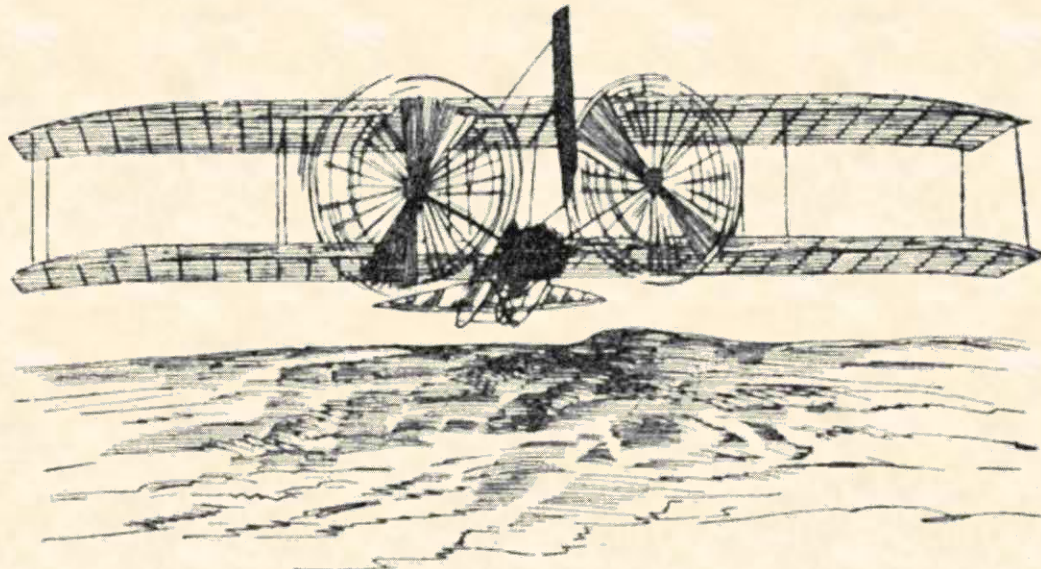


A. I. Root, the liar number four after the Wright Brothers and their mentor, Octave Chanute



Probable appearance of the Wright brothers' flying machine

Carl Dienstbach, "Das erste Lebensjahr der praktischen Flugmaschine", Illustrierte Aeronautische Mitteilungen, March 1905, pp. 91-93 (p. 92).

18. Sept 20th W.W.
 Cloudy. N.W. Wind. AM
 Distance $315 \times 8 = 2520$
 Time OW 1.01 $\frac{2}{5}$
 " CET 1.01 $\frac{4}{5}$
 51] Anem. 473 ft.
 1.05 $\frac{3}{5}$
 Anem. { 1005 meters.

Flight lasted about 2 sec. after engine shut off.

Rain _____
 N.E. Wind. P.M.

Complete circle
 Distance $510 \times 8 = 4080$
 Time OW 1.35 $\frac{2}{5}$
 52] C.E.T. 1.35 $\frac{1}{5}$
 Anemometer 1.35 $\frac{4}{5}$
 Dist 1505 met
 Anemometer on ground
 recorded 900 ft. in 1.35
 Flight lasted about 3 sec after
 anemometer was shut off.

First Flight Sep 20 W.W. 19.



2nd Flight Sep 20 W.W.



(Root present)

Dayton, Ohio, December 21, 1904.

Mr. Carl Dienstbach, New York.

Dear Sir:

... On the 20th of September we made our first complete circle and returned to the starting point after having covered a distance of about 4300 feet over the ground, and 4900 feet through the air as recorded by a Richard's anemometer attached to the Flyer. The greater distance recorded by the anemometer was due to the wind blowing at the time of the trial. The record of the anemometer in flights made in calm air has always agreed almost exactly with the distance measured over the ground. ...

Sincerely yours,

Wilbur & Orville Wright
 O.W.

W. Wright, "Entry for September 20, 1904", Wilbur Wright's 1904-1905 notebook, pp. 18-19.

by Bogdan Lazar

April 28, 2017

Table of Contents

Section I.....	4
Amos Ives Root from Medina, Ohio, wants to see the Wright brothers and their flying machine.....	4
The publication of a story is negotiated.....	4
A. I. Root claims that he saw Wilbur flying his plane, on September 20, 1904.....	5
Over two years of annoying letters.....	5
The 1908 officially witnessed flights of the Wrights triggered a series of many articles in <i>Gleanings</i>	7
A strange dialog between two people who claimed they had seen Wilbur and Orville flying in 1904.....	9
August 29, 1910, the day when the dream came true	10
The death of Wilbur, a simple pretext for A. I. Root to repeat he had witnessed an epoch making event.....	14
If you tell a lie big enough and keep repeating it, people will eventually come to believe it.....	16
28 years latter, people were still asking for the picture promised by Root in <i>Gleanings</i> for January 1, 1905	21
Section II	22
Questions and Answers	22
▪ Did A. I. Root meet the Wright Brothers in the summer of 1904?	22
▪ Was the old Amos an eyewitness of some powered flights performed by the two inventors during the summer of 1904?	22
▪ Is there evidence, in A. I. Root's letters, that he witnessed Wilbur flying his plane in a circuit, on September 20, 1904?	24
▪ Is the January 1, 1905, article in <i>Gleanings</i> (pp. 36-39) the only indication that Root witnessed the September 20, 1904, circular flight?	24
▪ Were the Wright Brothers aware that Root would publish an article in which he would claim he had witnessed Wilbur flying in a circuit, on September 20, 1904?	27
▪ Did the two inventors allow the old Amos to have the story printed in <i>Gleanings</i> ?	27
▪ Has A. I. Root written things, in his letters or articles, that <i>strongly</i> demonstrate he did not witness Wilbur flying, on September 20, 1904?	27
▪ Did A. I. Root witness at least one powered flight, of Wilbur or Orville, performed after September 20, 1904, and before August 8, 1908?	29
▪ Is there evidence in A. I. Root's letters that he, at least, saw a plane resting on the ground, before August 8, 1908?	29
▪ Did Root write the January 1, 1905, articles just to advertise his journal?.....	30
▪ Are there signs that show he deliberately misled his readers?.....	30

▪ Was Amos Root an honest man?	31
▪ Did the people, who knew him, consider he had witnessed the Wright Brothers flying in 1904?	31
▪ Is there enough information to demonstrate that A. I. Root had all necessary data to write the January 1, 1905, article without seeing any actual powered flight?	33
Conclusions. Evidence showing that A. I. Root did not see the Wright Brothers flying in 1904.	34
Section III	35
I hope you will excuse me, friends, for the liberty I take in addressing you	35
May God be praised that He has permitted me to live at the same time when the Wright Bros. came here on earth	36
As nobody seems to want to talk about it around here I can very easily drop the subject and pretend I am riding some other hobby	41
It was my privilege, on the 20th day of September, 1904, to see the first successful trip of an airship, without a balloon to sustain it, that the world has ever made.....	43
If I could say so much, it would relieve me of the charge of having made a big fuss about something that had not after all panned out to amount to anything	50
No, you had not told me that you did not expect to make any flights this year.....	53
He asked me how the Wright Brothers were progressing in France and Germany with their flying-machine. I could not answer him, and I can not answer you <i>just now</i> either.	57
The Wright Brothers and Their Flying - Machine, Not Only “Out in the Open” but “Up in the Air.”	60
Do You Believe This?	67
Then and Now	71
“Why, my good friend, can’t you stop long enough to look pleasant, and thank God for having permitted you <i>just now</i> to make the first flight since the world began, turning corners, and coming around to the stopping-place?”	80
It was finally my privilege to go up in a flying-machine.....	94
Section IV	98
Letters sent by Amos Ives Root to the Wright Brothers and a few other related documents	98
Section V	118
Articles in Gleanings in Bee Culture about the Wright Brothers or that make references to them.....	118
References	159
▪ Letters sent by Amos Ives Root to the Wright Brothers and a few other related documents	159
▪ Articles in Gleanings in Bee Culture about the Wright Brothers or that make references to them	161
▪ Various articles, letters and other documents	164

A. I. Root, the liar number four after the Wright brothers and their mentor, Octave Chanute

“it would relieve me of the charge of having made a big fuss about something that had not after all panned out to amount to anything” (Amos Ives Root, “Letter to the Wright brothers”, November 9, 1905).

Section I

Amos Ives Root from Medina, Ohio, wants to see the Wright brothers and their flying machine

A. I. Root was a businessman from Medina, Ohio, USA, who had a passion for science and technology, at the same time being a religious man and Sunday School (Christian educational institution) teacher. Why is him important for the hoax perpetrated by the Wright brothers regarding spectacular powered flights allegedly performed by them between December 17, 1903, and October 5, 1905, before the first officially witnessed take offs made by others in 1906? Because A. I. Root, out of pure enthusiasm for airships without gas bags combined with the effort to sell his journal “*Gleanings in Bee Culture*”, published, in its January 1st, 1905, issue, a story that, in some respects, out-rivalled the *Arabian Nights fables*, as himself stated.

The main idea of Root’s tale is that he witnessed Wilbur Wright completing a circuit through the air, near Dayton, on September 20, 1904. However, did this entrepreneur from Medina really see, that day, a plane flying some distance and returning to the starting point? The goal of the columns which follow is to prove that he just fabricated a narration based mainly on some ground tests he had witnessed, detailed explanations received from the two brothers themselves and at least one picture showing Wilbur gliding with his 1902 apparatus.

Fortunately, the numerous letters sent by Root to Dayton and all articles or paragraphs of interest written by him in *Gleanings* are available in archives and all have been converted to electronic format by me directly from the scanned originals to be sure no detail is missed. To avoid accusations that I give citations out of context to make a point, these texts are attached in full to the present work and ordered chronologically. You do not have to read all of them. Only a few contain information of real interest for proving that Root did not, in fact, witness any powered Wright machine flying before August 29, 1910, a date well within the aviation age. Despite pretending repeatedly in *Gleanings* he saw Wilbur flying on September 20, 1904, this man from Medina left behind faint traces, either in his letters or articles, that show he did not and in consequence his value as a reliable witness is zero.

The book is organised in 5 parts:

- Section I explains who A. I. Root was and examines, in chronological order, his most important letters to the Wrights and articles he wrote in connection with the two inventors.
- Section II, titled “Questions and Answers”, that ends with a series of conclusions, is the most important division of this work because it presents in a concise manner, and based on relevant excerpts from the documents he left behind, what Root saw and did not see during the visits he paid to the Wright brothers.
- Section III is simply a more detailed version of part I. It contains extensive quotations from A. I. Root’s letters and articles. A multitude of fragments, from various articles of the time and other letters and documents, are included in order for the reader to have a much clear picture of the general context in which A. I. Root wrote his texts.
- Section IV and V contain Root’s letters and articles, in full, plus a few other related documents.

In short, Amos Ives Root, 64 years old, a personage the Wright brothers had never heard about, and who had read about the

December 17, 1903, flights, sent them a letter on February 16, 1904, expressing his wish to witness some of their next experiments. The two inventors answered on February 23, 1904, suggesting he might have such an opportunity. Root became insistent and bothered them with a few more requests. Finally, from his August 23, 1904, letter we find out he had already visited the Wrights but the text does not confirm he had seen a plane flying. The visit took place after July 26, 1904.

The publication of a story is negotiated

A text dated September 12, 1904, the first after that of August 23, shows evidence he had received a new invitation from Dayton. The next letter, written on September 22, 1904, is quite puzzling because it does not suggest Root had seen a powered flight two days before or during the summer of that year. Sometime between the 22nd and 26th of September 1904, the insistent entrepreneur and aviation enthusiast sent another letter together with an early draft (missing from the archive) of the article that would finally appear in *Gleanings* in its January 1, 1905, number. Only the letter is available and, unfortunately, it does not make reference to any flight Root had witnessed up to that date.

The answer sent by the Wrights, on September 26, 1904, was not the one Amos Root would have liked to get. He continued to push ahead for three more months with his arguments trying to convince the two inventors the article would be in their favour.

While negotiating the publication of another story, that would appear in *Gleanings* for October 15, 1904, Root wrote to Wilbur, on October 8, 1904, these lines: “*I have repeatedly already explained to my friends that I was not at liberty to mention what I witnessed and they have always taken it kindly*” which throw doubts regarding his credibility in front of the people who knew him. As a note, what precisely he witnessed is not clearly stated.

Without explicitly saying when, he visited again the two inventors during November 1904, as he had promised in a letter composed on the 7th of the same month.

As a parenthesis, Wilbur wrote in his 1904-1905 notebook, on page 36, that five trials were made on November 22, 1904, and the flights ranged from 150 to 250 feet. A. I. Root is mentioned as one of the people who were present.

It is known with certitude that the day of November 28, 1904, found the old beekeeper writing a message to extend his congratulations to his good friend Orville for the good flight he made just as Root left for his car, a formulation suggesting the old aviation enthusiast was no longer present when the younger brother performed that satisfactory travel through the air. He received the information by some other means than from directly seeing the flight with his own eyes. On the other hand, the next lines of the same letter seem to confirm that Amos Root once witnessed Orville striking the ground with his plane and then flying and managing the machine as gracefully as anything Root had ever seen in the line.

The next letter, dated December 6, 1904, is even more stunning. First, the old Amos expressed his satisfaction that *Orville had gone around four times without stopping on Dec. 1st*. He obtained the information from Torrence Baird (Beard), a man he had asked to keep him updated, about the flights of the two inventors, with messages written on postal cards. Then he wrote: “*if Orville sailed that thing as gracefully and steadily as he did on the last trip I witnessed he certainly is not a back number to any man living at*

present” which means Root had really witnessed Orville flying. It is hard to find a different explanation for such a phrase that appears in a letter addressed to the Wright brothers themselves, not in a text meant for publication where fiction can play an important role, unless the old Amos had moments when he lost touch with reality and his mind constructed visual images based on what Torrence, a false witness instructed by the brothers to tell lies, mailed him. A search for the name “Beard” within the content of the current work will reveal more details about the involvement of the Beard family members in the Wright affair, as doubtful witnesses.

As a remark, the January 1, 1905, article does not make reference to any flight performed by Orville and having Root as an onlooker despite the fact the text was updated mentioning the day of December 1, 1904, as the last of the season when the Wrights flew their plane.

A. I. Root claims that he saw Wilbur flying his plane, on September 20, 1904

After being delayed so much, the article first submitted to the Wrights in September 1904 finally got into *Gleanings* with some revisions. The text is a mixture of personal assessments and conclusions, divagations, things Root had found out from various publications and the two inventors themselves and some paragraphs that describe what this businessman from Medina claimed he had seen with his own eyes. Amos Root states with clarity he personally met the Wrights: “I found them in a pasture lot of 87 acres, a little over half a mile long and nearly as broad” and then continues: “When I first saw the apparatus it persisted in going up and down like the waves of the sea.” The article does not say when Root first saw the machine but from his August 23, 1904, letter it results the event happened before that date without being quite clear what exactly he had witnessed.

The text continues with some explanations regarding the way the Wrights cured their plane (with a weight attached to the front part) of its bad habit of following a sinuous course and then suddenly the old Amos wrote a few lines that would secure him a (fraudulent) place in the aviation history books: “it was my privilege, on the 20th day of September, 1904, to see the first successful trip of an airship, without a balloon to sustain it, that the world has ever made, that is, to turn the corners and come back to the starting-point”. In conclusion, the text does not leave any room for interpretation; Root was the eyewitness, according to his claim, of a remarkable historical event, the first flight in circuit ever performed by an airplane. This man from Medina, close to the final part of the text, even gives details about the above mentioned remarkable event, writing:

When it first turned that circle, and came near the starting-point, I was right in front it; and I said then ... it was one of the grandest sights, if not the grandest sight, of my life. Imagine a locomotive that has left its track, and is climbing up in the air right toward you — a locomotive without any wheels ... but with white wings instead ... a locomotive made of aluminum. Well, now, imagine this white locomotive, with wings that spread 20 feet each way, coming right toward you with a tremendous flap of its propellers, and you will have something like what I saw. The younger brother bade me move to one side for fear it might come down suddenly; but I tell you, friends, the sensation that one feels in such a crisis is something hard to describe.

Also, at one point somewhere in the article, Root mentions he saw the machine lifting that weight added for stabilisation purposes: “When I saw it pick up the fifty pounds of iron so readily I asked if I might ride in place of the iron. I received, by way of assurance, the answer that the machine would no doubt carry me easily.” As a note, it has to be stressed that the January 1, 1905, article was

submitted to the Wrights on December 24, 1904, for a final approval. A copy of this last draft still exists in archives. So, the text was not published without the consent of the two inventors.

In the same issue of *Gleanings* (January 1, 1905), Root published another article which, unlike the first, has the quite explicit title “My Flying-Machine Story”. He again refers to the experiments he witnessed using what can be labelled as a poetic style: “I enjoyed being out in that big field with the Wright brothers many times during the past summer and fall, watching that wonderful creation of the hand and brain of those two men, while it “learned to fly,” very much as a young bird just out of the nest learns by practice to use its wings.”. However, soon Root comes back to reality ending his short essay with this dishonest promise: “A picture of the flying-machine up in the air will appear in our next issue, nothing preventing”, which discredits him. He evidently told a lie. The old Amos was well aware on December 26, 1904, the day he wrote the text, that the January 15, 1904, number of *Gleanings* would show only a photo of a Wright glider (see the letter dated December 24, 1904). This was a trick played by Root to make the readers curious and sell his journal.

Root’s January 15, 1905, article titled “The Wright Brothers’ Flying-Machine” starts with a disappointing “I shall have to apologize a little, friends, for giving a picture of the gliding-machine instead of a flying-machine” which is nothing else but a fraudulent excuse. A direct piece of evidence proving he really misled his readers is the letter dated January 8, 1906, and sent to him by the American photographer George Grantham Bain who asked for that photography to enrich his collection. Bain wanted the picture promised by Root and not printed in the January 15, 1905, issue of *Gleanings*. Bain explicitly states in his letter he already had the photo of the gliding machine.

Also it does not represent direct evidence Root did not see the Wrights flying a powered plane in 1904, one can not ignore the similarity between two remarks made by him, the first in connection with the September 20, 1904, flight, the second related to the sensation he lived when watching that picture showing Wilbur gliding:

- (1) Regarding the flight Root saw on September 20, 1904: “it was one of the grandest sights, if not the grandest sight, of my life”. (“Our Homes”, *Gleanings*, January 1, 1905, pp. 36-39 (col. 2, p. 38))
- (2) About the photo of the glider: “to me the sight of a machine like the one I have pictured, with its white canvas planes and rudders subject to human control, is one of the grandest and most inspiring sights I have ever seen on earth”. (“The Wright Brothers’ Flying-Machine”, *Gleanings*, January 15, 1905, pp. 86-87 (col. 2, p. 86))

It appears that the impressive photo of the glider in the air triggered in Root’s mind the fantastic story he narrated in his January 1, 1905, long article.

It is worth mentioning now a letter, of a certain G. L. Tinker, dated January 11, 1905, and published in *Gleanings*. If authentic, it represents evidence that the January 1, 1905, article of A. I. Root captivated the attention of at least one reader as long as this person stated: “It was with intense interest that I read in *Gleanings* for Jan. 1 the first notice of a practical flying-machine that has ever been published.”

Over two years of annoying letters

The letters sent by the old Amos continued to arrive in Dayton, at the same high rate as in 1904, for two more years, 1905 and 1906, after which their frequency decreased substantially. Most of them are of little to no value containing in essence just the repetitive message that Wrights’ friend from Medina was anxious to see new experiments. Unfortunately, despite his insistence pushed to the

extreme he would not have the chance to see a Wright plane flying till August 29, 1910.

A letter of some importance is that of October 21, 1905, which contains direct evidence Root had the habit to take for granted what the Wrights told him. The text is written after the spectacular series of flights that ended on October 5, 1905, according to the claims of the two inventors. Amos Root expressed his satisfaction *for the good news* he had just received and then made the remark: *"I take it for granted you have not yet gone outside of your field ... and that the machine has been brought back at the end of every trial to the starting place"*, followed a few lines further by a request for permission to publish at least *a brief statement* regarding what had been done. He was embarrassed because, and here are his own words: *"they keep saying to me tauntingly 'What has become of the Wright Bros?'"* which is an affirmation that proves people who knew Root did not take his word for granted as he did with the word of the Wright brothers.

The next three letters (of October 27, November 4 and 6, 1905) demonstrate the old Amos was relatively optimistic regarding his chance to witness a (new) flight. Following a letter dated October 26, 1905, and coming from the Wrights, Root immediately answered the next day asking the two inventors to send him a telegram just before a new flight attempt and emotionally declared that *he would almost cross the ocean just to see that machine get outside of the enclosure*. About a week later, on November 4, 1905, without making all the necessary verifications, Root suggested to his younger friends to send a telegram at such a time as to arrive in Medina between 5 and 6 in the morning which would allow him to take a train and reach the place where the Wrights performed experiments, at around one o'clock in the afternoon. Two days later, on November 6, 1905, after finding out the telegraph office opened at 7 o'clock AM, he came with a new proposal telling the two inventors to contact him *by long distance telephone*. One more letter followed (November 8, 1905) where Root notified his friends from Dayton about *a difficulty with flying machines they and him had not thought of*.

The old Amos' high hopes were to be smashed by a Wrights' letter dated November 8, 1905. His answer, written the following day, November 9, 1905, shows his visible disappointment. He was not to witness a flight any time soon and asked for one more favour, the permission to publish a short note reading: *"At present I am not at liberty to give a report of what the Wright Bros. have done during the past summer."* This text itself contains nothing special. However, referring to the note, Root continued with a quite baffling explanation, and here are his own words: *"it would relieve me of the charge of having made a big fuss about something that had not after all panned out to amount to anything."* Had he really seen one of the brothers flying in a circuit on September 20, 1904, he would not have made such a remark. Did that flight amount to nothing for him?! It is illogical. This is a strong piece of evidence A. I. Root had not seen any powered flight up to November 9, 1905.

In *Gleanings* for November 15, 1905, Amos Root informed his readers he could not give details about *the wonderful progress made by the Wright Brothers*. In the meantime he received more powers from his friends in Dayton, as can be seen from his November 28, 1905, letter where he answered: *"Many thanks dear friends for the permission to talk about flying machines"*, at the same time assuring the two inventors he would not cross red lines like divulging secrets about *the construction of the machine and the method of starting*.

In the next number of his periodical (December 1, 1905) Root published a text which is quite close to the standard of the Scientific American. The complicated style with divagations that plagued the January 1, 1905, essay is gone and together with it the sensation

that the entire account is just a piece of fiction is no longer felt by the reader. However, this last article, despite containing figures and technical explanations, is neither an eyewitness account, being based on letters received by Root from the two inventors, nor an exclusive text that only *Gleanings* had the privilege to make public. An ample investigation containing about the same things appeared in the French aeronautic journal *L'Aérophile* ("Les Frères Wright et leur Aéroplane à moteur", *L'Aérophile*, December 1905, pp. 265-272) where two Wrights' letters, containing precise details regarding the alleged September - October 1905 long flights, were printed. The first, dated October 9, 1905, was addressed to Captain Ferber, a French aeronaut, and the second, sent on November 17, 1905, to Georges Besançon, the founder of the journal.

The end of 1905 and beginning of 1906 was a period characterized by a lot of articles in connection with the spectacular sequence of flights that ended on October 5, 1905. The newspapers made a lot of noise announcing the intention of the French government to buy the brothers' invention. Root became somehow frustrated noticing that *all the papers had so much to say & Gleanings, the pioneer, in reliable news, was entirely silent*, as can be seen from his February 27, 1906, letter. He asked the brothers for a few authoritative lines, if possible, that he could publish in *Gleanings*, regarding their recent deal with France. The two Wrights advised him to refrain from writing about them in his journal. This can be inferred from the letter dated May 17, 1906, started by Root with the assurance: *"All right, friends not a word shall be published either directly or indirectly in regard to your work until you give permission"*. Two days later, on May 19, 1906, Root promised his friends from Dayton he would not send the Scientific American anything without their permission. This came as an explanation for a letter of his son, Ernest, addressed to this well-known periodical, suggesting that his father might furnish some facts. However, the Sci. Am. wanted the story to go through *Gleanings* first, a thing Root appeared to dislike. As an additional clarification to put in context the letter of E. R. Root, it has to be mentioned that the Scientific American had already published, in 1906, a few important articles about the two inventors:

- (1) "The Wright Aeroplane and Its Fabled Performances" (col. 1, p. 40, January 13, 1906);
- (2) "The Wright Aeroplane and Its Performances" (pp. 291-292, April 7, 1906);
- (3) "Chanute on the Wright Brothers' Achievement in Aerial Navigation" (col. 1, p. 307, April 14, 1906) authored by Octave Chanute, the mentor of the two inventors, himself.

Another succession of little value texts followed. They contain mainly the same annoying idea that Root was anxious to see his friends doing experiments outdoors.

Starting with his letter dated October 24, 1906, the old Amos put more and more pressure on the two Daytonians to allow him to publish something in *Gleanings* about their progress, invoking the existence of *a lot of inquiries in regard to the airship*. Having received no first hand information up to date of what the Wrights had been doing during the 1906 season, he could not hide his disappointment as can be seen from the following quite tough remark: *"to tell the truth, as it is coming so near winter again I was getting a little discouraged, that is, so far as I have a right to be discouraged about something that is not my own affair"*. However, Root had an indirect source of news, more precisely an article, forwarded to him by his sister in Xenia, which quoted Octave Chanute as saying that the Wright brothers' airship was capable of a sustained flight with two people on board and 200 pounds of extra weight. With their permission, he would have liked to republish in his journal what O. Chanute had said.

Fife days later, on October 29, 1906, Wright's friend from Medina composed another letter, this time in connection with the

article "*Santos-Dumont Wins the \$10,000 Prize*" (The Automobile, October 25, 1906, col. 2, p. 527) which is inaccurate, exaggerated and in the same time inconsistent but clear enough to convince the old Amos that *Dumont had got off the ground without any balloon* on October 23, 1906. He was also concerned about the closing remark of the article which quoted Capt. Ferber as saying:

"So convinced am I that M. Santos-Dumont is on the right lines that I think it absolutely essential that the Wright brothers immediately make public the result of their experiments. Within six months their instrument will have been surpassed in France, and they will find they are too late."

Root ended his October 29, 1906, text by explaining he was in a big dilemma, he would have liked to tell his readers about what Santos Dumont had just accomplished but at the same time he was afraid, at least this was his claim, that a lot of inquiries would follow relative to *what the Wright Bros. had been doing during the previous 12 months*.

A very full and complete letter, dated October 30, 1906, and coming from Dayton, got Root out of his deadlock. It can be inferred from the answer promptly formulated the next day, October 31, 1906, that the brothers told him the statement of Octave Chanute (see the October 24, 1906, letter) was inexact or simply an invention of the papers. Root was also informed the text in the Automobile (October 25, 1906) was inaccurate.

As an explanation, on October 23, 1906, Santos-Dumont really won an aviation prize, for being the first to fly more than 25 meters, but not the big \$10,000 (1906 dollars) reward for completing a circular one-kilometer course in a heavier-than-air craft, as claimed by the Automobile. This appreciable sum of money was won later, on January 13, 1908, by Henry Farman.

The last lines of the October 31, 1906, answer and the entire November 7, 1906, letter prepared the Wrights for a new visit. Root announced them he would be in Dayton on Wednesday, November 14, 1906, for a few hours before taking a train to St. Louise. Whether he met them is not clear from the available documents. However, it is certain that the two inventors, exasperated by Root's bombardment with letters, sent him a message for *Gleanings* that appeared in its November 15, 1906, issue. It is self-evident from the introduction: "*Dear Mr. Root: — If your readers are really anxious to know what we have been working at this year we have no objection to your telling them.*" that the Wrights doubted Root's readers were so eager to learn details about their progress. The real person anxious to get news from them was Amos Root himself not the ones who bought his journal. The brothers continued their message with this explanation: "*We have been engaged in designing and building machines suitable for actual service rather than mere experimenting, and have given special attention to perfecting motors not only light but sufficiently strong and reliable to run for hours without attention.*", which contains some verifiable truth because the article "The Second Annual Exhibition of the Aero Club of America" (Scientific American, December 15, 1906, pp. 447-449) shows on page 449 a photo of an engine characterized as it follows: "*The most interesting motor on exhibition was the new 4-cylinder, four-cycle, water-cooled engine built by Messrs. Orville and Wilbur Wright, of Dayton, Ohio, and intended for use on their new aeroplane.*"

It is not quite evident why the Scientific American was so impressed by the new Wright motor as long as the same article shows the photo of another engine, made by the manufacturer Glenn Hammond Curtis, that was lighter and as powerful as the one of the Wrights and in consequence it was a better choice accepting both were equally reliable.

Coming back to A. I. Root, on November 24, 1906, he wrote his friends in Dayton that *Santos Dumont had gone most 1/4 miles* (the real distance covered was 1/8 miles), a thing he had read in "Santos

Dumont's Latest Flight" (Scientific American, November 24, 1906, col. 3, p. 378).

Another letter of some importance is the one of April 16, 1907, sent by the old Amos to prepare his younger friends for a new visit he had scheduled for the 23rd or 24th of April 1907. By April 30, 1907, Root was already in possession of an article ("Wright Boys Score Another Triumph", Dayton Journal, March 21, 1907) which was promptly republished in *Gleanings* for May 15, 1907. The text is about a hydroplane publicly tested by the two inventors on March 21, 1907. Another newspaper, Dayton Herald, printed even a picture taken that day and showing two counter-rotating propellers with sprockets, on their axels, connected by bicycle chains to the shaft of an engine, everything being mounted on a floating platform without wings ("Newest Invention of Wright Brothers Will Carry Their Aeroplane on Water", Dayton Herald, March 21, 1907). The test was unsatisfactory but Root mentions in *Gleanings* for May 15, 1907, that *in a talk with the Wright Brothers a few days before they said such an apparatus might, without question, make more than a mile a minute*. The old aviation enthusiast ends his article with a few lines, dated May 2, 1907, and *just received from the Wright Brothers* as an answer to his April 30, 1907, letter. The text reads: "*Our only objection to publishing any thing about our experiments is that it may cause people to write us for information, and we haven't the time for answering.*". The motive invoked by the two inventors seemed plausible and the old Amos, after deciding to write something about the activity of his friends, also printed their letter as a means to warn the readers against sending any kind of inquiries to Dayton. However, the text can be interpreted more as a message for Root himself, aimed at stopping his annoying letters.

The 1908 officially witnessed flights of the Wrights triggered a series of many articles in *Gleanings*

The articles of the old entrepreneur from Medina about the two brothers continued till his death in 1923 but, with a few exceptions, they contain things gathered from various newspapers and magazines. Also, the flow of messages sent to Dayton reduced to about zero.

During the summer of 1908, Root still had some weak direct contact with what he called "his friends", as can be seen in "The Wright Brothers and Their Flying-Machine; Also Something in Regard to Other Flying-Machines." (*Gleanings*, July 1, 1908, pp. 836-837) from which we learn a postcard had arrived from France. It contained *just five words*: "*With kind regards, Wilbur Wright.*" that the old apiarist *prized very highly* because, for him, they were the evidence the elder of the two inventors still remembered his friend. Apart from this element of originality, the rest of the text is a compilation based on articles authored by others.

A single letter of Root, dated July 28, 1908, can be found for the entire 1908 year. A journal, Woman's National Daily, scared him pretending that *gangrene had set in in consequence of a burn W. Wright had suffered*. He wanted clarifications from Orville, still located in the USA at the time, regarding the health of his brother. In passing, it is worth noting that, as concerned as he was, he could not abstain from begging again for an invitation to flight demonstrations. The articles Root published show he did not receive such an invitation in 1908 and 1909. He witnessed the first flight of a Wright machine on August 29, 1910, in the same place where he had seen the elder of the two brothers completing a circular course through the air on September 20, 1904 (according to his account in *Gleanings* for January 1, 1905).

Root kept reporting in his journal about the activity of the two aviators. From *Gleanings* for September 1, 1908, p. 1097 we find out he expected them to be *up in the air both in Europe and*

America” (Wilbur had already started to perform public flights in France beginning with the 8th of August 1908, Orville had not yet commenced his demonstrations in the United States).

However, not the content of the September 1, 1908, article, that lacks details, is interesting, the readers being sent to newspapers and magazines for more information, but its title: “The Wright Brothers and Their Flying-Machine, Not Only “Out in the Open” but “Up in the Air”” which has the aspect of an irony. How can Root, a man who persistently declared he had seen W. Wright flying on September 20, 1904, could have written “not only out in the open” had he really witnessed a flight about 4 years before?! Such a title suggests the old beekeeper and businessman had seen the two brothers just out in the open.

Another text of some interest is “The Wright Brothers and Their Aerial Flight up to Date” (Gleanings, September 15, 1908, p. 1156). Besides telling his readers about the successes of the two brothers, despite the fact he was well aware the newspapers were not only ahead of him but his source of information, A. I. Root disclosed an incident that happened in a morning when he was taking breakfast with the two inventors. None of them accepted coffee explaining to him *they expected to make some flights that morning, and they had learned by experience that their heads were clearer and their nerves steadier if they abstained from coffee at breakfast*. The September 15, 1908, account does not specify when this episode occurred but a much later memory (“Aviation and Stimulants. Saloons and the “Chicken Business.””, Gleanings, February 1919, pp. 110-112) locates it in the summer of 1904. As a remark, both texts (September 15, 1908, and February 1919) fail to clarify whether Root witnessed at least a flight that day or not.

The next article of some interest regarding the involvement of Amos Root in the Wright affair is “The Wright Brothers and Their Flying Machine up to Date” (Gleanings, November 15, 1908, pp. 1390-1392) where he expresses his unjustified disappointment in seeing in a prospectus *the broad claim that the Scientific American was the first publication to announce that the Wright flying-machine was a success*. He wrongly considered that *Gleanings in Bee Culture* announced the success to the world a long while before the *Scientific American* had taken any notice of this wonderful invention. In reality, this well known technical journal published a notice titled “A Successful Experiment with a Motor-Driven Aeroplane” (Scientific American, December 26, 1903, col. 3, p. 486), about the December 17, 1903, flights, before the apparition of the first trace of the two brothers in Root’s periodical which mentioned them quite late, in “Our Homes” (Gleanings, March 1, 1904, pp. 240-243 (p. 241)). This is the Scientific American report:

A Successful Experiment with a Motor-Driven Aeroplane.

On December 17 the Messrs. Orville and Wilbur Wright made some successful experiments at Kitty Hawk, N. C., with an aeroplane propelled by a 16-horsepower, four-cylinder, gasoline motor, and weighing complete more than 700 pounds.

The aeroplane was started from the top of a 100-foot sand dune. After it was pushed off, it at first glided downward near the surface of the incline. Then, as the propellers gained speed, the aeroplane rose steadily in the air to a height of about 60 feet, after which it was driven a distance of some three miles against a twenty-mile-an-hour wind at a speed of about eight miles an hour. Mr. Wilbur Wright was able to land on a spot he selected, without hurt to himself or the machine. This is a decided step in advance in aerial navigation with aeroplanes, and it is probably due to the increased degree of controllability resulting from the Wright brothers’ novel form of horizontal rudder, which is a small guiding aeroplane placed in front of, instead of behind, the aeroplane proper. A well illustrated description of the Wright aeroplane appeared in our February 22, 1902, issue. The present aeroplane has the very large surface of 510 square feet, making its apparent entire controllability all the more remarkable. (Scientific American, December 26, 1903, col. 3, p. 486)

This version of events, spread by the Virginian-Pilot newspaper (“Flying Machine Soars 3 Miles in Teeth of High Wind Over Sand Hills and Waves at Kitty Hawk on Carolina Coast”, Virginian-Pilot, US, December 18, 1903, p. 1), was not supported by the Wright brothers who later came with clarifications and corrections as in “Wright Flyer. A Report of Late Tests is Given by Messrs. Wright, Inventors of the Machine.” (Dayton Press, Ohio, US, January 6, 1904). These are their words regarding the best performance of December 17, 1903: “*at the fourth trial a flight of 59 seconds was made, in which time the machine flew a little more than a half mile through the air, and a distance of 852 feet over the ground*”.

However, as exaggerated as it is, the little story in the Sci. Am. has priority over the January 1, 1905, long tale in *Gleanings* and in consequence the old apiarist was at least ill-informed when he stated that his journal had announced the success of the Wright plane before *the Scientific American* had taken any notice of this wonderful invention. Root further explains that *as soon as an impression was off the press he mailed a copy of it to the Scientific American, and sent a letter accompanying it, thinking they would be glad to give it a wider publicity than he could give in his comparatively little journal*. His letter with the proof-sheets was received by the Sci. Am. that immediately asked for a copy of *Gleanings*, which was promptly sent. Unfortunately, this periodical, known worldwide, ignored Root’s essay and had all reasons to do so as long as the text contained an account as fantastic as the one already published in its December 26, 1903, issue. Such an implausible story, supported by just one eyewitness, would have further discredited the Sci. Am. had it proved false.

As a remark, Amos Root avoided to directly remind his readers he had seen Wilbur Wright completing a circuit through the air on September 20, 1904. He expressed his dissatisfaction regarding the attitude of the *Scientific American* with a carefully worded phrase: “*not a word of thanks for the trouble I had taken to give them full particulars of what I had been an eye-witness*”.

Another point of interest in the same November 15, 1908, article is Root’s account about what he knew at the moment January 1, 1905, but was not allowed to divulge. He had been aware of two things since 1904: “*The first was an apparatus for putting a stronger curve on the tips of the wings when rounding a curve. Second, a device that would enable the machine to spring up into the air as a bird does in starting*”.

No details are offered about the first but regarding the second apparatus, he explained that, immediately after meeting the Wright brothers, he had the idea of using a catapult independently of them. However, he did not tell anything about what he had thought of. These are his words:

After I left them I figured out in my mind that a derrick from which a weight could be dropped something like a pile-driver in order to get up a good momentum in starting would be a good plan. I was so full of this idea that I made a second trip in a short time, and was astonished as well as pleased to find they had got hold of the same thing and had it in practical operation.

His memory is definitely wrong. In a letter dated August 23, 1904, the first after having the opportunity to meet the brothers, he wrote:

I am very anxious to know in regard to that plan of dropping a weight from a little derrick, that is, if you decide to undertake anything of the sort.

These lines prove Root already knew about the project of using a starting device based on weights and a derrick, well before his second visit which took place on September 20, 1904, according to his claim in *Gleanings* (January 1, 1905, issue). If he really had such an idea then he discussed it with the brothers before August 23, 1904.

While giving explanations regarding the necessity of a starting device Root, again made a carefully worded statement:

When I first visited them they were obliged to run the machine along a single rail for, I think, 60 or 70 feet, in order to get up sufficient speed to "climb into the air."

It is not clear whether he saw the plane flying or he just got the information from the two Wrights.

Another text of some value is "Navigating The Air — The Wright Brothers up to Date" (Gleanings, April 15, 1909, pp. 258 and 29) which contains an interesting affirmation made by Root in the context of Katherine Wright's first flight (February 15, 1908, Pau, France). He says that *when the Wright Brothers were making their first experiments out in that pasture-lot near Dayton, it was his privilege to take that same Miss Wright on a little trip around the lot with his little Olds mobile* and then he continues: "At that early date I believe I had more faith in the ultimate outcome of their experiments than the old father, the sister, or even the two brothers themselves". Again, Amos Root refers vaguely to some experiments performed by his younger friends without saying he had seen the Wrights flying.

Two months later, in "Animated Eggs — A Great Discovery" (Gleanings, June 15, 1909, p. 21), while detailing a finding of a member of his family, at least he strongly believed so and asked his readers to correct him if they had knowledge that somebody else was the originator of that invention, the old businessman made another puzzling affirmation: "*GLEANINGS claims to be the first magazine to exploit the great invention of the Wright Brothers*". One more time, the passage is imprecise and fails to explicitly state A. I. Root had seen a man carrying plane flying, in 1904.

Also not something directly connected with aviation, it is worth mentioning that, one month later, in "Our Homes" (Gleanings, July 15, 1909, pp. 446-448 (p. 447)), Amos Root informed his readers that the newborn daughter of his youngest son had been named Katherine after Miss Katherine Wright who had become a celebrity of the time.

A strange dialog between two people who claimed they had seen Wilbur and Orville flying in 1904

Unlike the one in the July 15, 1909, issue, the editorial for the 15th of August ("Our Homes", Gleanings, August 15, 1909, pp. 515-518 (p. 516)) is a document of great historical value because it contains one of the most important pieces of evidence that throws serious doubts on the credibility of the January 1, 1905, eyewitness account. The general message of Root is that some texts like those in the Bible and his own story, about the September 20, 1904, flight in a circuit of W. Wright, have the stamp of truth on them even if they contain unbelievable things.

In short, while in Dayton, a few years before July 30, 1909, Root met the aviation pioneer and mentor of the two brothers, Octave Chanute, who received from Orville Wright a copy of the January 1, 1905, issue of *Gleanings*. O. Chanute read the story and the next day, after finding out from Amos Root himself about his disappointment generated by the little interest his text had elicited, O. Chanute explained to him the people were right not to believe his account and gave him this logical justification:

"your readers all supposed that it was a made-up story. The way in which you talked about Christopher Columbus putting out on the unknown deep and all that, made people believe it was a sort of fairy story, such as we find in our magazines every little while — stories so much mixed up that one can not tell which is fact and which is fiction. The world did not believe you were *telling the truth*."

Root came with a quite unconvincing answer. In his opinion, the article was marked with the stamp of truth. These are his words:

"Mr. Chanute, I am in the habit of having *strangers* doubt my statements; but those who are acquainted with me, and know my way of talking, and those who have read my department in our journal for years past, ought to know that I tell the truth. Furthermore, that article has the stamp of truth on it from beginning to end. I mentioned the locality, and the things that happened, in a way that would convince any reasonable person that what I related really occurred."

O. Chanute was not convinced and gave him a polite answer:

"Well, I guess that is so to a great extent; but what you are telling is *too wonderful*. The world is not yet ready to take it in."

At the end of the dialog, Amos Root emphasised that:

Certain people, certain books, and certain articles in the papers have the stamp of truth on them; and this New Testament account of our Lord Jesus Christ has the stamp of truth on every page.

That "*certain articles in the papers*" is his January 1905 story which has "*the stamp of truth on every page*" as the Bible.

The big question is why would Octave Chanute have had doubts regarding the veracity of Root's January 1, 1905, article as long as in a letter dated March 31, 1906, and published by the Scientific American in its April 14, 1906, issue, O. Chanute himself claimed he had *witnessed a flight of 1,377 feet performed in 23 4-5 seconds, starting from level ground and sweeping over about one-quarter of a circle* that was made by Orville Wright on October 15, 1904. In other words, at the time he read the January 1, 1905, article, Chanute had already witnessed a man carrying plane flying, less than one month after Wilbur's flight in a circuit of September 20, 1904. Logically, Chanute would have had all reasons to believe Root's eyewitness account!

The problem is that the credibility of Chanute's March 31, 1906, answer is also quite low as long as, close to the end of the text, he states that the Wright brothers performed two improbable feats, the first consisted in "*inventing a practical flying machine*", the second in keeping their plane "*which could only be operated in the open*" far "*from the incredulous but Argus-eyed American press*". This remark sounds like a joke, an irony. The relevant part of the letter is reproduced below:

... On the 15th of October, 1904, I witnessed a flight of 1,377 feet performed in 23 4-5 seconds, starting from level ground and sweeping over about one-quarter of a circle, at a speed of 39 miles per hour. The wind blew at some six miles per hour, but in a diagonal direction to the initial course. After the machine had gone some 500 feet and risen some 15 feet, a gust of wind struck under the right-hand side and raised the apparatus to an oblique inclination of 15 to 20 degrees. The operator, who was Orville Wright, endeavored to recover an even transverse keel, was unable to do so while turning to the left, and concluded to alight. This was done in flying before the wind instead of square against it as usual, and the landing was made at a speed of 45 to 50 miles an hour. One side of the machine struck the ground first; it slewed around and was broken, requiring about one week for repairs. The operator was in no wise hurt. This was flight No. 71 of that year (1904), and on the preceding day Wright brothers had made three flights — one of 4,001 feet for less than a full circuit of the field, one of 4,903 feet covering a full circle, and one of 4,936 feet over rather more than a full circuit, alighting safely. ...

In addition to the great feat of inventing a practical flying machine the Wright brothers have, in my judgment, performed another improbable feat by keeping knowledge of the construction of a machine, which can only be operated in the open, from the incredulous but Argus-eyed American press. ...

O. CHANUTE.

Chicago, Ill., March 31, 1906.

(Octave Chanute, "Chanute on the Wright Brothers' Achievement in Aerial Navigation", Scientific American, April 14, 1906, col. 1, p. 307)

The question is why would Octave Chanute, author of the book "Progress in Flying Machines" (1894) and well known by the aeronautic community of the time, have told such a lie. The answer is simple. On November 9, 1905, he sent a private letter to the French aeronaut Captain Ferber recommending him to trust the word of the Wright brothers, who had just claimed a series of spectacular flights. To make the statements of the two inventors more credible he wrote this: "*I have not seen, with my own eyes, anything excepting a short flight of half a kilometer*". Captain Ferber did not keep the text only for himself but had it published in "Les Frères Wright et leur Aéroplane à moteur" (L'Aérophile, December 1905, pp. 265-272, (p. 268)). Therefore, there was no way back for O. Chanute but to keep the story and pretend he had seen one of the brothers flying, otherwise his credibility in front of the technical world of the time would have suffered.

This is the entire text of the letter:

Chicago, Ill., 9 novembre 1905

Cher capitaine Ferber,

Je viens de recevoir votre lettre du 26 octobre. Je crois que vous pouvez octroyer toute confiance à ce que les Wright vous ont écrit de leurs accomplissements (*sic*). Je n'ai vu, de mes yeux, qu'une petite envolée d'un demi-kilomètre, mais ils m'ont mandé leurs progrès de semaine en semaine et leurs amis intimes qui ont vu les longs parcours du commencement d'octobre, m'ont confirmé verbalement la semaine dernière, quand j'étais à Dayton, pour voir une envolée projetée de 60 kil. en une heure, qui n'a pu avoir lieu par raison d'un grand orage.

Les Wright se sont inspirés de l'exemple de la France qui a tenu secrets ses progrès de ballons dirigeables depuis 1885. Ils se sont arrangés avec leurs journaux à Dayton. Il y a bien eu une indiscretion et un article publié, mais sa circulation a été supprimée.

Les Wright devaient vous écrire vers le 4 novembre.

Agréez, cher monsieur, l'expression de mes sentiments les meilleurs.

(Signé) : O. CHANUTE.

("Les Frères Wright et leur Aéroplane à moteur", L'Aérophile, December, pp. 265-272, (p. 268))

After all these explanations the August 15, 1909, article of Root about his dialog with O. Chanute, a few years before, can be more easily understood as a conversation between two people who had never seen a man carrying heavier than air machine flying.

Two weeks later, in "Coming Events Cast Their Shadows Before." (Gleanings, September 1, 1909, p. 554), the old beekeeper, again, has a paragraph conceived to emphasise his role in advertising the invention of the two Daytonians. This is what he wrote:

In 1904, when I told you about the Wright brothers, and a little later when I told you at length what I had seen with my own eyes, I said at that time that their discovery (that the air could be traversed without the aid of balloons or gas of any kind) would make a sensation in the world akin to the discovery of America by Christopher Columbus.

He is one more time vague and avoids repeating what exactly he saw.

At the end of the text, he noticed with disappointment his *good friends had been already left behind*. As an explanation, a competition took place in France at the end of August 1909 and all records established by W. Wright on December 31, 1908, were broken.

The next piece of evidence regarding Amos Root's integrity is another editorial titled "Our Homes" (Gleanings, July 1, 1910, pp. 429-431 (p. 429)) one of his many texts of a religious character which this time is about authority, sincerity, credibility. As an exemplification, Root mentions the case of his January 1, 1905, story saying that *when he published the account of their work and said he had seen them with his own eyes make a trip (of about a mile) through the air and come back to the starting-point, many*

people began to inquire who A. I. Root was; and quite a few decided his story was just a made-up piece of fiction. It is self-evident he became aware in 1905 that an unexpectedly large number of people had considered his account not credible. Further inside the text Root acknowledged he was not honest all the time. These are his words: "*do not understand, please, that your old friend who speaks to you on these pages claims that he is entirely honest ... I am trying to be honest and sincere from daylight to dark, and every day in the week; but with shame I confess that a good many times I can look back and see that I have made bungling work of it*".

The credibility of an implausible story, like the one about the September 20, 1904, flight of W. Wright, coming from a man that struggled to be honest, as Root himself declared, is quite low.

August 29, 1910, the day when the dream came true

August 29, 1910, a real important date, at least for A. I. Root, who finally saw, that day, with his own eyes a Wright plane flying. Unlike the January 1, 1905, fantastic tale, the write up "Then and Now. The Wright Brothers and Their Flying-machine up to Date." (Gleanings, September 15, 1910, pp. 602-604) with the account of what this businessman from Medina had seen near Dayton at the end of August 1910, is realistic, giving convincing details about what happened during his visit and while watching the plane taking off, circling the field and landing.

Root starts the article with the last lines of his "Our Homes" for October 15, 1904 (pp. 987-988). He said then that a machine that would "*float as easily and safely as the bees, the butterflies, and the carrier pigeons was already in sight*" which does not clearly mean a reality, something he had already witnessed on September 20, 1904. However, in this case, Root had an excuse because he had not received yet, in October 1904, the permission of the two brothers to write about their invention.

A. I. Root continued the introduction with his repetitive claim regarding *seeing the Wright brothers making their first successful flight* emphasising that: "*Gleanings was the first periodical on the face of the earth to announce to the world the crowning success of their years of experimenting in order to make a machine that would fly without a balloon*". It is not certain what he meant by "*the crowning success*". If he had in mind a long flight with a plane that made turns than *Gleanings* might be considered the first bimonthly which reported about such an achievement. However, as long as the newspapers in Dayton had already given, before the end of 1904, descriptions of flights more spectacular than the one presented in the January 1, 1905, issue of *Gleanings*, any priority claimed by Root, in announcing the final accomplishment of his younger friends, is null.

The Dayton Journal, on December 2, 1904, and Dayton Press, on December 17, 1904, both dedicated relatively long articles to the long series of flights performed by the Wright brothers at the end of 1904. One of them, the Dayton Press, even mentioned the date of September 20, 1904. This is what can be found printed:

1904-12-02, Dayton Journal, December 2, 1904

Wright Flyer Glides Through Air for Distance of Three Miles

... In order to demonstrate the efficacy of the aeroplane, a flight was made yesterday and a distance of three or four miles was made with perfect ease and precision. The machine proved perfectly dirigible and sudden and short turns were made with the same ease as the flight was maintained through a straight course.

The remarkable speed of fifty miles an hour was maintained throughout the flight ...

The Wright flyer is the only machine that ever lifted a man off the ground. The other inventions of this character have been of the airship variety, while

this is a true flying machine and is operated by means of aeroplanes, that serve as wings to carry the machine through the air. An even higher rate of speed is contemplated for it than has so far been achieved, as now, merely to avoid the necessity at this time of rearranging the engine and other equipment sufficiently to maintain the equilibrium of the machine, a weight of about seventy-five pounds was carried on the flight made yesterday. ...

The flight was made at a height of about forty feet above the ground. It had been contemplated by the Wright brothers to make several spectacular flights for the benefit of the public, but the weather has now become unfavorable for the best results and the work will be abandoned until next spring. The Wright brothers are especially gratified with the result of their experiments, inasmuch as experts have announced that the flight over the distance of a mile, together with the ability to pursue a circuit, would solve the problem of air navigation. Both have been accomplished and an excellent degree of efficiency attained in both. ... ("Wright Flyer Glides Through Air for Distance of Three Miles", Dayton Journal, December 2, 1904)

1904-12-17, Dayton Press, December 17, 1904

Trials Over for Season

... The new machine, which is 20 feet from rear to front, and 40 feet from tip to tip, is the first machine to make complete circles. Since September 20, the Wrights have made 20 complete circles with the machine. The machine carries no gas bag, but depends entirely on its gasoline engine for propelling power. The weight of the flyer is 900 pounds.

The longest flights yet accomplished by the machine occurred on November 9 and December 1, when the flyer made almost three miles in five minutes. The Wright brothers experiment station is situated in a field almost one mile square on the Torrence Huffman farm on Huffman Hill. All the experiments have been finished for the present season and the flyer is being brought back to the city for the winter. The Wright flyer is the only machine that ever lifted a man off the ground ... It is operated by means of aeroplanes, that serve as wings to carry the machine through the air. A speed of 40 miles an hour can be obtained. The only changes in the mechanism of this year's flyer were made in the steering apparatus, the success of which has been thoroughly demonstrated by the ability of the machine to fly through the air in circles. ("Trials Over for Season", Dayton Press, December 17, 1904)

Coming back to the September 15, 1910, article, Root says that at about 2 PM, on August 29, 1910, he reached *the old familiar field between Dayton and Springfield* with an invitation from one of the brothers. At first, he was disappointed because none of his two friends was present but after being informed by the young aviators, who were present there, *they would soon sail through the sky without any assistance from the Wright brothers, his disappointment began to give way*. People started to gather. One of the Wright machines was pushed outside of the building that housed it. Neither the catapult nor the rail was used. The plane had pneumatic tire wheels and rolled on them.

Root continued with a credible eyewitness description of the take-off procedure, giving precise technical details in deep contrast to the fantastic January 1, 1905, account. The pilot took his seat, two other people did the cranking by turning the propellers and a fourth man held the plane in place till the propellers reached their full speed. At a signal from the pilot, the machine was liberated, gained speed, the tires pressed less and less the ground and finally the plane rose gracefully into the air. It started to do circles and eights. When it went with the wind the speed appeared to be one mile a minute but when it made turns and especially when the apparatus came against the wind its speed diminished considerably in a visible way. Root also witnessed the plane flying with two people on board. This time the machine did not ascend so easily but finally it left the ground.

Besides informing his readers about what he saw on August 29, 1910, Root also made some remarks:

1) "I asked one of the Wrights what the comparative expense was going to be for gasoline compared with the amount needed, say, to carry four people in an automobile. He said he thought the flying-machine would

take less gasoline to do the same work". As a remark, there exist planes that use less fuel/passenger than a car, so the answer given by one of the brothers contained some truth.

2) "There are at present about half a dozen machines of this kind in service in the United States. I can not say how many there are in foreign countries; but there are several factories across the water ... The Wright brothers are at present employing 25 to 30 hands". About 6 Wright planes in service, spread across the entire US at the end of August 1910, was not a large number. The two brothers did not have too many clients.

3) "I might mention here that there has been some criticism in regard to the price — \$7500 — for each finished and fully equipped machine." The price was huge in comparison with what the newspapers had estimated about two years before. This is what A. I. Root mentioned in one of his two November 15, 1908, articles about the two inventors: "I noticed this morning the statement made in the morning papers that Wilbur Wright said a flying-machine need not cost more than \$300 when a considerable number of them are made at a time with adequate machinery." ("The Wright Brothers and Their Flying Machine up to Date", Gleanings, November 15, 1908, pp. 1390-1392)

4) "Once more, all the inventors of the world, for ages past, have never made any machine that would fly even a few rods — that is, and carry a passenger — until the Wright brothers did; and, if I am right about it, no one has ever since made a machine that would fly without making use of some feature of the Wright invention." Again the same old story according to which the two Daytonians were the first to fly an airplane, also no credible witness beyond any doubt saw their flight capable powered machine, in the air or on the ground, before 1908. No pictures or technical drawings, of a Wright plane, published before 1908, exist.

5) "As evidence of the comparative safety of the machines as now made, I will mention that Miss Catharine, sister of the Wrights, has made several flights, and the venerable father, Bishop Wright, was up about 350 feet, and in the air several minutes, recently." Milton Wright flew with Orville, on May 25, 1910, reaching a height of about 300 feet. The newspapers of the time wrote about this event. Here is a text from The Evening Star: "For the first time in his eighth-two years Bishop Milton Wright, father of the aviators, left the earth yesterday with Orville in a six-minute flight, and was taken 300 feet in the air." ("Wright's Rapid Descent", The Evening Star, Washington, D. C., May 26, 1910, col. 6, p. 1)

6) "Some of the papers reported the Wright Bros. had found a better engine in France than could be made in our country. Wilbur says this is untrue."

7) "While conversing with the brothers I made the remark that we had seen the bicycle go through an evolution ... I then remarked to the brothers, 'How long will it take for the flying-machine to go through a like evolution?'"

Orville replied at once, "Mr. Root, the flying-machine has already passed the period of evolution;" and he pointed me to the fact that the machine I was looking at that day, and admiring, was but slightly different in its main features from the one I saw years ago." Orville Wright later came with clarifications, which softened such a ridiculous statement, admitting that there would be many improvements but the successful flying machine would likely have propellers to push it through the air.

8) "Inventors all over the world have tried 'something different' — machines to float by the flapping of wings, as a bird flies, for instance; but their machines did not fly — that is, they do not fly unless they make it pretty near something in the line of following the Wright brothers from first to last." In reality, the historical evidence tells a different story. As an example, on November 18, 1907, Orville Wright, who was in France at that time, witnessed Henry Farman performing a series of flights in an attempt to win a prestigious aviation prize. The Wright brothers had not yet shown any plane up to that date. Their heavier than air apparatus was still a phantom. The public first saw a Wright machine on August 8, 1908, at Le Mans, France. In consequence, it was the Wright brothers who followed other inventors, not the opposite.

The November 19, 1907, Paris edition of the New York Herald dedicated an extensive article to the attempts of H. Farman to perform a 1-kilometre flight in a circuit. The trials were witnessed by many known personalities of the aeronautic world like Santos Dumont and Louis Bleriot. Orville Wright was also there and even gave an interview to a Herald reporter. Here are some relevant extracts from this text illustrated

with a few pictures, one of them showing the Farman plane flying and another Orville Wright standing:

Mr. Orville Wright Sees Mr. Henry Farman Compete for Deutsch-Archdeacon Prize.



THE AEROPLANE TAKING THE VIRAGE

... Mr. Henry Farman came within an ace of winning the Deutsch-Archdeacon prize of 50,000fr. with his aeroplane at Issy-les-Moulineaux yesterday afternoon. Had his motor worked with a trifle more regularity the money was his. He made at least ten excellent flights, but each time at the critical moment, when the apparatus with perfect balance was describing the curve the motor appeared to lack the necessary force, and the apparatus touched the ground.

The first flight, which took place about half past two, was one of some 600 mètres, finishing with a semi-circular movement, during which the wheels touched the ground. This was followed by half a dozen similar flights, all with the same result. ...

The Prize Nearly Won.

Just before dusk a final effort was decided upon. This time the machine left the ground easily and traveled down the field to the turning point at a good rate of speed. In the turning the wheels touched for an instant and again a few seconds later, but after this the rest of the circle was completed with ease.

For a moment the spectators appeared to think that the prize had been won, but this was not so. To win this Grand Prix de l'Aviation it is essential to complete the kilomètre in a closed circle without touching the ground in any way. ...

Among those present were: ... Mr. Orville Wright, of Dayton, Ohio; M. Santos-Dumont, M. Esnault-Pelterie, M. Deutsch (de La Meurthe), M. Archdeacon, M. Decugis, M. Delagrange, Mr. Maurice Farman, Captain Ferber, ..., Mr. O. Berg, ..., M. Blériot, ...



MR. HART BERG, MR ORVILLE WRIGHT, MR SAVAGE LANDOR

Mr. Orville Wright's Opinion.

Asked by a HERALD correspondent to give his impression upon Mr. Farman's flights, Mr. Orville Wright said he did not care under the circumstances to say much on the subject. In his opinion the flights accomplished by Mr. Farman were excellent, though he was surprised that the Deutsch-Archdeacon prize had not been won some months ago.

He thought that so far as flying in France was concerned, Mr. Farman easily took the lead over everyone else. He considered Mr. Farman an ideal aeronaut, and one who would probably help to develop the art of flying in a very great degree. ... ("Mr. Orville Wright Sees Mr. Henry Farman Compete for Deutsch-Archdeacon Prize", New York Herald, Paris, November 19, 1907)

Perhaps the most important words written by Root in the entire September 15, 1910, article are: "*During my first visits, years ago, before their patents were secured, I was asked to omit certain things in my write-up; but when I to-day asked if I could describe all I saw Wilbur replied, 'Mr. Root, you may tell any thing you choose about our work, providing you tell the truth.'*". The remark

made by the elder of the two brothers further disqualifies the old apiarist as a credible witness because it implies that he had not told the truth, all the time, in his previous articles about the two inventors and their machines.

"The Wright Brothers' Up-To-Date Flying-Machine" (Gleanings, October 1, 1910, pp. 628 and 640-641) is a continuation of the September 15, 1910, text and contains an interesting commentary of Root. During his August 29, 1910, visit, he noticed that the students of the two inventors "*swung around in a very large circle as there was quite a brisk wind*". Orville Wright explained to him that an expert aviator could make tight turns if the wind was weak. In other words, the planes of the two brothers, known as being highly manoeuvrable, needed ideal weather conditions, otherwise they could not turn exceptionally fast.

Regarding the tight turns Root further noticed that "*at a meeting in Boston, some of the Wrights' pupils were swinging their machines around on so short a curve that Wilbur interfered, and forbade their taking any more such risks*".

The air show Root referred to was organised by the Harvard Aeronautical Society being the largest aeronautical meeting held in America up to that time. It took place between September 3 and 13, 1910, and unofficially continued three more days ending September 16, 1910 ("Harvard-Boston Meeting", Aeronautics, October 1910, pp. 115-118). The great winner was the English aviator Claude Grahame-White who earned various prizes totaling \$22,100 plus \$7,500 the contract price for entry. The second and third places were occupied by two pilots, Johnstone and Brookins, flying on Wright machines. They won \$5,000 and \$4,250, respectively. The contract price for entry of both was \$30,000 which means that they earned sensible more money just for participation than from scoring points!

The editorial for November 1, 1910 ("Our Homes", Gleanings, November 1, 1910, pp. 703-707) is another document of a certain importance. From the first lines, without explicitly saying he had witnessed Wilbur Wright flying on September 20, 1904, Root reminded his readers he had seen the two inventors doing something, five years before:

"when I told you five years ago what I saw the Wright brothers do, I felt sure that flying would be a common thing in a year or two"

The first part of the text is about the religious belief of Root, which was also shared by the two inventors, that a good Christian has to keep Sundays as holy days, *days of rest from all of our duties and cares*, and not even transform them in holidays. As an illustrative example of what can happen if somebody does not respect this special day of the week, Amos Root presented the case of Eugene Ely, the only pilot who decided to start on Sunday, October 9, 1910, from Chicago with the intention to reach New York by the end of the week. All kind of bad things happened to him and finally he was obliged to abandon. The Wrights and others refused to fly. Incidentally, Eugene Ely flew on a biplane made by Glenn Curtiss, seen by the two brothers as their enemy, a man who used without right what is known today as ailerons which the two inventors claimed to be their own discovery. In reality, a description of ailerons appears in an English patent (A.D. 1868, 5th February. No 392) obtained by the inventor Matthew Piers Watt Boulton.

The second part of the editorial is titled "Aviation at the Cleveland Centennial" and its main subject is the relatively bad experience Root had at an aerial show held in a place called Lakeside Park, on October 15, 1910, or before, during the Cuyahoga County's centennial which lasted from the 10th of October to the 15th. The flight demonstrations, he witnessed, were below the promises of the organisers. Here are his words:

During the afternoon this one machine made four flights of three to five minutes each. There were no trials for duration, no trials for altitude, no speed contests, no flights with passengers, and no feats to compare with the ones the Wright students made on the afternoon I visited them. In fact, the whole afternoon seemed to be spent in fussing with the machines to make them go. ... what a poor tribute, to put it mildly, these people were paying ... to the Wright brothers who first demonstrated to the world that a machine could be *made* to climb up into the air without any balloon at all ...

Root was also revolted by some clips which put his friends from Dayton in an unfavourable light, emphasising at the same time the superiority of the Curtiss machines. This is the specific text:

It takes the combined efforts of a dozen men to haul the Wright flyer around on its cumbersome, wide-tired wheels and adjust it on the starting-rail before it is as nearly ready for a flight as is the Curtiss machine at all times.

The Wrights are content, on the other hand, with a machine which trundles along at forty miles an hour, and which must either return to its starting-rail before flying again, or else have the starting-rail brought to it.

As an answer to all these misleading statements Root explained that:

It *never* took a dozen men to haul around the Wright flyer, even in their first experiments. I know, for I was there; and at the very time this statement was made, it did not take any men (or boys either) to get the Wright flyers up to the starting-place. The aviator just starts his engine, and the propeller which carries it over the ground or through the air takes it up to the starting-point, even if it is *up hill*.

One more time, the old beekeeper mentions the first experiments of the two inventors, witnessed by him, without saying he had seen the plane flying. However, he comes with something new, never said before, Root saw, in 1904, the Wright machine being moved around on the ground by less than a dozen men.

In a paragraph Amos Root directly accuses Curtiss of *copying the Wright machine as near as he could*:

I have been informed on good authority that Glenn H. Curtiss visited the Wright brothers before he made a flying-machine at all. They extended to him every courtesy, and permitted him to look their machines all over at his leisure; but it would seem that, as soon as he left, he copied their machine as near as he could without too flagrant an infringement on their patents. At present I know nothing about the suit for infringement.

In reality, the Curtiss planes were single pusher biplanes similar to the 1907 Voisin machine. Such an apparatus, driven by Henry Farman, was seen flying by Orville Wright on November 18, 1907. Glenn Curtiss himself flew 1 kilometer, at Hammondsport, NY, on July 4, 1908, piloting a biplane, built by the Aerial Experiment Association, that was quite similar to the 1907 Voisin apparatus. The double pusher Wright biplane became known to the public on August 8, 1908, in France, at a moment when the heavier than air flying machine was already a reality.

Toward the end of the article, Root comes back to the bad things that happen if people fly on Sunday, giving as an example a failed aerial show that disappointed 7500 spectators at Belmont Park, Long Island, NY, on October 23, 1910.

Also the Wright team, composed of the pilots Hoxsey, Brookins, and Johnstone, was willing to fly, Wilbur Wright could not be convinced by the show organisers to allow his people to take off on Sunday, a thing highly appreciated by his old friend from Medina.

The period that stretches between February 15, 1911, and August 1, 1911, is characterised by several texts in *Gleanings* which mention the two Daytonians in various circumstances, some of them quite funny. Here is a commented list with all these articles:

- 1) "Sunday Papers, E. G. Lewis, Etc." (*Gleanings*, February 15, 1911, p. 119) starts with a letter addressed to Amos Root by a woman who considered the "funny sheets" of the Sunday and daily papers had a ruinous effect upon the minors. Root agreed that the very worst and most mischievous things somehow seemed to find a place in the Sunday daily

and, to illustrate his statement with an example, he presented the case of a misleading Sunday article which made him believe a large number of flying machines were competing at the 1904 St. Louise exposition. After forwarding the paper to the Wrights he was informed by them that *no such machines were on exhibition at St. Louis, and never existed at all except in the imagination of the reporter who was paid for "telling lies"*.

- 2) A short paragraph in *Gleanings* (March 15, 1911, issue, p. 160), which belongs to an extensive article signed Dr. C. C. Miller, quotes a text (ALIN CAILLAS, *L'Apiculteur*, p. 464) with some calculations, based on pure assumptions, regarding the distance covered by a bee each day and the total length traveled by the bees of a colony to make a certain quantity of honey. At one point in the paragraph a remark about the two Daytonians is made: "*As flyers, the Wright brothers are not in it with the bees.*" which has an unclear meaning. An interpretation would be that the two inventors did not fly as often as a bee.

- 3) In another column ("The Question of a Winter Nest and Its Relation to Locality", *Gleanings*, March 15, 1911, p. 191) Root just made this joke: "*I want to whisper a word to my good friends the Wright brothers. A year or two ago they made some experiments on a craft partly in water, and partly in air. Well, my ducks are experts in that trick.*". As an explanation, the two inventors publicly tested a hydroplane (without wings) in March 1907 ("Newest Invention of Wright Brothers Will Carry Their Aeroplane on Water", *Dayton Herald*, March 21, 1907).

- 4) The April 1, 1911, number of *Gleanings*, on page 198, contains a passage signed by a certain Mrs. H. G. Acklin, of Glendora, California, who, apparently talking seriously, asked the editor of *Gleanings* to tell the Wrights to perfect their flying machine so that *moving bees, supplies, and honey, to and from mountain canyons, by air, would be feasible*. As a remark, Root had already come with a similar idea in "Flying Apiaries" (*Gleanings*, May 1, 1907, p. 620).

- 5) Another text that contains some references to the Wrights is "Potatoes Shipped From Florida To Alaska" (*Gleanings*, August 1, 1911, p. 478). A newspaper article about an order, coming from Seattle, for three railroad cars of Hastings potatoes grown in Florida which were finally to be shipped to Alaska, triggered in the mind of the old Amos another unrealistic application of the flying machines. Also he realized it would take some time, he still had a faint hope to see potatoes delivered by plane from one extremity of the United States to the other.

"The Wright Brothers up to Date, and Something About Flying-Machines" (*Gleanings*, November 1, 1911, p. 674) and "Fireless Cookers, Fireless Brooders, etc., and, Finally, the "Fireless Aeroplane" " (*Gleanings*, March 1, 1912, pp. 147-148) are two articles about the *powerless flying-machine* of Orville Wright who *had left the ground on a glider, without any power whatever, and had gone up in the air and had remained stationary for almost ten minutes*. Root did nothing else but to repeat a story run by the newspapers of the time. An example of column announcing the great achievement of the younger brother is "Remains Almost Stationary in Air. Orville Wright Goes Up in Glider in Fifty-Mile Gale." (*The Times Dispatch*, Richmond, Virginia, October 25, 1911, col. 3, p. 1) which talks about O. Wright who drove a glider for a record time of 9 minutes and 45 seconds, on October 24, 1911. However, there is no word about the presence of some official witnesses able to certify such a feat.

Wilbur, who was not involved in those trials as can be seen from his October 27, 1911, letter sent to L'Aérophile, *had heard no word himself from his brother regarding his experiments in Kitty Hawk and had not the real facts himself*. Also, he recognised in the newspaper reports a mixture of *actual glides and many fanciful stories which he readily detected as probably fabrications*. Even for W. Wright, it was difficult to extract the truth from the media accounts.

A last word about the November 1, 1911, text would be that the old Amos used it, like many other of his columns, more as a pretext for stressing again that "*GLEANINGS was the first periodical in the whole wide world to announce the Wright brothers had made a flight of something like a mile, and whirled round and come back to the place of starting*".

In the March 1, 1912, article, Root comes back to the topic “*fireless aeroplane*” due to a short text, he had read in the *Cleveland Plain Dealer*, which sounds more like a joke. Even if he realized the paragraph could have been just *newspaper pleasantries*, the old businessman expressed his intention *to go and see that “fireless” and then tell his readers more about it*. Another thing that should be mentioned is that the Wright brothers and their sister had not yet completely forgotten their old friend because Root thanked them, in the same article, for their Christmas greeting sent *about the first of January 1912*.

“Chicken Thieves; What Shall We Do To Protect Our Valuable Stock From Their Depredations?” (Gleanings, March 15, 1912, pp. 182-183 (p. 182)), also starts with a totally discouraging title, contains an information of interest because, at one point, the old entrepreneur and apiarist affirms that *when he was witnessing the early experiments of the Wright Bros. he boarded with a farmer*. In a later article, “Aviation and Stimulants. Saloons and the “Chicken Business.” ” (Gleanings, February 1919, pp. 110-112), Root gives further details saying that in *that eventful summer, the farmhouse where he had board and lodging was kept by a renter by the name of Beard. Nights and mornings, before the Wright brothers got around, he became quite well acquainted with Mrs. Beard who was an invalid suffering from lung trouble*. In a letter to his friends in Dayton, written between the 22nd and 26th of September 1904, the old beekeeper wrote that *Mrs. Beard had promised to take care of his wife. Root wanted to have his wife enjoy with him that wonderful creation of the Wright brothers*.

All these represent evidence that, in the summer of 1904, the importunate aviation enthusiast was the guest of a person who lived close to the place near Dayton where the two brothers performed their experiments. Again there is no word from the old Amos regarding the flights he saw that summer. “*Early experiments*” does not automatically mean a plane travelling through the air.

A. I. Root himself does not mention Mr. or Mrs. Beard as witnessing any flight but in a letter dated December 6, 1904, and addressed to the Wrights he expresses his satisfaction that “*Orville went around four times without stopping on Dec. 1st.*”, an information he had obtained from *Torrence Baird* (identified as Torrence Beard, the son of the farmer David Beard), a man Root had asked to keep him updated, regarding the flights of the two inventors, with messages written on postal cards.

However, D. Beard appears as an eyewitness in a French article (“Nouveaux Détails sur les Frères Wright et Leur Aéroplane”, *L'Auto*, Paris, December 31, 1905) which is a translation of a letter written by Harry M. Weaver the brother in law of Frank Samuel Lahm, an American aeronaut living in Paris. At the request of Lahm, Weaver, who lived in Ohio, went to Dayton on December 3, 1905, to investigate the claims of the two inventors, especially the credibility of the spectacular series of flights that had ended on October 5, 1905. At one point he was brought by Orville Wright to a person identified as D. Beard who lived close to the field where the tests had been made. David Beard told Weaver about *experiments that had been taking place in front of his eyes for a long time and assured him there was no doubt regarding the flights which he had remarked often and especially the series that ended on October 5, 1905*.

This is the relevant fragment from the French article:

Pour des raisons faciles à comprendre, les frères Wright ont tenu ces expériences aussi secrètes que possible. Les voitures du tramway électrique passent toutes les trente minutes; ils ont arrangé leurs vols en conséquence et ont ainsi pu éviter d'être remarqués des voyageurs. Les fermiers d'alentour sont les seuls qui aient eu l'occasion de bien voir les expériences; après deux ans d'essais, ils étaient blasés là-dessus.

M. D. Beard habite l'autre côté de la route de Springfield, près du champ d'expériences; c'est chez lui que M. Wright m'a amené d'abord. J'ai trouvé

un homme intelligent, âgé de soixante ans. Il m'a parlé des expériences qui se passaient sous ses yeux depuis longtemps, et m'a assuré qu'il ne pouvait pas y avoir de doute quant aux vols. Il les a souvent remarqués et spécialement la série qui a pris fin le 5 octobre de cette année. (“Nouveaux Détails sur les Frères Wright et Leur Aéroplane”, *L'Auto*, Paris, December 31, 1905)

Neither the postcards of T. Beard, sent to A. I. Root, nor the declarations of his father, D. Beard, in front of H. M. Weaver represent solid evidence the Wrights had flown. Both of them, son and father, look like fraudulent witnesses instructed to tell lies. It is self evident that Orville would have brought Weaver in front of D. Beard only if he had been sure that this farmer was to confirm the flights. Also, the old Amos would have been directed to lodge in another location in 1904 had the Wrights have been uncertain about what the Beard family would tell him about them.

Coming back to *Gleanings*, its April 1, 1912, issue contains on page 216, inside a long *Our Homes* editorial (pp. 215-218), these lines: “*We have ... the flying-machine that the Wright brothers are still pushing further and further, that is to be the great excitement of the whole wide world in just a few weeks more*”. It is not clear what specific thing was in the mind of Root. He could have referred to the *powerless or fireless aeroplane* of Orville.

The death of Wilbur, a simple pretext for A. I. Root to repeat he had witnessed an epoch making event

The death of Wilbur, on May 30, 1912, determined his old friend to dedicate two articles to him in *Gleanings* for June 15, 1912. The first, “Wilbur Wright; What our President and Army Officers Have to Say in Regard to His Untimely Death.” (Gleanings, June 15, 1912, p. 21), is simply a series of quotations with the words of three main politicians of the time, including the US president, William Howard Taft, the only one who considered Wilbur as “*the father of the great new science of aeronautics*”. The secretary of war, Henry Lewis Stimson, referred to him as “*being probably the foremost exponent of aviation on this side of the Atlantic*” and major general Leonard Wood, chief of staff of the army, regarded the same inventor as “*the foremost figure in aviation in America*”. While Wood saw Wilbur as the most important aviation pioneer in the US (he did not say “in the world”), Stimson was not even sure the first born of the two brothers deserved such an honour inside the United States. He used the word “*probably*”.

The other article (“Our Homes. Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio.”, Gleanings, June 15, 1912, pp. 385-387) is more about A. I. Root who again tries to make credible his January 1, 1905, story by repeating that *it was his privilege to be present when the Wrights made their first flight of a mile or more, and turned a circle and came down to the place of starting*. The text is largely a recap of what Root had already said on various occasions, in *Gleanings*, about his pre-1908 visits to Dayton and the place where his younger friends performed their experiments.

From the first paragraph, the readers of his periodical are reminded that in the *March 1st issue of GLEANINGS for 1904* Amos Root first made mention of the two men, Orville and Wilbur Wright. He continues by stating that *he made many visits to the field just outside of Dayton, where they were experimenting during the summer of 1904*, without explicitly saying when those visits took place. For a while he was not allowed to publish anything regarding the activity of the two brothers but *finally, in the issue for Jan. 1, 1905, of Gleanings, he was given permission to write up what he had witnessed*. Root does not forget to stress that his article was *the first detailed account given in any periodical in the world of the experiments and final success of the Wright brothers*.

However, it should be noted that he adds an “*if I am correct*” which means he wanted to vaguely suggest he was not 100% sure. Root was perfectly aware the credibility of his January 1, 1905, story had been quite low because this is what he tells us: “*My write-up of the event was so astonishing that many people thought it was a piece of fiction to advertise our journal; and even so good an authority as the Scientific American did not see fit to credit my account*”. Root continues by explaining the Sci. Am. finally *apologized for its want of faith at first, in his plain and simple story*, but he does not bring any evidence.

A large part of the article is dedicated to the September 20, 1904, flight. The old Amos presents a more detailed version of the event but he omits to say what date it happened. He remembers that *one day he came on the ground just as the Wrights had succeeded in making the plane turn a curve so as to fly at right angles to its course*. This is a flight A. I. Root does not say he witnessed.

As a parenthesis, Wilbur Wright’s 1904-1905 notebook, pp. 18-19, contains information about two flights, both of them performed by the elder brother on September 20, 1904. The first one, marked no. 51 in a list of many pages, is 2520 ft in length and its trajectory has the shape of an S. The path followed by the second flight (no. 52), of 4080 ft, looks roughly like a circle. However, Wilbur’s notebook does not confirm in any way Root’s account regarding the flights of September 20, 1904. The old Amos and the two Daytonians exchange many letters during 1904, they also met, and so there is no guarantee that a copy of Wilbur’s notebook, page 18 and 19, containing data about two fictitious flights, did not reach the old beekeeper who, based on the information available there, wrote a piece of fiction.

Coming back to the June 15, 1912, article, we learn that Root found the two inventors preparing for their second flight of the day. They were about to abandon because of a thunder cloud but the old aviation enthusiast suggested to them *that they would have plenty of time to get around and get the machine safely housed*. Finally, Wilbur decided to fly, *he turned the curve at the end of the field, as before, and turned still another curve, and came around to the starting place*. Instead of landing, the plane unexpectedly continued his course in a straight line, a thing that alarmed Orville, Root and “*the mechanic*”, a person who is not named but can be identified as Charles Edward Taylor, the only employee of the Wrights. (According to the notebook that was already mentioned, two people, identified by their initials OW and CET, timed Wilbur at 1 min 35 2/5 sec and 1 min 35 1/5 sec, respectively.) This tense situation did not last too much because *the engine stopped, and the machine alighted as safely and as gently as a feather*. The old Amos and the other two people, who had watched the demonstration, hurried to the place where the plane had come to rest but, as he was considerably older than Orville and the mechanic, he was left behind and when he reached that location he found the two brothers arguing, the elder (the pilot) blaming the younger for the fact he was not been able to stop the engine *when he came back to the starting-place*. A. I. Root intervened and with a hand on Wilbur’s shoulder told him that he should *thank God for having permitted him to make the first flight since the world began, turning corners, and coming around to the stopping-place*. Only then the elder brother realized the importance of the moment.

It is not difficult to realize that Root, a man who filled his journal with the pronoun I, simply speculated the death of Wilbur to emphasize again, in a moment when nearly all readers of his journal had heard about this aviator from Dayton, that he was the first witness (other than the Wrights and their employee) of a flight in a circuit made by a man carrying plane.

Another episode mentioned by the old beekeeper refers to one of his visits that took place after the Wrights *succeeded in getting the*

machine to make circles in the air as long as they wanted to stay up, from which it can be concluded the event happened after October 5, 1905. Root met not only the two brothers but also Octave Chanute. The three were *discussing finances*. The old aviation enthusiast recalls that O. Chanute “*thought a million of dollars would be needed to put the invention on a sound financial footing*” and also that Wilbur’s answer was, with approximation:

“Mr. Chanute, I have no ambition to be a millionaire. So far as I am concerned, I think a hundred thousand dollars would be all I should ever have use for in this world.”

Wilbur might have made such an affirmation because the Agreement between the Wright Brothers and Arnold Fordyce (December 30, 1905) specified that their plane would be bought by France for the sum of 1,000,000 francs (200,000 dollars – not so far from that “modest” one hundred thousand Wilbur talked about in the presence of A. I. Root and O. Chanute) if some conditions were fulfilled.

Root does not explicitly say when he saw O. Chanute but in “Our Homes” (Gleanings, August 15, 1909, pp. 515-518 (p. 516)) he states he met the mentor of the two brothers a few years before July 30, 1909. The June 15, 1912, and August 15, 1909, articles might refer to the same visit.

Another episode, mentioned by the old beekeeper, happened *one day they were all out in the field with the machine while there was a cool northwest wind*. Unfortunately, the old Amos misses again the opportunity to precisely locate in time that event but from “Our Homes” (Gleanings, April 1, 1905, pp. 373-376 (p. 375)) it is clear the incident happened in the autumn of 1904. Root just repeats what he already said. *Wilbur was in his shirtsleeves* and when Root told him he would catch a cold he answered: “*That is not the way people catch cold as a rule*”. According to the elder of the two brothers, *people catch cold, by keeping themselves shut up in hot and poorly ventilated rooms and perhaps they may take cold by going out from such places*.

Another thing the old beekeeper talks about is the request of the two Daytonians, made *during his first visit, and while the Wrights were making application for a patent, regarding certain things Root was asked to avoid mentioning in print*.

A paragraph of the June 15, 1912, text is dedicated to the honesty of Wilbur. On his last visit, that was described in “Then and Now. The Wright Brothers and Their Flying-machine up to Date.” (Gleanings, September 15, 1910, pp. 602-604) Root, after witnessing flights performed with a Wright machine, asked if he could present in his journal what he had seen. Wilbur replied: “*Mr. Root, tell any thing you like, providing you tell the truth, and only the truth*”. Root explicitly quotes his Sept. 15, 1910, article and the answer of the elder brother is taken directly from that issue, so it brings nothing new. In the next sentence, the old Amos wonders *how many proprietors of the American establishments would have instructed a reporter of a magazine to avoid exaggeration in his relation of what he had seen*. In the opinion of the old beekeeper, the remark of Wilbur was a confirmation of his sincerity. However, another more logical interpretation can be offered. The elder of the two brothers knew that his older friend had the habit to lie in his write-ups and as long as, in 1910, he no longer needed overstatements about his planes and activity in general, he stressed that Root should not depart from the line of truth.

The old Amos also emphasises that *it was his pleasure several times to share Wright’s noonday lunches put up by that good sister Katherine*.

As in other articles, Root does not forget to prize the respect Wilbur paid to the holy day of the week by refusing to fly or even exhibit *the machine on the generally recognized Sunday of the world*. He also highly appreciated the invariable reply of the

Wrights: “Gentlemen, we are not in the show business.”, each time they were asked to exhibit their machine at State fairs or great expositions, even if big sums of money were offered to them. Root concludes by remarking that “the years they labored in perfecting their invention were not for the purpose of making money. It was to bless humanity.”. This is a totally personal and not supported by evidence opinion. If the Wrights had not been interested in getting rich, and their only desire had been to bless humanity, they would have given their invention to the world for free. Instead they just repeatedly claimed, starting with December 17, 1903, that they had flown in 1903, 1904 and 1905, making a lot of noise in newspapers. They showed no picture or technical drawing of their powered planes, before 1908, and finally the aviation appeared in France in 1906 without their help.

The next article in line is “The Wright Brothers’ Flying Machine in the Year 1912” (Gleanings, September 15, 1912, pp. 589 and 593). Some businessmen of Medina decided to bring a Wright plane on the local fairground on the Fourth of July. They were asked to pay \$1000 for three demonstrations with a total duration of no less than 45 minutes. According to A. I. Root, *the flights were a perfect success in every respect. He was present during all the flights and preliminaries and, while the apparatus was standing on the ground, he had a picture taken of himself, occupying the passenger seat, and the pilot Oscar Brindley. He further explained that the Wright Brothers only manufactured the machines, having nothing to do with renting them out for fairtime.*

Root had a long talk with O. Brindley who entirely agreed with him in thinking that there was but little danger of loss of life if the instructions furnished by the Wright Brothers were strictly complied with. To support such an affirmation he presented two examples of flights that ended tragically. The pilots are not named and it is not clear who manufactured the planes. In the first case, a crowd of people pressured an aviator to fly in conditions considered unfavourable by him. In desperation, he took off, had an accident and died. The second example is about a pilot who attempted a dive at great speed with a machine heavier than the ones he had ever operated before. The apparatus had a mechanical failure, near the ground, generated by the shock induced when it received the command to lift its nose up. It crashed and the pilot had the same fate as the first. However, whether the advice of the two inventors could be followed is debatable. Root himself, unwillingly, furnished two examples having Brindley as a protagonist and him as a witness. During one of the flights, a wing touched a telephone wire. Later, the same aviator failed to get off the ground due to a gust of wind.

If you tell a lie big enough and keep repeating it, people will eventually come to believe it

“The High Cost of Living, etc.; Something About God’s New and Precious Gifts.” (Gleanings, March 1, 1913, pp. 166-168 (p. 166)) and “The High Cost of Living; How our Missionaries May Help to Reduce It.” (Gleanings, July 1, 1913, p. 471-472) are two articles having, as their central point, a new vegetable, for the farmers in the US, called “dasheen”. In both texts, the two inventors from Dayton are mentioned in passing.

Root read about this unfamiliar plant, got enthusiastic, ordered samples and finally expressed his intention to make a present of a dasheen tuber to every reader of GLEANINGS who sent the subscription price for one year.

The old entrepreneur and beekeeper transformed in farmer started his March 1, 1913, column with a different subject, talking about his Buttercup chickens. One generation, that was three weeks old at the time, had learned, in order to save the trouble of climbing

over a high door step, just to spread their gauzy wings and sail out like a Wright flying-machine, for all the world.

In the second text (July 1, 1913), the old Amos reproduced a letter of a missionary in South Africa who received *Gleanings* for free and realizing he would not meet the conditions to get automatically a tuber decided to contact the editor of the journal and proposed him a deal, that was immediately accepted with great pleasure. Just to tell who he was, the missionary reminded Root that, due to him, he had been able to meet the younger of the two Daytonians. Here are his words: “It was through your kindness in sending me a letter of introduction to the Wright Brothers, while I was at home on furlough year before last, that I met Mr. Orville Wright (also father and sister), and saw him fly.”

“Remember the Sabbath Day to Keep It Holy” (Gleanings, September 15, 1913, p. 659) is another text of Amos Root where the central figures are the two aviators. The small article reproduces a few lines from a publication of a religious character, the *Sunday School Times*, that prized the determination of the two inventors to keep the Sabbath day holy even when the monarch of Spain asked W. Wright to perform a flight demonstration for him. The elder brother refused. The paper does not specify the date of this incident, localising it in time just with the explanation: “when Wilbur was at the high tide of his first foreign success, and was acclaimed everywhere” which means the years 1908 - 1909. There are 1909 documents, one of them being “Alphonse XIII chez les Wright” (L’Aérophile, March 1, 1909, pp. 107-108), but they talk about Wilbur flying in front of the sovereign at Pau, France on February 20, 1909 (that fell on a Saturday). The king Alphonse XIII of Spain witnessed two flights. The first lasted 28 minutes, the plane being manoeuvred by W. Wright. The second was 13 minutes long. This time Comte de Lambert was the pilot and Wilbur just occupied the seat next to him. It is true that the two aviators avoided flying during the holy day of the week but there is no evidence the story in the *Sunday School Times* is real.

However, the same paper is right when stating that *from their father, good old Bishop Wright, they inherited two sterling traits — character and a shrewd business sense.* The two inventors, or at least the elder, knew how to run affairs otherwise they would not have scammed the French government making it pay them 25,000 francs as penalties, in 1906. No plane was shown, not even one standing still on the ground. This episode was already explained. You can reread the paragraphs that contain references to the “Agreement between Wilbur and Orville Wright and Arnold Fordyce” (December 30, 1905) and the letter of the French war minister, dated September 4, 1906 (“Le ministre de la Guerre à M.M. Wright frères 1127 West Third Street Dayton-Ohio”, Paris, le 4SEPT1906).

Root finished his moral lesson by expressing a lot of admiration for Wilbur who *was not afraid to stand up before men, even kings, and confess their respect for God’s holy word.*

The next two articles in *Gleanings* related to the Wrights (January 15 and February 15, 1914, issues) treat a variety of topics that will be explained one by one in detail. Starting from the pretext that his journal *was the first periodical on the face of the earth to give an eye-witness account of the Wright brothers’ first flight to make the machine come back to its starting-point*, A. I. Root considered *his journal should occasionally notice the progress that was being made in navigating the air.*

1) The first big aviation achievement of the time, that attracted the attention of the old beekeeper, consisted of a series of spectacular flights performed by Adolphe Pégoud, a pilot who succeeded at Juvisy, France in flying, with his Blériot-Gnôme 50 HP plane, upside down on September 1, 1913, and then he looped the loop at the Blériot airfield, Buc, near Paris, three weeks later, on the 21st of September. Details about these aerial stunts can be found in L’Aérophile (“Une audacieuse

expérience de Pégoud. Il vole la tête en bas décrivant un S magistral.”, L’Aérophile, September 15, 1913, pp. 420-421) and (“Pégoud poursuit ses extraordinaires expériences. Il remplit son audacieux programme et boucle la boucle plusieurs fois.”, L’Aérophile, October 1, 1913, pp. 447-448). The source of information used by Root was an extensive article in the Independent (Henry Woodhouse, “Safety and Stability in the Aeroplane of Today”, The Independent, October 23, 1913, pp. 166-168).

2) The next topic is about airboats (flying boats) and hydroplanes (floatplanes) and starts with quoting the closing paragraph of the same article in the Independent that talks about two pilots who flew from Chicago to Detroit, 900 miles, which they covered in 900 minutes. Such a race was advertised in the summer of 1913 as can be seen in the newspaper article “Leaders Are Off Again in World’s Greatest Aero-boat Race; 900 Miles by Water and Air, From Chicago to Detroit for Prize of \$17,500” (The Seattle Star, July 12, 1913, p. 6). The text in the Independent ends with the remark according to which *the four principal aeroplane constructors — the Wrights, of Dayton, Ohio; Curtiss, of Hammondsport, New York; Burgess, of Marblehead, Massachusetts, and Benoist, of St. Louis, Missouri*, were all developing water aeroplanes.

The Wright factory was really trying to make and sell planes that took off from the water as can be seen in an interview given by the superintendent of the company, Grover Cleveland Loening, and reproduced by the Sun (“New Aero-boat to Go 67 Miles in an Hour. Stability and Speed Combined in Orville Wright’s Latest Invention.”, The Sun, New York, August 11, 1913, col. 6, p. 2). At the time the article appeared, Orville’s firm was already prepared to sell a hydroplane named C-H which, using only a 60 HP motor, had carried up to four people, according to Loening. The text is illustrated with the picture of a Wright floatplane resting on water. The term *aero-boat* does not really refer to a flying boat in the modern sense of the word.

A different article (“Final Tests of New Wright Aero-boat. Success Crowns Trials.”, Dayton Daily News, November 23, 1913) shows three pictures with a new model that was a real flying boat. The essays took place on Saturday, November 22, 1913. *The craft was flown by Orville Wright and Oscar Brindley*. The text mentions a few technical characteristics: speed – one mile a minute, total weight in flight – almost 1800 pounds, lifting capacity – over 600 pounds, engine – 6 cylinders and almost 70 HP. It is also mentioned that the *aero-boat was designed by Grover C. Loening of New York under the direction of Orville Wright, and was entirely built at the Dayton factory*.

Also Amos Root acknowledged he was not prepared to say exactly who should have the credit for the water aeroplane, he was inclined to think the Wrights were the first in the world to experiment with hydro-aeroplanes. Definitely, he was wrong. In one of his own older articles (A. I. Root, “Flying Through the Air, Skimming Over the Water, Etc.”, Gleanings, May 15, 1907, p. 720) which quotes a text from a Dayton newspaper (“Wright Boys Score Another Triumph”, Dayton Journal, March 21, 1907), the following paragraph can be found: “*This is not the first hydroplane that has been invented, although never before has such a craft been seen in local waters, or ever been devised by any one in this section of the country.*”. In conclusion, the journalists were well aware in March 1907, when the Wrights performed experiments with a machine (without wings) that floated on water and was pushed by two counter-rotating aerial propellers, that such an apparatus was not their invention.

3) The third and the last matter, in Root’s January 15, 1914, text, is about the single propeller aeroplane of Orville, baptized model “E” and tested by the inventor himself on October 6, 1913. The apparatus was made especially for exhibition purposes. According to the Cleveland Plain Dealer, quoted by the old Amos, “*in a test against time a flight was made, and the entire machine dismantled and loaded ready for shipment in twelve minutes*”.

4) One month later, the same aviation enthusiast came with another article (“Flying To Be Made Safer in the Near Future”, Gleanings, February 15, 1914, p. 159-160). His source of information was the Cleveland Plain Dealer which extensively quoted some affirmations of Orville made before January 5, 1914. The text is about an automatic stabilizer invented by the two brothers about which the one still alive claimed that *it was more accurate than any aviator could be and would make flying fool proof. He also said he had flown many miles with it and had never touched the controls*. The Cincinnati Enquirer (“Wizard Orville Wright Demonstrates ‘Fool-Proof’ Aerial Device, Which Is Expected To Revolutionize Present Methods of Warfare”, The Cincinnati

Enquirer, January 4, 1914, p. 1) quotes the same statements of Orville presenting them as a special dispatch from Dayton dated January 3, 1914.

Amos Root closes his article with this remark: “*Judging from a pretty close acquaintance with Orville Wright, I feel sure he would not express himself so hopefully were it not that he has some very good reasons for so doing.*”, an affirmation that can be interpreted as showing some slight doubts the old apiarist and entrepreneur had. As a note, all the plane stabilizers based on the pendulum principle (like the one employed by O. Wright) were regarded with scepticism at the time. For example, the author of a text, published by L’Aérophile in its October 1, 1913, issue, considered such a device the equivalent of a human co-pilot with slow reflexes, able to drive the plane in favourable atmospheric conditions but being inferior to his master:

Nous considérons un stabilisateur pendulaire comme une sorte d’aide-pilote, ne possédant que des réflexes moins prompts que ceux de son maître, mais toujours égal à lui-même et remplissant exactement son rôle dans la mesure de ses moyens. A cet auxiliaire, lorsque les circonstances atmosphériques ne sont pas trop défavorables, le pilote peut abandonner les commandes pour satisfaire aux exigences de sa mission, observer, prendre des notes ou des photographies, toutes choses qu’il ne pourrait faire, seul, que très imprudemment sur un appareil ordinaire, non stabilisé. Il pourra même user de son auxiliaire pour se reposer momentanément de la conduite de son appareil, si toutefois ses fonctions et sa responsabilité professionnelle l’y autorisent; car il ne doit pas oublier qu’au cours d’une randonnée aérienne les surprises sont toujours à craindre, même par le temps en apparence le plus favorable. (L. H., “Stabilisation Automatique des Aéroplanes. Sur les Stabilisateurs Pendulaires.”, L’Aérophile, October 1, 1913, p. 436)

In reality, an autopilot based on the pendulum principle is fundamentally flawed because the pendulum aligns to the vertical, after finishing its damped oscillations, just in a few particular situations like the ones in which the suspension point is at rest or moves at a constant speed as a vector. This is not the case inside a plane. A technical drawing of the Wright stabilizer is available in L’Aérophile (P. James, “Le Stabilisateur Automatique Wright”, L’Aérophile, February 1, 1914, p. 59). The pendulum supposed to efficiently control the roll stability can be clearly seen in the image.

Using various pretexts, A. I. Root continued to refresh the memory of his readers with the story according to which he had seen the Wright brothers flying in 1904. No less than four such articles can be found between February 15, 1914, and September 15, 1915.

1) “Dasheen, Flying-Machines, and Something About God’s New and Wonderful Gifts to Us in 1914” (Gleanings, February 15, 1914, p. 160) contains a text dedicated to an air passenger service, between St. Petersburg and Tampa, Florida, that used the flying boats of Tom W. Benoist, one of the leading aircraft manufacturers in the United States. As an introduction for such an achievement that ten years before, in 1904, was just a dream, the old Amos reminded the buyers of his journal that *the world laughed when he told what he had seen after visiting the Wright brothers*. Again, he is vague and does not explicitly say what exactly he witnessed.

2) Nine months later, in “Our Homes” (Gleanings, November 15, 1914, pp. 913-916 (p. 915)), the old beekeeper, one more time, wrote something about the two inventors stating that “*The Wright brothers could not have invented their flying-machine without gasoline*”. As a parenthesis, on October 7, 1906, the Romanian aviation pioneer Traian Vuia flew 4 meters at a height of about 15 cm in a single tractor monoplane powered by a steam engine that used carbonic acid instead of water. This was a public test controlled by Ernest Archdeacon and Édouard Surcouf, members of the French aero club (Auguste Nicolleau, “L’Aéroplane Vuia”, L’Aérophile, October 1906, pp. 242-243). Wilbur Wright was first seen flying, beyond any doubt, on August 8, 1908. If the gasoline motor had not existed the aviation based on steam engines would have been possible.

3) In “The Flying-Machine — A New Use For It.” (Gleanings, August 1, 1915, p. 649) A. I. Root, visibly marked by the First World War, recalled an episode that happened when he was having such an enjoyable time in being with the Wrights when they made their first experiments (as a remark, the word “experiments” is used, not “flights”). His enjoyment was greatly marred on being informed by Wilbur Wright that the flying machine would probably be of more use in war than as a vehicle to assist commerce and travel. The old businessman and aviation enthusiast presents what the elder of the two brothers told him as a personal original prediction of this inventor, something that he saw fulfilled before his eyes,

in 1915. In reality, the potential of heavier than air flying machines as weapons was envisioned by many others before. The French war office even financed the engineer Clément Ader to build a plane for military purposes. On October 14, 1897, Ader's aircraft was seriously damaged while attempting a take off in front of an official military commission. The apparatus never left the ground. Therefore, there was nothing new in that prophecy of Wilbur.

4) One month and a half later (Gleanings, September 15, 1915, p. 782) Root advertised a book titled "The Story of Art Smith" about an American aviator. As expected, he did not miss the opportunity to remind his subscribers *he was with the Wright brothers when they made their first flight that succeeded in bringing the machine back to the place of starting*. This businessman from Medina, Ohio, really believed that if he repeated the same lie often enough his January 1, 1905, tale would become an accepted truth.

At the end of 1915 ("The Wright Brothers' Flying-Machine Factory at Dayton, Ohio.", Gleanings, December 15, 1915, p. 1047), the old Amos wrote a short article to inform the clients of his publication that *Orville Wright had sold his factory*. Many newspapers of the time dedicated space in their columns to that transaction. One example is this announcement:

DEAL IN AIRSHIPS

Orville Wright Sells Interests in Wright Aero-plane Company.

New York, Oct. 13. — Orville Wright has sold his entire interest in the Wright Aeroplane Company, at Dayton, O., to a syndicate consisting of William B. Thompson, Albert H. Wiggin, president of the Case National Bank of New York, and T. Frank Manville, of the H. W. Johns-Manville Company, according to an announcement made here today. ...

All negotiations for the purchase of the Wright company have been completed in New York and the stock will be transferred within a day or two. ...

Dayton, O., Oct. 13. — The sale of the Wright aeroplane factory was for a consideration of approximately \$1,500,000, it was reported here today.

Orville Wright has been in ill health for nearly a year ...

"The sale includes everything," he said, "I shall retain some stock in the company and probably will be consulted in an advisory capacity. I will give my time to scientific research along the lines of aviation. I think I shall enjoy the respite from business cares."

("Deal in Airships. Orville Wright Sells Interests in Wright Aero-plane Company.", Evening Times-Republican, Marshalltown, Iowa, October 13, 1915, col. 2, p. 1)

Root was unsure about the real reasons which determined the younger of the two brothers to sell his company but he speculated that Orville might have done it *because he was averse to furnishing machines for war*. The old apiarist and entrepreneur was definitely wrong. The telegram sent by Brigadier General James Allen to the Wrights, on February 8, 1908, informing them their bid, to deliver a plane to the US War Department for \$25,000, had been accepted, is evidence the two inventors did not care too much their machines would be used for military purposes and killing people.

At this point, it is worth mentioning a letter, the last one that can be found, sent by A. I. Root to the Wrights, on September 14, 1915. The old Amos started his text by recommending that Orville read "The Story of Art Smith". He even sent a clipping from *Gleanings* with the article where he advertised the book. It is clear from the content of the letter he had not been in touch with the Wrights for a long time because he wrote: *"I suppose your good father is still alive as I have heard nothing to the contrary and I trust your bright and able sister is still living to see the success of her brother's work."* From the same text, we learn that Root had not found, in the newspapers, too much information about the company of Orville. However, he knew that it was *quoted at a million Dollars or over* and he reminded his younger friend that *he once said their invention would be worth a Million Dollars. He was glad to see his*

prediction, so far, verified. The letter is unfocused. It might appear that the old beekeeper just intended to find out new things regarding Orville's factory and publish something about it because he explained that *Wilbur once said to him that he might write up whatever he saw, providing he told the truth, and he presumed Wilbur had meant nothing but the truth*. This affirmation can be interpreted as an assurance that, in case he had received news from Orville he would not have written in *Gleanings* things not approved by him.

The next article ("Aeroplane Development", Gleanings, April 15, 1916, p. 335), where the two inventors are mentioned, is about the contribution World War I had in revolutionising the aeroplane or at least this was the opinion of the old Amos who, at the same time, felt the need to stress the idea according to which *there had been no radical departures from the early models of Orville and Wilbur Wright, although there existed, at that time (1916) many varied arrangements of the wings*. In reality, the planes used during the First World War were most of them single tractor biplanes, quite different from the double pusher apparatus with a front elevator flown by Wilbur in France, on August 8, 1908. Using Root's way of reasoning one can arrive quickly at the conclusion that a WWII Messerschmitt 262 did not depart too much from the first planes of the two brothers.

An article in Collier's ("The Title to an Honor", Collier's, January 6, 1917, p. 11) attacking all those who had made *efforts to rob the Wrights of their hard-earned title to being the originators of the art of flying*, as A. I. Root persisted in claiming, determined this businessman from Medina to reproduce its integral text in his journal ("Wilbur and Orville Wright", Gleanings, April 1917, pp. 300-301). According to Collier's, that is vague and does not give names, *a group of men took out of the Smithsonian Institution the old Langley machine which had been wrecked in launching*, operated numerous modifications on it, added a number of devices that were the inventions of the Wrights and finally succeeded in making the apparatus *not fly but hop*.

A 1914 newspaper article ("Langley Folly Flies", The Alma Record, Alma, Michigan, US, June 4, 1914, col. 3, p. 3) partly confirms the version of Collier's, stating that *at the request of Secretary Charles D. Walcott of the Smithsonian institution, Glenn H. Curtiss (an enemy of the Wrights) had Langley's machine sent to his factory at Hammondsport, N. Y. where it was fitted with pontoons, the wings were covered again, and the engine was tuned. The apparatus demonstrated the ability to raise itself from the water*. According to Curtiss, *the machine demonstrated that the principles embodied in its construction were correct*.

As a remark, Orville, quoted in the same 1914 article, did not accuse Curtiss of adding devices created by his brother and him. He simply affirmed that *there was nothing in common between the two machines, Langley's system of control being entirely different from that of the Wright machines* and then he stressed that *Langley's plane was tried out ten days before Wrights' successful flight in 1903 and failed*.

Unfortunately, while Samuel Langley's lack of success on December 8, 1903, was witnessed by a numerous public, the December 17, 1903, flights of the two Daytonians still rest completely shrouded in mystery like all their powered flights performed before August 8, 1908. In consequence, the closing paragraph in Collier's, according to which *"the Wright brothers were the first persons to leave the earth in a mechanically propelled plane"*, remains just a pure belief based on trusting the word of the two inventors, more precisely a telegram sent by Orville to his father, on December 17, 1903, and a letter with clarifications addressed to the press (see: "Wright Flyer. A Report of Late Tests Is Given by Messrs. Wright, Inventors of the Machine.

Interesting Description of the Trials Made at Kitty Hawk.”, Dayton Press, Ohio, US, January 6, 1904), both of them containing simple claims. There is no word about witnesses and no picture or technical drawing of the plane is present. More, an obvious misleading statement can be detected by comparing the text of the telegram (where with the words “*inform Press*” Milton Wright was clearly instructed to make public the success of his sons) and the January 6, 1904, explanatory article in which the brothers talk about *the contents of a private telegram, announcing to their folks at home the success of their trials, that was dishonestly communicated to newspaper men at the Norfolk office*. They also say, in the same newspaper column, that *it had not been their intention to make any detailed public statement concerning the private trails of their power “Flyer” on the 17th of December 1904*.

As can be seen, the Wrights fail to make clear that the intended final beneficiary of the telegram was the American public, at least the inhabitants of Dayton. As it is formulated, the January 6, 1904, article misleads the readers making them to believe that a message, not destined for a large audience at all, reached some dishonest newspaper men, was distorted and finally *a fictitious story incorrect in almost every detail was very widely disseminated* (see: “Flying Machine Soars 3 Miles in Teeth of High Wind Over Sand Hills and Waves at Kitty Hawk on Carolina Coast”, *Virginian-Pilot*, US, December 18, 1903, p. 1). In reality, there is no solid evidence a licked telegram was the source of inspiration for the fanciful account, in the *Virginian-Pilot*, which spread like wildfire.

It must be stressed that not all the daily papers got the story wrong. There are articles like “Dayton Boys Solve Problem” (*Dayton Herald*, Ohio, US, December 18, 1903) or “Dayton Boys Emulate Great Santos-Dumont” (*Dayton Daily News*, Ohio, US, December 18, 1903) which reproduced the telegram, just with minor changes to make it more readable, without distorting its contents in any way.

It seems ridiculous, but the most serious evidence, behind the December 17, 1903, powered flights, consists of a short text cabled to Dayton and a letter, of the two brothers, with further explanations. Both documents were published immediately.

Coming back to the April 1917 text in *Gleanings*, a more hidden goal can be detected behind it. A. I. Root used the pro Wrights article in Collier’s as a pretext to repeat once again *he was with the Wright Brothers when they made their first success in getting the machine to turn around and come back to the starting-place*. It should also be remarked that this is a rare case in which the old apiarist, entrepreneur and aviation enthusiast indicates precisely the page and issue of his journal where the story, that made the world aware of what he had seen, can be found. These are his exact words: “*GLEANINGS was privileged to give the first account, by an eye witness, of their invention of any magazine or periodical in the world. See GLEANINGS for January 1, 1905, p. 32.*”

Also of little relevance, it is the right moment now to mention a letter dated August 18, 1917, and addressed by Orville to the A. I. Root Company. It contains just an order for a quantity of wax, “*Gentlemen: Kindly send me by Parcels Post ten pounds of beeswax.*”

The next letter in line, marked April 15, 1918, was written by H. H. Root (one of the old Amos’ sons) to O. Wright as a means to express his regret he was not at home when Orville came. Its content is significant to a certain extent because H. H. Root stated somewhere inside the text: “*all of us appreciate your kindness to father in those early days when you were making those first, wonderful, revolutionary experiments*”. As a remark, he did not use the word “*flights*” preferring to say “*experiments*” which is a vague term. There is no doubt the Wrights performed some tests in 1904

but this does not mean they flew a man carrying powered plane that year.

Another thing of some value is the affirmation of H. H. Root that his father *treasured every reference to Orville (the Wrights) that he saw in the newspapers, and he had watched their work with what was almost a fatherly interest.*”. This is correct as long as the old Amos often published in his periodical various updates about the two brothers, but it is also equally true he did it to emphasise he was the first witness of a real life plane that had even flown in a circuit since the world began, a fraudulent claim.

“*Aviation and Stimulants*” plus “*Saloon and the “Chicken Business”*” (*Gleanings*, February 1919, pp. 110-112), an article composed of two parts, is the next text connected to the Wrights and at the same time one of the most important because it contains Root’s memories about his direct interaction with the two inventors, in 1904.

A few lines in the *Sunday School Times*, for October 3, 1918, that made reference to *a widely circulated opinion against the use of alcohol in flying expressed by one of the brothers*, recalled in Root’s mind *a number of incidents*, that had happened in 1904, which he condensed in a few paragraphs permitting to all those interested in identifying the truth, in the intricate Wright affair, to have a relatively clear picture of what really this businessman from Medina witnessed.

Amos Root recalls that at one point he had *an intimation that the Wright brothers were experimenting with a flying machine* (“*Our Homes*”, *Gleanings*, March 1, 1904, pp. 240-243 (p. 241)). Then *he felt as if he could not rest unless he went down to Dayton to see the brothers’ work*. This state of exaggerated impatience can be traced in his letters sent between February 16 and July 26, 1904. After months of persistent insistence, he received the green light and *started on his trip with an automobile. He found the Wrights on the very same aviation grounds, still in existence at the time the article was published or the day the text was written (October 19, 1918), a few miles east of the city of Dayton. He obtained board and lodging at a farmhouse near by which was kept by a renter by the name of Beard. All these happened during that eventful summer (of 1904). Root remained for a few days with the Beard family and during the nights and mornings, before the Wright brothers got around, he became quite well acquainted with Mrs. Beard, an invalid suffering from lung trouble. Before the winter’s snow came on, Orville Wright wrote A. I. Root that his good friend Mrs. Beard had died of “quick consumption”.*

Regarding the tests of the two inventors, the old aviation enthusiast declares that *at first he was somewhat worried for fear the brothers would not care to have a spectator hanging around, and maybe meddling while they experimented with an apparatus that might mean death instead of success in navigating the air like a bird*. Root also noticed *the neighbors seemed to take no particular interest in the experiments and him and the Wrights were, most of the time, a good deal alone, and they soon became fairly well acquainted with each other*. At one point *the brothers insisted that their new friend should go home with them and get acquainted with their sister Katharine*.

Next morning at breakfast a small incident happened. *Katharine passed Root a cup of coffee*. He accepted it out of courtesy also he drank coffee only *on special occasions just to be like other folks*. *The two brothers shook their heads, declining the offer*. Root felt a bit embarrassed believing the coffee had been made just for him. However, one of the two inventors gave him this explanation:

“*We do use coffee to some extent ordinarily; but today we expect to make one or more flights; and when we are going to handle that flying machine we want every bit of strength of mind and body to enable us to do just the right thing at just the right time; and we have learned by experience*

that a cup of coffee is a detriment and a hindrance; therefore no coffee in the morning when we expect to make flights during the day.”

As can be seen, also the word “flights” appears in the text, the old beekeeper missed again the opportunity to mention he had witnessed at least one.

The last piece of information, that is worth some attention, is the affirmation made by the old Amos according to which *Katharine, who was at the time a school-teacher, had helped more or less in financing the boys in their novel undertaking*. No further explanations are provided.

In “Our Homes” (Gleanings, June 1919, pp. 392-394) Root reminded again his readers he had a granddaughter *Catharine named after the sister of the Wright brothers* and then he reproduced a passage from *the Hummer, a little periodical of which Howard Calvert, his grandson, was the editor*. Writing about his grandfather, who at that time was quite enthusiastic about his electric automobile charged by a windmill, H. Calvert considered that *the success of A. I. Root’s prophecy regarding wind power would be assured in years to come in much the same way as the success of the Wright Brothers’ airplanes, predicted by his grandfather several years before aviation was perfected, had already become reality*.

As a remark, H. Calvert does not really say Amos Root witnessed the two Daytonians flying in 1904. He just wrote his grandfather had made some predictions regarding the future of aviation and his prophecies materialized a few years later.

The same issue of *Gleanings* contains an article about a record flight made by Maj. T. C. MacAuley who flew *from San Diego, California, to Jacksonville, Florida, in 19 hours and 15 minutes*, total time in the air (“From San Diego, Cal., to Jacksonville, Fla., in 19 Hours and 15 Minutes.” (Gleanings, June 1919, pp. 394-395). It has to be mentioned that this was not a continuous flight, but the old apiarist realised that, in theory, *it would have been possible for one to get an early breakfast in San Diego and a late supper in Jacksonville all in one and the same day*.

However, this coast to coast record looks more like a pretext used by the old beekeeper to repeat the story regarding what he saw on September 20, 1904. This is his introductory word about the flights of Maj. MacAuley:

I have mentioned one or more times that it was my great privilege to be with the Wright brothers when they first made their flying machine start out and turn around and come back to the starting place.

Two months later (see: “Our Homes”, Gleanings, August 1919, pp. 535-537 (p. 536)), while talking about the predictions he had made in the previous 60 or 65 years, Root again reminded his readers that:

... when the Wright brothers first made that wonderful flight and whirled around and came back to the place of starting, he said that the feat would some time be recorded side by side with that of Columbus when he discovered America.

The next article of interest is “Our Florida Garden and Some Glimpses of Our Florida Home” (Gleanings, August 1919, pp. 538-540) where, one more time, Root refers to his January 1, 1905, tale, while explaining that beside him, in a picture, was *Huber’s* (one of his sons) *daughter, Katharine who was named after the sister of the Wright brothers who invented the flying machine*. He further explains that *Miss Katharyn Root was born shortly after the Wright brothers made their first successful flight and got back to the starting place*, stressing that *an account of that event was first written up (and first given to the world) in Gleanings in 1905*.

In “Our Homes” (Gleanings, July 15, 1909, pp. 446-448 (p. 447)), the old Amos has a slightly different version for the given name of his granddaughter, born on June 20, 1909, at a distance of four years and nine months from the historic flight in circuit which

he said he had witnessed on September 20, 1904. Here are his words:

As Miss Katherine Eva Root is only about three weeks old to-day, July 10, ... as her father and mother are both very nice-looking young people, ... I congratulated them on having named her after Miss Katherine Wright, sister of the Wright brothers, who is just now, with those brothers, almost the center of attraction to the whole world. (“Our Homes”, Gleanings, July 15, 1909, pp. 446-448 (p. 447))

Huber’s daughter was not born so shortly after that flight in circuit of Wilbur, allegedly witnessed by her grandfather, but much later at a time when the two inventors and their sister were already known in the entire world and their celebrity of 1909 was the real reason Root’s granddaughter was named after Katherine Wright not the fantastic event of September 20, 1904.

“Away Up High, Papa’s Baby” (Gleanings, October 1919, pp. 679-682 (p. 680)), the next article where the two Daytonians are mentioned, is of particular importance because it tells us that the old businessman finally flew, during the 1919 county fair organized in Medina, and had the opportunity to see his town from above. A. I. Root gives an extensive and realistic description of the flight, specific to people who share their impressions with others after travelling through the air for the first time.

After explaining that the flying machine was one of the inducements brought there to attract people to the fair, he made this affirmation:

Inasmuch as I was with the Wright brothers during their experiments, and witnessed their first successful flight in getting around to the startingplace, everybody took it for granted that *I* would be the first one to fly.

It is not quite clear what he meant by “everybody” but it is self-evident Amos Root attempted again to strengthen his claim he had witnessed Wilbur flying on September 20, 1904.

He first refused to get on the plane because of his advanced age but after one of his daughters, Constance Root Boyden, broke the ice and went up reaching the neighbourhood of the clouds, the old entrepreneur finally consented. He was equipped *with a sort of fur-lined hood* and the apparatus took off, with him as a passenger, seriously shaking him *as the machine bumped over the rough meadow lot, uphill toward the north*, and making him to almost regret for a short while his decision to fly. However, *when all of a sudden the beautiful machine slipped up noiselessly into the air, a wonderful thrill of thanksgiving and praise came into his heart, that it was finally his privilege to go up in a flying-machine*.

Another column touching the subject “The Wright brothers” is “A. I. Root As His Daughter Sees Him” (Gleanings, March 1921, pp. 171), a text that simply reproduces the article “One of the Farm Journal’s Oldest Friends, Amos I. Root, the Bee Man” which appeared in the Farm Journal for January 1921 and was written by his daughter, Constance Boyden, the one who flew in 1919 and encouraged his father to do the same.

The text is mainly about the multitude of hobbies the old beekeeper had: electricity, wind power, bees, gardening, growing chickens, etc.. Regarding aviation, this is what C. Boyden wrote:

He was one of the first keenly interested in aviation, being a confidant and friend of the Wright Brothers when they were making their first secret attempts at flying.

As can be remarked, the text does not explicitly say Amos Root witnessed the Wrights flying in 1904. The daughter of this entrepreneur just says her father was a *confidant* of the two inventors at the time *they were making their first secret attempts at flying*. *Confidant* does not automatically mean eyewitness and *attempts at flying* is not necessarily the equivalent of manned powered flights. As it is formulated, Constance Boyden’s sentence

is just a carefully worded message susceptible to various interpretations.

In "Flying-machines Versus Horses, Trucks, Railways or Steamboats" (Gleanings, June 1922, pp. 402-403), another text that contains the name of the two inventors, A. I. Root comes back to his old idea according to which *the cheapest way to move freight of any sort is by the "AIR" route*. This thought reappeared in his mind while watching the activity of some energetic Italian bees returning full of pollen to their hive. He did not have precise figures but believing *the bees had been demonstrating for ages past the superiority of the "air route" over anything else for moving things* and also thinking he was the first to ask himself such a question, Root proposed anybody, who might have been interested in the subject, to do the math and calculate *what proportion the honey and pollen bear to the weight of the bee that carries them*. More than 110 years of aviation, measured from 1906 when the first took offs were officially witnessed, show that the air route is inefficient for carrying freight and trucks, trains and ships still reign when it comes to moving heavy loads.

As expected, the old Amos, again, did not miss the opportunity to remind his readers about that 1904 flight in a circuit, of W. Wright, he had obsessively claimed since January 1, 1905, he had witnessed. Here are his words:

When Wilbur Wright made his first trip out into the great free air and back again with his flying-machine, I told him that he had that day demonstrated the possibility of travel without macadamized roads or railways.

As a note, even before September 20, 1904, in a long text, published in *Gleanings* for September 1, 1904, that made no explicit reference to the Wrights and their invention, Root wrote: "*I am not at liberty just now to tell all I know in regard to this matter*", the matter being that "*people were already, at least to some extent, ignoring roads of every kind, and climbing through the air, and not by means of the gas-balloon*". Definitely, the old entrepreneur already had in mind *the possibility of travel without macadamized roads or railways* without seeing Wilbur flying because this man from Medina often repeated he had just witnessed some tests performed by the Wrights, in the summer of 1904, avoiding to say he had seen them flying.

Coming back to the June 1922 article, it is worth mentioning that, talking about his early hobbies in life, windmills and electricity, A. I. Root states at one point that *it did get into his head that the two could be linked together, when he was near 80 years old* which is another example of ignorance and self-importance displayed by him. In reality, powerful wind turbines that generated electricity and charged batteries had been built since the time Root was about 50. An example is the electric generator of Charles F. Brush of Cleveland, Ohio ("Mr. Brush Windmill Dynamo", Scientific American, December 20, 1890, cover and p. 389) that, at the time the article was printed, had been in continuous operation for more than two years. It was capable of generating up to 12 kW and a big batterie composed of *408 secondary cells* occupied a room in the basement of Brush's house.

The last article of interest in *Gleanings* ("Modern Surgery: What it Has Accomplished.", *Gleanings*, December 1922, pp. 802-803) brings nothing new. A. I. Root just repeats that he suggested naming Huber's daughter (born on June 20, 1909) *after the good sister of the Wright brothers, with whom he was in touch, some years before*.

28 years latter, people were still asking for the picture promised by Root in Gleanings for January 1, 1905

On April 30, 1923, Ernest, A. I. Root's oldest son, informed Orville that his father had passed away that day. O. Wright replied on May 8, 1923, and his answer was rather formal. He wrote things that are usually said when somebody dies, but he also tried to accredit the idea that Amos Root had seen the Wrights flying in 1904 because he referred to the visits of Ernest's father at the time when he and his brother *were carrying on their early flying experiments*. The text does not clearly state A. I. Root witnessed flights in 1904. It just talks about "*flying experiments*" performed at the time this aviation enthusiast used to visit the two Daytonians. In an answer that followed about one week later, on May 16, 1923, Ernest Root affirmed that *his father had often spoken about the Wrights and had seemed to feel a great deal of pride in that he had known them personally*.

Ernest R. Root continued to write to Orville. Four such letters and an answer coming from O. Wright can be found over a period of five years, December 19, 1930 – December 31, 1935. These texts have things in common and, for this reason, they will be commented together:

1) On December 19, 1930, E. R. Root started his letter to Orville by saying that *he had read with very much interest the true story of the Wright Brothers which he assumed to be authentic. He also appreciated very much the reference to A. I. Root*.

Also he did not specify what publication he referred to, it is evident he talked about the book "The Wright Brothers Fathers of Flight" by John R. McMahon (Little, Brown, and Company; Boston, 1930) which, on page 159, reads: "*Sep. 20 ... Wilbur flew a full circle with a circumference of 4080 feet in 2 minutes 15 2/5 seconds. A. I. Root, editor of a bee journal, was present*". However, Ernest R. R. had some doubts regarding the credibility of McMahon's story otherwise he would not have said: "*which I assumed to be authentic*".

2) In three letters, E. R. Root denied any involvement of Root's family members in spreading the false information according to which his father had financed the Wrights, helping them to develop *the machine*. Orville assured him that neither he nor his brother had ever believed that his father had been responsible for those incorrect reports.

3) Two of the letters express the regret of Ernest R. R., who spoke in the name of the entire Root family, that they missed the opportunity to meet Orville when he came to Medina in the spring of 1918 (see: H. H. Root, "Letter to Orville Wright", April 15, 1918).

4) The letter of January 3, 1933, is of greater importance in comparison to the others because its main subject is about another letter E. R. Root sent, in December 1932, to a certain Jay Smith who wrote for magazines and had demanded *two copies of Gleanings* (January 1905) *that had pictures of the Wright Brothers' flying machine*. Together with Ernest's letter, Orville also got a copy of the text addressed to J. Smith who, unfortunately, did not receive what he had asked for but a copy of the January 1, 1905, issue of *Gleanings* which contained (see: "My Flying-Machine Story", January 1, 1905, *Gleanings*, p. 48) just a fraudulent promise that a picture of the flying machine would appear in the January 15, 1905, number of the same journal. The oldest son of Amos Root tried, in his December 2, 1932, answer, to make J. Smith believe that such a picture existed saying that *he remembered it very distinctly* but he could not locate it. In reality, only the photo of a glider was printed (see: "The Wright Brothers' Flying-Machine", January 15, 1905, *Gleanings*, pp. 86-87) and E. R. Root knew this or at least had all the information to locate the article. Had he been an honest man he would have told Jay Smith that no picture with a Wright plane was published in *Gleanings* before August 8, 1908.

5) Together with his January 3, 1933, letter, E. R. Root sent Orville a copy of *Gleanings* for January 1st, 1905, saying that, based on his father's reports, he had prepared an article for the Scientific American about the work of the Wrights. Unfortunately, his text was turned down. Orville (who evidently had in front of him the February 4, 1905, letter of A. I. Root where the old aviation enthusiast wrote he had sent *marked copies* to the Sci. Am.) asked in his reply, that came on January 31, 1933, whether a *marked copy* of the January 1, 1905, article had been mailed to the Scientific American or something else. E. R. Root answered he had sent a paper prepared by him and signed by his father, which was a different text from that of A. I. Root. If his memory is right, also the

Scientific American might have received a marked copy of *Gleanings* (the second sent by Amos Root) it also got a manuscript of Ernest, *describing Wrights' first flights* and having an unknown precise content, which was rejected.

6) The last thing of interest, that can be found in the 1930 - 1935 correspondence, is a reference to *letters that were written by Wilbur or Orville to A. I. Root* (see: E. R. Root, "Letter to Orville Wright", December 31, 1935). Regarding these documents, there also exists a note on a page, with a printed header reading "From the desk of Orville Wright", which mentions a December 1938 letter sent by a certain *Mrs. A. E. Mc Laudon who offered for sale letters of W. Bros. to Root*. Another relevant document is a text dated November 5, 1943. It is written by somebody from the A. I. Root Company who informed Fred C. Kelly (a biographer of the two Daytonians) that if he really wanted those letters, a trip to Florida was necessary to talk with a woman who had them, and make copies. No further information is available regarding the fate of Wrights' letters to Amos Root.

Section II

Questions and Answers

Also the case of A. I. Root was already presented chronologically, the many things he wrote in his letters and articles can be restructured to answer a few questions regarding what exactly this old man witnessed.

• Did A. I. Root meet the Wright Brothers in the summer of 1904?

• Yes, there is no doubt. His letter dated August 23, 1904, is quite explicit, making reference to a recent visit during which he also met their sister who impressed him in a visible way. His reply of September 12, 1904, again, touches the same subject, A. I. Root, after expressing his feeling that *perhaps his presence was more of a hindrance than a help*, transmitted *kindest regards to Wright brothers' good sister* and suggested that she should read his September 1, 1904, article about the trip through Ohio. Years later, in "Aviation and Stimulants. Saloons and the "Chicken Business."" (Gleanings, February 1919, pp. 110-112), the same beekeeper and businessmen explicitly say that, during his first visit, he met the two inventors *a few miles east of the city of Dayton* and at one point they insisted that *he should go home with them and get acquainted with their bright sister, Katharine. Next morning at breakfast Katharine passed him a cup of very fragrant coffee*. Also, in "Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio." (Gleanings, June 15, 1912, pp. 385-387), the old Amos remembers that *it was his pleasure several times to share Wright's noonday lunches put up by that good sister Katherine*, without specifying when these episodes happened.

It is true that Root's articles have no credibility but, for this particular situation, the February 1919 text in *Gleanings* (also to a lesser extent, because it is imprecise, the June 15, 1912, article) and the August 23 plus September 12, 1904, letters support each other. So, Amos Root met Wilbur, Orville and Katherine Wright during the summer of 1904.

1904-08-23, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

... It may be that bright sister of yours might consent to gladden the heart of an old man by a little report if she feels so inclined. At any rate give her my regards with grateful thanks for the part she had in making my recent visit one of the bright spots in my life. ... From your old friend, A. I. Root.

1904-09-12, A. I. Root, "Letter to Wilbur and Orville Wright"

Dear Sirs:-

Many thanks, dear friends, for yours of Sept. 10th and especially for your very kind invitation. I began to fear that perhaps my presence was more of a hindrance than a help ...

Please give kindest regards to your good sister. We send you copy of our journal for Sept. 1st. If you do not have time to read my travels you might turn it over to your sister. ...

1912-06-15, "Our Homes. Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio.", Gleanings, pp. 385-387

... It was my pleasure several times to share their noonday lunches put up by that good sister Katherine. May God bless and sustain her in this great affliction. Well, their food was always plain, wholesome, and in keeping with their ideas about the importance of open air, etc. ...

1919-02, "Aviation and Stimulants. Saloons and the "Chicken Business."" Gleanings, pp. 110-112

... When I first had an intimation that the Wright brothers were experimenting with a flying machine, I told our people here that I felt as if I could not rest unless I went down to Dayton to see the brothers work. I had just succeeded in getting one of the first automobiles, and with this I started on my trip. I found them on the very same aviation grounds that are now occupied, a few miles east of the city of Dayton. ... it was one of the happiest of my "happy surprises" when the brothers insisted that I should go home with them and get acquainted with their bright sister, Katharine, who was at the time the housekeeper for the two young men. Perhaps I might mention incidentally that this good sister, who was at the time a school-teacher, had helped more or less in financing the boys in their novel undertaking. Next morning at breakfast Katharine passed me a cup of very fragrant coffee. ...

This is dictated the 19th day of October ...

• Was the old Amos an eyewitness of some powered flights performed by the two inventors during the summer of 1904?

• According to carefully worded short fragments in two of his articles, A. I. Root saw at least one flight in the course of that summer. However, none of his letters, sent to the Wrights, contain affirmations suggesting the old Amos had witnessed such a flight.

In his August 23, 1904, letter he referred to a *plan of dropping a weight from a little derrick* and then assured his younger friends that *he had not said anything about the flying machine experiments*, in a text he had prepared for the following issue of his periodical. The September 1, 1904, number of *Gleanings* does not bring more light. In a long "Our Homes" editorial, the old beekeeper just wrote: *"we are already, at least to some extent, ... climbing through the air"* and then specified he did not talk about balloons. Unfortunately, *he was not at liberty to tell all he knew in regard to that matter*.

Root repeatedly wrote in his periodical about an incident that happened in the summer of 1904, when he was introduced to Katherine. While taking breakfast together with Root, Wilbur and Orville declined the coffee offered by their sister. In the February 1919 issue of *Gleanings*, where this episode is clearly located in time, the old Amos says the brothers explained to him that *they expected to make one or more flights* during the day and that they had learned from their previous experience the coffee had a negative effect upon them in situation when they needed *every bit of strength of mind and body to enable them to do just the right thing at just the right time*. More than 10 years before, in "The Wright Brothers and Their Aerial Flight Up To Date" (Gleanings, September 15, 1908, p. 1156), the old beekeeper said the same thing and in an earlier article ("Civilized Out of Existence.", Gleanings, October 15, 1907, pp. 1335-1336 (p. 1336)), while mentioning the same incident, he talked about the intention of the two inventors *to make a test of their flying-machine*. This time the word "flight" does not appear and "test" is used instead. However, there is no sign, in the three texts written between 1907 and 1919, that Root witnessed at least one of the trials or flights, the Wrights

planned for that day, also he returned to *that pasture-lot near Dayton* and took *Miss Wright on a little trip around the lot with his little Olds mobile*, as it is explained in “Navigating the Air — The Wright Brothers Up To Date” (Gleanings, April 15, 1909, pp. 258 and 29). As a further explanation, only one time Root came, in his Olds mobile car, to see the Wrights and from the February 1919 and April 15, 1909, articles it is evident that he first met Wilbur and Orville outside of Dayton, then after a few days went in the city and saw their sister, took that breakfast during which the scene with the coffee occurred, and then he came back to the place where the Wrights performed their tests.

On the other hand, there are two articles in which the old Amos worded his sentences in such a way that the reader can understand he really witnessed the Wrights flying a powered plane during the summer of 1904. In “Our Homes” (Gleanings, January 1, 1905, pp. 36-39) he affirmed that *he had met the Wrights in a pasture lot of 87 acres and when he first saw the apparatus it persisted in going up and down like the waves of the sea*. A few years later, in “The Wright Brothers and Their Flying Machine Up To Date” (Gleanings, November 15, 1908, pp. 1390-1392), the same old aviation enthusiast stated: “*When I first visited them they were obliged to run the machine along a single rail for, I think, 60 or 70 feet, in order to get up sufficient speed to “climb into the air.”*”. Root does not clearly assert he personally witnessed the plane running 60 - 70 feet on the ground, taking off and then flying a sinuous trajectory but it is hard to interpret the two texts as written by somebody who did not really see the machine flying, assuming the author was a honest person.

1904-08-23, A. I. Root, “Letter to the Wright brothers”

Dear Friends:-

... I am very anxious to know in regard to that plan of dropping a weight from a little derrick ... in my account of my trip through Ohio on the automobile ... I did not say anything about the flying machine experiments. ... From your old friend, A. I. Root.

1904-09-01, “Our Homes”, Gleanings, pp. 852-857

... In a recent trip of 400 miles through Ohio I passed through Ashland, Mansfield, Marion, Delaware, Marysville, Springfield, Dayton, and Xenia ... And, by the way, we are already, at least to some extent, ignoring not only mud roads, but roads of every kind, and climbing *through the air*, and I do not mean by means of the gas-balloon either. But I am not at liberty just now to tell all I know in regard to this matter. ...

1905-01-01, “Our Homes”, Gleanings, pp. 36-39

... Dear friends, I have a wonderful story to tell you ...

... I am now going to tell you something of ... a *minister's* boys, who love machinery ... Their names are Orville and Wilbur Wright, of Dayton, Ohio. ...

... I found them in a pasture lot of 87 acres, a little over half a mile long and nearly as broad. ...

When I first saw the apparatus it persisted in going up and down like the waves of the sea. Sometimes it would dig its nose in the dirt, almost in spite of the engineer. After repeated experiments it was finally cured of its foolish tricks, and was made to go like a steady old horse. ...

1907-10-15, “Civilized Out of Existence.”, Gleanings, pp. 1335-1336 (p. 1336)

... Remember what the Wright Brothers said about abstaining entirely from coffee on the day they were going to make a test of their flying-machine. ...

1908-09-15, “The Wright Brothers and Their Aerial Flight Up To Date”, Gleanings, p. 1156

... When I was taking breakfast with them one morning I ventured to ask why it was that neither of the brothers accepted coffee. I think it was Wilbur who replied with his peculiar pleasant smile:

“Mr. Root, we expect to make some flights this morning, and we have learned by experience that our heads are clearer and our nerves steadier if we abstain from coffee at breakfast.” ...

1908-11-15, “The Wright Brothers and Their Flying Machine Up To Date”, Gleanings, pp. 1390-1392

... When I first visited them they were obliged to run the machine along a single rail for, I think, 60 or 70 feet, in order to get up sufficient speed to “climb into the air.” This long track had to be moved so as to face the wind every time the wind changed, making considerable labor for each successive experiment. ...

1909-04-15, “Navigating the Air — The Wright Brothers Up To Date”, Gleanings, pp. 258 and 29

Perhaps our readers may care to know that, when the Wright Brothers were making their first experiments out in that pasture-lot near Dayton, it was my privilege to take ... Miss Wright on a little trip around the lot with the little Olds mobile ... At that early date I believe I had more faith in the ultimate outcome of their experiments than the old father, the sister, or even the two brothers themselves; and you can imagine, therefore, how it rejoices my heart to learn I was not far out of the way about it. ...

1912-03-15, “Chicken Thieves; What Shall We Do To Protect Our Valuable Stock From Their Depredations?”, Gleanings, pp. 182-183 (p. 182)

... When I was witnessing the early experiments of the Wright Bros. I boarded with a farmer whose wife was on a decline with the great white plague. ...

1919-02, “Aviation and Stimulants. Saloons and the “Chicken Business.””, Gleanings, pp. 110-112

... When I first had an intimation that the Wright brothers were experimenting with a flying machine, I told our people here that I felt as if I could not rest unless I went down to Dayton to see the brothers work. I had just succeeded in getting one of the first automobiles, and with this I started on my trip. I found them on the very same aviation grounds that are now occupied, a few miles east of the city of Dayton. In order to be on hand, I obtained board and lodging at a farmhouse near by. At first I was somewhat worried for fear the brothers would not care to have a spectator hanging around, and maybe meddling while they experimented with an apparatus that might mean death instead of success in navigating the air like a bird. As the neighbors seemed to take no particular interest in the experiments, we three were, most of the time, a good deal alone, and we soon became fairly well acquainted with each other; and it was one of the happiest of my “happy surprises” when the brothers insisted that I should go home with them and get acquainted with their bright sister, Katharine, who was at the time the housekeeper for the two young men. Perhaps I might mention incidentally that this good sister, who was at the time a school-teacher, had helped more or less in financing the boys in their novel undertaking. Next morning at breakfast Katharine passed me a cup of very fragrant coffee. I took it as a matter of course; but when both of the young men shook their heads, declining the coffee, I ventured the question, “Why, look here, friends, I wonder if you have been making coffee just for myself when I never drink either tea or coffee unless it is on an occasion like this, to be like other folks.”

Now, friends, listen to the reply. I can not remember now whether it was Wilbur or Orville who spoke; but it was something like this:

“We do use coffee to some extent ordinarily; but today we expect to make one or more flights; and when we are going to handle that flying machine we want every bit of strength of mind and body to enable us to do just the right thing at just the right time; and we have learned by experience that a cup of coffee is a detriment and a hindrance; therefore no coffee in the morning when we expect to make flights during the day.” ...

Just one more incident that occurred during that eventful summer. The farmhouse where I had board and lodging was kept by a renter by the name of Beard. Mrs. Beard was an invalid suffering from lung trouble. The doctors declared that her only hope was to get outdoors and keep outdoors. They recommended gardening or raising poultry, or something that would keep her in the open air. Nights and mornings, before the Wright brothers got around, I became quite well acquainted with Mrs. Beard. I think she had girls who did most of the housework, and she spent a great part of her time outdoors in raising chickens. ... What do you suppose happened? When the chickens were of the very best size to be sold as broilers in the big city of Dayton, some chicken-thieves came in the night and took every last one — not a chick was left. Mrs. Beard was heart-broken. As the family was short in finances the blow seemed all the harder. Her hard work for weeks and months was all swept away in a single night; and before the winter's snow

came on, Orville Wright wrote me that my good friend Mrs. Beard had died of "quick consumption." ...

This is dictated the 19th day of October ...

• Is there evidence, in A. I. Root's letters, that he witnessed Wilbur flying his plane in a circuit, on September 20, 1904?

• None of Root's letters, to the Wrights, refers to such a flight. His September 12, 1904, answer represents evidence he had received a new invitation from the two Daytonians and also for the fact that, because of personal reasons, he probably could not see them until the following week, which started on Sunday, September 18, 1904.

The letter of September 22, 1904, written just two days after the alleged epoch-making event of September 20, starts with a sentence that informed the two inventors their old friend from Medina had just received a clipping, *from a relative in Xenia, Ohio*, about a 1000 feet flight done by the Wrights at an unspecified date. A. I. Root motivated that, if everybody else put the Wrights' achievements into the papers, a little write-up about them, authored by him, would not do harm. There is no word in the entire letter suggesting, even vaguely, the old Amos had seen Wilbur flying just 48 hours before or at any time in the past. The next letter, unfortunately undated but sent between the 22nd and maximum 26th of September 1906, does not depart too much from the message of the previous one. The old aviation enthusiast just continued insisting his write-up would be harmless as long as important magazines like the Independent (Wilbur Wright, "The Experiments of a Flying Man", The Independent, New York, US, February 4, 1904, pp. 242-246) and Scientific American (possible the old Amos referred to: "A Successful Experiment with a Motor-Driven Aeroplane", Scientific American, December 26, 1903, col. 3, p. 486; also it is not clear) had stories about what his younger friends had done. Root does not specify what articles he referred to, but only two such texts, about the powered flights of the Wrights, had appeared in the above-mentioned periodicals up to the end of September 1904. He had undoubtedly read one of them, that in the Independent, as his February 16, 1904, letter demonstrates.

The old businessman offered *\$100 for the privilege of printing that paper* which he wanted to be *straightened up so that it would contain nothing but actual facts*. However, as the content of the draft is not known, because it does not exist in archives, we can not simply assume the article prepared by Root in September 1904 contained his eyewitness account published in the January 1, 1905, number of *Gleanings*. One thing is certain, neither the September 22, 1904, letter nor the following one, written between September 22 and 26, 1904, or any other letter, make reference to a powered flight done in the presence of Amos Root from Medina.

1904-09-12, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Many thanks, dear friends, for yours of Sept. 10th and especially for your very kind invitation. I began to fear that perhaps my presence was more of a hindrance than a help, of course, I do not expect to be very much help just yet, but may be after a time. Business on hand is such that I cannot get away probably until next week. ...

1904-09-22, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

Enclosed clipping was just mailed me from a relative in Xenia, Ohio. Now, if everybody else is putting you into the papers, what harm will it do for me to give you a little write-up that has already been submitted to your inspection? I have already dictated what I would like to say and will try to mail it to you to-day or to-morrow. I do not know the date of the enclosed clipping but it was evidently made since you have got up the derrick. ...

1904-09-22, Undated clipping, from a newspaper, sent to Wilbur and Orville Wright, on Sep. 22, 1904, by A. I. Root who had received it from a relative in Xenia, Ohio

THE FLYING MACHINE.

The Wright brothers were experimenting with their airship on Mad river prairies yesterday. They started the machine with 1,200 pounds weight, and at a height of 10 feet sailed a distance of one thousand feet across the field, and anchored, the working being entirely satisfactory to the Messrs. Wright who have been seven years perfecting the machinery. They say they will make an ascension at St. Louis before the exposition ends.

1904-09-between 22 and 26, A. I. Root, "Letter to the Wright brothers" (the precise date is not known)

Dear Friends Wright:

I inclose herewith what I have written up just as I should like to do it--- that is, just about what I should like to put in print ... You see it has been in the papers already, even such periodicals as the Scientific American and the Independent, besides the clippings I have shown you. ... I would gladly give you \$100 for the privilege of printing this paper ... Perhaps there is a little pride in wanting to be the first to give to the great world the real facts in the case---that is, after you have straightened up my statement so that it will contain nothing but actual facts. ...

• Is the January 1, 1905, article in *Gleanings* (pp. 36-39) the only indication that Root witnessed the September 20, 1904, circular flight?

• Yes. As a remark, the old aviation enthusiast referred to the above mentioned event many times, in his periodical. In most of the cases he inserted only brief notes just to refresh the memory of his readers that he had seen an amazing flight, without explicitly pointing to the Jan. 1st text. In rare instances he also named the exact issue where his account was published and there exist some situations when the old entrepreneur even furnished additional details, things that are not present in the original story. Here is the list of excerpts from *Gleanings* that talk directly or indirectly about the September 20, 1904, milestone:

1905-01-01, "Our Homes", *Gleanings*, pp. 36-39

... Dear friends, I have a wonderful story to tell you — a story that, in some respects, out-rivals the Arabian Nights fables ... I will tell my story, and you shall be the judge. ...

... I am now going to tell you something of ... a *minister's* boys, who love machinery, and who are interested in the modern developments of science and art. Their names are Orville and Wilbur Wright, of Dayton, Ohio. ...

... I found them in a pasture lot of 87 acres, a little over half a mile long and nearly as broad. ...

When I first saw the apparatus it persisted in going up and down like the waves of the sea. Sometimes it would dig its nose in the dirt, almost in spite of the engineer. After repeated experiments it was finally cured of its foolish tricks, and was made to go like a steady old horse. ... to make the matter short, it was my privilege, on the 20th day of September, 1904, to see the first successful trip of an airship, without a balloon to sustain it, that the world has ever made, that is, to turn the corners and come back to the starting-point. ...

... When I saw it pick up the fifty pounds of iron so readily I asked if I might ride in place of the iron. I received, by way of assurance, the answer that the machine would no doubt carry me easily. ...

... When it first turned that circle, and came near the starting-point, I was right in front it; and I said then, and I believe still, it was one of the grandest sights, if not the grandest sight, of my life. Imagine a locomotive that has left its track, and is climbing up in the air right toward you — a locomotive without any wheels, we will say, but with white wings instead, we will *further* say — a locomotive made of aluminum. Well, now, imagine this white locomotive, with wings that spread 20 feet each way, coming right toward you with a tremendous flap of its propellers, and you will have something like what I saw. The younger brother bade me move to one side for fear it might come down suddenly; but I tell you, friends, the sensation that one feels in such a crisis is something hard to describe. The attendant at one time, when the rope came off that started it, said he was shaking from

head to foot as if he had a fit of ague. His shaking was uncalled for, however, for the intrepid manager succeeded in righting up his craft, and she made one of her very best flights. ...

1905-01-01, "My Flying-Machine Story", Gleanings, p. 48

... Well, just before Christmas my heart was made glad by a letter informing me that, as the experiments for 1904 were probably ended, I might tell the world what I knew about the flying-machine, and therefore I have been made happy. Yes, to-day, Dec. 26, I am not only enjoying a happy Christmas but I feel just like saying "A merry and a happy Christmas to you all." I hope you will enjoy my story about the flying-machine — as much as I enjoyed being out in that big field with the Wright brothers many times during the past summer and fall, watching that wonderful creation of the hand and brain of those two men, while it "learned to fly," very much as a young bird just out of the nest learns by practice to use its wings. ...

1905-12-01, "The Wright Brothers' Flying-Machine to Date; Flying 24 Miles in 38 Minutes", Gleanings, p. 1258

Our readers' attention is called to the articles in regard to the Wright Brothers' flying-machine in our issues for Jan. 1 and 15, 1905; also to the italics on page 1202 in our last issue. I have *now* permission to give you some further particulars. A great number of long flights were made during the past summer. Along late in the fall the machine made 24 miles, and was up in the air 38 minutes; and as this flying was all done in a circle, the speed was not as great as it might have been in a straight line. ...

1907-05-01, "Flying Apiaries", Gleanings, p. 620

The *American Magazine* for April contains nine pages, with illustrations, of the Wright Bros.' flying-machine. This is the machine described by Mr. A. I. Root in GLEANINGS last year, and Mr. Root's name is mentioned in the article. The Wright Bros. have traveled through the air at a speed of 50 miles an hour. ...

1908-05-15, "Wright Brothers Make a Successful Trip in Air-Ship", Gleanings, p. 658

I have been telling you several times of late that we should soon have some news. As I write to-day, May 9, the daily papers are full of accounts of their flights. ... Every thing worked quite as well as when I witnessed their work two years ago last October. First one of the brothers made a flight and then the other. ...

1908-11-15, "The Wright Brothers and Their Flying Machine Up To Date", Gleanings, pp. 1390-1392

... In our issue for March 1, as far back as 1904, p. 241, I gave the first intimation of what was going on here in Ohio in the way of flying; and at frequent intervals during 1904 I visited the Wright Brothers at Dayton, Ohio, to witness their preliminary experiments. In our issue for January 1, 1905, I gave the result in detail, occupying three or four pages of GLEANINGS. Just as soon as an impression was off the press I mailed a copy of it to the *Scientific American*. ... Well, what do you suppose happened? Not a peep, not a word of thanks for the trouble I had taken to give them full particulars of what I had been an eye-witness. ... In our issue for Jan. 15 I gave some further particulars with a cut of the gliding machine. At that stage of proceedings the Wright Brothers would not permit a photo of the complete apparatus to be given in print, for they had not fully secured their patents.

On page 48, Jan. 1, 1905, I gave my reasons for having kept back some news of this wonderful discovery as long as I did. Permit me to mention here that as soon as I had *permission* to give my write-up of the machine I sent the Wright Brothers a check for \$100; and, in fact, I would have been willing to send \$500 for the privilege of announcing to the world this wonderful invention. They thanked me for the check, but it was promptly returned ...

... GLEANINGS goes back to March, 1904, with frequent mentions of what the boys accomplished step by step until the present.

At the time I gave my write-up there were several points in regard to the machine that I was not permitted to mention; but since these various features are now being fully discussed through the various periodicals I presume I am at liberty to tell what I know about it.

The first was an apparatus for putting a stronger curve on the tips of the wings when rounding a curve. Second, a device that would enable the machine to spring up into the air as a bird does in starting. When I first visited them they were obliged to run the machine along a single rail for, I think, 60 or 70 feet, in order to get up sufficient speed to "climb into the air." This long track had to be moved so as to face the wind every time the

wind changed, making considerable labor for each successive experiment. I suggested wheeling the machine up on to a platform over the little building where it was stored, so as to get up momentum by running down hill. After I left them I figured out in my mind that a derrick from which a weight could be dropped something like a pile-driver in order to get up a good momentum in starting would be a good plan. I was so full of this idea that I made a second trip in a short time, and was astonished as well as pleased to find they had got hold of the same thing and had it in practical operation. They had a lot of iron weights, about the size of a small grindstone, with a rope running up through the hole in the middle. By hitching on more or less iron weights they could get up any desired speed. I think they used fully as much as 1500 lbs. for the experiment at Dayton. This weight dropped 15 to 18 feet, and by a system of pulleys to magnify the *speed* and *distance*, the machine was given a sudden impetus that threw it up into the air a sufficient height and with sufficient speed to start the vehicle for flight. The device was a complete success from the start.* I think the great wide world has had no intimation of this starting-device until the present summer. As I see pictures of it in the various magazines just now I suppose I am at liberty to describe it as I have done above. ...

* It really reminds one of firing a man into the air out of a cannon when the trigger is pulled to let that big weight drop.

...

1909-06-15, "Animated Eggs — A Great Discovery", Gleanings, p. 21

... GLEANINGS claims to be the first magazine to exploit the great invention of the Wright Brothers ...

1909-09-01, "Coming Events Cast Their Shadows Before", Gleanings, p. 554

... In 1904, when I told you about the Wright brothers, and a little later when I told you at length what I had seen with my own eyes, I said at that time that their discovery (that the air could be traversed without the aid of balloons or gas of any kind) would make a sensation in the world akin to the discovery of America by Christopher Columbus. I thought then that *before* the year 1909 we would see the air full of flying-machines. ...

1910-09-15, "Then and Now. The Wright Brothers and Their Flying-machine up to Date.", Gleanings, pp. 602-604

At the close of Our Homes for Oct. 15, 1904, I used these words: "We want a machine that will float as easily and safely as the bees, the butterflies, and the carrier pigeons. May the Lord be praised, this is already *in sight*."

The above was the closing of an article on the new inventions of the age. Shortly after (see GLEANINGS for Jan. 1, 1905), I told you of seeing the Wright brothers make their first successful flight, and that included turning around and coming back to the place of starting; and Gleanings was the first periodical on the face of the earth to announce to the world the crowning success of their years of experimenting in order to make a machine that would fly without a balloon. ...

Day before yesterday, Aug. 29, it was my pleasure to get around once more to the old familiar field between Dayton and Springfield, Ohio, where they have so long made their experimental flights. ... Since my last visit a neat and convenient building has been erected, of sufficient capacity to hold a flying-machine, or, in fact, two of them, all ready to fly. ...

1910-11-01, "Our Homes", Gleanings, pp. 703-707

... when I told you five years ago what I saw the Wright brothers do, I felt sure that flying would be a common thing in a year or two ...

... the Wright brothers who first demonstrated to the world that a machine could be *made* to climb up into the air without any balloon at all ...

... It *never* took a dozen men to haul around the Wright flyer, even in their first experiments. I know, for I was there ...

1911-11-01, "The Wright Brothers up to Date, and Something About Flying-Machines", Gleanings, p. 674

... GLEANINGS was the first periodical in the whole wide world to announce the Wright brothers had made a flight of something like a mile, and whirled round and come back to the place of starting. ...

1912-06-15, "Our Homes. Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio.", Gleanings, pp. 385-387

... In the March 1st issue of GLEANINGS for 1904 I first made mention of the two men, Orville and Wilbur Wright. ... In the summer of 1904 I wrote the Wrights, asking permission to pay them a visit and witness some of their experiments. This permission was kindly granted; but they preferred that I

should make no mention through our journal of what I might see until later on. I made many visits to the field just outside of Dayton, where they were experimenting during the summer of 1904; and finally, in our issue for Jan. 1, 1905, I was given permission to write up what I had witnessed, this being the first detailed account, if I am correct, given in any periodical in the world of the experiments and final success of the Wright brothers.

It was my privilege to be present when they made their first flight of a mile or more, and turned a circle and came down to the place of starting. My write-up of the event was so astonishing that many people thought it was a piece of fiction to advertise our journal; and even so good an authority as the *Scientific American* did not see fit to credit my account, although afterward they apologized for their want of faith at first, in my plain and simple story.

... I shall always regard it as one of the privileges of my life that I was permitted to become intimately acquainted with these two great characters (and I might say *benefactors*) of the human race. Wilbur Wright, the elder, was a little peculiar. Usually he was rather quiet and taciturn; but when he got going he was quite a talker. There was a peculiar twinkle in his eye, and an expressive working of the muscles of his face when a new idea occurred to him or when he had something pleasant to tell. While the two men worked together in perfect harmony, they often had lively discussions. Sometimes, one would think these discussions were becoming pretty nearly heated ones; but all of a sudden they would both stop and pitch into the work, and perhaps in a little while demonstrate *who* was right and who was wrong.

As Wilbur was the older of the two, for a time he seemed to do rather more flying than his brother Orville. I once asked their assistant mechanic which one of the two, in his opinion, was the more expert. He said he could not tell — sometimes one and sometimes the other. ... One day I came on the ground just as they had succeeded in making it turn a curve so as to fly at right angles to its course. They were getting ready to make another attempt; but a thunder cloud loomed up in the west, and they were about to abandon the experiment for the time being. As every thing was all ready for another flight I took the liberty of suggesting that they would have plenty of time to get around and get the machine safely housed before the blow would come up. In thinking of it since, I have considered that it was rather presuming on my part for me, an outsider, to offer such advice. Finally Wilbur, who was, I think, rather more venturesome than his brother, said *he* was ready to try it, and accordingly they started off rather hurriedly. Wilbur turned the curve at the end of the field, as before, and turned still another curve, and came around to the starting place, where we expected him to alight; but to our great surprise and astonishment he went right on, over our heads, and was heading for a lot of telephone wires, thorn trees, etc. The other brother, the mechanic, and myself, were greatly alarmed. It was so long ago that I can not exactly recall the details; but for a time it seemed to us he turned the rudder with the apparent intention of going over the obstacles and out of the field; but when he had sailed high enough to clear every thing the engine stopped, and the machine gradually slid back on the air, and alighted as safely and as gently as a feather, in their own field. We all rushed up to where he stopped, to see what was the matter. As I was considerably older than the other two, I did not get there in time to see what started the "discussion," but Wilbur was evidently considerably stirred up, and he and his brother were disputing rather hotly as to whose fault it was that he could not get the engine *stopped* when he came back to the starting-place. I finally interrupted the discussion by putting my hand on Wilbur's shoulder and remarking, "Why, my good friend, can't you stop long enough to look pleasant, and thank God for having permitted you *just now* to make the first flight since the world began, turning corners, and coming around to the stopping-place?" He looked at first a little vexed at the interruption, but finally his countenance softened, and that peculiar — I might almost say bewitching — smile spread over his countenance as he put out his hand and said, so far as I can recall, "Why, Mr. Root, I guess you are right; and I *am* glad and thankful that I succeeded, even if I could not get my engine stopped when I wanted it to stop."

I do not remember now what it was that made the engine keep going after the switch was turned off. I only remember that he put the blame on Orville, and I suppose it came about on account of the excitement of the moment in consequence of the thunder cloud, that caused the accident. ...

I suppose the whole world knows that, while I write on this 31st day of May, 1912, Wilbur Wright is no more. ... May God be praised that such a man as Wilbur Wright has lived for 46 years to bless the world. ...

1914-01-15, "Flying-Machines up to Date; 900 Miles in 900 Minutes.", *Gleanings*, pp. 78-79

AS GLEANINGS was the first periodical on the face of the earth to give an eye-witness account of the Wright brothers' first flight to make the machine come back to its starting-point, it is no more than proper that GLEANINGS should occasionally notice the progress that is being made in navigating the air. ...

1914-02-15, "Dasheen, Flying-Machines, and Something About God's New and Wonderful Gifts to Us in 1914", *Gleanings*, p. 160

... when I visited the Wright brothers, and told what I had seen, the world laughed ...

1915-08-01, "The Flying-Machine — A New Use For It.", *Gleanings*, p. 649. (This text does not explicitly refer to the September 20, 1904, event but to the experiments of that year, in general.)

When I was having such an enjoyable time in being with the Wrights when they made their first experiments, my enjoyment was greatly marred on being informed by Wilbur Wright that the flying machine would probably be of more use in war than as a vehicle to assist commerce and travel; and it has saddened my heart again and again to see this prediction fulfilled before my eyes. ...

1915-09-15, "The Story of Art Smith.", *Gleanings*, p. 782

... I was with the Wright brothers when they made their first flight that succeeded in bringing the machine back to the place of starting. ...

1915-12-15, "The Wright Brothers' Flying-Machine Factory at Dayton, Ohio.", *Gleanings*, p. 1047

Ever since the Wright brothers succeeded in making a machine fly, I have given you occasional notes as the years have gone by. ...

1917-04, "Wilbur and Orville Wright", *Gleanings*, pp. 300-301

As I was with the Wright Brothers when they made their first success in getting the machine to turn around and come back to the starting-place, you can realize somewhat the pain I felt when I saw, as the years have passed, efforts to rob them of their hard-earned title to being the originators of the art of flying. ...

... GLEANINGS was privileged to give the first account, by an eye witness, of their invention of any magazine or periodical in the world. See GLEANINGS for January 1, 1905, p. 32.

Just a word in closing about Wilbur Wright. We had many discussions during the days I was with them in regard to the value to the world of their invention. I insisted it would result in something like Columbus' discovery of America, etc., but Wilbur, with a sad, far-away look on his face, declared its first use would be for *war purposes*. God knows he had no sympathy for anything along that line. As the years have passed, and we hear of the invention only in connection with war, I am reminded of his prophecy.

1919-06, "From San Diego, Cal., to Jacksonville, Fla., in 19 Hours and 15 Minutes.", *Gleanings*, pp. 394-395

I have mentioned one or more times that it was my great privilege to be with the Wright brothers when they first made their flying machine start out and turn around and come back to the starting place. Therefore you can realize with what interest I note progress in flying as the years go by. ...

1919-08, "Our Homes", *Gleanings*, pp. 535-537 (p. 536)

... When the Wright brothers first made that wonderful flight and whirled around and came back to the place of starting, I said that the feat would some time be recorded side by side with that of Columbus when he discovered America. ...

1919-08, "Our Florida Garden and Some Glimpses of Our Florida Home", *Gleanings*, pp. 538-540

... The little girl in the cut is Huber's daughter, Katharine. She was named after the sister of the Wright brothers who invented the flying machine.

... Miss Katharyn Root was born shortly after the Wright brothers made their first successful flight and got back to the starting place. An account of this was first written up (and first given to the world) in *Gleanings* in 1905. ...

1919-10, "Away Up High, Papa's Baby", *Gleanings*, pp. 679-682 (p. 680)

... Our county fair has just closed. Among the other inducements to get the people to come was a flying-machine; and passengers were to be carried up for about seven or eight minutes for the sum of \$15.00. Inasmuch as I was

with the Wright brothers during their experiments, and witnessed their first successful flight in getting around to the startingplace, everybody took it for granted that I would be the first one to fly. ...

1922-06, "Flying-machines Versus Horses, Trucks, Railways or Steamboats", *Gleanings*, pp. 402-403

... When Wilber Wright made his first trip out into the great free air and back again with his flying-machine, I told him that he had that day demonstrated the possibility of travel without macadamized roads or railways. ...

1922-12, "Modern Surgery: What it Has Accomplished.", *Gleanings*, pp. 802-803. (This excerpt stresses that A. I. Root had been in touch with the Wrights some years before. It does not explicitly mention the September 20, 1904, achievement)

... The general manager of our institution had only one little girl. You may remember I suggested naming her Kathryn, after the good sister of the Wright brothers, with whom I was in touch, some years ago. ...

1933-01-03, E. R. Root, "Letter to Orville Wright"

... In going over the back volumes of our journal I discovered an article by my father on your early experiments in aviation when you made your first successful flight. I am enclosing a copy of our journal for January 1st, 1905, and refer you to pages 36, 37 and 38. ... It might interest you to know that about that time I prepared an article based on my father's reports, for the *Scientific American*, telling about your work. That paper turned it down as impossible and then later on saw their mistake. ...

1933-01-31, Orville Wright, "Letter to E. R. Root"

... Your father once told us of the "*Scientific American*" refusing to print an account of our flights sent to it. Was this a marked copy of "*Gleanings*" of January 1, 1905, or was it a specially prepared article? ...

1933-02-09, E. R. Root, "Letter to Orville Wright"

... Your interesting letter has been received. The article offered to the *Scientific American* describing your first flights as mentioned in the journal *Gleanings in Bee Culture*, which you have, was prepared by myself and submitted to my father. He signed it and then I sent it on to the *Scientific American*. They returned the manuscript with thanks, saying that flying machines heavier than air were not a success and never would be, or something to that effect. ...

- Were the Wright Brothers aware that Root would publish an article in which he would claim he had witnessed Wilbur flying in a circuit, on September 20, 1904?

- Did the two inventors allow the old Amos to have the story printed in *Gleanings*?

- The answer to both questions is yes.

On December 24, 1904, the old businessman submitted his article to the brothers, for the last review. The copy still exists and is identical, excepting some minor, unimportant differences, to the January 1, 1905, text.

The \$100, promised at the end of September 1904, were paid (see the January 6 and 18, 1905, letters) but, as we learn from an answer dated February 4, 1905, the two Daytonians refused the sum. However, they asked for *100 extra numbers of Gleanings for Jan. 1st*. Therefore, A. I. Root's account is in no way in the situation of "Flying Machine Soars 3 Miles in Teeth of High Wind Over Sand Hills and Waves at Kitty Hawk on Carolina Coast" (*Virginian-Pilot*, US, December 18, 1903, p. 1) or "The Experiments of a Flying Man" (*The Independent*, New York, US, February 4, 1904, pp. 242-246) which the Wrights criticized labelling them as inaccurate. More, in a letter dated April 28, 1933, and addressed to Arthur R. Coelho, a Brazilian living in New York, Orville included the January 1, 1905, article as the first in "*a list of publications containing statements of disinterested witnesses of the flights of 1903, 1904 and 1905*". In other words, the younger of the two inventors considered the January 1, 1905, sermon of Root as the most important piece of evidence that demonstrated their claimed

1903-1905 flights had really happened. This once more proves how thin their case is. The Wrights permitted the publication of a fictitious account and later they used it to convince people that Wilbur had flown on September 20, 1904, and came back to the point of departure.

1904-12-24, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Enclosed find proofs of the forthcoming article on the flying machine. As we want to be sure to get it in the issue for January 1st will you please look it over and return as quickly as possible if you wish any changes made. ...

1905-01-06, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

... some time in the fall I told you I would give a hundred dollars or more for the privilege of publishing the article that appeared a little changed in our number for Jan. 1st. ... Now I have not said anything about the \$100.00 but I want to say it is ready for you ...

1905-01-18, A. I. Root, "Letter to the Wright brothers"

Dear Sirs friends:-

With the wish that the enclosed may help you a little in your multitude of experiments which you have as yet got little pay for, and so far as I know with little thanks, in the great wide world, I remain, Your old friend, A. I. Root. *Draft 100⁰⁰*

1905-02-04, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Well, friends, I suppose if you cannot accept of the check I shall have to keep it but I will try and fix it (mentally) to your credit in some way. You can have 100 extra numbers of *Gleanings* for Jan. 1st if you want them. We send you ten copies at once ...

1933-04-28, Orville Wright, "Letter to Arthur R. Coelho", p. 1

April 28, 1933.

Mr. Arthur R. Coelho,
603 West 138th Street,
New York City, New York.

Dear sir:

I have your letter of April 14th asking for authentic information concerning our early flights. ...

As a disinterested public would and should hesitate to take, unless otherwise corroborated, the statements of the inventors who may have a monetary or other private interest, I am sending you a list of publications containing statements of disinterested witnesses of the flights of 1903, 1904 and 1905.

"*Gleanings in Bee Culture*", January 1, 1905, published by the A.I. Root Company, Medina, Ohio, containing an article by A.I. Root, an eyewitness, describing the first complete circular flight made on the 20th of September, 1904. ...

- Has A. I. Root written things, in his letters or articles, that *strongly* demonstrate he did not witness Wilbur flying, on September 20, 1904?

- Yes. In the November 9, 1905, letter, while informing his younger friends of Dayton he intended to ask his readers, in an article, *for reports of flying machines*, the old Amos, visibly disappointed he had not been invited to witness (new) flights, expressed his wish to receive the permission to publish this statement: "*At present I am not at liberty to give a report of what the Wright Bros. have done during the past summer.*", motivating that such an explanation *would relieve him of the charge of having made a big fuss about something that had not after all panned out to amount to anything*. Had he really seen Wilbur flying in a circuit, on September 20, 1904, he would not have made such a remark because that flight would have had an extraordinary value for him.

This November 9, 1905, text discredits the January 1, 1905, long article in *Gleanings*.

Another puzzling affirmation of A. I. Root was in connection with the American aeronaut Augustus Roy Knabenshue. In an August 29, 1905, letter the old Amos expressed his concern that Knabenshue might finally use *no balloon at all*, advising the Wrights to get ahead of him. The question is why did this old man from Medina have such a fear as long as he had already witnessed Wilbur Wright flying in a circuit without any balloon?

In the September 1, 1908, issue of *Gleanings*, A. I. Root published the article "The Wright Brothers And Their Flying - Machine, Not Only "Out In The Open" But "Up In The Air."" (p. 1097). At the time it was printed, Wilbur had already performed public flights since August 8, 1908. The big problem with the above-mentioned text is its title which has the aspect of an irony. Had he really witnessed a powered flight about 4 years before, the old Amos could not have opted for such a heading which visibly suggests he had seen the two brothers just "out in the open" and not "up in the air".

"Our Homes" (*Gleanings*, August 15, 1909, pp. 515-518 (p. 516)) contains one of the most important pieces of evidence that further discredits the January 1, 1905, narration. The message of the old aviation enthusiast is that some texts like those in the Bible and his own story, about the September 20, 1904, flight, have the stamp of truth on them even if they include unbelievable things. Root recalls a conversation he had with Octave Chanute, a few years before July 30, 1909, but after October 5, 1905 as can be inferred from another text ("Our Homes. Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio.", *Gleanings*, June 15, 1905, pp. 385-387). O. Chanute did not fully believe Root despite his insistence that he had told the truth in his January 1, 1905, account. Finally, the mentor of the Wrights replied politely: "*Well, I guess that is so to a great extent; but what you are telling is too wonderful.*", which is an impossible reaction that O. Chanute could not have had, assuming he told the truth when pretended he had *witnessed a flight of 1,377 feet performed in 23 4-5 seconds, starting from level ground and sweeping over about one-quarter of a circle*, made by Orville on October 15, 1904, less than one month after A. I. Root had seen a longer but comparable flight.

The entire dialog between the two old men can be logically understood only as a conversation of two people who had not seen flight demonstrations performed with a man carrying powered plane.

1905-08-29, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Well friends I suppose you will excuse your old friend, A. I. Root, if he does get a little anxious. You see Knabenshue is forging ahead so I have been wondering if he would not begin to use a lighter balloon, a still lighter, and after a while no balloon at all unless you folks should get ahead of him in some way. ... As ever, A. I. Root.

1905-11-09, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Many thanks for postal card of Nov. 8th. Now I have just one more favor to ask ... I would like to add after asking for reports of flying machines something like this. "At present I am not at liberty to give a report of what the Wright Bros. have done during the past summer." If I could say so much or something like it changed in any way you see fit it would relieve me of the charge of having made a big fuss about something that had not after all panned out to amount to anything. It would be an acknowledgement of course that something had been done but no more. If you think this would not do you any harm I should be exceedingly glad. ... As ever yours, A. I. Root.

1908-09-01, "The Wright Brothers And Their Flying - Machine, Not Only "Out In The Open" But "Up In The Air.", *Gleanings*, p. 1097

THE WRIGHT BROTHERS AND THEIR FLYING - MACHINE, NOT ONLY "OUT IN THE OPEN" BUT "UP IN THE AIR."

While your eyes rest on these words the probabilities are that the Wright Brothers will be "up in the air," both in Europe and America. For the first time they permit photographs to be taken of the entire machine. ...

1909-08-15, "Our Homes", *Gleanings*, pp. 515-518 (p. 516)

... It has been my good fortune, at least as a general rule, to have my statements accepted. In only a few times in my life have I been accused of untruthfulness. When I first gave the story about the Wright brothers, and said I saw them fly with their machine and come around to the starting-point, I was disappointed because my report created so little sensation. The Wright brothers have *recently* made stir enough in the world; but when I first introduced them to the world I was surprised and disgusted. While at Dayton some years ago I met Mr. Chanute, the man who had made experiments with gliding-machines, even before the Wright brothers had, and a man who is widely known all over the world wherever there is any interest in flying-machines. When I was introduced to Mr. Chanute he paid but little attention to me. That did not hurt me at all, for God knows I did not care to be exploited. As the party broke up, Orville Wright handed Mr. Chanute a copy of our journal, turned over to the pages that gave my story, and suggested to him that he might be interested in reading it after he got to his hotel. The next morning, when we met again, Mr. Chanute's face had changed. He came up to me with a very friendly greeting and put out his hand. When I told him that I was much disappointed, when I wrote the article, to find that it elicited so little interest, he replied something like this: "Why, Mr. Root, your readers all supposed that it was a made-up story. The way in which you talked about Christopher Columbus putting out on the unknown deep and all that, made people believe it was a sort of fairy story, such as we find in our magazines every little while — stories so much mixed up that one can not tell which is fact and which is fiction. The world did not believe you were *telling the truth.*"

I replied something as follows:

"Mr. Chanute, I am in the habit of having *strangers* doubt my statements; but those who are acquainted with me, and know my way of talking, and those who have read my department in our journal for years past, ought to know that I tell the truth. Furthermore, that article has the stamp of truth on it from beginning to end. I mentioned the locality, and the things that happened, in a way that would convince any reasonable person that what I related really occurred."

He glanced over the pages again and said slowly:

"Well, I guess that is so to a great extent; but what you are telling is *too wonderful*. The world is not yet ready to take it in."

I turned to Mr. Chanute and the Wright brothers, and then said:

"My friends, none of you know what you are doing. I am sure you do not recognize the unexplored field that you are opening up."

They laughed at my enthusiasm; but today, this 30th day of July, 1909, I think most people who read this will say I was right. My enthusiasm was not misplaced. I did not think, however, that it would take so many years for this world to wake up as it has done.

I have used as an illustration the Wright brothers and their flying-machine, and I wish to say again that there is a still more wonderful unexplored region in the line of our text than in any thing else on the face of the earth. Those who are experienced in the affairs of the world can judge pretty well whether a statement is true or not. Certain people, certain books, and certain articles in the papers have the stamp of truth on them; and this New Testament account of our Lord Jesus Christ has the stamp of truth on every page. The narrators may have made some trifling mistakes, but they are honest. The Bible *is* the word of God. I know not the future; but I am satisfied to risk it with him who said, "I am the resurrection and the life. He that believeth in me, though he were dead, yet shall he live." ...

1912-06-15, "Our Homes. Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio.", *Gleanings*, pp. 385-387

... Later, after they succeeded in getting the machine to make circles in the air as long as they wanted to stay up, I made them a visit and happened to be there at the same time as Mr. Chanute, a man who had made experiments with gliding machines before the Wright brothers ever took it up. I believe he is still living, and that he is also, perhaps, one of the best authorities in the world on aeronautics. They were discussing finances. Mr. Chanute thought a *million of dollars* would be needed to put the invention on a sound financial footing. I remember I noticed the peculiar twinkle on Wilbur's face as he said something as follows:

"Mr. Chanute, I have no ambition to be a millionaire. So far as I am concerned, I think a hundred thousand dollars would be all I should ever have use for in this world." ...

• Did A. I. Root witness at least one powered flight, of Wilbur or Orville, performed after September 20, 1904, and before August 8, 1908?

• The only relatively strong evidence, that he saw such a flight, is contained in his letters of November 28 and December 6, 1904, but it is a matter of interpretation whether the plane had traveled through the air in his presence or he just constructed visual images based on what he was told it had happened. In the first letter, the old entrepreneur congratulated Orville *for the good flight he made just as Root left for his car*, which does not necessarily mean he witnessed the flight and then he mentioned an episode during which the younger brother *struck the ground but when he picked up and went ahead the machine worked as handsomely and was managed as gracefully as anything he had ever seen in the line*. In the second one, dated December 6, 1904, while informing the Wrights he had received a postcard from Torrence Baird (an alleged eyewitness) regarding their December 1, 1904, flight, the old aviation enthusiast made this comment: *"if Orville sailed that thing as gracefully and steadily as he did on the last trip I witnessed he certainly is not a back number to any man living at present."* which means Root had really witnessed Orville flying at an unspecified date in the past. This is the most logical interpretation.

Unfortunately, the January 1, 1905, long article does not make reference to any flight of the younger brother that had Root as an onlooker despite the fact the text was updated mentioning the day of December 1, 1904, as the last of the season when the Wrights flew their plane.

As a parenthesis, Wilbur wrote in his 1904-1905 notebook, on page 36, that five trials (no. 88, 89, 90, 91, 92) were made on November 22, 1904, and the flights ranged from 150 to 250 feet. A. I. Root is listed as one of the people who were present.

[#-88-89-90+91+92]

Nov 22.

Made five trials but owing to improper gasoline regulation did not get a single start

flights ranged from 150-250 ft.

Furnas & Root & others - present.

(Wilbur Wright's 1904-1905 notebook, p. 36)

Wilbur's logbook does not contain another reference to his older friend from Medina as a witness of some other flights performed during November 1904. It should be also remarked that the Convention at Columbus (a city situated 105 km from Dayton), A. I. Root talked about in his November 7, 1904, letter, took place between the 14th and 18th of November, 1904, and the old Amos attended the symposium as it can be figured out from one of his articles ("Our Homes", Gleanings, December 1, 1904, pp. 1115-1118 (p. 1115)). He also mentioned in two of his articles ("Our Homes", Gleanings, April 1, 1905, pp. 373-376 (p. 375) and "Our Homes. Death of Wilbur Wright ...", June 15, 1912, Gleanings, pp. 385-387) an episode that occurred in his presence *during a pretty cool day* of the 1904 autumn when *Wilbur Wright was working with the flying-machine*. As no precise date is given we can just assume that incident happened in November, possible on the 22nd of the month. One thing is certain, the old Amos does not say he witnessed flights during that cold day.

Unfortunately, what the old aviation enthusiast wrote in his November 28, 1904, letter (*"I want to extend my congratulations to my good friend Orville for the good flight he made just as I left for my car."*) is not supported by Wilbur's entry in his diary reading:

"Nov 22. Made five trials but owing to improper gasoline regulation did not get a single start". No good flight took place on November 22, 1904. The old beekeeper was told a lie and, as a result, he congratulated Orville for nothing. Root was definitely a liar but also a victim of the deceptive tactics used by the two Daytonians.

1904-11-07, A. I. Root, "Letter to Wilbur and Orville Wright"

Friends W:-

... I am to be in Columbus next week and if the weather is favorable I expect to drop in at Sims Station sometime in the afternoon. If you are not there of course I will take the next car to Dayton. After our Convention at Columbus I may come out again if the weather is so that you can make any experiments. ... Yours truly, A. I. Root.

1904-11-28, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

I want to extend my congratulations to my good friend Orville for the good flight he made just as I left for my car. It was especially gratifying because the wind was in the wrong way and he once struck ground, but when he picked up and went ahead the machine worked as handsomely and was managed as gracefully as anything I ever saw in the line; in fact, a swallow could not have made the curves any better until the machine went down. I suppose that was the fault of the engine and no fault of Orville's. If that was the last flight for the season it certainly was a big success so far as managing the machine is concerned. Should there be any more experiments I would be very glad to have a brief account of same. ...

1904-12-06, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Hurrah for my good friend Orville. By the way I think I will have to explain that I sent Torrence Baird some postal cards and asked him if he would briefly report if you made any more flights yet this winter. He just tells me that Orville went around four times without stopping on Dec. 1st. It was a pretty cold day up here. Now if Orville sailed that thing as gracefully and steadily as he did on the last trip I witnessed he certainly is not a back number to any man living at present. ...

1905-04-01, "Our Homes", Gleanings, pp. 373-376 (p. 375)

... When Wilbur Wright was working with the flying-machine last fall, in his shirt sleeves, during a pretty cool day, I declared he would take a severe cold and be laid up. ...

1912-06-15, "Our Homes. Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio.", Gleanings, pp. 385-387

... One day we were all out in the field with the machine while there was a cool northwest wind. Wilbur was in his shirtsleeves while I, if I remember correctly, had on my fur cap and overcoat. I urged him to put on his coat lest he "catch cold." He looked up to me with one of those smiles I have mentioned, and said, "Mr. Root, I shall not catch cold out here in this breeze. That is not the way people catch cold as a rule. They 'catch cold,' as you express it, by keeping themselves shut up in hot and poorly ventilated rooms; and perhaps they may take cold by going out from such places warmed by artificial heat; but people who live outdoors, as God intended they should live, do not take cold, even if they get to feeling a little chilly." ...

• Is there evidence in A. I. Root's letters that he, at least, saw a plane resting on the ground, before August 8, 1908?

• There is plenty of evidence A. I. Root desired to see flights. Most of his letters, written before or after September 20, 1904, contain at least a sentence where he expressed his wish to get an invitation from the two brothers and witness some of their tests. In his January 1, 1905, article, the old Amos claimed he had seen a Wright plane not only on the ground but up in the air and for this reason one might expect to discover strong clues in his letters proving he really saw the machine. Instead, nearly nothing of value can be found.

In his text written between the 22nd and 26th of September 1904, the old beekeeper mentioned Mrs. Beard who had promised to take care of his wife if she came *with Root to enjoy that wonderful creation of the Wrights*. This represents strong evidence the old Amos knew, at the time he wrote the letter, Mrs. Beard, a person who lived close to the field where the two inventors made their tests.

In his letter of September 27, 1904, the same man from Medina stated: *"I may be of some good to you as a witness, but a printed description with a date to it would be worth ever so much more"*, an affirmation that proves he was a witness of something.

A sentence of Root, written on October 8, 1904, informs us that *twice he had seen pictures of the propelling blades that looked almost exactly like those of the Wrights*, which means he had seen propellers, not necessarily spinning, made by the two inventors.

On November 28, 1904, the old Amos wrote: *"I want to extend my congratulations to my good friend Orville for the good flight he made just as I left for my car."*, a text that shows he was present sometime before the 28th and after the 7th of November, 1904 (see the letter dated November 7, 1904) at the location where the two brothers experimented. Also he did not see that good flight of Orville, we can infer he might have seen the plane on the ground. This is just a supposition.

The December 21, 1904, letter of Root shows he intended to present *"a little model of the gliding machine"* to a *"Sunday School Christmas gathering"*. It is not clear where he had the model from or at least its plans, if the toy had not been built yet at the time he composed the letter.

On February 16, 1905, Ernest, A. I. Root oldest son, wrote the Wrights saying that his father *had told him that they were using water-cooling for their gasoline-engine*. The text does not specify whether the old Amos had seen the motor or not.

Quite late, on April 30, 1906, the old beekeeper referred to the operation of *shifting some iron weights to one side of the field or the other*. The Wrights were reminded that such a task was to be Root's job, a thing that suggests this man from Medina had seen the catapult or at least its counterweights.

1904-09-between 22 and 26, A. I. Root, "Letter to the Wright brothers" (the precise date is not known)

... if you should decide to keep on with your experiments until you can go out of that field and get back into it, I want to pay you another visit---perhaps bringing Mrs. Root along. Mrs. Beard has promised to take care of her, and I want to have her enjoy with me that wonderful creation of yours. ...

1904-09-27, A. I. Root, "Letter to Wilbur and Orville Wright"

Gentlemen:-

... when it comes to litigation it is often of very great value to be able to prove an invention by exhibiting a printed journal. I once prevented what threatened to be a big law suit by finding a printed description of the invention in an old journal dated years before. This thing will surely come out before the people soon and your invention will be copied and stolen unless you are ready to prove every point. I may be of some good to you as a witness, but a printed description with a date to it would be worth ever so much more, of course, the matter is entirely in your hands. Please do not think for a minute that I want to dictate. ...

1904-10-08, A. I. Root, "Letter to Wilbur Wright"

Dear Friend Wright:-

... Twice I have seen pictures of the propelling blades that look almost exactly like yours. There was no mention however that they were made of wood. ...

1904-11-07, A. I. Root, "Letter to Wilbur and Orville Wright"

Friends W:-

... I am to be in Columbus next week and if the weather is favorable I expect to drop in at Sims Station sometime in the afternoon. If you are not there of course I will take the next car to Dayton. ...

1904-11-28, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

I want to extend my congratulations to my good friend Orville for the good flight he made just as I left for my car. ...

1904-12-21, A. I. Root, "Letter to Wilbur and Orville Wright"

Dear Sirs:-

Please do not forget to send me cut representing your gliding machine. The one on page 20 of your little pamphlet "Soaring" would suit me very well. ... I am going to give our Sunday School Christmas gathering a little talk about God's latest gifts showing them a little model of the gliding machine. ...

1905-02-16, E. R. Root, "Letter to Wilbur and Orville Wright"

... Gentlemen:-

My father, A. I. Root, has often spoken of the Wright Brothers, and of what they are doing with their flying-machine. When he told me that you were using water-cooling for your gasoline-engine, I began to wonder if you had ever exploited the field of air-cooling for such engines. ...

1906-04-30, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

... I hope you will remember to let me know when you want those iron weights shifted to one side of the field or the other. Do not forget that that was to be my job. ...

-
- Did Root write the January 1, 1905, articles just to advertise his journal?
 - Are there signs that show he deliberately misled his readers?
-

▪ It would be unfair to say the only goal, the old Amos had in mind while writing the two January 1, 1905, articles, was to make his readers curious and determine them to buy the next issue of *Gleanings*. However, his letter dated December 24, 1904, and "My Flying-Machine Story" (*Gleanings*, January 1, 1905, p. 48), written on December 26, 1904, demonstrate together that their author, also fully aware no picture of a plane would appear in the January 15, 1905, number of his periodical, simply lied, making a fraudulent promise. Had he been honest and told that only the photo of an old Wright glider, that had been already printed by others, would be published, the interest of his clients, in purchasing the next issue, would have been much lower. The excuses in "The Wright Brothers' Flying-Machine" (*Gleanings*, January 15, 1905, pp. 86-87) for showing just the picture of a glider seriously damage his credibility.

It is also worth mentioning that in the majority of his letters, written between August 23, 1904, and the end of that year, Root insisted, in a way or another, that he should be allowed to publish something in connection with the Wrights and their flying machine. At one point (see the letter sent between the 22nd and 26th of September 1904) he even acknowledged he had a personal interest in publishing such an article, saying: *"While I am thinking somewhat of my own interests, I wish to consider right along your interests also."*

There is evidence that at least two people, the American photographer George Grantham Bain (see his letter, dated January 8, 1906, to A. I. Root) and a certain Jay Smith (consult the December 2, 1932, text of E. R. Root) were fooled by the old Amos' articles (*Gleanings*, January 1, 1905, pp. 36-39 and p. 48) and asked for what their author had promised. Root himself was well aware and acknowledged in his June 15, 1912, sermon, regarding the death of Wilbur, that *many people had thought his January 1, 1905, write-up had been a piece of fiction to advertise his journal*.

In conclusion, also the old man from Medina did not write his two January 1, 1905, texts only to advertise his periodical, because his numerous letters demonstrate he was really interested in flying

machines, he deliberately misled his readers by making a proven deceitful promise.

1904-09-between 22 and 26, A. I. Root, "Letter to the Wright brothers" (the precise date is not known)

Dear Friends Wright:

I inclose herewith what I have written up just as I should like to do it---that is, just about what I should like to put in print; but, of course, it is subject to your approval ... I have for years been trying to keep posted, and to keep before our people, through our journal, all real progress in science and art, and I would gladly give you \$100 for the privilege of printing this paper just about as it is ... Perhaps there is a little pride in wanting to be the first to give to the great world the real facts in the case---that is, after you have straightened up my statement so that it will contain nothing but actual facts. ... There would not be time to get it in our journal any way for Oct. 1; but if we can it for Oct. 15, as I said before, it would make me very glad.

Now, if you will pardon a little more intrusion in your affairs, I would recommend that you retain a good trusty attorney, and let him advise you in regard to the legal and financial matters---that is, if you can find such a man as you want. In that case I would submit to him this write-up of mine, and abide by his decision. While I am thinking somewhat of my own interests, I wish to consider right along your interests also. ...

1904-12-24, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Enclosed find proofs of the forthcoming article on the flying machine. ...

By today's mail we have received an excellent photograph of the gliding machine. ... if you cannot furnish at once a plate to print from of the same picture I will have engraving made for January 15th ... Yours truly, A. I. Root.

1905-01-01, "My Flying-Machine Story", *Gleanings*, p. 48

... Yes, to-day, Dec. 26, I am not only enjoying a happy Christmas but I feel just like saying "A merry and a happy Christmas to you all." I hope you will enjoy my story about the flying-machine ... A picture of the flying-machine up in the air will appear in our next issue, nothing preventing. ...

1905-01-15, "The Wright Brothers' Flying-Machine", *Gleanings*, pp. 86-87

I shall have to apologize a little, friends, for giving a picture of the gliding-machine instead of a flying-machine ... The operator, Mr. Wilbur Wright, if I am correct, is shown very plainly. ...

I mention at the outset that the picture represents the gliding-machine. Well, the flying-machine is the same thing with the aluminum engine which stands right close to the operator and the pair of propellers, one each side of the back rudder. When in flight the propellers are invisible. Their action is very much like the motion of a bee's wing --- perhaps not quite as rapid. ...

1906-01-08, George Grantham Bain, "Letter to A. I. Root"

Jan. 8/06

Dear Sir:

In your issue of Jan. 1 you promise to publish in a subsequent issue a photograph and description of the Wright flying machine. In my collection of flying machine pictures (which is remarkably complete) I have photographs of the Wright gliding machine, made by Mr. Chanute of Chicago. I am very anxious to obtain a photograph of the new machine at the earliest possible moment and shall be greatly obliged if you will let me have your photograph long enough to make a copy of it. Yours very truly, George Grantham Bain ...

1912-06-15, "Our Homes. Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio.", *Gleanings*, pp. 385-387

... It was my privilege to be present when they made their first flight of a mile or more, and turned a circle and came down to the place of starting. My write-up of the event was so astonishing that many people thought it was a piece of fiction to advertise our journal; and even so good an authority as the *Scientific American* did not see fit to credit my account ...

1933-01-03; 1932-12-2, E. R. Root, "Copy of a letter, dated 12/2/32, sent by E. R. Root to Jay Smith"

... Dear Mr. Smith: That portion of your letter ... requesting two copies of *Gleanings* that has pictures of the Wright Brothers flying machine has been received. ... I have secured one copy of *Gleanings* for January 1905 where my father gives a detailed account of the Wright machine and its first

flight. ... I will make a further search and if I can find the copy that contains a picture of the Wright flying machine I will do so. I remember it, of course, very distinctly. ...

• Was Amos Root an honest man?

• Did the people, who knew him, consider he had witnessed the Wright Brothers flying in 1904?

Definitely, Root was not an honest person. In "Our Homes" (*Gleanings*, July 1, 1910, pp. 429-431 (p. 429)), while referring to his first article about the Wrights ("Our Homes", *Gleanings*, March 1, 1904, pp. 240-243 (p. 241)), he wrote these lines: "*When I said on these pages that the Wright brothers had a machine that would fly without any balloon, the statement was challenged on every side.*", an affirmation that is a pure lie because, at the moment he published the March 1, 1904, text, the two inventors had already flown, according to their claims, and Root did not tell that the machine would fly but that it had already flown. The old Amos wanted to demonstrate, with this untruth written in the July 1, 1910, issue of *Gleanings*, that he had predicted the success of the Wrights that finally became reality in front of his eyes, on September 20, 1904.

Another case that shows Root was a liar is his January 1, 1905, promise that *a picture of the flying-machine up in the air would appear in the following issue of his journal*, also he knew, as it has been already discussed, that only *a photograph of the gliding-machine* would be printed in the January 15, 1905, number.

A few of the old Amos' letters or articles contain evidence he had credibility problems in front of his friends, family members and readers. Even Octave Chanute had doubts regarding his account about the September 20, 1904, flight. As an irony, in the same text ("Our Homes", *Gleanings*, July 1, 1910, pp. 429-431 (p. 429)) in which Root remarked that a sizable number of people *had decided his January 1, 1905, story was just a made-up piece of fiction*, he also acknowledged he was not *entirely honest*, in general, without being specific. Here is a list of fragments, taken from the texts of A. I. Root, that proves he was not believed:

- "I have repeatedly already explained to my friends that I was not at liberty to mention what I witnessed and they have always taken it kindly" (1904-10-08, A. I. Root, "Letter 1 addressed to Wilbur Wright")
- "I have been a good deal disappointed because so few people, even the members of my own family, regard it as such a non important matter." (1904-10-08, A. I. Root, "Letter 1 addressed to Wilbur Wright")
- "As nobody seems to want to talk about it around here I can very easily drop the subject and pretend I am riding some other hobby." (1904-10-08, A. I. Root, "Letter 1 addressed to Wilbur Wright")
- "I take it for granted that you do not wish any mention made of what you have done at present. This is rather hard for me because they keep saying to me tauntingly "What has become of the Wright Bros?" (1905-10-21, A. I. Root, "Letter to the Wright brothers")
- "In only a few times in my life have I been accused of untruthfulness. When I first gave the story about the Wright brothers, and said I saw them fly with their machine and come around to the starting-point, I was disappointed because my report created so little sensation." (1909-08-15, "Our Homes", *Gleanings*, pp. 515-518 (p. 516))
- "He [Octave Chanute] glanced over the pages again and said slowly: "Well, I guess that is so to a great extent; but what you are telling is *too wonderful*. The world is not yet ready to take it in." (1909-08-15, "Our Homes", *Gleanings*, pp. 515-518 (p. 516))
- "When I published the account of their work and said I had seen them with my own eyes make a trip (of about a mile) through the air and come back to the starting-point, many people began to inquire who A. I. Root was; and quite a few decided my story was just a made-up piece of fiction." (1910-07-01, "Our Homes", *Gleanings*, pp. 429-431 (p. 429))
- "do not understand, please, that your old friend who speaks to you on these pages claims that *he* is entirely honest, and that all the rest of mankind are bad. ... God knows I am *trying* to be honest and sincere

from daylight to dark, and every day in the week; but with shame I confess that a good many times I can look back and see that I have made bungling work of it." (1910-07-01, "Our Homes", Gleanings, pp. 429-431 (p. 429))

- "when I to-day asked if I could describe all I saw Wilbur replied, "Mr. Root, you may tell any thing you choose about our work, providing you tell the truth."" (1910-09-15, "Then and Now. The Wright Brothers and Their Flying-machine up to Date.", Gleanings, pp. 602-604)

- "I asked if I might be permitted to describe in our journal what I saw. Wilbur replied with that same expressive twinkle, "Mr. Root, tell any thing you like, providing you tell the truth, and only the truth."" (1912-06-15, "Our Homes. Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio.", Gleanings, pp. 385-387)

- "Our departed friend, your brother Wilbur once said to me that I might write up whatever I saw, providing I told the truth, and I presume he meant nothing but the truth." (1915-09-14, A. I. Root, "Letter to Orville Wright")

There is strong evidence that A. I. Root talked often, about the two brothers and their planes, in the presence of some members of his family. A few letters of his sons, Ernest and Huber, strongly demonstrate this thing (see the list of quotations that follows the next two paragraphs).

However, only twice and about three decades after 1904, E. R. Root used explicitly the word "flight". In his January 3, 1933, letter to Orville, he referred to the January 1, 1905, account as "*an article by my father on your early experiments in aviation when you made your first successful flight*" and then explained that *he had prepared an article based on his father's reports, for the Scientific American, telling about Wrights' work*. On February 9, 1933, Ernest Root emphasised that *the article offered to the Scientific American describing Wright's brothers' first flights, as mentioned in the journal Gleanings in Bee Culture, had been prepared by himself*.

Apart from this two closely related exceptions, there is no trace of the word "flight" in other texts of the old Amos' family members. E. R. Root talks in his February 16, 1905, letter about the fact that his father *had often spoken of the Wright Brothers, and of what they were doing with their flying-machine*, without explicitly mentioning some flights witnessed by the old apiarist and businessmen. Huber Root, in his April 15, 1918, answer, refers to *those early days when the Wrights were making those first, wonderful, revolutionary experiments*. Howard Calvert, Root's grandson, wrote, before June 1919, that his grandfather *predicted the success of the Wright Brothers' airplanes several years before aviation was perfected*. Constance Boyden, Root's daughter, stated in the Farm Journal for January 1921 that his father was "*a confidant and friend of the Wright Brothers when they were making their first secret attempts at flying*".

- "My father, A. I. Root, has often spoken of the Wright Brothers, and of what they are doing with their flying-machine." (1905-02-16, E. R. Root, "Letter to Wilbur and Orville Wright")

- "For years I have wished that I might have the opportunity of shaking your hand and telling you how much all of us appreciate your kindness to father in those early days when you were making those first, wonderful, revolutionary experiments." (1918-04-15, H. H. Root, "Letter to Orville Wright")

- "He [Amos I. Root] treasures every reference to you that he sees in the newspapers, and he has watched your work with what is almost a fatherly interest." (1918-04-15, H. H. Root, "Letter to Orville Wright")

- "As he [Amos I. Root] predicted the success of the Wright Brothers' airplanes several years before aviation was perfected, so will the success of his prophecy regarding wind power be assured in years to come" (1919-06, "Our Homes", Gleanings, pp. 392-394. This text was written by Howard Calvert, one of Root's grandsons, in the *Hummer*, a periodical of which Howard was the editor. The old Amos just quoted it.)

- "He [Amos I. Root] was one of the first keenly interested in aviation, being a confidant and friend of the Wright Brothers when they were making their first secret attempts at flying." (1921-03, "A. I. Root As His

Daughter Sees Him", Gleanings, p. 171. The text was written by Constance Boyden, one of Root's daughters, in the Farm Journal for January 1921. The editor of Gleanings just quoted it.)

- "Father often spoke of you two men and your sister Katharine, of the very high character of you all. ... he seemed to feel a great deal of pride in that he knew both of you men personally." (1923-05-16, E. R. Root, "Letter to Orville Wright")

- "As the oldest son of A. I. Root I read with very much interest the true story of the Wright Brothers which I assumed to be authentic. I appreciate very much the reference to A. I. Root." (1930-12-19, E. R. Root, "Letter to Orville Wright")

- "In going over the back volumes of our journal I discovered an article by my father on your early experiments in aviation when you made your first successful flight." (1933-01-03, E. R. Root, "Letter to Orville Wright")

- "The article offered to the Scientific American describing your first flights as mentioned in the journal Gleanings in Bee Culture, which you have, was prepared by myself and submitted to my father. He signed it and then I sent it on to the Scientific American." (1933-02-09, E. R. Root, "Letter to Orville Wright")

In conclusion, it is not clear at all whether Root's family members believed he had witnessed flights performed by the two Daytonians in 1904 or at any time before August 8, 1908.

1904-10-08, A. I. Root, "Letter I addressed to Wilbur Wright"

Dear Friend Wright:-

... I have repeatedly already explained to my friends that I was not at liberty to mention what I witnessed and they have always taken it kindly; in fact, I have been a good deal disappointed because so few people, even the members of my own family, regard it as such a non important matter. ... As nobody seems to want to talk about it around here I can very easily drop the subject and pretend I am riding some other hobby. Of course I do not mean to be wicked or tell fibs, but I think you will understand me. All my acquaintances expect to see me having some new hobby to ride every few days so they wont be at all surprised if I keep still about flying machines. ...

1905-01-01, "My Flying-Machine Story", Gleanings, p. 48

... A picture of the flying-machine up in the air will appear in our next issue, nothing preventing. ...

1905-01-15, "The Wright Brothers' Flying-Machine", Gleanings, pp. 86-87

I shall have to apologize a little, friends, for giving a picture of the gliding-machine instead of a flying-machine ...

1905-02-16, E. R. Root, "Letter to Wilbur and Orville Wright"

... Gentlemen:-

My father, A. I. Root, has often spoken of the Wright Brothers, and of what they are doing with their flying-machine. ...

1905-10-21, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

May the Lord be praised for the good news that comes in yours of October 19th. ... Please do not fail to let me know when you think of making another trial. ... I take it for granted that you do not wish any mention made of what you have done at present. This is rather hard for me because they keep saying to me tauntingly "What has become of the Wright Bros?" ... From your old friend, A. I. Root.

1909-08-15, "Our Homes", Gleanings, pp. 515-518 (p. 516)

... In only a few times in my life have I been accused of untruthfulness. When I first gave the story about the Wright brothers, and said I saw them fly with their machine and come around to the starting-point, I was disappointed because my report created so little sensation. ... The next morning, when we met again, Mr. Chanute's face had changed. ... When I told him that I was much disappointed, when I wrote the article, to find that it elicited so little interest, he replied something like this: "Why, Mr. Root, your readers all supposed that it was a made-up story. The way in which you talked about Christopher Columbus putting out on the unknown deep and all that, made people believe it was a sort of fairy story, such as we find in our magazines every little while — stories so much mixed up that one can not tell which is fact and which is fiction. The world did not believe you were telling the truth." ...

He glanced over the pages again and said slowly:

"Well, I guess that is so to a great extent; but what you are telling is *too wonderful*. The world is not yet ready to take it in." ...

1910-07-01, "Our Homes", *Gleanings*, pp. 429-431 (p. 429)

... Whenever any thing new comes up, people at once ask for authority. When I said on these pages that the Wright brothers had a machine that would fly without any balloon, the statement was challenged on every side. People asked, as they had a right to, "Where do the Wrights live, and who are they?" When I published the account of their work and said I had seen them with my own eyes make a trip (of about a mile) through the air and come back to the starting-point, many people began to inquire who A. I. Root was; and quite a few decided my story was just a made-up piece of fiction.

... Now do not understand, please, that your old friend who speaks to you on these pages claims that *he* is entirely honest, and that all the rest of mankind are bad. ... God knows I am *trying* to be honest and sincere from daylight to dark, and every day in the week; but with shame I confess that a good many times I can look back and see that I have made bungling work of it. ...

1910-09-15, "Then and Now. The Wright Brothers and Their Flying-machine up to Date.", *Gleanings*, pp. 602-604

... During my first visits, years ago, before their patents were secured, I was asked to omit certain things in my write-up; but when I to-day asked if I could describe all I saw Wilbur replied, "Mr. Root, you may tell any thing you choose about our work, providing you tell the *truth*." God knows we as a people want the *truth* always and everywhere. ...

1912-06-15, "Our Homes. Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio.", *Gleanings*, pp. 385-387

... During my first visit, and while the Wrights were making application for a patent on their invention, there were certain things I was asked to avoid mentioning in print. On my last visit, Wilbur invited me to go over and see their great factory. This was described on p. 602, Sept. 15, 1910. On starting out I asked if I might be permitted to describe in our journal what I saw. Wilbur replied with that same expressive twinkle, "Mr. Root, tell any thing you like, providing you *tell the truth*, and only the truth." How many proprietors of our American establishments nowadays would instruct a reporter of a magazine (who is writing it up) to avoid exaggeration or overstatement in his relation of what he saw? ...

1915-09-14, A. I. Root, "Letter to Orville Wright"

Friend Wright:-

... Our departed friend, your brother Wilbur once said to me that I might write up whatever I saw, providing I told the truth, and I presume he meant nothing but the truth. ...

1918-04-15, H. H. Root, "Letter to Orville Wright"

... My dear Mr. Wright:

... For years I have wished that I might have the opportunity of shaking your hand and telling you how much all of us appreciate your kindness to father in those early days when you were making those first, wonderful, revolutionary experiments. I feel sure that the interest that he took in your work then and that he has maintained thru the years that have elapsed since, has surely lengthened his life. He treasures every reference to you that he sees in the newspapers, and he has watched your work with what is almost a fatherly interest. ... Yours sincerely, H H Root ...

1919-06, "Our Homes", *Gleanings*, pp. 392-394

... Your old friend, A. I. Root, not only did find his burdens lifted by his grandson Howard, but our long trip together, gave me a chance of becoming better acquainted with him than I had ever been before. To give you a little glimpse of him I give below a clipping from the *Hummer*, a little periodical of which he is the editor:

... We then can get our lights and heat from the air, run our automobiles from wind-made electricity, and probably do many other things just as A. I. Root is doing with his electric windmill in Florida. As he predicted the success of the Wright Brothers' airplanes several years before aviation was perfected, so will the success of his prophecy regarding wind power be assured in years to come — just how many years we will not venture to say. ...

1921-03, The Editor of *Gleanings*, "A. I. Root As His Daughter Sees Him", *Gleanings*, p. 171

The Farm Journal for January, on its page of "Workers and Work," published an article "unbeknownst" to Mr. A. I. Root, under these headlines:

"One of the Farm Journal's Oldest Friends, Amos I. Root, the Bee Man." The author was his daughter, Mrs. Constance Root Boyden ... The editor of *Gleanings* makes bold to publish this well-done sketch of the father without consulting either the subject or the author of it. Here it is:

"My father might be described as a man who has never been without a hobby. ...

... He was one of the first keenly interested in aviation, being a confidant and friend of the Wright Brothers when they were making their first secret attempts at flying. ...

1923-04-30, E. R. Root, "Letter to Orville Wright"

... Dear Mr. Wright:

My father, A. I. Root, passed away early today. ...

Father had a very warm place in his heart for you, and I am sure that he would be glad to have me express to you for him a final word of friendship. ...

1923-05-08, Orville Wright, "Letter to Ernest R. Root"

... Dear Mr. Root: ...

Your father was a man of unusual character and intelligence, and his passing is a real loss to the World as well as to his family. I look back on the times when your father used to visit us while we were carrying on our early flying experiments with much pleasure; and though we had not had the opportunity of seeing him in his later years we often thought and talked of him. ...

1923-05-16, E. R. Root, "Letter to Orville Wright"

... Dear Mr. Wright:

Your welcome letter expressing sympathy in the loss of our dear father, A. I. Root, was duly received.

Father often spoke of you two men and your sister Katharine, of the very high character of you all. While he claimed no credit in your great invention, he seemed to feel a great deal of pride in that he knew both of you men personally. ... Most sincerely yours, E. R. Root ...

1930-12-19, E. R. Root, "Letter to Orville Wright"

Wright Brothers, ...

Gentlemen:

As the oldest son of A. I. Root I read with very much interest the true story of the Wright Brothers which I assumed to be authentic. I appreciate very much the reference to A. I. Root. ...

1933-01-03, E. R. Root, "Letter to Orville Wright"

... In going over the back volumes of our journal I discovered an article by my father on your early experiments in aviation when you made your first successful flight. I am enclosing a copy of our journal for January 1st, 1905, and refer you to pages 36, 37 and 38. ...

... It might interest you to know that about that time I prepared an article based on my father's reports, for the *Scientific American*, telling about your work. That paper turned it down as impossible ...

1933-01-31, Orville Wright, "Letter to E. R. Root"

... Your father once told us of the "*Scientific American*" refusing to print an account of our flights sent to it. Was this a marked copy of "*Gleanings*" of January 1, 1905, or was it a specially prepared article? ...

1933-02-09, E. R. Root, "Letter to Orville Wright"

... The article offered to the *Scientific American* describing your first flights as mentioned in the journal *Gleanings in Bee Culture*, which you have, was prepared by myself and submitted to my father. He signed it and then I sent it on to the *Scientific American*. ...

• Is there enough information to demonstrate that A. I. Root had all necessary data to write the January 1, 1905, article without seeing any actual powered flight?

Yes. In his first letter to the Wrights (February 16, 1904) the old Amos announced the two inventors that *he had seen their account in the Independent* (Wilbur Wright, "The Experiments of a Flying Man", *The Independent*, New York, US, February 4, 1904, pp. 242-246). It is true, the article was not authored by the elder of the two brothers and contained some inaccuracies, the main one being the

affirmation that the 1903 Wright plane had one of its two propellers placed *underneath the machine and revolving horizontally to assist in sustaining the apparatus in the air*. However, the text was illustrated with a Wright glider in flight, it also gave a description of the motor used by the 1903 plane, which would have been enough for a man like A. I. Root (who said that, years before, *he had made some experiments on a small scale based on the idea that "a flying machine should be made on the principle of flying a kite"*; see the February 16, 1904, letter) to construct in his mind a visual image of the powered apparatus.

There is also evidence, in his October 8, 1904, letter, that the old Amos had seen the real propellers used by the two inventors as long as he stated: *"Twice I have seen pictures of the propelling blades that look almost exactly like yours."*

Root had also read an article of the elder brother (Wilbur Wright, "Experiments and Observation in Soaring Flight" (Read June 24, 1903), Printed in Advance of the Journal of the Western Society of Engineers, August 1903; pp. 1-18) because in his December 21, 1904, letter he wrote: *"Please do not forget to send me cut representing your gliding machine. The one on page 20 [likely page 2] of your little pamphlet "Soaring" would suit me very well."* The text contains eight pictures showing Wright gliders flying, including one, that on page 2, which was also printed in *Gleanings* for January 15, 1905.

With the work "Soaring" and its photos in front of him, plus the knowledge he had about the propellers and engine used by the two inventors and also with the information regarding *"that plan of dropping a weight from a little derrick"* (August 23, 1904, letter), A. I. Root would have had abundant sources of inspiration to write the January 1, 1905, story that in fact was just in part his creation as long as the two Daytonians had all its intermediary versions at their disposal and the full power to amend the text.

1904-02-16, A. I. Root, "Letter to Wilbur and Orville Wright"

Gentlemen:-

I hope you will excuse me, friends, for the liberty I take in addressing you. Let me say briefly that I have all my life had an idea in my head that a flying machine should be made on the principle of flying a kite, and years ago I made some experiments on a small scale in this line. ... if you have any models of your apparatus in Dayton, Ohio, I should be exceedingly glad to pay you a visit very soon to look them over ... I saw your account in the Independent. ... Yours truly, A. I. Root.

1904-08-23, A. I. Root, "Letter to Wilbur and Orville Wright"

Dear Friends:-

I have not laid awake nights thinking about your work quite as much since I got home as I did before, but my mind is still on it a great deal ... I am very anxious to know in regard to that plan of dropping a weight from a little derrick, that is, if you decide to undertake anything of the sort. ... I did not say anything about the flying machine experiments. ... I am reading the two books you gave me over and over again. I get some new apprehension of the matter every time I look them over. ...

1904-10-08, A. I. Root, "Letter to Wilbur Wright"

Dear Friend Wright:-

... Twice I have seen pictures of the propelling blades that look almost exactly like yours. There was no mention however that they were made of wood. ...

1904-12-21, A. I. Root, "Letter to Wilbur and Orville Wright"

Dear Sirs:-

Please do not forget to send me cut representing your gliding machine. The one on page 20 of your little pamphlet "Soaring" would suit me very well. ... I am going to give our Sunday School Christmas gathering a little talk about God's latest gifts showing them a little model of the gliding machine. ...

Conclusions. Evidence showing that A. I. Root did not see the Wright Brothers flying in 1904.

- The November 9, 1905, letter where he referred to *"having made a big fuss about something that had not after all panned out to amount to anything"* (1905-11-09, A. I. Root, "Letter to the Wright brothers").

- His dialog with O. Chanute, he recalled on July 30, 1909, which is a bizarre conversation, that took place after October 5, 1905, between two people who had already seen the Wrights flying in 1904 and one of them, the engineer Chanute, had totally unexplained doubts regarding the January 1, 1905, story of Root as can be seen from this fragment of text: *"He [Octave Chanute] glanced over the pages again and said slowly: "Well, I guess that is so to a great extent; but what you are telling is too wonderful. ..."* (1909-08-15, "Our Homes", *Gleanings*, pp. 515-518 (p. 516)).

- The absence of any reference to the September 20, 1904, flight in his numerous letters sent to the Wrights.

- The fact that a newspaper (see: "Trials Over for Season", Dayton Press, December 17, 1904) had already mentioned the date of September 20, 1904, as the first when the two brothers flew in a circuit: *"The new machine, which is 20 feet from rear to front, and 40 feet from tip to tip, is the first machine to make complete circles. Since September 20, the Wrights have made 20 complete circles with the machine."* The article appeared about one week before Root sent the proofs of his January 1, 1905, story to Dayton for a final review: *"Enclosed find proofs of the forthcoming article on the flying machine. As we want to be sure to get it in the issue for January 1st will you please look it over and return as quickly as possible"* (1904-12-24, A. I. Root, "Letter to the Wright brothers") and only two days before the old Amos was in Dayton where he met the father of the two brothers and also read his story: *"Mr. A. J. Root came at 4:30. He read his articles for his bee Journal. He went on 8:00 car to Springfield. Mr. Root seems to be a fine old gentleman. He lives in Medina, Ohio."* (Milton Wright diaries, entry for Monday, December 19, 1904).

- His continual insistence pushed to the extreme, in the messages mailed to Dayton, on seeing the Wright machines in the air, also he had already witnessed, according to his claims, flights performed on a few occasions:

1) In the summer of 1904:

- *"When I first saw the apparatus it persisted in going up and down like the waves of the sea. Sometimes it would dig its nose in the dirt, almost in spite of the engineer."* ("Our Homes", *Gleanings*, January 1, 1905, pp. 36-39 (col. 1, p. 37));

- *"When I first visited them they were obliged to run the machine along a single rail for, I think, 60 or 70 feet, in order to get up sufficient speed to climb into the air."* ("The Wright Brothers and Their Flying Machine Up To Date", *Gleanings*, November 15, 1908, pp. 1390-1392 (col. 1, p. 1391)).

It should be noted that the two texts represent relatively weak evidence the old businessman really saw the apparatus flying because they do not explicitly emphasise that A. I. Root witnessed the plane describing a trajectory through the air.

2) On September 20, 1904, when he saw Wilbur closing a circuit aboard his apparatus: *"it was my privilege, on the 20th day of September, 1904, to see the first successful trip of an airship, without a balloon to sustain it, that the world has ever made, that is, to turn the corners and come back to the starting-point"* ("Our Homes", *Gleanings*, January 1, 1905, pp. 36-39 (col. 2, p. 37)).

3) Before December 6, 1904: *"Now if Orville sailed that thing as gracefully and steadily as he did on the last trip I witnessed he certainly is not a back number to any man living at present."* (1904-12-06, A. I. Root, "Letter to Wilbur and Orville Wright").

- A title, "The Wright Brothers And Their Flying - Machine, Not Only "Out In The Open" But "Up In The Air."" (*Gleanings*, September 1, 1908, p. 1097) which suggests that the old beekeeper had seen the two brothers just "out in the open" and not "up in the air". A. I. Root had a rare moment of sincerity when he selected such a heading.

- The deceitful promise he made in "My Flying-Machine Story" (*Gleanings*, January 1, 1905, p. 48): *"A picture of the flying-machine up in the air will appear in our next issue, nothing preventing."*, also he was well aware at the time he wrote the article (December 26, 1904), as can be seen from his December 24, 1904, letter, that the January 15, 1905, number of *Gleanings*

would contain just the photo of a glider taken from “Experiments and Observation in Soaring Flight” (by Wilbur Wright, Read June 24, 1903, pp. 1-18 (p. 2)). Why should we believe his January 1, 1905, account as long as, in the same issue of his periodical, Root told such a lie regarding the Wright powered apparatus?

Another example that shows the old man from Medina was not an honest person is his affirmation in “Our Homes” (Gleanings, July 1, 1910, pp. 429-431 (p. 429)), while referring to his first article about the Wright brothers (“Our Homes”, Gleanings, March 1, 1904, pp. 240-243 (p. 241)). The text he wrote: “*When I said on these pages that the Wright brothers had a machine that would fly without any balloon, the statement was challenged on every side.*” (July 1, 1910) is an evident lie because, at the time he published the March 1, 1904, sermon, the two inventors had already flown, according to their claims, and Root did not tell in March 1904 that the machine would fly but that it had already flown. These are his words: “*During the past few months these two boys have made a machine that actually flew through the air for more than half a mile, carrying one of the boys with it.*” (March 1, 1904). Therefore, he made no prediction but simply informed his readers about what he knew.

- A. I. Root was fully aware that people doubted his January 1, 1905, account and occasionally he tried to convince his readers he had told the truth. One of the most relevant example is his sermon “Our Homes” (Gleanings, August 15, 1909, pp. 515-518 (p. 516)) in which he makes a parallel between the Bible and his own story, about the September 20, 1904, flight in circuit of W. Wright, pretending that his account has the stamp of truth on it like the New Testament even if both include unbelievable things. Here are two relevant excerpts from the August 15, 1909, text:

1) “*Mr. Chanute, I am in the habit of having strangers doubt my statements; but those who are acquainted with me ... ought to know that I tell the truth. Furthermore, that article has the stamp of truth on it from beginning to end.*”

2) “*Those who are experienced in the affairs of the world can judge pretty well whether a statement is true or not. Certain people, certain books, and certain articles in the papers have the stamp of truth on them; and this New Testament account of our Lord Jesus Christ has the stamp of truth on every page. The narrators may have made some trifling mistakes, but they are honest.*”

With such ridiculous explanations, the effect is the opposite of what he desired. He discredited the January 1, 1905, narration instead of making it more plausible. Root thought that, if he portrayed himself as a kind of prophet fighting a crowd of unbelievers, the scepticism of the people would diminish and more and more would accept his account as something that had really happened.

- The fact that a son, grandson and daughter of him did not explicitly say the old Amos had witnessed at least one powered flight in 1904 or at any time before August 8, 1908. E. R. Root wrote in his February 16, 1905, letter that his father *had often spoken of the Wright Brothers, and of what they were doing with their flying-machine*, without explicitly mentioning the flights witnessed by the old businessmen. Huber Root, in his April 15, 1918, text, refers to *those early days when the Wrights were making those first, wonderful, revolutionary experiments*. His grandson, Howard Calvert, wrote before June 1919 that his grandfather *predicted the success of the Wright Brothers' airplanes several years before aviation was perfected*. Constance Boyden, Root's daughter, stated in the Farm Journal for January 1921 that his father was “*a confidant and friend of the Wright Brothers when they were making their first secret attempts at flying*”.

- The reaction Octave Chanute had, a few years before July 30, 1909, after reading Root's article and hearing his complaints regarding the so little sensation his account had created. This is what O. Chanute answered: “*Mr. Root, your readers all supposed that it was a made-up story. The way in which you talked about Christopher Columbus putting out on the unknown deep and all that, made people believe it was a sort of fairy story, such as we find in our magazines every little while — stories so much mixed up that one can not tell which is fact and which is fiction.*” (“Our Homes”, Gleanings, August 15, 1909, pp. 515-518 (p. 516)).

It is evident that the mentor of the two brothers himself was unable to extract the truth from A. I. Root's narration.

Section III

I hope you will excuse me, friends, for the liberty I take in addressing you

1904

▪ On February 14, 1904, just before the last bell rang, the Sunday School teacher Amos Ives Root from Medina, Ohio, according to his custom to give the class *a hint of what was going on in the scientific world*, told his hard to manage audience, formed by young men, about the Wright brothers and their plane. One day later he was already writing an article of a religious character for the March 1, 1904, issue of *Gleanings in Bee Culture*, his bimonthly periodical, a publication addressed mainly to beekeepers but also used to bring people closer to God. These are the relevant paragraphs regarding the two inventors:

1904-03-01, “Our Homes”, Gleanings, pp. 240-243 (p. 241)

“Do you know, friends, that two Ohio boys, or young men, rather, have outstripped the world in demonstrating that a *flying-machine* can be constructed without the use of a balloon? During the past few months these two boys have made a machine that actually flew through the air for more than half a mile, carrying one of the boys with it. This young man is not only a credit to our State, but to the whole country and to the *world*.”

“Where do the boys live? What are their names?” said a chorus of voices.

“Their names are Orville and Wilbur Wright, of Dayton, Ohio.”

“When and where did their machine fly?”

“Their experiments were made just before winter set in, on the Atlantic coast, at Kitty Hawk, N. C., at a place where there are several miles of soft sand blown up by the wind. They chose that sandy waste so that, in case of an accident, they would not be apt to be severely hurt by falling. For the same reason they managed it so as to keep the machine within five or ten feet of the ground. As soon as we have warm weather they are going on with their experiments. The machine was made something after the fashion of a box kite. A gasoline engine moved propeller wheels that pulled it against the wind. When they make their next trial I am going to try to be on hand and see the experiment.”

This little story seemed to have the effect I expected it would. They seemed to have forgotten the unpleasantness about maintaining order, and I was thanking God that I had been enabled to talk as severely as I did, and yet not arouse any bad or vindictive feelings in their hearts; but as we passed out of the door of our room, however, one of the tallest and brightest of the group said something like this:

“If they take you up in the machine I hope they will let you drop; for we haven't any use for any such ‘old thing’ around here.”

▪ The teacher was not too much discouraged by the remark of that disrespectful student who hoped his professor be let to fall from the plane he had talked about and two days later, on February 16, 1904, he contacted the Wright brothers expressing his wish to witness their experiments. This is the content of his letter:

1904-02-16, A. I. Root, “Letter to the Wright brothers”

Gentlemen:-

I hope you will excuse me, friends, for the liberty I take in addressing you. Let me say briefly that I have all my life had an idea in my head that a flying machine should be made on the principle of flying a kite, and years ago I made some experiments on a small scale in this line. Now when you make any more experiments with your machine I want to be on hand if you can manage to permit me to go along. I am not going to make any experiments of my own and I think I can assure you that I won't undertake to borrow any of your ideas, and at my age I do not care to make investments in the project. In fact, we have a good business already that uses all our capital, but I want to be in the crowd and see you work and if I can be of any assistance in any way I should be exceedingly glad. By consulting Dun or Bradstreet you can easily find out what my financial standing is. Another thing, if you have any models of your apparatus in Dayton, Ohio, I should be exceedingly glad to pay you a visit very soon to look them over; that is, if I may be permitted. I can give you any guarantee you wish in regard to my honesty and integrity. I saw your account in the

Independent. I expect you are already overrun with a vast amount of correspondence, but I hope you will find time to give me some sort of an answer soon. Yours truly, A. I. Root.

- The account Root said he had read was:

Wilbur Wright, "The Experiments of a Flying Man", The Independent, New York, US, February 4, 1904, pp. 242 – 246.

W. Wright denied he had written such an article that gave a totally inaccurate description of his plane, as can be seen from this small fragment of its extensive text:

One of the propellers was set to revolve vertically and intended to give a forward motion, while the other underneath the machine and revolving horizontally, was to assist in sustaining it in the air.

The Independent twice published apology notes, the first on February 25, the second on March 10, 1904, the latter finally making clear that the two brothers were not responsible for the content of the article and the real author was not W. Wright but a literary agent.

As can be seen from his March 22, 1904, letter, the old aviation enthusiast was already aware of *what the Independent had said in the way of apology*.

For roughly three years, A. I. Root bombed the two inventors with dozens of letters, the majority of them reminding the brothers their old friend from Medina would like to witness experiments, even ground tests if, for a reason or another, flights were not possible. His insistence pushed a bit to the extreme, see Root's texts composed between March 22 and July 26, 1904, was not in vain. He finally got an invitation and met the Wrights in the summer of 1904.

1904-03-22, A. I. Root, "Letter to the Wright brothers"

Gentlemen:-

Permit me to thank you, friends, for your letter of Feb. 23rd and your promise that I may have an opportunity of witnessing your experiments. I am exceedingly anxious to be on hand when you make your first trial this season. ... I suppose you have noticed what the Independent has said in the way of apology. The particular point to me was to know how much of the matter in the Independent was truth and how much was fiction. I suppose of course you gave some reporter at least a foundation for their article. ... Now if you could tell me about when you expect to make your first experiment it would be quite a favor because I want to arrange my business no as to be away from home a week or two, or as long as I can be of any service. Resp. yours, A. I. Root.

1904-05-10 or 16, A. I. Root, "Letter to the Wright brothers"

Gentlemen:-

Please excuse me, friends, but I am getting quite anxious to see some experiments with that flying machine. ... I have heard some talk to the effect that you are having some trouble about getting patents. ... I am now 64 years old and have had quite a little to do with patents and patent office business. ... Please understand that I do not want any financial interest in your affairs. I only want to help along the first real practical flying machine the world has ever seen, if I understand it. From your old friend, A. I. Root. ...

1904-05-28, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

I have no particular right to kick even if you have tested the machine without letting me know, for you did not promise to let me see your first experiment; but you did promise that I should have a chance to see the machine; indeed, I would willingly make a trip to

your city or most anywhere else just to see the machine standing still, but I would make a half dozen trips gladly to see it move even if it did not go more than 30 feet. ... If the weather should be bad and you have to wait, why, I can wait too. Won't you tell me, please, on the enclosed postal card how soon you will make another trial. I am sorry to be importunate but I am tremendously interested. Yours truly, A. I. Root.

1904-07-06, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

I see by the papers, friends, that you have made two tests of your apparatus during the month of June. I suppose you were too busy or did not see fit to let me know when these tests were made. I hardly need to tell you it would be a great favor if you would wire me at my expense when you next make a trial trip. ... I expect to make a trip to your city soon but I would very much prefer to make it about the time you make a test. ... Of course I will not make public anything in regard to your work without your permission. From your old friend, A. I. Root.

1904-07-12, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Many thanks for your very kind promise to let me know as well as you can before another experiment. As I have relatives in Xenia I should stay two or three days without any particular inconvenience. ... Thanking you again for your kind offer I remain, Yours very truly, A. I. Root.

1904-07-20, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

May I be permitted to bother you a little once more. I would prefer to make the trip to your place on my automobile. I expect I could get down in one day but I would a little rather make the trip in two days and this is to ask you to be so kind as to give me notice about when you make the next experiment say two or three days ahead. ... Thanking you for information you have given me already I remain, Yours old friend, A. I. Root.

1904-07-26, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Please excuse me, friends, but I am so anxious to see that airship I can hardly sleep nights. Won't you please tell me on enclosed postal if there is any prospect that you will make a trial with it this week. If there is I want to start down there right away. May be I can run errands for you or do something with my automobile; if so, it will be entirely at your service while I am around there. Yours truly, A. I. Root.

May God be praised that He has permitted me to live at the same time when the Wright Bros. came here on earth

- After so many boring lines, the August 23, 1904, letter comes with some information of historical value. A. I. Root, 64 years old, had already met the two inventors and their sister, born in 1873, who impressed him quite a lot. He went so far as to transmit her *grateful thanks for the part she had in making his recent visit one of the bright spots in his life*.

The text does not state Amos Root had seen a plane flying. Talking about an article he had put on paper, for the September 1, 1904, issue of *Gleanings*, about his car trip through Ohio, Root just wrote these words: "*I did not say anything about the flying machine experiments*", a statement that can be interpreted that he had witnessed the Wrights'

machine doing something but not quite clear what exactly. Additionally, Root talks about “*that plan of dropping a weight from a little derrick*” which represents vague evidence the Wrights contemplated to use a catapult powered by a falling weight. Here are the relevant parts of the above-mentioned letter:

1904-08-23, A. I. Root, “Letter to the Wright brothers”

Dear Friends:-

I have not laid awake nights thinking about your work quite as much since I got home as I did before ... I am getting hungry for even a brief report as to how you are succeeding. ... I am very anxious to know in regard to that plan of dropping a weight from a little derrick, that is, if you decide to undertake anything of the sort. It may be that bright sister of yours might consent to gladden the heart of an old man by a little report if she feels so inclined. At any rate give her my regards with grateful thanks for the part she had in making my recent visit one of the bright spots in my life. If she will give me her address I will take pleasure in mailing her our journal. She may be interested in my account of my trip through Ohio on the automobile. Of course I did not say anything about the flying machine experiments. ... I am reading the two books you gave me over and over again. ... May God be praised that He has permitted me to live at the same time when the Wright Bros. came here on earth ... From your old friend, A. I. Root.

- The September 1, 1904, extremely long article makes no explicit reference to the Wright brothers and their invention. Root just wrote: “*I am not at liberty just now to tell all I know in regard to this matter*”, the matter being that *people were already, at least to some extent, ignoring roads of every kind, and climbing through the air, and not by means of the gas-balloon*. This is quite an ambiguous formulation and it does not prove Wright’s friend from Medina had seen a man carrying plane flying. Here is the relevant paragraph as written by Root in *Gleanings*:

1904-09-01, “Our Homes”, *Gleanings*, pp. 852-857

... In a recent trip of 400 miles through Ohio I passed through Ashland, Mansfield, Marion, Delaware, Marysville, Springfield, Dayton, and Xenia, besides many other good-sized towns and cities. It was a pleasant surprise to find almost every one of these cities torn up more or less in the work of making better thoroughfares. I passed through so many different towns in a brief period of time that I can hardly remember now which was which; but in quite a few I found not only beautiful streets paved with vitrified bricks, but in three or four there were asphalt pavements where the automobile would run without a sound, and turn almost as easily as if it were walking on air. And, by the way, we are already, at least to some extent, ignoring not only mud roads, but roads of every kind, and climbing *through the air*, and I do not mean by means of the gas-balloon either. But I am not at liberty just now to tell all I know in regard to this matter. ...

- A letter dated September 12, 1904, the first after that from August 23, represents evidence Root had received a new invitation from Dayton because he wrote: “*Many thanks ... for yours of Sept. 10th and especially for your very kind invitation.*”

1904-09-12, A. I. Root, “Letter to the Wright brothers”

Dear Sirs:-

Many thanks, dear friends, for yours of Sept. 10th and especially for your very kind invitation. I began to fear that perhaps my presence was more of a hindrance than a help, of course, I do not expect to be very much help just yet, but may be after a time. Business on hand is such that I cannot get away probably until next week. By that time may be you will be going over fences and corn fields, but I will try and not get my expectations up to high.

Please give kindest regards to your good sister. We send you copy of our journal for Sept. 1st. If you do not have time to read my travels you might turn it over to your sister. From your old friend, A. I. Root.

- The next letter is quite puzzling. According to what Root claimed in *Gleanings* for January 1st, 1905, he witnessed Wilbur

Wright making a spectacular flight in a circuit, on September 20, 1904. However, the September 22, 1904, text, you can read a few lines below, does not suggest the old Amos had seen a flight of any kind two days before or at any time in the past.

1904-09-22, A. I. Root, “Letter to the Wright brothers”

Dear Friends:-

Enclosed clipping was just mailed me from a relative in Xenia, Ohio. Now, if everybody else is putting you into the papers, what harm will it do for me to give you a little write-up that has already been submitted to your inspection? I have already dictated what I would like to say and will try to mail it to you to-day or to-morrow. I do not know the date of the enclosed clipping but it was evidently made since you have got up the derrick. I am thinking about that air-ship all day long and dream about it nights. When you get out of the corn fields and come back to the starting point, let me know and I will be down again. I will write you further probably by next mail. I thought you ought to know what was “flying around” in the papers. Yours very truly, A. I. Root.

- That clipping titled “The Flying Machine”, Root attached to his letter, is quite imprecise. It uses the formulation: “*They started the machine with 1,200 pounds weight*”, without providing details, and then the readers are informed that, after flying 1000 feet, the Messrs. Wright *anchored*. The one who wrote the text had in mind an airship or balloon because those aerial vehicles anchored after completing a flight.

1904-09-22, Undated clipping, from a newspaper, sent to Wilbur and Orville Wright, on Sep. 22, 1904, by A. I. Root who had received it from a relative in Xenia, Ohio

THE FLYING MACHINE.

The Wright brothers were experimenting with their airship on Mad river prairies yesterday. They started the machine with 1,200 pounds weight, and at a height of 10 feet sailed a distance of one thousand feet across the field, and anchored, the working being entirely satisfactory to the Messrs. Wright who have been seven years perfecting the machinery. They say they will make an ascension at St. Louis before the exposition ends.

- As a parenthesis, about the same time, Octave Chanute filed a patent application (O. Chanute, “Means for Aerial Flight”, Application Filed September 16, 1904, Patented October 30, 1906, USA, No. 834658, 4 pages). Weeks later, his associate and pilot, William Avery, performed public flights with a glider that took off after being towed using a cord, like in Chanute’s patent. The newspapers and magazine of the time wrote about Avery’s demonstrations, supporting their articles with pictures showing the apparatus and its operator in the air. The Scientific American (October 29, 1904, issue, p. 302) talks about the October 6, 1904, trials of W. Avery at St. Louis which were witnessed by a few personalities of the aeronautic world, including O. Chanute himself. The photo of the article shows Avery *sailing 50 feet from the ground*. The line with which the kite-like biplane was towed is visible in the picture. The St. Louis Republic newspaper (October 27, 1904, col. 3-4, p. 6) contains an even more breathtaking snapshot, taken the previous day, with Avery at an altitude of 25 feet in front of a crowd of spectators. The image was captured *just before he fell and wrenched his right ankle*.

If we are to believe the two inventors from Dayton, between September 7, when their catapult became operational, and December 9, 1904, they performed a series of flights (no. 40 - 165; in some cases, the apparatus did not take off). Many of them were spectacular, like the one made

by Orville on December 1, 1904 (no. 100) when the onboard anemometer recorded a distance of 4515 m. The flight time, as measured by Wilbur and Charles Taylor was 4 min 50 4/5 sec and 4 min 53 sec, respectively. The plane was launched using a system similar to that imagined by the Wrights' mentor. However, while in Chanute's patent, a motor, that actuated a winding-drum, generated the towing force needed to accelerate the glider and make it rise in the air, in Wright brother's case a falling weight was employed, instead of an engine, to help the powered apparatus get airborne.

The big problem is that O. Chanute did not believe the two inventors who wrote him a few letters, in the summer and autumn of 1904, reporting their progress. This lack of confidence can be clearly seen from his ironic answers:

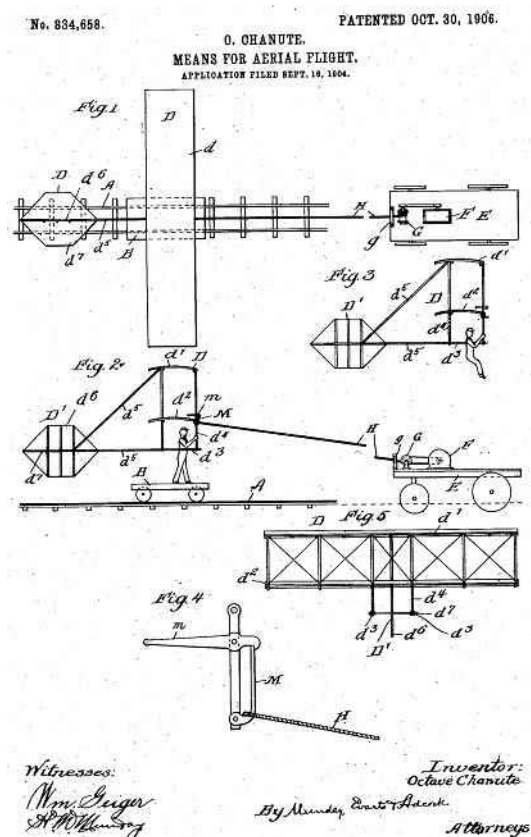
- "I am glad to see that the newspapers have not yet found you out." (1904-05-26, O. Chanute, "Letter to W. Wright", Chicago);
- "I hope that your immunity from premature publicity may continue." (1904-06-08, O. Chanute, "Letter to W. Wright", Chicago);
- "I hope that you will use great caution in your experiments, and will not run into a cow." (1904-06-25, O. Chanute, "Letter to W. Wright", Chicago);
- "I hope you will have good luck, and keep out of the newspapers." (1904-07-04, O. Chanute, "Letter to W. Wright", Chicago);
- "I expect ... to receive a letter from you advising me of your final success." (1904-07-31, O. Chanute, "Letter to W. Wright", Chicago);
- "I feel confident that once you get a good start you will make a phenomenal flight." (1904-08-14, O. Chanute, "Letter to W. Wright", Chicago);
- "I ... congratulate you on the good progress you have made." (1904-09-05, O. Chanute, "Letter to W. Wright", Chicago);
- "I also enclose a French clipping which lays down the rules for the \$10,000 prize for a power flying machine. This prize you can win if you choose to go to France to do so." (1904-11-19, O. Chanute, "Letter to W. Wright", Chicago);
- "I have been thinking it not unlikely that you should be called upon to go to Japan. It could well afford to give you and your brother \$100,000 for a few months work in reconnoitring. Santos-Dumont would preferably be called upon by Russia, as that country follows the French lead." (1904-12-26, O. Chanute, "Letter to W. Wright", Chicago).

It is evident that O. Chanute highly doubted the two brothers could fly their plane so often without being remarked by the entire press in the United States. The letters are too long to be quoted in full here but, excepting those excerpts which have been already listed a few lines above, O. Chanute appears to simply ignore the impressing progress reports coming from Wilbur, preferring to talk about other things in his replies and looking like somebody who politely answers the letters of a storyteller.

Possibly, the most visible piece of evidence, regarding the lack of faith that Chanute had concerning the, out of the 1904 world, accomplishments claimed by W. Wright, is the fragment of his December 26, 1904, reply where he expressed his thoughts that Wilbur and Orville might be paid \$100,000 to do aerial reconnaissance work for Japan, that time in war with Russia which could also benefit of a similar help coming from Santos-Dumont. Honestly, such an

ironic answer was absolutely normal after the December 20, 1904, letter of the two brothers which stated they had circled their field 2 1/4 and almost 4 times on November 16 and December 1, 1904, respectively.

Like A. I. Root, who fails to convince, with what he wrote in his letters, that he witnessed the elder brother flying on September 20, 1904, Octave Chanute's letters, sent to Wilbur, also does not provide evidence this old engineer saw a flight on October 15, 1904, as he claimed in "Chanute on the Wright Brothers' Achievement in Aerial Navigation" (Scientific American, April 14, 1906, col. 1, p. 307). More his letters demonstrate he did not take the two inventors into serious regarding their powered flights.



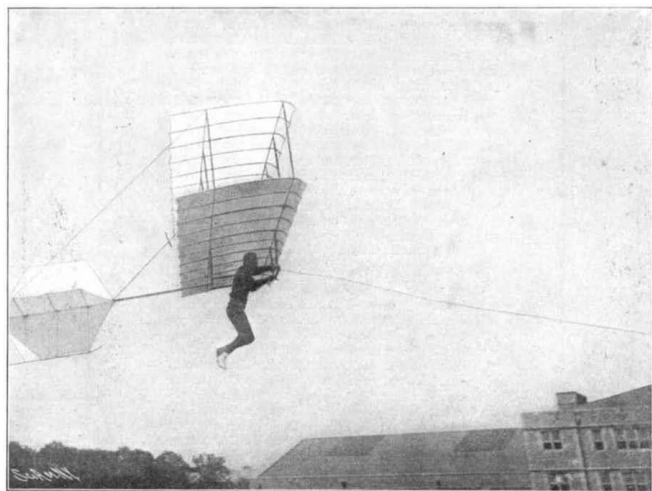
O. Chanute, "Means for Aerial Flight", Application Filed Sept. 16, 1904, Patented Oct. 30, 1906, USA, No. 834658.

1904-10-29, "Preparations for the Airship Contest at St. Louis.", Scientific American, col. 2-3, p. 302

PREPARATIONS FOR THE AIRSHIP CONTEST AT ST. LOUIS.

The first attempt in the history of aeroplanes to operate a flying machine of that type carrying a man through the air was made on Thursday, the 6th instant, in the Stadium at the World's Fair by experts in aeronautics, and was considered by all of them a remarkably successful venture. Among those who witnessed Mr. Avery's trial performances were Major Baden-Powell, Mr. Chanute, Mr. Baldwin of San Francisco, Prof. Carl Myers and wife, M. Hippolite François and party, Mr. J. E. Sullivan of the Washington University, Lieutenant-Colonel Capper of the British Army Balloon Corps and Mrs. Capper, Mr. W. F. Reed of London, England, and Captain Von Tschudi of the German Army Balloon Corps.

Encouraged by the plaudits of the scientists who witnessed his initial venture, Mr. Avery awaits the time of the great aeronautic contest for which the Exposition Company has offered the \$100,000 prize. Mr. Avery's machine, which was built by himself, assisted by his brother Frank, in the Aerodrome at the Fair, is made upon plans furnished by Mr. Chanute, the man who built the first bridge over the Mississippi River. Mr. Chanute furnishes original plans free of all cost to any *bona-fide* aspirant for aeronautical achievements.



SAILING 50 FEET FROM THE GROUND SUSPENDED FROM AN AEROPLANE AT THE WORLD'S FAIR.

The Avery machine is especially interesting because of its lightness, being perhaps the lightest structure of equal surface area ever built for actual man flight, as it weighs but 18 pounds all told. It consists of a light framework supporting two aerocurves, each 18 feet wide by 5 feet deep, one placed 4 feet above the other. Behind this is a cross-bladed rudder for balance and safety of evolution. The machine is propelled by the force of gravity acting upon it, the weight including that of the operator and the machine, which falls or glides from a height downward and forward through the air to a landing on the ground. This height is attained by rapidly pulling the vessel forward by means of a copper wire attached to a small motor, until the machine rises gracefully in the air like a kite, carrying the man in its flight. The latter rests along two horizontal bars under his armpits and forearms, permitting a free movement of the body backward or forward, and a swinging of the lower limbs in any direction to counterpoise the machine or balance any irregularities of the wind currents. It is interesting to note in this connection that before taking up the study of aeronautics, Mr. Avery was for many years a sailor. While at sea he made a close study of the effect of wind currents upon sails, and is thus enabled to meet or resist the action of the current as he glides through the air. Before making the start, the kite-like glider rests upon a small platform, which is mounted upon four wheels on a small rail track, and it is upon this platform that the glider is drawn forward until sufficient speed is attained to lift the whole thing aloft and send it scudding through the air. The operator releases the copper cable at any desired point, allowing the machine to glide forward and downward to the ground. The entire operation is based upon exactly the same principle as the flying of a kite.

There are four other airships in the Exposition Aerodrome which will be entered in the forthcoming contests. ... ("Preparations for the Airship Contest at St. Louis," Scientific American, October 29, 1904, col. 2-3, p. 302)

1904-10-27, "Undismayed By Accident, Avery Will Again Attempt Aeroplane Flight To-Day," The St. Louis Republic, col. 3-4, p. 6

UNDISMAYED BY ACCIDENT, AVERY WILL AGAIN ATTEMPT AEROPLANE FLIGHT TO-DAY.



FRANK AVERY. IN AN AEROPLANE. TWENTY-FIVE FEET ABOVE THE PLAZA OF ST. LOUIS. PHOTOGRAPHED YESTERDAY AFTERNOON JUST BEFORE THE AEROPLANE FELL TO THE GROUND, OWING TO THE BREAKING OF A PULL ROPE WHICH WAS TO HAVE STEADIED THE MACHINE UNTIL MR. AVERY HAD ATTAINED THE HEIGHT HE WISHED TO GO BEFORE SOARING.

Although injured by the precipitate landing of the Chanute aeroplane, which he guided in its glide over Plaza St. Louis, yesterday afternoon, William Avery announces his intention of trying another flight with the gliding machine to-day.

Because the rope attached to the aeroplane yesterday snapped while the machine was swiftly coursing through the air twenty-five feet above the plaza both operator and machine came to earth sooner and more suddenly than was planned. The flight took place yesterday afternoon at 3 o'clock in the presence of a great crowd.

Just as the aeroplane was leaving the ground and rising gracefully in the air the cord, one end of which was fastened to the Manufactures building and the other to the machine, snapped, caused, it is believed by the too sudden turning on of the full current into the electric motor.

Mr. Avery had risen about thirty-five or forty feet from the ground, and with great presence of mind steered the aeroplane safely to the ground. Avery slipped on the asphaltum walk as the machine landed, and wrenched his right ankle. While the injury is not serious, it is painful, and Mr. Avery was persuaded to defer a second attempt until this afternoon.

He stated that he was sure no bones were broken. In the hands of a less cool-headed operator, the accident might have resulted more seriously. ("Undismayed By Accident, Avery Will Again Attempt Aeroplane Flight To-Day," The St. Louis Republic, Thursday, October 27, 1904, col. 3-4, p. 6)

▪ A selection of fragments, from the 1904 Chanute - Wright correspondence, that show the low level of confidence the old engineer living in Chicago had in the progress reported by Wilbur.

1904-05-26, O. Chanute, "Letter to W. Wright", Chicago

... I am glad to know, from your letter of 20th that the indoor tests of your machinery have resulted so well, and I am anxious to come down to see your first flights. ...

I am glad to see that the newspapers have not yet found you out. I hope your luck will continue and I ardently wish for your success.

1904-06-05, W. Wright, "Letter to O. Chanute", Dayton

... The fact that we are experimenting at Dayton is now public, but so far we have not been disturbed by visitors. The newspapers are friendly and not disposed to arouse prying curiosity in the community. ...

1904-06-08, O. Chanute, "Letter to W. Wright", Chicago

... I hope that your immunity from premature publicity may continue. I do not quite understand whether your experiments are made with last year's or this year's machine. ...

1904-06-25, O. Chanute, "Letter to W. Wright", Chicago

... I hope that you will use great caution in your experiments, and will not run into a cow. I shall be glad to know how you are progressing. ...

1904-07-04, O. Chanute, "Letter to W. Wright", Chicago

... I hope you will have good luck, and keep out of the newspapers. ...

1904-07-31, O. Chanute, "Letter to W. Wright", Chicago

... I expect to be back here on the 4th or 5th of August, and to receive a letter from you advising me of your final success. ...

1904-08-14, O. Chanute, "Letter to W. Wright", Chicago

... I feel gratified that you are approaching a success, for I feel confident that once you get a good start you will make a phenomenal flight. ...

1904-09-05, O. Chanute, "Letter to W. Wright", Chicago

... I ... congratulate you on the good progress you have made.

Mr. Avery started for St. Louis last night, to make arrangements to compete for the gliding prizes. He is to use an electric motor, and a portable Railroad track and car. ... As he is not well off I am furnishing him the funds, and have therefore declined to act on the International Jury, for that concourse at least. ...

1904-10-05, W. Wright, "Letter to O. Chanute", Dayton

... On the 20th of September we renewed the attempt and on the second trial succeeded. The sky was overcast and a heavy rain separated the two attempts, but the wind was fairly steady and had a velocity of 7 or 8 miles an hour on the ground and about 10 miles at a height of 15 or 20 ft from the ground. The distance over the ground was about 4100 ft and through the air 4800 ft. About two thirds of the flight was more or less to windward. The wind was blowing almost from the north. Since we have been making longer flights and getting more practice, the machine is becoming much more controllable and now seems very much like our gliders at Kitty Hawk.

Up to the present we have been very fortunate in our relations with newspaper reporters, but intelligence of what we are doing is gradually spreading through the neighborhood and we are fearful that we will soon have to discontinue experiment. If your business will permit you to visit us this year it would be well to come within the next three weeks. As we have decided to keep our experiments strictly secret for the present we are becoming uneasy about continuing them much longer at our present location. In fact it is a question whether we are not ready to begin considering what we will do with our baby now that we have it. ...

1904-10-12, O. Chanute, "Letter to W. Wright", Chicago

... I have just returned from the St. Louis Exposition and find here yours of 5th.

I expect to go to Cincinnati thursday night and to call on you friday afternoon (14th) or saturday. ...

1904-11-15, W. Wright, "Letter to O. Chanute", Dayton

... Three days sufficed to repair the damage the machine received the day you were here ... The changes made to remedy the trouble which caused Orville's misfortune gave the machine an unfamiliar feeling, and before I had gone far I ran it into the ground and damaged it again. On Nov 2nd we circled the field again, and repeated it on the 3rd. On the 9th we went out to celebrate Roosevelt's election by a long flight and went around four times in 5 min. 4 sec. ...

1904-11-19, O. Chanute, "Letter to W. Wright", Chicago

... I also enclose a French clipping which lays down the rules for the \$10,000 prize for a power flying machine. This prize you can win if you choose to go to France to do so. ...

1904-12-20, W. Wright, "Letter to O. Chanute", Dayton

... We finished our experiments several weeks ago and have now dismantled the machine. During the season one hundred and five starts were made. The best flights since my last letter were on Nov 16th and Dec 1st, the flights being 2¼ turns of the field on the first named date, and almost four rounds on the last. Although 70 lbs of steel was carried in this last flight to balance the machine it was still insufficient and the flight was made with pressure on the top side of the front rudder. We succeeded in curing the trouble caused by the tendency of the machine to turn up too much laterally when a short turn was made. ...

1904-12-26, O. Chanute, "Letter to W. Wright", Chicago

... I have yours of 20th, and I congratulate you heartily upon the successful results of your improvements and the safe progress that you have made in controlling your machine. I wish you still more success and a happy New Year. I trust that it will not pass without bringing you a material reward. ...

I have been thinking it not unlikely that you should be called upon to go to Japan. It could well afford to give you and your brother \$100,000 for a few months work in reconnoitring. Santos-Dumont would preferably be called upon by Russia, as that country follows the French lead. ...

• Coming back to Root, as he had promised on September 22, 1904, he submitted to the Wrights an article for approval. He was insistent and even offered them one hundred dollars *for the privilege of printing* that paper, with an unknown content, which apparently Amos Root wanted to be accurate as long as he furnished this explanation:

Perhaps there is a little pride in wanting to be the first to give to the great world the real facts in the case---that is, after you have straightened up my statement so that it will contain nothing but actual facts.

The letter, as it exists in the archive, does not longer have the article attached. However, the draft can be identified as an early version of the January 1, 1905, long text, published in *Gleanings*, from the sum of money offered which was promised again on January 6, 1905, after the article had already appeared, paid on January 18, 1905, and refused by the Wrights. In his February 4, 1905, letter, the old aviation enthusiast wrote: "*Well, friends, I suppose if you cannot accept of the check I shall have to keep it but I will try and fix it (mentally) to your credit in some way.*"

Coming back to the September 22-26, 1904, letter, its full content, you can read a few lines below, does not make reference to any flight witnessed by Amos Root, who missed again the opportunity to leave behind a historical document that would have added a lot of weight to his printed claim in *Gleanings* (January 1, 1905, issue) that he had seen W. Wright flying on September 20, 1904.

1904-09-between 22 and 26, A. I. Root, "Letter to the Wright brothers" (the precise date is not known)

Dear Friends Wright:

I inclose herewith what I have written up just as I should like to do it---that is, just about what I should like to put in print; but, of course, it is subject to your approval; but if you say so, any part of it or all of it will be withheld from the public; but it would make your old friend exceedingly glad if you would consider that, as it is already so near the public, it would do but little harm; and, better still, if you would let me give your names and place of residence. You see it has been in the papers already, even such periodicals as the Scientific American and the Independent, besides the clippings I have shown you. I have for years been trying to keep posted, and to keep before our people, through our journal, all real progress in science and art, and I would gladly give you \$100 for the privilege of printing this paper just about as it is, if that would make no difference. Yes, I would give more than that. Perhaps there is a little pride in wanting to be the first to give to the great world the real facts in the case---that is, after you have

straightened up my statement so that it will contain nothing but actual facts. There would not be time to get it in our journal any way for Oct. 1; but if we can it for Oct. 15, as I said before, it would make me very glad.

Now, if you will pardon a little more intrusion in your affairs, I would recommend that you retain a good trusty attorney, and let him advise you in regard to the legal and financial matters---that is, if you can find such a man as you want. In that case I would submit to him this write-up of mine, and abide by his decision. While I am thinking somewhat of my own interests, I wish to consider right along your interests also. And, by the way, if you should decide to keep on with your experiments until you can go out of that field and get back into it, I want to pay you another visit---perhaps bringing Mrs. Root along. Mrs. Beard has promised to take care of her, and I want to have her enjoy with me that wonderful creation of yours. Very sincerely yours, A. I. Root.

As we have no copy of article, please return by registered mail when done with it.

If you dont object & would wire me at once, we might get it in Oct. 1st. As ever A. I. R.

▪ The answer sent by the brothers on September 26, 1904, was not the one Root would have liked to get. He continued to push ahead with his arguments trying to convince the two inventors the article would be in their favour, as can be seen reading the following paragraph of Root's September 27, 1904, letter:

1904-09-27, A. I. Root, "Letter to the Wright brothers"

Gentlemen:-

Many thanks for your kind favor of Sept. 26th, dear friends. You need not bother to make changes in the manuscript I have sent you until you are ready to have it given to the public, for I should have no use for it unless it could be given in our journal. I suppose you have decided that withholding all names and the places where the experiment occurred would not sufficiently disguise it; now let me suggest another point, when it comes to litigation it is often of very great value to be able to prove an invention by exhibiting a printed journal. I once prevented what threatened to be a big law suit by finding a printed description of the invention in an old journal dated years before. This thing will surely come out before the people soon and your invention will be copied and stolen unless you are ready to prove every point. I may be of some good to you as a witness, but a printed description with a date to it would be worth ever so much more, of course, the matter is entirely in your hands. Please do not think for a minute that I want to dictate. Will you please drop me a postal or wire me just as soon as you are making experiments that take you outside of that field. ... Your old friend, A. I. Root.

As nobody seems to want to talk about it around here I can very easily drop the subject and pretend I am riding some other hobby

▪ Again a statement of some value: "*I may be of some good to you as a witness, but a printed description with a date to it would be worth ever so much more*". Unfortunately, Amos Root does not say what exactly he witnessed.

In the autumn of 1904, the Wrights were trying to secure patents, in the United States and a few European countries, for their 1902 unpowered glider, not the 1903 or 1904 planes, and might have considered that Root's article would somehow negatively affect their effort to get those brevets.

The letters sent by Root between September 30 and October 8, 1904, were dedicated to another article that would appear in the October 15, 1904, issue of *Gleanings*. Out of all, the text addressed to W. Wright on October 8, 1904, is the most important. At one point the old beekeeper wrote: "*I have repeatedly already explained to my friends that I was not at liberty to mention what I witnessed and they have always taken it kindly*" which raises serious questions about the general credibility of A. I. Root in front of his friends. Another important statement made in the same letter is: "*Twice I*

have seen pictures of the propelling blades that look almost exactly like yours." This is evidence Root had seen some propellers when he visited the two brothers but also for the fact that similar aerial screws were used by others. Another important comment, that proves Root had likely seen a Wright plane, is: "*Perhaps you do not want to make any machines for sale at present; but my impression is there are a thousand people that would buy one in the United States if they just saw what I saw.*". However, again, he does not say he had admired the flying machine while it was in the air.

1904-09-30, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

I promised you I would not put in print anything referring to your invention without submitting to you. Therefore I submit another paper for our next issue. I beg pardon for troubling you so much, but I wish you would go over this hastily and cross out anything you would prefer not made public. ... Your "importunate" friend, A. I. Root.

1904-10-05, A. I. Root, "Letter to the Wright brothers"

Gentlemen:-

I am sorry to trouble you, friends, but our printers are wanting copy of the last article I mailed you. I hope this will not be objectionable after you have crossed out all reference to yourselves in the matter. I will however, of course, keep my promise and not say anything in print about flying machines in general if you so prefer. If you could manage to mail this last article back again as soon as you get this I will be very much obliged. The first one you can keep until such time as you should be willing to permit me to use some part or all of it. ... Your old friend, A. I. Root.

1904-10-08, A. I. Root, "Letter 1 addressed to Wilbur Wright"

Dear Friend Wright:-

I am sorry to have put you to the trouble of writing me so much at length. With your explanation I fully appreciate your position and I will be careful in the future not to say anything more until I have your permission. I have repeatedly already explained to my friends that I was not at liberty to mention what I witnessed and they have always taken it kindly; in fact, I have been a good deal disappointed because so few people, even the members of my own family, regard it as such a non important matter. Of course my opinion from my standpoint of view may not amount to much but I do think your invention should be pushed along before anybody else gets in ahead of you. I expect to see flying machines advertised for sale at a special price within one year, but I may be mistaken. Not only the daily papers but the magazines are full of it. I can cut out the articles and forward them to you if you wish; but I have been astonished to find that from so many different directions people are working almost in the line with your work. Perhaps I should say suggesting rather than working. Twice I have seen pictures of the propelling blades that look almost exactly like yours. There was no mention however that they were made of wood. In a recent magazine your machine was almost outlined but no reference made to yourselves. If you want it I will hunt it up; I cannot remember now what magazine it was. Every Goodies Mag for Oct. As nobody seems to want to talk about it around here I can very easily drop the subject and pretend I am riding some other hobby. Of course I do not mean to be wicked or tell fibs, but I think you will understand me. All my acquaintances expect to see me having some new hobby to ride every few days so they wont be at all surprised if I keep still about flying machines. I should be ready now to give you an order for a machine, that is if you wanted an order, if our folks would let me practice on it; but they would say my bones are too old and would break too easy, etc. Perhaps you do not want to make any machines for sale at present; but my impression is there are a thousand people that would buy one in the United States if they just saw what I saw. May be I better cut it down to one hundred, but it would not be long before a thousand would be wanted. Now friends don't let the grass grow under your feet or let somebody else get ahead of you by delays. That is only my opinion though.

As ever, not only your old friend, but one who is ready and anxious to start out any minute to help you along with that wonderful gift that God has seen fit to entrust you with. A. I. Root.

1904-10-08, A. I. Root, "Letter 2 addressed to the Wright brothers"

Dear Friends Wright:-

Since writing you yesterday I have been thinking over what my good friend Wilbur said in his kind letter and I infer that he would prefer I should not mention in my forthcoming article that I am in possession of some secret I am not at liberty to reveal. In other words "the best way to keep a secret is to avoid mentioning that you have a secret." I have therefore crossed out that portion of my article intimating that I knew something that I dare not tell, etc. No doubt you are right about it and I do not want you to have any good reason for thinking perhaps you have been unwise in taking me into your confidence and friendship to the extent you have. I send you proof of the article as it is to appear and on the whole I believe I like it best that way. Yours as ever, A. I. Root.

▪ Finally, after all these negotiations, the article Root wished to publish got in the pages of *Gleanings* but it contains just vague references to airplanes, like: "*We want a machine that will float as easily ... the carrier pigeons do; and, may the Lord be praised, it is already in sight*". As instructed, he mentioned neither the name of the two Wrights nor that of another inventor visited by him. Regarding the "*periodical devoted to the navigation of the air*" Amos Root desired, it has to be clarified that such a journal already existed in the world. This was the French *L'Aérophile*, read by the Wright brothers, which had published, in the middle of 1903, the plans of their 1902 glider (Octave Chanute, "La Navigation Aérienne Aux États-Unis", *L'Aérophile*, August 1903, pp. 171-183 (176-183)) and, in the beginning of 1904, an account of Orville Wright, addressed to *L'Aérophile*, with the version of the two Daytonians regarding what happened on December 17, 1903, ("La machine volante des frères Wright", *L'Aérophile*, January 1904, pp. 16-18).

Coming back to Root's text, the relevant part of it can be consulted here:

1904-10-15, A. I. Root, "Our Homes", *Gleanings*, pp. 987-988

... I wonder if I am the first one in the world to suggest that we now need a periodical devoted to the navigation of the air. *The Horseless Age* was started before any thing had been done worth mentioning; and it greatly aided progress by posting people up and comparing notes. Let me tell you *why* it is needed. An inventor whom I have visited (he will not permit me to give his name here) is spending thousands of dollars in making an air-ship, and years of time, sometimes working day and night; and this inventor would stop wasting money if he knew what was going on in some other parts of the world. The papers tell us there are still other inventors, but they prefer to keep their plans secret because each man will have it that *he* is right and *all the rest* are wrong. If these men could have a convention, and would trust each other, not only would time and money be saved, and probably also precious lives, but the new development would make a great stride. Please, dear friends, do not imagine that I am talking about air-ships held aloft by great bulky unwieldy balloons. I hope the progressive world has got past that idea. Santos Dumont may astonish us with what he has done with a dirigible balloon; but this is not what we need at all. We want a machine that will float as easily and safely as the bees, the butterflies, and the carrier pigeons do; and, may the Lord be praised, it is already *in sight*.

▪ The next three letters prepared the Wrights for another visit. If the lines wrote on October 17, 1904, hint Root's disappointment because his friends *thought best to let their invention rest where it was until the following spring*, the letter dated October 20, 1904, informs us about the plans of Root to do Mr. Freeman of Kalkaska (a man who was working at a flying apparatus) *a kindness by telling him something of what the Wrights were doing with that machine he was so sure would never fly unless it was run down hill*. Again, the text of the old apiarist does not explicitly state the machine built by his younger friends was witnessed flying by him. It is quite hard to interpret the October 20, 1904, letter as solid evidence that Amos Root, who had seen the Wrights flying, wanted to communicate this to Mr. Freeman to make him avoid investing his money in an apparatus with little chance to fly.

Anyway, the November 7, 1904, message is quite explicit. Mr. Root would be in Columbus, Ohio the following week (13 - 19 November 1904) and would use the opportunity to go to Sims Station (close to the place where the Wright brothers performed their experiments) or even to visit the two inventors in Dayton.

1904-10-17, A. I. Root, "Letter to the Wright brothers"

Friends Wright:-

... If you think best to let your invention rest where it is until next spring, all right; you are the boss and I am simply a spectator, but I am hoping some day the thing will get loose and astonish the world perhaps more than Radium or even wireless telegraphy. Your old friend, A. I. Root.

1904-10-20, A. I. Root, "Letter to the Wright brothers"

Dear Friends W:-

Nothing preventing I expect to go up to our place in north Michigan about the middle of next week, and as I shall be near to Kalkaska it will be quite convenient for me to call on Mr. Freeman to see how he gets along with his \$10,000 flying machine. Now if there was no objection I think I might do the poor man a kindness by telling him something of what you are doing with that machine he was so sure would never fly unless it was run down hill, etc. As the matter stands I presume you would rather I should not mention to him anything of your work or that I know you; and may be it would be better for your interests if I should not go and visit him at all. ... My impression is that you still wish the matter kept as secret as possible and I do not feel at all inclined to disagree with you, only I hate to see this old fellow blow away his dollars. ... As ever, A. I. Root.

1904-11-07, A. I. Root, "Letter to the Wright brothers"

Friends W:-

I am home again from Michigan, but I did not call on Mr Freeman because I learned in Traverse City his machine had never yet got off from the ground. ...

Now I am to be in Columbus next week and if the weather is favorable I expect to drop in at Sims Station sometime in the afternoon. If you are not there of course I will take the next car to Dayton. After our Convention at Columbus I may come out again if the weather is so that you can make any experiments. There is a lot of things I want to talk with you about anyway.

You need not make any reply to this unless you see fit. Yours truly, A. I. Root.

▪ The next two letters are ones of the most important the old beekeeper ever mailed to Dayton. As he had promised on November 7, 1904, Root visited the two inventors during the month, without explicitly saying when.

As a parenthesis, Wilbur wrote in his 1904-1905 notebook, on page 36, that five trials (no. 88, 89, 90, 91, 92) were made on November 22, 1904, and the flights ranged from 150 to 250 feet. A. I. Root is mentioned as one of the people who were present.

[#-88-89-90+91+92]

Nov 22.

Made five trials but owing to improper gasoline regulation did not get a single start

flights ranged from 150-250 ft.

Furnas & Root & others - present.

(Wilbur Wright's 1904-1905 notebook, p. 36)

It is known with certitude the day of November 28, 1904, found the old beekeeper writing a message *to extend his congratulations to his good friend Orville for the good flight he made just as Root left for his car*, a formulation suggesting the old aviation enthusiast was no longer present when the younger brother performed that satisfactory travel through the air. He received the information by other means than from directly seeing the flight with his own eyes. On the other hand, the next lines of the same letter seem to confirm that Amos Root witnessed Orville striking the ground with his plane and then flying and managing the machine *as gracefully as anything Root had ever seen in the line*.

The next letter, dated December 6, 1904, is even more stunning. First, Root expressed his satisfaction that *Orville had gone around four times without stopping on Dec. 1st*. He obtained the information from Torrence Baird (Beard), a man Root had asked to keep him updated, about the flights of the two inventors, with messages written on postal cards. Then he wrote: “*if Orville sailed that thing as gracefully and steadily as he did on the last trip I witnessed he certainly is not a back number to any man living at present*” which means Root had really witnessed Orville flying. It is hard to find a different explanation for such a phrase that appears in a letter addressed to the Wright brothers themselves, not in a text meant for publication where fiction can play an important role, unless Root had moments when he lost touch with reality and his mind constructed visual images based on what Torrence, a false witness instructed by the brothers to tell lies, mailed him. A search for the name “Beard” within the content of the current work will reveal more details about the involvement of the Beard family members in the Wright affair, as doubtful witnesses.

As a remark, the January 1, 1905, article does not make reference to any flight performed by Orville Wright and having Root as an onlooker despite the fact the text was updated mentioning the day of December 1, 1904, as the last of the season when the Wrights flew their plane.

1904-11-28, A. I. Root, “Letter to the Wright brothers”

Dear Friends:-

I want to extend my congratulations to my good friend Orville for the good flight he made just as I left for my car. It was especially gratifying because the wind was in the wrong way and he once struck ground, but when he picked up and went ahead the machine worked as handsomely and was managed as gracefully as anything I ever saw in the line; in fact, a swallow could not have made the curves any better until the machine went down. I suppose that was the fault of the engine and no fault of Orville's. If that was the last flight for the season it certainly was a big success so far as managing the machine is concerned. Should there be any more experiments I would be very glad to have a brief account of same. I shall be counting the days, weeks and months from now on until April or such a time as you see fit to start up.

Please give my kind regards to your sister. As ever your old friend, A. I. Root.

1904-12-06, A. I. Root, “Letter to the Wright brothers”

Dear Sirs:-

Hurrah for my good friend Orville. By the way I think I will have to explain that I sent Torrence Baird some postal cards and asked him if he would briefly report if you made any more flights yet this winter. He just tells me that Orville went around four times without stopping on Dec. 1st. It was a pretty cold day up here. Now if Orville sailed that thing as gracefully and steadily as he did on the last trip I witnessed he certainly is not a back number to any man living at present. I rejoice and thank God that you two have been able to make such a record before winter sets in, and I declare I begin to believe that may be you will get the knack of flying in cold weather so you may keep it up more or less all winter. I hope I did not transgress any in asking Torrence to keep me posted. Of course I shall not make any mention of it until I have permission. Yours old friend, A. I. Root.

▪ Four letters followed in preparation for the January 1 and 15, 1905, articles (three in total) for *Gleanings*. On December 12, 1904, Amos Root warned his younger friends that the inventor Baldwin *was going to work on a flying machine that would fly without a balloon*, at the same time expressing his wish to print something of what he knew about the Wrights' apparatus. The message had the desired effect because in the next letter, dated December 21, 1904, Root reminded his friends in Dayton to send him a cut representing their gliding machine, for the next issue of his periodical. A few days later, on December 24, 1904, the old businessman submitted his article to the brothers for a last review and pressed them to mail him a negative of a Wright glider (he had already obtained a

positive) which finally did not come, as can be seen from the letter of December 29, 1904. The photo was scheduled to be published two weeks later in the middle of January 1905.

The last wish of Root for 1904: “*Some time in the future I hope to have the privilege of showing our people a good picture of the complete machine*” materialised quite late, in 1910 (see: “The Wright Brothers' Up-To-Date Flying-Machine”, *Gleanings*, October 1, 1910, pp. 628 and 640-641).

1904-12-12, A. I. Root, “Letter to the Wright brothers”

Dear Friends:-

The enclosed is from the Scientific American. ... Now Baldwin is going to work on a flying machine that will fly without a balloon ... and I expect there will be a lot more Baldwins; and I expect too that what you have done will soon be in the papers. May be I am mistaken, but before it gets to be an old story I would like to have the privilege of telling the world something of what I know about it, and I hope too that I may be able to help prove your priority of invention. ... Your old friend, A. I. Root.

1904-12-21, A. I. Root, “Letter to the Wright brothers”

Dear Sirs:-

Please do not forget to send me cut representing your gliding machine. The one on page 20 of your little pamphlet “Soaring” would suit me very well. If it has not been sent when this reaches you please get it here promptly because we want to get out a little earlier on account of its being the 1st of January. I am going to give our Sunday School Christmas gathering a little talk about God's latest gifts showing them a little model of the gliding machine. Your old friend, A. I. Root.

1904-12-24, A. I. Root, “Letter to the Wright brothers”

Dear Sirs:-

Enclosed find proofs of the forthcoming article on the flying machine. As we want to be sure to get it in the issue for January 1st will you please look it over and return as quickly as possible if you wish any changes made. ...

By today's mail we have received an excellent photograph of the gliding machine. I understood you were to send me a plate that I could use with the article in *Gleanings*. Of course I can have one made from the photograph you sent but there is hardly time. Another thing it does not show the back rudder, in fact, it looks as if this had been erased. If you prefer not to have the back rudder shown all right. The picture is an excellent one otherwise and if you cannot furnish at once a plate to print from of the same picture I will have engraving made for January 15th, but I should be very glad indeed to have it in for January 1st. Yours truly, A. I. Root.

1904-12-29, A. I. Root, “Letter to Orville Wright”

Friend Orville:-

Thanks for your card of December 25th. On looking more closely I notice the back rudder is in the picture but this being white it did not show very well. We are going to have the picture enlarged and will try to make it plainer and if we succeed in getting a pretty good looking picture of the gliding machine you are quite welcome to it if you have any use for it. Some time in the future I hope to have the privilege of showing our people a good picture of the complete machine. As ever yours, A. I. Root.

It was my privilege, on the 20th day of September, 1904, to see the first successful trip of an airship, without a balloon to sustain it, that the world has ever made

1905

▪ After being delayed so much, the article first submitted to the Wrights in September 1904 finally got into *Gleanings* with some changes and updates. The text is a mixture of personal assessments and conclusions, divagations, things Root had found out from various publications and the two inventors themselves and some paragraphs that describe what this businessman from Medina said he had seen with his own eyes. Amos Root states with clarity he

personally met the Wright brothers: “*I found them in a pasture lot of 87 acres, a little over half a mile long and nearly as broad*” and then continues: “*When I first saw the apparatus it persisted in going up and down like the waves of the sea.*”. The article does not say when the old beekeeper first saw the apparatus but from his August 23, 1904, letter it results the event happened before that date.

The text continues with some explanations regarding the way the Wright brothers cured their plane (with a weight attached to the front part) of its bad habit of following a sinuous course and then suddenly A. I. Root wrote a few lines that would secure him a place in the aviation history books: “*it was my privilege, on the 20th day of September, 1904, to see the first successful trip of an airship, without a balloon to sustain it, that the world has ever made, that is, to turn the corners and come back to the starting-point.*”. The message leaves no room for ambiguity, Root was the eyewitness, according to his claim, of a remarkable historical event, the first flight in a circuit ever performed by a full-size airplane. This man from Medina, close to the final part of his story, even gives details, about the above mentioned spectacular flight, writing:

When it first turned that circle, and came near the starting-point, I was right in front it; and I said then ... it was one of the grandest sights, if not the grandest sight, of my life. Imagine a locomotive that has left its track, and is climbing up in the air right toward you — a locomotive without any wheels ... but with white wings instead ... a locomotive made of aluminum. Well, now, imagine this white locomotive, with wings that spread 20 feet each way, coming right toward you with a tremendous flap of its propellers, and you will have something like what I saw. The younger brother bade me move to one side for fear it might come down suddenly; but I tell you, friends, the sensation that one feels in such a crisis is something hard to describe.

Also, at one point, the old aviation enthusiast says he saw the machine lifting that weight added for stabilisation purposes: “*When I saw it pick up the fifty pounds of iron so readily I asked if I might ride in place of the iron. I received, by way of assurance, the answer that the machine would no doubt carry me easily.*”. It has to be mentioned that the January 1, 1905, tale was a text submitted to the Wrights on December 24, 1904, for a final approval. A copy of this last draft still exists in the archives. So, the literary composition, you can read a few lines below, was not published without the consent of the two inventors.

1905-01-01, “Our Homes”, Gleanings, pp. 36-39

... Dear friends, I have a wonderful story to tell you — a story that, in some respects, out-rides the Arabian Nights fables ... I will tell my story, and you shall be the judge. ...

In our issue for Sept. 1 I told you of two young men, two farmer's boys, who love machinery, down in the central part of Ohio. I am now going to tell you something of two other boys, a *minister's* boys, who love machinery, and who are interested in the modern developments of science and art. Their names are Orville and Wilbur Wright, of Dayton, Ohio. I made mention of them and their work on page 241 of our issue for March 1 last. You may remember it. These two, perhaps by accident, or may be as a matter of taste, began studying the flights of birds and insects. From this they turned their attention to what has been done in the way of enabling men to fly. They not only studied nature, but they procured the best books, and I think I may say all the papers, the world contains on this subject. ... With a gliding machine made of sticks and cloth they learned to glide and soar from the top of a hill to the bottom; and by making not only hundreds but *more than a thousand* experiments, they became so proficient in guiding these gliding machines that they could sail like a bird, and control its movements up and down as well as sidewise. ...

Well, these two men spent several summers in that wild place, secure from intrusion, with their gliding machine. When they became experts they brought in, as they had planned to do, a gasoline-engine to furnish power, and made a little success with their apparatus before winter set. As soon as the weather would permit, their experiments were resumed the past season. You may have seen something in regard to it in the papers; but as their

purpose has been from the beginning to the end to avoid publicity, the great outside world has had but very little opportunity of knowing what is going on. The conditions were so different after applying power that it seemed at first, to a great extent, as if they would have to learn the trade of guiding their little ship all over again. At first they went only a few hundred feet; and as the opportunity for practice in guiding and controlling it was only a few seconds at a time, their progress was necessarily very slow. ...

Well, these boys wanted ... privacy to try their flying-machine ... but as it measures about forty feet from the tip of one wing to the tip of the other ... they wanted a large level field in some out-of-the-way place. I found them in a pasture lot of 87 acres, a little over half a mile long and nearly as broad. The few people who occasionally got a glimpse of the experiments, evidently considered it only another Darius Green, but I recognized at once they were really *scientific explorers* who were serving the world in much the same way that Columbus did when he discovered America, and just the same way that Edison, Marconi, and a host of others have done all along through the ages. ...

When I first saw the apparatus it persisted in going up and down like the waves of the sea. Sometimes it would dig its nose in the dirt, almost in spite of the engineer. After repeated experiments it was finally cured of its foolish tricks, and was made to go like a steady old horse. This work, mind you, was all new. Nobody living could give them any advice. It was like exploring a new and unknown domain. Shall I tell you how they cured it of bobbing up and down? Simply by loading its nose or front steering-apparatus with cast iron. In my ignorance I thought the engine was not large enough; but when *fifty pounds* of iron was fastened to its “nose” (as I will persist in calling it), it came down to a tolerably straight line and carried the burden with ease. There was a reason for this that I can not explain here. Other experiments had to be made in turning from right to left; and, to make the matter short, it was my privilege, on the 20th day of September, 1904, to see the first successful trip of an airship, without a balloon to sustain it, that the world has ever made, that is, to turn the corners and come back to the starting-point. During all of these experiments they have kept so near the soft marshy ground that a fall would be no serious accident, either to the machine or its occupant. In fact, so carefully have they managed, that, during these years of experimenting, nothing has happened to do any serious damage to the machine nor to give the boys more than what might be called a severe scratch. I think great praise is due them along this very line. They have been prudent and cautious. I told you there was not another machine equal to such a task as I have mentioned, *on the face of the earth*; and, furthermore, just now as I dictate there is probably not another man besides these two who has learned the trick of controlling it. In making this last trip of rounding the circle, the machine was kept near the ground, except in making the turns. If you will watch a large bird when it swings around in a circle you will see its wings are tipped up at an incline. This machine must follow the same rule; and to clear the tip of the inside wing it was found necessary to rise to a height of perhaps 20 or 25 feet. When the engine is shut off, the apparatus glides to the ground very quietly, and alights on something much like a pair of light sled-runners, sliding over the grassy surface perhaps a rod or more. Whenever it is necessary to slow up the speed before alighting, you turn the nose up hill. It will then climb right up on the air until the momentum is exhausted, when, by skillful management, it can be dropped as lightly as a feather.

Since the above was written they have twice succeeded in making four complete circles without alighting, each circle passing the starting-point. These circles are nearly a mile in circumference each; and the last flight made, Dec. 1, could have been prolonged indefinitely had it not been that the rudder was in such position it cramped the hand of the operator so he was obliged to alight. The longest flight took only five minutes and four seconds by the watch. Over one hundred flights have been made during the past summer. Some of them reached perhaps 50 or 60 feet above ground. On both these long trips *seventy pounds* instead of fifty of cast iron was carried on the “nose.” ...

The man who made this last trip said there was no difficulty whatever in going above the trees or anywhere he chose; but perhaps wisdom would dictate he should have still more experience a little nearer the ground. The machine easily made thirty or forty miles an hour, and this in going only a little more than half a mile straight ahead. No doubt it would get up a greater speed if allowed to do so — perhaps, with the wind, a mile a minute after the first mile.

... I confess it is not clear to me, even yet, how that little aluminum engine, with four paddles, does the work. I asked the question,

"Boys, would that engine and these two propellers raise the machine from the ground if placed horizontally above it"

"Certainly not, Mr. Root. They would not lift a quarter of its weight."

"Then how is it possible that it *sustains* it in the air as it is?"

The answer involves a strange point in the wonderful discovery of air navigation. When some large bird or butterfly is soaring with motionless wings, a very little power from behind will keep it moving. ... When I saw it pick up the fifty pounds of iron so readily I asked if I might ride in place of the iron. I received, by way of assurance, the answer that the machine would no doubt carry me easily. ...

At first there was considerable trouble about getting the machine up in the air and the engine well up to speed. They did this by running along a single-rail track perhaps 200 feet long. It was also, in the early experiments, found advisable to run against the wind, because they could then have a greater time to practice in the air and not get so far away from the building where it was stored. Since they can come around to the starting-point, however, they can start with the wind even behind them; and with a strong wind *behind* it is an easy matter to make even *more* than a mile a minute. The operator takes his place lying flat on his face. This position offers less resistance to the wind. The engine is started and got up to speed. The machine is held until ready to start by a sort of trap to be sprung when all is ready; then with a tremendous flapping and snapping of the four-cylinder engine, the huge machine springs aloft. When it first turned that circle, and came near the starting-point, I was right in front it; and I said then, and I believe still, it was one of the grandest sights, if not the grandest sight, of my life. Imagine a locomotive that has left its track, and is climbing up in the air right toward you — a locomotive without any wheels, we will say, but with white wings instead, we will *further* say — a locomotive made of aluminum. Well, now, imagine this white locomotive, with wings that spread 20 feet each way, coming right toward you with a tremendous flap of its propellers, and you will have something like what I saw. The younger brother bade me move to one side for fear it might come down suddenly; but I tell you, friends, the sensation that one feels in such a crisis is something hard to describe. The attendant at one time, when the rope came off that started it, said he was shaking from head to foot as if he had a fit of ague. His shaking was uncalled for, however, for the intrepid manager succeeded in righting up his craft, and she made one of her very best flights. ...

▪ In the same issue of his periodical, Root published another article which, unlike the first, has the quite explicit title "My Flying-Machine Story" (Gleanings, January 1, 1905, p. 48). He again refers to the experiments he witnessed using what can be labelled as a poetic style: "*I enjoyed being out in that big field with the Wright brothers many times during the past summer and fall, watching that wonderful creation of the hand and brain of those two men, while it 'learned to fly,' very much as a young bird just out of the nest learns by practice to use its wings.*". However, soon Amos Root comes back to reality ending his short essay with this dishonest promise: "*A picture of the flying-machine up in the air will appear in our next issue, nothing preventing*", which discredits him. He evidently lied. This old man from Medina was well aware on December 26, 1904, the day he wrote the text, that the January 15, 1904, issue of *Gleanings* would show only a photo of a Wright glider (see the letter dated December 24, 1904). This was a trick played by him to make the readers curious and sell his journal. Root's January 15, 1905, article titled "The Wright Brothers' Flying-Machine" starts with a disappointing "*I shall have to apologize a little, friends, for giving a picture of the gliding-machine instead of a flying-machine*" which is nothing else but a fraudulent excuse.

Also it does not represent direct evidence Amos Root did not see the Wrights flying a powered plane in 1904, one can not ignore the similarity between two remarks made by him,

the first in connection with the September 20, 1904, flight, the second related to the sensation he lived when watching that picture showing W. Wright gliding:

(1) Regarding the flight Root saw on September 20, 1904: "*it was one of the grandest sights, if not the grandest sight, of my life*" (Gleanings, January 1, 1905).

(2) In connection with the photo of the glider: "*to me the sight of a machine like the one I have pictured, with its white canvas planes and rudders subject to human control, is one of the grandest and most inspiring sights I have ever seen on earth*" (Gleanings, January 15, 1905).

It appears that the impressive picture of the gliding machine, floating in the air, triggered in Root's mind the fantastic story he narrated in his January 1, 1905, long article.

1905-01-01, "My Flying-Machine Story", Gleanings, p. 48

MY FLYING-MACHINE STORY.

For 32 years I have been ransacking the world ... watching periodicals of almost every sort, and leaving no stone unturned to furnish information of interest and value to the readers of GLEANINGS. ... for the first time in my life, during the past summer I have been under a promise of secrecy. When the Wright brothers kindly permitted me to be present while they were making preliminary experiments they especially desired I should keep to myself, at least for the time being, what I saw. ... Scarcely a dozen people in this whole universe knew what I knew, but I could not tell it. I have thrown out some hints, you may remember, of what was going on. But one of the brothers suggested "the best way to keep a secret is to avoid letting anybody know you *have* a secret to keep." ... Well, just before Christmas my heart was made glad by a letter informing me that, as the experiments for 1904 were probably ended, I might tell the world what I knew about the flying-machine, and therefore I have been made happy. Yes, to-day, Dec. 26, I am not only enjoying a happy Christmas but I feel just like saying "A merry and a happy Christmas to you all." I hope you will enjoy my story about the flying-machine — as much as I enjoyed being out in that big field with the Wright brothers many times during the past summer and fall, watching that wonderful creation of the hand and brain of those two men, while it "learned to fly," very much as a young bird just out of the nest learns by practice to use its wings. A picture of the flying-machine up in the air will appear in our next issue, nothing preventing. We could not get it ready for this one.

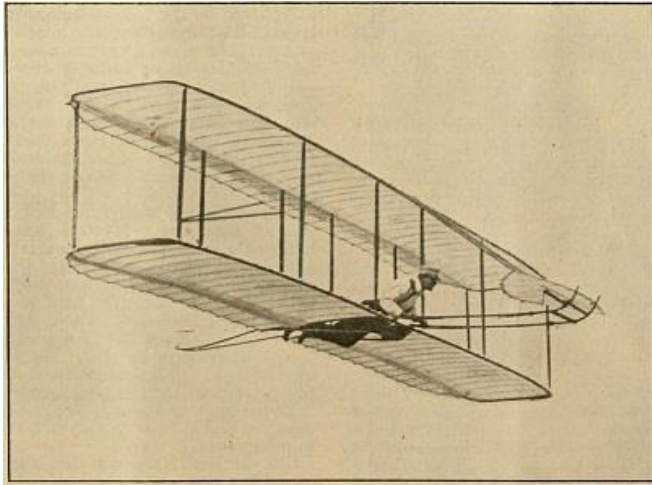
1905-01-15, "The Wright Brothers' Flying-Machine", Gleanings, pp. 86-87

THE WRIGHT BROTHERS' FLYING-MACHINE.

I shall have to apologize a little, friends, for giving a picture of the gliding-machine instead of a flying-machine; and I shall have to apologize a little more because the rudder in the rear that guides it from right to left is not shown in the cut ... The operator, Mr. Wilbur Wright, if I am correct, is shown very plainly.

... to me the sight of a machine like the one I have pictured, with its white canvas planes and rudders subject to human control, is one of the grandest and most inspiring sights I have ever seen on earth ...

I mention at the outset that the picture represents the gliding-machine. Well, the flying-machine is the same thing with the aluminum engine which stands right close to the operator and the pair of propellers, one each side of the back rudder. When in flight the propellers are invisible. Their action is very much like the motion of a bee's wing — perhaps not quite as rapid.



THE NEW-FASHIONED SLED FOR SLIDING DOWN HILL ON THE AIR.

▪ It is worth mentioning now a letter, of a certain G. L. Tinker, dated January 11, 1905, and published in *Gleanings*. If authentic, it represents evidence that the January 1, 1905, article of A. I. Root captivated the attention of at least one reader as long as this person stated: “*It was with intense interest that I read in Gleanings for Jan. 1 the first notice of a practical flying-machine that has ever been published.*”

1905-01-15, A. I. Root, “A Good Word in Regard to the Flying-Machine”, *Gleanings*, col. 1, p. 101

A GOOD WORD IN REGARD TO THE FLYING-MACHINE.

Dear Friends: — It was with intense interest that I read in *Gleanings* for Jan. 1 the first notice of a practical flying-machine that has ever been published. You are to be congratulated. ... We shall hope that our old friend A. I. Root may have a more intimate connection with this wonderful invention than now appears.

G. L. TINKER, M. D.

New Philadelphia, Ohio, Jan. 11.

▪ The letters sent by Root continued to arrive in Dayton, at the same high rate as in 1904, for two more years, 1905 and 1906. Then, their frequency decreased substantially. Most of them are of little to no value containing in essence just the repetitive message that Wrights’ old friend from Medina wanted to see new experiments performed by the two inventors with their plane. Unfortunately, despite his insistence pushed to the extreme, he would not have the chance to see a Wright apparatus flying till August 29, 1910.

On January 6, 1905, Amos Root announced his younger friends that the 100 dollars promised for the long article about them were ready. He paid the money on January 18, 1905, but, as we find out from the letter dated February 4, 1905, the two inventors refused the sum but asked for 100 copies of *Gleanings* for January 1, 1905. Another thing of interest, the old entrepreneur mentioned, was that the *Scientific American* ignored what he had written in his journal about the Wright brothers’ experiments, also he twice had sent relevant copies to this well known scientific publication.

1905-01-06, A. I. Root, “Letter to the Wright brothers”

Dear Sirs:-

... By the way, friends, some time in the fall I told you I would give a hundred dollars or more for the privilege of publishing the article that appeared a little changed in our number for Jan. 1st. ... Now I have not said anything about the \$100.00 but I want to say it is ready for you ... From your old friend, A. I. Root.

1905-01-18, A. I. Root, “Letter to the Wright brothers”

Dear Sirs *friends*:-

With the wish that the enclosed may help you a little in your multitude of experiments which you have as yet got little pay for, and so far as I know with little *thanks*, in the great wide world, I remain, Your old friend, A. I. Root. *Draft*100⁰⁰*

1905-02-04, A. I. Root, “Letter to the Wright brothers”

Dear Sirs:-

Well, friends, I suppose if you cannot accept of the check I shall have to keep it but I will try and fix it (mentally) to your credit in some way. You can have 100 extra numbers of *Gleanings* for Jan. 1st if you want them. We send you ten copies at once and if there is anybody you would like to have have them just give us the addresses and we will send them gladly. ...

I expect that extra passenger will be for the benefit of one of you two brothers; but if it should come handy remember nothing would delight your old friend A. I. Root like a short trip in that extra-- I was going to say seat, but perhaps I had better put it hammock or something of that sort. ...

Don’t you want also some copies of the next issue containing the print. You might answer on enclosed postal. ...

As ever your old friend and devoted servant, A. I. Root. ...

By the way, I mailed a marked copy to the *Scientific American* when it was first out. After a few days they replied saying that the copy had not reached them and asked me to send a second one directed to a special member of their staff. Since then I have not heard a word from them and there has been no mention made in the *Scientific American* whatever of your work. I thought perhaps they had asked you to write it up for them. I hope so for I am surprised to think such a paper as the *Scientific American* should be so much behind the times. A. I. R.

▪ On February 16, 1905, E. R. Root, the son of A. I. Root, got involved in the Wright affair suggesting the two inventors to consider using air cooled engines for their planes. On February 23, 1905, the brothers answered. It is evident from the letter sent in response by E. R. Root that the reason given by the Wrights, for not using air cooled motors, was the high number of revolutions per minute their aviation engine had to sustain. A speed so great generated a lot of heat and only the water cooling mechanism could carry it away and keep the engine at an acceptable temperature.

Between the two letters written by his son, the old beekeeper also had an intervention, on February 17, 1905, suggesting that the two Daytonians take a look at a clipping “*from Electricity for Feb. 15th*” (1905).

1905-02-16, E. R. Root, “Letter to the Wright brothers”

Gentlemen:-

My father, A. I. Root, has often spoken of the Wright Brothers, and of what they are doing with their flying-machine. When he told me that you were using water-cooling for your gasoline-engine, I began to wonder if you had ever exploited the field of air-cooling for such engines. ... While you have built something far lighter than any thing else on the market, yet if you adopt air-cooling you can reduce the weight and complication very much more. ...

In a letter you just wrote to my father you say that the horse power of your engine just built seemed to decrease after running a little. This may be due to a lack of lubrication, or to too much gasoline running through your carbureter after the engine got warmed up. After the engine has been running a while, cut down the flow of gasoline a little and note the effect. If every thing is right the engine ought to run faster after every thing is warmed up, and consequently give more power than the reverse. But you no doubt are familiar with this fact.

You probably have taken into consideration all the suggestions in this letter; but if you have not, there may be something of value to you in it. ... Yours very truly, The A. I. Root Company. E. R. ROOT. ...

1905-02-17, A. I. Root, “Letter to the Wright brothers”

Dear Sirs:-

The enclosed just clipped from *Electricity* for Feb. 15th may interest you. To tell the truth I have had the same thing in mind myself. It won’t do you

any harm to think it over even if you do not see anything practical in it. Yours truly, A. I. Root.

1905-02-24, E. R. Root, "Letter to the Wright brothers"

Dear Sirs:-

Your letter of Feb. 23rd replying to mine regarding air cooled motors has been received. As we suspected you have been all over this ground. I was not aware that you required so high a speed, a speed that would probably require water cooling instead of air cooling. ... Yours truly, *The A. I. Root Company*. E. R. ROOT.

• In "Our Homes" (Gleanings, April 1, 1905, pp. 373-376 (p. 375)), at one point, Root remembers that *Wilbur Wright worked with the flying-machine the previous fall, in his shirt sleeves, during a pretty cool day* and seeing this he *declared Wilbur would take a severe cold and be laid up*. This represents evidence the old entrepreneur witnessed the elder of the two brothers doing something with his plane, during a cold autumn day of the year 1904, but the text does not contain any explicit or implicit reference to a flight.

1905-04-01, "Our Homes", Gleanings, pp. 373-376 (p. 375)

... When Wilbur Wright was working with the flying-machine last fall, in his shirt sleeves, during a pretty cool day, I declared he would take a severe cold and be laid up. He replied, "Mr. Root, I shall never take cold in working in the open air, even if I do get pretty well chilled. I have been having the grip, but I do not fear that working out here will make it any worse. The thing that gives me a cold is sitting in a room that is unpleasantly warm." And I think Mr. Wright is right (?), and his experience will apply to a great lot of us. We take cold when sitting in rooms that are too warm; but very rarely by getting cold — at least where we are at work at something. ...

• A succession of many letters followed between March 22, 1905, and October 4, 1905. The majority express in a way or another Root's desire to visit his friends again and see their progress. In some of them, the old aviation enthusiast touched also different topics. In what follows I tried to classify somehow these texts:

• Letters: March 22, 28; April 17; May 5, 12; July 25 (1905)

Subject treated: The glider built by John Joseph Montgomery.

In the beginning (March 22, 1905) Root had limited information about that flying apparatus and feared a *newspaper blunder* but after gathering more data he found out Montgomery's machine was lifted by a balloon at an altitude of *two or three thousand feet* and then detached and glided down to earth with a man on board. Root was impressed considering that such a flight *amounted to something*. He warned the two brothers that the pilot who handled Montgomery's glider could easily learn to drive *the same machine with a motor* and, in consequence, his friends from Dayton *might have had a rival*. On his May 5 and 12 letters, Root appears to be a bit surprised that *Prof. Montgomery and the rest of the aeronauts* did not know about Wright brother's experiments performed in the summer of 1904 also *he had given the matter sufficient publicity*. The death of Maloney, Montgomery's pilot, who finally crashed his glider, disappointed Root who feared the sad event would *discourage further experiments* of that kind, as can be seen from the lines he wrote on July 25, 1905.

• Letters: June 24; July 25; August 21, 29; September 12 (1905)

Subject treated: The airship of Augustus Roy Knabenshue.

Possible the most important and also puzzling remark Root made in connection with this American aeronaut is:

Knabenshue is forging ahead so I have been wondering if he would not begin to use a lighter balloon, a still lighter, and after a while no balloon at all unless you folks should get ahead of him in some way. (August 29, 1905)

The question is why did Amos Root have such a fear as long as he had already witnessed Wilbur Wright flying in a circuit without any balloon on September 20, 1904?

• Letters: March 22; April 4 (E. R. Root), 17; May 20 (1905)

Subject treated: The disappointment of A. I. Root regarding the attitude of the Scientific American and other publications that ignored his January 1, 1905, long article.

This is what the old beekeeper and his son wrote: "*I have felt hurt to think the Scientific American has not even mentioned the experiments of last summer.*" (March 22, 1905); "*My father ... requested us to send a copy of the last issue of the Scientific American which contains mention of the Wright Bros.' experiments*" (E. R. Root, April 4, 1905); "*I ... am disgusted with ... the scientific press, to find so few of them have even taken the trouble to copy what I have written or make any mention of the matter.*", "*I think after a while you will get recognition from the Scientific American and the rest of the world*" (April 17, 1905); "*the Scientific American rather gives us a slap in the face, or at least I take it so. Perhaps you do not, and Think it is all right.*" (May 20, 1905).

The text E. R. Root referred to, on April 4, 1904, is "The Progress of Aviation Since 1891" (Scientific American, April 1, 1905, pp. 260 and 262 (p. 262)). An important part of it is dedicated to the Wright brothers. The article is the abstract of a paper, in the Revue d'Artillerie, written by Capt. F. Ferber (French aeronaut) who appeared to take for granted the December 17, 1903, powered flights, as can be seen from the following excerpt:

In December, 1903, they began to experiment with a machine of 50 square meters surface and 12 meters breadth, weighing 338 kilogrammes and having astern two screws driven by a 16-horse-power motor. Starting on level ground from an inclined monorail they made four flights, the longest of 59 seconds at a speed of 16 kilometers per hour relatively to the ground. December 17, 1903, marks the date of the first real flight of a manned flying machine and the honor of this memorable achievement belongs to the Wrights. (Abstract of a paper by Capt. F. Ferber in the Revue d'Artillerie, "The Progress of Aviation Since 1891", Scientific American, April 1, 1905, pp. 260 and 262 (p. 262))

However, if the full article in French is consulted, it becomes evident that F. Ferber had some doubts as long as he made it quite clear he did not fully understand why the two Daytonians (who had already flown more than 4 km and returned to the point of departure, at the end of 1904) did not come in France to compete for the 50 000 fr. prize for the first man carrying plane able to fly 1 km in a circuit. He speculated that one reason might have been the high cost of transportation, from the United States to Europe, of such a delicate machine. He also indirectly warned the Wrights the new patents in aeronautics did not have any value as long as all principles of flight were already known and brevets in the field had been granted one per week on average in the previous 100 years. In consequence, the plan of the two Ohioans, to get rich by selling their invention, had little chance of success in the opinion of Ferber who further remarked that, unlike before, both of them had been quite secretive since December 17, 1903, and, also people had continued to hear about them, the information regarding their progress had been vague. Here are his words:

A tout seigneur tout honneur. Malheureusement, il n'est pas possible de montrer autre chose que d'anciennes photographies, car les frères Wright, après avoir commencé leurs expériences comme un sport ..., sont devenus soudain très mystérieux depuis qu'ils ont, le 17 décembre 1903, fait faire à l'aviation un pas décisif. Ils avaient ce jour-là exécuté quatre essais en partant de la plaine sur un monorail et réussi à voler contre un vent de 31 km à l'heure (9 m par seconde) pendant une minute, en parcourant 250 m. Leur planeur pesait 338 kg avec 50 m² de surface et un moteur de 16 chevaux actionnant des hélices arrière.

Depuis cette date, on ne peut pas dire qu'on n'a plus entendu parler d'eux; mais ce que nous savons est bien vague. On a cru pendant quelque temps que le souci de s'assurer des brevets ... les empêchait de recommencer leurs expériences, mais il est probable qu'ils sont simplement retardés par les inconvénients inhérents à leur façon de partir face au vent de tempête qui leur est nécessaire pour soulager au départ leurs 338 kg.

M. Chanute m'a annoncé qu'ils avaient fait au mois d'août 1904 plusieurs parcours de 300 à 400 m. Plus récemment, il m'apprend encore que le 15 septembre 1904 ils ont commencé à tourner, que le 20 septembre ils sont revenus à leur point de départ après avoir pour la première fois décrit un cercle complet. De plus, le 9 novembre ils ont pris 25 kg de barres d'acier en surcharge et le 1^{er} novembre 35 kg. Ces derniers vols auraient dépassé cinq minutes pendant lesquelles auraient été décrits quatre grands orbes représentant plus de 4 km. Un pareil résultat est tellement remarquable qu'on a pu se demander pourquoi les frères Wright ne viennent pas en France disputer le prix de 50 000 fr. de l'Aéro-Club ouvert à tous pour un parcours d'un kilomètre seulement (!).

Quoi qu'il en soit, il est impossible de donner une vue de l'appareil employé, les constructeurs américains croyant sans doute, comme beaucoup d'autres, que les inventeurs de machines volantes feront fortune. C'est plutôt le contraire qui se produira: en aviation, il n'est guère possible, à mon avis du moins, de défendre son invention, par la bonne raison que les questions de principe étant archiconnues, les brevets n'auront aucune valeur et que les détails de construction se tournent, comme on sait, avec la plus entière facilité.

Il n'y a pas actuellement de secret en aviation: la théorie mathématique a été bien assise par les Penaud, les Tatin, les Renard surtout, et, quant aux brevets, comme il s'en prend en moyenne un par semaine depuis un siècle pour une machine aérostatique, on comprend qu'il y a longtemps que tout a été revu et réédité sous toutes les faces.

(I) Cette abstention paraît devoir être attribuée aux frais considérables que nécessitent non seulement la construction et les expériences préliminaires des appareils, mais encore le transport de ces engins délicats.

(F. Ferber, Capitaine d'artillerie, "Les Progrès de L'aviation Par le Vol Plané", Revue d'artillerie, August 1905, pp. 317-375, (pp. 335-337))

Definitely the above text is not written by somebody who had no doubt regarding the claims of the two Daytonians.

The May 20, 1905, letter of Amos Root, which mentions the name of his friends in connection with another article in the Sci. Am., might refer to "Rising an Aeroplane with an Automobile" (Scientific America, May 6, 1905, col. 2, p. 366), a text about a Wright-type glider that, towed with a 60 HP automobile, rose to 100 feet and then crashed. The experiments were conducted by Ernest Archdeacon, an important member of the French Aéro-Club. The glider just carried a weight equivalent to that of a man. There was no pilot aboard.

• Letters: April 11; June 3, 13, 24, 30, August 21 (1905)

Subject treated: The Wright planes.

On April 11, 1905, Amos Root wrote: "*I hope you are progressing with your work.*". On June 3, 1905, after reading a letter dated May 30, 1905, and coming from the two inventors, their old friend from Medina replied: "*I am very glad ... that there is a prospect that you may get something substantial for your invention.*". Ten days later, on June 13, 1905, the same businessman was *very anxious to see the new apparatus anyway even if he would not see it fly* and on June 24, 1905, Root sent the Wrights an *enclosed letter from one of his journal subscribers to show them the kindly interest his friends felt in their success*. On June 30, 1905, the old apiarist wrote: "*I trust you are prospering.*" and on August 21, 1905: "*I shall be very glad to make you another visit just as soon as I know that you are making experiments.*".

In what follows, you can read fragments of the letters commented above:

1905-03-22, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

See enclosed clipping. Now do you consider it worth while to follow this thing up. Do you suppose it is really true that this man with an apparatus weighing 42 pounds has ascended two thousand feet. I think it must be a newspaper blunder. ...

By the way I have felt hurt to think the Scientific American has not even mentioned the experiments of last summer. I sent them copies of Gleanings the second time but they did not even give me a word of thanks or recognition of any kind. It may be possible they wrote it up in their supplement; but it seems to me out of courtesy they might send me a copy. Your old friend, A. I. Root. ...

1905-03-28, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

Very likely you have seen enclosed before this reaches you, but I thought it would be just as well to submit it to you. The first statement I sent you, was not correct; "That he had no balloon." But he has made some progress, evidently, with the Glide Machine, that is, if the story is true. Very truly yours, A. I. Root.

1905-04-04, E. R. Root, "Letter to the Wright brothers"

Dear Sirs:-

My father has gone up to his little ranch in northern Michigan ... Just before he left he requested us to send a copy of the last issue of the Scientific American which contains mention of the Wright Bros.' experiments. ... Yours truly, *The A. I. Root Company. E. R. ROOT.*

1905-04-11, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

The enclosed letters and papers will explain themselves. I thought likely you might like to see them. I hope you are progressing with your work. Yours truly, A. I. Root.

1905-04-17, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Many thanks for your very kind letter of April 16th. I for one am disgusted with the press generally, especially the scientific press, to find so few of them have even taken the trouble to copy what I have written or make any mention of the matter. ... I enclose in this some new clippings. They ... tell you something more about Prof. Montgomery. By the way this California exploit of dropping down two or three thousand feet with a gliding machine ... seems to me amounts to something. The man who handled that gliding machine ... must be somewhat of an expert; and if he can handle a gliding machine he probably is pretty well prepared to learn to run the same machine with a motor; and it looks to me as though you might have a rival somewhere on the Pacific coast. ...

... I think after a while you will get recognition from the Scientific American and the rest of the world; but perhaps it is just as well not to have too much notoriety just now. From your old friend, A. I. Root.

1905-05-05, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

The enclosed comes from one of my friends in California, W. A. Pryal, 479 Valencia St., San Francisco, Cal. As it gives a picture of the machine I thought it might give you some additional light on the subject. The only particular point with me is this, -does Prof. Montgomery know of what you have accomplished. I should infer from his remarks he does not ... Your old friend, A. I. Root.

1905-05-12, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Thanks for your kind letter. I know that Prof. Montgomery, and I suppose the rest of the aeronauts, knew about your gliding experiments, but do they know of your work last summer. It seems to me they do not and yet I thought I gave the matter sufficient publicity. By the way, inquiries are coming in all the while as to the progress you are making. Now perhaps I took a liberty when I made that brief note about the fact that you were making a two passenger machine. If so, I beg pardon; but if you are willing I shall tell what I know of about what you are doing I would be glad to do so and a lot of our friends would be glad to get any sort of news in the matter. You see it is a good thing for our journal. ... Yours truly, A. I. Root.

1905-05-20, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

I enclose another leaf from the Scientific American, also one from a California paper. You will notice in the wind-up the Scientific American rather gives us a slap in the face, or at least I take it so. Perhaps you do not, and Think it is all right. You may say that the writer of the article was not aware of what you did last summer. Very true; but the editor of the Scientific American is aware and if they publish a live journal with any fairness I think they might have added in a foot note that he was mistaken. Nevertheless if you are satisfied I will try to be.

Hoping this will find you making progress, I remain, Yours truly, A. I. Root.

1905-06-03, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

Thanks for yours of May 30th. ... I am very glad indeed to know that you are getting along and especially that there is a prospect that you may get something substantial for your invention. ... With best wishes, I remain, Yours truly, A. I. Root.

1905-06-13, A. I. Root, "Letter to the Wright brothers"

Dear Sir:-

The enclosed was mailed me but the clipping don't give any particulars in regard to the date. I think it is something pretty recent. I am watching the mails anxiously to hear that you are pretty near ready for some experimental work. ... I am very anxious to see the new apparatus anyway even if I do not see it fly.

As ever, Yours truly, A. I. Root.

1905-06-24, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

I got home safe and sound in very good shape and found the enclosed from the Toledo man. It seems he is having some experience that he did not calculate on. Flying in the air cannot be done altogether on paper.

I also enclose a letter from one of our subscribers to show you the kindly interest our friends feel in your success. ... As ever yours, A. I. Root.

1905-06-30, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

I hope you will find something of interest in the enclosed pages. Owing to ill health Huber did not get down to Dayton. I trust you are prospering. Yours truly, A. I. Root.

1905-07-25, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

Enclosed find full particulars in regard to the sad fate of poor Maloney. You will notice his death was caused by a little carelessness in starting out. I fear it is going to discourage further experiments in California. Knabenshue at Toledo is having some trouble ... Your old friend, A. I. Root.

1905-08-21, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

On my arrival home I find yours of Aug. 16th and am watching anxiously for something further from you, I shall be very glad to make you another visit just as soon as I know that you are making experiments, as you are perhaps already by this time I hope. I enclose a clipping from the Leader regarding Knabenshue. Yours very truly, A. I. ROOT.

1905-08-29, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Well friends I suppose you will excuse your old friend, A. I. Root, if he does get a little anxious. You see Knabenshue is forging ahead so I have been wondering if he would not begin to use a lighter balloon, a still lighter, and after a while no balloon at all unless you folks should get ahead of him in some way. ... As ever, A. I. Root.

1905-09-12, A. I. Root, "Letter to the Wright brothers"

Traverse City Mich

Wright Bros. Dear Sirs.

Your kind postal of the 7th has just reached us up here. We have only been here a few days ... I would rather not return until some time in October. I presume you are not yet ready to have your work written up again ..., but when you are, I will gladly drop everything & do all I can to help you hold your invention. If Knabenshue has not been to see you when he was so near, it is to me one of the greatest mysteries. He has

acknowledged publicly his work is of no practical value, unless he can dispense with the balloon and I am sure a great future is just ahead of us along in the line you are working. ... May God bless, guide & direct you. From your old friend, A. I. Root.

▪ As the months passed and the season suitable for outdoors experiments was coming to an end, A. I. Root became more and more impatient. By October 4, 1905, he was thinking of the Wrights almost *every hour* wondering of what would happen if his young friends were not able to manoeuvre the plane correctly.

1905-10-04, A. I. Root, "Letter to the Wright brothers"

Dear Friends,

I have been thinking of you ~~almost~~ every day & I might almost say every hour. Perhaps this is almost too romantic for an old man, but I have been wondering if you are not able to "go up", "stay up" & go either to the right or left; & up or down as you choose. I enclose a notice of Freeman's present prospects. What do you think of Mr Whitehead, who has made a machine of his own that goes & has also "helped" make "35 or 40" different machines? I wonder if he made them all a "success"? I would be very glad of a brief note from you. I cant well get round you say before about the 15th or 20th, & may be later. As ever, A. I. R.

▪ On October 21, 1905, another letter followed which is direct evidence Root had the habit to take for granted what the Wrights told him. The text is written after the alleged spectacular series of fights that ended on October 5, 1905. Amos Root expressed his satisfaction *for the good news* he had just received and then made the remark: "*I take it for granted you have not yet gone outside of your field ... and that the machine has been brought back at the end of every trial to the starting place*", followed a few lines further by a request for permission to publish at least *a brief statement* regarding what had been done. Root was embarrassed because, and here are his own words: "*they keep saying to me tauntingly 'What has become of the Wright Bros?'*" which is an affirmation that proves people who knew him did not trust his word as much as he trusted the stories of the two brothers.

1905-10-21, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

May the Lord be praised for the good news that comes in yours of October 19th. ... Please do not fail to let me know when you think of making another trial. ... I would be very glad to have you answer a few questions. I take it for granted you have not yet gone outside of your field or much outside, and that the machine has been brought back at the end of every trial to the starting place or pretty near the starting place. Second, I take it for granted that you do not wish any mention made of what you have done at present. This is rather hard for me because they keep saying to me tauntingly "What has become of the Wright Bros?" If I could just give the contents of this letter you sent me or a brief statement in my own words of what you had done in order to set myself and yourselves right before the world I should be very glad to do so, but of course there wont be a whisper without your permission. ... From your old friend, A. I. Root.

▪ The next three letters, dated October 27, November 4 and 6, 1905, demonstrate Root was relatively optimistic regarding his chance to witness a (new) flight. Following a letter of October 26, 1905, that had come from the Wrights, the old beekeeper immediately answered the next day asking them to send him a telegram just before a new flight attempt. "*I will almost cross the ocean just to see that machine get outside of the enclosure.*", Amos Root wrote. About a week later, on November 4, 1905, without making all the necessary verifications, he suggested his younger friends to send a telegram at such a time as to reach Medina between 5 and 6 in the morning which would allow him to take a train and arrive, at the place where the Wrights performed experiments, at around one o'clock in the afternoon. Two days later, on November 6, 1905, after finding out the telegraph office opened

at 7 o'clock AM, he came with a new proposal telling the two inventors to contact him *by long distance telephone*. One more letter followed (November 8, 1905) with which Root informed his friends from Dayton about: "*a difficulty with flying machines we had not thought of*".

1905-10-27, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Many thanks for yours of October 26th. Now it would be a great favor if you will wire me at my expense when you expect to make another flight. I will start off day or night, in fact I will almost cross the ocean just to see that machine get outside of the enclosure. We are having beautiful weather now and I should be exceedingly glad to get a telegram as soon as this reaches you. From your old friend, A. I. Root. ...

1905-11-04, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

... I wish you would tell me on enclosed postal whether you did anything today. If you did not then I will feel better and if you did succeed in breaking the record I will try to feel better too. By the way if you could get a telegram to reach Medina between 5 and 6 o'clock in the morning I would be at your place by 1 o'clock in the afternoon; but perhaps it is so late in the season it is not worth while to consider the matter; I mean if you have not made your final trip for the season when this reaches you. As ever yours, A. I. Root.

1905-11-06, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

I wrote you Saturday if you could send me a telegram between 5 and 6 in the morning I could get down to your place by about one o'clock. Since then I find that our telegraph office is not open until seven; but you could get me by long distance telephone and if the message reaches me about six o'clock I can catch an electric car at 6:20 so as to get to Simms about one o'clock P. M. If you have made all of the flights you are to make this year when this reaches you, of course there is no use talking about it.

Now there is just one thing more. If it would be in no way objectionable to you I should like to ask the readers of *Gleanings* to forward me newspaper clippings in regard to aviation all over the world. ... Of course such a request would probably call forth quite a few inquiries as to the Wright Bros. but I could answer them privately and let the matter drop. As ever yours, A. I. R.

1905-11-08, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Well, friends, how does things please you the day after election.

The enclosed clipping mentions a difficulty with flying machines we had not thought of. I thought best to submit it to you. As ever yours, A. I. Root.

If I could say so much, it would relieve me of the charge of having made a big fuss about something that had not after all panned out to amount to anything

▪ The high hopes of the old aviation enthusiast were to be smashed by a Wright brother's letter dated November 8, 1905. Root's answer, that came the next day, November 9, shows his visible disappointment. He was not to witness a flight any time soon and asked for one more favour, the permission to publish a short note reading: "*At present I am not at liberty to give a report of what the Wright Bros. have done during the past summer.*" This text itself contains nothing special. However, referring to the note, Root continued with a quite baffling explanation, and here are his own words: "*it would relieve me of the charge of having made a big fuss about something that had not after all panned out to amount to anything.*" Had he really seen Wilbur flying in a circuit, on September 20, 1904, he would not have made such a remark because that flight would have had an extraordinary value for him. This November 9, 1905, letter discredits the January 1, 1905, long article in *Gleanings*.

1905-11-09, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Many thanks for postal card of Nov. 8th. Now I have just one more favor to ask ... I would like to add after asking for reports of flying machines something like this. "At present I am not at liberty to give a report of what the Wright Bros. have done during the past summer." If I could say so much or something like it changed in any way you see fit it would relieve me of the charge of having made a big fuss about something that had not after all panned out to amount to anything. It would be an acknowledgement of course that something had been done but no more. If you think this would not do you any harm I should be exceedingly glad. ... As ever yours, A. I. Root.

▪ For three more letters (November 10, 13 and 28), Root continued to negotiate about what he should keep for himself and what he should publish and received ample powers from the Wrights. "*Many thanks dear friends for the permission to talk about flying machines*", he wrote on November 28, 1905, at the same time assuring the two inventors that he would not cross red lines like divulging secrets about *the construction of the machine and the method of starting*.

1905-11-10, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

I wrote you yesterday in regard to making a statement to our readers. I think you will be interested in the enclosed sheets from the Technical World Magazine. See page 449 where I have made pencil marks. Now you will see part of this paragraph is what I would like to use if you see fit to give me permission; but rest assured not a word will be said unless it meets with your approval. As ever, A. I. Root.

1905-11-13, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Many thanks, friends, for giving me permission to make a bigger statement than I had any thought of making. Now the way is open for me to comment on air ships or anything along the line I choose without having it thrown in my teeth that I made a big fuss a year ago and nothing ever came of it. Once more many thanks. Yours truly, A. I. Root.

1905-11-28, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Many thanks dear friends for the permission to talk about flying machines once more. ... I have made a write up for our journal that goes on the press today. I would have submitted it to you but there was not time, and as I did not say a word about the construction of the machine and the method of starting I trust it will prove satisfactory. ...

Hurrah for ... the year 1906, flying machines and all. Yours truly, A. I. Root.

▪ The first article (November 15, 1905) referring to flying machines, Root published as a result of his negotiations presented above, just informed the readers of *Gleanings* he was not *at liberty to give a report of the wonderful progress made by the Wright Brothers* in the previous few months.

The second text (December 1, 1905) is quite close to the standard of the Scientific American. The complicated style with divagations that plagued the January 1, 1905, story is gone and together with it the sensation that the entire account is nothing else but a piece of fiction is no longer felt by the reader. However, this last article, despite containing figures and technical explanations, is neither an eyewitness report, being based on letters received by Root from the two Daytonians, nor an exclusive text that only *Gleanings* had the privilege to make public. An extensive investigation, containing about the same things, appeared in the French *L'Aérophile* ("Les Frères Wright et leur Aéroplane à moteur", *L'Aérophile*, December 1905, pp. 265-272) where two Wrights' letters, with precise details regarding the alleged September - October 1905 long flights, were published. The first, dated October 9, 1905, was addressed to

Captain Ferber and the second, sent on November 17, 1905, to Georges Besançon, the founder of the journal.

1905-11-15, "Navigating the Air", Gleanings, p. 1202

NAVIGATING THE AIR.

... I should be glad to have any of our readers mail me whatever they find in the papers in regard to any experiments in navigating the air — more especially those that will work without the aid of a balloon. ... I want reports of what has actually *been* done up to date. *At present I am not at liberty to give a report of the wonderful progress made by the Wright Brothers in the past few months.*

1905-12-01, "The Wright Brothers' Flying-Machine to Date; Flying 24 Miles in 38 Minutes", Gleanings, p. 1258

THE WRIGHT BROTHERS' FLYING-MACHINE TO DATE; FLYING 24 MILES IN 38 MINUTES.

Our readers' attention is called to the articles in regard to the Wright Brothers' flying-machine in our issues for Jan. 1 and 15, 1905; also to the italics on page 1202 in our last issue. I have *now* permission to give you some further particulars. A great number of long flights were made during the past summer. Along late in the fall the machine made 24 miles, and was up in the air 38 minutes; and as this flying was all done in a circle, the speed was not as great as it might have been in a straight line. The reason why they have made no longer flights, say from one city to another, is because they are following the policy they adopted in the beginning, of working slowly and safely. This longest flight did not extend much outside of the inclosure I have described, where the building is located for storing the machine. For several reasons it is quite desirable that the apparatus should be put back in the house built for it, after every flight; and if they ventured very far away from where it is located there might be difficulty in getting it over fences or along highways.

In making these circles of about one mile in circumference they did not choose to go higher than perhaps 75 or 100 feet from the ground. In order to test the machine fully in case of accident the engine was shut off repeatedly while under full speed, and at a considerable height from the ground. There is no difficulty at all in alighting on any tolerably smooth field (that is, a field tolerably clear of trees, bushes, stumps, etc.) without accident to the machine or operator; in fact, they can strike ground at a speed of 40 miles an hour without injury. They even consider it safer to alight at a pretty fair speed than to drop straight down without speed. The reason why they stopped at the end of 38 minutes was because their reservoir of gasoline held only enough for that length of time; but as they carried along about 40 lbs. of cast iron for ballast, the machine is amply capable of carrying gasoline enough for an hour or perhaps two or three hours. As nearly as I could find out, the amount of gasoline required to run it is but little if any greater than is required for a two passenger automobile. You see it is easier work *sliding on the air* than traveling over our best macadamized roads.

... Until now they have endeavored to keep the matter from being mentioned in the papers as much as possible. These workers in this new field have not desired publicity.

▪ On December 9, 1905, Root made his two friends an "interesting" proposal. The brothers were suggested to go to Florida, where he would spend the winter. After announcing the Wrights he would start for Florida on December 12, 1905, in the afternoon, the old businessmen continued to push ahead with that quite unrealistic idea, due to the logistic complications it would have generated, in two more letters, dated January 17 and 18, 1905, which gave details about the terrain configuration of the island where he was spending the winter and where he would have liked his friends to experiment with their plane during the cold season when the weather in Ohio was not suitable for outdoor tests.

Far more important than this Florida dream of the old aviation enthusiast, to see the Wrights flying above his winter residence, is the January 8, 1906, letter addressed to him by the American photographer George Grantham Bain who, misled by Root's article: "My Flying-Machine Story" (Gleanings, January 1, 1905, p. 48) that ended with the fraudulent promise: "*A picture of the flying-machine up in the air will appear in our next issue, nothing*

preventing", asked for that photography to enrich his collection. The son of A. I. Root, who forwarded Bain's text to the Wright brothers on January 13, 1905, wrongly speculated the letter was an attempt to *get hold of the details of Wright's invention*. In reality Bain just wanted the image promised by Root and that was not printed in the January 15, 1905, issue of his periodical. Bain clearly stated he already had the picture of the gliding machine.

1905-12-09, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

I expect to start for Florida next Tuesday. Now if you should take a notion to want to make some experiments before summer comes and should think of going to Florida I would be exceedingly glad to be on hand and to give whatever assistance I am able. Yours truly, A. I. Root.

1905-12-12, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

... Mrs. Root and I expect to leave for Florida this afternoon. Success to the new engine and all the experiments you may make during the coming winter. ... Yours truly, A. I. Root.

1906

1906-01-13, E. R. Root, "Letter to the Wright brothers"

Dear Sirs:

I inclose you a letter addressed to my father, who, as you probably know, is in Florida, at Osprey. I thought I would turn it over to you as you may be interested in guessing at the motive that prompted the writing of the letter. I suspect they were trying to get hold of the details of your invention. Even if we had such photo we would not give it out without your full knowledge and consent. Yours very truly, The A. I. Root Company, E. R. Root.

1906-01-08, George Grantham Bain, "Letter to A. I. Root"

Jan. 8/06

Dear Sir:

In your issue of Jan. 1 you promise to publish in a subsequent issue a photograph and description of the Wright flying machine. In my collection of flying machine pictures (which is remarkably complete) I have photographs of the Wright gliding machine, made by Mr. Chanute of Chicago. I am very anxious to obtain a photograph of the new machine at the earliest possible moment and shall be greatly obliged if you will let me have your photograph long enough to make a copy of it. Yours very truly, George Grantham Bain ...

1906-01-17, A. I. Root, "Letter to the Wright brothers"

Osprey Fla Jan 17

Many thanks friends for the clippings you have been so kind as to send me. ... I am glad to see one of them gives Gleanings a little recognition.

At present writing I do not know of a better island than our own. It is 10 miles long or about that ... We are located on about the middle of the island where the land is only about 200 yards wide. ... I would advise that one or both of you come down here and look it over. We have boats etc which are quite at your service. ... If you want a secluded spot, I think this is it.

Coldest night here so far was 48, & it is comfortable working out doors every day.

All the islands so far as we know, are covered with trees & bushes, but there are parcels covered with grass near hear, but I think the grass is pretty tall. In haste, A. I. R.

1906-01-18, A. I. Root, "Letter to the Wright brothers"

Osprey Jan 18/06

Wright - Bros

Dear friends, I have been up to the north end of our island & find it much better than I expected. For more than a mile there is nothing but soft grass that can be burned off if it is in the way ... Mr. Shumard who owns the island or who is almost its sole occupant, says he will give you all the assistance he can. ...

Where the tufts of grass grows, there are hummocks something like those at the place you used last summer, but as they are in the sand, are not near as bad to crush down. The Seaboard Air line R. R. will run a car for you,

right out on the dock, & all your apparatus can be taken from car directly on a boat with very little trouble or expense. This same boat can run clear up to the grassy bank on the bay side. The Beekeepers around here have read about your work in *Gleanings*, and are all my personal friends, & will be only to drop every thing & do any thing you might want done. At the same time, as it is only sparsely settled, you will be as free from inquisitive visitors, as in almost any other spot.

I remain as ever, at your service, whenever I can help. A. I. Root.

▪ The end of 1905 and beginning of 1906 was a period characterized by numerous articles in connection with the spectacular sequence of flights that had ended on October 5, 1905. The newspapers made a lot of noise about a possible deal between the two brothers and the French government which, according to the daily papers, was interested in buying their invention. Root became somehow frustrated noticing that *all the papers had so much to say & Gleanings, the pioneer, in reliable news, was entirely silent* as can be seen from his February 27, 1906, letter. He asked the brothers for a few authoritative lines, if possible, that he could publish in his journal regarding their agreement with France.

The March 1, 1906 issue of *Gleanings* contains a short text reading: "*They have sold to the French nation the right to France, but not to the whole United States, as many of the papers have it.*" which was so deeply buried in a long article about gardening in Florida, and having nothing to do with flying through the air, that the real intention of Root appears to have been more to hide that information from the public than to reveal it to his readers. To connect somehow the above-mentioned text to gardening and more precisely growing strawberries, one of the topics treated in the article, Root states that a farmer, he was talking about, *learned the trade by slow and gradual steps just as his friends the Wright Bros. learned how to fly*. As a remark, he missed again the opportunity to repeat and emphasise he had seen the two inventors flying. There was no shortage, that time, of articles talking about the flights of the two inventors. However, there existed a serious deficit of witnesses.

1906-03-01, "High - Pressure Gardening in West Florida", *Gleanings*, pp. 301-304 (p. 302)

HIGH - PRESSURE GARDENING IN WEST FLORIDA.

... As mulching to keep the berries out the dirt is a rather hard matter, the most of friend Rood's three acres is not mulched ... I asked him how it was that he had the only strawberries in that region. He answered something like this:

"Friend R., the rest of the people have not learned how I have been years studying and experimenting. ..."

... he (and his wife) learned the trade by slow and gradual steps just as my friends the Wright Bros. learned how to fly. (I have got a lot to tell you about them soon. They have sold to the French nation the right to *France*, but not to the whole United States, as many of the papers have it.). ...

▪ In the meantime Root returned from Florida, went to his ranch in northern Michigan and when he came back to Medina it was clear the Wrights had advised him to refrain from writing about them in his journal. This can be inferred from the letter dated May 17, 1906, and started by the old beekeeper with the assurance: "*All right, friends not a word shall be published either directly or indirectly in regard to your work until you give permission*". Two days later, on May 19, 1906, he guaranteed his friends from Dayton he would not send the *Scientific American* anything without their permission. This came as an explanation for a letter sent by his son, Ernest, to this well-known periodical, suggesting that his father might furnish some facts. However, the *Sci. Am.* wanted the story to go through *Gleanings* first, a thing Root apparently disliked. As an additional explanation to put in context the letter or E. R. Root, it has to be mentioned that the *Scientific American* had already published a few important articles about the two inventors:

- (1) "The Wright Aeroplane and Its Fabled Performances" (col. 1, p. 40, January 13, 1906);
- (2) "The Wright Aeroplane and Its Performances" (pp. 291-292, April 7, 1906);
- (3) "Chanute on the Wright Brothers' Achievement in Aerial Navigation" (col. 1, p. 307, April 14, 1906) authored by Octave Chanute, the mentor of the two inventors, himself.

1906-02-27, A. I. Root, "Letter to the Wright brothers"

Osprey Fla Feb 27 06

Please accept thanks for your kind letter of recent date with the good news it contains. I suppose I may be allowed to say, "May the Lord be praised for the excellent prospect that you will soon have the reward you two have so richly earned for your years of labor."

They tell me at home, there are a lot of people wanting to know the real truth of your deal with France, but as I take it; your recent letter is strictly confidential in that respect. ... I expect to be back in Ohio about 1st week in April.

If you could see your way to give me just a few lines to be used in our journal in regard to the recent deal I would be exceedingly glad. You see it begins to look singular that all the papers have so much to say & *Gleanings*, the pioneer, in reliable news, is entirely silent. As ever, A. I. Root. ...

1906-04-30, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Dear friends, I am just starting for my place in northern Michigan to be gone a couple of weeks, and I hope you will remember to let me know when you want those iron weights shifted to one side of the field or the other. Do not forget that that was to be my job. Even if you should send word and I get down there when the weather is bad I won't mind it, and I surely want to be on hand when there is "something doing." From your old friend, A. I. Root. ...

1906-05-17, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

All right, friends not a word shall be published either directly or indirectly in regard to your work until you give permission. I am so anxious however to see this thing go on that I continually regret there don't seem to be anything I can do to help the matter. What I had in mind when I was speaking about having your work last year known to the world was that perhaps some of the California millionaires might if they knew what you had done feel enough interested to furnish capital ... Yours truly, A. I. Root.

1906-05-19, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Dear Friends, you may be interested in reading the enclosed from Munn & Co.. It came during my absence in northern Michigan. I hope you will excuse me for saying that I am exceedingly anxious to know just what you are doing. ...

In regard to the *Scientific American* of course I shall not write anything until you have seen it or approve of it and I am not sure I would want to then. In my absence Ernest wrote them a very nice letter suggesting that perhaps I might furnish them some facts. If there are any facts however it wants to go through *Gleanings* first. If they cannot take it second hand why they will have to go without it as far as I am concerned. Your old friend, A. I. Root.

See copy letter filed
Scientific Am.

▪ Another succession of little value texts followed. They contain mainly the repetitive message that Amos Root was anxious to see his friends doing experiments outdoors. From a letter dated May 28, 1906, we find out the Wrights were having some problems with their engines but also that the old aviation enthusiast received the promise to *let him know when there was anything doing*. This assurance made him so happy that, at the end of the text, he personified his automobile saying: "*we would both be exceedingly glad to run errands for you or do anything else to help things along*" and closed the letter with the unusual formula: "*your enthusiastic old friend*".

One month later, on June 28, 1906, Root was a bit afraid not to miss the opportunity of witnessing a test while being away from home two or three weeks. After another month, on July 30, 1906, he was *hungry to see something about how the Wrights were prospering*. On August 9, 1906, Amos Root announced the brothers he would like to see them with the occasion of a trip to Xenia (town close to Dayton). He likely was aware the two inventors were not prepared for visits because otherwise he would not have written this: *"If for any reason you do not care to see your friends at present, just say so on the enclosed postal and there won't be any hard feelings"*. His fear proved justified. On August 15, 1906, the Wrights sent a letter which evidently did not encourage him to come, as long as, on August 17, 1906, Root answered: *"If you are not quite ready for work out doors I think I won't make the call I was talking about."*

1906-05-28, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Many thanks for your kind letter of May 26th, friends. I am very sorry indeed to know you are having bad luck with your engines, but I am very glad to receive your promise to let me know when there is anything doing. Should you decide to select a location that is not close to an electric car line just remember myself and my automobile are entirely at your service; in fact we would both be exceedingly glad to run errands for you or do anything else to help things along. As ever, your enthusiastic old friend, A. I. Root.

1906-06-28, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

I am planning to be away two or three weeks but if there should be anything doing with the flying machine I could just as well put it off. Will you please tell me on the enclosed postal or otherwise what the prospect is.

Hoping I am not troubling you too much, I remain, Yours truly, A. I. Root.

1906-07-30, A. I. Root, "Letter to the Wright brothers"

Dear Sir:-

Friends, I am just back from my Michigan trip and I am hungry to see something about how you are prospering. You might put it briefly on the enclosed postal. Yours truly, A. I. Root.

1906-08-09, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

Within a week or ten days I shall be going to Xenia to take a nephew of mine to the Soldier's Home and while I am so near you I would like to make a little call, that is if there is anything doing with the air-ship or if you are ready to see your old friend A. I. Root. If for any reason you do not care to see your friends at present, just say so on the enclosed postal and there won't be any hard feelings I heartily assure you. May God speed you in the important work you are trying to do for coming generations, at least that is the way I look at it. Yours very truly, A. I. Root.

1906-08-17, A. I. Root, "Letter to the Wright brothers"

Many thanks for your kind favor of the 15th, friend Wright. If you are not quite ready for work out doors I think I won't make the call I was talking about. ... Yours very truly, A. I. Root.

▪ Starting with the following letter, sent on October 24, 1906, the importunate entrepreneur from Medina put more and more pressure on his younger friends to allow him to publish something in *Gleanings* about their progress, invoking the existence of *a lot of inquiries in regard to the airship*. Having received no first hand information up to date of what the Wrights had been doing during the 1906 season, he could not hide his disappointment as can be seen from the following quite tough remark: *"to tell the truth, as it is coming so near winter again I was getting a little discouraged, that is, so far as I have a right to be discouraged about something that is not my own affair"*. However, Root had an indirect source of information, more precisely an article forwarded to him by his sister in Xenia, which quoted Octave Chanute as saying that the

Wrights' airship was capable of a sustained flight with two people on board and 200 pounds of extra weight. With the permission of the two inventors, Root would have liked to republish in his journal what O. Chanute had said.

Fife days later, on October 29, 1906, the old Amos composed another letter, this time in connection with the article "Santos-Dumont Wins the \$10,000 Prize" (*The Automobile*, October 25, 1906, p. 527) which, despite being an inaccurate and exaggerated text, contained the truth that *Dumont had got off from the ground without any balloon*, on October 23, 1906. Root was also concerned about the closing remark of it which quoted Capt. Ferber as saying:

"So convinced am I that M. Santos-Dumont is on the right lines that I think it absolutely essential that the Wright brothers immediately make public the result of their experiments. Within six months their instrument will have been surpassed in France, and they will find they are too late."

The old man from Medina ended his October 29, 1906, text by explaining he was in a big dilemma, he would have liked to tell his readers about what Santos Dumont had just accomplished but in the same time he was afraid, at least this was his claim, that a lot of inquiries would follow relative to *what the Wright Bros. had been doing during the previous 12 months*.

1906-10-24, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

Of course there has been a lot of inquiries in regard to the airship, but I have been obliged to tell all of them that I have no information up to date of what you two have been doing this season; and to tell the truth, as it is coming so near winter again I was getting a little discouraged, that is, so far as I have a right to be discouraged about something that is not my own affair. Well, I confess it gives me a happy surprise when my sister in Xenia forwarded me a newspaper clipping, probably from an Xenia paper, although I cannot tell for sure. The part of the clipping that interests me in particular is the following:

"Mr. Chanute states confidently that the brothers have developed their airship until now it is capable of a sustaining flight carrying two men and 200 pounds of additional weight, at an average speed of 28 miles an hour."

Now if the above is true, and I hardly think he would give it in a Chicago paper unless you gave him authority to do so, something has been doing after all; and I would be very glad indeed to make the above statement to the readers of *Gleanings*; but of course I won't think of doing so without your permission. ... Your old friend, A. I. Root. ...

1906-10-29, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

I do not know how much interest you will take in the enclosed leaflet from the *Automobile*. Of course it is a little bit indefinite but it really seems as if Dumont had got off from the ground without any balloon. If so, he is going to push ahead. Now you know your own business best and perhaps I am meddling a good deal, but I am afraid there is some truth in the last sentence just over the picture of the big balloons. Yours truly, A. I. Root.

P. S.-

Now I should be glad to give the readers of *Gleanings* something in regard to what Santos-Dumont has done; but of course I would not want to quote what was said in reference to the Wright Bros. But I won't say anything at all if you rather not; and in fact if I should tell what Dumont has done everybody would be clamoring to know what the Wright Bros. had been doing during the past year. You see it puts me in a little bit of a dilemma unless I keep mum as I have been doing and say nothing at all. A. I. R.

No, you had not told me that you did not expect to make any flights this year

▪ A very full and complete letter, dated October 30, 1906, and coming from Dayton, got Root out of his deadlock. It can be inferred from the answer promptly formulated the next day, October 31, 1906, that the brothers told him the statement of

Octave Chanute (see the October 24, 1906, letter) was inexact or simply an invention of the papers. The old apiarist was also informed the text in *The Automobile* (October 25, 1906) was inaccurate. On October 23, 1906, Santos-Dumont really won an aviation prize, for being the first to fly more than 25 meters, but not the big \$10,000 (1906 dollars) reward for completing a circular one-kilometer course in a heavier-than-air craft, as claimed by *The Automobile*. This appreciable sum of money was won later, on January 13, 1908, by Henry Farman.

1906-10-31, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

Many thanks, dear friends, for your very full and complete letter of Oct. 30th. No, you had not told me that you did not expect to make any flights this year. I supposed, of course, that you were going ahead with the deal with the French people and have been watching all summer long for something like what Chanute gave or is said to have given. I very much regret that he made such a statement as that to the papers or that the papers put out anything of that kind. Under the circumstances I think it best to say nothing about it in our journal. I am very sorry indeed that such a statement should go out in regard to what Santos-Dumont has done; and I confess I have been a little surprised that there is nothing in any of the other periodicals to corroborate the statement made by the *Automobile*. I expect to be in Columbus during the Convention on the 12th and 13th of November and very likely I will go over to make you a short call. As ever your old friend, A. I. Root.

1906-11-07, A. I. Root, "Letter to the Wright brothers"

Gentlemen:-

I expect to pass through Dayton on Wednesday the 14th and I would like to call on you say some time about 3 or 4 o'clock in the afternoon. Will I probably find you in your shop at that time. I take a train for St. Louis to the National Anti-Saloon League Convention I think about 7 o'clock in the evening so I shall have two or three hours to spare in Dayton. You might tell me on enclosed postal if you will probably be in your place of business at the time mentioned above. Yours truly, A. I. Root.

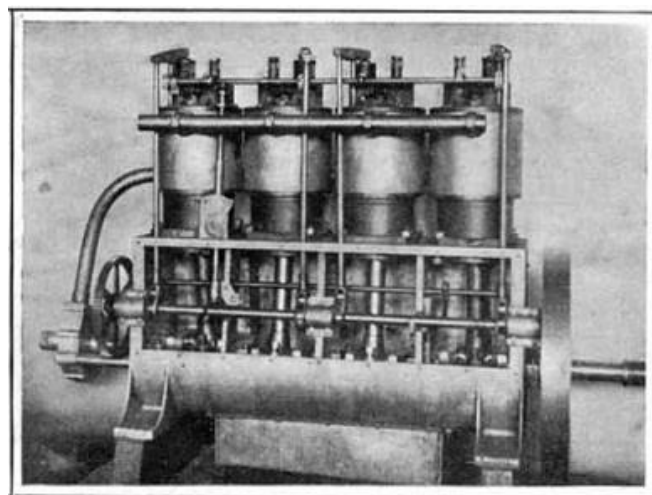
▪ The last lines of the October 31, 1906, answer and the entire November 7, 1906, letter prepared the two brothers for a new visit. Root announced them he would be in Dayton on Wednesday, November 14, 1906, for a few hours before taking a train to St. Louise. Whether he met them or not is not clear from the available documents. However, it is certain that the Wrights, exasperated by his letters, sent him a message, for *Gleanings*, that appeared in its November 15, 1906, issue. It is self-evident from the introduction: "*Dear Mr. Root: — If your readers are really anxious to know what we have been working at this year we have no objection to your telling them.*" that the brothers doubted Amos Root's readers were so eager to find out details about their progress. The real person anxious to get news from them was the importunate apiarist himself not the ones who bought his journal. To please a bit their insistent friend, the two Daytonians continued their answer with this explanation:

"We have been engaged in designing and building machines suitable for actual service rather than mere experimenting, and have given special attention to perfecting motors not only light but sufficiently strong and reliable to run for hours without attention.",

which contains some verifiable truth. The article "The Second Annual Exhibition of the Aero Club of America" (*Scientific American*, December 15, 1906, pp. 447-449) shows on page 449 a photo of an engine characterized as it follows:

The most interesting motor on exhibition was the new 4-cylinder, four-cycle, water-cooled engine built by Messrs. Orville and Wilbur Wright, of Dayton, Ohio, and intended for use on their new aeroplane.

From the same text, we find out its weight, power and speed as being 160 pounds, 28-30 HP and 1200 RPM, respectively.

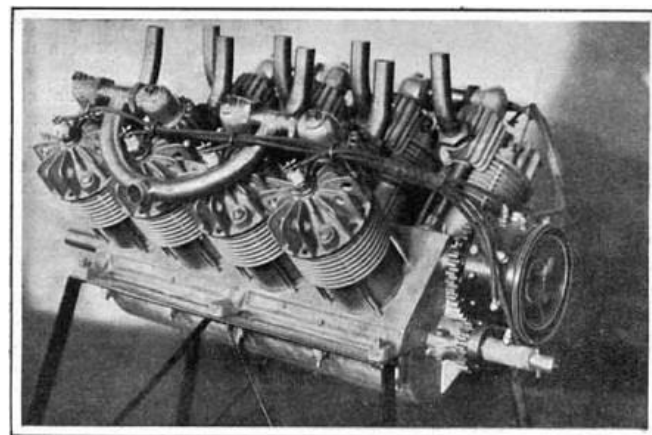


Wright Brothers' 28 to 30-Horse-Power Aeroplane Motor.
Weight, 160 pounds. Cylinders, $4\frac{1}{4} \times 4$. Speed, 1,200 R. P. M.

As a remark, it is not evident at all why the *Scientific American* was so impressed by the new Wright motor as long as the same article, talking about the engines made by the manufacturer Glenn Hammond Curtis, reads:

They are one of the most practical air-cooled motors built in this country, and the 8-cylinder engine, which weighs 125 pounds and develops 30 horsepower at 1,800 R. P. M., is the very latest attempt at making a high-speed, light-weight, multiple-cylinder motor for aeronautical work.

A picture of this 8-cylinder motor is also given. It was lighter and as powerful as that of the Wrights and, in consequence, a better choice accepting both were equally reliable.



The Curtis 8-Cylinder, Air-Cooled, V-Motor, of 30 Horse-Power.
Weight, 125 pounds. Cylinders, $3\frac{1}{4} \times 3\frac{1}{4}$. Speed, 1,800 R. P. M.

In conclusion, in December 1906, the two brothers had an engine. They finally showed something also there is no confirmation the motor had the claimed technical characteristics and, besides this, its existence represents no serious proof the two inventors had really flown planes in the previous years.

1906-11-15, "The Wright Brothers and Their Flying-Machine at the Present Date", *Gleanings*, p. 1454

THE WRIGHT BROTHERS AND THEIR FLYING-MACHINE AT THE PRESENT DATE.

In answer to a lot of inquiries in regard to the progress the Wright Brothers are making, I am permitted to give the following:

Dear Mr. Root: — If your readers are really anxious to know what we have been working at this year we have no objection to your telling them. We have been engaged in designing and building machines suitable for actual service rather than mere

experimenting, and have given special attention to perfecting motors not only light but sufficiently strong and reliable to run for hours without attention.

WRIGHT BROTHERS.

Dayton, Ohio.

It would seem from the above that they believe their experiments of last season have sufficiently demonstrated the practicability of their machine, for they made several flights, staying up in the air until the gasoline was exhausted. Their next work will probably be with a machine for "actual service," as they state it. You may rest assured, friends, that I am always anxious to report progress from the Wright Brothers or anybody else as soon as I know the statements that appear in the papers are fully reliable.

▪ Coming back to A. I. Root, on November 24, 1906, he wrote his friends in Dayton that *Santos Dumont had gone most 1/4 miles* (the real distance covered was 1/8 miles), a thing he had learned from the article "Santos Dumont's Latest Flight" (Scientific American, November 24, 1906, col. 3, p. 378):

A cable dispatch from Paris announces that Santos Dumont, at 4 o'clock on Monday afternoon, November 12, made a new record with his aeroplane, "14-bis," which we illustrated in flight in our last issue. This time he flew against a slight breeze for a distance of 210 meters (689 feet), or a trifle over one-eighth of a mile. The machine was in the air for 21 seconds, which corresponds to a speed of 22.36 miles per hour. ("Santos Dumont's Latest Flight", Scientific American, November 24, 1906, col. 3, p. 378)

This was evidently not good news for the Wrights.

The next letter of the old Amos (December 1, 1906) contains two distinct things collected by him from two sources: (1) The Cleveland Leader newspaper stated that the government of the USA had not made any proposition to the Wrights in connection with their invention and (2) the World's Work magazine for December 1906 gave some quite vague technical details regarding the way the two brothers were said to *have increased the stability of their machine*.

1906-11-24, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

The enclosed clipping may not be of value to you but I thought I would send it so you will know what is going on. Your old friend, A. I. Root.

Santos Dumont has gone most 1/4 miles
see last Sci Am.

1906-12-01, A. I. Root, "Letter to the Wright brothers"

Dear Sirs:-

The enclosed clipping is from one of our Cleveland papers. I hope it is true and I shall be very much better pleased if our Government gets hold of it than some foreign power. I think I will venture to congratulate you even if it is only a newspaper statement.

Since dictating the above I saw by the morning Cleveland Leader it is contradicted that the Government has made you any proposition whatever.

By the way, in the magazine called the "World's Work", on page 8296 I find the following:

"The two brothers are said to have increased the stability of their machine by making a joint in the movable wings so that the outer end can be lifted, as a bird's wing bends, to relieve the pressure of gusts of wind. If this be true they have a device for shifting the center of pressure from side to side, as well as forward and back by means of the horizontal front rudder. These shifts, if they can be made rapidly enough, solve the problem of equilibrium--and the successful flying machine has arrived."

A large part of the December number of the above magazine is given to balloons and flying machines. Yours truly, A. I. Root.

1907

▪ The February 15, 1907, issue of *Gleanings* contains an interesting title, "Florida 'Flying-Machines'", which finally proves to refer to Root's chickens, hatched out with the help of an incubator. Regarding the two inventors, we just learn that *the*

Wright Bros. had done a wonderful work. No further details are provided.

1907-02-15, "Florida 'Flying-Machines.'", *Gleanings*, pp. 263-265 (p. 264)

FLORIDA "FLYING-MACHINES."

If anybody should ask you what A. I. Root is doing this winter you can tell him he is down on an island off the west coast of Florida, manufacturing flying-machines. No, that isn't quite right — *not* "manufacturing" but *creating*. But *that* is not right either, for it is not he that "creates," but "God," who "in the beginning created the heavens and the earth." ...
... The Wright Bros. have done a wonderful work; but, oh dear me! when will mankind *ever* approach any thing so strong, light, and graceful as a chicken's wing? ...

Did I forget to mention that my good old friend the sitting hen takes all the chicks as fast as they come from the incubator? Well, she does ...

▪ On April 16, 1907, the old aviation enthusiast from Medina sent a letter to prepare his friends for a new visit he had scheduled for the 23rd or 24th of April 1907. By April 30, 1907, he was already in possession of an article ("Wright Boys Score Another Triumph", Dayton Journal, March 21, 1907) which was promptly republished in *Gleanings* (May 15, 1907, issue). The text is about a hydroplane publicly tested by the two inventors on March 21, 1907. Another newspaper, Dayton Herald, printed even a picture taken that day and showing two counter-rotating propellers with sprockets, on their axels, connected by bicycle chains to the shaft of an engine, everything being mounted on a floating platform ("Newest Invention of Wright Brothers Will Carry Their Aeroplane on Water", Dayton Herald, March 21, 1907).



THIS PHOTOGRAPH WAS TAKEN BY HEISMAN FOR THE HERALD AT THE THIRD STREET BRIDGE THIS MORNING WHILE THE WRIGHTS BOYS WERE EXPERIMENTING. (Dayton Herald, March 21, 1907)

The test was unsatisfactory but A. I. Root mentioned in his article that *in a talk with the Wright Brothers a few days before they had said such an apparatus might, without question, make more than a mile a minute*. The article in *Gleanings* ends with a few lines, dated May 2, 1907, and just received from the Wright Brothers as an answer to Root's April 30, 1907, letter. The statement reads: "Our only objection to publishing any thing about our experiments is that it may cause people to write us for information, and we haven't the time for answering." The motive invoked by the two inventors seems plausible and the old Amos, after deciding to write something about the activity of his friends, also had their letter printed as a means to warn his readers against sending any kind of inquiries to Dayton. However, the explanation received from the Wrights can be interpreted more as a message for Root himself, aimed at stopping his annoying demands.

1907-04-16, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

I expect to get around to Xenia some time the forepart of next week, and although you may not be doing anything so early in the season I thought I would get around to make you a brief call, perhaps some time about Tuesday or Wednesday. I suppose I will find you at your usual place of business. Yours truly, A. I. Root.

1907-04-30, A. I. Root, "Letter to the Wright brothers"

Dear Friends:-

The enclosed is what I prepared to give with the clipping from the Dayton paper. Now if there is any part of it that you would rather I would not use just cross it out; or, if you prefer I should simply give the clipping from the Dayton paper and nothing else, just say so and it will be all right. ... Yours truly, A. I. Root.

1907-05-15, "Flying Through the Air, Skimming Over the Water, etc.", Gleanings, p. 720

FLYING THROUGH THE AIR, SKIMMING OVER THE WATER, ETC.

... You may imagine with what interest I read over and over the following which I copy from the Dayton *Journal* of March 1, 1907:

WRIGHT BOYS SCORE ANOTHER TRIUMPH.

INVENT A HYDROPLANE AND ATTRACT WIDESPREAD ATTENTION BY THEIR EXPERIMENTS IN MIAMI RIVER NEAR BRIDGE-STREET BRIDGE — ENGINE REFUSES TO WORK AND TEST IS INCOMPLETE.

Orville and Wilbur Wright, the inventors of the famous Wright flyer, who have startled the scientific world with the wonderful progress they have made in connection with the difficult problem of aerial navigation, have diverted their attention for a time to new channels and have invented a hydroplane which bids fair to elicit widespread attention.

... Yesterday they put their queer little craft to a practical test on the Miami River, near the River-Street bridge.

... The engine refused to operate properly, and, of course, the test was unsatisfactory. ...

This is not the first hydroplane that has been invented, although never before has such a craft been seen in local waters ...

In a talk with the Wright Brothers a few days ago they said such an apparatus might, without question, make more than a mile a minute ... They do not, however, seem to think it worth while to experiment further in that direction, since they have succeeded in flying so easily through the air. ... The above experiment was made with one of their old discarded engines, and the power was hardly sufficient to make high speed. ...

In regard to the above I have just received from the Wright Brothers the following statement:

Dear Mr. Root: — Our only objection to publishing any thing about our experiments is that it may cause people to write us for information, and we haven't the time for answering.

WRIGHT BROTHERS.

Dayton, Ohio, May 2.

▪ Also less actual than the May 15, 1907, text, a small article with the bizarre title "Flying Apiaries" appeared in the preceding issue of *Gleanings*. With visible pride, Root brought to the attention of his readers a nine-page compilation that can be identified as: "At Last We Can Fly. The Story of the Wright Brothers, Who, After Years of Experimenting, Have Made Flying Practicable." written by the author Herbert N. Casson (The American Magazine, April 1907, pp. 616-624). On page 619 the article quotes with approximation the description of the September 20, 1904, flight as given by Amos Root in his January 1, 1905, story:

Another witness — A. I. Root, a business man of Medina, Ohio — was present during several of the flights of 1904. "It was one of the grandest sights of my life," he said. "I stood in front of the machine as it came around a curve. Imagine, if you can, an aluminum locomotive, without wheels, but with twenty-foot wings and big, flapping propellers, climbing up in the air right towards you! Such a tremendous flapping and snapping! Everyone was excited except the two Wrights. Even the attendant who helped to launch the machine was shaking from head to foot as though he had a fit of ague." (The American Magazine, April 1907, pp. 619)

However, it should be clarified that A. I. Root, in his May 1, 1907, short text, was quite vague and did not explicitly say what

exactly the *American Magazine* had written about him also he should have had all reasons to emphasise that a periodical more important than his own credited him as a witness of some 1904 powered flights.

"Flying Apiaries" ends with a dream of Root. He hoped that, one day, airplanes loaded with honeybee colonies would *start out in the south in spring and follow the bloom as it opens up north*.

1907-05-01, "Flying Apiaries", Gleanings, p. 620

FLYING APIARIES.

The *American Magazine* for April contains nine pages, with illustrations, of the Wright Bros.' flying-machine. This is the machine described by Mr. A. I. Root in GLEANINGS last year, and Mr. Root's name is mentioned in the article. The Wright Bros. have traveled through the air at a speed of 50 miles an hour. In the no distant future I believe we shall move out-apiaries on these flying-machines — perhaps start out in the south in spring and follow the bloom as it opens up north. Those will surely be *strenuous times*.

▪ "The Wright Brothers and Their Air-Ships" (Gleanings, June 15, 1907, p. 869) is an up-to-date review, regarding the activity of Wilbur Wright who was visiting Europe, but its content is simply a compilation of news collected from two journals. The old entrepreneur had some doubts and, from the beginning, he stated he was not sure about the quantity of truth contained in the excerpts he had quoted. From the *Woman's National Daily* he learned that the elder brother would have *an opportunity to see Santos Dumont's air-ship, No. 16, which was ready for its trials* and from a clipping send by one of his subscribers he found out that *while in Paris the Wrights had purchased several light motors of 24 and 40 horsepower and that they would be paid \$10,000 for each machine constructed by them in Germany*.

1907-06-15, "The Wright Brothers and Their Air-Ships", Gleanings, p. 869

THE WRIGHT BROTHERS AND THEIR AIR-SHIPS.

All the information we have at present is contained in the following, which we clip from the *Woman's National Daily*. The statements may be true, or they may be only a newspaper item:

PARIS, June 5. — Wilbur Wright, the American inventor, who is visiting here, refuses to talk about his aeroplane. He says he is merely visiting Europe for pleasure. He will have an opportunity to see Santos Dumont's air-ship, No. 16, which is ready for its trials.

BERLIN, June 6. — The Wright Brothers, of America, are here making arrangements for the construction of a number of air-ships for the German government.

Since the two above extracts were put in type a subscriber sends us a newspaper clipping which is evidently taken from the *Baltimore News* of June 8:

WRIGHTS SELL AIR-SHIP.

(Paris Cable Dispatch in New York *Times*.)

BALTIMORE, June 8. — The Wright Brothers, whose negotiations for the sale of their airship to the German government were announced exclusively in the cables of the New York *Times*, left Paris to-day for Berlin to conclude arrangements for the construction of a number of air-ships. It is understood that they will be paid \$10,000 for each machine constructed by them. While in Paris they purchased several light motors of 24 and 40 horsepower.

▪ "The Wright Brothers' Air-Ship" (Gleanings, August 1, 1907, p. 1038) is another compilation based on what Root learned from two informative notes, one in the *Woman's National Daily* and the other in the *Cincinnati Enquirer*. Both articles are inaccurate. The Wrights had not sold their plane and had not received any payment. They were not in possession of any contract in connection with their flying machines, in July - August 1907.

Regarding the affirmation: "*DAYTON, O., July 19. ... The machine was intrusted to the Adams Express Company to-day for shipment to Paris via New York.*", quoted by Root, there is evidence it was assumed by Orville Wright who, in an answer dated

July 5, 1930, and addressed to Frederick A. Barber (from the publishing house G. P. Putnam's Sons, New York), said:

The plane used by Wilbur in France, in 1908, was one we had shipped there in July, 1907, and lay in the Custom House until Wilbur's return in May, 1908. Before leaving for France some practice was had at Kitty Hawk with the 1905 plane. (Orville Wright, "Letter to Frederick A. Barber", Library of Congress, US, July 5, 1930).

Sure, such an assertion does not necessarily mean a working flying machine was really sent to France in July 1907. The July 5, 1930, statement of O. Wright remains just a pure claim.

1907-08-01, "The Wright Brothers' Air-Ship", *Gleanings*, p. 1038

THE WRIGHT BROTHERS' AIR-SHIP.

The latest thing we have heard from the Wright Brothers is the following, which I clip from the *Woman's National Daily*:

DAYTON, O., July 19. — The aeroplane built by Orville and Wilbur Wright is said to have been sold to the French government. The machine was intrusted to the Adams Express Company to-day for shipment to Paris via New York.

The above seems to indicate that they have sold their invention to France, and will at once make some flights as soon as the machine reaches its destination. With modern facilities the express company ought to deliver it in Paris so that we may soon have reports in regard to their success in teaching our friends across the water how to fly.

Later: — We clip the following from the *Cincinnati Enquirer*:

DAYTON, O., July 20. — According to information obtained to-day, Wilbur and Orville Wright, inventors and builders of the Wright flyer, the only aeroplane ever successfully tested in this neighborhood, have practically sold their machine to the French Government, and have received the first payment of the reported purchase price, 1,000,000 francs, equivalent to about \$200,000. Negotiations had been conducted on a basis of \$300 000; and that the sale has been effected at a handsome figure is a matter of great satisfaction to their friends.

He asked me how the Wright Brothers were progressing in France and Germany with their flying-machine. I could not answer him, and I can not answer you just now either.

▪ Another article that contains references to the Wrights is "Civilized Out of Existence" (*Gleanings*, October 15, 1907, pp. 1335-1336 (p. 1336)). The old man from Medina took a cup of coffee in a railway station and he later regretted drinking it. This episode recalled him about his friends from Dayton who *abstained entirely from coffee on the day they were going to make a test of their flying-machine*. As a note, he used the word "test" not "flight". A more detailed version of the story with the coffee, Amos Root and the two inventors can be found in the September 15, 1908, issue of *Gleanings*.

The next day, while travelling back home by train, the old businessmen met a construction engineer who, after a little talk, *asked him how the Wright Brothers were progressing in France and Germany with their flying-machine. Root could not answer him, and he could not answer his readers either*. He had no news about his younger friends.

1907-10-15, "Civilized Out of Existence.", *Gleanings*, pp. 1335-1336 (p. 1336)

"CIVILIZED OUT OF EXISTENCE."

Myself and a young companion were making a hurried trip on a train that stopped at a station only ten minutes for supper. It was after our supper time, and we were both hungry. I suggested to my young friend that it was not well to eat so hurriedly as to get through in ten minutes, and therefore we would each get a lunch in a paper bag and eat it at our leisure on the train. Without inquiring the price I called for a leg of fried chicken for each of us, and a sandwich and a piece of pie. I suggested to the boy that, if he cared for coffee, he would have time enough to drink that and take his lunch afterward. The waiter misunderstood, and brought *two* cups of coffee. I very seldom drink coffee; but I decided that, to save trouble, I would take the cup. ...

Now a word about the cup of strong coffee. The boy, sixteen years old, drank it right down. He said it was not a bit too strong for him — the stronger the better. ... If I had the same experience to go through again I would go without the coffee. Remember what the Wright Brothers said about abstaining entirely from coffee on the day they were going to make a test of their flying-machine. ...

Next day I passed the same lunch-counter in going back home, and the train stopped just ten minutes a little after the noon hour. ...

Before I left the train the car was crowded, and a bright looking man came and sat down by me. After a little talk he asked me how the Wright Brothers were progressing in France and Germany with their flying-machine. I could not answer him, and I can not answer you *just now* either. He was a construction engineer on a new trolley line that is running across our State. ...

... my friend was near his destination; and as he got up he put out his hand and said he was glad of the privilege of having a talk with me, and said something like this:

"Mr. Root, to put it short you are afraid that, if the present stage of civilization keeps on, we may finally get to a point where we shall be 'civilized out of existence;' and to be frank about it I do not know but you are more than half right. Good by; and do not forget to tell us about the flying-machine." ...

1908

▪ The articles of Root, about the Wrights, continued till his death in 1923 but, with a few exceptions, they combine things collected from various newspapers and magazines.

The May 15 and June 1, 1908, issues of *Gleanings* contain two texts in connection with the flights shrouded in mystery the two Daytonians made at Kitty Hawk in May 1908. Their friend from Medina had *no up-to-date information from the Wright Brothers themselves* and he relied on the *daily papers that were full of accounts of their flights*. As of May 9, 1908, when the first article was written, the two enigmatic aviators *had made as many as ten ascensions, covering in all over 30 miles* and A. I. Root adds that *every thing worked quite as well as when he witnessed their work two years before the previous October* which would mean that he saw at least one flight of the series that ended on October 5, 1905. This is incorrect. More likely he referred to the September 20, 1904, event or another 1904 test.

The second article ("The Wright Brothers and Their Flying-Machine", *Gleanings*, June 1, 1908, p. 720) is a continuation of the first. After announcing his readers that *the Wright Brothers themselves had not seen fit to make any report of their doings*, the old Amos wrote: "*if the reporters are to be credited, who witnessed their flight (of course at a distance), they have made a record of eight miles in 7¾ minutes*". Such a flight is assumed by the Wrights themselves in a text dated June 3, 1908, and sent from Dayton to *L'Aérophile*. The letter was published in "Les Frères Wright en Amérique et en France" (*L'Aérophile*, June 15, 1908, pp. 222-223). There also exists an English version, "Our Recent Experiments in North Carolina" by *Wright Brothers. O.W.* (*Aeronautics*, June 1908, pp. 4-6).

Two weeks later, in "The Wright Brothers and Their Flying - Machine" (*Gleanings*, June 15, 1908, p. 781), Amos Root used an extract from the *Woman's National Daily* that in its turn quoted an unidentified man associated with Wilbur. It was true the two inventors had an arrangement (Contract between Lazare Weiller and the Wright brothers, March 3, 1908) according to which they would have received \$100,000 (500,000 francs) had they made two flights of at least 50 kilometers in one hour each and fulfilled a series of other conditions. Root got this information right from the *Woman's National Daily* but the same newspaper also pretended that W. Wright had *already equalled that distance (50 km) in the flights at Manteo, N. C.*, quoting the elder brother himself who could not have declared such a thing. Up to June 15, 1908, the

longest flight in North Carolina, claimed by the two inventors, took place on May 14, 1908, the total distance traveled through the air (measured with an onboard anemometer) being 8050 meters which were covered in 7 minutes 29 seconds. The absolute record, 24 1/5 miles, also through the air, had been "registered" on October 5, 1905, near Dayton. Both performances were mentioned by the brothers themselves in their June 3, 1908, letter published in *L'Aérophile* (June 15, 1908, p. 222) and also in an article authored by them that appeared in the *Aeronautics* (June 1908, p. 4).

1908-05-15, "Wright Brothers Make a Successful Trip in Air-Ship", *Gleanings*, p. 658

WRIGHT BROTHERS MAKE A SUCCESSFUL TRIP IN AIR-SHIP.

I have been telling you several times of late that we should soon have some news. As I write to-day, May 9, the daily papers are full of accounts of their flights. From a column of matter in the Cleveland *Leader* I gather that they are making some flights from Manteo, N. C., over the sand dunes of what is called Kill Devil Hill. They have made as many as ten ascensions, covering in all over 30 miles. Every thing worked quite as well as when I witnessed their work two years ago last October. First one of the brothers made a flight and then the other. They seemed to show equal skill in handling the machine. "At no time did it seem necessary to direct the machine to the ground. Apparently it could easily have continued its flight many miles." Their longest flight, which occupied two minutes, covered a mile and a half. The papers state that the present machine weighs 350 lbs. The engine, 30 horse-power, weighs just about as much as the rest of the machine. I quote from the *Leader* as follows:

The Wrights refuse requests for information regarding their machine, and little can be learned about it except by observation of its performances. Located as they are at Kill Devil Hill, and surrounded by sand hills with practically no inhabitants, their experiments were witnessed by only a few people. They are one mile from the Kill Devil Hill life-saving station, on the beach of the Atlantic. Its six surfmen assisted them in building and in handling the machine. These and several others witnessed the experiments to-day.

A herd of long-haired cattle, observing operations from afar, were frightened into Roanoke Sound when once the machine flew in their direction.

Probably by the time this reaches you there will be plenty of news of a more extended flight. May God grant that no accident may happen to these two young Ohio inventors who seem to have distanced the whole wide world in making a machine that will actually fly like a bird, without the assistance of any balloon.

I have had no recent information from the Wright Brothers themselves; but the above would indicate that there is going to be "something doing" pretty soon in the way of a real flying-machine — that is, a machine that does not need a balloon to hold it up.

1908-06-01, "The Wright Brothers and Their Flying-Machine", *Gleanings*, p. 720

THE WRIGHT BROTHERS AND THEIR FLYING-MACHINE

I suppose most of the friends have kept posted in regard to the Wright Brothers, for their exploits have been given in all the papers of the United States. The Wright Brothers themselves have not seen fit to make any report of their doings; but if the reporters are to be credited, who witnessed their flight (of course at a distance), they have made a record of eight miles in 7¾ minutes, which is a little over a mile a minute. They have also a machine that carries two people sitting up as one would in a buggy or an automobile. Lastly they made a trip out over the ocean, two miles and back; but their machine was finally disabled by an accident, obliging them to lie off for a time for necessary repairs; but as they have other machines here in Ohio, however, we shall expect to hear from them further very soon. ...

1908-06-15, "The Wright Brothers and Their Flying - Machine", *Gleanings*, p. 781

THE WRIGHT BROTHERS AND THEIR FLYING - MACHINE.

Since the report in our last issue, the elder of the Wright Brothers has gone to France. The following, clipped from the *Woman's National Daily*, gives a glimpse of what is going to be done:

Paris, June 2. — One of the men associated with Mr. Wilbur Wright in the aeroplane trials that are to take place in the north of France said to day that Wright was confident of meeting conditions laid down by Lazare Weiler, who has offered \$100,000 for the Wright aeroplane if it will make two flights of 50 kilometres within a week, carrying two passengers and enough gasoline for a 200-kilometer flight, or

ballast equivalent to this. "I have already equaled this distance," said Mr. Wright, "in the flights at Manteo, N. C. Fifty kilometers is 31 miles, and I shall be disappointed if I do not sail further than this in a single flight. Our machine has sailed with two passengers, though we have never carried a weight equal to that imposed by Weiler."

With what is now going on in other parts of the world with successful flying-machines, I think it is quite likely that *some of us*, at least, will see them going over our heads before another winter.

▪ The issue of *Gleanings* for July 1, 1908, dedicated lots of space to the Wrights. We learn that a postcard had arrived from France having *just five words* on it: "*With kind regards, Wilbur Wright.*" that the old Amos *prized very highly* because, for him, they were the evidence that Wilbur still remembered his friend from Medina. Apart of this element of originality, the rest of the text is a compilation based on three articles:

- 1) Wright Brothers, O. W., "Our Recent Experiments in North Carolina", *Aeronautics*, New York, June 1908, Vol. II, No. 6, pp. 4-6.
- 2) Byron R. Newton, "Watching the Wright Brothers Fly", *Aeronautics*, New York, June 1908, Vol. II, No. 6, pp. 6-10.
- 3) "The Seven Men in America Who Have Actually Flown in Motor Driven Aeroplanes", *Aeronautics*, New York, June 1908, Vol. II, No. 6, p. 59.

"Our Recent Experiments in North Carolina" is simply a claim of the two brothers. Its centerpiece is a table (omitted in *Gleanings* by Root who preferred to reproduce just the explanations corresponding to it). It has five columns (Date, No. Passengers, Distance, Time, Velocity of Wind) and 13 rows corresponding to the thirteen flights performed between May 6 and May 14, 1908, near Kitty Hawk.

After doing some math, a suspicious airspeed, greater but close to 40 mph, is always obtained for each flight in the table. Here, a short explanation is required. At the time the article was published the Wrights were already in possession of a contract with the US army for delivering a heavier than air machine *designed to have a speed of at least 40 miles per hour in still air* (minimum average airspeed 40 mph). This is a fragment from the list of conditions imposed by the army:

3. The flying machine must be designed to carry two persons having a combined weight of about 350 pounds, also sufficient fuel for a flight of 125 miles.
4. The flying machine should be designed to have a speed of at least 40 miles per hour in still air ... Less than 36 miles per hour, rejected. ...

(James Allen, Brigadier General, Chief Signal Officer of the Army, "No. 486 - Signal Corps, U. S. A., Advertisement and Specification for a Heavier-Than-Air Flying Machine", December 23, 1907, 2 pages)

There is no doubt that for publicity reasons, their table in the *Aeronautics* was artificially built in a fraudulent manner by filling its columns with distances, time intervals and wind velocities, selected in such a way as to always satisfy that 40 mph airspeed condition. Neither Wilbur nor Orville officially proved in 1908, during their public demonstrations in Europe and the United States, they had a plane capable of sustaining such a velocity with two people on board.

The speed condition was met quite late, on July 30, 1909, as can be seen from the following extract:

Late in the afternoon of Friday, July 30th, Orville Wright accomplished a flight such as had never been made before ... he flew steadily back to the starting point and crossed the line 14 minutes and 42 seconds after first passing over it on the outward journey. Deducting the time of the turn at the far end of the course, the time for the 10 miles was 14 minutes and 12 seconds, which corresponds to a speed of 42.25 miles an hour. This means that the Wrights will receive a bonus of \$5,000 in addition to \$25,000 they bid for supplying a 2-man machine. ("Orville Wright's Record Flights at Fort Myer", *Scientific American*, August 7, 1909, pp. 88 and 99)

In a long text illustrated with photos, about the July 4, 1908, flight of the American aviation pioneer Glenn Curtiss who had won

the 1-kilometer trophy, at Hammondsport, NY, USA, the Scientific American made in its July 18, 1908, issue the following remark:

The distance traversed was easily a mile, and the time of the flight 1 minute 42 2/5 seconds. This corresponds to an average speed of 35.1 miles an hour; but if the distance of 6,000 feet is taken as the total length of the flight (which distance has been computed by the members of the Association who are most familiar with the course) the speed of the machine was very nearly 40 miles an hour — 39.8 to be exact. Thus it will be seen that this aeroplane, with the total weight of 650 pounds including the aviator, and with the expenditure of 25 horse-power, is capable of very nearly the same speed that the Wright brothers claim for their 1,000-pound machine with approximately the same horse-power. ("The Winning Flight of the 'June Bug' Aeroplane for the Scientific American Trophy", Scientific American, July 18, 1908, p. 45)

The fragment quoted above shows that, as late as the middle of July 1908, the Scientific American had doubts about that 40 mph airspeed the brothers said they had surpassed for all their May 1908 flights, otherwise the word "claim" would not have been used by this well-known periodical.

Coming back to A. I. Root's text, the next article present in his compilation is "Watching the Wright Brothers Fly", a long piece of literature signed Byron R. Newton, a journalist who affirmed he had witnessed, together with other newspaper men, unfortunately unnamed, the two inventors flying, near Kitty Hawk in May 1908. If somebody reads just the paragraphs selected by Amos Root, B. R. Newton's story appears somehow credible. However, if the entire article in the *Aeronautics* is studied carefully it becomes evident we have no alternative but to trust the word of the author who from the first lines of his essay leaves the strong impression he was out of touch with reality, otherwise he would not have written an enormity like this one:

The month of May, 1908, will doubtless be known to future generations as the most important period in the development of aerial navigation. There may have been other months when more was accomplished in a rudimentary way, but during the middle week of May civilization learned that mechanical flight was at last a reality and not a mere human aspiration. The world received its first news that this dream of the ages had been realized — that Wilbur and Orville Wright of Dayton, Ohio, had surely mastered the mighty problem, and, with the sea gulls and the buzzards, were soaring about over a desolate strip of beach on the coast of North Carolina. (Byron R. Newton, "Watching the Wright Brothers Fly", *Aeronautics*, New York, June 1908, Vol. II, No. 6, pp. 6-10)

It is more than clear that this columnist considered all officially witnessed flights, like the April 11, 1908, record of 3925 meters established by Léon Delagrangé at Issy-les-Moulineaux, France ("Commission Sportive du 14 Avril 1908", *L'Aérophile*, May 15, 1908, p. 193), nothing else but things "*accomplished in a rudimentary way*"!

As an irony, immediately after B. R. Newton's creation, not sustained by pictures or witness names, there is another article (Alexander Graham Bell, "The Work of the Aerial Experiment Association", *Aeronautics*, New York, June 1908, Vol. II, No. 6, pp. 10-14) illustrated with six photos, two of them showing the plane White Wing in flight. A huge difference in the degree of reliability exists between the two texts that further discredits the narration of B. R. Newton, the self-declared eyewitness.

Again, returning to Root's article, the last text quoted by him is "The Seven Men in America Who Have Actually Flown in Motor Driven Aeroplanes" (*Aeronautics*, New York, June 1908, Vol. II, No. 6, p. 59) which put the Wrights at the top of the list also they still had, at that time, no official or credible witnesses beyond any doubt.

1908-07-01, "The Wright Brothers and Their Flying-Machine; Also Something in Regard to Other Flying-Machines.", *Gleanings*, pp. 836-837

THE WRIGHT BROTHERS AND THEIR FLYING-MACHINE; ALSO SOMETHING IN REGARD TO OTHER FLYING- MACHINES.

If you want the full particulars of all that has been done by the Wright Brothers and others in America ... you should subscribe for *Aeronautics*, published at 1777 Broadway, New York. ... It is quite a good-sized magazine, and perhaps the most up-to-date document that has appeared on the subject of aeronautics.

The most valuable point to me in this number is the first article, which is a communication from the Wright Brothers themselves. After giving a schedule of every flight during May, 1908, they add as follows:

Our recent experiments were conducted upon the grounds near Kitty Hawk, N. C., where we experimented in 1900, 1901, 1902, and 1903. The flyer used in these experiments was the one used in making the flights in September and October, 1905, near Dayton, Ohio. The means of control remained the same as in those flights, but the position of the controlling levers and their directions of motion had to be altered in order to permit the operator to take a sitting position. A seat for a passenger was added. The engine used in 1905 was replaced by a later model, one of which was exhibited at the Aero Club Show at New York in 1906. Larger gasoline-reservoirs and radiators were also installed.

We undertook these experiments in order to test the carrying capacity of the machine, and to ascertain its speed with two men on board, as well as to regain familiarity in the handling of the machine after a period of almost three years without practice. No attempt was made to beat our record of distance made in 1905.

The first flights were made over a straight course against winds of 8 to 18 miles an hour. The equilibrium of the machine proving satisfactory in these flights, we began to describe circles, returning and landing at the starting-point. These flights covered distances of from 1 to 2½ miles.

On the 14th of May a passenger was taken on board. In the first flight the motor was shut off at the end of 29 seconds to prevent running into a sand hill, toward which the machine was started. But in a second the machine carried the passenger and operator for a flight of 3 minutes and 40 seconds, making a circle, landing near the starting-point. The wind, measured at a height of 6 ft. from the ground while the machine was flying, had a velocity of 18 to 19 miles an hour. The distance traveled through the air as registered by an anemometer attached to the machine was a little over 2½ miles, which indicated a speed of about 41 miles an hour. A speed as high as 44 miles an hour was reached in an earlier flight, with only one man on board.

In a later flight, May 14, a false movement of a controlling lever caused the machine to plunge into the ground when traveling with the wind at a speed of about 55 miles an hour. The repairs of the machine would have necessitated a delay of five or six days; and as that would have consumed more time than we had allowed for the experiments we discontinued them for a time.

Besides this there is quite a long article by Byron R. Newton, correspondent of the New York *Herald*. From his account I extract as follows:

When the little band of correspondents arrived at Manteo they decided to feel out the ground by sending one of their number to ascertain if there was any change in the Wrights' policy of secrecy. It was a day's journey, and a fruitless one. When the scout reached the aerodrome, nestled between Kitty Hawk and Kill Devil Hills, the Wrights were about to make a flight; but at the approach of a stranger they wheeled the aeroplane back into the building, closed the doors, and advanced to meet their visitor. They were civil, but very firm. "We appreciate your good intentions," they said, "but you can only do us harm. We do not want publicity of any sort. ..."

Then one of the brothers and their assistant mechanic walked with the correspondent back to his boat and watched it far out on the sound toward Manteo.

The next morning at 4 o'clock, equipped with a guide, water, and provisions we set out determined to ambush the wily inventors and observe their performance from a hiding-place in the jungle. After a tedious journey ... we found a spot opposite the aerodrome, commanding a clear view of the beach and sand hills for a distance of five miles in either direction. There for four days we lay in hiding ... But it paid. We saw what few human eyes had ever witnessed before, and had the satisfaction of telling the world about it. ...

The first flight we all witnessed was made early in the morning. As we crept into our hiding-place we could see that the doors of the aerodrome were open and the machine standing on its mono-rail track outside. Three men were working about it and making frequent hurried trips to the aerodrome. Presently a man climbed into the seat while the others continued to tinker about the mechanism. Then we saw the two propellers begin to revolve and flash in the sunlight. Their sound came to us across the sand plain something like the noise of a dirigible balloon's propellers, but the clacking was more staccato and louder. The noise has been described as like that of a reaping-machine, and the comparison is a very good one. We were told by a mechanic who assisted the Wrights that the motor made 1700 revolutions a minute, but was geared down so that the propellers made but 700 revolutions.

For several seconds the propeller blades continued to flash in the sun, and then the machine arose obliquely in the air. At first it came directly toward us, so that we could not tell how fast it was going except that it appeared to increase rapidly in size as it approached. In the excitement of this first flight, men trained to observe details under all sorts of distractions forgot their cameras, forgot their watches, forgot every thing but this aerial monster chattering over our heads. As it neared us we could plainly see the operator in his seat working at the upright levers close by his side. When it was

almost squarely over us there was a movement of the forward and rear guiding-planes, a slight curving of the larger planes at one end, and the machine wheeled about at an angle every bit as gracefully as an eagle flying close to the ground could have done.

It appeared to be 25 or 30 feet from the ground; and, so far as we could judge by watching its shadow sweeping along the sand, it was going about 40 miles an hour. Certainly it was making the average speed of a railroad train.

After the first turn it drove straight toward one of the sand hills as if it were the intention of the operator to land there; but instead of coming down, there was another slight movement of the planes and the machine soared upward, skimmed over the crest of the mountain, 240 feet high, and disappeared on the opposite side. For perhaps ten seconds we heard indistinctly the clatter of the propellers, when the machine flashed into view again, sailed along over the surf, made another easy turn, and dropped into the sand about 100 yards from the point of departure. No sooner had it touched the sand than men started from the shed with two wide-tired trucks. These were placed under the machine, the motor started, and the aeroplane at once became a wind wagon, rolling itself back to the starting track with the power of its own propellers. After each flight all the mechanism was examined in most painstaking manner, and the operator always came down when the slightest thing about the machinery was found to be working imperfectly.

On several occasions we saw the machine sail straight away up the beach until it was a mere speck, scarcely distinguishable from birds and other indistinct objects near the line of the horizon. During these flights the sound of the propellers would be lost altogether until the machine turned about and came back, frequently landing within a few feet of the starting-point. These long flights must have covered a distance of four to six miles.

As our readers may be curious to know many men at the present time have actually been able to fly without the aid of a dirigible balloon, we give the following:

THE SEVEN MEN IN AMERICA WHO HAVE FLOWN IN MOTOR-DRIVEN AEROPLANES.

Wilbur Wright, Orville Wright, A. M. Herring, Thomas Selfridge, F. W. Baldwin, G. H. Curtiss, J. A. D. McCurdy.

Mr. Curtiss, so far as we can find out, has flown a greater distance — 1020 feet — on first trial than any other aviator in the world. The time was 19 seconds.

Last, but not least (in my opinion) I hold in my hand a card postmarked Montaigne, Paris. Underneath the picture of L'Arc de Triomphe there are just five words that I prize very highly. These words are, "With kind regards, Wilbur Wright." I prize them because they remind me that my good friend Wilbur Wright, even if he is "away up in the air," and traveling all over the world, still remembers his old friend A. I. Root.

▪ A single letter sent by Root to the Wrights can be found for the entire year 1908. It is dated July 28, 1908. The old Amos was scared by the publication *Woman's National Daily* that a burn Wilbur had suffered in France had led to gangrene. He wanted a confirmation from Orville, who was in the US at the time, that his brother was in good health. However, as concerned as he was, he could not abstain from closing the letter with his habitual request for an invitation to see flight demonstrations. The articles published by the old aviation enthusiast show he did not benefit of such a favour in 1908 and 1909. He witnessed a Wright machine flying, quite late, on August 29, 1910, at the same place where, according to his claim, he had seen the elder of the two brothers completing a circular course on September 20, 1904.

1908-07-28, A. I. Root, "Letter to Orville Wright"

Friend Orville:-

I am sure you will excuse me when I tell you that I feel very anxious about your brother Wilbur. The *Woman's National Daily* has just had a brief editorial saying that gangrene had set in in consequence of the burn he had a while ago, and it was feared it would interfere with plans he had in view. If you can assure me that he is all right and that burn will not result in anything serious I shall be exceedingly glad.

And, by the way, if there are to be some public demonstrations now pretty soon I hope you will give your old friend A. I. Root due notice. ... Your old friend, A. I. Root.

▪ "The Wright Brothers Flying-Machine, and Others, Up To Date" (Gleanings, August 1, 1908, p. 965), the next article dedicated to aviation, is about the burn suffered by Wilbur and a series of record flights made in Europe and America:

1) May 30, 1908, Rome, Italy: Léon Delagrangé, 12750 meters in 15 minutes 26 4/5 seconds. ("20 minutes 20 seconds en aéroplane", *L'Aérophile*, July 15, 1908, pp. 272-273)

2) July 4, 1908, Hammondsport, NY, USA: Glenn Curtiss, 1 minute 42 2/5 seconds, "*the distance traversed was easily a mile*". ("The Winning Flight of the 'June Bug' Aeroplane for the Scientific American Trophy", *Scientific American*, July 18, 1908, p. 45)

3) July 6, 1908, Issy, France: Henri Farman, 20 minutes 20 seconds, distance not measured. ("20 minutes 20 seconds en aéroplane", *L'Aérophile*, July 15, 1908, pp. 272-273)

The Wright Brothers and Their Flying - Machine, Not Only "Out in the Open" but "Up in the Air."

▪ From "Flying-Machines Up To Date" (Gleanings, August 15, 1908, p. 1025) we finally learn from Root, informed in his turn by the daily papers of the time, that *Wilbur Wright had made two or more successful flights in France*.

Here is a list of these first witnessed flights, beyond any doubt, (location - Hunaudières Race Course, Le Mans, France):

1) August 8, 1908: 1 minute 45 seconds (the flight time was measured by Ernest Zens and Louis Blériot), altitude 10 m, the plane landed 20 m from the point of departure, estimated speed 55 km/h.

2) August 10, 1908, 7 PM: 42 seconds.

3) August 10, 1908, 7:30 PM: 1 minute 41 seconds, altitude 10-12 m, two eights were described through the air.

4) August 11, 1908: 3 minutes 43 seconds, more than 4 km, the plane proved to be manoeuvrable, changing repeatedly its altitude from 2 m to 20 m and back at the will of the pilot.

5) August 12, 1908, 8:05 AM: 6 minutes 56 seconds, 7-8 km, wind speed 15 km/h.

6) August 12, 1908, 6:30 PM: 40 seconds.

7) August 12, 1908, 6:30 PM: 1 minute 44 seconds.

(Source: M. Degoul, "Les premiers vols de Wilbur Wright en France", *L'Aérophile*, August 15, 1908, pp. 324-328)

8) August 13, 1908: 8 minutes 13 seconds.

9) August 13, 1908: 2 minutes 20 seconds, altitude 30 m. The engine did not work properly and W. Wright decided to land. Unfortunately, he manoeuvred the plane incorrectly and one wing touched the ground. The time necessary for repairs was estimated to 8 days.

(Source: "Les expériences de Wilbur Wright", *L'Aérophile*, August 15, 1908, p. 328)

All the flights the Wrights said they had made, with one of their planes, before August 8, 1908, are pure claims some of them being "supported" by unreliable eyewitness accounts like the ones written by A. I. Root and Byron R. Newton.

The old businessman from Medina continued to report in his journal about the activity of his younger friends. "The Wright Brothers and Their Flying - Machine, Not Only "Out in the Open" but "Up in the Air."" (Gleanings, September 1, 1908, p. 1097) tells us that A. I. Root expected the two inventors to be *up in the air both in Europe and America* (Wilbur had already started to make public flights in France beginning with the 8th of August 1908, Orville had not yet commenced his demonstrations in the United States).

However, not the content of the September 1, 1908, article, that lacks details, is interesting, the readers being sent to newspapers and magazines for more information, but its title which has the aspect of an irony. Had he really witnessed a powered flight about 4 years before, Amos Root could not have written: "not only out in the open". Such a title suggests he had seen the two brothers just "out in the open" and not "up in the air".

1908-08-01, "The Wright Brothers Flying-Machine, and Others, Up To Date", Gleanings, p. 965

THE WRIGHT BROTHERS FLYING-MACHINE, AND OTHERS, UP TO DATE.

We learn by the papers that, some little time ago, Wilbur Wright, ... while making some experiments in flying, was pretty severely burned ... He said, however, he was not hurt ... ; but as we go to press we learn by the *Woman's Daily* that the hurt was more severe after all ... It is just like my good friend Wilbur to say he was not hurt, even when suffering severely, and we hope and pray that he may soon be fully recovered.

From the magazine called *Aeronautics* we learn that De la Grange, on the 30th of May, made ten circles with his aeroplane, staying up in the air 15 minutes and 26 seconds. The distance covered was from 14 to 15 kilometers. ... Farnam has also made a successful flight, carrying a passenger, and afterward won the \$2000 prize by making a 20-minute flight of 11 miles.

The "June Bug," as it is called, has also made some very successful flights here in America, in one of them winning the Scientific American trophy. This flight was made July 4, and the machine made something over a mile, at the rate of about 40 miles an hour. We are further told that De la Grange has planned to arrive with his machine in the city of New York about the 20th of August, that Farnam is probably here by this time, and the prospect is that "something will be doing" now right speedily. In fact, it may be that something has *already* been done while I dictate these words.

1908-08-15, "Flying-Machines Up To Date", *Gleanings*, p. 1025

FLYING-MACHINES UP TO DATE.

I suppose most of you have noticed by the daily papers that my predictions are coming to pass. Farnam has been making a series of successful flights here in America, and Wilbur Wright has also made two or more successful flights in France. ... flying-machines will probably very soon be an every-day occurrence ... God grant that they do not duplicate the number of accidents that are being daily recorded with automobiles ...

1908-09-01, "The Wright Brothers And Their Flying - Machine, Not Only "Out In The Open" But "Up In The Air."", *Gleanings*, p. 1097

THE WRIGHT BROTHERS AND THEIR FLYING - MACHINE, NOT ONLY "OUT IN THE OPEN" BUT "UP IN THE AIR."

While your eyes rest on these words the probabilities are that the Wright Brothers will be "up in the air," both in Europe and America. For the first time they permit photographs to be taken of the entire machine. We have space just now to quote only the following (in regard to Wilbur Wright in France) from the *Chicago Daily News*:

"On a carpenter's table in the shed are vases of fading flowers brought by women admirers from gardens near the sea. There, several unopened bottles of dry champagne share space with copper wire, a lathe, wrenches, a roll of canvas. All will be used but the champagne, for Wright, who does no stroke of work on Sunday, touches neither alcohol nor tobacco."

May God grant that no untoward accident may happen to these two intrepid brothers who not only have the eyes of the *mechanical* world directed toward them, but who are setting such a good example in the way of *morals* before the young inventors of the world, as is indicated by the above newspaper clipping. See the daily paper and magazines for an account of their doings.

▪ The articles about the Wrights in the next four issues of *Gleanings* (September 15, October 1 and 15, November 1; 1908) are dedicated to the world record flights started by Orville Wright at Fort Myer, Arlington County, Virginia, USA and continued by his brother at Camp D'auvour, Le Mans (about 200 km South West of Paris), France. Precise information about these accomplishments, Root referred to, can be found in the *Scientific American* and *L'Aérophile*:

Orville Wright - Fort Myer, US:

- 1) September 9, 1908, in the morning: 57 1/2 minutes.
 - 2) September 9, 1908, in the afternoon: 1 hour 2 1/4 minutes.
 - 3) September 9, 1908: 6 minutes 26 seconds, with Lieut. Lahm.
 - 4) September 10, 1908: 65 minutes 52 seconds, wind speed 12 mph.
 - 5) September 11, 1908: 1 hour 10 minutes 32 seconds, altitude 200 feet.
- (Source: "The Making of Aeroplane History", *Scientific American*, September 19, 1908, p. 182)
- 6) September 17, 1908: wind speed 6 mph, with Lieut. Thomas Selfridge. The flight ended in a crash. (M. Degoul, "La catastrophe du 18 (17) septembre. Le lieutenant Selfridge tué. — Orville Wright grièvement blessé" (title of a section inside a large article), *L'Aérophile*, October 1, 1908, pp. 384-385)

Wilbur Wright - Camp D'auvour, Le Mans, France:

- 7) September 21, 1908: 1 hour 31 minutes 25 4/5 seconds. (M. Degoul, "Les Merveilles de l'aviation, Journées glorieuses. — Journées tragiques. — Les Wright en France et en Amérique.", October 1, 1908, pp. 379-385)
 - 8) October 3, 1908: 55 minutes 37 2/5 seconds, with Frantz Reichel.
 - 9) October 6, 1908: 1 hour 4 minutes 26 1/5 seconds, with Arnold Fordyce.
 - 10) October 10, 1908: 1 hour 9 minutes 45 3/5 seconds, with Paul Painlevé.
- (Source: M. Degoul, "Les Vols de Wilbur Wright", *L'Aérophile*, November 1, 1908, pp. 428-429)

Besides telling his readers about the successes of the two brothers, despite the fact he was well aware the newspapers were not only ahead of him but his source of information, A. I. Root also wrote some original things like about an episode that happened during a morning when he was taking breakfast with the two inventors. None of them accepted coffee explaining to him that *they expected to make some flights that morning, and they had learned by experience that their heads were clearer and their nerves steadier if they abstained from coffee at breakfast*. This scene must have happened in 1904 because this is the only year (before September 15, 1908, when Root published this recollection) when the two inventors could have planned a flight, according to their claims, hours after seeing their enthusiastic old friend from Medina, one morning. As a remark, Root does not say whether he witnessed at least a flight that day or not. As a note, years later, in "Aviation and Stimulants" plus "Saloon and the "Chicken Business"" (*Gleanings*, February 1919, pp. 110-112), he places the incident with the coffee in the summer of 1904.

Root's October 1, 1908, article starts with the crash of Orville's plane that had serious consequences: the pilot was injured, the passenger, Lieut. Thomas Selfridge, killed, the apparatus damaged and, as a result, the Fort Myer impressive sequence of demonstrations came to an abrupt end in a moment when none of the conditions imposed by the US army ("No. 486 - Specification for a Heavier-Than-Air Flying Machine", December 23, 1907) had been met.

However, a good thing happened in France, Wilbur, just four days after the crash of his brother, broke a new endurance record staying in the air 1 hour 31 minutes 25 4/5 seconds on September 21, 1908. By October 15, 1908, the elder brother had already met all the technical conditions imposed by L. Weiller (Contract Lazare Weiller - Wright brothers, March 3, 1908) and the old Amos was happy to hear his friend *had been granted the \$100,000*. In reality, the contract was quite complex. A long article in *L'Aérophile* (P. Ancelle, "Les prouesses de Wilbur Wright", *L'Aérophile*, October 15, 1908, pp. 398-400) ends with a paragraph that assured its readers that the financial group of Lazare Weiller considered the conditions of purchase as fulfilled and would pay 250 000 francs (equivalent to \$50 000). The other half of the sum was to be granted when Wilbur had finished instructing the three students he had committed himself to train. Here is the original text:

On assure que le groupe financier de M. Lazare Weiller, considérant les conditions d'achat comme remplies, se disposerait à verser à Wright la moitié de la somme promise (250,000 fr.) l'autre moitié payable lorsque l'aviateur aura instruit les trois élèves qu'il s'est engagé à former. (*L'Aérophile*, October 15, 1908, p. 400)

On November 1, 1908, Root told his readers that *Wilbur Wright had recovered from his accident and he was going back to his home in Dayton*. Two weeks later, the next issue of *Gleanings* published an errata. The one who got back on his feet was Orville, not Wilbur.

1908-09-15, "The Wright Brothers and Their Aerial Flight Up To Date", *Gleanings*, p. 1156

THE WRIGHT BROTHERS AND THEIR AERIAL FLIGHT UP TO DATE.

I suppose you all know that our two friends, the Wright Brothers, are not only "up in the air," but they are, perhaps, standing out more prominently before the whole wide world than and other two persons now living. ... As we go to press, Orville has made his third long flight, each one of about an hour or a little more. ... he took Lieut. Lahm, the army's aeronautic expert, along with him for a flight of 6 minutes and 26 seconds. This was the first time he had been accompanied by a passenger in the present series of tests ... I especially admire these two young men because they have worked so slowly and carefully. ... When I was taking breakfast with them one morning I ventured to ask why it was that neither of the brothers accepted coffee. I think it was Wilbur who replied with his peculiar pleasant smile:

"Mr. Root, we expect to make some flights this morning, and we have learned by experience that our heads are clearer and our nerves steadier if we abstain from coffee at breakfast." ...

Many are just now asking the question why these brothers do not take a straight flight, say from one city to another, and let the whole wide world see what they are doing, I presume it will be better just yet for them to keep the machine reasonably near the workshop where their tools and appliances are kept. Another thing, they are just now negotiating the sale of one of their machines to France, and another to the government of the United States. When these preliminary tests are completed we may expect to see these machines, or similar ones, flying over the whole wide world, perhaps including even the *north and south pole* that have been so much talked about.

STILL LATER IN REGARD TO THE WRIGHT BROTHERS.

From the *Woman's National Daily* we clip the following:

CAN EQUAL BROTHER'S RECORD.

LE MANS, Sept. 13. — Wilbur G. Wright says that defects in his motor are all that have kept him from equaling the flights made by his brother Orville at Ft. Myer, in America. "My motor has not worked smoothly yet, but I expect to get it in shape soon. Just as soon as I find that it is all right I expect to make a flight that will be as startling as that of my brother. There is no reason why I should not, as our machines are practically the same."

From the same paper we learn that Orville Wright, when asked why he did not stay up still longer during the last and longest flight, replied as follows:

"Well, the fact is I came down solely because I was tired and hungry. I could have continued the flight another hour just as easily. I knew by the figures chalked on the shed-roof by my mechanic that I had bettered my previous record, and I thought that was enough for one day." ...

1908-10-01, "Navigating the Air; The Wright Bros. Up To Date.", *Gleanings*, p. 1223

NAVIGATING THE AIR; THE WRIGHT BROS. UP TO DATE.

On page 1097, Sept. 1, I said, "May God grant that no accident may happen to these two intrepid brothers." I then had in mind, and have had in mind all along, that during these preliminary experiments there would be accidents, and, in all probability, loss of life. Well, an accident has happened; and although Orville Wright has been spared so that he may take up his work again soon, we regret the loss of the life of his companion who was with him. Most of you have seen accounts in the papers. One of the wings of the propellers broke in midair; and before young Wright could adjust his machine it came down to the ground with a crash. ... These propeller wings are selected of the very best Vermont spruce, or at least such was the case when I was with them. ...

... We learn from the *Woman's National Daily* that on the 22d of September Wilbur Wright broke all previous records by remaining in the air 91 minutes, and covering in all about 61 miles. Here is what the paper says about it:

"There was nothing marvelous in the performance," Wright said to a group of admirers. "The machine is built on the right principles; and as long as it is properly manned it has got to fly. I could have stayed up another hour or until the petrol was exhausted; but it was getting dark and I thought it best to come down. I am glad for my sake that the flight was such a success, but doubly glad on Orville's account. Many thought when my brother met with his regrettable accident last week that our machines were failures, and that we had been enabled to fly largely through good luck. Well, I think they ought to be satisfied now that the aeroplane is all that we have claimed for it, and that the coming machine will be built along the lines that we have laid down."

Ten thousand persons witnessed the record-breaking flight of Mr. Wright.

1908-10-15, "Navigating The Air", *Gleanings*, p. 1284

NAVIGATING THE AIR.

Since my remarks in the last issue, Mr. Wilbur Wright has not only carried a bag of sand, but he has carried several passengers, and one of them a lady. ... Our good friend Wilbur has also succeeded in remaining up in the air over an hour with a passenger, and we are told he has been granted the \$100,000. It rejoices my heart to hear of this complete success; for these two young men have worked hard and faithfully for many years. They have been so careful at every stage of proceedings, that, even after having made hundreds of flights, no accident occurred until the fatal one of September 17. And, by the way, I am told that Orville's broken bone is knitting nicely, and that it will probably very soon be as good as ever. ...

1908-11-01, "The Wright Brothers' and Other Flying-Machines", *Gleanings*, p. 1334

THE WRIGHT BROTHERS' AND OTHER FLYING-MACHINES.

We are pleased to note that Wilbur Wright has so far recovered from his recent accident that he is going back to his home in Dayton, and probably is there at the present writing. The broken bone has made a very quick and satisfactory mend. ...

• The November 15, 1908, issue of *Gleanings* contains one article of interest in which Amos Root expressed his unjustified disappointment in seeing in a prospectus *the broad claim made that the Scientific American was the first publication to announce that the Wright flying-machine was a success*. He wrongly considered that *GLEANINGS IN BEE CULTURE* had announced the success to the world a long while before the *Scientific American* had taken any notice of this wonderful invention. In reality, the journal Root referred to became aware of the December 17, 1903, event immediately and published a small article, in connection with what happened that day, in its December 26, 1903, issue. This is the full text:

A Successful Experiment with a Motor-Driven Aeroplane.

On December 17 the Messrs. Orville and Wilbur Wright made some successful experiments at Kitty Hawk, N. C., with an aeroplane propelled by a 16-horsepower, four-cylinder, gasoline motor, and weighing complete more than 700 pounds.

The aeroplane was started from the top of a 100-foot sand dune. After it was pushed off, it at first glided downward near the surface of the incline. Then, as the propellers gained speed, the aeroplane rose steadily in the air to a height of about 60 feet, after which it was driven a distance of some three miles against a twenty-mile-an-hour wind at a speed of about eight miles an hour. Mr. Wilbur Wright was able to land on a spot he selected, without hurt to himself or the machine. This is a decided step in advance in aerial navigation with aeroplanes, and it is probably due to the increased degree of controllability resulting from the Wright brothers' novel form of horizontal rudder, which is a small guiding aeroplane placed in front of, instead of behind, the aeroplane proper. A well illustrated description of the Wright aeroplane appeared in our February 22, 1902, issue. The present aeroplane has the very large surface of 510 square feet, making its apparent entire controllability all the more remarkable. (*Scientific American*, December 26, 1903, p. 486)

This version, spread by the *Virginian-Pilot* newspaper ("Flying Machine Soars 3 Miles in Teeth of High Wind Over Sand Hills and Waves at Kitty Hawk on Carolina Coast", *Virginian-Pilot*, US, December 18, 1903, p. 1), was not supported by the Wrights who later came with clarifications and corrections as in "Wright Flyer. A Report of Late Tests is Given by Messrs. Wright, Inventors of the Machine." (Dayton Press, Ohio, US, January 6, 1904). These are their words regarding the best performance of December 17, 1903: "*at the fourth trial a flight of 59 seconds was made, in which time the machine flew a little more than a half mile through the air, and a distance of 852 feet over the ground*".

However, as exaggerated as it was, the little story in the *Sci. Am.* has priority over the January 1, 1905, long tale and in consequence Root was at least ill informed when stating his journal had announced the success of the Wright plane before "*the Scientific American had taken any notice of this wonderful invention*". The old aviation enthusiast further explains that *as soon as an*

impression was off the press he mailed a copy of it to the *Scientific American*, and sent a letter accompanying it, thinking they would be glad to give it a wider publicity than he could give in his comparatively little journal. The *Scientific American* received the letter with the proof-sheets and asked for a copy of *Gleanings*, which was promptly delivered. Unfortunately, this well-known publication finally chose to ignore Root's article and had all reasons to do so as long as the text contained an account as fantastic as the one already printed in its December 26, 1903, issue. Such an implausible story, supported by just one eyewitness who chose to narrate it inside a sermon, would have further discredited the *Sci. Am.* had it proved false.

As a remark, Amos Root avoided to directly remind his readers he had seen Wilbur completing a circuit through the air on September 20, 1904. He expressed his dissatisfaction regarding the attitude of the *Scientific American* with a carefully worded sentence: "not a word of thanks for the trouble I had taken to give them full particulars of what I had been an eye-witness".

Another point of interest in the same November 15, 1908, text is Root's account about what he knew at the moment January 1, 1905, but was not allowed to divulge. He says he was aware of two things: "The first was an apparatus for putting a stronger curve on the tips of the wings when rounding a curve. Second, a device that would enable the machine to spring up into the air as a bird does in starting."

No details are given about the first device but regarding the second, the old Amos remembers that immediately after meeting the brothers he had the idea of using a catapult, independently of them but without communicating what he had figured out in his mind. These are his words:

After I left them I figured out in my mind that a derrick from which a weight could be dropped something like a pile-driver in order to get up a good momentum in starting would be a good plan. I was so full of this idea that I made a second trip in a short time, and was astonished as well as pleased to find they had got hold of the same thing and had it in practical operation.

His memory is definitely wrong. In a letter dated August 23, 1904, the first after meeting the two inventors, he wrote:

I am very anxious to know in regard to that plan of dropping a weight from a little derrick, that is, if you decide to undertake anything of the sort.

These lines prove the old entrepreneur already knew about a plan of using a starting device based on weights and a derrick, well before his second visit which occurred on September 20, 1904, according to his claim in *Gleanings* (January 1, 1905, issue). If he really had such an idea then he discussed it with the brothers before August 23, 1904.

While giving explanations regarding the necessity of a starting device, A. I. Root again makes a carefully worded statement:

When I first visited them they were obliged to run the machine along a single rail for, I think, 60 or 70 feet, in order to get up sufficient speed to "climb into the air."

It is not clear whether he saw the plane flying or just he got the information from the Wrights.

1908-11-15, "The Wright Brothers and Their Flying Machine Up To Date", *Gleanings*, pp. 1390-1392

THE WRIGHT BROTHERS AND THEIR FLYING MACHINE UP TO DATE.

A few days ago a prospectus of the *Scientific American* was placed on my desk; and in enumerating the many things that journal has done for the world I was surprised to see the broad claim made that theirs was the *first* publication to announce that the Wright flying-machine was a success. This statement vexed me a little

because of the fact that GLEANINGS IN BEE CULTURE announced it to the world a long while before the *Scientific American* had taken any notice of this wonderful invention. In our issue for March 1, as far back as 1904, p. 241, I gave the first intimation of what was going on here in Ohio in the way of flying; and at frequent intervals during 1904 I visited the Wright Brothers at Dayton, Ohio, to witness their preliminary experiments. In our issue for January 1, 1905, I gave the result in detail, occupying three or four pages of GLEANINGS. Just as soon as an impression was off the press I mailed a copy of it to the *Scientific American*, and sent a letter accompanying it, thinking they would, of course, be glad to give it a wider publicity than we could give in our comparatively little journal. Well, what do you suppose happened? Not a peep, not a word of thanks for the trouble I had taken to give them full particulars of what I had been an eye-witness. Do you suggest that perhaps they did not get my letter with the proof-sheets? They *did* get it, and promptly asked me for *another* copy of our journal. Not a word of thanks then, and no mention of the Wright Brothers until more than a year afterward. If they have any thing to say in defense of their way of announcing inventions as they come up, we shall be glad to be corrected. In our issue for Jan. 15 I gave some further particulars with a cut of the gliding machine. At that stage of proceedings the Wright Brothers would not permit a photo of the complete apparatus to be given in print, for they had not fully secured their patents.

On page 48, Jan. 1, 1905, I gave my reasons for having kept back some news of this wonderful discovery as long as I did. Permit me to mention here that as soon as I had *permission* to give my write-up of the machine I sent the Wright Brothers a check for \$100; and, in fact, I would have been willing to send \$500 for the privilege of announcing to the world this wonderful invention. They thanked me for the check, but it was promptly returned, thus indicating that those two young men were not working altogether for the almighty dollar, but, rather, that they may benefit humanity.

While I am about it, permit me to say I am also a little surprised to see in the *Technical World* for November the following statement:

In June, 1906, the *Technical World Magazine* announced the success of the Wright Brothers, of Dayton, O., in the private tests of their wonderful aeroplane. The *Technical World Magazine* was the first publication to accord full credence to the Wright Brothers' claims, now so abundantly made good.

And the *Technical World* admits they did not give it to the world till 1906, while GLEANINGS goes back to March, 1904, with frequent mentions of what the boys accomplished step by step until the present.

At the time I gave my write-up there were several points in regard to the machine that I was not permitted to mention; but since these various features are now being fully discussed through the various periodicals I presume I am at liberty to tell what I know about it.

The first was an apparatus for putting a stronger curve on the tips of the wings when rounding a curve. Second, a device that would enable the machine to spring up into the air as a bird does in starting. When I first visited them they were obliged to run the machine along a single rail for, I think, 60 or 70 feet, in order to get up sufficient speed to "climb into the air." This long track had to be moved so as to face the wind every time the wind changed, making considerable labor for each successive experiment. I suggested wheeling the machine up on to a platform over the little building where it was stored, so as to get up momentum by running down hill. After I left them I figured out in my mind that a derrick from which a weight could be dropped something like a pile-driver in order to get up a good momentum in starting would be a good plan.

I was so full of this idea that I made a second trip in a short time, and was astonished as well as pleased to find they had got hold of the same thing and had it in practical operation. They had a lot of iron weights, about the size of a small grindstone, with a rope running up through the hole in the middle. By hitching on more or less iron weights they could get up any desired speed. I think they used fully as much as 1500 lbs. for the experiment at Dayton. This weight dropped 15 to 18 feet, and by a system of pulleys to magnify the *speed* and *distance*, the machine was given a sudden impetus that threw it up into the air a sufficient height and with sufficient speed to start the vehicle for flight. The device was a complete success from the start.* I think the great wide world has had no intimation of this starting-device until the present summer. As I see pictures of it in the various magazines just now I suppose I am at liberty to describe it as I have done above. ...

* It really reminds one of firing a man into the air out of a cannon when the trigger is pulled to let that big weight drop.

...

• The other texts, in the November 15, 1908, issue of *Gleanings*, about the two inventors or containing references to them, and the articles that followed, up to July 15, 1909, are mainly second-hand reports regarding the activity of the two Daytonians. Here is a chronologically ordered list of the main events mentioned by Root (who used various sources of information) as they were presented by L'Aérophile, a reliable periodical specialized in flying machines:

1) September 16 – October 15, 1908, Camp d'Auvours, Le Mans, France: The November 1, 1908, issue of L'Aérophile contains the complete list of all 30 persons who had flown with Wilbur up to October 15, 1908, and also gives the cumulated flight time, 13 h 49 min and 13 sec, of all the 72 aerial demonstrations performed by the same American aviator in France starting with August 8, 1908. All the flights with passengers took place at Camp d'Auvours. This is the relevant fragment from the above mentioned aeronautical journal:

"La durée totale des vols exécutés en France par Wilbur Wright, au 15 octobre inclusivement, donne pour les 72 expériences une durée de 13 heures 49 m. 13 s. et un parcours d'environ 694 kilomètres.

Nous avons compté les distances parcourues à raison de 49 kilomètres 896 à l'heure, l'expérience du 11 octobre ayant donné 29 virages aux poteaux distants de 1.000 mètres, soit 58 kilomètres pour une durée de 1 heure 9 m. 45 s. (13 m. 86 à la seconde).

A ce jour, trente personnes ont pris place dans l'aéroplane du célèbre aviateur américain. Nous en donnons la liste en mentionnant, entre parenthèses, la durée du séjour dans l'atmosphère de chacune d'elles:

- 16 septembre 1908, M. Ernest Zens (20' 20").
- 25 septembre, M. Paul Zens (9' 1" 1/5).
- 28 septembre 1908, MM. Paul Tissandier (11' 35" 2/5); le comte de Lambert (7' 45").
- 3 octobre 1908, MM. Dickins (3' 2" 2/5); Frantz Reichel (55' 37" 2/5).
- 5 octobre 1908, MM. Léon Bollée (4' 9"); Pellier, quatre vols (3' 54", 7' 30", 30", 10").
- 6 octobre 1908, M. Fordyce (1 h. 4' 26" 1/5).
- 7 octobre 1908, MM. Hart O. Berg (3' 24"); Mme Hart O. Berg (2' 3"); MM. Landry (4' 25" 4/5); Jamin (4' 22"); Michalopoulos (4' 12" 2/5); Seldotenoff (4' 25" 4/5).
- 8 octobre 1908, MM. Brewer (3' 15"); Rolls (3' 43"); Butler (4' 2"); major Baden-Powell (4' 25"); Serge Kaznatkoff (4' 26" 3/5); Bottiaux (14' 55" 4/5).

- 9 octobre 1908, Mme Lazare Weiller (4' 59" 4/5); MM. Henry Deutsch (de la Meurthe) (7' 26" 1/5); Bernheim (7' 37"); le capitaine Nollet (3' 20").

- 10 octobre 1908, M. Painlevé (1 h. 9' 45" 3/5).

- 12 octobre 1908, le capitaine Lucas-Gérardville (2' 40").

- 15 octobre 1908, MM. Mercanti (1' 38"); René Gasnier (2' 35")."

(M. Degoul, "Les Vols de Wilbur Wright", L'Aérophile, November 1, 1908, pp. 428-429 (p. 429))

2) October 15, 1908, Camp d'Auvours, Le Mans, France, after 4:20 PM: Wilbur Wright took off alone, climbed to a height of 20 meters, circled the airfield twice in 4 min 20 sec and then suddenly switched the ignition off. The plane glided and landed gently after travelling 60 more meters. The crowd cheered. (M. Degoul, "Les Vols de Wilbur Wright", L'Aérophile, November 1, 1908, pp. 428-429)

3) October 28, 1908, Camp d'Auvours, Le Mans, France: Wilbur gives the first flight lessons to his first student, the Count de Lambert. Two flights, of 12 and 8 minutes, took place in the morning and a third one, of 15 minutes and 2 3/5 seconds, in the evening.

October 29, 1908, same location: Three flights, of 7 minutes 5 3/5 seconds, 17 minutes 34 2/5 seconds, 19 minutes 25 3/5 seconds, were made. The last one started at 5:15 PM. During all these 6 lessons, Count de Lambert, as an apprentice co-pilot, manoeuvred the plane to a certain extent under the supervision of W. Wright.

(M. Degoul, "Wilbur Wright Forme des Élèves", L'Aérophile, November 15, 1908, pp. 461-462)

4) October 31, 1908: Orville left the Fort Myer hospital and was transported by train to Dayton. (M. Degoul, "Wilbur Wright Forme des Élèves", L'Aérophile, November 15, 1908, pp. 461-462 (p. 462))

5) November 5, 1908: The speech of Wilbur that took place in the party room of the Automobile Club of France (Georges Bans, "Le Banquet Wilbur Wright organisé par l'Aéro-Club de France", L'Aérophile, November 15, 1908, pp. 441-444 (p. 443)). This event did not happen in front of the French Senate as Root states.

6) November 10, 1908, Camp D'auvour, Le Mans, France: The first flight of W. Wright with a new apprentice, Captain Lucas Girardville of the French army. (M. Degoul, "Wilbur Wright Forme des Élèves", L'Aérophile, November 15, 1908, pp. 461-462 (p. 462))

7) November 13, 1908, Camp d'Auvours, Le Mans, France: Wilbur performed his first public take-off without using the catapult. For this, the rail was extended by about ten meters. At 4:03 PM he took off for the Altitude Prize offered by the Aero-Club of Sarthe (1000 francs for flying over an obstacle 30 metres in height). At 4:08:30 PM, Wilbur passed 15 meters above the line of captive balloons, floating at a height of 30 meters, and, at 4:11:15 PM, he crossed the same line at an altitude of 60 meters which was twice as much as the height necessary for winning the prize. (M. Degoul, "Les expériences de Wright. Wright gagne le Prix de la Hauteur de l'Aéro-Club de la Sarthe.", L'Aérophile, December 1, 1908, pp. 476-477 (p. 476))

8) Before November 15, 1908: There is no information in L'Aérophile according to which Wilbur had received the \$100,000 for the right to make and use his flying-machine in France. This was just a guess of A. I. Root.

9) December 18, 1908, Camp D'auvour, Le Mans, France: Wilbur took off at 10:11:40 AM establishing a new flight endurance record of 1 hour 53 minutes 59 2/5 seconds. The official distance was 99 km, also a record. In the afternoon his plane left the ground at about 4 PM and passed above a captive balloon floating at 100 m, an altitude record. ("Pour la Coupe

Michelin d'aviation. — Les nouveaux records du monde de distance, durée et hauteur.”, L’Aérophile, January 1, 1909, p. 13)

10) January 11-12, 1909: Orville together with his sister Katherine arrived in Paris during the night of January 11 to 12, 1909. (“Les Wright à Pau”, L’Aérophile, January 15, 1909, pp. 39-40)

11) February 15, 1909, after 5 PM, Pau, France: Katherine Wright flew for the first time. The pilot of the plane was Wilbur. (“Wilbur Wright et ses élèves à Pau”, L’Aérophile, March 1, 1909, p. 107)

12) February 20, 1909, Pau, France: The king Alphonse XIII of Spain witnessed two flights. The first lasted 28 minutes, the plane being manoeuvred by W. Wright. The second was 13 minutes long. This time Comte de Lambert was the pilot and Wilbur just occupied the seat next to him. (“Alphonse XIII chez les Wright”, L’Aérophile, March 1, 1909, pp. 107-108)

13) April 26, 1909, Centocelle, Rome, Italy: Wilbur took off using neither the catapult nor the rail. The plane slid on the wet grass for about 150 meters and rose into the air. (“Wright s’élève et vole sans pylone ni rail”, L’Aérophile, May 15, 1909, p. 224)

It is also worth mentioning two pictures that Root published under the title “Wilbur Wright in Aeroplane” (Gleanings, p. 1382). They were reproduced from a French magazine (François Peyrey, “Wilbur Wright s’entraîne”, La Vie au Grand Air, August 22, 1908, cover, pp. 132-133 and pp. 138-139).

Besides the articles which give useful information about the activity of Wilbur in France, there exist also some texts of less value.

In two consecutive Our Homes editorials (Gleanings, November 15, 1908, pp. 1389-1390 (p. 1390) and December 1, pp. 1448-1449 (p. 1449)), A. I. Root made short references to the Wrights, comparing them with Edison. In the first, he says that *he had been watching Edison since boyhood much as he had been watching the Wright Brothers in their experiments*. In the second, the old Amos gives thanks to God for the privilege that he had been permitted to live and be in touch with such men as Edison, the Wright Brothers and others.

There also exist another two less important articles. One of them (“As the Crow Flies”, Gleanings, February 1, 1909, p. 10) starts with a joke made by its author, a certain Walter S. Pouder who sold beekeeping supplies manufactured by the A. I. Root company. He advised his clients they should hurry up and order, before the spring rush, the things they needed because the *Consolidated Cloudland Atmospheric Express Service* of the two inventors had not been established yet. The other (“Big Sum Offers Are Spurned by Wrights”, Gleanings, February 15, 1909, p. 118), written by Root, is vague, romantic and does not give details about those good offers the two brothers had received.

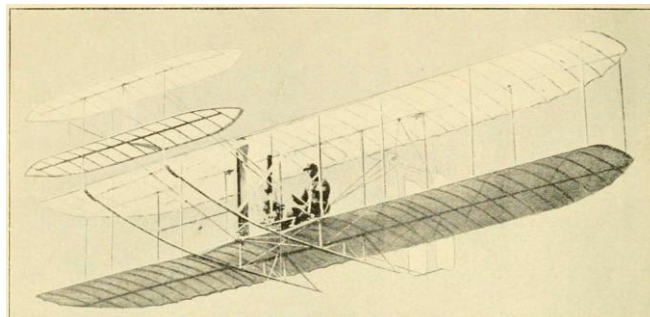
“Navigating the Air — The Wright Brothers Up To Date” (Gleanings, April 15, 1909, pp. 258 and 29) contains an interesting affirmation made by the old Amos in the context of Katherine Wright’s first flight (February 15, 1908, Pau). This old man from Medina told his readers that *when the Wright Brothers were making their first experiments out in that pasture-lot near Dayton, it was his privilege to take that same Miss Wright on a little trip around the lot with his little Olds mobile* and then he continued: “*At that early date I believe I had more faith in the ultimate outcome of their experiments than the old father, the sister, or even the two brothers themselves*”. Again, Amos Root refers to some experiments performed by his younger friends without giving details or saying he had seen them flying.

Two month later, in “Animated Eggs — A Great Discovery” (Gleanings, June 15, 1909, p. 21), while describing a finding of a member of his family, at least he strongly believed so and asked his

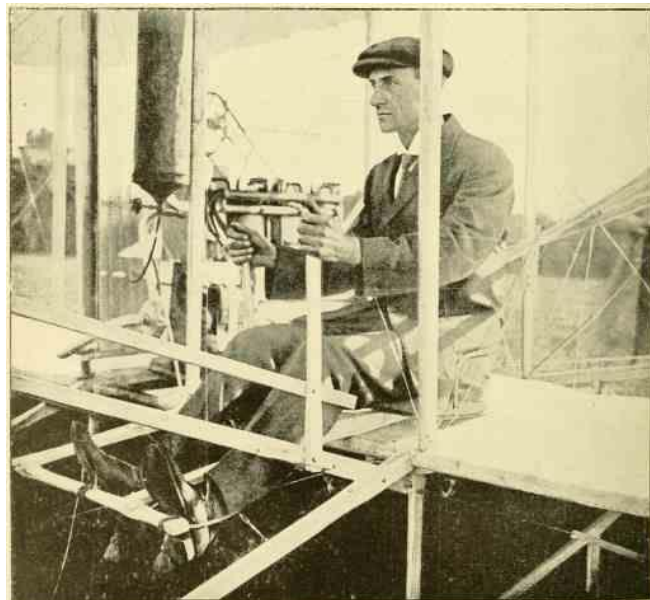
reader to correct him if they had knowledge that somebody else was the originator of that invention, the old Amos made another puzzling affirmation: “*GLEANINGS claims to be the first magazine to exploit the great invention of the Wright Brothers*”. The text is unclear and fails to explicitly state that he had seen a man carrying plane flying, in 1904.

Also not something directly connected with aviation, we find out from two fragments of text buried inside one of Root’s sermons (“Our Homes”, Gleanings, July 15, 1909, pp. 446-448 (p. 447)) that the newborn daughter, of his youngest son, was named Katherine after Miss Katherine Wright who had become a celebrity of the time.

1908-11-15, “Wilbur Wright in Aeroplane”, Gleanings, p. 1382



WILBUR WRIGHT IN ONE OF HIS FLIGHTS, SUCH AS HAVE RECENTLY TAKEN PLACE AT LE MANS, FRANCE, DURING THE PAST SUMMER.



WILBUR WRIGHT AS HE SAT DURING A FLIGHT IN HIS FLYING-MACHINE.

We copy the above pictures from a French paper entitled *La Vie au Grande Air*. The article was written by Wilbur Wright himself.

1908-11-15, “Our Homes”, Gleanings, pp. 1389-1390 (col. 1, p. 1390)

OUR HOMES

BY A. I. ROOT.

... I can well remember the time when the newsboy Edison began to startle the world with his wonderful experiments. He had had but very little money, and he needed it so badly for chemical apparatus that not a copper was wasted. I have been watching him ever since boyhood (for he lived not far from Medina) much as I have been watching the Wright Brothers in their experiments. ...

1908-11-15, “The Wright Brothers Up To Date”, Gleanings, p. 1405

THE WRIGHT BROTHERS UP TO DATE.

While the French Senate was in session Wilbur Wright was called on to make a speech. Now, from what I know of Wilbur I do not imagine he would make a very *long* speech, but that when he did make one it would be right to the point, and I think you will agree with me when you read it. Here it is:

I sometimes think that this indescribable desire to fly through space after the manner of birds is an inherited longing transmitted to us from our ancestors, who, in their toilsome journeys through the wilderness in primeval times, looked up and saw the birds shooting at almost lightning speed wherever they willed in the unobstructed pathways of the heavens.

Mr. Wright concluded by saying that he told his brother Orville in 1901 that men would not fly in fifty years, and yet he said *they* flew in 1902.

JUST ONE OF MY BLUNDERS.

On page 1334, Nov. 1, in speaking of Wilbur Wright's "accident" I meant his brother, Orville Wright. I am very sorry indeed if any blunder of mine has conveyed the idea that any thing has marred Wilbur's very successful flights at Le Mans.

WILBUR WRIGHT INSTRUCTING PUPILS IN THE ART OF FLYING.

Several times I have remarked that if any accident should happen to the Wright Brothers it might be a difficult matter to find anybody on the face of our great round globe who could run the machine without some previous practice or experience with the Wrights as teachers. In view of this it rejoices my heart to know that the work of teaching is already under way, and that our good friend Wilbur has at least one pupil. See the following, which I clip from the *Cleveland Plain Dealer*, dated at Le Mans, France, Nov. 10:

Captain Lucas Girardville, of the French army, made a flight of 15 minutes with Wilbur Wright, the American aeroplanist, today, receiving his first lesson in piloting.

I suppose most of our readers are aware that Wilbur *has received the \$100,000* for the right to make and use his flying-machine in France.

Orville returned to his home in Dayton, O., in time to vote, and is able to get around, at least after a fashion, by the aid of crutches.

1908-12-01, "Our Homes", *Gleanings*, pp. 1448-1449 (col. 2, p. 1449)

OUR HOMES

BY A. I. ROOT.

... I think I said recently, "May God be praised that he has permitted me to live and be in touch with such men as Edison, the Wright Brothers, Moody and Sankey," ...

1908-12-01, "Navigating the Air by the Wright Brothers and Others", *Gleanings*, p. 1453

NAVIGATING THE AIR BY THE WRIGHT BROTHERS AND OTHERS.

The latest report we clip as below from the *Chicago Daily News*:

WINS IN FIVE MINUTES A PRIZE THAT NATIVES HAD BEEN CAREFULLY PREPARING TO CONTEST FOR.

LE MANS, NOV. 14. — "I might as well have that 1000 francs (\$200), even if I don't exactly need it," remarked Wilbur Wright yesterday afternoon after suddenly deciding to try for the prize offered by the Aero Club of the Sarthe department for an aeroplane flying as high as 100 feet. In another half-hour he had shot up into the air on his machine without using the starting apparatus, and soon he soared twice around the big Auvours field at a height of fifty feet above the small captive balloons which marked the 100-feet height.*

It took Wright five minutes to win the prize, which several French aeronauts have been carefully preparing to acquire for several weeks past — not for the sum involved, but for what the Aero Club calls "the peculiar distinction of not only flying but flying at high altitudes."

GIVES LESSONS IN FLYING.

Wright is giving the last lessons in flying to a number of different persons, according to his contract. When these are concluded he will go to America via Cherbourg, because in the neighborhood of that seaport there still remains another prize to take — that for the straight-distance flying.

Yesterday's flight, made without using the sort of catapult which has caused so much gossip, has settled the question of the machine's being handicapped for long flights.

We gather from the above that our friend Wilbur has learned the trick of starting without his "catapult" (the starting apparatus I described in our last issue), and, in fact, I rather suspected they would, after they became better acquainted with the machine and its capabilities. The following clippings from *Aeronautics* for November give us glimpses of what is going on in the aeronautic world:

It has been figured that the total duration of Wilbur Wright's 72 flights in France, up to Oct. 15, inclusive, amounted to 13 hours 49 minutes (will it take place "all in one sitting" next year?). Thirty persons have been carried, including three women and a boy, a total distance of 431 miles.

On October 15, two flights were made of 1 minute 38 seconds, and 2 minutes 35 seconds, carrying MM. Mercanti and Gasnier. Wright stopped his motor when at a height of 120 feet and made a long smooth glide to earth.

On the 28th Count de Lambert began his lessons as an apprentice-aviator. For his first lesson he had three flights of 12, 8, and 15 minutes. On the following day the master and pupil made three more, 7 minutes and 5 seconds, 17 minutes and 34 seconds, and 19 minutes and 25 seconds.

* In a second flight of 11 minutes' duration, Mr. Wright is said to have risen to a height of 195 feet above ground. These are the first official records for height that the American aviator has made. — *Scientific American*.

In a recent interview Wilbur Wright stated that the success of his machine was especially due to the high efficiency of its propellers, that light motors were not essential, and flight could as well be attained with a steam-engine. He claims 70 per cent efficiency for his propellers.

Mr. Franz Reichel, who made the first "hour flight" as passenger on the Wright machine in France, has been the first one to describe accurately the wonderful sensation of human flying. He says: "If in an aeroplane going straight ahead is a delicious sensation, turning is a veritable intoxication. It was during these evolutions that I felt that the air was conquered, well conquered."

It is said that fully one hundred Wright aeroplanes have been ordered from the Societe Navale de Chantiers de France. They will be fitted with Bollee engines and be sold at \$5000 apiece. Count de Lambert and Vicomte de La Brosse will receive the first two. (This seems an "awful lie.")

On the 28th Farman made another long flight and again another of about a mile with M. Painlevé aboard. Following these, other alterations were made and for the first time in the history of aviation a flying-machine traveled from one town to another.

NEW PRIZES — IN FRANCE.

1000 francs by Aero Club de la Sarthe as a height prize, with conditions making it possible for Wilbur Wright to compete (he was excluded from the other prize for height for not starting by his own power only). Captive balloons must be flown over at a height of 30 meters.

First, it is an agreeable surprise, at least to myself, to know that thirty persons, including a woman and a boy, were carried; and the second item declares positively that the machine actually carried *two people* besides Mr. Wright himself. If they would only tell us the total weight of the three persons we could judge a little better of the capacity of the machine for carrying burdens. I am very glad indeed to know that 100 machines have already been ordered, and that the others will be sold as low as \$5000 apiece. That is not any more than some of our automobiles cost; but I do not exactly understand the footnote by the editor of *Aeronautics*. Does the "awful lie" refer to the 100 machines to be built, or to the price, or to the fact that the Count de Lambert and the Vicomte de la Brosse will receive the two first?*

Our last item tells us that Farman is also making progress, and that he too is carrying a passenger; and that he has succeeded, at least to a small extent, in traveling from one town to another. When actual flying-machines begin to traverse the country by going from town to town as automobiles do, then we shall see such a stir throughout the whole wide world as has never been seen before.

My last clipping I have given to explain *why* it was that Wilbur Wright was induced to try *climbing up into the air* without the use of the catapult. Oh! is it not glorious to be alive when so much is going on in the way of invention and progress — not only on the face of the earth, but away up into the beautiful air above us, and, with a prospect in future, of enjoying companionship with the very *clouds* that float above us?

* Since the above was in type I notice by one of the papers that Wilbur Wright has at least once shut down the engine while high up in the air, and made a gradual glide down to the ground in perfect safety. This refutes the statement made by several of the papers that disaster would surely follow in case of the breaking-down of the engine. If I am correct, the engine might be stopped for repairs while up in the air, and, if up high enough, and the repairs did not take too long, the difficulty would be little if any greater than in stopping the engine of an automobile for repairs.

1908-12-15, "The Wright Brothers Up To Date", *Gleanings*, p. 1533

THE WRIGHT BROTHERS UP TO DATE.

If I am correctly informed, Orville Wright has so far recovered that he has left his home in Dayton, Ohio, and is now on his way to join his brother in France ...

1909

1909-01-01, "Wilbur Wright Still Breaking Records", *Gleanings*, p. 44

WILBUR WRIGHT STILL BREAKING RECORDS.

On the 18th of Dec., Wilbur Wright (so the *Plain Dealer* tells us) "smashed two world's air records." He stayed up in the air *almost* two hours, went over 60 miles, and ascended higher than he had done on previous flights. He also encountered a gust of wind that made his machine back up and plunge like a restive young colt, but he pulled it back into shape while the (at first) "terrified spectators" cheered him with loud shouts. How about his pupils? Can any of them yet run the machine alone?

1909-02-01, By the Bee Crank (Walter S. Pouder), "As the Crow Flies", *Gleanings*, p. 10

"If goods are wanted quick, send to Pouder."

Established 1889

AS THE CROW FLIES

By the Bee Crank

When the Wright Brothers have established their Consolidated Cloudland Atmospheric Express Service they may be able to clip off a few rods from the length of the present route from you to me. It is not yet established, and they are not even likely to have it in operation before you are ready for your spring bee-supplies.

I mention this now because some of my customers are going to delay ordering until the last minute, and then find themselves in a great hurry for their goods. If you do, I shall be ready for you. But why wait? Isn't it better for you to take my catalog to-night, sit down in front of the cozy fire, look through it carefully, and check off the things you will need, and drop me a line telling me about them? ...

Every communication sent here receives an immediate and courteous reply.

Walter S. Pouder,
859 Massachusetts Avenue, Indianapolis, Indiana

1909-02-15, "Big Sum Offers Are Spurned by Wrights", *Gleanings*, p. 118

BIG SUM OFFERS ARE SPURNED BY WRIGHTS.

PAU, France, Jan. 19. — All the money which the Wright brothers have gained by taking prizes offered for aviation is insignificant compared with the sum they could earn by accepting the offers made by many local authorities, and the owners of certain fashionable resorts, as well as by the officials of French railways, to induce them to carry on their experiments in different neighborhoods. The town has gone mad on the subject of flying. Street musicians are singing impromptu melodies with words glorifying the American brothers. A number of French painters have arrived, with the view of committing to canvas their first impressions of a real flying-machine, and exhibiting them at this year's saloon. A legion of photographers is also in sight, while scores of dainty damsels belonging to French high society may be seen to-day going toward the aviation ground, with cameras under their arms, in the hope that they may be able to get a snapshot of Wilbur Wright, who slept last night with his two workmen beside his precious machine. Mr. Wright tells the correspondent of the Chicago *Daily News* that he did not expect to compete at the forthcoming race from Monte Carlo to Cap Martin and back, since the distance and other conditions will not be sufficiently interesting. He added, however, that he might go over there "by the side entrance" with his machine to see how his colleagues are getting along.

1909-04-15, "Navigating the Air — The Wright Brothers Up To Date", *Gleanings*, pp. 258 and 29

NAVIGATING THE AIR — THE WRIGHT BROTHERS UP TO DATE.

So little has been going on during the winter I have not thought best to keep a record; but just now I give you a glimpse of what is coming soon by the following clippings from that excellent magazine, *Aeronautics*, for March:

FRANCE.

The Wrights still hold the eyes of the world. Despite all that is being done in Europe, it has to be admitted that it is Wilbur Wright alone who is showing the real conquest of the air. Others are flying, but with a difference. Wright has shown that he can do almost as he pleases in the air. The month, however, has been principally spent, since the first flight at Pau with the new made-in-France Wright engine, on Feb. 3, in teaching his pupils, the Conte de Lambert and Paul Tissandier, and in receiving distinguished visitors. ...

ALFONSO LONGS TO FLY.

The next visitor was of still greater distinction. This was Alfonso XIII., the young king of Spain, who turned up at nine o'clock in the morning on Saturday, Feb. 20, and became wildly enthusiastic. He took off his coat and got into the machine, and afterward was so excitedly delighted that he insisted on remaining in his shirtsleeves. He was received by Hart O. Berg and the mayor of Pau, and, after shaking hands very heartily with the two Wrights and Miss Wright, asked every conceivable question, and made Orville tell him all about the accident at Fort Myer. Wilbur made a brilliant display for half an hour, doing every possible maneuver. After his return, and more questions had been answered, the king asked whether Wilbur would mind making another flight for him, taking one of his students with him. Count de Lambert was chosen, and, after a twelve-minute flight, the machine was brought back almost to the king's feet. The young monarch admitted that it was the temptation of his life to make a flight, and he could hardly tear himself away.

MISS WRIGHT'S FIRST FLIGHT.

Another interesting feature of the month was that Miss Wright made her first flight. This event took place on the 15th, and she soared around beside her brother for seven minutes. Before she would venture, however, the Comtesse de Lambert went for a five-minute trip. Miss Wright made another voyage on the 23d.

Perhaps our readers may care to know that, when the Wright Brothers were making their first experiments out in that pasture-lot near Dayton, it was my privilege to take this same Miss Wright on a little trip around the lot with the little Olds mobile that is giving Mrs. Root and me so much enjoyment down here in Florida. At that early date I believe I had more faith in the ultimate outcome of their experiments than the old father, the sister, or even the two brothers themselves; and you can imagine, therefore, how it rejoices my heart to learn I was not far out of the way about it. Read the following:

Both Tissandier and Count Lambert quickly picked up the knack of steering. For a few days they held the levers for the straight runs, and Wright manipulated the curves. Later Wright became the passenger throughout long runs. Tissandier says that driving is the most fascinating sport he has ever tried. ...

1909-05-01, "The Wright Brothers Up To Date", *Gleanings*, p. 30

THE WRIGHT BROTHERS UP TO DATE.

We clip the following from the Cleveland *Plain Dealer* of April 27:

ROME, April 26. — Wilbur Wright made a series of successful flights here to-day, making the starts without the aid of a derrick or rail. The aeroplane was propelled over the grass by its own power, momentum gradually increasing, until at the end of 150 yards the machine left the ground and sailed into the air.

1909-06-15, "Animated Eggs — A Great Discovery", *Gleanings*, p. 21

ANIMATED EGGS — A GREAT DISCOVERY.

... Now, so far as I know, Mr. Root is the original discoverer of this wonderful phenomenon. If any of our readers can point out where this has ever before been described in print, I should be glad to see it. *GLEANINGS* claims to be the first magazine to exploit the great invention of the Wright Brothers; and if no one comes forward to prove the contrary we shall claim it is ahead of all other poultry books or poultry journals in announcing that not only the chickens, but the eggs *themselves*, may show "animation" before the chick gets out into the world.

1909-07-15, "Our Homes", *Gleanings*, pp. 446-448 (p. 447)

OUR HOMES

BY A. I. ROOT.

... Huber, the youngest of the Root family, on the 20th of June, received into his home a most precious gift in the shape of a girl baby.* ...

* As Miss Katherine Eva Root is only about three weeks old to-day, July 10, I can not say very much about her "accomplishments;" but as her father and mother are both very nice-looking young people, as a matter of course that baby is already about the handsomest one in the whole wide world. I congratulated them on having named her after Miss Katherine Wright, sister of the Wright brothers, who is just now, with those brothers, almost the center of attraction to the whole world. ...

Do You Believe This?

▪ "Our Homes" (*Gleanings*, August 15, 1909, pp. 515-518 (p. 516)) contains one of the most important pieces of evidence that throws serious doubts on the credibility of the January 1, 1905, narration. The message of Root is that some texts like those in the Bible and his own story, about the September 20, 1904, flight in a

circuit of W. Wright, have the stamp of truth on them even if they include unbelievable things.

In short, while in Dayton, a few years before July 30, 1909, Amos Root met Octave Chanute who, in front of him, received from Orville a copy of the January 1, 1905, issue of *Gleanings*. O. Chanute read the story and the next day, after finding out from A. I. Root himself about his disappointment generated by the little interest his text had elicited, O. Chanute explained to him that the people were right not to believe his account and gave him this logical reason:

“your readers all supposed that it was a made-up story. The way in which you talked about Christopher Columbus putting out on the unknown deep and all that, made people believe it was a sort of fairy story, such as we find in our magazines every little while — stories so much mixed up that one can not tell which is fact and which is fiction. The world did not believe you were *telling the truth*.”

Root came with a quite unconvincing answer. In his opinion, the article had the stamp of truth. These are his words:

“Mr. Chanute, I am in the habit of having *strangers* doubt my statements; but those who are acquainted with me, and know my way of talking, and those who have read my department in our journal for years past, ought to know that I tell the truth. Furthermore, that article has the stamp of truth on it from beginning to end. I mentioned the locality, and the things that happened, in a way that would convince any reasonable person that what I related really occurred.”

O. Chanute was not convinced and formulated a polite answer:

“Well, I guess that is so to a great extent; but what you are telling is *too wonderful*. The world is not yet ready to take it in.”

After writing from memory the dialog presented above, A. I. Root continued his article emphasising that:

Certain people, certain books, and certain articles in the papers have the stamp of truth on them; and this New Testament account of our Lord Jesus Christ has the stamp of truth on every page.

That “*certain articles in the papers*” is his January 1905 story which has “*the stamp of truth on every page*” as the Bible.

The big question is why would Octave Chanute have had doubts regarding the veracity of Root’s 1905 account as long as in a letter dated March 31, 1906, and published by the Scientific American in its April 14, 1906, issue, O. Chanute himself claimed he had *witnessed a flight of 1,377 feet performed in 23 4-5 seconds, starting from level ground and sweeping over about one-quarter of a circle*, made by Orville on October 15, 1904. He also listed another three flights, that took place the previous day, two of them, of 4,903 and 4,936 feet, covering a full circle or more. In other words, at the time he read Root’s January 1, 1905, article, Octave Chanute had already seen a flight performed less than one month after Wilbur’s flight in circuit seen by A. I. Root. Logically, Chanute would have had all reasons to believe Root’s eyewitness account!

The problem is that the credibility of Chanute’s April 14, 1906, article is also quite low as long as, close to the end of the text, he stated that the Wright’s had performed two improbable feats, the first consisted in *inventing a practical flying machine*, the second in keeping their plane, *which could only be operated in the open, far from the incredulous but Argus-eyed American press*. This remark sounds like a joke, an irony:

... On the 15th of October, 1904, I witnessed a flight of 1,377 feet performed in 23 4-5 seconds, starting from level ground and sweeping over about one-quarter of a circle, at a speed of 39 miles per hour. The wind blew at some six miles per hour, but in a diagonal direction to the initial course. After the machine had gone some 500 feet and risen some 15 feet, a gust of wind struck under the right-hand side and raised the apparatus to an oblique inclination of 15 to 20 degrees. The operator, who was Orville Wright, endeavored to recover an even transverse keel, was unable to do so while

turning to the left, and concluded to alight. This was done in flying before the wind instead of square against it as usual, and the landing was made at a speed of 45 to 50 miles an hour. One side of the machine struck the ground first; it slewed around and was broken, requiring about one week for repairs. The operator was in no wise hurt. This was flight No. 71 of that year (1904), and on the preceding day Wright brothers had made three flights — one of 4,001 feet for less than a full circuit of the field, one of 4,903 feet covering a full circle, and one of 4,936 feet over rather more than a full circuit, alighting safely. ...

In addition to the great feat of inventing a practical flying machine the Wright brothers have, in my judgment, performed another improbable feat by keeping knowledge of the construction of a machine, which can only be operated in the open, from the incredulous but Argus-eyed American press. ...

O. CHANUTE.

Chicago, Ill., March 31, 1906.

(Octave Chanute, “Chanute on the Wright Brothers’ Achievement in Aerial Navigation”, Scientific American, April 14, 1906, col. 1, p. 307)

Why would Octave Chanute, author of the book “Progress in Flying Machines” (1894) and well known by the aeronautic community of the time, have told such a lie?! The answer is simple. On November 9, 1905, he sent a private letter to Captain Ferber recommending to him that he trust the word of the Wrights, who had just claimed a series of spectacular flights. To make the statements of the two inventors more credible, he wrote this: *I have not seen, with my own eyes, anything excepting a short flight of half a kilometer*. Captain Ferber did not keep the text only for him but had it published in the December 1905 issue of *L’Aérophile*. Therefore, there was no way back for O. Chanute but to keep the story and pretend he had seen one of the brothers flying, otherwise his credibility in front of the technical world of the time would have suffered.

This is the original French text of the letter sent to Captain Ferber:

Chicago, Ill., 9 novembre 1905

Cher capitaine Ferber,

Je viens de recevoir votre lettre du 26 octobre. Je crois que vous pouvez octroyer toute confiance à ce que les Wright vous ont écrit de leurs accomplissements (*sic*). Je n’ai vu, de mes yeux, qu’une petite envolée d’un demi-kilomètre, mais ils m’ont mandé leurs progrès de semaine en semaine et leurs amis intimes qui ont vu les longs parcours du commencement d’octobre, m’ont confirmé verbalement la semaine dernière, quand j’étais à Dayton, pour voir une envolée projetée de 60 kil. en une heure, qui n’a pu avoir lieu par raison d’un grand orage.

Les Wright se sont inspirés de l’exemple de la France qui a tenu secrets ses progrès de ballons dirigeables depuis 1885. Ils se sont arrangés avec leurs journaux à Dayton. Il y a bien eu une indiscretion et un article publié, mais sa circulation a été supprimée.

Les Wright devaient vous écrire vers le 4 novembre.

Agréez, cher monsieur, l’expression de mes sentiments les meilleurs.

(Signé) : O. CHANUTE.

(“Les Frères Wright et leur Aéroplane à moteur”, *L’Aérophile*, December, pp. 265-272 (p. 268))

After all these explanations, the August 15, 1909, article of Root about his dialog with O. Chanute, a few years before, can be more easily understood as a conversation between two people who had not seen a man carrying heavier than air machine flying.

1909-08-15, “Our Homes”, *Gleanings*, pp. 515-518 (p. 516)

OUR HOMES

BY A. I. ROOT.

... “*Believest thou this?*” Do you, my friends, each and every one of you, honestly believe that whoever *lives* and *believes* in Jesus Christ as the Son of the living God *shall never die*? ...

To be real honest, I suppose I shall have to confess to you that there are times when I am tempted to unbelief. ...

There is a certain air of honesty that runs all through the New Testament that stamps its statements as truthful.

It has been my good fortune, at least as a general rule, to have my statements accepted. In only a few times in my life have I been accused of untruthfulness. When I first gave the story about the Wright brothers, and said I saw them fly with their machine and come around to the starting-point, I was disappointed because my report created so little sensation. The Wright brothers have *recently* made stir enough in the world; but when I first introduced them to the world I was surprised and disgusted. While at Dayton some years ago I met Mr. Chanute, the man who had made experiments with gliding-machines, even before the Wright brothers had, and a man who is widely known all over the world wherever there is any interest in flying-machines. When I was introduced to Mr. Chanute he paid but little attention to me. That did not hurt me at all, for God knows I did not care to be exploited. As the party broke up, Orville Wright handed Mr. Chanute a copy of our journal, turned over to the pages that gave my story, and suggested to him that he might be interested in reading it after he got to his hotel. The next morning, when we met again, Mr. Chanute's face had changed. He came up to me with a very friendly greeting and put out his hand. When I told him that I was much disappointed, when I wrote the article, to find that it elicited so little interest, he replied something like this: "Why, Mr. Root, your readers all supposed that it was a made-up story. The way in which you talked about Christopher Columbus putting out on the unknown deep and all that, made people believe it was a sort of fairy story, such as we find in our magazines every little while — stories so much mixed up that one can not tell which is fact and which is fiction. The world did not believe you were *telling the truth*."

I replied something as follows:

"Mr. Chanute, I am in the habit of having *strangers* doubt my statements; but those who are acquainted with me, and know my way of talking, and those who have read my department in our journal for years past, ought to know that I tell the truth. Furthermore, that article has the stamp of truth on it from beginning to end. I mentioned the locality, and the things that happened, in a way that would convince any reasonable person that what I related really occurred."

He glanced over the pages again and said slowly:

"Well, I guess that is so to a great extent; but what you are telling is *too wonderful*. The world is not yet ready to take it in."

I turned to Mr. Chanute and the Wright brothers, and then said:

"My friends, none of you know what you are doing. I am sure you do not recognize the unexplored field that you are opening up."

They laughed at my enthusiasm; but today, this 30th day of July, 1909, I think most people who read this will say I was right. My enthusiasm was not misplaced. I did not think, however, that it would take so many years for this world to wake up as it has done.

I have used as an illustration the Wright brothers and their flying-machine, and I wish to say again that there is a still more wonderful unexplored region in the line of our text than in any thing else on the face of the earth. Those who are experienced in the affairs of the world can judge pretty well whether a statement is true or not. Certain people, certain books, and certain articles in the papers have the stamp of truth on them; and this New Testament account of our Lord Jesus Christ has the stamp of truth on every page. The narrators may have made some trifling mistakes, but they are honest. The Bible *is* the word of God. I know not the future; but I am satisfied to risk it with him who said, "I am the resurrection and the life. He that believeth in me, though he were dead, yet shall he live." ...

▪ In "Coming Events Cast Their Shadows Before" (Gleanings, September 1, 1909, p. 554), the old Amos again reminded his readers about *what he had seen with his own eyes*, in 1904, and the prediction he had made that the Wrights' discovery *would make a sensation in the world akin to the discovery of America by Christopher Columbus*. At the end of the text, he expressed his disappointment because his *good friends were left behind*.

As an explanation, a competition took place in France during the last days of August 1909 and all records established by Wilbur on December 31, 1908, were broken. L'Aérophile (September 15, 1909, issue, pp. 410-412) published the results of the contest, the most important achievements being listed in the next four tables:

Distance prize

Place	Prize (francs)	Pilot	Plane	Engine	Date	Distance (km)
I	50 000	Henri Farman	Farman biplane	Gnome	1909-08-27	180
II	25 000	Hubert Latham	Antoinette no. 29 monoplane	Antoinette	1909-08-26	154.5
III	10 000	Louis Paulhan	Voisin biplane	Gnome	1909-08-25	131
IV	5 000	Comte De Lambert	Wright biplane	Wright	1909-08-26	116

Speed prize - distance 30 km

Place	Prize (francs)	Pilot	Plane	Date	Real time	Time
I	10 000	Glenn H. Curtiss	Herring-Curtiss biplane	1909-08-29	23' 29" 1/5	25' 39" 1/5
II	5 000	Hubert Latham	Antoinette monoplane	1909-08-29	25' 18" 1/5	26' 33" 1/5
III	3 000	Paul Tissandier	Wright biplane	1909-08-22	without penalisation	28' 59" 1/5
IV	2 000	Lefebvre	Wright biplane	1909-08-29	without penalisation	29' 59" 1/5

Altitude prize (Date: 1909-08-29)

Place	Prize (francs)	Pilot	Plane	Altitude (m)
I	10 000	Hubert Latham	Antoinette monoplane	155
II	0	Henry Farman	Farman biplane	110
III	0	Louis Paulhan	Voisin biplane	90
IV	0	Henri Rougier	Voisin biplane	55

Passengers' prize - distance 10 km (Date: 1909-08-28)

Place	Prize (francs)	Pilot + passengers	Plane	Time
I	10 000	Henri Farman (pilot) + 2 passengers	Farman biplane	10' 39"
II	0	Henri Farman (pilot) + 1 passenger	Farman biplane	9' 52" 1/5
III	0	Lefebvre (pilot) + 1 passenger	Wright biplane	11' 5" 4/5

Source: Edmond Poillot, "Après la Grande Semaine, Le classement des diverses épreuves, Grand Prix de la Champagne et de la Ville de Reims", L'Aérophile, September 15, 1909, pp. 410-412.

World records at the end of the competition:

- 1) Distance + time spent in the air: Henri Farman - 180 km in 3 hours 4 minutes 56 2/5 seconds (August 27, 1909).
- 2) Altitude: Hubert Latham - 155 m (August 29, 1909).

As a comparison, on December 31, 1908, at Champ d'Auvours, Le Mans, France, Wilbur flew 123.2 km in 2 hours 18 minutes 33 3/5 seconds ("A Wilbur Wright, la Coupe Michelin 1908", L'Aérophile, January 15, 1909, pp. 38-40).

In the October 15, 1909, issue of *Gleanings*, Root remarked with pride *the Wright Brothers were not in the "show" business and neither were they in the business of getting rich*. The second statement can be taken just as a personal opinion as long as the two brothers were greedy and swindlers in the same time. To explain this affirmation, they had a 1,000,000 francs deal with a French negotiator ("Agreement between Wilbur and Orville Wright and Arnold Fordyce", December 30, 1905). A deposit of 25,000 francs had to be made no later than February 5, 1906, at a bank (J. P. Morgan and Company, New York) to the joint credit of the Wright brothers and A. Fordyce. The rest of the money, up to one million, had to be deposited on April 5, 1906. The two inventors were obliged to perform a flight of no less than 50 km in no more than 1 hour and land near the point of departure, before August 1, 1906, to cache the million. The 25,000 francs were deposited in time but the rest of the money did not come and so the agreement was nullified excepting the forfeit of 25,000 francs. A letter of the French Minister of War, dated September 4, 1906 ("Le ministre de la Guerre à M.M. Wright frères 1127 West Third Street Dayton-Ohio", Paris, le 4SEPT1906) announced the two inventors that the negotiations with them had been closed but they would receive the 25,000 francs. A bad clause, for the French government, inserted in the December 30, 1905, agreement, put the two brothers in possession of a large sum of money without delivering or showing any plane. Later, in a letter ("Arnold Fordyce to the Wright brothers", April 11, 1907), A. Fordyce wrote:

Ourselves, the Commandant Bonel & I, the greatest harm has been made to our reputation. People think & say that everything was arranged between you & us & that we obtained some profit out of the 25.000 fcs. paid to you.

An explanation: the Commandant Bonel was another French negotiator who had talks with the Wrights, in Dayton.

Coming back to the October 15, 1909, article, one remark of Root that *there had already been some loss of life*, also vague, refers to the death of two pilots. The first was Eugène Lefebvre who suffered a fatal accident on September 7, 1909, while testing a Wright plane. He was the first victim of aviation in France ("Aviateurs Contemporains", L'Aérophile, September 15, 1909, p. 409). The second was Ferdinand Ferber who died while manoeuvring a Voisin biplane, on September 22, 1909 ("Mort tragique du Capitaine Ferber", L'Aérophile, October 1, 1909, pp. 440-441).

"Still More "Discoveries"" (*Gleanings*, November 15, 1909, pp. 715-716 (p. 715)) is another article of the old beekeeper where, at one point, inside a text unrelated to aviation, he just wrote: "*It is one thing to invent a machine, and it is often quite another thing to learn how to manipulate it. Ask the Wright brothers what they think about this statement.*".

1909-09-01, "Coming Events Cast Their Shadows Before", *Gleanings*, p. 554

"COMING EVENTS CAST THEIR SHADOWS BEFORE."

... In 1904, when I told you about the Wright brothers, and a little later when I told you at length what I had seen with my own eyes, I said at that time that their discovery (that the air could be traversed without the aid of balloons or gas of any kind) would make a sensation in the world akin to the

discovery of America by Christopher Columbus. I thought then that *before* the year 1909 we would see the air full of flying-machines. Now, it may take until 1910 for my more mature prediction to come true. ... I need not take space here to give you the proof of what the Wright brothers and a host of others scattered almost all over the face of the earth are doing in this new lately developed gift from God. ... This morning we are told that our good friends the Wright brothers are left behind; but to-morrow's daily may tell us that our old friend Wilbur is "up on his nerve," and is not so much behind after all. ... May God be praised that I have been permitted to live long enough to see flying-machines an assured success.

1909-10-15, "The Wright Brothers not in the "Show" Business", *Gleanings*, p. 23

THE WRIGHT BROTHERS NOT IN THE "SHOW" BUSINESS.

We are informed by the papers that both Orville and Wilbur Wright have declined making flights simply for an exhibition. From what I know of the two men I can readily understand that they could not be induced by any offer of money to go around the country giving exhibitions. They are not in the show business; neither are they in the business of *getting rich*. God has given them their success and their great popularity for some better purpose. Wilbur recently said something to the effect that their first business was to establish a factory for making safe flying-machines; and the next thing is to establish a school to teach the art of flying. And there has already been some loss of life; and loss of life is almost sure to come when an inexperienced person, without practice or training, undertakes to fly. This school and workshop will prove to be a blessing to humanity. But how much good will come from this wonderful discovery if they circle round about the country in response to the one who makes them the biggest offer of money? May the Lord be praised that we have a couple of inventors who have the grace to say, no matter how tempting the offer, "Gentlemen, we thank you; but we are not in the show business."

1909-11-15, "Still More "Discoveries"", *Gleanings*, pp. 715-716 (p. 715)

STILL MORE "DISCOVERIES."

Yes, I am making lots of progress with my new incubator and chickens. My discoveries may not be exactly new to the great Poultry world, but they are new to me, and I think they are to most of you. ...

The first hatch from my *newly invented* incubator, as described in the last issue, was only five chicks from ten eggs. One reason for it was that I put the ten eggs in the incubator before I had learned to handle it. It is one thing to invent a machine, and it is often quite another thing to learn how to manipulate it. Ask the Wright brothers what they think about this statement. ...

1910

▪ "Our Homes" (*Gleanings*, July 1, 1910, pp. 429-431 (p. 429)) is one of the many editorials of a religious character of the old Amos. This time he wrote about authority, sincerity, credibility. As an exemplification, he mentioned the case of his January 1, 1905, long article. *When he published the account of their work and said he had seen them with his own eyes make a trip (of about a mile) through the air and come back to the starting-point, many people began to inquire who A. I. Root was; and quite a few decided his story was just a made-up piece of fiction*. Again, he expressed the idea that an unexpectedly large number of persons had labelled his narration as not credible. Further inside the text, Root acknowledged he was not honest all the time. These are his words:

"do not understand, please, that your old friend who speaks to you on these pages claims that he is entirely honest ... I am trying to be honest and sincere from daylight to dark, and every day in the week; but with shame I confess that a good many times I can look back and see that I have made bungling work of it"

The credibility of an unbelievable account, like the one about the September 20, 1904, flight of Wilbur, coming from a man who struggled with himself to remain honest, can not be too high.

1910-07-01, "Our Homes", *Gleanings*, pp. 429-431 (p. 429)

Our Homes

BY A. I. ROOT

... the Master was constantly challenged as to his authority. Hitherto all the great and learned doctors and teachers had been able to give only their opinion about certain things; and to-day, away along in the twentieth century, it is much as it was in olden times. There is a constant and unending discussion as to who is right and who is wrong. ...

Whenever any thing new comes up, people at once ask for authority. When I said on these pages that the Wright brothers had a machine that would fly without any balloon, the statement was challenged on every side. People asked, as they had a right to, "Where do the Wrights live, and who are they?" When I published the account of their work and said I had seen them with my own eyes make a trip (of about a mile) through the air and come back to the starting-point, many people began to inquire who A. I. Root was; and quite a few decided my story was just a made-up piece of fiction.

Dear friends, the above is a little preface to a talk I want to give you this morning in regard to authority. ...

... Jesus explained and declared to all the multitudes that his power was a *miraculous* one. This world of ours is full of tricks and deceptions, not only in business, but our doctors who are healing the sick (or trying to do so) sometimes use tricks and deception; yes, and I say it sadly, not all of those who stand in our pulpits as God's servants are *entirely* free from the practice of little deceptions. Now do not understand, please, that your old friend who speaks to you on these pages claims that *he* is entirely honest, and that all the rest of mankind are bad. That simple little sentence uttered by the *Sunday School Times*, that "deception is always wrong," hits me every little while. God knows I am *trying* to be honest and sincere from daylight to dark, and every day in the week; but with shame I confess that a good many times I can look back and see that I have made bungling work of it. ...

▪ "The Wright Brothers and Their Flying-Machines Up To Date" (*Gleanings*, July 15, 1910, p. 472) is a report about an altitude and a speed record. More precise information regarding the two achievements can be found in the list that follows:

- 1) July 9, 1910: Walter Brookins, flying on a Wright machine, reached the altitude of 6175 feet (1.17 miles) at Atlantic City. ("Brookins More Than a Mile Up", *New-York Tribune*, July 10, 1910, p. 1).
- 2) July 9, 1910: Léon Morane flying on a Blériot monoplane traveled 5 km in 2 minutes 51 seconds (average speed 105.26 km/h or 65.4mph) establishing a world record ("Le 2e Meeting de Champagne", *L'Aérophile*, August 1, 1910, pp. 338-340 (p. 340)). Root wrongly presumed that the apparatus used by Morane was "*one of the patterns of the Wright brothers*".

As a remark, Amos Root could not refrain from making a ridiculous prediction that, in reality, had already nothing to do with the progress of aviation but with the weather. Here are his own words: "*I predict and firmly believe we shall "see" with our own eyes very soon the aeroplanes gliding over our heads among the clouds*". The plane of Walter Brookins had already reached the height of 1.17 miles where clouds can exist. It was just a matter of luck or coordination with the weather to have a plane flying among clouds, and so the prophecy of this businessman from Medina remains just an exercise of self-importance in front of some ignorant readers.

1910-07-15, "The Wright Brothers and Their Flying-Machines Up To Date", *Gleanings*, p. 472

THE WRIGHT BROTHERS AND THEIR FLYING-MACHINES UP TO DATE.

I can not go into details just now, because there are so many of the Wright machines, and so much is being done with them all over the world. But as we go to press, notice comes in the papers that one of their pupils has made a flight of something over 6000 feet, or over a mile in height, as you will notice. When first making their experiments, if I remember correctly, the brothers did not expect to be able to reach any great height — nothing like that reached by a gas balloon, for instance; but it now transpires they they can reach an altitude of at least a mile; and it *may* transpire there will

be greater safety at a considerable distance above the earth. Perhaps we had better wait a little and see. And I predict and firmly believe we *shall* "see" with our own eyes very soon the aeroplanes gliding over our heads among the clouds.

OVER A MILE A MINUTE.

Aside from the above we learn from the *Plain Dealer* of July 11 that Leon Morane, at Rheims, has just broken the record by making a speed at the rate of a little more than 68 miles an hour. The paper does not state what aeroplane was used, but I presume it is one of the patterns of the Wright brothers.

Then and Now

▪ August 29, 1910, a real important date, at least for A. I. Root, who finally saw with his own eyes a Wright plane flying. Unlike the January 1, 1905, fantastic story, the September 15, 1910, article in *Gleanings*, with the account of what the old Amos had seen near Dayton at the end of August 1910, is realistic, giving convincing details about what happened during his visit and while watching the plane taking off, circling the field and landing.

Root started the text with the last lines of his "Our Homes" from October 15, 1904. He said then that a machine that would *float as easily and safely as the bees, the butterflies, and the carrier pigeons was already in sight*, which, of course, is just a vague statement containing absolutely no trace of evidence that he had already witnessed a flight on September 20, 1904. However, in this case, the old beekeeper has an excuse because he had not received yet, in October 1904, the permission of the two brothers to write about their invention.

A. I. Root continues with his repetitive claim about *seeing the Wright brothers making their first successful flight*, emphasising that *Gleanings was the first periodical on the face of the earth to announce to the world the crowning success of their years of experimenting in order to make a machine that would fly without a balloon*. It is unclear what he meant by "*the crowning success*". If he had in mind a long flight with a plane that made turns, then *Gleanings* might be considered the first bimonthly which reported about such an achievement. However, as long as the newspapers in Dayton had already given, before the end of 1904, descriptions of flights more spectacular than the one presented in the January 1, 1905, issue of *Gleanings*, any priority claimed by Amos Root, in announcing the final accomplishment of his younger friends, is null.

The Dayton Journal, on December 2, 1904, and Dayton Press, on December 17, 1904, both dedicated ample space in their columns to the series of flights performed by the Wrights at the end of 1904. One of them (The Dayton Press) even mentioned the date of September 20, 1904. This is what they wrote:

1904-12-02, "Wright Flyer Glides Through Air for Distance of Three Miles", *Dayton Journal*, December 2, 1904

Wright Flyer Glides Through Air for Distance of Three Miles

... In order to demonstrate the efficacy of the aeroplane, a flight was made yesterday and a distance of three or four miles was made with perfect ease and precision. The machine proved perfectly dirigible and sudden and short turns were made with the same ease as the flight was maintained through a straight course.

The remarkable speed of fifty miles an hour was maintained throughout the flight ...

The Wright flyer is the only machine that ever lifted a man off the ground. The other inventions of this character have been of the airship variety, while this is a true flying machine and is operated by means of aeroplanes, that serve as wings to carry the machine through the air. An even higher rate of speed is contemplated for it than has so far been achieved, as now, merely to avoid the necessity at this time of rearranging the engine and other equipment sufficiently to maintain the equilibrium of the machine, a weight of about seventy-five pounds was carried on the flight made yesterday. ...

The flight was made at a height of about forty feet above the ground. It had been contemplated by the Wright brothers to make several spectacular flights for the benefit of the public, but the weather has now become unfavorable for the best results and the work will be abandoned until next spring. The Wright brothers are especially gratified with the result of their experiments, inasmuch as experts have announced that the flight over the distance of a mile, together with the ability to pursue a circuit, would solve the problem of air navigation. Both have been accomplished and an excellent degree of efficiency attained in both. ... ("Wright Flyer Glides Through Air for Distance of Three Miles", Dayton Journal, December 2, 1904)

1904-12-17, "Trials Over for Season", Dayton Press, December 17, 1904

Trials Over for Season

... The new machine, which is 20 feet from rear to front, and 40 feet from tip to tip, is the first machine to make complete circles. Since September 20, the Wrights have made 20 complete circles with the machine. The machine carries no gas bag, but depends entirely on its gasoline engine for propelling power. The weight of the flyer is 900 pounds.

The longest flights yet accomplished by the machine occurred on November 9 and December 1, when the flyer made almost three miles in five minutes. The Wright brothers experiment station is situated in a field almost one mile square on the Torrence Huffman farm on Huffman Hill. All the experiments have been finished for the present season and the flyer is being brought back to the city for the winter. The Wright flyer is the only machine that ever lifted a man off the ground ... It is operated by means of aeroplanes, that serve as wings to carry the machine through the air. A speed of 40 miles an hour can be obtained. The only changes in the mechanism of this year's flyer were made in the steering apparatus, the success of which has been thoroughly demonstrated by the ability of the machine to fly through the air in circles. ("Trials Over for Season", Dayton Press, December 17, 1904)

▪ Coming back to the September 15, 1910, article, we learn that at about 2 PM, on August 29, 1910, Root reached *the old familiar field between Dayton and Springfield* with an invitation from one of the brothers. At first, he was disappointed because none of his two friends was there but after being told by the young aviators, who were present there, *they would soon sail through the sky without any assistance from the Wright brothers, his disappointment began to give way*. People started to gather. One machine was pushed outside of the building that housed it. Neither the catapult nor the rail was used. The plane had pneumatic tire wheels and rolled on them.

Root continued with a credible eyewitness description of the take off procedure giving precise technical details in deep contrast to the fairytale-like January 1, 1905, account. The pilot took his seat, two other people did the cranking by turning the propellers and a fourth man held the plane in place till the propellers reached their full speed. At a signal from the pilot, the machine was liberated, gained speed, the tires pressed less and less the ground and finally the plane rose gracefully into the air. It started to do circles, eights. When it went with the wind the speed appeared to be 1 mile a minute but when it made turns and especially when the plane came against the wind its speed diminished considerably in a visible way. The old Amos also witnessed the plane flying with two people aboard. This time the apparatus did not ascend so easily but finally it left the ground.

Besides informing his readers about what he saw on August 29, 1910, Root also made some remarks:

1) *"I asked one of the Wrights what the comparative expense was going to be for gasoline compared with the amount needed, say, to carry four people in an automobile. He said he thought the flying-machine would take less gasoline to do the same work"*. There exist planes that use less fuel/passenger than a car, so the answer given by one of the brothers contained some truth.

2) *"There are at present about half a dozen machines of this kind in service in the United States. I can not say how many there are in foreign*

countries; but there are several factories across the water ... The Wright brothers are at present employing 25 to 30 hands". About 6 Wright planes in service, spread across the entire US in September 1910, was not a large number. The two brothers did not have too many clients.

3) *"I might mention here that there has been some criticism in regard to the price — \$7500 — for each finished and fully equipped machine."* The sum was huge in comparison with the estimates in some newspapers, which quoted Wilbur, about two years before. This is what A. I. Root mentioned in one of his November 15, 1908, articles: *"I noticed this morning the statement made in the morning papers that Wilbur Wright said a flying-machine need not cost more than \$300 when a considerable number of them are made at a time with adequate machinery."* ("The Wright Brothers and Their Flying Machine up to Date", Gleanings, November 15, 1908, pp. 1390-1392)

4) *"Once more, all the inventors of the world, for ages past, have never made any machine that would fly even a few rods — that is, and carry a passenger — until the Wright brothers did; and, if I am right about it, no one has ever since made a machine that would fly without making use of some feature of the Wright invention."* Again the same old story according to which the two Daytonians were the first to fly, also no credible witness beyond any doubt saw their flight capable powered machine in the air or on the ground before 1908. No picture or technical drawing, of a Wright plane, published before 1908, exist.

5) *"As evidence of the comparative safety of the machines as now made, I will mention that Miss Catharine, sister of the Wrights, has made several flights, and the venerable father, Bishop Wright, was up about 350 feet, and in the air several minutes, recently."* Milton Wright flew with Orville, on May 25, 1910, reaching a height of about 300 feet. The newspapers wrote about this event. Here is a text from The Evening Star: *"For the first time in his eighth-two years Bishop Milton Wright, father of the aviators, left the earth yesterday with Orville in a six-minute flight, and was taken 300 feet in the air."* ("Wright's Rapid Descent", The Evening Star, Washington, D. C., May 26, 1910, col. 6, p. 1)

6) *"Some of the papers reported the Wright Bros. had found a better engine in France than could be made in our country. Wilbur says this is untrue."*

7) *"While conversing with the brothers I made the remark that we had seen the bicycle go through an evolution ... I then remarked to the brothers, 'How long will it take for the flying-machine to go through a like evolution?'"*

Orville replied at once, *"Mr. Root, the flying-machine has already passed the period of evolution;"* and he pointed me to the fact that the machine I was looking at that day, and admiring, was but slightly different in its main features from the one I saw years ago". The younger brother later came with clarifications which softened such a ridiculous statement admitting that there would be many improvements but the successful flying machine would likely have propellers to push it through the air.

8) *"Inventors all over the world have tried 'something different' — machines to float by the flapping of wings, as a bird flies, for instance; but their machines did not fly — that is, they do not fly unless they make it pretty near something in the line of following the Wright brothers from first to last."* In reality, the historical evidence tells a different story. As an example, on November 18, 1907, Orville, who was in France at that time, witnessed Henry Farman performing a series of flights in an attempt to win a prestigious aviation prize. The two brothers had not yet shown any plane up to that date. Their heavier than air apparatus was still a phantom. The public first saw a Wright machine on August 8, 1908, at Le Mans, France. In consequence, the two Americans from Dayton followed other inventors, not the other way.

The November 19, 1907, Paris edition of the New York Herald dedicated an extensive article to the attempts of H. Farman to perform a 1-kilometer flight in a circuit. The trials were witnessed by many known personalities of the aeronautic world of the time, like Santos Dumont and Louis Bleriot. Orville was also there and even gave an interview to a Herald reporter. Here are some relevant fragments from this article illustrated with a few pictures, one of them showing the Farman plane flying and another Orville Wright standing:

1907-11-19, "Mr. Orville Wright Sees Mr. Henry Farman Compete for Deutsch-Archdeacon Prize", New York Herald, Paris

Mr. Orville Wright Sees Mr. Henry Farman Compete for Deutsch-Archdeacon Prize.

... Mr. Henry Farman came within an ace of winning the Deutsch-Archdeacon prize of 50,000fr. with his aeroplane at Issy-les-Moulineaux yesterday afternoon. Had his motor worked with a trifle more regularity the money was his. He made at least ten excellent flights, but each time at the critical moment, when the apparatus with perfect balance was describing the curve the motor appeared to lack the necessary force, and the apparatus touched the ground.

The first flight, which took place about half past two, was one of some 600 mètres, finishing with a semi-circular movement, during which the wheels touched the ground. This was followed by half a dozen similar flights, all with the same result. ...

The Prize Nearly Won.

Just before dusk a final effort was decided upon. This time the machine left the ground easily and traveled down the field to the turning point at a good rate of speed. In the turning the wheels touched for an instant and again a few seconds later, but after this the rest of the circle was completed with ease.

For a moment the spectators appeared to think that the prize had been won, but this was not so. To win this Grand Prix de l'Aviation it is essential to complete the kilomètre in a closed circle without touching the ground in any way. ...

Among those present were: ... Mr. Orville Wright, of Dayton, Ohio; M. Santos-Dumont, M. Esnault-Pelterie, M. Deutsch (de La Meurthe), M. Archdeacon, M. Decugis, M. Delagrangé, Mr. Maurice Farman, Captain Ferber, ..., Mr. O. Berg, ..., M. Blériot, ...

Mr. Orville Wright's Opinion.

Asked by a HERALD correspondent to give his impression upon Mr. Farman's flights, Mr. Orville Wright said he did not care under the circumstances to say much on the subject. In his opinion the flights accomplished by Mr. Farman were excellent, though he was surprised that the Deutsch-Archdeacon prize had not been won some months ago.

He thought that so far as flying in France was concerned, Mr. Farman easily took the lead over everyone else. He considered Mr. Farman an ideal aeronaut, and one who would probably help to develop the art of flying in a very great degree. ... ("Mr. Orville Wright Sees Mr. Henry Farman Compete for Deutsch-Archdeacon Prize", New York Herald, Paris, November 19, 1907)

▪ Perhaps the most important words written by Amos Root in the entire September 15, 1910, text are: "*During my first visits, years ago, before their patents were secured, I was asked to omit certain things in my write-up; but when I to-day asked if I could describe all I saw Wilbur replied, 'Mr. Root, you may tell any thing you choose about our work, providing you tell the truth.'*" ". The remark made by the elder of the two brothers further disqualifies their friend from Medina as a credible witness because it implies that he had not told the truth, all the time, in his previous articles about the two inventors and their machines.

1910-09-15, "Then and Now. The Wright Brothers and Their Flying-machine up to Date.", Gleanings, pp. 602-604

THEN AND NOW.

The Wright Brothers and Their Flying-machine up to Date.

At the close of Our Homes for Oct. 15, 1904, I used these words: "We want a machine that will float as easily and safely as the bees, the butterflies, and the carrier pigeons. May the Lord be praised, this is already *in sight*."

The above was the closing of an article on the new inventions of the age. Shortly after (see GLEANINGS for Jan. 1, 1905), I told you of seeing the Wright brothers make their first successful flight, and that included turning around and coming back to the place of starting; and Gleanings was the first periodical on the face of the earth to announce to the world the crowning success of their years of experimenting in order to make a machine that would fly without a balloon. Since then the Wright brothers have been held up so prominently, not only before the people of this country, but before the *whole world*, that everybody knows pretty well what they have been doing.

Day before yesterday, Aug. 29, it was my pleasure to get around once more to the old familiar field between Dayton and Springfield, Ohio, where they have so long made their experimental flights. I reached there about 2 P.M., and was at first somewhat disappointed on finding neither of the Wright brothers present, and to be told that they might not come out that day at all. Since my last visit a neat and convenient building has been erected, of sufficient capacity to hold a flying-machine, or, in fact, two of them, all ready to fly. A very plain notice, in black and white, met me at the gate, saying —

"POSITIVELY NO ADMITTANCE."

But I ventured to open the gate and go through, notwithstanding; and when I explained to the four bright young men that I had an invitation from one of the Wright brothers I was made an exception to the general rule.

Permit me to say right here, that, at the present time, not only hundreds but sometimes nearly a thousand are permitted to stand around *outside* the fence, for at present there is no more need of secrecy. When these young students in the art of flying informed me that they would very soon run out the craft and sail it through the sky without any assistance from the Wright brothers, my disappointment began to give way; for I reflected that, if the work had come to such perfection that the students could be intrusted to make flights all day long without the *presence* of the owners, things were indeed progressing far beyond what I expected or knew any thing about. As the wind generally goes down toward evening, a good many days most of the flying is done late in the afternoon.

In a little while people began gathering in from all directions, with automobiles and other vehicles. An ice-cream wagon came on the ground; the popcorn boy was in evidence, and one of the Wright machines was easily slid or pushed outside of the building. The track that the machine used to run on had been dispensed with, and also the weight dropping to shoot the machine up into the air. Two pairs of pneumatic tire wheels, not unlike what we see on automobiles, were so placed as to lift the car a little above the runners, made something like a sled-runner, although very light and strong, as I have explained in previous papers. One of the students took a seat near the engine. Two others took hold of the propellers to do the cranking, and the fourth young man sat on the ground and held the machine till the propellers got up to full speed. The starting-ground is simply a smooth piece of grass descending slightly a few rods. At a signal from the man in the machine the boys let go, and off it started. The rubber tires, as they bumped over the ground, made some little jolting, especially when the machine got up speed. Very gradually the rubber wheels touched more and more lightly on old mother Earth, and pretty soon the beautiful and wonderful fabric *slid* off into the air, and then it was as still and smooth in running as a boat going through the smoothest water. To me the sight was most inspiring. I remarked to bystanders that it was more wonderful than any story in the Arabian Nights. After the machine left the ground it rose gradually in circles, and then for the greater part of the afternoon — in fact, until dusk — the machine was, most of the time, in the air, describing circles, figure eights, and making all sorts of graceful maneuvers. In going with the wind it seemed as if the speed was pretty close to a mile a minute; but in making a turn it slackened up in velocity quite perceptibly; and in coming back against the wind the speed was very materially retarded.

The boys who read these pages have, in times past, had fun in sliding down hill. But you have to walk back laboriously, dragging your sled after you. Now, boys, what sort of fun do you suppose it would be to slide down hill *on the air*, and then, instead of having to walk back, you just "slide up hill" on the air to the point of starting, and then slide down again. And that is what those students do with the flying-machine.

Six years ago I tried to tell the world what was going to be accomplished by dispensing with roads and bridges, to say nothing of iron railways and railway bridges. I asked one of the Wrights what the comparative expense was going to be for gasoline compared with the amount needed, say, to carry four people in an automobile. He said he thought the flying-machine would take *less* gasoline to do the same work; and then he made a remark something like this:

"But, Mr. Root, perhaps you know by experience that the up-keep of the rubber tires is a much greater expense than the gasoline. This machine requires no *rubber tires* as it reels off the miles through the air."

Come to think of it, there is almost no wear or tear on any thing except the engine, chain, and the bearings of the two propellers. There are at present about half a dozen machines of this kind in service in the United States. I can not say how many there are in foreign countries; but there are several factories across the water turning out machines as fast as they can possibly make them. The Wright brothers are at present employing 25 to 30 hands, and turning out machines as fast as they can. They are just now occupying a rented building, but have just completed the purchase of two acres of land near the Soldiers' Home, where a building 250 feet long and 60 feet wide will be put up this fall. I might mention here that there has been some criticism in regard to the price — \$7500 — for each finished and fully equipped machine. But even at this price they are *at present* unable to supply the demand. They often tell customers that, if they can wait another year, they will probably be cheaper. But men who have abundant means prefer to pay the present price rather than wait a year. Once more, all the inventors of the world, for ages past, have never made any machine that

would fly even a few rods — that is, and carry a passenger — until the Wright brothers did; and, if I am right about it, no one has ever *since* made a machine that would fly without making use of some feature of the Wright invention. I believe this is quite generally acknowledged.* The Wright brothers commenced their experiments more than ten years ago, and they went at it in a scientific way, and have labored hard, early and late. We have often been told that in years past the real inventor of any great innovation has seldom had proper *credit* or even *pay* for what he has given the world. We hope this will not prove true with the Wright brothers.

*As evidence of the comparative safety of the machines as now made, I will mention that Miss Catharine, sister of the Wrights, has made several flights, and the venerable father, Bishop Wright, was up about 350 feet, and in the air several minutes, recently.

After one of the students made his first flight and sailed through the sky at different elevations for some little time, he came down easily and gracefully, and took in one of the others who was just learning to fly. With *two* good-sized men instead of one, the machine did not ascend from the ground quite as readily. As it ran a little further it went out among the weeds, and I began to fear it would not take the air; but in a little time it stopped its wabbling, and arose from the earth as easily and gracefully as a sea gull. Many times, in watching the pelicans in Florida I have seen them strike the water with their feet in order to get up speed so their wings would sustain them; and in this case it seemed as if these beautiful structures of wood and cloth must really in a like manner have life. Another reason why these machines are at the present time expensive is that the very best of material is procured, without regard to expense. They have made careful experiments to get the very best wood, cloth, and metal. The frame for the woodwork is made of the very best clear spruce, this wood proving to have more strength for its weight than any other they have yet found. The runners that slide along the ground while alighting are made partly of the strongest ash, and are reinforced so as to stand the shock of making a landing on almost any kind of ground. As so much depends on the propeller-blades, these are made of thin strips of spruce built up together with the strongest glue. They are then covered with the strongest canvas glued on. Their mechanics, especially those at the heads of the different departments, are probably as skillful in their line of work as any who can be found.+

+ Some of the papers reported the Wright Bros. had found a better engine in *France* than could be made in our country. Wilbur says this is untrue.

Consider for a moment how the very lives of good people depend on the faithfulness and fidelity of their work. The machine as at present made for carrying two people is about 40 feet wide, and it is almost as much from the tip of the front end to the end of the steering apparatus.*

While conversing with the brothers I made the remark that we had seen the bicycle go through an evolution, and that the automobile was also now so well along in its evolution that the inventors of both machines are now settling down to very narrow lines. Inventors have about ceased making changes in the bicycle, and most of the automobiles on the market are getting closer and closer to established lines. I then remarked to the brothers, "How long will it take for the flying-machine to go through a like evolution?"

Orville replied at once, "Mr. Root, the flying-machine has already *passed* the period of evolution;" and he pointed me to the fact that the machine I was looking at that day, and admiring, was but slightly different in its main features from the one I saw years ago. In talking the matter over afterward, Orville said he did not mean to say that there would not be great improvements, and very likely many important improvements, on the machine; but he felt pretty certain the successful machines are going to be either along the line of their invention, double plane or possibly monoplanes, such as they have now, and propellers to push it through the air. England, France, and Germany have each purchased the patent from the Wright brothers, and have factories turning them out more or less rapidly.

During my first visits, years ago, before their patents were secured, I was asked to omit certain things in my write-up; but when I to-day asked if I could describe all I saw Wilbur replied, "Mr. Root, you may tell any thing you choose about our work, providing you tell the *truth*." God knows we as a people want the *truth* always and everywhere.

Six years ago, in my write-up of inventions I referred to Columbus' discovery of America. When he looked abroad over this green earth and across the great waters he asked the question, "What is beyond and across the great sea?" But the world had lived 1492 years, and no one till his time had been able to tell what *was* away off across that watery waste. Just think

of it, friends! Yankee ingenuity and Yankee curiosity have now got to such a pitch that we have compassed the North Pole, or at least have come pretty near it; and now inventive genius is at work to solve the mystery of the South Pole. Recent developments in Alaska indicate great things are destined to be brought to life in that region. Columbus was not content until he had pushed ahead and opened up a new world beyond the one known in his time. And let me predict once more in closing that the Wright brothers have by honest, faithful, hard, and untiring work, and *scientific study*, wrested from Nature this great secret, and we are just now on the eve of exploring the mystery of the great "upper deep."

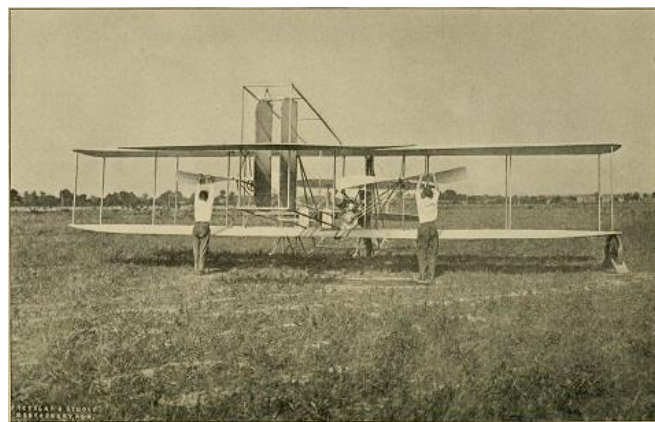
*Inventors all over the world have tried "something different" — machines to float by the flapping of wings, as a bird flies, for instance; but their machines *did not fly* — that is, they do not fly unless they make it pretty near something in the line of following the Wright brothers from first to last.

▪ "The Wright Brothers' Up-To-Date Flying-Machine" (Gleanings, October 1, 1910, pp. 628 and 640-641 (p. 640)) contains an interesting remark of the old Amos. During his August 29, 1910, visit, he noticed that the students of the two brothers *swung around in a very large circle as there was quite a brisk wind*. Orville explained to him that an expert aviator could make tight turns if the wind was weak. In other words the planes of the two Daytonians, known as being highly manoeuvrable, needed ideal weather conditions, otherwise they could not turn exceptionally fast.

Regarding the tight turns, Root noticed that *at a meeting in Boston, some of the Wrights' pupils were swinging their machines around on so short a curve that Wilbur interfered, and forbade their taking any more such risks*. It is not clear from the text whether he was an eyewitness or just he somehow found out about this thing.

The air show the old businessman referred to was organised by the Harvard Aeronautical Society being the largest aeronautical meeting held in America up to that time. It took place between September 3 and 13, 1910, and unofficially continued three more days ending on September 16, 1910 ("Harvard-Boston Meeting", Aeronautics, October 1910, pp. 115-118). The great winner was the English aviator Claude Grahame-White who earned various prizes totalizing \$22,100 plus \$7,500 the contract price for entry. The second and third places were occupied by two pilots, Johnstone and Brookins, flying on Wright machines. They won \$5,000 and \$4,250, respectively. In total, the contract price for entry of both was \$30,000 which means they earned sensible more money just for participation than from scoring points.

1910-10-01, "The Wright Brothers' Up-To-Date Flying-Machine", Gleanings, pp. 628 (picture) and 640-641 (p. 640)



WRIGHT BROTHERS' UP-TO-DATE FLYING-MACHINE FOR TWO PASSENGERS.

THE WRIGHT BROTHERS' UP-TO-DATE FLYING-MACHINE;
SEE PAGE 628.

Up above the world so high.
Like a diamond in the sky.

In writing up my visit to the Wright brothers, p. 602, last issue, I said I hoped to give our readers a good picture of it soon; and through the kindness of Miss Catherine Wright, sister of Orville and Wilbur Wright, I received a very good picture of the machine I tried to describe in our last issue; and I tell you it is an imposing spectacle, even when it stands out on the grassy field, *ready* to fly. In steering an automobile the operator has only to swing it to the left or right; but after the flying-machine leaves the earth, it has to be steered in a like manner up and down. Just in front of the machine you see a pair of cloth planes, something like the large machine itself, except that they can be turned up or down with a lever. At the rear of the machine there are two similar planes of cloth, but they stand up and down vertically, as you see; and these can be revolved so as to make the machine turn either to the right or to the left. While the students were making their experiments during my visit they swung around in a very large circle, as there was quite a brisk wind. But Orville explained to me that, when there was a little wind, or almost a dead calm, an expert aviator could tip the machine up almost edgewise, and swing around in a circle so small that it was almost like turning on one's heel. The skill to perform this feat, however, comes only with long practice. I noticed that, at the recent meet in Boston, some of the pupils were swinging their machines around on so short a curve that Wilbur Wright interfered, and forbade their taking any more such risks. ...

▪ The October 15, 1910, issue of *Gleanings* contains two articles related to the Wrights. The first has a funny title, "Catching Chickens that Roost in the Trees; Flying-machines, etc.". Its text is a letter sent by a certain W. C. Gault to A. I. Root. It starts with the description of a device for *getting chickens out of the trees* and then mentions the spruce timber, used by the two brothers for their planes, and willow that in the opinion of Gault was the strongest and lightest wood available. Toward the end of the letter, the old Amos received the good advice to *not risk his neck by going up in one of those machines*.

"From Chicago to Springfield by Flying-Machine" (*Gleanings*, October 15, 1910, pp. 675-676) is the second article which is of much more interest than the first. The text is about a prize of \$10,000 won by Walter Brookins who flew 187 miles, with two stops, between Chicago, Illinois and Springfield, Ohio, on September 29, 1910. The plane ended its trip at 4:27 PM, 7 hours and 12 minutes after its departure from Chicago. The actual flight time was 5 hours and 44 minutes. Wilbur together with other people followed Brookins, in a train. Accounts of this flight can be found in various newspapers like the Los Angeles Herald ("Brookins Gains Record in Dash with Aeroplane", Los Angeles Herald, Friday Morning, September 30, 1910, col. 3, p. 1 and col. 2, p. 3). The source of information used by Root was the Chicago Record-Herald for September 30, 1910.

1910-10-15, "Catching Chickens that Roost in the Trees; Flying-machines, etc.", *Gleanings*, p. 669

Catching Chickens that Roost in the Trees; Flying-machines, etc.

Mr. Root: — You spoke of the difficulty of getting chickens out of the trees in Florida. I have used a very convenient device. ... Try it.

In speaking of the Wright brothers using spruce timber in their machines, I think that willow is the strongest and lightest wood we have. I have used a good deal of it for things that require very little weight but a good deal of strength. I have used it for ladders ten to fifteen feet long.

Now one thing more. I have said to my friends that I hoped Mr. Root would not risk his neck by going up in one of those machines. This world is not ready to spare him yet. ...

New London, O., Sept. 23.

W. C. GAULT.

1910-10-15, "From Chicago to Springfield by Flying-Machine", *Gleanings*, pp. 675-676

FROM CHICAGO TO SPRINGFIELD BY FLYING-MACHINE.

The Chicago *Record-Herald* for Sept. 30 gives a thrilling account of the above \$10,000 flight by Walter R. Brookins, one of the Wright brothers' youngest students. The *Record-Herald* offered a prize of \$10,000 for the feat, and the 22-year-old "cloud-explorer," as they call him, fairly won it. ... A special train containing Wilbur Wright and a host of friends started to race with him ...

At his elevation of something like 2000 feet Mr. Brookins caught sight of the city of Springfield when 44 miles away. He started from Chicago at 9:25, and reached Springfield in 7 hours and 9 minutes. He was in the air 5 hours and 45 minutes, and at one time made 88 miles without descending. In all respects he has broken all previous records. ...

▪ "Our Homes" (*Gleanings*, November 1, 1910, pp. 703-707) is a sermon with numerous references to the Wrights. From the first lines, without explicitly saying he had witnessed Wilbur flying on September 20, 1904, Root reminded his readers he had seen the two inventors doing something, more than five years before:

"when I told you five years ago what I saw the Wright brothers do, I felt sure that flying would be a common thing in a year or two"

The first part of the text is about the religious belief of the old Amos, which was also shared by the two inventors, that a good Christian has to keep Sundays as holy days, *days of rest from all of our duties and cares*, and not even transform them in holidays. As a main example of what can occur if somebody does not respect this special day of the week, the old beekeeper presented the case of Eugene Ely, the only pilot who decided to start on Sunday, October 9, 1910, from Chicago with the intention to reach New York by the end of the week. All kind of bad things happened to him and finally he was obliged to abandon. The Wrights and others refused to fly. Incidentally, Eugene Ely flew on a biplane made by Glenn Curtiss, seen by the two brothers as their enemy, a man who used without right what is known today as ailerons which the two inventors claimed as their own discovery. In reality, a description of ailerons appears in an English patent (A.D. 1868, 5th February. No 392) obtained by Matthew Piers Watt Boulton when Wilbur was not even one year old.

The second part of the sermon is titled "Aviation at the Cleveland Centennial" and its main subject is the relatively bad experience Root had at an aerial show held in a place called Lakeside Park on October 15, 1910, or before that date during the Cuyahoga County's centennial, which lasted from the 10th of October to the 15th. The flight demonstrations, that he witnessed, were below the promises of the organisers. Here are his words:

During the afternoon this one machine made four flights of three to five minutes each. There were no trials for duration, no trials for altitude, no speed contests, no flights with passengers, and no feats to compare with the ones the Wright students made on the afternoon I visited them. In fact, the whole afternoon seemed to be spent in fussing with the machines to make them go. ... what a poor tribute, to put it mildly, these people were paying ... to the Wright brothers who first demonstrated to the world that a machine could be *made* to climb up into the air without any balloon at all ...

The old entrepreneur was also revolted by some clips which put his friends from Dayton in an unfavourable light emphasising at the same time the superiority of the Curtiss machines. This is the specific text:

It takes the combined efforts of a dozen men to haul the Wright flyer around on its cumbersome, wide-tired wheels and adjust it on the starting-rail before it is as nearly ready for a flight as is the Curtiss machine at all times.

The Wrights are content, on the other hand, with a machine which trundles along at forty miles an hour, and which must either return to its starting-rail before flying again, or else have the starting-rail brought to it.

As an answer to all these misleading statements, Root explained that:

It *never* took a dozen men to haul around the Wright flyer, even in their first experiments. I know, for I was there; and at the very time this statement was made, it did not take any men (or boys either) to get the Wright flyers up to the starting-place. The aviator just starts his engine, and the propeller which carries it over the ground or through the air takes it up to the starting-point, even if it is *up hill*.

Again he mentioned the first experiments, of the two inventors, witnessed by him, without saying he had seen the plane flying but coming with something new, never said before. Root saw, in 1904, the Wright machine being moved around on the ground by less than a dozen men.

He continued with the attacks against Curtiss accusing him of *copying the Wright machine as near as he could*:

I have been informed on good authority that Glenn H. Curtiss visited the Wright brothers before he made a flying-machine at all. They extended to him every courtesy, and permitted him to look their machines all over at his leisure; but it would seem that, as soon as he left, he copied their machine as near as he could without too flagrant an infringement on their patents. At present I know nothing about the suit for infringement.

In reality, the Curtiss machines were single pusher biplanes similar to the 1907 Voisin plane. Such an apparatus, piloted by Henry Farman, was seen flying by Orville on November 18, 1907. Glenn Curtiss himself flew 1 kilometer at Hammondsport, NY, on July 4, 1908, with a biplane built by the Aerial Experiment Association that closely followed the design of the 1907 Voisin apparatus. The double pusher Wright biplane became known to the public on August 8, 1908, in France, in a moment when the heavier than air flying machine was already a reality.

Toward the end of the article, Root came back to the bad things that happened if people flew on Sunday, giving as an example a failed aerial show that disappointed 7500 spectators at Belmont Park, Long Island, NY, on October 23, 1910. Also the Wright team, composed of the pilots Hoxsey, Brookins and Johnstone, was willing to fly, Wilbur could not be convinced by the show organisers to allow his people to take off on Sunday, a thing highly appreciated by his old friend from Medina.

1910-11-01, "Our Homes", Gleanings, pp. 703-707

Our Homes

By A. I. ROOT

... While I write, flying-machines seem to be in the air and in the minds of a great many of our people. I have been predicting for some time that we would soon see them overhead in such numbers that they would not call forth any more attention than the automobiles that are getting to be almost as common, even in country places, as the horse-drawn vehicles. When I announced the coming of electric railways in my boyhood, I was somewhat disappointed because they were so *slow* in getting along; and when I told you five years ago what I saw the Wright brothers do, I felt sure that flying would be a common thing in a year or two; and after its development across the seas about a year ago I said that before snow flew there would be plenty of them all over the United States. Well, we have not seen the snowflakes yet here in Medina; and flying-machines are not going to be as plentiful as I expected, during this year of 1910.

Now to get down to business, or to take up the subject I had in mind, let me remark that as much as three or four weeks ago a project was put on foot to have a lot of aviators attempt a flight from New York to Chicago. The matter was presented to the Wright brothers, and, if I am correct, they promised to enter into the contest. All together there were to be toward a dozen flying-machines. At first the date was fixed for the fore part of the first week in October. As it might take four or five days, it occurred to me in the outset that they would have to start during the fore part of the week to avoid being out over Sunday, especially if they flew only in the day time and not by night. Well, as nearly as I can make out, the event was postponed several times until they were talking about starting on Saturday. I felt sure the Wright brothers would object, as they always have done, to any Sunday flying. They would do this out of respect to their old father, who is a minister of the gospel, if for no other reason. Therefore I was not surprised

when told that only *four* were going to make the flight, and they were going to start on Saturday afternoon. Later still I was yet more pained to have the papers tell us (without protesting or commenting), that the flight was to begin on Sunday afternoon, October 9. I think the Saturday papers informed us further that all had dropped out but one — Eugene Ely — and he was to start alone on Sunday afternoon. Two others with their aeroplanes were to go a piece with him, and see that he got under way all right, without any mishap. I suppose that most of you know from accounts in the papers how it turned out. Here is what I found in the Cleveland *Plain Dealer* in regard to the matter:

HE MAY ARRIVE LATE.

Kissing his wife and assuring her that he would join her at the Hotel Astor, in New York, not later than next Friday noon, Eugene Ely sailed from Chicago in a Curtiss biplane Sunday afternoon.

Then he flew nine miles.

Let us pause a little right here. If I should say that I almost *knew* he would have had luck if he started on Sunday afternoon some of you would call me superstitious and perhaps fanatical. ...

... If I am right about it, starting out with a lot of flying-machines on Sunday afternoon is breaking the laws of our land, and I think the officers of the law, if they choose, could forbid such an undertaking; and it is most *certainly* breaking the laws of God. Did you ever think of and admire the wonderful wisdom of the way in which we are told or asked to observe the sabbath — "Remember the sabbath day to keep it holy"?

... People generally, especially good people, have decided on one particular day of the week to be called God's day — a day of rest from all of our duties and cares, and a day to consider especially God's wishes and God's commands to his children.

I am well aware that there is much disposition of late to regard Sunday as a holiday rather than a holy day; and a certain class of people have seemed to think it proper and fitting to select that day for running automobiles, testing flying-machines, etc. ... So many awful accidents have happened on Sunday that the daily papers have made comments. They did not suggest that it was the *wrong* thing to do. They only said it seems queer that there should be such an array of fatalities and strange accidents to be chronicled *every Monday morning*. ...

... This man Ely seems to have been the only one of about a dozen who was willing to start out on Sunday afternoon on this trip of flying from Chicago to New York. He had plenty of time to put his machine in the most perfect trim, for they had been waiting all the week for favorable weather; but before he had flown even *nine miles* there was something the matter with his carburetor. He came down and got it fixed, and got up in the air again; but just as he left the ground one of the rubber-tired wheels for starting and stopping caught an obstruction and was torn off. After several more delays he got started again, and then something *else* happened. In fact, by some strange fatuity — that is, so some people said — "bad luck" seemed to follow him. ...

AVIATION AT THE CLEVELAND CENTENNIAL.

While I am on the subject of aviation I have something further to say that does not particularly belong to starting out with flying-machines on Sunday. Through the daily papers and other means, Cuyahoga County's centennial, lasting from October 10th to the 15th, was very widely advertised all over this region, and particularly the aviation exhibitions. The following clippings from the *Plain Dealer* of Oct. 15 tell us something about it:

About 200 policemen guarded all entrances to the field yesterday; and any one who could think up a sufficiently persuasive argument to get by the bluecoats was entitled to admission without further parley. Employees of the railroad were about the only ones who saw the flights without going through the formality of buying a ticket.

Four machines will be ready for flight. Altitude, speed, climbing, and bomb-throwing contests will be on the program, which opens at 1 o'clock.

To-day's program will be the most interesting one of the entire meet. Altitude flights, glides from the clouds, speed contests, and bomb-throwing experiments will be staged. Post, Mars, McCurdy, and Ely will be the contesting aviators.

Fair weather is promised, and it is expected that fully 30,000 persons will attend the meet. Saturday is the last day.

These exhibitions of flight were given in Lakeside Park; but, unlike the exhibitions I described on p. 675, last issue, where thousands could view the spectacle, high or low, rich or poor, black or white, without money and without price, this exhibition was guarded from the public at large by means of canvas fences so high that no one could well look over them. As it extended clear around Lakeside Park it must have cost quite a sum of money. Then the first one of the clippings tells us that *200 policemen* were

employed to keep the small boys who could not raise half a dollar from crawling under, and getting a glimpse of this wonderful flying-machine. At the gateway we were further informed that the fifty cents entitled us to only a seat on the side-hill. If we wanted to go down near the machines and get a view of their construction, it would cost another half a dollar. But even after we had paid the fifty cents, or had even got inside, we were not furnished a program. The program agents were exceedingly busy all during the entertainment in holding said program under the noses of the people, and telling them they could not understand the flying-machine unless they had a program. The program cost ten cents. One of the clippings above tells us that 30,000 people were expected to pay fifty cents each, or a dollar each, and then a dime more for a program. Well, perhaps I would not have said anything about the ten cents for the program were it not for the clips all the way through it at the Wright brothers. Here is a sample of them:

It takes the combined efforts of a dozen men to haul the Wright flyer around on its cumbersome, wide-tired wheels and adjust it on the starting-rail before it is as nearly ready for a flight as is the Curtiss machine at all times.

The Wrights are content, on the other hand, with a machine which trundles along at forty miles an hour, and which must either return to its starting-rail before flying again, or else have the starting-rail brought to it.

Let us stop and consider a minute. The advertisement says there were to be four machines on the ground, and seven different aviators were advertised to make flights. We got our seats about one o'clock — the time the flights were advertised to begin. After an hour or more, two machines were run out of the tent. After trying one of the two for about half an hour, and failing utterly to make it get off the ground, they confined their attention to the one remaining machine. During the afternoon this one machine made four flights of three to five minutes each. There were no trials for duration, no trials for altitude, no speed contests, no flights with passengers, and no feats to compare with the ones the Wright students made on the afternoon I visited them. In fact, the whole afternoon seemed to be spent in fussing with the machines to make them go. After it got so near dark that it was difficult to see, I am told that a machine made a flight over the lake; and it seemed to me that the four brief flights I witnessed were purposely kept near the ground so people outside of the canvas inclosure would be unable to get a glimpse of them. I suppose the seats on the side-hill would hold, say, 20,000 persons; but I felt glad to notice that only a small part of the seats were occupied. Huber said that, the day before, the seats were nearly all filled; but instead of following the advertised program, *one machine* made quite a few brief flights of four or five minutes each. It certainly *was* a grand sight, and worth going miles to see, especially when that one machine ran along the smooth ground and gradually climbed up into the air. But what a poor tribute, to put it mildly, these people were paying (I do not know exactly who was responsible for it) to the Wright brothers who first demonstrated to the world that a machine could be *made* to climb up into the air without any balloon at all — what a *poor tribute*, I say, to pay, to have a man around peddling these programs containing such matter as I have quoted; yet the vender of those leaflets actually pushed them under our noses while the machines were leaving the ground. He got in my way so many times I was sorely tempted to push him over down hill, especially after reading what they said about the Wrights.

Let us now take that up for a minute. It *never* took a dozen men to haul around the Wright flyer, even in their first experiments. I know, for I was there; and at the very time this statement was made, it did not take any men (or boys either) to get the Wright flyers up to the starting-place. The aviator just starts his engine, and the propeller which carries it over the ground or through the air takes it up to the starting-point, even if it is *up hill*. The Curtiss crowd, or whoever it was, kept that crowd of 30,000 people, more or less, waiting while a couple of men *ran themselves out of breath* to help get the machine back to the tent for more gasoline. Why in the world he did not put on his propellers and *run* back I could never tell. The Wright brothers have not used a starting-rail this season, and perhaps not last season nor the one before that. Several times they have been asked or have been offered money to go into the "show business;" but they have always declined, and God will honor them for it, even if the people do not; and I believe, too, they have refused to *sell* machines to those who wanted to go into the "show business." I have been informed on good authority that Glenn H. Curtiss visited the Wright brothers before he made a flying-machine at all. They extended to him every courtesy, and permitted him to look their machines all over at his leisure; but it would seem that, as soon as he left, he copied their machine as near as he could without too flagrant an infringement on their patents. At present I know nothing about the suit for infringement. God

forbid that the "graft business" or any thing like it should be permitted to go any further in the field of aviation. Flying-machines are a gift from God to his children of this new century; and it ill becomes us to use this gift for taking the money from our hard-working people, especially taking the money and *then* not furnishing the entertainment that was promised and paraded through all the papers. ...

Later. — I notice by the Cleveland *Plain Dealer* that they have just had *another* aviation on Sunday (or tried to) at Belmont Park, Long Island. I will make just two clippings from the account. The first is a sentence from the opening of a long article:

There were two smash-ups, Oct. 23, no flights, and 7500 disappointed spectators at the second day of the international aviation meet at Belmont Park, Long Island.

And here is the concluding paragraph:

The Wright team, Hoxsey, Brookins, and Johnstone, were all willing and anxious to fly; but Wilbur Wright allows none of his machines to go out on Sunday; and, although the management pleaded with him over the telephone, he remained obdurate. At 4 o'clock the events for the day were definitely called off. ...

▪ The interval of time between February 15, 1911, and August 1, 1911, is characterised by several texts in *Gleanings* which mention the two inventors in various circumstances, some of them quite funny. Here is a commented list of all these articles:

- 1) "Sunday Papers, E. G. Lewis, Etc." (*Gleanings*, February 15, 1911, p. 119) starts with a letter addressed to Amos Root by a woman who considered the "*funny sheets*" of the *Sunday and daily papers* had a *ruinous effect upon the minors*. Root agreed that the *very worst and most mischievous things somehow seemed to find a place in the Sunday daily* and, to illustrate his statement with an example, he presented the case of a misleading Sunday article which made him believe a large number of flying machines were competing at the 1904 St. Louise exposition. After forwarding the paper to the Wrights he was informed by them that *no such machines were on exhibition at St. Louis, and never existed at all except in the imagination of the reporter who was paid for "telling lies"*.
- 2) A short paragraph in *Gleanings* (March 15, 1911, issue, p. 160), which belongs to an extensive article signed Dr. C. C. Miller, quotes a text (ALIN CAILLAS, *L'Apiculteur*, p. 464) with some calculations, based on pure assumptions, regarding the distance covered by a bee each day and the total length traveled by the bees of a colony to make a certain quantity of honey. At one point in the paragraph a remark about the two Daytonians is made: "*As flyers, the Wright brothers are not in it with the bees.*" which has an unclear meaning. An interpretation would be that the two inventors did not fly as often as a bee.
- 3) In another column ("The Question of a Winter Nest and Its Relation to Locality", *Gleanings*, March 15, 1911, p. 191) Root just made this joke: "*I want to whisper a word to my good friends the Wright brothers. A year or two ago they made some experiments on a craft partly in water, and partly in air. Well, my ducks are experts in that trick.*" As an explanation, the two inventors publicly tested a hydroplane (without wings) in March 1907 ("Newest Invention of Wright Brothers Will Carry Their Aeroplane on Water", *Dayton Herald*, March 21, 1907).
- 4) The April 1, 1911, issue of *Gleanings*, on page 198, contains a passage signed by a certain Mrs. H. G. Acklin, of Glendora, California, who, apparently talking seriously, asked the editor of *Gleanings* to tell the Wrights to perfect their flying machine so that *moving bees, supplies, and honey, to and from mountain canyons, by air, would be feasible*. As a remark, Root had already come with a similar idea in the article "Flying Apiaries" (*Gleanings*, May 1, 1907, p. 620).
- 5) Another text that contains some references to the Wrights is "Potatoes Shipped From Florida To Alaska" (*Gleanings*, August 1, 1911, p. 478). A newspaper article about an order, coming from Seattle, for three railroad cars of Hastings potatoes grown in Florida which were finally to be shipped to Alaska, triggered in the mind of A. I. Root another unrealistic application of the flying machines. Also he realized it would take some time, he still had a faint hope to see potatoes delivered by plane from one extremity of the United States to the other.

1911-02-15, "Sunday Papers, E. G. Lewis, Etc.", *Gleanings*, p. 119

SUNDAY PAPERS, E. G. LEWIS, ETC.

Mr. A. I. Root. — As a reader of Our Homes I make bold to write you. I find many helpful things in your sermons; but I am just wondering why you do not give a sermon

on the “funny sheets” of our Sunday and daily papers as to their ruinous effects upon the children of our land. ...

I have been much interested in what you have had to say about E. G. Lewis and his “League.” I am a member, “full paid,” of the League, and altogether have forwarded him about seventy dollars. ...

But I have just been wondering what my duty might be. To tell the truth, I have lost faith. ...

With best wishes for you and Mrs. Root, and trusting you may reach your one hundred years,

I am MRS. JESSIE BAIRD.

Elm Grove, W. Va., Oct. 21.

My good friend, I have been pained for years whenever I have picked up or examined one of the average Sunday daily newspapers. ... I have several times commented on the fact that the very worst and most mischievous things somehow seem to find a place in the Sunday daily. During the St. Louis exposition a daily came out giving an account, with pictures, of the different flying machines competing for prizes. The statement was given with date, residences of the inventors, etc., in such a way that I was myself completely fooled. I submitted it to the Wright brothers, and they at once informed me that no such machines were on exhibition at St. Louis, and never existed at all except in the imagination of the reporter who was *paid* for “telling lies,” and perhaps paid *extra* for doing it on *Sunday*. ...

I am very glad to get so good a report concerning the Lewis Woman’s League; but I am glad, *also*, that you have refrained from making a further investment.

1911-03-15, By Dr. C. C. Miller, Marengo, Ill., “ALIN CAILLAS, *L’Apiculteur*, p. 464, estimates that a bee carrying .0007 oz. of honey at a load will make 12,632 trips”, *Gleanings*, p. 160

ALIN CAILLAS, *L’Apiculteur*, p. 464, estimates that a bee carrying .0007 oz. of honey at a load will make 12,632 trips to fill a section 4 inches square and 1 inch thick. If it average 5/8 of a mile to the trip, it will travel as much as a third of the way around the world. In a colony of 120,000 bees, if 80,000 are fielders, and each one makes 10 trips of 5/8 of a mile daily, the total travel for the day will be more than twice the distance to the moon. As flyers, the Wright brothers are not in it with the bees. [If a bee carried .0007 oz. of *nectar* it would have to make nearly twice 12,000 trips in order to make enough honey to fill a section 4 inches square and 1 inch thick. — ED.]

1911-03-15, “The Question of a Winter Nest and Its Relation to Locality”, *Gleanings*, pp. 190-191 (p. 191)

THE QUESTION OF A WINTER NEST AND ITS RELATION TO LOCALITY.

... There have been no more aviation experiments up to date. They evidently think *aquatics* preferable.

Right here I want to whisper a word to my good friends the Wright brothers. A year or two ago they made some experiments on a craft partly in water, and partly in air. Well, my ducks are experts in that trick. ...

1911-04-01, By Mrs. H. G. Acklin, Glendora, Cal., “In looking at that picture on page 628 of the Oct. 1st, 1910, issue, I am reminded very forcibly that the Wright Bros. ought to perfect their flying machines”, *Gleanings*, p. 198

In looking at that picture on page 628 of the Oct. 1st, 1910, issue, I am reminded very forcibly that the Wright Bros. ought to perfect their flying machines so that moving bees, supplies, and honey, to and from our mountain canyons, in that way, will be feasible. Just think what a boon a safe flying-machine would be to California beekeepers! Last winter nearly 200 colonies of bees, including many fixtures, were moved from Corona to Glendora; and the trials and tribulations of that moving expedition were something awful. Part of the bees had to be unloaded before the last stiff grade into the canyon could be made, although there were four horses to each load. Just imagine, if you can, the vast difference there would have been in moving by aeroplane — no roundabout roads to follow, no grades to overcome, only straight sailing and landing at the right spot while it was still daylight. No danger of the airship getting stung, so plenty of time could have been taken to have unloaded the bees on their proper stands, instead of setting them down anywhere to be shifted later. But this is only one of the many instances in which a reliable flying-machine would come handy for California bee-keepers; so, won’t you please, Mr. Editor, write the Wright Bros. a letter requesting them to “hurry up”?

1911-08-01, “Potatoes Shipped From Florida To Alaska”, *Gleanings*, p. 478

POTATOES SHIPPED FROM FLORIDA TO ALASKA.

We clip the following from the Jacksonville, Fla., *Times-Union*:

The Hastings potato-growers closed the most prosperous year they have known, Wednesday of last week. About 1200 cars were shipped from the entire section. Something of a sensation was created in the produce world by an order from a Seattle firm for three carloads of Hastings potatoes which they wanted to fill an order from Alaska — one extremity of the United States supplying another with this delicacy.

I am very glad to know that raising Irish potatoes for the early northern markets is getting to be a great industry in Florida. ... When we get to sending potatoes by the Wright flying machines from Florida to Alaska I will give a write-up of the event — that is, if God permits me to live long enough.

▪ The November 1, 1911, and March 1, 1912, issues of *Gleanings* contain two articles about the *powerless flying-machine* of Orville Wright who *had left the ground on a glider, without any power whatever, and had gone up in the air and had remained stationary for almost ten minutes*. Root did nothing else but to repeat a story run by the newspapers of the time. An example of column announcing the great achievement of the younger brother is “Remains Almost Stationary in Air. Orville Wright Goes Up in Glider in Fifty-Mile Gale.” (The Times Dispatch, Richmond, Virginia, October 25, 1911, col. 3, p. 1) which talks about O. Wright who drove a glider for a record time of 9 minutes and 45 seconds, on October 24, 1911. However, there is no word about the presence of some official witnesses able to certify such a feat.

Wilbur Wright, who was not involved in the trials as can be seen from his October 27, 1911, letter sent to L’Aérophile, *had heard no word himself from his brother regarding his experiments in Kitty Hawk and had not the real facts himself*, also he recognised in the newspaper reports a mixture of *actual glides and many fanciful stories which he readily detected as probably fabrications*. Even for W. Wright, it was difficult to extract the truth from the media accounts.

1911-10-25, “Remains Almost Stationary in Air. Orville Wright Goes Up in Glider in Fifty-Mile Gale.”, The Times Dispatch, Richmond, Virginia, October 25, 1911, col. 3, p. 1

REMAINS ALMOST STATIONARY IN AIR

Orville Wright Goes Up in Glider in Fifty-Mile Gale.

HIGHLY PLEASED WITH EXPERIMENT

Its Success Is Declared to Mark Long Step Forward in Science of Aviation Toward Solving Problem of Preserving Equilibrium of Heavier Than-Air Machines.

Kill Devil Hill, N. C., October 24. — In a fifty-mile gale to-day Orville Wright went aloft and remained virtually stationary in his glider, with which he is conducting experiments in aerial stability. He was up nine minutes and forty-five seconds, and maintained an altitude of approximately 150 feet.

The record-breaking flight was the seventeenth of a series that began to-day when the rain ceased.

The first glide lasted only fifty-four seconds, each lengthening until the final one. The success of the experiment is understood here to mark a long step forward in the science of aviation, and to point the way toward solving the problem of automatically preserving the equilibrium of heavier-than-air machines.

When Orville Wright and Alexander Ogilvie, the English aviator, brought out the machine for the initial flight, the wind gauge showed that the gale was thirty-five miles and freshening. Sand carried by the wind pelted the aviators, the tiny particles cutting like small shot.

In the opinion of the experimenters, no more trying weather conditions under which to make the test of the machine could be found. The glider was equipped with a rear rudder of twenty four feet spread. In front, to preserve the balance, a ten-pound bag of sand, was swung on the end of a rod extending eight feet in front of the aviator’s seat. The ailerons, or balancing wings, on the sides of the machine, were adjusted, and Orville Wright lifted himself into the seat.

Soars like a bird.

"Let it go," he shouted Lorin Wright and Ogilvie thrust the glider into the face of the rising gale and it shot up.

Again and again this was repeated, each flight becoming lengthier, until for almost ten minutes Wright soared like a brooding buzzard on the rush of a fifty-mile gale. Ogilvie made several brief flights at the close of the day, but none even approximated the one made by Wright.

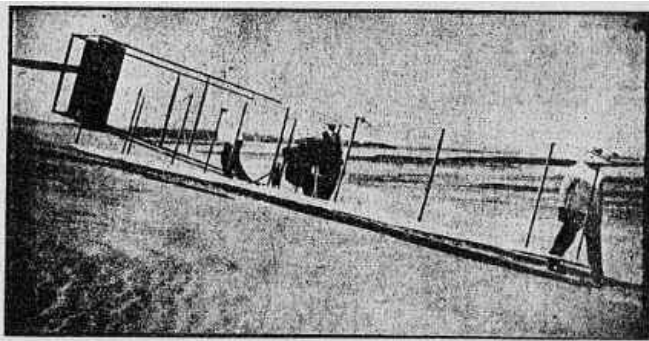
It was apparent that the maintenance, poise and balance rested as much on the ability and skill of the aviator as upon the mechanical contrivances by which the Wrights hope to minimize the perils of flying.

Orville Wright admitted his satisfaction with the results, and declared the conditions under which the flight was made were unusually severe.

"There were more different and differing air currents up there," he said, "than I have ever experienced before. It was a novel and exciting experience."

Wright expects to continue the flights to-morrow.

WRIGHT BROTHERS' NEW GLIDER AND PARTY ENGAGED IN TESTS



Without the aid of a motor or other artificial power, the Glider can be driven higher into the air than the elevated point from which the glide is made. The controlling apparatus has been simplified and improved so that the control of the new machine is nearly perfect.



Orville Wright and Alexander Ogilvie, who are testing the new Gilder at Kill Devil Hill, N. C. In the picture, from left to right, are shown Loren Wright, a brother of the inventor; a newspaper correspondent, Orville Wright, Loren Wright's son Horace, and Alexander Ogilvie.

1911-11-15, "Les expériences de planement des Wright", L'Aérophile, November 15, 1911, p. 536

THE WRIGHT COMPANY

Dayton, Ohio

October 27 1911

Dear Sir,

I have had no word myself from my brother regarding his experiments in Kitty Hawk but I expect to see him home within a few days. He will probably give out a statement when he returns. The newspaper reports of the actual glides have been supplemented with many fanciful stories which I readily recognize as probably fabrications, but I have not the real facts myself as yet.

Yours truly,

Wilbur Wright.

1911-11-01, "The Wright Brothers up to Date, and Something About Flying-Machines", Gleanings, p. 674

THE WRIGHT BROTHERS UP TO DATE, AND SOMETHING ABOUT FLYING-MACHINES.

... GLEANINGS was the first periodical in the whole wide world to announce the Wright brothers had made a flight of something like a mile, and whirled round and come back to the place of starting. Well, we have wireless telegraphy, fireless cookers, fireless brooders for chickens; and a fireless incubator is not exactly in sight, but it is under way. And now it is my privilege to announce — that is, to the best of my belief — that flying-machines will in time be as plentiful as automobiles. Perhaps I shall be dead and gone, however, before that happens. But there is still one thing more coming. With the fireless cookers and wireless telegraphy we are going to have powerless flying-machines. Orville Wright has already left the ground on a glider, without any power whatever, and has gone up in the air and remained stationary for almost ten minutes. Perhaps he is away up in the clouds by this time if a merciful Providence has spared his life* to go through with these daring experiments.

... Well, the Wright brothers have only to acquire sufficient skill to find these ascending currents of air; and after taking advantage of these they can get to a sufficient height, and from this point they can glide down hill or go anywhere they wish to; for aviators frequently shut off the engine when up at a great height, and go many miles without making any use of their power whatever. A glider without any engine or propellers will be very much lighter. ...

* Please notice the frequent losses of life among aviators are all or nearly all with other machines than those made by the Wrights.

▪ A last word about the November 1, 1911, text would be that the old aviation enthusiast used it, like many other of his columns, more as a pretext for stressing again that "*GLEANINGS was the first periodical in the whole wide world to announce the Wright brothers had made a flight of something like a mile, and whirled round and come back to the place of starting*".

In "Fireless Cookers, Fireless Brooders, etc., and, Finally, the "Fireless Aeroplane"" (Gleanings, March 1, 1912, pp. 147-148) Root comes back to the topic "*fireless aeroplane*" due to a short text, he had read in the *Cleveland Plain Dealer*, which sounds more like a joke. Even if he realized the paragraph could have been just *newspaper pleasantries*, the old businessman expressed his intention *to go and see that "fireless" and then tell his readers more about it*. Another thing that should be mentioned is that the Wright brothers and their sister had not yet completely forgotten their friend from Medina because Root thanked them, in the same article, for their Christmas greeting sent *about the first of January 1912*.

"Chicken Thieves; What Shall We Do To Protect Our Valuable Stock From Their Depredations?" (Gleanings, March 15, 1912, pp. 182-183 (p. 182)), also starts with a totally discouraging title, contains an information of interest because, at one point, the old entrepreneur and apiarist affirms that *when he was witnessing the early experiments of the Wright Bros. he boarded with a farmer*. In a later article, "Aviation and Stimulants. Saloons and the "Chicken Business." " (Gleanings, February 1919, pp. 110-112), Root gives further details saying that in *that eventful summer, the farmhouse where he had board and lodging was kept by a renter by the name of Beard. Nights and mornings, before the Wright brothers got around, he became quite well acquainted with Mrs. Beard who was an invalid suffering from lung trouble*. In a letter to his friends in Dayton, written between the 22nd and 26th of September 1904, the old beekeeper wrote that *Mrs. Beard had promised to take care of his wife. Root wanted to have his wife enjoy with him that wonderful creation of the Wright brothers*.

All these represent evidence that, in the summer of 1904, the importunate aviation enthusiast was the guest of a person who lived close to the place near Dayton where the two brothers performed

their experiments. Again there is no word from Amos Root regarding the flights he saw that summer. “*Early experiments*” does not automatically mean a plane traveling through the air.

A. I. Root himself does not mention Mr. or Mrs. Beard as witnessing any flight but in a letter dated December 6, 1904, and addressed to the Wrights he expresses his satisfaction that “*Orville went around four times without stopping on Dec. 1st.*”, an information he had obtained from *Torrence Baird* (identified as Torrence Beard, the son of the farmer David Beard), a man Root had asked to keep him updated, regarding the flights of the two inventors, with messages written on postal cards.

However, D. Beard appears as an eyewitness in a French article (“*Nouveaux Détails sur les Frères Wright et Leur Aéroplane*”, *L’Auto*, Paris, December 31, 1905) which is a translation of a letter written by Harry M. Weaver the brother in law of Frank Samuel Lahm, an American aeronaut living in Paris. At the request of Lahm, Weaver, who lived in Ohio, went to Dayton on December 3, 1905, to investigate the claims of the two inventors, especially the credibility of the spectacular series of flights that had ended on October 5, 1905. At one point he was brought by Orville Wright to a person identified as D. Beard who lived close to the field where the tests had been made. David Beard told Weaver about *experiments that had been taking place in front of his eyes for a long time and assured him there was no doubt regarding the flights which he had remarked often and especially the series that ended on October 5, 1905.*

This is the relevant fragment from the French article:

Pour des raisons faciles à comprendre, les frères Wright ont tenu ces expériences aussi secrètes que possible. Les voitures du tramway électrique passent toutes les trente minutes; ils ont arrangé leurs vols en conséquence et ont ainsi pu éviter d’être remarqués des voyageurs. Les fermiers d’alentour sont les seuls qui aient eu l’occasion de bien voir les expériences; après deux ans d’essais, ils étaient blasés là-dessus.

M. D. Beard habite l’autre côté de la route de Springfield, près du champ d’expériences; c’est chez lui que M. Wright m’a amené d’abord. J’ai trouvé un homme intelligent, âgé de soixante ans. Il m’a parlé des expériences qui se passaient sous ses yeux depuis longtemps, et m’a assuré qu’il ne pouvait pas y avoir de doute quant aux vols. Il les a souvent remarqués et spécialement la série qui a pris fin le 5 octobre de cette année. (“*Nouveaux Détails sur les Frères Wright et Leur Aéroplane*”, *L’Auto*, Paris, December 31, 1905)

Neither the postcards of T. Beard, sent to A. I. Root, nor the declarations of his father, D. Beard, in front of H. M. Weaver represent solid evidence the Wrights had flown. Both of them look like fraudulent witnesses instructed to tell lies. It is self evident that O. Wright would have brought Weaver in front of D. Beard only if he had been sure that this farmer was to confirm the flights. Also, A. I. Root would have been directed to lodge in another location in 1904 had the Wrights have been uncertain about what the Beard family would tell him about them.

Coming back to *Gleanings*, its April 1, 1912, issue contains on page 216, inside a long *Our Homes* editorial (pp. 215-218), these lines: “*We have ... the flying-machine that the Wright brothers are still pushing further and further, that is to be the great excitement of the whole wide world in just a few weeks more*”. It is not clear what specific thing was in the mind of Root. He could have referred to the *powerless or fireless aeroplane* of O. Wright.

1912-03-01, “*Fireless Cookers, Fireless Brooders, etc., and, Finally, the “Fireless Aeroplane”*”, *Gleanings*, pp. 147-148

FIRELESS COOKERS, FIRELESS BROODERS, ETC., AND, FINALLY, THE “FIRELESS AEROPLANE”

...Now about the fireless aeroplane: My attention has just been called to it by the following, which I clip from the *Cleveland Plain Dealer*:

The Wright brothers announce the completion of a fireless aeroplane. Anybody can fly now — there’s no danger of being drowned if one wears a cork belt, and why be hanged if you have a good lawyer? And now that one can’t get burned up while flying, immortality is assured.

We don’t know how much of the above is newspaper pleasantries and how much is truth; but the clipping calls to mind that I have neglected, until just now, to thank the kind friends who sent Christmas greetings to Mrs. Root and myself about the first of the New Year; and, while thanking you all, I want to tell you that I feel a lot of pride in pointing to a neat booklet on our center table that contains inside the following:

1911 — 1912

A MERRY CHRISTMAS AND A HAPPY NEW YEAR

WILBER WRIGHT,
ORVILLE WRIGHT,
KATHERINE WRIGHT.

When I go back to Ohio in May I am planning to go and see that “*fireless*” and then I can tell you more about it.

1912-03-15, “*Chicken Thieves; What Shall We Do To Protect Our Valuable Stock From Their Depredations?*”, *Gleanings*, pp. 182-183 (p. 182)

CHICKEN THIEVES; WHAT SHALL WE DO TO PROTECT OUR VALUABLE STOCK FROM THEIR DEPREDACTIONS?

... Let me here repeat a little story I told you some years ago. When I was witnessing the early experiments of the Wright Bros. I boarded with a farmer whose wife was on a decline with the great white plague. To prolong the life of the poor woman (and they were poor financially) the doctors advised poultry-keeping in order to have her in the open air as much as possible. She became quite enthusiastic, succeeded with the poultry, and was improving in health, when one morning as she went out to liberate her pets that she had labored so hard for, to get them up to broiler age, she found every chick gone, and just the still empty coops. The shock and disappointment were so great she went into a decline, and not long after went down to her death. ...

1912-04-01, “*Our Homes*”, *Gleanings*, pp. 215-218 (p. 216)

OUR HOMES

A. I. ROOT.

... What is to be the outcome of the great inventions and discoveries that are now coming so thick and fast? We have wireless telegraphy, the dictaphone (that I am using now while I am talking to you), the flying-machine that the Wright brothers are still pushing further and further, that is to be the great excitement of the whole wide world in just a few weeks more, and other discoveries that are coming thick and fast. The question naturally arises, “*What about the future, and what is coming next?*” ...

“Why, my good friend, can’t you stop long enough to look pleasant, and thank God for having permitted you *just now* to make the first flight since the world began, turning corners, and coming around to the stopping-place?”

▪ The death of Wilbur, on May 30, 1912, determined his old friend to dedicate two articles to him in *Gleanings* for June 15, 1912. The first, “*Wilbur Wright; What our President and Army Officers Have to Say in Regard to His Untimely Death.*” (*Gleanings*, June 15, 1912, p. 21), is simply a series of quotations with the words of three main politicians of the time, including the US president, William Howard Taft, the only one who considered W. Wright as “*the father of the great new science of aeronautics*”. The secretary of war, Henry Lewis Stimson, referred to him as “*being probably the foremost exponent of aviation on this side of the Atlantic*” and major general Leonard Wood, chief of staff of the army, regarded the same inventor as “*the foremost figure in aviation in America*”. While Wood saw Wilbur as the most important aviation pioneer in the US (he did not say “*in the world*”), Stimson was not even sure the first born of the two brothers deserved such an honour inside the United States. He used the word “*probably*”.

The other article ("Our Homes. Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio.", *Gleanings*, June 15, 1912, pp. 385-387) is more about A. I. Root who again tries to make credible his January 1, 1905, story by repeating that *it was his privilege to be present when the Wrights made their first flight of a mile or more, and turned a circle and came down to the place of starting*. The text is largely a recap of what Root had already said on various occasions, in *Gleanings*, about his pre-1908 visits to Dayton and the place where his younger friends performed their experiments.

From the first paragraph, the readers of his periodical are reminded that *in the March 1st issue of GLEANINGS for 1904 Amos Root first made mention of the two men, Orville and Wilbur Wright*. He continues by stating that *he made many visits to the field just outside of Dayton, where they were experimenting during the summer of 1904*, without explicitly saying when those visits took place. For a while he was not allowed to publish anything regarding the activity of the two brothers but *finally, in the issue for Jan. 1, 1905, of Gleanings, he was given permission to write up what he had witnessed*. Root does not forget to stress that his article was *the first detailed account given in any periodical in the world of the experiments and final success of the Wright brothers*. However, it should be noted that he adds an "if I am correct" which means he wanted to vaguely suggest he was not 100% sure. Root was perfectly aware the credibility of his January 1, 1905, story had been quite low because this is what he tells us: "*My write-up of the event was so astonishing that many people thought it was a piece of fiction to advertise our journal; and even so good an authority as the Scientific American did not see fit to credit my account*". Root continues by explaining the *Sci. Am.* finally *apologized for its want of faith at first, in his plain and simple story*, but he does not bring any evidence.

A large part of the article is dedicated to the September 20, 1904, flight. The old Amos presents a more detailed version of the event but he omits to say what date it happened. He remembers that *one day he came on the ground just as the Wrights had succeeded in making the plane turn a curve so as to fly at right angles to its course*. This is a flight A. I. Root does not say he witnessed.

As a parenthesis, Wilbur Wright's 1904-1905 notebook, pp. 18-19, contains information about two flights, both of them performed by the elder brother on September 20, 1904. The first one, marked no. 51 in a list of many pages, is 2520 ft in length and its trajectory has the shape of an S. The path followed by the second flight (no. 52), of 4080 ft, looks roughly like a circle. However, Wilbur's notebook does not confirm in any way Root's account regarding the flights of September 20, 1904. The old Amos and the two Daytonians exchange many letters during 1904, they also met, and so there is no guarantee that a copy of Wilbur's notebook, page 18 and 19, containing data about two fictitious flights, did not reach the old beekeeper who, based on the information available there, wrote a piece of fiction.

Coming back to the June 15, 1912, article, we learn that Root found the two inventors preparing for their second flight of the day. They were about to abandon because of a thunder cloud but the old aviation enthusiast suggested to them that *they would have plenty of time to get around and get the machine safely housed*. Finally, Wilbur decided to fly, *he turned the curve at the end of the field, as before, and turned still another curve, and came around to the starting place*. Instead of landing, the plane unexpectedly continued his course in a straight line, a thing that alarmed Orville, Root and "the mechanic", a person who is not named but can be identified as Charles Edward Taylor, the only employee of the Wrights. (According to the notebook that was already mentioned, two people, identified by their initials OW and CET, timed Wilbur at 1 min 35

2/5 sec and 1 min 35 1/5 sec, respectively.) This tense situation did not last too much because *the engine stopped, and the machine alighted as safely and as gently as a feather*. The old Amos and the other two people, who had watched the demonstration, hurried to the place where the plane had come to rest but, as he was considerably older than Orville and the mechanic, he was left behind and when he reached that location he found the two brothers arguing, the elder (the pilot) blaming the younger for the fact he was not been able to stop the engine *when he came back to the starting-place*. A. I. Root intervened and with a hand on Wilbur's shoulder told him that he should *thank God for having permitted him to make the first flight since the world began, turning corners, and coming around to the stopping-place*. Only then the elder brother realized the importance of the moment.

It is not difficult to realize that Root, a man who filled his journal with the pronoun I, simply speculated the death of Wilbur to emphasize again, in a moment when nearly all readers of his journal had heard about this aviator from Dayton, that he was the first witness (other than the Wrights and their employee) of a flight in a circuit made by a man carrying plane.

Another episode mentioned by the old beekeeper refers to one of his visits that took place after the Wrights *succeeded in getting the machine to make circles in the air as long as they wanted to stay up*, from which it can be concluded the event happened after October 5, 1905. Root met not only the two brothers but also Octave Chanute. The three *were discussing finances*. The old aviation enthusiast recalls that O. Chanute "*thought a million of dollars would be needed to put the invention on a sound financial footing*" and also that Wilbur's answer was, with approximation:

"Mr. Chanute, I have no ambition to be a millionaire. So far as I am concerned, I think a hundred thousand dollars would be all I should ever have use for in this world."

Wilbur might have made such an affirmation because the Agreement between the Wright Brothers and Arnold Fordyce (December 30, 1905) specified that their plane would be bought by France for the sum of 1,000,000 francs (200,000 dollars – not so far from that "modest" one hundred thousand Wilbur talked about in the presence of A. I. Root and O. Chanute) if some conditions were fulfilled.

Root does not explicitly say when he saw O. Chanute but in "Our Homes" (*Gleanings*, August 15, 1909, pp. 515-518 (p. 516)) he states he met the mentor of the two brothers a few years before July 30, 1909. The June 15, 1912, and August 15, 1909, articles might refer to the same visit.

Another episode, mentioned by the old beekeeper, happened *one day they were all out in the field with the machine while there was a cool northwest wind*. Unfortunately, the old Amos misses again the opportunity to precisely locate in time that event but from "Our Homes" (*Gleanings*, April 1, 1905, pp. 373-376 (p. 375)) it is clear the incident happened in the autumn of 1904. Root just repeats what he already said. *Wilbur was in his shirtsleeves* and when Root told him he would catch a cold he answered: "*That is not the way people catch cold as a rule*". According to the elder of the two brothers, *people catch cold, by keeping themselves shut up in hot and poorly ventilated rooms and perhaps they may take cold by going out from such places*.

Another thing the old beekeeper talks about is the request of the two Daytonians, made *during his first visit, and while the Wrights were making application for a patent, regarding certain things Root was asked to avoid mentioning in print*.

A paragraph of the June 15, 1912, text is dedicated to the honesty of Wilbur. On his last visit, that was described in "Then and Now. The Wright Brothers and Their Flying-machine up to Date." (*Gleanings*, September 15, 1910, pp. 602-604) Root, after

witnessing flights performed with a Wright machine, asked if he could present in his journal what he had seen. Wilbur replied: “*Mr. Root, tell any thing you like, providing you tell the truth, and only the truth.*”. Root explicitly quotes his Sept. 15, 1910, article and the answer of the elder brother is taken directly from that issue, so it brings nothing new. In the next sentence, the old Amos wonders *how many proprietors of the American establishments would have instructed a reporter of a magazine to avoid exaggeration in his relation of what he had seen.* In the opinion of the old beekeeper, the remark of Wilbur was a confirmation of his sincerity. However, another more logical interpretation can be offered. The elder of the two brothers knew that his older friend had the habit to lie in his write-ups and as long as, in 1910, he no longer needed overstatements about his planes and activity in general, he stressed that Root should not depart from the line of truth.

The old Amos also emphasises that *it was his pleasure several times to share Wright's noonday lunches put up by that good sister Katherine.*

As in other articles, Root does not forget to prize the respect Wilbur paid to the holy day of the week by refusing to fly or even exhibit *the machine on the generally recognized Sunday of the world.* He also highly appreciated the invariable reply of the Wrights: “*Gentlemen, we are not in the show business.*”, each time they were asked to *exhibit their machine at State fairs or great expositions*, even if big sums of money were offered to them. Root concludes by remarking that “*the years they labored in perfecting their invention were not for the purpose of making money. It was to bless humanity.*”. This is a totally personal and not supported by evidence opinion. If the Wrights had not been interested in getting rich, and their only desire had been to bless humanity, they would have given their invention to the world for free. Instead they just repeatedly claimed, starting with December 17, 1903, that they had flown in 1903, 1904 and 1905, making a lot of noise in newspapers. They showed no picture or technical drawing of their powered planes, before 1908, and finally the aviation appeared in France in 1906, without their help.

1912-06-15, “Wilbur Wright; What our President and Army Officers Have to Say in Regard to His Untimely Death.”, *Gleanings*, p. 21

WILBUR WRIGHT; WHAT OUR PRESIDENT AND ARMY OFFICERS HAVE TO SAY IN REGARD TO HIS UNTIMELY DEATH.

After *Our Homes* was in type I came across the following, which I clip from the Bangor (Maine) *Weekly Commercial*:

DESERVES TO STAND WITH FULTON, STEPHENSON, AND BELL.

Washington, May 30. — President Taft, who presented the medals granted by Congress to Wilbur Wright and his brother Orville, and who had frequently seen Mr. Wright fly, Thursday dictated the following statement:

“I am very sorry that the father of the great new science of aeronautics is dead, and that he has not been permitted to live to see the wonderful development that is sure to follow along the primary lines which he laid down. He deserves to stand with Fulton, Stephenson, and Bell.”

Secretary Stimson said:

“Besides being probably the foremost exponent of aviation on this side of the Atlantic, Mr. Wright was a citizen of whom America may be proud for his manly qualities, his perseverance, modesty, skill, and attention to his profession.”

Major General Leonard Wood, chief of staff of the army, said:

“The death of Wilbur Wright removes the foremost figure in aviation in America. The man has done more for the practical development of aviation along safe and well-thought-out lines than any one else; was a citizen of the best type, and the army has lost a man who taught it most of what it knows of aviation.”

If I am correct, it is almost without precedent to have the President of the United States take notice or make public mention of the death of a comparatively humble citizen.

1912-06-15, “*Our Homes. Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio.*”, *Gleanings*, June 15, 1912, pp. 385-387

OUR HOMES

A. I. ROOT.

The Lord gave, and the Lord hath taken away. Blessed be the name of the Lord. — JOB 1:21. ...

DEATH OF WILBUR WRIGHT, THE OLDER OF THE WRIGHT BROTHERS, OF DAYTON, OHIO.

For the past half-dozen years or so the whole wide world has been discussing and reading in regard to the Wright brothers (and their flying-machines) more than, perhaps, any other two people on the face of the earth. In every clime and in every language people have been eager to learn all about the two young men who have succeeded for the first time in human history in making a machine that would fly, and carry passengers, purely by mechanical means without the aid of a balloon or any thing of the sort. In the March 1st issue of *GLEANINGS* for 1904 I first made mention of the two men, Orville and Wilbur Wright. It was in the fall and winter of 1903 that they first succeeded in applying a gasoline-engine to a gliding machine they had been experimenting with. In the summer of 1904 I wrote the Wrights, asking permission to pay them a visit and witness some of their experiments. This permission was kindly granted; but they preferred that I should make no mention through our journal of what I might see until later on. I made many visits to the field just outside of Dayton, where they were experimenting during the summer of 1904; and finally, in our issue for Jan. 1, 1905, I was given permission to write up what I had witnessed, this being the first detailed account, if I am correct, given in any periodical in the world of the experiments and final success of the Wright brothers.

It was my privilege to be present when they made their first flight of a mile or more, and turned a circle and came down to the place of starting. My write-up of the event was so astonishing that many people thought it was a piece of fiction to advertise our journal; and even so good an authority as the *Scientific American* did not see fit to credit my account, although afterward they apologized for their want of faith at first, in my plain and simple story.

In times past it has been my good fortune to become more or less intimately acquainted with some of God's noble men and women; and I shall always regard it as one of the privileges of my life that I was permitted to become intimately acquainted with these two great characters (and I might say *benefactors*) of the human race. Wilbur Wright, the elder, was a little peculiar. Usually he was rather quiet and taciturn; but when he got going he was quite a talker. There was a peculiar twinkle in his eye, and an expressive working of the muscles of his face when a new idea occurred to him or when he had something pleasant to tell. While the two men worked together in perfect harmony, they often had lively discussions. Sometimes, one would think these discussions were becoming pretty nearly heated ones; but all of a sudden they would both stop and pitch into the work, and perhaps in a little while demonstrate *who* was right and *who* was wrong.

As Wilbur was the older of the two, for a time he seemed to do rather more flying than his brother Orville. I once asked their assistant mechanic which one of the two, in his opinion, was the more expert. He said he could not tell — sometimes one and sometimes the other. They first made quite a good many experiments by simply flying ahead in a straight line. Then the machine at that stage of the invention had to be wheeled back to the starting-place by hand. One day I came on the ground just as they had succeeded in making it turn a curve so as to fly at right angles to its course. They were getting ready to make another attempt; but a thunder cloud loomed up in the west, and they were about to abandon the experiment for the time being. As every thing was all ready for another flight I took the liberty of suggesting that they would have plenty of time to get around and get the machine safely housed before the blow would come up. In thinking of it since, I have considered that it was rather presuming on my part for me, an outsider, to offer such advice. Finally Wilbur, who was, I think, rather more venturesome than his brother, said *he* was ready to try it, and accordingly they started off rather hurriedly. Wilbur turned the curve at the end of the field, as before, and turned still another curve, and came around to the starting place, where we expected him to alight; but to our great surprise and astonishment he went right on, over our heads, and was heading for a lot of telephone wires, thorn trees, etc. The other brother, the mechanic, and myself, were greatly alarmed. It was so long ago that I can not exactly recall the details; but for a time it seemed to us he turned the rudder with the apparent intention of going over the obstacles and out of the field; but when he had sailed high enough to clear every thing the engine stopped, and the machine gradually slid back on the air, and alighted as safely and as gently as a feather, in their own field. We all rushed up to where he stopped, to see what was the matter. As I was considerably older

than the other two, I did not get there in time to see what started the "discussion," but Wilbur was evidently considerably stirred up, and he and his brother were disputing rather hotly as to whose fault it was that he could not get the engine *stopped* when he came back to the starting-place. I finally interrupted the discussion by putting my hand on Wilbur's shoulder and remarking, "Why, my good friend, can't you stop long enough to look pleasant, and thank God for having permitted you *just now* to make the first flight since the world began, turning corners, and coming around to the stopping-place?" He looked at first a little vexed at the interruption, but finally his countenance softened, and that peculiar — I might almost say bewitching — smile spread over his countenance as he put out his hand and said, so far as I can recall, "Why, Mr. Root, I guess you are right; and I *am* glad and thankful that I succeeded, even if I could not get my engine stopped when I wanted it to stop."

I do not remember now what it was that made the engine keep going after the switch was turned off. I only remember that he put the blame on Orville, and I suppose it came about on account of the excitement of the moment in consequence of the thunder cloud, that caused the accident.

Later, after they succeeded in getting the machine to make circles in the air as long as they wanted to stay up, I made them a visit and happened to be there at the same time as Mr. Chanute, a man who had made experiments with gliding machines before the Wright brothers ever took it up. I believe he is still living, and that he is also, perhaps, one of the best authorities in the world on aeronautics. They were discussing finances. Mr. Chanute thought a *million of dollars* would be needed to put the invention on a sound financial footing. I remember I noticed the peculiar twinkle on Wilbur's face as he said something as follows:

"Mr. Chanute, I have no ambition to be a millionaire. So far as I am concerned, I think a hundred thousand dollars would be all I should ever have use for in this world."

And this was characteristic of the man.* When he crossed the water and went over to England, France, and Germany with their invention, crowds followed them everywhere — not only common people but the nobility, crowned heads, kings, and queens came to recognize and do homage to the Wright brothers of Dayton, Ohio. Well, in some foreign lands, as you may know, where they do not know or *care* when Sunday comes, Wilbur always paid respect to God's holy sabbath day, and several times the nobility (and, I think, once or twice members of the royal family, great lords and ladies) wanted to see the Americans and the American flying-machine on Sunday. Now, here comes a true test of courage and of fearless manhood. I use the word "manhood" in the best sense of the word. Wilbur Wright said gently but firmly that they had been taught to "remember the sabbath day to keep it holy," and kindly asked to be excused, not only from making any flight, but from exhibiting the machine on the generally recognized Sunday of the world. He added that, as soon as the day was passed, he and his brother would gladly and cheerfully be at their service. This has been heralded world-wide; and, no matter what *opinions* people may have in regard to sabbath desecration, I think one and all, good and bad, reverence and respect the memory of Wilbur Wright for standing up and living up to his honest convictions. I do not mean that his brother Orville was any less conspicuous in this matter than Wilbur; but Wilbur, being the elder, generally took the responsibility of being spokesman.

During my first visit, and while the Wrights were making application for a patent on their invention, there were certain things I was asked to avoid mentioning in print. On my last visit, Wilbur invited me to go over and see their great factory. This was described on p. 602, Sept. 15, 1910. On starting out I asked if I might be permitted to describe in our journal what I saw. Wilbur replied with that same expressive twinkle, "Mr. Root, tell any thing you like, providing you *tell the truth*, and only the truth." How many proprietors of our American establishments nowadays would instruct a reporter of a magazine (who is writing it up) to avoid exaggeration or overstatement in his relation of what he saw? I mentioned this incident in my talk to our Bradentown Sunday-school, in Florida, and urged the youngsters who were listening to my account of the flying-machine, in the language of our last text, to "*buy the truth and sell it not*."

* In connection with the above I may mention that the Wright brothers were many times offered considerable sums of money if they would exhibit their machine at State fairs or great expositions; but their invariable reply has been, "Gentlemen, we are not in the show business." The years they labored in perfecting their invention were not for the purpose of making money. It was to bless humanity. I suppose they recognized full well that an advertisement saying the Wright brothers would be present with their flying-machine would draw a bigger crowd than the mention of any other two men on the face of the earth. But they have never been and are not now catering to the curiosity

of the crowds that frequent great fairs, expositions, etc. They felt and now feel, as I have tried to express it, that God was calling them in another direction.

One day we were all out in the field with the machine while there was a cool northwest wind. Wilbur was in his shirtsleeves while I, if I remember correctly, had on my fur cap and overcoat. I urged him to put on his coat lest he "catch cold." He looked up to me with one of those smiles I have mentioned, and said, "Mr. Root, I shall not catch cold out here in this breeze. That is not the way people catch cold as a rule. They 'catch cold,' as you express it, by keeping themselves shut up in hot and poorly ventilated rooms; and perhaps they may take cold by going out from such places warmed by artificial heat; but people who live outdoors, as God intended they should live, do not take cold, even if they get to feeling a little chilly."

I believe this was his rule of life. A great strong man, full of life, blood, and energy, has been cut off by typhoid fever; and at least a part of the responsibility rests on you and me. "God will not always chide."

It was my pleasure several times to share their noonday lunches put up by that good sister Katherine. May God bless and sustain her in this great affliction. Well, their food was always plain, wholesome, and in keeping with their ideas about the importance of open air, etc. *Why* should he have been permitted to die when the world needs *such* men so much? "The Lord gave, and the Lord hath taken away."

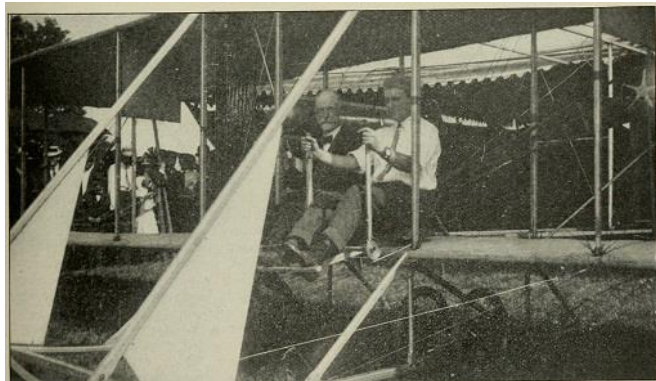
I suppose the whole world knows that, while I write on this 31st day of May, 1912, Wilbur Wright is no more. He died on the early morning of Decoration day; but before the day was fairly closed, messages of condolence and regret came from those same foreign nations where they censured him but a few months ago, because he so firmly, as they put it, refused to fly on Sunday. May God be praised that such a man as Wilbur Wright has lived for 46 years to bless the world. His sad, sudden, and untimely death came from typhoid fever ...

▪ The next article in line is "The Wright Brothers' Flying Machine in the Year 1912" (Gleanings, September 15, 1912, pp. 589 and 593). Some businessmen of Medina decided to bring a Wright plane on the local fairground on the Fourth of July. They were asked to pay \$1000 for three demonstrations with a total duration of no less than 45 minutes. According to A. I. Root, *the flights were a perfect success in every respect*. He was present *during all the flights and preliminaries* and, while the apparatus was standing on the ground, he *had a picture taken of himself, occupying the passenger seat, and the pilot Oscar Brindley*. He further explained that *the Wright Brothers only manufactured the machines, having nothing to do with renting them out for fairtime*.

Root had a long talk with O. Brindley who entirely agreed with him in thinking that there was but little danger of loss of life if the instructions furnished by the Wright Brothers were strictly complied with. To support such an affirmation he presented two examples of flights that ended tragically. The pilots are not named and it is not clear who manufactured the planes. In the first case, a crowd of people pressured an aviator to fly in conditions considered unfavourable by him. In desperation, he took off, had an accident and died. The second example is about a pilot who attempted a dive at great speed with a machine heavier than the ones he had ever operated before. The apparatus had a mechanical failure, near the ground, generated by the shock induced when it received the command to lift its nose up. It crashed and the pilot had the same fate as the first. However, whether the advice of the two inventors could be followed is debatable. Root himself, unwillingly, furnished two examples having Brindley as a protagonist and him as a witness. During one of the flights, a wing touched a telephone wire. Later, the

same aviator failed to get off the ground due to a gust of wind.

1912-09-15, "The Wright Brothers' Flying Machine in The Year 1912. See P. 589", Gleanings, pp. 589 (picture) and 593



An up-to-date Wright Brothers flying-machine. The persons shown in the cut are your humble servant, A. I. Root, and Mr. Oscar Brindley, the aviator See page 593.

THE WRIGHT BROTHERS' FLYING MACHINE IN THE YEAR 1912. SEE P. 589

BY A. I. ROOT

Some time ago a few of the leading business men of Medina became enthusiastic over the idea of having a flying-machine exhibition on our fairground on the Fourth. Correspondence with the people who send out flying-machines brought out the fact that it would cost a good deal more money on the Fourth than later during fairtime. Indeed, the demand was so great for machines on that special day that the best arrangement our people could make would be \$1000 for a man and machine to make three trips — the man to remain in the air not less than 45 minutes all together. The question was whether our county of Medina would turn out in sufficient numbers at 25 cts. admission to make up the thousand dollars. But it transpired that something like 10,000 people were on hand to witness the flights. The flights were a perfect success in every respect. The operator handled his machine with almost the ease that a bird in the air flaps its wings. He went up something like a quarter of a mile, and went off over the country for two or three miles in different directions — executed a variety of sharp turns, dives, etc.

The machine, as you see, p. 589, is made to carry a passenger; but as it requires a longer space to get off the ground with a passenger than our fairground afforded, no attempt was made to carry a passenger. As I was close at hand, however, during all the flights and preliminaries, a request was made that I occupy the vacant seat while the machine was standing on the ground, and have a picture taken of myself and Mr. Brindley. Perhaps I should explain that the Wright Brothers manufacture the machines, but they have nothing to do with renting them out for fairtime, exhibitions, etc. All correspondence in regard to this matter should be directed to The Mercurial Aeroplane and Entertainment Co., 803 Central National Bank Building, St. Louis, Mo.

You will notice the operator has hold of two levers, besides other levers operated by the feet. As it would be inconvenient for him to take his watch out of his pocket, he has a pretty little timepiece strapped to his wrist, as you will notice.

I had a long talk with him during the day, and he entirely agrees with me in thinking that there is but little danger of loss of life if the instructions furnished by the Wright Brothers are strictly complied with. The deaths of at least a part of the aviators have been because they became excited, and wanted to make a display that was evidently unsafe, or started out when the weather was unfavorable. Somewhere out west during a fair, I think it was, the aviator declared it was not safe to undertake the flight just then. But the crowd hooted and jeered, called him a coward, and said "the machine would not fly anyhow," etc. He was a young fellow, and finally, in desperation, he said he *would* fly, even if it broke his neck, and he did. He was killed almost instantly. That crowd was *guilty of murder*. In another case a young fellow

undertook to exploit "sliding down hill on the air," at a breakneck speed, expecting to turn the machine up again when he neared the ground. This time, however, he had a heavier machine than he had ever operated before. He failed to calculate the consequences of a sudden change in direction and the momentum occasioned by the increased weight. The consequence was that the sticks of wood and wires of steel would not stand the shock. The machine was crushed, and he was killed. In one or two cases I have seen the operator smoke a cigarette before starting, to give him courage (?); but I am glad to say that Mr. Brindley, who sits by my side, never touches tobacco nor stimulants of any kind whatever. I know there is quite a mental strain on the aviator because on one occasion, owing to a little gust of wind at an inopportune moment, he failed to get off the ground. On the flight just before this, one of the wings touched a telephone wire. Had the wing been an inch or two closer to the wire the result would have been a smash-up and very likely death to the operator. Well, after this failure to get off the ground he went and lay down on a cot in the tent, and rested some fifteen or twenty minutes while his assistants got the machine back to the starting-point. God forbid that any more lives should be sacrificed through want of care, or a disposition to take risks in showing the wonderful things that this new vehicle or transporter is capable of.

▪ "The High Cost of Living, etc.; Something About God's New and Precious Gifts." (Gleanings, March 1, 1913, pp. 166-168 (p. 166)) and "The High Cost of Living; How our Missionaries May Help to Reduce It." (Gleanings, July 1, 1913, p. 471-472) are two articles having as their central point a new vegetable, for the farmers in the US, called "dasheen". In both texts, the two inventors from Dayton are mentioned in passing.

Root read about this unfamiliar plant, got enthusiastic, ordered samples and finally expressed his intention *to make a present of a dasheen tuber to every reader of GLEANINGS who sent the subscription price for one year.*

The old entrepreneur and beekeeper transformed in farmer started his March 1, 1913, column with a different subject, talking about his Buttercup chickens. One generation, that was three weeks old at the time, *had learned, in order to save the trouble of climbing over a high door step, just to spread their gauzy wings and sail out like a Wright flying-machine, for all the world.*

In the second text (July 1, 1913), Amos Root reproduced a letter of a missionary in South Africa who received *Gleanings* for free and realizing he would not meet the conditions to get automatically a tuber decided to contact the editor of the journal and proposed him a deal, that was immediately accepted with great pleasure. Just to tell who he was, the missionary reminded Root that, due to him, he had been able to meet O. Wright. Here are his words: "*It was through your kindness in sending me a letter of introduction to the Wright Brothers, while I was at home on furlough year before last, that I met Mr. Orville Wright (also father and sister), and saw him fly.*"

1913-03-01, "The High Cost of Living, etc.; Something About God's New and Precious Gifts.", Gleanings, pp. 166-168 (p. 166)

THE HIGH COST OF LIVING, ETC.; SOMETHING ABOUT GOD'S NEW AND PRECIOUS GIFTS.

To-day is January 2, 1913, and so far it has been indeed a happy New Year to me. Let me tell you a few things that have made me happy. On New Year's day a beautiful lot of Buttercup chickens came out of the incubator ... My first brood of Buttercups are now a little over three weeks old; and when I open the door in the morning to let them go out they go out on the wing. The doorstep is a little bit high, so they have learned, in order to save the trouble of climbing over it, just to spread their gauzy wings and sail out like a Wright flying-machine, for all the world. ... Besides, we have a very pretty garden of sweet potatoes, common potatoes, early peas, lettuce, mustard for the chickens, etc. The thing that has made me happy and set me to thanking God most of all, *just now*, is a new vegetable sent out by the Department of Agriculture. I saw it mentioned in some of the rural Florida papers, and so I sent to Washington and asked them if they could furnish me some of the tubers. The night before Christmas, when I went to the

postoffice I found in my box a card saying, "Package too large to go in the box. Present at the office." This was Christmas eve, remember. When I presented my card, a little bag holding perhaps a couple of quarts of something that looked like potatoes was handed me. I at once decided that it was the new "dasheen," and I also decided that, of all the Christmas presents I have had in seventy years, I do not know that I have ever gotten hold of one that I liked more than this little bag of dasheen. ...

In a letter that I have recently received from the Department of Agriculture, they promise to furnish me more tubers if I can make use of them. Now, I tell you confidentially what my plan is. As soon as I can get enough of them I want to make a present of a dasheen tuber to every reader of GLEANINGS — that is, to every one who sends the subscription price for one year. It seems to be more exactly suitable for Florida soil and Florida conditions than for any other part of the United States. ...

1913-07-01, "The High Cost of Living; How our Missionaries May Help to Reduce It.", Gleanings, p. 471-472

THE HIGH COST OF LIVING; HOW OUR MISSIONARIES MAY HELP TO REDUCE IT.

Friend Root: — I presume you will not remember meeting me in Medina some ten or twelve years ago; but knowing that you are interested in our work, and have taken a part in it, I think I may venture to address you as above. It was through your kindness in sending me a letter of introduction to the Wright Brothers, while I was at home on furlough year before last, that I met Mr. Orville Wright (also father and sister), and saw him fly. The fact that GLEANINGS has been coming to me for years I take to be a substantial proof of the A. I. Root Company's interest in foreign missions in general and in our mission in particular. I have read your department with much interest and pleasure; and seeing your interest in every good work I can only regard you as one of our number — a missionary. I have often felt like writing you after reading your kind and helpful messages, but have felt that it would not be wise to impose on your time; but upon reading what you say about the "dasheen" in GLEANINGS for March 1, 1913, and noticing that I am left out of your proposal to send a "dasheen tuber to every reader of GLEANINGS — that is, to every one who sends the subscription price for one year," since I receive it free, I have decided to write to see if I can not arrange to receive a tuber also. ...

W. L. Thompson, M. D.

Mount Silinda, Melsetter, Rhodesia, South Africa, April 25, 1913.

My good friend, ... I will see that you get a small "bagful" of dasheens. ...

▪ "Remember the Sabbath Day to Keep It Holy" (Gleanings, September 15, 1913, p. 659) is another text of Amos Root where the central figures are the two Daytonians. The small article reproduces a few lines from a publication of a religious character, the *Sunday School Times*, that prized the determination of the two inventors to keep the Sabbath day holy even when the monarch of Spain asked W. Wright to perform a flight demonstration for him. The elder brother refused. The paper does not specify the date of this incident, localising it in time just with the explanation: "*when Wilbur was at the high tide of his first foreign success, and was acclaimed everywhere*" which means the years 1908 - 1909. There are 1909 documents, one of them being "Alphonse XIII chez les Wright" (L'Aérophile, March 1, 1909, pp. 107-108), but they talk about W. Wright flying in front of the sovereign at Pau, France on February 20, 1909 (that fell on a Saturday). The king Alphonse XIII of Spain witnessed two flights. The first lasted 28 minutes, the plane being manoeuvred by W. Wright. The second was 13 minutes long. This time Comte de Lambert was the pilot and Wilbur just occupied the seat next to him. It is true that the two aviators avoided flying during the holy day of the week but there is no evidence the story in the *Sunday School Times* is real.

However, the same paper is right when stating that *from their father, good old Bishop Wright, they inherited two sterling traits — character and a shrewd business sense*. The two inventors, or at least the elder, knew how to do business otherwise they would not have scammed the French government making it pay them 25,000 francs as penalties, in 1906. No plane was shown, not even one standing still on the ground. This episode was already explained. You can reread the paragraphs that contain references to the "Agreement between Wilbur and Orville Wright and Arnold

Fordyce" (December 30, 1905) and the letter of the French war minister, dated September 4, 1906 ("Le ministre de la Guerre à M.M. Wright frères 1127 West Third Street Dayton-Ohio", Paris, le 4SEPT1906).

Root finished the article by expressing his admiration for W. Wright who *was not afraid to stand up before men, even kings, and confess their respect for God's holy word*.

1913-09-15, "Remember the Sabbath Day to Keep It Holy", Gleanings, p. 659

REMEMBER THE SABBATH DAY TO KEEP IT HOLY.

The following, which we clip from the *Sunday School Times*, explains itself:

WILBUR WRIGHT'S ANSWER.

Today is a sabbath unto Jehovah. — Ex. 16:25. The Wright brothers, the famous aviators (of whom one died in 1913), are clean-limbed and clean-minded. From their father, good old Bishop Wright, they inherit two sterling traits — character and a shrewd business sense. When Wilbur was at the high tide of his first foreign success, and was acclaimed everywhere as "the emperor of the air," the king of Spain came to see his machine. An orderly approached and said, "His Majesty would like to see you fly." "I am very sorry," was the reply, "but we never fly on Sunday."

It is especially interesting to me, because I was so well acquainted with our good friend Wilbur Wright, his father (Bishop Wright), and the rest of the family. God grant that we may have at least a few men left who are not afraid to stand up before men, even kings, and confess their respect for God's holy word.

▪ The next two articles in *Gleanings* related to the Wrights (January 15 and February 15, 1914, issues) treat a variety of topics that will be explained one by one in detail. Starting from the pretext that his journal *was the first periodical on the face of the earth to give an eye-witness account of the Wright brothers' first flight to make the machine come back to its starting-point*, A. I. Root considered *his journal should occasionally notice the progress that was being made in navigating the air*.

- 1) The first big aviation achievement of the time, that attracted the attention of the old beekeeper, consisted of a series of spectacular flights performed by Adolphe Pégoud, a pilot who succeeded at Juvisy, France in flying, with his Blériot-Gnome 50 HP plane, upside down on September 1, 1913, and then he looped the loop at the Blériot airfield, Buc, near Paris, three weeks later, on the 21st of September. Details about these aerial stunts can be found in L'Aérophile ("Une audacieuse expérience de Pégoud. Il vole la tête en bas décrivant un S magistral.", L'Aérophile, September 15, 1913, pp. 420-421) and ("Pégoud poursuit ses extraordinaires expérience. Il remplit son audacieux programme et boucle la boucle plusieurs fois.", L'Aérophile, October 1, 1913, pp. 447-448). The source of information used by Root was an extensive article in the Independent (Henry Woodhouse, "Safety and Stability in the Aeroplane of Today", The Independent, October 23, 1913, pp. 166-168).
- 2) The next topic is about airboats (flying boats) and hydroplanes (floatplanes) and starts with quoting the closing paragraph of the same article in the Independent that talks about two pilots who *flew from Chicago to Detroit, 900 miles, which they covered in 900 minutes*. Such a race was advertised in the summer of 1913 as can be seen in the newspaper article "Leaders Are Off Again in World's Greatest Aeroboat Race; 900 Miles by Water and Air, From Chicago to Detroit for Prize of \$17,500" (The Seattle Star, July 12, 1913, p. 6). The text in the Independent ends with the remark according to which *the four principal aeroplane constructors — the Wrights, of Dayton, Ohio; Curtiss, of Hammondsport, New York; Burgess, of Marblehead, Massachusetts, and Benoist, of St. Louis, Missouri*, were all developing water aeroplanes.

The Wright factory was really trying to make and sell planes that took off from the water as can be seen in an interview given by the superintendent of the company, Grover Cleveland Loening, and reproduced by the Sun ("New Aeroboat to Go 67 Miles in an Hour. Stability and Speed Combined in Orville Wright's Latest Invention.", The Sun, New York, August 11, 1913, col. 6, p. 2). At the time the article appeared, Orville's firm was already prepared to sell a hydroplane named C-H which, using only a 60 HP motor, had carried up to four people, according to Loening. The text is illustrated with the picture of a Wright

floatplane resting on water. The term aeroboate does not really refer to a flying boat in the modern sense of the word.

A different article ("Final Tests of New Wright Aeroboate. Success Crowns Trials.", Dayton Daily News, November 23, 1913) shows three pictures with a new model that was a real flying boat. The essays took place on Saturday, November 22, 1913. *The craft was flown by Orville Wright and Oscar Brindley.* The text mentions a few technical characteristics: speed – one mile a minute, total weight in flight – almost 1800 pounds, lifting capacity – over 600 pounds, engine – 6 cylinders and almost 70 HP. It is also mentioned that the aeroboate was designed by Grover C. Loening of New York under the direction of Orville Wright, and was entirely built at the Dayton factory.

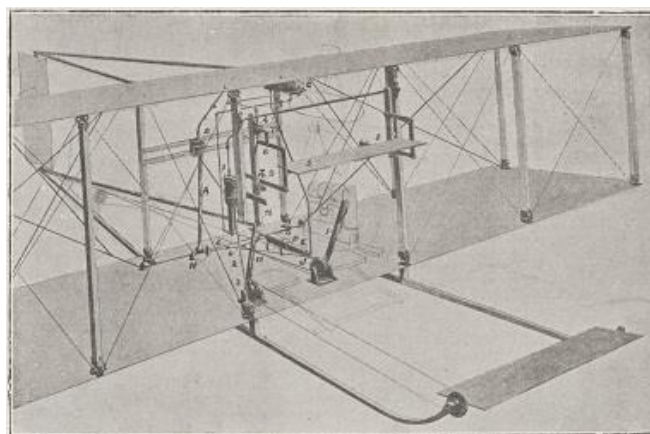
Also Amos Root acknowledged he was not prepared to say exactly who should have the credit for the water aeroplane he was inclined to think the Wrights were the first in the world to experiment with hydro-aeroplanes. Definitely, he was wrong. In one of his own older articles (A. I. Root, "Flying Through the Air, Skimming Over the Water, Etc.", Gleanings, May 15, 1907, p. 720) which quotes a text from a Dayton newspaper ("Wright Boys Score Another Triumph", Dayton Journal, March 21, 1907), the following paragraph can be found: *"This is not the first hydroplane that has been invented, although never before has such a craft been seen in local waters, or ever been devised by any one in this section of the country."* In conclusion, the journalists were well aware in March 1907, when the Wrights performed experiments with a machine (without wings) that floated on water and was pushed by two counter-rotating aerial propellers, that such an apparatus was not their invention.

3) The third and the last matter, in Root's January 15, 1914, text, is about the single propeller aeroplane of Orville Wright, baptized model "E" and tested by the inventor himself on October 6, 1913. The apparatus was made especially for exhibition purposes. According to the Cleveland Plain Dealer, quoted by Amos Root, *"in a test against time a flight was made, and the entire machine dismantled and loaded ready for shipment in twelve minutes"*.

4) One month later, the same aviation enthusiast came with another article ("Flying To Be Made Safer in the Near Future", Gleanings, February 15, 1914, p. 159-160). His source of information was the Cleveland Plain Dealer which extensively quoted some affirmations of Orville Wright made before January 5, 1914. The text is about an automatic stabilizer invented by the two brothers about which the one still alive claimed that it was more accurate than any aviator could be and would make flying fool proof. He also said he had flown many miles with it and had never touched the controls. The Cincinnati Enquirer ("Wizard Orville Wright Demonstrates "Fool-Proof" Aerial Device, Which Is Expected To Revolutionize Present Methods of Warfare", The Cincinnati Enquirer, January 4, 1914, p. 1) quotes the same statements of Orville presenting them as a special dispatch from Dayton dated January 3, 1914.

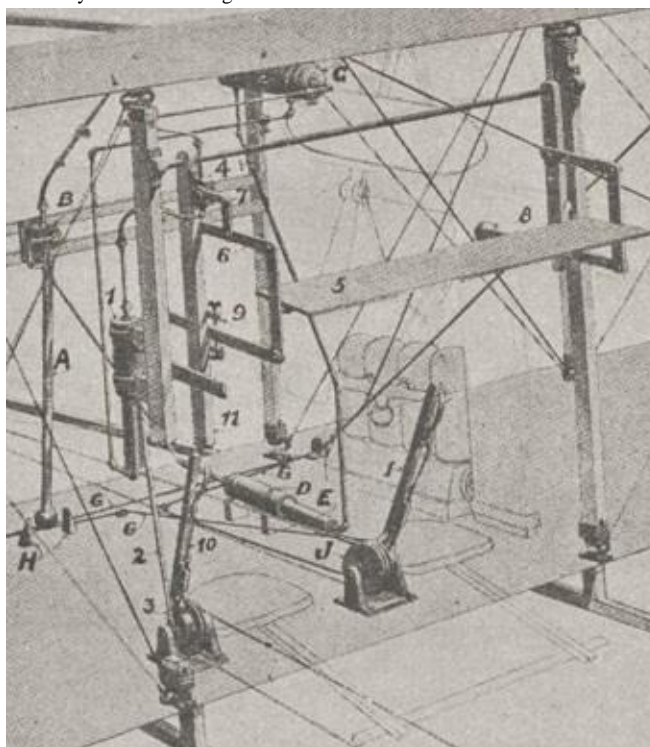
Amos Root closes his article with this remark: *"Judging from a pretty close acquaintance with Orville Wright, I feel sure he would not express himself so hopefully were it not that he has some very good reasons for so doing."*, an affirmation that can be interpreted as showing some slight doubts the old apiarist and entrepreneur had. As a note, all the plane stabilizers based on the pendulum principle (like the one employed by O. Wright) were regarded with scepticism at the time. For example, the author of a text, published by L'Aérophile in its October 1, 1913, issue, considered such a device the equivalent of a human co-pilot with slow reflexes, able to drive the plane in favourable atmospheric conditions but being inferior to his master:

Nous considérons un stabilisateur pendulaire comme une sorte d'aide-pilote, ne possédant que des réflexes moins prompts que ceux de son maître, mais toujours égal à lui-même et remplissant exactement son rôle dans la mesure de ses moyens. A cet auxiliaire, lorsque les circonstances atmosphériques ne sont pas trop défavorables, le pilote peut abandonner les commandes pour satisfaire aux exigences de sa mission, observer, prendre des notes ou des photographies, toutes choses qu'il ne pourrait faire, seul, que très imprudemment sur un appareil ordinaire, non stabilisé. Il pourra même user de son auxiliaire pour se reposer momentanément de la conduite de son appareil, si toutefois ses fonctions et sa responsabilité professionnelle l'y autorisent; car il ne doit pas oublier qu'au cours d'une randonnée aérienne les surprises sont toujours à craindre, même par le temps en apparence le plus favorable. (L. H., "Stabilisation Automatique des Aéroplanes. Sur les Stabilisateurs Pendulaires.", L'Aérophile, October 1, 1913, p. 436)



Stabilisateur automatique Wright
(L'Aérophile, February 1, 1914, p. 59)

In reality, an autopilot based on the pendulum principle is fundamentally flawed because the pendulum aligns to the vertical, after finishing its damped oscillations, just in a few particular situations like the ones in which the suspension point is at rest or moves at a constant speed as a vector. This is not the case inside a plane. A technical drawing of the Wright stabilizer is available in L'Aérophile (P. James, "Le Stabilisateur Automatique Wright", L'Aérophile, February 1, 1914, p. 59). The pendulum supposed to efficiently control the roll stability can be clearly seen in the image.



Stabilisateur automatique Wright
(L'Aérophile, February 1, 1914, p. 59 - Detail)

(Les lettres se réfèrent aux organes du stabilisateur latéral; les chiffres à ceux du stabilisateur longitudinal.)

Stabilisateur latéral. — A, tige pendulaire connectée avec le robinet B à 3 voies qui commande l'entrée de l'air comprimé du réservoir C dans le servo-moteur D. — E, tige de connection. — G, câble commandant le gauchissement.

Stabilisateur longitudinal. — 1, servo-moteur; 2, tige de connection et 3, poulie; 4, robinet à 3 voies; 5, plaque anémométrique; 6, parallélogramme articulé auquel est fixée la plaque. (D'après Scientific American).

1914-01-15, "Flying-Machines up to Date; 900 Miles in 900 Minutes.", Gleanings, pp. 78-79

FLYING-MACHINES UP TO DATE; 900 MILES IN 900 MINUTES.

AS GLEANINGS was the first periodical on the face of the earth to give an eye-witness account of the Wright brothers' first flight to make the machine come back to its starting-point, it is no more than proper that GLEANINGS should occasionally notice the progress that is being made in navigating the air. The steps of progress are so rapid now, and as our daily newspapers and magazines are full of it, it would take too much space to give here an account of *all* that is being done. Just now, however, the world is startled by M. Pegoud, who not only "loops the loop," but flies quite a little distance with the machine upside down. Of course he has straps to hold him securely to his seat. At first the world was inclined to say his success was accidental — that he could not do it again; but he has done it again and *again*, and I think he says it is no very difficult trick. The whole thing is described, with some very good illustrations, in the *Independent* for Oct. 23. We give below the closing paragraph of the article:

At the present time the cost of aeroplanes still ranges from \$5000 to \$10,000 per machine, which is too high for the average man; and the sportsman and enthusiast has an extremely safe craft in the water aeroplane — the airboat, which is essentially a boat with wings, and the hydro-aeroplane, which is an aeroplane with floats to enable it to land on water. Water-flying is much more safe than land-flying, because the water always presents a flat surface to start from and land on; and, in case of a spill, the aviator, who is dressed in a floating coat, just gets a drenching. A score of American sportsmen acquired airboats in the past summer and flew them continually, and made from 60 to 80 miles an hour while they flew them; and two of them actually flew from Chicago to Detroit, 900 miles, which they covered in 900 minutes, going through a succession of storms which no boat could have weathered; but there were no accidents, not even a drenching. The demonstration of the safety of water-flying was so conclusive that scores of other sportsmen were converted, and the four principal aeroplane constructors — the Wrights, of Dayton, Ohio; Curtiss, of Hammondsport, New York; Burgess, of Marblehead, Massachusetts, and Benoist, of St. Louis, Missouri, are working overtime turning out this sort of machine.

New York City.

I am not prepared to say exactly who should have the credit for the water aeroplane, as it is called above; but I do know that the Wright brothers made experiments with a craft to skim over the water of the Miami River, that passes through Dayton, a good many years ago, and before any thing of the kind was mentioned in the papers. This I did not get from the Wright brothers themselves, but from one of their workmen. The Wright brothers certainly have the credit (and I guess it is acknowledged world-wide) of making the first heavier-than-air machine to rise up from the ground; and I am inclined to think they were the first in the world to experiment with hydro-aeroplanes. Somebody will probably cross the ocean very soon with such a craft. If they can go a mile a minute, and skim along in spite of wind and wave, there will be comparatively little difficulty in making the trip. We clip the following from the *Cleveland Plain Dealer*:

TESTS NEW AIR-CRAFT; ORVILLE WRIGHT SHOWS ONE PROPELLER MODEL AT DAYTON, OHIO.

DAYTON, Ohio, Oct. 6. — Orville Wright, himself driving to-day, tested out his latest aeroplane model in a series of successful flights.

The new model has but one propeller, which with the motor, seat, and drive, is in one unit in the center section, as compared with the former two-propeller machines, with blades in opposite directions. The new model "E" is made especially for exhibition purposes, and is capable of dismantling in short time.

Much of the machine is built of aluminum. In a test against time a flight was made, and the entire machine dismantled and loaded ready for shipment in twelve minutes. This model has been viewed by representatives of the International Club. Another test will be made Oct. 15.

1914-02-15, "Flying to be Made Safer in the Near Future", *Gleanings*, p. 159-160

Eye hath not seen, nor ear heard, neither have entered into the heart of man the things which God hath prepared for them that love him. — I. COR. 2:9.

FLYING TO BE MADE SAFER IN THE NEAR FUTURE.

I am sure the friends who have followed me in my reports in regard to the development of aviation by the Wright brothers will read with interest the following, clipped from the *Cleveland Plain Dealer*:

DAYTON, O., Jan. 5. — Orville Wright, premier aviator, to-day discussed the possibilities of his automatic stabilizer, which, he declares, will make flying "fool proof" and as comparatively safe as transportation by land. It means that an unskilled operator may make a trip from Dayton to New York and return with comparative safety. He said:

"We have invented an automatic stability device which will revolutionize flight," said Wright. "It is more accurate than any aviator can be, and will make flying fool proof, or as nearly fool proof as any thing can be. I have flown many miles with it and

have never touched the controls. We are now simplifying, and expect to be able to bring it to the point where it may be put in general use by early spring.

"We believe in making aerial work as safe as any on land," he said, "and we will continue to labor in that direction. We hope to see the day when it will be just as safe to board an aeroplane and take a long trip as it is at present to make this journey behind a locomotive.

"The stability device will go a long way toward making this dream a reality, and we are enthusiastic about it. Our device insures lateral as well as fore-and-aft stability. It depends in part on electricity, and we shall soon have the mechanism so perfected that it will not get out of order, and that means safety in flight.

"As may be generally known, many of the accidents in aviation have been due to what is called stalling. The aviator lets his speed sag below a certain point, the point necessary to secure sufficient wind pressure on the wings to sustain the machine, and it falls. Nothing can stop it.

"If he is traveling on an even keel when he reduces his speed below the danger-point, his machine will slide back, tail first, to the ground. Our device prevents the plane from rising too sharply; and if the speed falls below the danger-point it automatically directs the machine to the ground so that it will acquire speed enough to sustain it."

Discussing the future of the aeroplane, Wright said:

"The aeroplane will be used for commercial purposes, especially as a means of speedy transportation over vast distances. Over waste places and deserts the aeroplane will be used; in fact, wherever water is not available.

"Mails will be thus carried, doubtless, over large stretches of territory in Texas, Utah, and New Mexico. Automatic stability is all that is needed to make it wholly practical, and I believe we have solved the problem."

Judging from a pretty close acquaintance with Orville Wright, I feel sure he would not express himself so hopefully were it not that he has some very good reasons for so doing. I wonder if they will not be coming down to Florida to test this great invention.

• Using various pretexts, A. I. Root continued to refresh the memory of his readers with the story according to which he had seen the Wright brothers flying in 1904. No less than four such articles can be found between February 15, 1914, and September 15, 1915.

1) "Dasheen, Flying-Machines, and Something About God's New and Wonderful Gifts to Us in 1914" (*Gleanings*, February 15, 1914, p. 160) contains a text dedicated to an air passenger service, between St. Petersburg and Tampa, Florida, that used the flying boats of Tom W. Benoist, one of the leading aircraft manufacturers in the United States. As an introduction for such an achievement that ten years before, in 1904, was just a dream, Amos Root reminded the buyers of his journal that *the world laughed when he told what he had seen after visiting the Wright brothers*. Again, he is vague and does not explicitly say what exactly he witnessed.

2) Nine months later, in "Our Homes" (*Gleanings*, November 15, 1914, pp. 913-916 (p. 915)), the old beekeeper, one more time, wrote something about the two inventors stating that "*The Wright brothers could not have invented their flying-machine without gasoline*". As a parenthesis, on October 7, 1906, the Romanian aviation pioneer Traian Vuia flew 4 meters at a height of about 15 cm in a single tractor monoplane powered by a steam engine that used carbonic acid instead of water. This was a public test controlled by Ernest Archdeacon and Édouard Surcouf, members of the French aero club (Auguste Nicolleau, "L'Aéroplane Vuia", *L'Aérophile*, October 1906, pp. 242-243). Wilbur Wright was first seen flying, beyond any doubt, on August 8, 1908. If the gasoline motor had not existed the aviation based on steam engines would have been possible.

3) In "The Flying-Machine — A New Use For It." (*Gleanings*, August 1, 1915, p. 649) A. I. Root, visibly marked by the First World War, recalled an episode that happened *when he was having such an enjoyable time in being with the Wrights when they made their first experiments* (as a remark, the word "experiments" is used, not "flights"). *His enjoyment was greatly marred on being informed by Wilbur Wright that the flying machine would probably be of more use in war than as a vehicle to assist commerce and travel*. The old businessman and aviation enthusiast presents what the elder of the two brothers told him as a personal original prediction of this inventor, something that he *saw fulfilled before his eyes*, in 1915. In reality, the potential of heavier than air flying machines as weapons was envisioned by many others before. The French war office even financed the engineer Clément Ader to build a plane for military purposes. On October 14, 1897, Ader's aircraft was seriously damaged while attempting a take off in front of an official military commission.

The apparatus never left the ground. Therefore, there was nothing new in that prophecy of W. Wright.

4) One month and a half later (Gleanings, September 15, 1915, p. 782) Root advertised a book titled "The Story of Art Smith" about an American aviator. As expected, he did not miss the opportunity to remind his subscribers *he was with the Wright brothers when they made their first flight that succeeded in bringing the machine back to the place of starting*. This businessman from Medina, Ohio, really believed that if he repeated the same lie often enough his January 1, 1905, tale would become an accepted truth.

1914-02-15, "Dasheen, Flying-Machines, and Something About God's New and Wonderful Gifts to Us in 1914", Gleanings, p. 160

DASHEEN, FLYING-MACHINES, AND SOMETHING ABOUT GOD'S NEW AND WONDERFUL GIFTS TO US IN 1914.

Some of you will think, no doubt, my heading embraces a queer combination. Well, perhaps it does; but the idea was suggested by a picture Huber has just sent me of our Medina plant that is to come out in our new catalog. When I stirred the world up on bee culture years ago I had, as people thought, some extravagant day dreams of the outcome of the honey industry; but it is all coming to pass, and even *more* than I ever dreamed of. Later, when I visited the Wright brothers, and told what I had seen, the world laughed again; and I confess events *have* crawled along a little slower than I expected; but just listen to what has been going on almost "under my nose," and I didn't know it. About a week ago our good friend Mr. Gault (of "Gault raspberry" fame) wrote me as follows:

Dear Mr. Root: — As you are interested in airships I enclose a circular which you may care to look over. If you come over, call on me.

St. Petersburg, Fla., Jan. 6.

W. C. GAULT.

Below is a copy of the circular.

ST. PETERSBURG-TAMPA AIR-BOAT LINE; FAST PASSENGER AND EXPRESS SERVICE.

Schedule: — Leave St. Petersburg 10:00 A. M. Arrive Tampa 10:30 A. M. Leave Tampa 11:00 A. M. Arrive St. Petersburg 11:30 A. M. Leave St. Petersburg 2:00 P. M. Arrive Tampa 2:30 P. M. Leave Tampa 3:00 P. M. Arrive St. Petersburg 3:30 P. M. ...

Rates: \$5.00 per trip. Round trip \$10.00. Booking for passage in advance ...

1914-11-15, "Our Homes", Gleanings, pp. 913-916 (p. 915)

OUR HOMES

A. I. ROOT

... It was my privilege to see oil brought out of the ground, and to see it go through the different stages of refining; to see utilized the waste product running out into the creeks and rivers until it got to be a great and dangerous nuisance. I have lived to see these waste products utilized in a thousand different ways, while the doctors' shelves now contain more medicines made from the refuse from the refinings than from almost any other source. One invention or discovery seems to pave the way for another. The Wright brothers could not have invented their flying-machine without gasoline. ...

1915-08-01, "The Flying-Machine — A New Use For It.", Gleanings, p. 649

THE FLYING-MACHINE — A NEW USE FOR IT.

When I was having such an enjoyable time in being with the Wrights when they made their first experiments, my enjoyment was greatly marred on being informed by Wilbur Wright that the flying machine would probably be of more use in war than as a vehicle to assist commerce and travel; and it has saddened my heart again and again to see this prediction fulfilled before my eyes. ...

... May God hasten the time when the flying-machine will prove to be an aid to peace instead of an aid to war.

1915-09-15, "The Story of Art Smith.", Gleanings, p. 782

"THE STORY OF ART SMITH."

The above is the title of a paper-bound pamphlet of 94 pages. It was sent me by my grandson feeling sure I would be interested in it because of the fact that I was with the Wright brothers when they made their first flight that succeeded in bringing the machine back to the place of starting. The book interested me for two reasons: First, because it was all about experiments with flying-machines; second, because the boy started out when he was only 15 years old — nearly the same age that I was when I started out giving

"lectures (?) on chemistry and electricity. There is still *another* reason why the book took a mighty hold on me. This boy, Art Smith, it seems to me, had more mishaps and discouragements and failures than I ever heard of falling to a single human being; and yet he is now, at the age of only 21, turning somersault after somersault away up above the clouds, leaving a trail of smoke by day and a trail of fire by night, to show the path that his machine actually made through the sky. ...

The price is 25 cents postpaid; but every one who sends us \$1.00 for GLEANINGS may have the book for 15 cents. I am well aware that some of my good friends may criticise me for encouraging what has cost so many lives already; but my reply is that the book will help to *save* life; and it will also encourage patience and perseverance among the young inventors now growing up more than any other book that I have ever read or heard of. The book is not fiction, because every event mentioned occurred out in the open air in the plain sight of hundreds and thousands gathered to see Art Smith fly — the boy who was born and brought up in Ft. Wayne, Ind.

• At the end of 1915 ("The Wright Brothers' Flying-Machine Factory at Dayton, Ohio.", Gleanings, December 15, 1915, p. 1047), Amos Root wrote a short article to inform the clients of his publication that *Orville Wright had sold his factory*. Many newspapers of the time dedicated space in their columns to that transaction. One example is this announcement:

DEAL IN AIRSHIPS

Orville Wright Sells Interests in Wright Aero-plane Company.

...
New York, Oct. 13. — Orville Wright has sold his entire interest in the Wright Aeroplane Company, at Dayton, O., to a syndicate consisting of William B. Thompson, Albert H. Wiggin, president of the Case National Bank of New York, and T. Frank Manville, of the H. W. Johns-Manville Company, according to an announcement made here today. ...

All negotiations for the purchase of the Wright company have been completed in New York and the stock will be transferred within a day or two. ...

Dayton, O., Oct. 13. — The sale of the Wright aeroplane factory was for a consideration of approximately \$1,500,000, it was reported here today.

Orville Wright has been in ill health for nearly a year ...

"The sale includes everything," he said, "I shall retain some stock in the company and probably will be consulted in an advisory capacity. I will give my time to scientific research along the lines of aviation. I think I shall enjoy the respite from business cares."

("Deal in Airships. Orville Wright Sells Interests in Wright Aero-plane Company.", Evening Times-Republican, Marshalltown, Iowa, October 13, 1915, col. 2, p. 1)

Root was unsure about the real reasons which determined the younger of the two brothers to sell his company but he speculated that Orville might have done it *because he was averse to furnishing machines for war*. The old apiarist and entrepreneur was definitely wrong. The telegram sent by Brigadier General James Allen to the Wrights, on February 8, 1908, informing them their bid, to deliver a plane to the US War Department for \$25,000, had been accepted, is evidence the two inventors did not care too much their machines would be used for military purposes and killing people.

At this point, it is worth mentioning a letter, the last one that can be found, sent by A. I. Root to the Wrights, on September 14, 1915. The old Amos started his text by recommending that Orville read "The Story of Art Smith". He even sent a clipping from *Gleanings* with the article where he advertised the book. It is clear from the content of the letter he had not been in touch with the Wrights for a long time because he wrote: "*I suppose your good father is still alive as I have heard nothing to the contrary and I trust your bright and able sister is still living to see the success of her brother's work.*". From the same text, we learn that Root had not found, in the newspapers, too much information about the company of Orville. However, he knew that it *was quoted at a million Dollars or over* and he reminded his younger friend that *he once said their*

invention would be worth a Million Dollars. He was glad to see his prediction, so far, verified. The letter is unfocused. It might appear that the old beekeeper just intended to find out new things regarding Orville's factory and publish something about it because he explained that *Wilbur once said to him that he might write up whatever he saw, providing he told the truth, and he presumed Wilbur had meant nothing but the truth.* This affirmation can be interpreted as an assurance that, in case he had received news from Orville he would not have written in *Gleanings* things not approved by him.

1915-09-14, A. I. Root, "Letter to Orville Wright"

Friend Wright:-

When you have time you may be interested in the clipping enclosed and if you haven't seen the book "The Story of Art Smith" I would be glad to send it to you if you would care to see it. I have been watching for some time to find something in the papers in regard to what your company is doing but I don't find very much. I did find, however, that your company was quoted at a million Dollars or over. Perhaps you may recall I once said that your invention would be worth a Million Dollars and I am glad to see my prediction, so far, verified.

I suppose your good father is still alive as I have heard nothing to the contrary and I trust your bright and able sister is still living to see the success of her brother's work.

Now if I won't be encroaching I should like to ask if it would be out of place for me to look over your establishment, or at least a part of it. Our departed friend, your brother Wilbur once said to me that I might write up whatever I saw, providing I told the truth, and I presume he meant nothing but the truth. With your many busy cares just now perhaps you won't find time to even write and it wouldn't matter very much anyway. ...

▪ The next article ("Aeroplane Development", *Gleanings*, April 15, 1916, p. 335), where the two inventors are mentioned, is about the contribution World War I had in revolutionising the aeroplane or at least this was the opinion of Amos Root who, at the same time, felt the need to stress the idea according to which *there had been no radical departures from the early models of Orville and Wilbur Wright, although there existed, at that time (1916) many varied arrangements of the wings.* In reality, the planes used during the First World War were most of them single tractor biplanes, quite different from the double pusher apparatus with a front elevator flown by Wilbur in France, on August 8, 1908. Using Root's way of reasoning one can arrive quickly at the conclusion that a WWII Messerschmitt 262 did not depart too much from the first planes of the two brothers.

1915-12-15, A. I. Root, "The Wright Brothers' Flying-Machine Factory at Dayton, Ohio.", *Gleanings*, December 15, 1915, p. 1047

THE WRIGHT BROTHERS' FLYING-MACHINE FACTORY AT DAYTON, OHIO.

Ever since the Wright brothers succeeded in making a machine fly, I have given you occasional notes as the years have gone by. Just now I clip the following from the *Ohio Farmer*:

WRIGHT PLANT SOLD.

Orville Wright, aviator and aeroplane inventor, has sold his factory at Dayton to a syndicate of eastern capitalists. He now intends to give all of his time to scientific research along the lines of aviation.

It may be of interest to know that this Dayton factory is now quoted at something over a million dollars. I have been wondering if it were not possible that Orville Wright has sold out because he is averse to furnishing machines for war, as his father has been all his life a minister; and from what I know of the man I can readily imagine that he would be strongly averse to the manufacture of any machine designed for the purpose of killing people.

1916-04-15, "Aeroplane Development", *Gleanings*, April 15, 1916, p. 335

AEROPLANE DEVELOPMENT.

The war has revolutionized the aeroplane. We no longer hear about the dangers of mere flying; mechanical ingenuity has apparently overcome them. In almost any kind of weather except the severest gales, the fliers now sweep along at over a hundred miles an hour, under 150 horsepower. Waldemar Kampffert, in a recent article, writes that there are over 5000 planes of various models in use in the different armies, and that the perils from armed aerial enemies and from aeroplane guns on the field below are such that the average flying life of a plane is not longer than two weeks! Very few of the machines used at the beginning of the war are now in service, and to repair the waste it may be necessary to build 50,000 aeroplanes a year while the war lasts. There have been no radical departures from the early models of Orville and Wilbur Wright, altho there are many varied arrangements of the wings. Types may vary, but the original principle persists. No longer is the aeroplane the toy of sport and adventure. It has become a surprisingly dependable machine.

▪ An article in Collier's ("The Title to an Honor", Collier's, January 6, 1917, p. 11) attacking all those who had made *efforts to rob the Wrights of their hard-earned title to being the originators of the art of flying*, as A. I. Root persisted in claiming, determined this businessman from Medina to reproduce its integral text in his journal ("Wilbur and Orville Wright", *Gleanings*, April 1917, pp. 300-301). According to Collier's, that is vague and does not give names, *a group of men took out of the Smithsonian Institution the old Langley machine which had been wrecked in launching*, operated numerous modifications on it, added a number of devices that were the inventions of the Wrights and finally succeeded in making the apparatus *not fly but hop*.

A 1914 newspaper article ("Langley Folly Flies", The Alma Record, Alma, Michigan, US, June 4, 1914, col. 3, p. 3) partly confirms the version of Collier's, stating that *at the request of Secretary Charles D. Walcott of the Smithsonian institution, Glenn H. Curtiss (an enemy of the Wrights) had Langley's machine sent to his factory at Hammondsport, N. Y. where it was fitted with pontoons, the wings were covered again, and the engine was tuned. The apparatus demonstrated the ability to raise itself from the water. According to Curtiss, the machine demonstrated that the principles embodied in its construction were correct.*

As a remark, Orville, quoted in the same 1914 article, did not accuse Curtiss of adding devices created by his brother and him. He simply affirmed that *there was nothing in common between the two machines, Langley's system of control being entirely different from that of the Wright machines* and then he stressed that *Langley's plane was tried out ten days before Wrights' successful flight in 1903 and failed.*

1914-06-04, "Langley Folly Flies", The Alma Record, Alma, Michigan, US, col. 3, p. 3

LANGLEY FOLLY FLIES

The Airship Whose Inventor Was Derided As a Darius Green

BASIC POINTS UNTOUCHED.

Machine Hauled Out of Potomac River After Failure In 1903 Vindicates Langley, Who Died Broken Hearted. Now, Says Glenn Curtiss, His Name Antedates All Present Aviators.

"Langley's folly," the famous old tandem aeroplane that has been hanging in the Smithsonian institution in Washington for a decade, has been successfully flown by Glenn H. Curtiss over Lake Keuka, New York. This is the identical machine that was hauled out of the Potomac river after its second and last failure to fly on Dec. 8, 1903.

Professor Samuel P. Langley gave the best years of his life to this aeroplane and died in sorrow and disappointment. His friends said his heart was broken by the ridicule heaped upon him as a modern Darius Green. Congress at the last, accepting the public's attitude, refused money for further experiments, and Professor Langley apparently lost his courage as an inventor.

It is thought, says the New York Sun, that this successful flight of a machine that was completely built before Orville and Wilbur Wright made their first flights may bring about more litigation over the basic patents granted to the Wright brothers. The Langley machine was built for the government and was not patented. It has been contended that the Wrights obtained ideas from Dr. Langley's experiments.

Turned Over to Glenn H. Curtiss.

Glenn H. Curtiss had the machine sent to his factory at Hammondsport, N. Y., at the request of Secretary Charles D. Walcott of the Smithsonian institution and fitted it with pontoons. The planes were recovered, and the engine was tuned, but otherwise the machine was left in its original state.

A puffy wind and the erratic performance of the old motor cut the trials short after the first demonstration of the machine's ability to raise itself from the water.

Mr. Curtiss was asked after the flight whether it was made primarily to assail the claim of the Wright brothers that they were the producers of the first successful heavier than air flying machine. He said:

"I acted under the direction of the Smithsonian institution, which has for some time desired to ascertain whether the Langley machine embodied principles making successful flight possible. The machine demonstrated that the principles embodied in its construction are correct.

"Although this flight proves that Dr. Langley antedated all present aviators, the Wrights have been awarded a court decision, which, so far as I see, stands. In making this flight I acted willingly, actuated by a veneration for the memory of Dr. Langley and his achievements."

Entirely Different, Says Wright.

Orville Wright says the performance of the Langley machine will have no bearing whatever on the Wrights' inventions. "There is nothing in common between the two machines," he says. "The Langley system of control is entirely different from that of the Wright machines. It is a very old system that enters into the Langley machine. That machine was tried out ten days before our successful flight in 1903 and failed, although it had four times the power of our machine." ("Langley Folly Flies", The Alma Record, Alma, Michigan, US, June 4, 1914, col. 3, p. 3)

• Unfortunately, while Samuel Langley's lack of success on December 8, 1903, was witnessed by a numerous public, the December 17, 1903, flights of the two Daytonians still rest completely shrouded in mystery like all their powered flights performed before August 8, 1908. In consequence, the closing paragraph in Collier's, according to which "*the Wright brothers were the first persons to leave the earth in a mechanically propelled plane*", remains just a pure belief based on trusting the word of the two inventors, more precisely a telegram sent by Orville to his father, on December 17, 1903 and a letter with clarifications addressed to the press (see: "Wright Flyer. A Report of Late Tests Is Given by Messrs. Wright, Inventors of the Machine. Interesting Description of the Trials Made at Kitty Hawk.", Dayton Press, Ohio, US, January 6, 1904), both of them containing simple claims. There is no word about witnesses and no picture or technical drawing of the plane is present. More, an obvious misleading statement can be detected by comparing the text of the telegram (where with the words "*inform Press*" Milton Wright was clearly instructed to make public the success of his sons) and the January 6, 1904, explanatory article in which the brothers talk about *the contents of a private telegram, announcing to their folks at home the success of their trials, that was dishonestly communicated to newspaper men at the Norfolk office*. They also say that *it had not been their intention to make any detailed public statement concerning the private trails of their power "Flyer" on the 17th of December 1904*.

As can be seen, the Wrights fail to make clear that the intended final beneficiary of the telegram was the American public, at least the inhabitants of Dayton. As it is formulated, the January 6, 1904, article misleads the readers making them to believe that a message, not destined for a large audience at all, reached some dishonest newspaper men, was distorted and finally a *fictitious story incorrect*

in almost every detail was very widely disseminated (see: "Flying Machine Soars 3 Miles in Teeth of High Wind Over Sand Hills and Waves at Kitty Hawk on Carolina Coast", Virginian-Pilot, US, December 18, 1903, p. 1). In reality, there is no solid evidence a licked telegram was the source of inspiration for the fanciful account, in the Virginian-Pilot, which spread like wildfire.

It must be stressed that not all the daily papers got the story wrong. There are articles like "Dayton Boys Solve Problem" (Dayton Herald, Ohio, US, December 18, 1903) or "Dayton Boys Emulate Great Santos-Dumont" (Dayton Daily News, Ohio, US, December 18, 1903) which reproduced the telegram, just with minor changes to make it more readable, without distorting its contents in any way.

It seems ridiculous, but the most serious evidence, behind the December 17, 1903, powered flights, consists of a short text cabled to Dayton and a letter, of the two brothers, with further explanations. Both documents were published immediately.

1903-12-17, Orville Wright, "Telegram to Milton Wright"

RECEIVED at
176 C KA CS 33 Paid.
Kitty Hawk N C Dec 17
Bishop M Wright

Via Norfolk Va

7 Hawthorne St

Success four flights thursday morning all against twenty one mile wind started from Level with engine power alone average speed through air thirty one miles longest 57 seconds inform Press

home Christmas. Orevelle Wright 525P

1904-01-06, "Wright Flyer. A Report of Late Tests Is Given by Messrs. Wright, Inventors of the Machine. Interesting Description of the Trials Made at Kitty Hawk.", Dayton Press, Ohio, US

Wright Flyer

A Report of Late Tests

Is Given by Messrs. Wright, Inventors of the Machine.

Interesting Description of the Trials Made at Kitty Hawk.

It had not been our intention to make any detailed public statement concerning the private trails of our power "Flyer" on the 17th of December last; but since the contents of a private telegram, announcing to our folks at home the success of our trials, was dishonestly communicated to newspaper men at the Norfolk office, and led to the imposition upon the public by persons who never saw the "Flyer" or its flights, of a fictitious story incorrect in almost every detail; and since this story, together with several pretended interviews or statements, which were fakes pure and simple, have been very widely disseminated, we feel impelled to make some corrections. The real facts were as follows:

On the morning of December 17, between the hours of 10:30 o'clock and noon, four flights were made, two by Orville Wright and two by Wilbur Wright. The starts were all made from a point on the level sand about 200 feet west of our camp, which is located a quarter of a mile north of the Kill Devil sand hill, in Dare county, North Carolina. The wind at the time of the flights had a velocity of 27 miles an hour at 10 o'clock, and 24 miles an hour at noon, as recorded by the anemometer at the Kitty Hawk weather bureau station. This anemometer is 30 feet from the ground. Our own measurements, made with a hand anemometer at a height of four feet from the ground, showed a velocity of about 22 miles when the first flight was made, and 20½ miles at the time of the last one. The flights were directly against the wind. Each time the machine started from the level ground by its own power alone with no assistance from gravity, or any other sources whatever. After a run of about 40 feet along a mono-rail track, which held the machine eight inches from the ground, it rose from the track and under the direction of the operator climbed upward on an inclined course till a height of eight or ten feet from the ground was reached, after which the course was kept as near horizontal as the wind gusts and the limited skill of the operator would permit. Into the teeth of a December gale the "Flyer" made its way forward with a speed of ten miles an hour over the ground and

30 to 35 miles an hour through the air. It had previously been decided that for reasons of personal safety these first trials should be made as close to the ground as possible. The height chosen was scarcely sufficient for maneuvering in so gusty a wind and with no previous acquaintance with the conduct of the machine and its controlling mechanisms. Consequently the first flight was short. The succeeding flights rapidly increased in length and at the fourth trial a flight of 59 seconds was made, in which time the machine flew a little more than a half mile through the air, and a distance of 852 feet over the ground. The landing was due to a slight error of judgment on the part of the operator. After passing over a little hummock of sand, in attempting to bring the machine down to the desired height, the operator turned the rudder too far, and the machine turned downward more quickly than had been expected. The reverse movement of the rudder was a fraction of a second too late to prevent the machine from touching the ground and thus ending the flight. The whole occurrence occupied little, if any more, than one second of time.

Only those who are acquainted with practical aeronautics can appreciate the difficulties of attempting the first trials of a flying machine in a 25 mile gale. As winter was already well set in, we should have postponed our trails to a more favorable season, but for the fact that we were determined, before returning home, to know whether the machine possessed sufficient power to fly, sufficient strength to withstand the shock of landings, and sufficient capacity of control to make flight safe in boisterous winds, as well as in calm air. When these points had been definitely established, we at once packed our goods and returned home, knowing that the age of the flying machine had come at last.

From the beginning we have employed entirely new principles of control; and as all the experiments have been conducted at our own expense, without assistance from any individual or institution, we do not feel ready at present to give out any pictures or detailed description of the machine.

▪ Coming back to the April 1917 text in *Gleanings*, a more hidden goal can be detected behind it. A. I. Root used the pro Wrights article in Collier's as a pretext to repeat once again *he was with the Wright Brothers when they made their first success in getting the machine to turn around and come back to the starting-place*. It should also be remarked that this is a rare case in which the old apiarist, entrepreneur and aviation enthusiast indicates precisely the page and issue of his journal where the story, that made the world aware of what he had seen, can be found. These are his exact words: "*GLEANINGS was privileged to give the first account, by an eye witness, of their invention of any magazine or periodical in the world. See GLEANINGS for January 1, 1905, p. 32.*"

1917-04, "Wilbur and Orville Wright", *Gleanings*, pp. 300-301

WILBUR AND ORVILLE WRIGHT.

As I was with the Wright Brothers when they made their first success in getting the machine to turn around and come back to the starting-place, you can realize somewhat the pain I felt when I saw, as the years have passed, efforts to rob them of their hard-earned title to being the originators of the art of flying. In view of this you may realize how it rejoiced my heart to find the following in *Collier's* for Jan. 6:

THE TITLE TO AN HONOR.

We should have thought that, if the authority of the great inventions of history were investigated, the one upon which the least shadow of doubt could be cast would be the invention of the aeroplane by Orville and Wilbur Wright. ... it is surprising to find that so well informed a man as Dr. Eliot — to whose judgment on any subject we usually defer — is reported to have ascribed the creation of the flying machine to Professor Langley. Professor Langley was a brilliant, ingenious, and modest scientist. We mean no disrespect to his memory when we say that Langley was, no more than Darius Green, the inventor of the essential contrivances for flying.

The attempt to discredit the originality of the Wrights, and to rob two fine Americans of an honor that will outlive all marble, started with a group of men who took out of the Smithsonian Institution the old Langley machine which had been wrecked in launching, changed the shape and weight of the ribs, the shape of the propellers, the controlling device, the starting and landing gear, added a number of devices which were peculiarly the inventions of the Wrights, secured a competent press agent, and turned the machine over to a skilled aeronaut, who, after much effort, succeeded in making the flying-machine — not fly — but *hop*. Between this confection and the Wright aeroplane as much difference exists as between a squat toad and a swallow. And, bad as it was, this was not the original Langley machine, but an

industrious improvement on it. The old Langley machine, we are told on good authority, "failed to fly because the wings collapsed from not being strong enough to carry the strain; even if it had been strong enough it would not have been a practical flying-machine, because it had no means of control except in a perfect calm; it was the discovery of a means of control, the solution of the problem of equilibrium by the Wright brothers — and by them alone — that conquered the domain of air for mankind and brought in the age of flying."

Langley's unsuccessful attempts were made only after the Wrights had completed their invention and progressed far in the actual use of it. They had proved out their system of control by gliding flights in 1902, and had thereby solved the problem of human flight, and they filed their application for their fundamental patent in March, 1903. It was not until more than six months after the latter date that Langley made his unsuccessful attempts at flying — the only ones that he did make. These attempts were made on Oct. 7 and Dec. 8, 1903. They proved nothing but failures, and added nothing to the contribution that the Wrights had made to the science in the previous year. On December 17, 1903, the Wrights again made completely successful flights, but this time with a power-driven machine, and as a result of their quiet, unadvertised, and well-directed work. ...

Misinformation cannot long obscure this fact of history — that *the Wright brothers were the first persons to leave the earth in a mechanically propelled plane and to invent the means of controlling that plane*.

In connection with the above it may be well to state that *GLEANINGS* was privileged to give the first account, by an eye witness, of their invention of any magazine or periodical in the world. See *GLEANINGS* for January 1, 1905, p. 32.

Just a word in closing about Wilbur Wright. We had many discussions during the days I was with them in regard to the value to the world of their invention. I insisted it would result in something like Columbus' discovery of America, etc., but Wilbur, with a sad, far-away look on his face, declared its first use would be for *war purposes*. God knows he had no sympathy for anything along that line. As the years have passed, and we hear of the invention only in connection with war, I am reminded of his prophecy.

▪ Also of little relevance, it is the right moment now to mention a letter dated August 18, 1917, and addressed by Orville to the A. I. Root Company. It contains just an order for a quantity of wax, "*Gentlemen: Kindly send me by Parcels Post ten pounds of beeswax.*". This is the next letter, related to A. I. Root, that can be found after the one he sent to Dayton on September 14, 1915.

1917-08-18, Orville Wright, "Letter to the A. I. Root Company"

... The A. I. Root Company,

Medina, Ohio.

Gentlemen:

Kindly send me by Parcels Post ten pounds of beeswax.

Your early attention in this matter will greatly oblige, Yours very truly,
Orville Wright ...

▪ The next letter in line, marked April 15, 1918, was written by H. H. Root (one of the old Amos' sons) to O. Wright as a means to express his regret he was not at home when Orville came. Its content is significant to a certain extent because H. H. Root stated somewhere inside the text: "*all of us appreciate your kindness to father in those early days when you were making those first, wonderful, revolutionary experiments*". As a remark, he did not use the word "flights" preferring to say "*experiments*" which is a vague term. There is no doubt the Wrights performed some tests in 1904 but this does not mean they flew a man carrying powered plane that year.

Another thing of some value is the affirmation of H. H. Root that his father *treasured every reference to Orville (the Wrights) that he saw in the newspapers, and he had watched their work with what was almost a fatherly interest.*". This is correct as long as the old Amos often published in his periodical various updates about the two brothers, but it is also equally true he did it to emphasise he was the first witness of a real life plane that had even flown in a circuit since the world began, a fraudulent claim.

1918-04-15, H. H. Root, "Letter to Orville Wright"

... My dear Mr. Wright:

On account of having been away several days last week, I have not yet, until this morning, taken occasion to express my regret at not being home that Sunday when you called. ... For years I have wished that I might have the opportunity of shaking your hand and telling you how much all of us appreciate your kindness to father in those early days when you were making those first, wonderful, revolutionary experiments. ... He treasures every reference to you that he sees in the newspapers, and he has watched your work with what is almost a fatherly interest. ...

Mother and father expect to be home toward the end of this week and he will be more than excited when he knows that you called. ... Yours sincerely, H H Root ...

▪ “Aviation and Stimulants” plus “Saloon and the “Chicken Business”” (Gleanings, February 1919, pp. 110-112), an article composed of two parts, is the next text connected to the Wright brothers and at the same time one of the most important because it contains Root’s memories about his direct interaction with the two inventors, in 1904.

A few lines in the Sunday School Times, for October 3, 1918, that made reference to *a widely circulated opinion against the use of alcohol in flying expressed by one of the brothers*, recalled in Root’s *mind a number of incidents*, that had happened in 1904, which he condensed in a few paragraphs permitting to all those interested in identifying the truth, in the intricate Wright affair, to have a relatively clear picture of what really this businessman from Medina witnessed.

Amos Root recalls that at one point he had *an intimation that the Wright brothers were experimenting with a flying machine* (“Our Homes”, Gleanings, March 1, 1904, pp. 240-243 (p. 241)). Then *he felt as if he could not rest unless he went down to Dayton to see the brothers’ work*. This state of exaggerated impatience can be traced in his letters sent between February 16 and July 26, 1904. After months of persistent insistence, he received the green light and *started on his trip with an automobile. He found the Wrights on the very same aviation grounds*, still in existence at the time the article was published or the day the text was written (October 19, 1918), *a few miles east of the city of Dayton. He obtained board and lodging at a farmhouse near by which was kept by a renter by the name of Beard*. All these happened *during that eventful summer* (of 1904). Root remained for a few days with the Beard family and *during the nights and mornings, before the Wright brothers got around, he became quite well acquainted with Mrs. Beard, an invalid suffering from lung trouble. Before the winter’s snow came on, Orville Wright wrote A. I. Root that his good friend Mrs. Beard had died of “quick consumption”*.

Regarding the tests of the two inventors, the old entrepreneur and aviation enthusiast declares that *at first he was somewhat worried for fear the brothers would not care to have a spectator hanging around, and maybe meddling while they experimented with an apparatus that might mean death instead of success in navigating the air like a bird*. Root also noticed *the neighbors seemed to take no particular interest in the experiments and him and the Wrights were, most of the time, a good deal alone, and they soon became fairly well acquainted with each other*. At one point *the brothers insisted that their new friend should go home with them and get acquainted with their sister Katharine*.

Next morning at breakfast a small incident happened. *Katharine passed Root a cup of coffee*. He accepted it out of courtesy also he drank coffee only *on special occasions just to be like other folks*. *The two brothers shook their heads, declining the offer*. Root felt a bit embarrassed believing the coffee had been made just for him. However, one of the two inventors gave him this explanation:

“We do use coffee to some extent ordinarily; but today we expect to make one or more flights; and when we are going to handle that flying machine we want every bit of strength of mind and body to enable us to do just the right thing at just the right time; and we have learned by experience

that a cup of coffee is a detriment and a hindrance; therefore no coffee in the morning when we expect to make flights during the day.”

As can be seen, also the word “flights” appears in the text, the old beekeeper missed again the opportunity to mention he had witnessed at least one.

The last thing, that is worth mentioning, is the affirmation made by Amos Root according to which *Katharine, who was at the time a school-teacher, had helped more or less in financing the boys in their novel undertaking*. No further explanations are provided.

1919-02, “Aviation and Stimulants. Saloons and the “Chicken Business.””, Gleanings, pp. 110-112

AVIATION AND STIMULANTS.

In the *Sunday School Times* for October 3 was an item that brought to mind a couple of incidents of years ago. Below is the clipping:

ALCOHOL NOT GOOD FOR AVIATORS.

When the Wright brothers visited France with their perfected flying machine a number of years ago, they surprised those who sought to do them honors with their total abstinence habits. An opinion against the use of alcohol in flying expressed by one of the brothers was widely circulated. But since then there have been flyers who have thought they could combine alcohol with the dangers in the air.

If you want to know how it turned out with the young man who thought a drink might help him handle flying machines, you had better get that number of the *Times* and read the whole of it. When I first had an intimation that the Wright brothers were experimenting with a flying machine, I told our people here that I felt as if I could not rest unless I went down to Dayton to see the brothers work. I had just succeeded in getting one of the first automobiles, and with this I started on my trip. I found them on the very same aviation grounds that are now occupied, a few miles east of the city of Dayton. In order to be on hand, I obtained board and lodging at a farmhouse near by. At first I was somewhat worried for fear the brothers would not care to have a spectator hanging around, and maybe meddling while they experimented with an apparatus that might mean death instead of success in navigating the air like a bird. As the neighbors seemed to take no particular interest in the experiments, we three were, most of the time, a good deal alone, and we soon became fairly well acquainted with each other; and it was one of the happiest of my “happy surprises” when the brothers insisted that I should go home with them and get acquainted with their bright sister, Katharine, who was at the time the housekeeper for the two young men. Perhaps I might mention incidentally that this good sister, who was at the time a school-teacher, had helped more or less in financing the boys in their novel undertaking. Next morning at breakfast Katharine passed me a cup of very fragrant coffee. I took it as a matter of course; but when both of the young men shook their heads, declining the coffee, I ventured the question, “Why, look here, friends, I wonder if you have been making coffee just for myself when I never drink either tea or coffee unless it is on an occasion like this, to be like other folks.”

Now, friends, listen to the reply. I can not remember now whether it was Wilbur or Orville who spoke; but it was something like this:

“We do use coffee to some extent ordinarily; but today we expect to make one or more flights; and when we are going to handle that flying machine we want every bit of strength of mind and body to enable us to do just the right thing at just the right time; and we have learned by experience that a cup of coffee is a detriment and a hindrance; therefore no coffee in the morning when we expect to make flights during the day.”

Well, here is the moral to rising young men, especially those who are doing their best to rise. Cut out or cut off, whichever you choose to put it, everything in the way of stimulants. Use milk as a beverage, not only in the place of booze, but in place of tea and coffee.

SALOONS AND THE “CHICKEN BUSINESS.”

Just one more incident that occurred during that eventful summer. The farmhouse where I had board and lodging was kept by a renter by the name of Beard. Mrs. Beard was an invalid suffering from lung trouble. The doctors declared that her only hope was to get outdoors and keep outdoors. They recommended gardening or raising poultry, or something that would keep her in the open air. Nights and mornings, before the Wright brothers got around, I became quite well acquainted with Mrs. Beard. I think she had girls who did most of the housework, and she spent a great part of her time outdoors in raising chickens. Of course I could sympathize with her, as I

had been more or less of a “chicken man” all my life, and was able to give her some advice. She succeeded in growing a beautiful flock of chickens — I think something like a hundred, and she got to be quite enthusiastic in the work and was evidently fast getting the better of her lung trouble. What do you suppose happened? When the chickens were of the very best size to be sold as broilers in the big city of Dayton, some chicken-thieves came in the night and took every last one — not a chick was left. Mrs. Beard was heart-broken. As the family was short in finances the blow seemed all the harder. Her hard work for weeks and months was all swept away in a single night; and before the winter’s snow came on, Orville Wright wrote me that my good friend Mrs. Beard had died of “quick consumption.” The loss of her chickens and the discouragement had spoiled her enthusiasm, and so her old trouble came back. The loss of that beautiful lot of chickens, the outcome of a summer’s hard work, had certainly much to do with hastening her death, even if not the real cause of it.

Where does temperance come in in this part of my story? you may ask. It comes in right here: The neighbors all around the Beard home lost chickens in a like manner. One farmer got up and attempted to stop the thieves; but they raised a shotgun and told him to go back into the house or take the consequences. With a telephone, however, he raised the neighbors and they followed the load of chickens into the city of Dayton. The driver finally evaded them by going into a part of the city where almost every house was a saloon. Of course the police were notified; but they excused themselves in some way, and said nothing could be done about it.

My good friends, the above is a sample of the sort of policemen we used to have years ago when the liquor gang put in officers that were according to their liking. Even the city police were of a class that could be persuaded to look the other way when somebody called on them to interfere with the liquor-traffic.

Once more may the Lord be praised that we have a better class of city officers, and that the saloon business, like the slavery of olden times, is largely a thing of the past.

This is dictated the 19th day of October, so I can not tell now the outcome of the coming election.

• In “Our Homes” (Gleanings, June 1919, pp. 392-394) Root reminded again his readers he had a granddaughter *Catharine named after the sister of the Wright brothers* and then he reproduced an excerpt from *the Hummer, a little periodical of which Howard Calvert, his grandson, was the editor*. Writing about his grandfather, who at that time was quite enthusiastic about his electric automobile charged by a windmill, H. Calvert considered that *the success of A. I. Root’s prophecy regarding wind power would be assured in years to come* in much the same way as the success of the Wright Brothers’ airplanes, predicted by his grandfather several years before aviation was perfected, had already become reality.

As a remark, H. Calvert does not really say Amos Root witnessed the two Daytonians flying in 1904. He just wrote his grandfather had made some predictions regarding the future of aviation and his prophecies materialized a few years later.

The same issue of *Gleanings* contains an article about a record flight made by Maj. T. C. MacAuley who flew *from San Diego, California, to Jacksonville, Florida, in 19 hours and 15 minutes*, total time in the air (“From San Diego, Cal., to Jacksonville, Fla., in 19 Hours and 15 Minutes.”) (Gleanings, June 1919, pp. 394-395). It has to be mentioned that this was not a continuous flight, but the old apiarist realised that, in theory, *it would have been possible for one to get an early breakfast in San Diego and a late supper in Jacksonville all in one and the same day*.

However, this coast to coast record looks more like a pretext used by the old beekeeper to repeat the story regarding what he saw on September 20, 1904. This is his introductory word about the flights of Maj. MacAuley:

I have mentioned one or more times that it was my great privilege to be with the Wright brothers when they first made their flying machine start out and turn around and come back to the starting place.

Two months later (see: “Our Homes”, Gleanings, August 1919, pp. 535-537 (p. 536)), while talking about the predictions he had made in the previous 60 or 65 years, Root again reminded his readers that:

... when the Wright brothers first made that wonderful flight and whirled around and came back to the place of starting, he said that the feat would some time be recorded side by side with that of Columbus when he discovered America.

The next article of interest is “Our Florida Garden and Some Glimpses of Our Florida Home” (Gleanings, August 1919, pp. 538-540) where, one more time, Root refers to his January 1, 1905, tale, while explaining that beside him, in a picture, *was Huber’s (one of his sons) daughter, Katharine who was named after the sister of the Wright brothers who invented the flying machine*. He further explains that *Miss Katharyn Root was born shortly after the Wright brothers made their first successful flight and got back to the starting place*, stressing that *an account of that event was first written up (and first given to the world) in Gleanings in 1905*.

In “Our Homes” (Gleanings, July 15, 1909, pp. 446-448 (p. 447)), A. I. Root has a slightly different version for the given name of his granddaughter, born on June 20, 1909, at a distance of four years and nine months from the historic flight in a circuit which he said he had witnessed on September 20, 1904. Here are his words:

As Miss Katherine Eva Root is only about three weeks old to-day, July 10, ... as her father and mother are both very nice-looking young people, ... I congratulated them on having named her after Miss Katherine Wright, sister of the Wright brothers, who is just now, with those brothers, almost the center of attraction to the whole world. (“Our Homes”, Gleanings, July 15, 1909, pp. 446-448 (p. 447))

Huber’s daughter was not born so shortly after that flight in circuit of W. Wright, allegedly witnessed by her grandfather, but much later at a time when the two inventors and their sister were already known in the entire world and their celebrity of 1909 was the real reason Root’s granddaughter was named after Katherine Wright not the fantastic event of September 20, 1904.

1909-07-15, “Our Homes”, Gleanings, pp. 446-448 (p. 447)

OUR HOMES

BY A. I. ROOT.

... Huber, the youngest of the Root family, on the 20th of June, received into his home a most precious gift in the shape of a girl baby.* ...

* As Miss Katherine Eva Root is only about three weeks old to-day, July 10, I can not say very much about her “accomplishments;” but as her father and mother are both very nice-looking young people, as a matter of course that baby is already about the handsomest one in the whole wide world. I congratulated them on having named her after Miss Katherine Wright, sister of the Wright brothers, who is just now, with those brothers, almost the center of attraction to the whole world. ...

1919-06, “Our Homes”, Gleanings, pp. 392-394

OUR HOMES

A. I. ROOT

... When I first got on to the idea of an automobile propelled by wind power, some of the sons and sons-in-law said with cheerful alacrity, “Go ahead, father. Get yourself a nice little car and put up the windmill and we will see that there are funds to carry out the experiment.” If they did not say it in words, they said it in acts. Huber and his little daughter Catharine (named after the sister of the Wright brothers) recently made a trip to Florida to see the experiment of harnessing the wind. If he does not tell you about his trip himself, I will try to do it later on. ...

... Your old friend, A. I. Root, not only did find his burdens lifted by his grandson Howard, but our long trip together, gave me a chance of becoming better acquainted with him than I had ever been before. To give you a little glimpse of him I give below a

clipping from the *Hummer*, a little periodical of which he is the editor:

... We then can get our lights and heat from the air, run our automobiles from wind-made electricity, and probably do many other things just as A. I. Root is doing with his electric windmill in Florida. As he predicted the success of the Wright Brothers' airplanes several years before aviation was perfected, so will the success of his prophecy regarding wind power be assured in years to come — just how many years we will not venture to say. ...

1919-06, "From San Diego, Cal., to Jacksonville, Fla., in 19 Hours and 15 Minutes.", *Gleanings*, pp. 394-395

FROM SAN DIEGO, CAL., TO JACKSONVILLE, FLA., IN 19 HOURS AND 15 MINUTES.

I have mentioned one or more times that it was my great privilege to be with the Wright brothers when they first made their flying machine start out and turn around and come back to the starting place. Therefore you can realize with what interest I note progress in flying as the years go by. While flying machines were first used for war purposes, somehow I did not feel like keeping track of them as much as I do now when war is at an end. Below is a clipping from the *Cleveland Plain Dealer*, dated from Fort Worth, Texas, April 18:

Maj. T. C. McAuley, commander of Taliaferro field, who has flown from coast to coast in 20 hours at an average speed of 137 miles an hour, arrived here safely this morning from Jackson, Miss., where he spent last night. He landed in his plane at 11:30 a. m.

Maj. MacAuley flew 5,500 miles in 44 hours and 15 minutes. His flying time across the continent from San Diego to Jacksonville was 19 hours and 15 minutes, setting a new record.

Of this distance, 880 miles, from Tucson, Ariz., to Sweetwater, Tex., were covered without a stop. He used a de Havilland plane with a Liberty motor.

The motor, according to the airman, never missed a stroke, and the only work done was to remove two dirty spark-plugs.

Years ago Mrs. Root and I enjoyed the privilege of going by rail from San Diego to Jacksonville. So far as I can remember it took nearly a week. Well, from the above clipping it would seem *possible* for one to get an early breakfast in San Diego and get a late supper in Jacksonville all in one and the same day. May God be praised for what has come to pass, or perhaps, rather, for what *is* coming to pass.

1919-08, "Our Homes", *Gleanings*, pp. 535-537 (p. 536)

OUR HOMES

A. I. ROOT

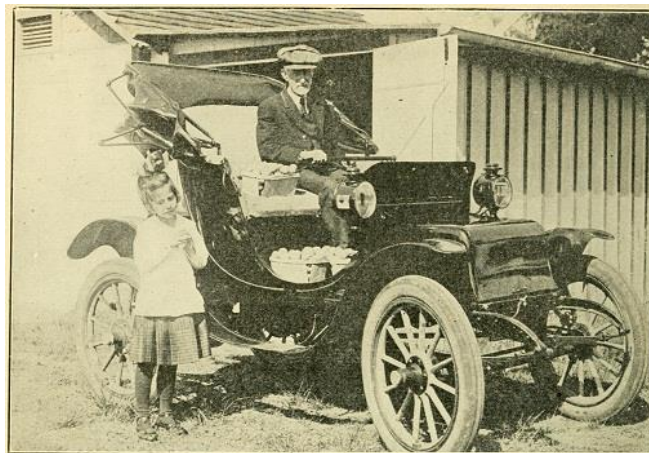
... My good friends, I have made quite a few predictions during the 60 or 65 years that I have looked over God's creation. ... when I was delivering my talks on chemistry and electricity around in the schoolhouses I said that, instead of steam, we should soon run our cars by electricity. Of course I was laughed at. I thought it might be three or four years, but it took *forty* or *fifty*. When the Wright brothers first made that wonderful flight and whirled around and came back to the place of starting, I said that the feat would some time be recorded side by side with that of Columbus when he discovered America. That event, too, (flying) might have taken 40 or 50 years to bring it to pass; but this terrible war hurried things up so it has taken only 12 or 15 years from the first to enable us now to get across the great water with a flying machine in the matter of hours instead of days or weeks. ...

1919-08, "Our Florida Garden and Some Glimpses of Our Florida Home", *Gleanings*, pp. 538-540

OUR FLORIDA GARDEN AND SOME GLIMPSES OF OUR FLORIDA HOME.

... The little girl in the cut is Huber's daughter, Katharine. She was named after the sister of the Wright brothers who invented the flying machine.

The garage for storing the automobile is seen in the background. Miss Katharyn Root was born shortly after the Wright brothers made their first successful flight and got back to the starting place. An account of this was first written up (and first given to the world) in *Gleanings* in 1905. ...



No. 5. — The electric automobile with a load of potatoes ready to take to market.

It was finally my privilege to go up in a flying-machine

▪ "Away Up High, Papa's Baby" (*Gleanings*, October 1919, pp. 679-682 (p. 680)), the next article where the two inventors from Dayton are mentioned, is of particular importance because it tells us that the old businessman finally flew, during the 1919 county fair organized in Medina, and had the opportunity to see his town from above. A. I. Root gives an extensive and realistic description of the flight, specific to people who share their impressions with others after traveling through the air for the first time.

After explaining that the flying machine was one of the inducements brought there to attract people to the fair, he made this affirmation:

Inasmuch as I was with the Wright brothers during their experiments, and witnessed their first successful flight in getting around to the starting place, everybody took it for granted that *I* would be the first one to fly.

It is not quite clear what he meant by "everybody" but it is self-evident Amos Root attempted again to strengthen his claim that he had witnessed W. Wright flying on September 20, 1904.

He first refused to get on the plane because of his advanced age but after one of his daughters, Constance Root Boyden, broke the ice and went up reaching the neighbourhood of the clouds, the old entrepreneur finally consented. He was equipped with a *sort of fur-lined hood* and the apparatus took off, with him as a passenger, seriously shaking him *as the machine bumped over the rough meadow lot, uphill toward the north*, and making him to almost regret for a short while his decision to fly. However, *when all of a sudden the beautiful machine slipped up noiselessly into the air, a wonderful thrill of thanksgiving and praise came into his heart, that it was finally his privilege to go up in a flying-machine.*

1919-10, "Away Up High, Papa's Baby", *Gleanings*, pp. 679-682 (p. 680)

And a little child shall lead them. — ISAIAH 11:6.

"AWAY UP HIGH, PAPA'S BABY."

On the very day that the first copy of *Gleanings*, Vol. I, No. 1, came off the press, God sent into our home a little blue-eyed girl baby. ... When she was able to walk fairly well, when I came home her favorite pastime was to come up to me; and while I held her baby hands so as to steady her, she

would walk up my body to her perch on my shoulder; and when I used the words, "Away up high, papa's baby," she would greet me with a glad smile and shout of delight, grasp my hands, and repeat the everyday performance. I think I have told you before, that little did she, or I, dream that her childlike mission here on earth was to lift the poor *father* "away up high," compared to where he stood, when she got that first glimpse of him, with her baby blue eyes. ...

Our county fair has just closed. Among the other inducements to get the people to come was a flying-machine; and passengers were to be carried up for about seven or eight minutes for the sum of \$15.00. Inasmuch as I was with the Wright brothers during their experiments, and witnessed their first successful flight in getting around to the startingplace, everybody took it for granted that I would be the first one to fly. I first refused, on the ground that I was getting to be too old; and finally, to my great astonishment, that same blue-eyed baby (of almost 50 years ago) came forward, bright and smiling, and almost as handsome in my eyes as when I first used to say "Away up high" to her. This same blue-eyed matronly woman, even tho she is the mother of a couple of fair-sized men, announced that *she* was going to fly, and, amid a crowd of expectant and admiring citizens, off she went up, if not into the clouds, she was pretty near their neighborhood. Little did I dream in the years gone by, and little did she dream, that in the years to come that same "away up high, papa's baby," would be repeated while she was away up above the earth and all things earthly.+ Perhaps she will tell you about it herself. But she came home so full of enthusiasm, and the children and grandchildren and the friends at the factory urged me so much, that I finally consented.

+ "Up above the world so high,
Like a diamond in the sky."

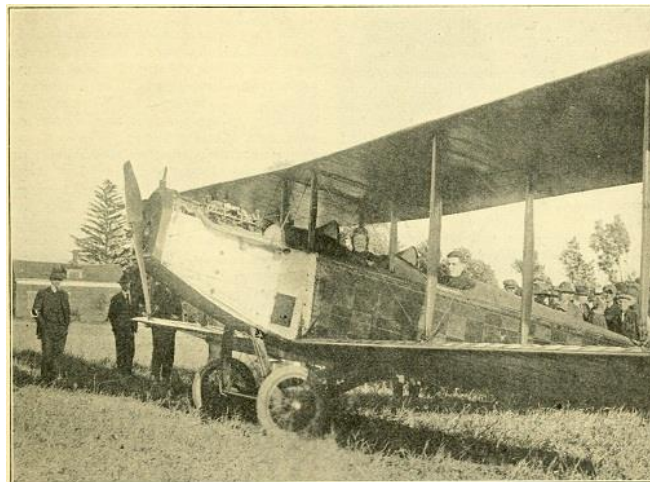
... Just before starting my heart beat almost painfully from the excitement, ... and when the machine bumped over the rough meadow lot, uphill toward the north, I almost regretted that I had undertaken it; but when all of a sudden the beautiful machine slipped up noiselessly into the air, a wonderful thrill of thanksgiving and praise came into my heart, that it was finally my privilege to go up in a flying-machine. We have been having recent rains, and crops were looking fine. The sun was over in the west, just right to illuminate the landscape to the best advantage; and, altho I have all my life been an ardent admirer of beautiful fields and growing crops and happy homes, I never saw anything like this before. Our town of Medina seemed like a veritable paradise. Beautiful homes, well-kept lawns, abundant shade trees and shrubbery, combined to make it something brighter and more entrancing than perhaps any other view I ever had before. But as we went up higher and higher things dwindled down until the Root factory and the various offices and other buildings seemed like a chicken-yard with nicely painted coops. A train of cars passed just under us. I looked down and said to myself, "Why, can that possibly be a *railroad*?" It seemed to me more like a string of ants following each other on a black wire and, had it not been for the smoke of the locomotive, I could hardly have been sure it *was* a train of cars. Not far from our factory there was a beautiful little garden, or so it seemed to me. There was an oblong or oval road going clear around in the center, with a lawn and trees in the middle. At one side of the yard was what I took to be a very pretty and artistic chicken-coop. We passed over it several times, and I was wondering how it was possible that such a pretty little spot could be so near our factory, and I had never seen it. After I got down and had been inquiring about it some one said, "That was the fairground;" and what I took to be such a pretty fixed-up chicken-coop was the grand stand. I was disappointed because I could not see further away from Medina. Far off were some beautiful hills and a rocky ledge about 16 miles away. But this I could see only dimly. The city of Akron, 20 miles away, was hidden by dense masses of smoke; and, altho the air seemed to be very clear, as it was just after a rain, I was unable to see in any direction more than 15 or 20 miles on account of the smoky horizon. I do not know whether this is always the case or not.

I was particularly impressed with the wonderful skill with which the machine was managed.++ It responded to the lightest touch, not only as readily as any automobile, but even more so; and instead of feeling dizzy or fearful while up in the air, it occurred to me (and I still stick to it to a considerable extent), that traveling thru the air will ultimately be as safe as the automobile, and perhaps more so.

++ Since the above was dictated I am told that during the three days they were here they carried up something like 30 passengers. The machine with two passengers weighs just about a ton. By means of an aneroid barometer they decided that at one

time I was up almost 1,000 feet. Furthermore, they claimed to have carried 12,000 passengers on similar trips and that they never had a mishap. If that is true, is it not likely that this new method of transit may be even safer than railroad cars, electric cars, or even automobiles?

When we came down to the place of starting we whizzed thru the air at such a terrible breakneck speed it seemed there would have to be a crash of some kind when we struck the ground; but the operator tilted the machine so that the rubber wheels first just skimmed the grassy slope uphill; and the stop was quicker and easier than we stop our best railway trains, with our most expert engineers and latest improvements.



In the above picture your humble servant is shown on the front seat. I wanted to wear my ordinary cap, but they said it would be blown off, and so I had to be equipped with a sort of fur-lined hood. The driver of the machine is shown just back of me. The propeller is in front. Does it not really look as if that little propeller was wholly inadequate to the task of pulling that big machine a mile a minute, or more, up in the air? No matter how it looks, the little "whirligig" certainly *did* "deliver the goods."

Just a word about the cost of such a trip. One reason why I objected at first was that I was afraid I might be setting a bad example before the younger ones around me. One son, two sons-in-law, three grandchildren, and several of our office girls made the trip. Perhaps they could afford to pay \$2.00 a minute for 7½ minutes of such experience;° but the whole wide world is just now talking about the *high cost of living*. Our good President and the good men and women back of him are right in warning our people to be careful, and to be saving of their money, even if we are getting better wages than ever before, and to economize in every way. No doubt, the price of a trip will soon come down. There is going to be plenty of competition very soon. One of my grandsons said something like this:

"Grandpa, if you will buy me a flying-machine, which will cost you only \$2,000, I will take you down to Florida in about *six hours*."

I think the above is a little exaggerated, but it may soon come to pass. ...

° I suppose most of you have noticed certain birds that have the remarkable faculty and skill of being able to remain stock-still while in the air. The hummingbird in particular shows this trait. Well, when we were up at the highest point there was quite a brisk north wind, and the operator almost stopped the engine; in fact, I could see the blades of the propeller quite plainly, and then I discovered he was regulating the speed so that it would just about equal the wind; and there we were for several seconds suspended, as it seemed to me, stock-still. It may have been dropping just a little. I was afraid there was something the matter with the engine, and that we were going to drop to the ground right on top of our factory; but after he had let me see that standing still was possible when the wind was just right, the motor speeded up and we were off again. ...

▪ Another column touching the subject "The Wright brothers" is "A. I. Root As His Daughter Sees Him" (Gleanings, March 1921, pp. 171), a text that simply reproduces the article "One of the Farm Journal's Oldest Friends, Amos I. Root, the Bee Man" which appeared in the Farm Journal for January 1921 and was written by his daughter, Constance Boyden, the one who flew in 1919 and encouraged his father to do the same.

The text is mainly about the multitude of hobbies the old beekeeper had: electricity, wind power, bees, gardening, growing chickens, etc.. Regarding aviation, this is what C. Boyden wrote:

He was one of the first keenly interested in aviation, being a confidant and friend of the Wright Brothers when they were making their first secret attempts at flying.

As can be remarked, the text does not explicitly say Amos Root witnessed the Wrights flying in 1904. The daughter of this businessman from Medina just says her father was a *confidant* of the two inventors at the time *they were making their first secret attempts at flying*. *Confidant* does not automatically mean eyewitness and *attempts at flying* is not necessarily the equivalent of manned powered flights. As it is formulated, Constance Boyden's sentence is just a carefully worded message susceptible to various interpretations.

1921-03, "A. I. Root As His Daughter Sees Him", *Gleanings*, p. 171

A. I. ROOT AS HIS DAUGHTER SEES HIM.

The Farm Journal for January, on its page of "Workers and Work," published an article "unbeknownst" to Mr. A. I. Root, under these headlines: "One of the Farm Journal's Oldest Friends, Amos I. Root, the Bee Man." The author was his daughter, Mrs. Constance Root Boyden — in the old days her father's "Blue Eyes." The editor of *Gleanings* makes bold to publish this well-done sketch of the father without consulting either the subject or the author of it. Here it is:

"My father might be described as a man who has never been without a hobby. Perhaps this explains why at eighty years of age he is mentally keen and has the enthusiasm and zest for life of a boy, altho always he has been handicapped by a frail constitution which necessitated his husbanding his health.

"When only sixteen his hobby was electricity, and he even went about giving lectures on what was then a little understood subject. Later when he had a growing business as manufacturing jeweler, he happened to notice a swarm of bees going overhead, and paid a workman a small sum to capture them for him.

"That little incident altered the course of his whole life, and shaped the lives of all his descendants to the third generation. From that time on bees became his hobby, and he gave all his spare time to their study. Since the books of that period did not give him all the information he wished, he studied his pets at first hand to such purpose that he afterward wrote the well-known "A B C of Bee Culture."

"But electricity and bees were by no means his only hobbies. He was one of the first keenly interested in aviation, being a confidant and friend of the Wright Brothers when they were making their first secret attempts at flying.

"And he has had a lifelong love for out-of-door work and "seeing things grow," both in his garden and chicken yard. You will notice I use the expression "out-of-door work." If father ever deliberately started out to play, I never knew it. He would probably not know a golf stick from a tennis racquet, nor has he any first-hand acquaintance with a fish-pole or gun. And yet, I am not sure but that he has taken more recreation than any other man I know. You see much of his work is recreation because he works along the lines of his hobbies. He can extract more pleasure from a combination of hoe, garden soil, and growing crops than other men can find on ideal links with the most expensive golf sticks.

"His latest hobby is to generate electricity by wind power. By windmills, at his little Florida home, he charges storage batteries and thus runs a little electric runabout and lights his house. He likes to mystify small boys by telling them his automobile runs by wind.

"Although father's life-work has seemed guided by his hobbies, there is a dominating principle over all, and that is, and always has been, his great desire to serve humanity.

"Here is a rather strange fact about father; he has never been employed by any other man, not even for one day.

"Now, at eighty years age, father is a busy, happy optimist."

▪ In "Flying-machines Versus Horses, Trucks, Railways or Steamboats" (*Gleanings*, June 1922, pp. 402-403), another text that contains the name of the two inventors, A. I. Root comes back to his old idea according to which *the cheapest way to move freight of any sort is by the "AIR" route*. This thought reappeared in his mind while watching the activity of some energetic Italian bees returning full of pollen to their hive. He did not have precise figures but

believing *the bees had been demonstrating for ages past the superiority of the "air route" over anything else for moving things* and also thinking he was the first to ask himself such a question, Root proposed anybody, who might have been interested in the subject, to do the math and calculate *what proportion the honey and pollen bear to the weight of the bee that carries them*. More than 110 years of aviation, measured from 1906 when the first took off were officially witnessed, show that the air route is inefficient for carrying freight and trucks, trains and ships still reign when it comes to moving heavy loads.

As expected, Amos Root, again, did not miss the opportunity to remind his readers about that 1904 flight in a circuit, of W. Wright, he had obsessively claimed since January 1, 1905, he had witnessed. Here are his words:

When Wilber Wright made his first trip out into the great free air and back again with his flying-machine, I told him that he had that day demonstrated the possibility of travel without macadamized roads or railways.

As a note, even before September 20, 1904, in a long text, published in *Gleanings* for September 1, 1904, that made no explicit reference to the Wrights and their invention, Root wrote: "*I am not at liberty just now to tell all I know in regard to this matter*", the matter being that "*people were already, at least to some extent, ignoring roads of every kind, and climbing through the air, and not by means of the gas-balloon*". Definitely, the old entrepreneur already had in mind *the possibility of travel without macadamized roads or railways* without seeing W. Wright flying because this man from Medina often repeated he had just witnessed some tests performed by the Wrights, in the summer of 1904, avoiding to say he had seen them flying.

Coming back to the June 1922 article, it is worth mentioning that, talking about his early hobbies in life, windmills and electricity, A. I. Root states at one point that *it did get into his head that the two could be linked together, when he was near 80 years old* which is another example of ignorance and self-importance displayed by him. In reality, powerful wind turbines that generated electricity and charged batteries had been built since the time Root was about 50. An example is the electric generator of Charles F. Brush of Cleveland, Ohio ("Mr. Brush Windmill Dynamo", Scientific American, December 20, 1890, cover and p. 389) that, at the time the article was printed, had been in continuous operation for more than two years. It was capable of generating up to 12 kW and a big batterie composed of 408 *secondary cells* occupied a room in the basement of Brush's house.

The last article of interest in *Gleanings* ("Modern Surgery: What it Has Accomplished.", *Gleanings*, December 1922, pp. 802-803) brings nothing new. A. I. Root just repeats that he suggested naming Huber's daughter (born on June 20, 1909) *after the good sister of the Wright brothers, with whom he was in touch, some years before*.

1922-06, "Flying-machines Versus Horses, Trucks, Railways or Steamboats", *Gleanings*, pp. 402-403)

Flying-machines Versus Horses, Trucks, Railways or Steamboats.

"Coming Events Cast Their Shadows Before."

Right close to the office where I dictate is a hive of unusually energetic Italian bees. They are just now scampering into the hive, not only with great loads of honey but tremendous loads of golden-yellow pollen. The honey comes from the fruit bloom, but I have not yet decided where they get such big loads of pollen. Well, now, this thing has been going on, I might say, ever since the time of Adam; and yet so far as I know no one has as yet even suggested that the bees demonstrate to us that the cheapest way to move freight of any sort is by the "AIR" route. Here in Ohio, as I have told you before, we have a clay soil on which, sometimes, without good roads, a

team can do but little more than pull an empty wagon, while we are spending millions in making good hard roads, only to find that these newly invented trucks that carry so many tons spoil our roads almost as fast as we can make them. Then we have to go to a still larger expense to lay tracks through hills and valleys for steam and electric cars. When Wilber Wright made his first trip out into the great free air and back again with his flying-machine, I told him that he had that day demonstrated the possibility of travel without macadamized roads or railways.

Now, will somebody get right to work and tell what proportion the honey and pollen bear to the weight of the bee that carries them? and has not the bee been demonstrating for ages past the superiority of the "air route" over anything else for moving things, whether it be human beings or carloads of grain to feed the starving, somewhere, on this big earth of ours?

One of my hobbies in childhood was windmills, to get hold of the wind and use it. A little later on it was electricity. Praise the Lord, it *did* get into my head that the two could be linked together, when I was near 80 years old; and it seems likely that the third hobby of mine — the possibilities of the outcome of bee culture — might link in flying also, with the work of the honeybee.

1922-12, "Modern Surgery: What it Has Accomplished.", *Gleanings*, pp. 802-803

Modern Surgery: What it Has Accomplished.

... The general manager of our institution had only one little girl. You may remember I suggested naming her Kathryn, after the good sister of the Wright brothers, with whom I was in touch, some years ago. ...

▪ On April 30, 1923, Ernest, A. I. Root's oldest son, informed Orville that his father had passed away that day. O. Wright replied on May 8, 1923, and his answer was rather formal. He wrote things that are usually said when somebody dies, but he also tried to accredit the idea that Amos Root had seen the Wrights flying in 1904 because he referred to the visits of Ernest's father at the time when he and his brother *were carrying on their early flying experiments*. The text does not clearly state A. I. Root witnessed flights in 1904. It just talks about "*flying experiments*" performed at the time this aviation enthusiast used to visit the two Daytonians. In an answer that followed about one week later, on May 16, 1923, Ernest Root affirmed that his *father had often spoken about the Wrights and had seemed to feel a great deal of pride in that he had known them personally*.

1923-04-30, E. R. Root, "Letter to Orville Wright"

... Dear Mr. Wright:

My father, A. I. Root, passed away early today. ... Father had a very warm place in his heart for you, and I am sure that he would be glad to have me express to you for him a final word of friendship. ... Yours sincerely, Ernest R. Root

1923-05-08, Orville Wright, "Letter to Ernest R. Root"

... Dear Mr. Root: ...

Your father was a man of unusual character and intelligence, and his passing is a real loss to the World as well as to his family. I look back on the times when your father used to visit us while we were carrying on our early flying experiments with much pleasure; and though we had not had the opportunity of seeing him in his later years we often thought and talked of him. ...

1923-05-16, E. R. Root, "Letter to Orville Wright"

... Dear Mr. Wright:

Your welcome letter expressing sympathy in the loss of our dear father, A. I. Root, was duly received.

Father often spoke of you two men and your sister Katharine, of the very high character of you all. While he claimed no credit in your great invention, he seemed to feel a great deal of pride in that he knew both of you men personally. ... Most sincerely yours, E. R. Root ...

▪ Ernest R. Root continued to write to Orville. Four such letters and an answer coming from O. Wright can be found during a five-

year-long interval of time, December 19, 1930 – December 31, 1935. These texts have things in common and, for this reason, they will be commented together:

1) On December 19, 1930, E. R. Root started his letter to Orville by saying that *he had read with very much interest the true story of the Wright Brothers which he assumed to be authentic. He also appreciated very much the reference to A. I. Root.*

Also he did not specify what publication he referred to, it is evident he talked about the book "The Wright Brothers Fathers of Flight" by John R. McMahon (Little, Brown, and Company; Boston, 1930) which, on page 159, reads: "*Sep. 20 ... Wilbur flew a full circle with a circumference of 4080 feet in 2 minutes 15 2/5 seconds. A. I. Root, editor of a bee journal, was present.*". However, Ernest R. R. had some doubts regarding the credibility of McMahon's story otherwise he would not have said "*which I assumed to be authentic*".

1930-12-19, E. R. Root, "Letter to Orville Wright"

Wright Brothers, ...

Gentlemen:

As the oldest son of A. I. Root I read with very much interest the true story of the Wright Brothers which I assumed to be authentic. I appreciate very much the reference to A. I. Root. ...

2) In three letters, E. R. Root denied any involvement of Root's family members in spreading the false information according to which his father had financed the Wrights, helping them to develop *the machine*. Orville assured him that neither him nor his brother had ever believed that his father had been responsible for those incorrect reports.

1930-12-19, E. R. Root, "Letter to Orville Wright"

... This letter requires no answer but is to let you know that we didn't take any stock in that statement that was published a year ago to the effect that A. I. Root had helped develop the machine or had helped to finance it. ...

1933-01-03, E. R. Root, "Letter to Orville Wright"

... My father was not a little annoyed on account of the persistent reports that he, A. I. Root, supplied the Wright Brothers with funds to carry on their aviation work. We have denied this repeatedly, saying that you boys went ahead on your own funds and your sisters to develop your wonderful invention. ...

1933-01-31, Orville Wright, "Letter to E. R. Root"

... We never thought your father in any way was responsible for the reports -- I believe not widely spread, -- that he had been our financial backer. Our relations were purely that of friends. ...

1933-02-09, E. R. Root, "Letter to Orville Wright"

... Father was always greatly annoyed at the occasional stories that came up to the effect that he was one of the backers of the Wright Brothers. In one or two cases, at his suggestion, I wrote to the publications, offering a correction. Whether such corrections were published I do not now recall. ...

3) Two of the letters express the regret of Ernest R. R., who spoke in the name of the entire Root family, that they missed the opportunity to meet Orville when he came to Medina in the spring of 1918 (see: H. H. Root, "Letter to Orville Wright", April 15, 1918).

1933-02-09, E. R. Root, "Letter to Orville Wright"

... We were all sorry that we were not at home when you called at Medina some years ago. ...

1935-12-31, E. R. Root, "Letter to Orville Wright"

... It has always been a regret that none of us were home at the time you called in Medina to see some of the members of A. I. Root's family. ...

4) The letter of January 3, 1933 is of greater importance in comparison to the others because its main subject is about another letter E. R. Root sent, in December 1932, to a certain Jay Smith who wrote for magazines and had demanded *two copies of Gleanings* (January, 1905) *that had pictures of the Wright Brothers' flying machine*. Together with Ernest's letter,

Orville also got a copy of the text addressed to J. Smith who, unfortunately, did not receive what he had asked for but a copy of the January 1, 1905, issue of *Gleanings* which contained (see: "My Flying-Machine Story", January 1, 1905, *Gleanings*, p. 48) just a fraudulent promise that a picture of the flying machine would appear in the January 15, 1905 number of the same journal. The oldest son of Amos Root tried, in his December 2, 1932 answer, to make J. Smith believe that such a picture existed saying that *he remembered it very distinctly* but he could not locate it. In reality, only the photo of a glider was printed (see: "The Wright Brothers' Flying-Machine", January 15, 1905, *Gleanings*, pp. 86-87) and E. R. Root knew this or at least had all the information to locate the article. Had he been a honest man he would have told Jay Smith that no picture with a Wright plane was published in *Gleanings* before August 8, 1908. Here are the relevant extracts from the January 3, 1933 letter and its attachment dated December 2, 1932:

1933-01-03, E. R. Root, "Letter to Orville Wright"

... I am enclosing a copy of letter just written to Jay Smith, who writes some for magazines. He desires the entire story regarding A. I. Root and his connection with your people of early days. ...

1933-01-03; 1932-12-2, E. R. Root, "Copy of a letter, dated 12/2/32, sent by E. R. Root to Jay Smith"

... Dear Mr. Smith: That portion of your letter ... requesting two copies of *Gleanings* that has pictures of the Wright Brothers flying machine has been received. ... I have secured one copy of *Gleanings* for January 1905 where my father gives a detailed account of the Wright machine and its first flight. ... I will make a further search and if I can find the copy that contains a picture of the Wright flying machine I will do so. I remember it, of course, very distinctly. ...

5) Together with his January 3, 1933 letter, E. R. Root sent Orville a copy of *Gleanings* for January 1st, 1905, saying that, based on his father's reports, he had prepared an article for the *Scientific American* about the work of the Wrights. Unfortunately, his text was turned down. Orville (who evidently had in front of him the February 4, 1905, letter of A. I. Root where the old aviation enthusiast wrote he had sent *marked copies* to the *Sci. Am.*) asked in his reply, that came on January 31, 1933, whether a *marked copy* of the January 1, 1905, article had been mailed to the *Scientific American* or something else. E. R. Root answered he had sent a paper prepared by him and signed by his father, which was a different text from that of A. I. Root. If his memory is right, also the *Scientific American* might have received a marked copy of *Gleanings* (the second sent by Amos Root) it also got a manuscript of Ernest, *describing Wrights' first flights* and having an unknown precise content, which was rejected. Here are the relevant fragments from the three letters discussed above and that of February 1905:

1905-02-04, A. I. Root, "Letter to the Wright brothers"

... Dear Sirs:- ... You can have 100 extra numbers of *Gleanings* for Jan. 1st if you want them. ... I mailed a marked copy to the *Scientific American* when it was first out. After a few days they replied saying that the copy had not reached them and asked me to send a second one directed to a special member of their staff. Since then I have not heard a word from them and there has been no mention made in the *Scientific American* whatever of your work. ...

1933-01-03, E. R. Root, "Letter to Orville Wright"

... In going over the back volumes of our journal I discovered an article by my father on your early experiments in aviation when you made your first successful flight. I am enclosing a copy of our journal for January 1st, 1905, and refer you to pages 36, 37 and 38. ... It might interest you to know that about that time I prepared an article based on my father's reports, for the *Scientific American*, telling about your work. That paper turned it down as impossible and then later on saw their mistake. ...

1933-01-31, Orville Wright, "Letter to E. R. Root"

... Your father once told us of the "*Scientific American*" refusing to print an account of our flights sent to it. Was this a marked copy of "Gleanings" of January 1, 1905, or was it a specially prepared article? ...

1933-02-09, E. R. Root, "Letter to Orville Wright"

... Your interesting letter has been received. The article offered to the *Scientific American* describing your first flights as mentioned in the journal *Gleanings* in Bee Culture, which you have, was prepared by myself and submitted to my father. He signed it and then I sent it on to the *Scientific American*. They returned the manuscript with thanks, saying that flying machines heavier than air were not a success and never would be, or something to that effect. ...

6) The last thing of interest, that can be found in the 1930 - 1935 correspondence, is a reference to *letters that were written by Wilbur or Orville to A. I. Root* (see: E. R. Root, "Letter to Orville Wright", December 31, 1935). Regarding these documents, there also exists a note on a page, with a printed header reading "From the desk of Orville Wright", which mentions a December 1938 letter sent by a certain *Mrs. A. E. Mc Laudon who offered for sale letters of W. Bros. to Root*. Another relevant document is a text dated November 5, 1943. It is written by somebody from the A. I. Root Company who informed Fred C. Kelly (a biographer of the two Daytonians) that if he really wanted those letters, a trip to Florida was necessary to talk with a woman who had them, and make copies. No further information is available regarding the fate of Wrights' letters to Amos Root.

1935-12-31, E. R. Root, "Letter to Orville Wright"

... Dear Mr. Wright: I am enclosing ... a copy of *Gleanings* in Bee Culture that was formerly edited by my father, A. I. Root ... I am sending you a copy of the January issue of that journal and refer you to page 20. I thought you would be interested in the reference in the second column referring to letters that were written by your brother or yourself to A. I. Root during the days when aviation was in its very infancy. ...

1938-12 or after, "Undated hand note with a printed header reading: "From the desk of ORVILLE WRIGHT" "

See letter Mrs A E Mc Laudon

Dec. 1938 offering for sale, letters W Bros to Root, clippings & pictures found in attic of Root home at Bradentown, Fla.

1943-11-05, The A. I. Root Company, "Copy of a letter sent to Fred C. Kelly"

... Dear Mr. Kelly: ... we have heard nothing further from the woman in Florida, but if you really want these letters I suspect we would have to go there in person and make copies of them. She seems to think the original letters of A. I. Root and Orville and Wilbur Wright ought to be worth a small fortune. ... The next time I do down there I shall try to go over whatever letters she may have. She offered to show them to me when I was there the last time. ...

▪ This is the story of A. I. Root, the second most important witness of the Wright Brothers, who, in fact, was just a liar. Please reread the *Question and Answers* section.

Section IV

Letters sent by Amos Ives Root to the Wright Brothers and a few other related documents

1904

1904-02-16, A. I. Root, "Letter to Wilbur and Orville Wright", February 16, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No. _____

Medina, O.

A. I. ROOT, President.
E. R. ROOT, V. Prest.
J. T. CALVERT, Treas.
A. L. BOYDEN, Secy.

FEB 16 1904

Wilbur & Orville Wright,
Dayton, Ohio.

Gentlemen:-

I hope you will excuse me, friends, for the liberty I take in addressing you. Let me say briefly that I have all my life had an idea in my head that a

flying machine should be made on the principle of flying a kite, and years ago I made some experiments on a small scale in this line. Now when you make any more experiments with your machine I want to be on hand if you can manage to permit me to go along. I am not going to make any experiments of my own and I think I can assure you that I won't undertake to borrow any of your ideas, and at my age I do not care to make investments in the project. In fact, we have a good business already that uses all our capital, but I want to be in the crowd and see you work and if I can be of any assistance in any way I should be exceedingly glad. By consulting Dun or Bradstreet you can easily find out what my financial standing is. Another thing, if you have any models of your apparatus in Dayton, Ohio, I should be exceedingly glad to pay you a visit very soon to look them over; that is, if I may be permitted. I can give you any guarantee you wish in regard to my honesty and integrity. I saw your account in the Independent. I expect you are already overrun with a vast amount of correspondence, but I hope you will find time to give me some sort of an answer soon.

Yours truly,

BN

A. I. Root.

1904-03-22, A. I. Root, "Letter to Wilbur and Orville Wright", March 22, 1904, 1 page, Library of Congress, US.

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In replying to this refer to file No.

Medina, O.,

MAR 22 1904

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Cycle Co.,

Dayton, O.

Gentlemen:-

Permit me to thank you, friends, for your letter of Feb. 23rd and your promise that I may have an opportunity of witnessing your experiments. I am exceedingly anxious to be on hand when you make your first trial this season, and I think I can promise you that I won't be a hindrance even if I do not do any good, and I hope to be able to help you a little in some way. I suppose you have noticed what the Independent has said in the way of apology. The particular point to me was to know how much of the matter in the Independent was truth and how much was fiction. I suppose of course you gave some reporter at least a foundation for their article. I have made one or two references to flying machines in our journal. We send you copies of these marked with blue pencil. In consequence of these articles our readers are sending me items in regard to flying machines. I enclose one of them. You may have seen it already. Now if you could tell me about when you expect to make your first experiment it would be quite a favor because I want to arrange my business no as to be away from home a week or two, or as long as I can be of any service.

Resp. yours,

BN

A. I. Root.

1904-05-10-or-16, A. I. Root, "Letter to Wilbur and Orville Wright", May 10 or 16, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

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MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

MAY 1[#] 1904

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Cycle Co.,

Dayton, O.

Gentlemen:-

Please excuse me, friends, but I am getting quite anxious to see some experiments with that flying machine, and inasmuch as you have promised me an opportunity of seeing them I would be glad to know if you wont get to working now pretty soon. If you are crowded with business and no time to write just tell me on the enclosed postal about when you will commence making the experiments, that is, if you know already. I have heard some talk to the effect that you are having some trouble about getting patents. Now I

do not want to be inquisitive, or seem to be meddling with somebody else business, but if I can be of any assistance in any way I should be very glad to help you. I am now 64 years old and have had quite a little to do with patents and patent office business. And permit me to say that not only my time but perhaps something more is at your service if I can be of any use to you. Please understand that I do not want any financial interest in your affairs. I only want to help along the first real practical flying machine the world has ever seen, if I understand it.

From your old friend,

BN

A. I. Root.

P. S.

I have been contemplating a trip in another direction say in the course of a week or ten days; but I will put it off if there is any probability that I can witness some experiments with your invention. I should like to be one of the crowd and I will stand off at a distance if you prefer I should do so; that is, I think I can promise I wont be in the way or hinder if there is no place where I can be of any help.

A. I. R.

1904-05-28, A. I. Root, "Letter to Wilbur and Orville Wright", May 28, 1904, 1 page, Library of Congress, US.

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MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

MAY 28 1904

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Cycle Co.,

Dayton, Ohio.

Dear Friends:-

I have no particular right to kick even if you have tested the machine without letting me know, for you did not promise to let me see your first experiment; but you did promise that I should have a chance to see the machine; indeed, I would willingly make a trip to your city or most anywhere else just to see the machine standing still, but I would make a half dozen trips gladly to see it move even if it did not go more than 30 feet. I know something about how it is to have a big crowd around when you are making experiments and have got your hands and brains full, too, for I ran an automobile from Medina to Traverse City, northern Michigan and back again. My son, who was with me, said one day, "Father if we are going to have any more repairs to make we want to go out in the country where there is not a house in sight. I cannot stand it to have a big crowd of folks asking fool questions when I am bothered with something I do not understand." Now I promise to keep out of the way and I wont ask any "fool questions," and I would keep it all to myself, if you say so. Can't I have a chance to stand off at a respectful distance when you make your next experiment. If the weather should be bad and you have to wait, why, I can wait too. Won't you tell me, please, on the enclosed postal card how soon you will make another trial. I am sorry to be importunate but I am tremendously interested.

Yours truly,

BN

A. I. Root.

1904-07-06, A. I. Root, "Letter to Wilbur and Orville Wright", July 6, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

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THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

JUL 6 - 1904

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Cycle Company,

Dayton, Ohio.

Dear Sirs:- I see by the papers, friends, that you have made two tests of your apparatus during the month of June. I suppose you were too busy or did not see fit to let me know when these tests were made. I hardly need to tell you it would be a great favor if you would wire me at my expense when you next make a trial trip. Perhaps you may care to know that I have just visited Mr. Freeman of Kalkaska, Mich. He has a machine nearly ready to test that

has cost a good many thousand dollars. He uses no balloon and expects the machine to fly on a plan something like yours. If you care to know anything about it I would be glad to give you all the information you may desire. He says that he expects to fly with it from northern Michigan to St. Louis. Of course he is working for the prize that is offered. I would consider it a great favor if you would put something on the enclosed postal with a pencil in regard to your next test; or, if you say you will wire me when it comes off as near as you can, that would be a still greater favor. I expect to make a trip to your city soon but I would very much prefer to make it about the time you make a test. Pardon me for my importunity but if I knew of any other way to get at the information I want I would gladly avail myself of it. Of course I will not make public anything in regard to your work without your permission.

BN
From your old friend,
A. I. Root.

1904-07-12, A. I. Root, "Letter to Wilbur and Orville Wright", July 12, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
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TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No.</i> Medina, O., JUL 12 1904

Wright Cycle Co.,
Dayton, O.

Dear Sirs:-

Many thanks for your very kind promise to let me know as well as you can before another experiment. As I have relatives in Xenia I should stay two or three days without any particular inconvenience. If you should want to make a trial on short notice I would consider it a great favor if you would wire me at my expense. I would be ready to go to your place by the first train upon notification.

Thanking you again for your kind offer I remain,
Yours very truly,
BN
A. I. Root.

1904-07-20, A. I. Root, "Letter to Wilbur and Orville Wright", July 20, 1904, 1 page, Library of Congress, US.

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Wright Cyce Co.,
Dayton, Ohio.

Dear Sirs:-

May I be permitted to bother you a little once more. I would prefer to make the trip to your place on my automobile. I expect I could get down in one day but I would a little rather make the trip in two days and this is to ask you to be so kind as to give me notice about when you make the next experiment say two or three days ahead. It will take me about two days to get down there, that is, taking it leisurely and even if I should have to wait a couple of days or more after I get there it would not matter. If you could tell me on enclosed postal what the prospects are just now under the circumstances it would be a favor.

Thanking you for information you have given me already I remain,
Yours old friend,
BN
A. I. Root.

1904-07-26, A. I. Root, "Letter to Wilbur and Orville Wright", July 26, 1904, 1 page, Library of Congress, US.

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THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O., JUL 26 1904

Wright Cycle Co.,
Dayton, O.

Dear Sirs:-

Please excuse me, friends, but I am so anxious to see that airship I can hardly sleep nights. Won't you please tell me on enclosed postal if there is any prospect that you will make a trial with it this week. If there is I want to start down there right away. May be I can run errands for you or do something with my automobile; if so, it will be entirely at your service while I am around there.

Yours truly,
BN
A. I. Root.

1904-08-23, A. I. Root, "Letter to Wilbur and Orville Wright", August 23, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, President. E. R. ROOT, V. Prest. J. T. CALVERT, Treas. A. L. Boyden, Secy.
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TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No. _____</i> Medina, O. AUG 23 1904

Wright Cycle Co.,
Dayton, Ohio.

Dear Friends:-

I have not laid awake nights thinking about your work quite as much since I got home as I did before, but my mind is still on it a great deal, and I am getting hungry for even a brief report as to how you are succeeding. If you could spare the time to make brief mention on the enclosed postal I would be exceedingly glad. I am very anxious to know in regard to that plan of dropping a weight from a little derrick, that is, if you decide to undertake anything of the sort. It may be that bright sister of yours might consent to gladden the heart of an old man by a little report if she feels so inclined. At any rate give her my regards with grateful thanks for the part she had in making my recent visit one of the bright spots in my life. If she will give me her address I will take pleasure in mailing her our journal. She may be interested in my account of my trip through Ohio on the automobile. Of course I did not say anything about the flying machine experiments. I believe this is almost the first incident in my travels where I have failed to let our readers know what is going on in the world especially in the line of new inventions and discoveries.

It is hardly necessary for me to say again that nothing will delight me more than to be able to assist you if such opportunity should ever offer. I am reading the two books you gave me over and over again. I get some new apprehension of the matter every time I look them over. May God be praised that He has permitted me to live at the same time when the Wright Bros. came here on earth and still more that it was my privilege to feel at least to some extent that they are my personal friends. May God give you wisdom and understanding in the great work you have undertaken.

From your old friend,
BN
A. I. Root.

1904-09-12, A. I. Root, "Letter to Wilbur and Orville Wright", September 12, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
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TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No.</i> Medina, O., SEP 12 1904

Wright Cycle Co.,
Dayton, Ohio.

Dear Sirs:-

Many thanks, dear friends, for yours of Sept. 10th and especially for your very kind invitation. I began to fear that perhaps my presence was more of a hindrance than a help, of course, I do not expect to be very much help just yet, but may be after a time. Business on hand is such that I cannot get away

probably until next week. By that time may be you will be going over fences and corn fields, but I will try and not get my expectations up to high.

Please give kindest regards to your good sister. We send you copy of our journal for Sept. 1st. If you do not have time to read my travels you might turn it over to your sister.

PS

From your old friend,
A. I. Root.

1904-09-22, A. I. Root, "Letter to Wilbur and Orville Wright", September 22, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

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Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

SEP 22 1904

Wright Cycle Company,
Dayton, Ohio.

Dear Friends:-

Enclosed clipping was just mailed me from a relative in Xenia, Ohio. Now, if everybody else is putting you into the papers, what harm will it do for me to give you a little write-up that has already been submitted to your inspection? I have already dictated what I would like to say and will try to mail it to you to-day or to-morrow. I do not know the date of the enclosed clipping but it was evidently made since you have got up the derrick. I am thinking about that air-ship all day long and dream about it nights. When you get out of the corn fields and come back to the starting point, let me know and I will be down again. I will write you further probably by next mail. I thought you ought to know what was "flying around" in the papers.

Yours very truly,

ZBD

A. I. ROOT

1904-09-22, "Undated clipping, from a newspaper, sent to Wilbur and Orville Wright, on Sep. 22, 1904, by A. I. Root who had received it from a relative in Xenia, Ohio", see the September 22, 1904 letter of A. I. Root to the Wright brothers, Library of Congress, US.

THE FLYING MACHINE.

The Wright brothers were experimenting with their airship on Mad river prairies yesterday. They started the machine with 1,200 pounds weight, and at a height of 10 feet sailed a distance of one thousand feet across the field, and anchored, the working being entirely satisfactory to the Messrs. Wright who have been seven years perfecting the machinery. They say they will make an ascension at St. Louis before the exposition ends.

1904-09-between 22 and 26, A. I. Root, "Letter to Wilbur and Orville Wright", 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

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MEDINA, OHIO, U.S.A.

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Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

1904

Dear Friends Wright:

I inclose herewith what I have written up just as I should like to do it---that is, just about what I should like to put in print; but, of course, it is subject to your approval; but if you say so, any part of it or all of it will be withheld from the public; but it would make your old friend exceedingly glad if you would consider that, as it is already so near the public, it would do but little harm; and, better still, if you would let me give your names and place of residence. You see it has been in the papers already, even such periodicals as the Scientific American and the Independent, besides the clippings I have shown you. I have for years been trying to keep posted, and to keep before our people, through our journal, all real progress in science and art, and I would gladly give you \$100 for the privilege of printing this paper just about as it is, if that would make no difference. Yes, I would give more than that. Perhaps there is a little pride in wanting to be the first to give to the great world the real facts in the case---that is, after you have

straightened up my statement so that it will contain nothing but actual facts. There would not be time to get it in our journal any way for Oct. 1; but if we can it for Oct. 15, as I said before, it would make me very glad.

Now, if you will pardon a little more intrusion in your affairs, I would recommend that you retain a good trusty attorney, and let him advise you in regard to the legal and financial matters---that is, if you can find such a man as you want. In that case I would submit to him this write-up of mine, and abide by his decision. While I am thinking somewhat of my own interests, I wish to consider right along your interests also. And, by the way, if you should decide to keep on with your experiments until you can go out of that field and get back into it, I want to pay you another visit---perhaps bringing Mrs. Root along. Mrs. Beard has promised to take care of her, and I want to have her enjoy with me that wonderful creation of yours.

Very sincerely yours,

A. I. Root.

As we have no copy of article, please return by registered mail when done with it.

If you dont object & would wire me at once, we might get it in Oct. 1st.

As ever A. I. R.

1904-09-27, A. I. Root, "Letter to Wilbur and Orville Wright", September 27, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

SEP 27 1904

Wright Cycle Co.,

Dayton, Ohio.

Gentlemen:-

Many thanks for your kind favor of Sept. 26th, dear friends. You need not bother to make changes in the manuscript I have sent you until you are ready to have it given to the public, for I should have no use for it unless it could be given in our journal. I suppose you have decided that withholding all names and the places where the experiment occurred would not sufficiently disguise it; now let me suggest another point, when it comes to litigation it is often of very great value to be able to prove an invention by exhibiting a printed journal. I once prevented what threatened to be a big law suit by finding a printed description of the invention in an old journal dated years before. This thing will surely come out before the people soon and your invention will be copied and stolen unless you are ready to prove every point. I may be of some good to you as a witness, but a printed description with a date to it would be worth ever so much more, of course, the matter is entirely in your hands. Please do not think for a minute that I want to dictate. Will you please drop me a postal or wire me just as soon as you are making experiments that take you outside of that field.

By the way our attorney, that is, the attorney employed by the A. I. Root Co., has always been a "crank" on flying machines and begs the privilege of coming with me, if you have no objection. I will guarantee his soundness and reliability and if his legal knowledge will be of any benefit to you by the way of advise it will be most freely at your disposal.

Now, dear friends, perhaps I may be presuming a good deal on so short an acquaintance, but I am deeply interested in the matter and exceedingly anxious that no one shall rob you of a single feature of your invention.

I enclose a few postals. Any brief statement of how you get along will make "happy."

Your old friend,

PS

A. I. Root.

1904-09-30, A. I. Root, "Letter to Wilbur and Orville Wright", September 30, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

SEP 30 1904

Wright Cycle Co.,

Dayton, Ohio.

Dear Friends:-

I promised you I would not put in print anything referring to your invention without submitting to you. Therefore I submit another paper for our next issue. I beg pardon for troubling you so much, but I wish you would go over this hastily and cross out anything you would prefer not made public. We enclose stamped envelope for the return of the document. When I come down again I am going to bring a barometer and it will afford me much pleasure to show you how I can foretell the weather for 12 or 24 hours, ~~and oblige~~

Your "importunate" friend,
A. I. Root.

PS

1904-10-05, A. I. Root, "Letter to Wilbur and Orville Wright", October 05, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In reply to this refer to file No.</i>
<i>Medina, O.,</i>	OCT 5 - 1904

Wright Cycle Co.,
Dayton, O.

Gentlemen:-

I am sorry to trouble you, friends, but our printers are wanting copy of the last article I mailed you. I hope this will not be objectionable after you have crossed out all reference to yourselves in the matter. I will however, of course, keep my promise and not say anything in print about flying machines in general if you so prefer. If you could manage to mail this last article back again as soon as you get this I will be very much obliged. The first one you can keep until such time as you should be willing to permit me to use some part or all of it. I hardly need to tell you I am anxiously waiting for some information in regard to further progress of your experiments. I sincerely hope that you are "marching on" with it.

Your old friend,
A. I. Root.

BN

1904-10-08, A. I. Root, "Letter to Wilbur Wright", October 8, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In reply to this refer to file No.</i>
<i>Medina, O.,</i>	OCT 8 - 1904

Wilbur Wright,
Dayton, Ohio.

Dear Friend Wright:-

I am sorry to have put you to the trouble of writing me so much at length. With your explanation I fully appreciate your position and I will be careful in the future not to say anything more until I have your permission. I have repeatedly already explained to my friends that I was not at liberty to mention what I witnessed and they have always taken it kindly; in fact, I have been a good deal disappointed because so few people, even the members of my own family, regard it as such a non important matter. Of course my opinion from my standpoint of view may not amount to much but I do think your invention should be pushed along before anybody else gets in ahead of you. I expect to see flying machines advertised for sale at a special price within one year, but I may be mistaken. Not only the daily papers but the magazines are full of it. I can cut out the articles and forward them to you if you wish; but I have been astonished to find that from so many different directions people are working almost in the line with your work. Perhaps I should say suggesting rather than working. Twice I have seen pictures of the propelling blades that look almost exactly like yours. There was no mention however that they were made of wood. In a recent magazine your machine was almost outlined but no reference made to yourselves. If you want it I will hunt it up; I cannot remember now what magazine it was. Every Goodies Mag for Oct. As nobody seems to want to

talk about it around here I can very easily drop the subject and pretend I am riding some other hobby. Of course I do not mean to be wicked or tell fibs, but I think you will understand me. All my acquaintances expect to see me having some new hobby to ride every few days so they wont be at all surprised if I keep still about flying machines. I should be ready now to give you an order for a machine, that is if you wanted an order, if our folks would let me practice on it; but they would say my bones are too old and would break too easy, etc. Perhaps you do not want to make any machines for sale at present; but my impression is there are a thousand people that would buy one in the United States if they just saw what I saw. May be I better cut it down to one hundred, but it would not be long before a thousand would be wanted. Now friends don't let the grass grow under your feet or let somebody else get ahead of you by delays. That is only my opinion though.

As ever, not only your old friend, but one who is ready and anxious to start out any minute to help you along with that wonderful gift that God has seen fit to entrust you with.

BN

A. I. Root.

1904-10-08, A. I. Root, "Letter to Wilbur and Orville Wright", October 8, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In reply to this refer to file No.</i>
<i>Medina, O.,</i>	OCT 8 - 1904

Wright Cycle Co.,
Dayton, O.

Dear Friends Wright:-

Since writing you yesterday I have been thinking over what my good friend Wilbur said in his kind letter and I infer that he would prefer I should not mention in my forthcoming article that I am in possession of some secret I am not at liberty to reveal. In other words "the best way to keep a secret is to avoid mentioning that you have a secret." I have therefore crossed out that portion of my article intimating that I knew something that I dare not tell, etc. No doubt you are right about it and I do not want you to have any good reason for thinking perhaps you have been unwise in taking me into your confidence and friendship to the extent you have. I send you proof of the article as it is to appear and on the whole I believe I like it best that way.

BN

Yours as ever,
A. I. Root.

1904-10-17, A. I. Root, "Letter to Wilbur and Orville Wright", October 17, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In reply to this refer to file No.</i>
<i>Medina, O.,</i>	OCT 17 1904

Wright Cycle Co.,
Dayton, O.

Friends Wright:-

We take the liberty of marking you for Gleanings complimentary. I do not suppose you will care to read about the bee business and may be you wont care to read all my Department; but as you are interested in the world of science aside from flying machines, bicycles, etc., I rather think you will find something of interest and may be things you have not got hold of elsewhere. If so, I shall be very glad. If you think best to let your invention rest where it is until next spring, all right; you are the boss and I am simply a spectator, but I am hoping some day the thing will get loose and astonish the world perhaps more than Radium or even wireless telegraphy.

BN

Your old friend,
A. I. Root.

1904-10-20, A. I. Root, "Letter to Wilbur and Orville Wright", October 20, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

OCT 20 1904

Wright Cycle Co.,

Dayton, Ohio.

Dear Friends W:-

Nothing preventing I expect to go up to our place in north Michigan about the middle of next week, and as I shall be near to Kalkaska it will be quite convenient for me to call on Mr. Freeman to see how he gets along with his \$10,000 flying machine. Now if there was no objection I think I might do the poor man a kindness by telling him something of what you are doing with that machine he was so sure would never fly unless it was run down hill, etc. As the matter stands I presume you would rather I should not mention to him anything of your work or that I know you; and may be it would be better for your interests if I should not go and visit him at all. I suppose I could find out from other people whether it had ever got off the ground or not. Now I dislike to bother you to keep writing me so much, therefore if you think it would be a little better that I should not see him at all under present existing circumstances you need not write anything. In this case silence does not give consent, but it is the other way. If, however, you think no harm would come in giving him a little friendly talk on the subject you might so indicate it. My impression is that you still wish the matter kept as secret as possible and I do not feel at all inclined to disagree with you, only I hate to see this old fellow blow away his dollars. I shall be up north about three weeks. About the middle of November I have an engagement with the Anti-Saloon League in Columbus, and when I go down there of course I will want to run over briefly to see you and knew how things are progressing. Of course if there is anything being developed that you think might interest me I would gladly put off my Michigan trip for my greatest interest just now is in your work; everything else is only a side issue.

As ever,

BN

A. I. Root.

1904-11-07, A. I. Root, "Letter to Wilbur and Orville Wright", November 7, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

NOV 7 - 1904

Wright Cycle Co.,

Dayton, O.

Friends W:-

I am home again from Michigan, but I did not call on Mr Freeman because I learned in Traverse City his machine had never yet got off from the ground. They said he made some tests to see how much it would lift, but my impression is he could not find anybody willing to go up in it; but a machinist said, who had been working for him, that he was offering a thousand dollars for a man that would go to St. Louis and make the flight. Nobody wanted the thousand dollars and he has given up competing.

Now I am to be in Columbus next week and if the weather is favorable I expect to drop in at Sims Station sometime in the afternoon. If you are not there of course I will take the next car to Dayton. After our Convention at Columbus I may come out again if the weather is so that you can make any experiments. There is a lot of things I want to talk with you about anyway.

You need not make any reply to this unless you see fit.

Yours truly,

BN

A. I. Root.

1904-11-28, A. I. Root, "Letter to Wilbur and Orville Wright", November 28, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

NOV 28 1904

Wright Cycle Co.,

Dayton, O.

Dear Friends:-

I want to extend my congratulations to my good friend Orville for the good flight he made just as I left for my car. It was especially gratifying because the wind was in the wrong way and he once struck ground, but when he picked up and went ahead the machine worked as handsomely and was managed as gracefully as anything I ever saw in the line; in fact, a swallow could not have made the curves any better until the machine went down. I suppose that was the fault of the engine and no fault of Orville's. If that was the last flight for the season it certainly was a big success so far as managing the machine is concerned. Should there be any more experiments I would be very glad to have a brief account of same. I shall be counting the days, weeks and months from now on until April or such a time as you see fit to start up.

Please give my kind regards to your sister.

As ever your old friend,

BN

A. I. Root.

1904-12-06, A. I. Root, "Letter to Wilbur and Orville Wright", December 6, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

DEC 6 - 1904

Wright Cycle Co.,

Dayton, O.

Dear Sirs:-

Hurrah for my good friend Orville. By the way I think I will have to explain that I sent Torrence Baird some postal cards and asked him if he would briefly report if you made any more flights yet this winter. He just tells me that Orville went around four times without stopping on Dec. 1st. It was a pretty cold day up here. Now if Orville sailed that thing as gracefully and steadily as he did on the last trip I witnessed he certainly is not a back number to any man living at present. I rejoice and thank God that you two have been able to make such a record before winter sets in, and I declare I begin to believe that may be you will get the knack of flying in cold weather so you may keep it up more or less all winter. I hope I did not transgress any in asking Torrence to keep me posted. Of course I shall not make any mention of it until I have permission.

Yours old friend,

BN

A. I. Root.

1904-12-12, A. I. Root, "Letter to Wilbur and Orville Wright", December 12, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

DEC 12 1904

The Wright Cycle Co.,

Dayton, O.

Dear Friends:-

The enclosed is from the Scientific American. The only point that interests you is perhaps the last sentence. Now Baldwin is going to work on a flying machine that will fly without a balloon and he will probably try to get what assistance he can from you, at least he is a foolish man if he does not, and I expect there will be a lot more Baldwins; and I expect too that

what you have done will soon be in the papers. May be I am mistaken, but before it gets to be an old story I would like to have the privilege of telling the world something of what I know about it, and I hope too that I may be able to help prove your priority of invention. If I am making myself busy over your affairs you will have to excuse me the best way you can. My only excuse is that I am deeply interested in the whole matter. I expect to go down to my Florida ranch some time in January. I wish I could take you two along, flying machine and all. Say, wouldn't it be a good idea to have a station down there with an equipment of tool, machinery, etc. It would not be expensive going back and forth because we could beat the fastest train going through the air. I would not wonder if I should live long enough to see this realized and you want to keep in mind that it is my project having a Florida station. Whenever you are ready it shall go up at once.

Your old friend,

BN

A. I. Root.

1904-12-21, A. I. Root, "Letter to Wilbur and Orville Wright", December 21, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF Bee-Keepers Supplies. TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In reply to this refer to file No.</i> <i>Medina, O.,</i> DEC 21 1904	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SEC'Y.
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Wright Cycle Co.,
Dayton, O.

Dear Sirs:-

Please do not forget to send me cut representing your gliding machine. The one on page 20 of your little pamphlet "Soaring" would suit me very well. If it has not been sent when this reaches you please get it here promptly because we want to get out a little earlier on account of its being the 1st of January. I am going to give our Sunday School Christmas gathering a little talk about God's latest gifts showing them a little model of the gliding machine.

Your old friend,

BN

A. I. Root.

1904-12-24, A. I. Root, "Letter to Wilbur and Orville Wright", December 24, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF Bee-Keepers Supplies. TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In reply to this refer to file No.</i> <i>Medina, O.,</i> DEC 24 1904	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SEC'Y.
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Wright Cycle Co.,
Dayton, O.

Dear Sirs:-

Enclosed find proofs of the forthcoming article on the flying machine. As we want to be sure to get it in the issue for January 1st will you please look it over and return as quickly as possible if you wish any changes made. If it is all right as it is please let us know on enclosed postal card.

By today's mail we have received an excellent photograph of the gliding machine. I understood you were to send me a plate that I could use with the article in Gleanings. Of course I can have one made from the photograph you sent but there is hardly time. Another thing it does not show the back rudder, in fact, it looks as if this had been erased. If you prefer not to have the back rudder shown all right. The picture is an excellent one otherwise and if you cannot furnish at once a plate to print from of the same picture I will have engraving made for January 15th, but I should be very glad indeed to have it in for January 1st.

Yours truly,

BN

A. I. Root.

1904-12-29, A. I. Root, "Letter to Orville Wright", December 29, 1904, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS.
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Bee-Keepers Supplies.

A. L. BOYDEN, SEC'Y.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

DEC 29 1904

O. Wright,

Dayton, O.

Friend Orville:-

Thanks for your card of December 25th. On looking more closely I notice the back rudder is in the picture but this being white it did not show very well. We are going to have the picture enlarged and will try to make it plainer and if we succeed in getting a pretty good looking picture of the gliding machine you are quite welcome to it if you have any use for it. Some time in the future I hope to have the privilege of showing our people a good picture of the complete machine.

As ever yours

BN

A. I. Root.

1905

1905-01-06, A. I. Root, "Letter to Wilbur and Orville Wright", January 6, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF Bee-Keepers Supplies. TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In reply to this refer to file No.</i> <i>Medina, O.,</i> JAN 6-1905	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SEC'Y.
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Wright Bros.,

Dayton, O.

Dear Sirs:-

We mail you with this a copy of the periodical "Electricity". I think you will be interested in what is said on windmills on page 7.

By the way, friends, some time in the fall I told you I would give a hundred dollars or more for the privilege of publishing the article that appeared a little changed in our number for Jan. 1st. I presume likely some of the magazines will give you that amount or more for a write-up. Now I have not said anything about the \$100.00 but I want to say it is ready for you or more too whenever you wish to avail yourselves of the offer. In fact it would be a pleasure for me to assist somewhat in defraying the expense of your experiments. The whole wide world ought to feel that way more or less; perhaps it will come around in due time. I hope I am always ready to do all I agree and more too. When I talked with you in regard to the matter I believe you have heretofore preferred to have the matter entirely in your own hands at your own expense. I know you will forgive me for taking the liberty of speaking out as I have done.

From your old friend,

BN

A. I. Root.

1905-01-18, A. I. Root, "Letter to Wilbur and Orville Wright", January 18, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF Bee-Keepers Supplies. TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In reply to this refer to file No.</i> <i>Medina, O.,</i> JAN 18 1905	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SEC'Y.
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Wright Cycle Co.,

Dayton, O.

Dear Sirs friends:-

With the wish that the enclosed may help you a little in your multitude of experiments which you have as yet got little pay for, and so far as I know with little thanks, in the great wide world, I remain,

Your old friend,

BN

A. I. Root.

*Draft*100⁰⁰*

1905-02-04, A. I. Root, "Letter to Wilbur and Orville Wright", February 4, 1905, 2 pages, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

FEB 4-1905

Wright Cycle Co.,
Dayton, O.

Dear Sirs:-

Well, friends, I suppose if you cannot accept of the check I shall have to keep it but I will try and fix it (mentally) to your credit in some way. You can have 100 extra numbers of Gleanings for Jan. 1st if you want them. We send you ten copies at once and if there is anybody you would like to have have them just give us the addresses and we will send them gladly. We are always glad to get opportunities to mail sample copies of our journal.

I expect that extra passenger will be for the benefit of one of you two brothers; but if it should come handy remember nothing would delight your old friend A.I. Root like a short trip in that extra-- I was going to say seat, but perhaps I had better put it hammock or something of that sort.

I am delighted to know that you are still at work and whenever it is possible for me in any way to give assistance just make it known.

Don't you want also some copies of the next issue containing the print. You might answer on enclosed postal.

As ever your old friend and devoted servant,
BN

A. I. Root.

Wright Cycle Co. #2

P. S.

By the way, I mailed a marked copy to the Scientific American when it was first out. After a few days they replied saying that the copy had not reached them and asked me to send a second one directed to a special member of their staff. Since then I have not heard a word from them and there has been no mention made in the Scientific American whatever of your work. I thought perhaps they had asked you to write it up for them. I hope so for I am surprised to think such a paper as the Scientific American should be so much behind the times.

A.I.R.

1905-02-16, E. R. Root, "Letter to Wilbur and Orville Wright", February 16, 1905, 2 pages, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

FEB 16 1905

Wright Cycle Co.,
Dayton, Ohio.

Gentlemen:-

My father, A. I. Root, has often spoken of the Wright Brothers, and of what they are doing with their flying-machine. When he told me that you were using water-cooling for your gasoline-engine, I began to wonder if you had ever exploited the field of air-cooling for such engines. I have had considerable experience in driving an automobile and in handling gasoline-engines; and I thought that possibly I might be able to give you a suggestion, although it is probable you have gone over this field before. If so, do not take the trouble to answer this letter. But I wish to say that air-cooling, as applied to gasoline-engines in automobiles, is a big success, especially where the engine is put in front of the machine where it can get a large amount of air. With your flying-machine you have exceptional facilities for air-cooling; and then, besides, you could reduce considerably the weight of the engine, which, of course, is a very important matter. While you have built something far lighter than any thing else on the market, yet if you adopt air-cooling you can reduce the weight and complication very much more. The air-cooled automobiles are very much lighter per horse power than the water-cooled machines. The Franklin, made at Syracuse, N. Y., is perhaps the lightest engine for its power of any thing on the market. The

same principle used in the Franklin, namely, projecting disks, or flanges, could be very easily applied to the special engine you are building. You would do away with a large amount of water with the pump and connections, radiator, etc. Some of the best air-cooled machines use projecting pins sticking out all around the cylinder. The Knox is one of the most prominent. Others make use of copper disks around the cylinder.

Up till lately the air-cooled principle did not allow of an engine or motor, rather, larger than 12 horse power; but they are now building four-cylinder motors up to 20 and even 30 horse power.

The high speed at which you travel in the air would make the air-cooling principle very simple and feasible; and if you are interested, to see illustrations of the various air-cooling machines, I think we can find some among our old automobile papers. In the mean time I suggest that you write to the Franklin Manufacturing Co., Syracuse, N. Y., requesting them to send you a circular describing their air-cooled automobiles.

Possibly you may not be aware of the fact that the Franklin, in their trans-continental trip from San Francisco to New York cut down the length of time in making the trip over a water-cooled machine just one-half. The reason was, the air-cooled motor was so much lighter that the automobile was not a burden to itself; or, in other words, it gave a great deal more horse power to the weight than the Winton water-cooled machine which had previously held the best record.

In a letter you just wrote to my father you say that the horse power of your engine just built seemed to decrease after running a little. This may be due to a lack of lubrication, or to too much gasoline running through your carbureter after the engine got warmed up. After the engine has been running a while, cut down the flow of gasoline a little and note the effect. If every thing is right the engine ought to run faster after every thing is warmed up, and consequently give more power than the reverse. But you no doubt are familiar with this fact.

You probably have taken into consideration all the suggestions in this letter; but if you have not, there may be something of value to you in it.

I wish to say in closing that some of the best automobile experts now believe that air-cooling will supplant the water-cooling principle on all machines of 20 horse power or less.

Yours very truly,

The A. I. Root Company.
E. R. ROOT.

I enclose you a print of the Franklin motor taken from my last Auto journal. It shows only the engine.

1905-02-17, A. I. Root, "Letter to Wilbur and Orville Wright", February 17, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

FEB 17 1905

Wright Cycle Co.,
Dayton, Ohio.

Dear Sirs:-

The enclosed just clipped from Electricity for Feb. 15th may interest you. To tell the truth I have had the same thing in mind myself. It won't do you any harm to think it over even if you do not see anything practical in it.

Yours truly,

BN

A. I. Root.

1905-02-24, E. R. Root, "Letter to Wilbur and Orville Wright", February 24, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

FEB 24 1905

Wright Cycle Co.,

Dayton, Ohio.

Dear Sirs:-

Your letter of Feb. 23rd replying to mine regarding air cooled motors has been received. As we suspected you have been all over this ground. I was not aware that you required so high a speed, a speed that would probably require water cooling instead of air cooling. There is one thing true however that on high speed you will get more power per pound of weight than you do on low speed.

I shall be glad to make your acquaintance personally some time if I would not be intruding. I believe, however, that the time will come when an air cooled engine can be built so it would be suitable for your purpose but at the present time experience has not shown just what design will give satisfactory results for conditions such as presented in your machine. As you say, the automobile has a chance to go slower allowing the engine to cool down somewhat; but on the other hand the high speed of your flier would give a larger amount of air pressure or cooling air to the engine.

Yours truly,

BN

*The A. I. Root Company.
E. R. ROOT.*

1905-03-22, A. I. Root, "Letter to Wilbur and Orville Wright", March 22, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SEC'Y.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No.</i> Medina, O., MAR 22 1905

Wright Cycle Co.,

Dayton, O.

Dear Friends:-

See enclosed clipping. Now do you consider it worth while to follow this thing up. Do you suppose it is really true that this man with an apparatus weighing 42 pounds has ascended two thousand feet. I think it must be a newspaper blunder. If you desire I will hunt up the real truth in regard to the matter. We have subscribers located almost everywhere and I think I can easily get at the truth.

By the way I have felt hurt to think the Scientific American has not even mentioned the experiments of last summer. I sent them copies of Gleanings the second time but they did not even give me a word of thanks or recognition of any kind. It may be possible they wrote it up in their supplement; but it seems to me out of courtesy they might send me a copy. Have you heard anything from them. Of course I am watching out for weather to be suitable to work outdoors.

Your old friend

BN

A. I. Root.

P. S.

Since the above was written we find we have two subscribers at Santa Cruz, Cal., and we have copied the enclosed to them asking them to hunt up the truth of it at our expense.

A.I.R.

1905-03-28, A. I. Root, "Letter to Wilbur and Orville Wright", March 28, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SEC'Y.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No.</i> Medina, O., MAR 28 1905

The Wright Bros. Co.,

Dayton, Ohio.

Dear Friends:-

Very likely you have seen enclosed before this reaches you, but I thought it would be just as well to submit it to you. The first statement I sent you, was not correct; "That he had no balloon." But he has made some progress, evidently, with the Glide Machine, that is, if the story is true.

I will let you know, when I get hold of something further in regard to it.

Very truly yours,
A. I. Root.

1905-04-04, A. I. Root, "Letter to Wilbur and Orville Wright", April 4, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SEC'Y.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No.</i> Medina, O., APR 4-1905

Wright Cycle Co.,

Dayton, O.

Dear Sirs:-

My father has gone up to his little ranch in northern Michigan where he will be for ten days or a couple of weeks. Just before he left he requested us to send a copy of the last issue of the Scientific American which contains mention of the Wright Bros.' experiments. Thinking that you may not have seen it we are sending you copy of the last issue for April 1st.

Yours truly,

BN

*The A. I. Root Company.
E. R. ROOT.*

1905-04-11, A. I. Root, "Letter to Wilbur and Orville Wright", April 11, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SEC'Y.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No.</i> Medina, O., APR 11 1905

Wright Bros.

Dayton, Ohio.

Dear Sirs:-

The enclosed letters and papers will explain themselves. I thought likely you might like to see them. I hope you are progressing with your work.

Yours truly,

BN

A. I. Root.

1905-04-17, A. I. Root, "Letter to Wilbur and Orville Wright", April 17, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SEC'Y.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No.</i> Medina, O., April 17 1905

Wright Cycle Co.,

Dayton, O.

Dear Sirs:-

Many thanks for your very kind letter of April 16th. I for one am disgusted with the press generally, especially the scientific press, to find so few of them have even taken the trouble to copy what I have written or make any mention of the matter. But please do not take the trouble to answer my letters unless you have plenty of time and can just as well as not. I enclose in this some new clippings. They do not amount to very much except to tell you something more about Prof. Montgomery. By the way this California exploit of dropping down two or three thousand feet with a gliding machine, that is, if we have got the truth of the matter, seems to me amounts to something. The man who handled that gliding machine, turning to the right and left, and then sliding down hill at terrific speed and going up again with the momentum required, must be somewhat of an expert; and if he can handle a gliding machine he probably is pretty well prepared to learn to run the same machine with a motor; and it looks to me as though you might have a rival somewhere on the Pacific coast. I think he better come

and see you before he wastes money; but may be you would not care to see him.

I hope I have not been so much of a hindrance that you won't want me around when you commence experimenting this year; but I want you to be frank about the matter and I will promise not to come around until you are ready to see me, much as I am interested. I will, however, keep mailing you all the clippings I get. They do not amount to much so far, but sometimes you know, straws show which way the wind blows. I think after a while you will get recognition from the Scientific American and the rest of the world; but perhaps it is just as well not to have too much notoriety just now.

From your old friend,

BN

A. I. Root.

1905-05-05, A. I. Root, "Letter to Wilbur and Orville Wright", May 5, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

MAY 5-1905

Wright Cycle Co.,

Dayton, O

Dear Sirs:-

The enclosed comes from one of my friends in California, W. A. Pryal, 479 Valencia St., San Francisco, Cal. As it gives a picture of the machine I thought it might give you some additional light on the subject. The only particular point with me is this, -does Prof. Montgomery know of what you have accomplished. I should infer from his remarks he does not; but I cannot understand why my friend Pryal did not tell him about it, for he has corresponded with me quite a little about it.

I trust you are improving the beautiful weather and shall be very glad indeed for even a postal card when you have anything to communicate.

Your old friend,

BN

A. I. Root.

1905-05-12, A. I. Root, "Letter to Wilbur and Orville Wright", May 12, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

MAY 12 1905

Wright Bros.,

Dayton, O.

Dear Sirs:-

Thanks for your kind letter. I know that Prof. Montgomery, and I suppose the rest of the aeronauts, knew about your gliding experiments, but do they know of your work last summer. It seems to me they do not and yet I thought I gave the matter sufficient publicity. By the way, inquiries are coming in all the while as to the progress you are making. Now perhaps I took a liberty when I made that brief note about the fact that you were making a two passenger machine. If so, I beg pardon; but if you are willing I shall tell what I know of about what you are doing I would be glad to do so and a lot of our friends would be glad to get any sort of news in the matter. You see it is a good thing for our journal.

By the way, one man says he wants a machine just as soon as you are ready to offer one for sale. I do not know anything about his financial standing. Of course I won't make any mention of work the present season without your permission to do so.

If you are busy you need not bother to answer when I write you. I enjoy letting you know all I get hold of in regard to the matter.

Yours truly,

BN

A. I. Root.

1905-05-20, A. I. Root, "Letter to Wilbur and Orville Wright", May 20, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

MAY 20 1905

Wright Cycle Co.,

Dayton, Ohio.

Dear Friends:-

I enclose another leaf from the Scientific American, also one from a California paper. You will notice in the wind-up the Scientific American rather gives us a slap in the face, or at least I take it so. Perhaps you do not, and Think it is all right. You may say that the writer of the article was not aware of what you did last summer. Very true; but the editor of the Scientific American is aware and if they publish a live journal with any fairness I think they might have added in a foot note that he was mistaken. Nevertheless if you are satisfied I will try to be.

Hoping this will find you making progress, I remain,

Yours truly,

BN

A. I. Root.

1905-06-03, A. I. Root, "Letter to Wilbur and Orville Wright", June 03, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No. 28900

Medina, O.,

JUN 3-1905

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wilbur & Orville Wright,

Dayton, Ohio.

Dear Friends:-

Thanks for yours of May 30th. You need not take the trouble to return any letters or clippings I send you. I am very glad indeed to know that you are getting along and especially that there is a prospect that you may get something substantial for your invention. I will of course keep the matter to myself. If you can let me know about the time you would be making trials I should be exceedingly glad to be on hand and I will try not to be in the way.

With best wishes, I remain,

Yours truly,

BN

A. I. Root.

1905-06-13, A. I. Root, "Letter to Wilbur and Orville Wright", June 13, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In reply to this refer to file No.

Medina, O.,

JUN 13 1905

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Cycle Co.,

Dayton, Ohio.

Dear Sir:-

The enclosed was mailed me but the clipping don't give any particulars in regard to the date. I think it is something pretty recent. I am watching the mails anxiously to hear that you are pretty near ready for some experimental work. You have not told me yet you wanted me along but I am importunate enough to take it for granted. I am very anxious to see the new apparatus anyway even if I do not see it fly.

As ever,

Yours truly,

BN

A. I. Root.

1905-06-24, A. I. Root, "Letter to Wilbur and Orville Wright", June 24, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

JUN 24 1905

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Cycle Co.,
Dayton, Ohio.

Dear Sirs:-

I got home safe and sound in very good shape and found the enclosed from the Toledo man. It seems he is having some experience that he did not calculate on. Flying in the air cannot be done altogether on paper.

I also enclose a letter from one of our subscribers to show you the kindly interest our friends feel in your success. Kindly return the letter in the enclosed stamped envelope, but the clipping from the Toledo man you may keep if you wish. I have a relative near him who will furnish me with all the newspaper accounts as fast as they come out and after I see them I will send them to you.

As ever yours,

BN

A. I. Root.

1905-06-30, A. I. Root, "Letter to Wilbur and Orville Wright", June 30, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

JUN 30 1905

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Cycle Co.,
Dayton, Ohio.

Dear Sirs:-

I hope you will find something of interest in the enclosed pages. Owing to ill health Huber did not get down to Dayton. I trust you are prospering.

Yours truly,

BN

A. I. Root.

1905-07-25, A. I. Root, "Letter to Wilbur and Orville Wright", July 25, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

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TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

JUL 25 1905

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Cycle Co.,
Dayton, Ohio.

Dear Friends:-

Enclosed find full particulars in regard to the sad fate of poor Maloney. You will notice his death was caused by a little carelessness in starting out. I fear it is going to discourage further experiments in California. Knabenshue at Toledo is having some trouble but I am told by a man who lives near there that two or more other are building similar airships with balloon. I expect to be up in northern Michigan for a couple of weeks. By the time I get back I hope you will have some good news for me if you have not already.

Your old friend

BN

A. I. Root.

1905-08-21, A. I. Root, "Letter to Wilbur and Orville Wright", August 21, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.

In replying to this refer to file No.

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

MEDINA, OHIO, U.S.A.

Medina, O.,

AUG 21 1905

Wright Cycle Company,
Dayton, Ohio.

Dear Friends:-

On my arrival home I find yours of Aug. 16th and am watching anxiously for something further from you, I shall be very glad to make you another visit just as soon as I know that you are making experiments, as you are perhaps already by this time I hope. I enclose a clipping from the Leader regarding Knabenshue.

Yours very truly,

ZBD

A. I. ROOT.

1905-08-29, A. I. Root, "Letter to Wilbur and Orville Wright", August 29, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

AUG 29 1905

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Cycle Co.,
Dayton, Ohio.

Dear Sirs:-

Well friends I suppose you will excuse your old friend, A. I. Root, if he does get a little anxious. You see Knabenshue is forging ahead so I have been wondering if he would not begin to use a lighter balloon, a still lighter, and after a while no balloon at all unless you folks should get ahead of him in some way. I would be very glad indeed to know what progress you are making and if you are ready to see your old friend around once more in where you are at work. You might reply briefly on enclosed postal if it will save you time.

As ever,

BN

A. I. Root.

1905-09-12, A. I. Root, "Letter to Wilbur and Orville Wright", September 12, 1905, 1 page, Library of Congress, US.

Trial Grounds and Seed Farm for Northern-grown Seeds and Potatoes for the Seed Department of THE A. I. ROOT CO., Medina, Ohio.

OUR CABIN
IN THE WOODS.

A. I. ROOT.
BINGHAM, LEELANAW Co. MICH.

Summer Residence of A. I. Root.
Located close to Bingham Dock, on Grand Traverse Bay,
8 miles north of Traverse City.

SEP 12 1905

Address me at
R. F. D. No 5
Traverse City Mich

Wright Bros. Dear Sirs.

Your kind postal of the 7th has just reached us up here. We have only been here a few days, and I would gladly make the trip back to Ohio at once if I thought I could be of any use to you, but if not; I would rather not return until some time in October. I presume you are not yet ready to have your work written up again, but when you are, I will gladly drop everything & do all I can to help you hold your invention. If Knabenshue has not been to see you when he was so near, it is to me one of the greatest mysteries. He has acknowledged publicly his work is of no practical value, unless he can dispense with the balloon and I am sure a great future is just ahead of us along in the line you are working. My conviction is that you will have to come out before the world very soon, (and I should say, the sooner the better) and then will be a contest as to who the invention belongs to. So far I have made no mention of Knabenshue, for I do not dare to, as every one would demand to know what you have done. Now dear friends, let me say again, that just my the word, & my presence, my influence & my means (at least to a reasonable extent) will be instantly at your service. I think our attorney will be a very safe adviser should you need any assistance of that kind. May God bless, guide & direct you.

From your old friend

A. I. Root.

1905-10-04, A. I. Root, "Letter to Wilbur and Orville Wright", October 4, 1905, 1 page, Library of Congress, US.

Trial Grounds and Seed Farm for Northern-grown Seeds and Potatoes for the Seed Department of THE A. I. ROOT CO., Medina, Ohio.

OUR CABIN
IN THE WOODS.

A. I. ROOT.
BINGHAM, LEELANAW Co. MICH.

Summer Residence of A. I. Root.
Located close to Bingham Dock, on Grand Traverse Bay,
8 miles north of Traverse City.

OCT 4 1905

Dear Friends,

I have been thinking of you almost every day & I might almost say every hour. Perhaps this is almost too romantic for an old man, but I have been wondering if you are not able to "go up", "stay up" & go either to the right or left; & up or down as you choose. I enclose a notice of Freeman's present prospects. What do you think of Mr Whitehead, who has made a machine of his own that goes & has also "helped" make "35 or 40" different machines? I wonder if he made them all a "success"? I would be very glad of a brief note from you. I cant well get round you say before about the 15th or 20th, & may be later.

As ever

A. I. R.

1905-10-21, A. I. Root, "Letter to Wilbur and Orville Wright", October 21, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

OCT 21 1905

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wilbur & Orville Wright,
Dayton, Ohio.

Dear Friends:-

May the Lord be praised for the good news that comes in yours of October 19th. I just got home last night and if I thought you would be making flights I should not stay home a minute. Please do not fail to let me know when you think of making another trial. And now if you can get time I would be very glad to have you answer a few questions. I take it for granted you have not yet gone outside of your field or much outside, and that the machine has been brought back at the end of every trial to the starting place or pretty near the starting place. Second, I take it for granted that you do not wish any mention made of what you have done at present. This is rather hard for me because they keep saying to me tauntingly "What has become of the Wright Bros?" If I could just give the contents of this letter you sent me or a brief statement in my own words of what you had done in order to set myself and yourselves right before the world I should be very glad to do so, but of course there wont be a whisper without your permission. You see I cannot say a word about Knabenshue because it would look strange that I did not say anything about the Wright Bros. Does Kanbenshue know what you have done or do you prefer that he should not know? I should think the Scientific American would leave no stone unturned to find out something about what you are doing, but if you are satisfied of course I will try to be. Last but not least has nothing appeared in the newspapers in regard to what you tell me. If something has appeared you probably have got hold of it; and would you want me to republish what has been said. Now please remember you are boss of the whole thing and I am your obedient servant. I will keep still or I will wake up the whole sleepy world, just as you say. I wish you would write me a postal card right away if you do not do anything more.

From your old friend,

A. I. Root.

BN

1905-10-27, A. I. Root, "Letter to Wilbur and Orville Wright", October 27, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.

In replying to this refer to file No.

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

MEDINA, OHIO, U.S.A.

Medina, O.,

OCT 27 1905

Wilbur & Orville Wright,
Dayton, Ohio.

Dear Sirs:-

Many thanks for yours of October 26th. Now it would be a great favor if you will wire me at my expense when you expect to make another flight. I will start off day or night, in fact I will almost cross the ocean just to see that machine get outside of the enclosure. We are having beautiful weather now and I should be exceedingly glad to get a telegram as soon as this reaches you.

From your old friend,

A. I. Root.

BN

P.S. In case I shall make the trip & the weather turns unfavourable, it wouldn't matter as far as I am concerned I want to call on my friends in Xenia any way.

A. I. R.

1905-11-04, A. I. Root, "Letter to Wilbur and Orville Wright", November 4, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

NOV 4-1905

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Cycle Co.,
Dayton, Ohio.

Dear Friends:-

We are having a beautiful day; it is nice and warm and there is hardly a breath of air stirring. It makes me so uneasy I can hardly stand it. I wish you would tell me on enclosed postal whether you did anything today. If you did not then I will feel better and if you did succeed in breaking the record I will try to feel better too. By the way if you could get a telegram to reach Medina between 5 and 6 o'clock in the morning I would be at your place by 1 o'clock in the afternoon; but perhaps it is so late in the season it is not worth while to consider the matter; I mean if you have not made your final trip for the season when this reaches you.

As ever yours,

A. I. Root.

BN

1905-11-06, A. I. Root, "Letter to Wilbur and Orville Wright", November 6, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

NOV 6 - 1905

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Cycle Co.,
Dayton, O.

Dear Friends:-

I wrote you Saturday if you could send me a telegram between 5 and 6 in the morning I could get down to your place by about one o'clock. Since then I find that our telegraph office is not open until seven; but you could get me by long distance telephone and if the message reaches me about six o'clock I can catch an electric car at 6:20 so as to get to Simms about one o'clock P. M. If you have made all of the flights you are to make this year when this reaches you, of course there is no use talking about it.

Now there is just one thing more. If it would be in no way objectionable to you I should like to ask the readers of Gleanings to forward me newspaper clippings in regard to aviation all over the world. They have been doing this a good deal during the year past but as the matter seems to be dropped in Gleanings I would be less likely to get more unless I made a request. Now if for any reason you would a little rather I should not make the request just yet please be free to say so and I will stop all investigation. The only reason why I thought of doing so is that I should like to know what is being done all over the world, and I thought perhaps I might run onto

something that would be interesting to you even if it did not amount to much. Of course such a request would probably call forth quit a few inquiries as to the Wright Bros. but I could answer them privately and let the matter drop.

As ever yours,

BN

A. I. Root.

P.S. Of course you have seen the kite or "glider" in the last Scientific Am & what they say about engines etc.

BN

A. I. R.

1905-11-08, A. I. Root, "Letter to Wilbur and Orville Wright", November 8, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

NOV 8 - 1905

Wednesday morning 10 A.M.

Wright Cycle Co.,

Dayton, O.

Dear Sirs:-

Well, friends, how does things please you the day after election.

The enclosed clipping mentions a difficulty with flying machines we had not thought of. I thought best to submit it to you.

As ever yours,

BN

A. I. Root.

1905-11-09, A. I. Root, "Letter to Wilbur and Orville Wright", November 9, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

NOV 9 - 1905

Wright Cycle Co.,

Dayton, O.

Dear Sirs:-

Many thanks for postal card of Nov. 8th. Now I have just one more favor to ask, but please be free to object to it if you feel like it. I would like to add after asking for reports of flying machines something like this. "At present I am not at liberty to give a report of what the Wright Bros. have done during the past summer." If I could say so much or something like it changed in any way you see fit it would relieve me of the charge of having made a big fuss about something that had not after all panned out to amount to anything. It would be an acknowledgement of course that something had been done but no more. If you think this would not do you any harm I should be exceedingly glad. If convenient you might answer on enclosed postal. If you however prefer to write something that will require some length (to me) all right; but I do not like to trouble you unnecessarily.

As ever yours

BN

A. I. Root.

1905-11-10, A. I. Root, "Letter to Wilbur and Orville Wright", November 10, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

NOV 10 1905

Wright Cycle Co.,

Dayton, O.

Dear Sirs:-

I wrote you yesterday in regard to making a statement to our readers. I think you will be interested in the enclosed sheets from the Technical World Magazine. See page 449 where I have made pencil marks. Now you will see part of this paragraph is what I would like to use if you see fit to give me permission; but rest assured not a word will be said unless it meets with your approval.

As ever,

BN

A. I. Root.

1905-11-13, A. I. Root, "Letter to Wilbur and Orville Wright", November 13, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

NOV 13 1905

Wright Cycle Co.,

Dayton, O.

Dear Sirs:-

Many thanks, friends, for giving me permission to make a bigger statement than I had any thought of making. Now the way is open for me to comment on air ships or anything along the line I choose without having it thrown in my teeth that I made a big fuss a year ago and nothing ever came of it. Once more many thanks.

Yours truly,

BN

A. I. Root.

1905-11-28, A. I. Root, "Letter to Wilbur and Orville Wright", November 28, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

NOV 28 1905

Wright Cycle Co.,

Dayton, O.

Dear Sirs:-

Many thanks dear friends for the permission to talk about flying machines once more. Now I can go down to Florida with a clear conscience. I have made a write up for our journal that goes on the press today. I would have submitted it to you but there was not time, and as I did not say a word about the construction of the machine and the method of starting I trust it will prove satisfactory. As soon as I get located in the south I will write you. The clippings it regard to flying machines I will have forwarded to me and after I have looked them over I will mail them to you if I think them of sufficient importance.

Hurrah for Pattison and the year 1906, flying machines and all.

Yours truly,

BN

A. I. Root.

1905-12-09, A. I. Root, "Letter to Wilbur and Orville Wright", December 9, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF

Bee-Keepers Supplies.

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.

Medina, O.,

DEC 9 - 1905

Wright Bros.,

Dayton, O.

Dear Friends:-

I expect to start for Florida next Tuesday. Now if you should take a notion to want to make some experiments before summer comes and should think of going to Florida I would be exceedingly glad to be on hand and to

give whatever assistance I am able. As we have bee-keepers all over the state I could secure suitable land almost anywhere without much trouble or expense. Nothing would give me more pleasure than to be called on to assist in any way. I enclose clipping you may have seen. I also enclose a page of my Home Paper that we expect to go out in the issue of Jan. 1st. My text is about moth and rust. I shall be very glad to use the illustration if you do not object. Or if you could make it unobjectionable by crossing out or changing anything I have said I would regard that a favor; but if you prefer that the illustration where I refer to you two be omitted entirely of course it wont go in. I have instructed our people here to be sure to obey your instructions whatever you may write. I enclose stamped envelope for its return.

Give my kind regards to your good sister and tell her she will hear from Mrs. Root and I, that is, if she cars to follow us through Gleanings.

Yours truly,

BN

A. I. Root.

1905-12-12, A. I. Root, "Letter to Wilbur and Orville Wright", December 12, 1905, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF
Bee-Keepers Supplies.
TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.
Medina, O.,
DEC 12 1905

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Cycle Co.,
Dayton, O.

Dear Sirs:-

All right, friends, as you state it I see the point. Mrs. Root and I expect to leave for Florida this afternoon. Success to the new engine and all the experiments you may make during the coming winter. By the way I do not know anything that would make my heart jump more than to get something from the Wright Cycle Co. while I am at my new home at Osprey, Fla.

Yours truly,

BN

A. I. Root.

1906

1906-01-13, E. R. Root, "Letter to Wilbur and Orville Wright", January 13, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF
Bee-Keepers Supplies.
TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

In replying to this refer to file No.
Medina, O.,
JAN 13 1906

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

Wright Brothers,
Dayton, Ohio.

Dear Sirs:

I inclose you a letter addressed to my father, who, as you probably know, is in Florida, at Osprey. I thought I would turn it over to you as you may be interested in guessing at the motive that prompted the writing of the letter. I suspect they were trying to get hold of the details of your invention. Even if we had such photo we would not give it out without your full knowledge and consent.

Yours very truly,

THE A. I. ROOT COMPANY
E. R. ROOT.

1906-01-08, George Grantham Bain, "Letter to A. I. Root", January 8, 1906, 1 page, Library of Congress, US.

File No. ...	JAN 13 1906	ROOM 636, PARK ROW
JAN 10 1906	ERNEST,	BUILDING
	A. I. ROOT,	NEW YORK CITY, U. S. A.

Jan. 8/06

Dear Sir:

In your issue of Jan. 1 you promise to publish in a subsequent issue a photograph and description of the Wright flying machine. In my collection

of flying machine pictures (which is remarkably complete) I have photographs of the Wright gliding machine, made by Mr. Chanute of Chicago. I am very anxious to obtain a photograph of the new machine at the earliest possible moment and shall be greatly obliged if you will let me have your photograph long enough to make a copy of it.

Yours very truly,

George Grantham Bain

A. I. Root E.

1906-01-17, A. I. Root, "Letter to Wilbur and Orville Wright", January 17, 1906, 2 pages, Library of Congress, US.

Osprey Fla Jan 17

Many thanks friends for the clippings you have been so kind as to send me. Enclosed find the two to be returned. I am glad to see one of them gives Gleanings a little recognition.

At present writing I do not know of a better island than our own. It is 10 miles long or about that, and has vegetation only along the East shore. Along the Gulf on the Ocean side there is a beautiful hard track for a horse & buggy or automobile, of perhaps 3 or 4 rods wide, & at each end of the island, there is almost a clear spot of 2 or 3 hundred yards wide. I will go and see the north end today & write you again. We are located on about the middle of the island where the land is only about 200 yards wide. It is one nub across the bay where there is store, hotel, telephone, etc. We can get over in boats, in 10 or 15 minutes. Mr Shumard & [###] own the greater part of the island, & had me say to you it is entirely at your service if it will answer your purpose. I would advise that one or both of you come down here and look it over. We have boats etc which are quite at your service. Nearest R. R. is 12 miles, but there is a daily mail boat, & large boats run once a week or oftener. If you want a secluded spot, I think this is it.

Coldest night here so far was 48, & it is comfortable working out doors every day.

All the islands so far as we know, are covered with trees & bushes, but there are parcels covered with grass near hear, but I think the grass is pretty tall.

In haste

A. I. R.

1906-01-18, A. I. Root, "Letter to Wilbur and Orville Wright", January 18, 1906, 2 pages, Library of Congress, US.

35

Osprey Jan 18/06

Wright - Bros

Dear friends, I have been up to the north end of our island & find it much better than I expected. For more than a mile there is nothing but soft grass that can be burned off if it is in the way and the ground is sand and shells making a very good road for a wagon any where. It is just about ¼ mile wide & nearly level being highest near the Gulf, or about 75 or 100 feet from the water. Along near the water, there is beautiful race track for bicycles or automobiles. This track is 10 miles or more long & because it is on the island, is not used once a year. A boat that carries the daily mail, runs very near the shore because the channel is there & he will stop any where for errands. It is 10 miles from Sarasota, a town of 3 or 400 over people. Mr. Shumard who owns the island or who is almost its sole occupant, says he will give you all the assistance he can. He and his boys own four boats, of different kinds. All traffic here is by boat.

Where the tuft of grass grows, there are hummocks something like those at the place you used last summer, but as they are in the sand, are not near as bad to crush down. The Seabord Air line R. R. will run a car for you, right out on the dock, & all your apparatus can be taken from car directly on a boat with very little trouble or expense. This same boat can run clear up to the grassy bank on the bay side. The Beekeepers around here have read about your work in Gleanings, and are all my personal friends, & will be only to drop every thing & do any thing you might want done. At the same time, as it is only sparsely settled, you will be as free from inquisitive visitors, as in almost any other spot.

I remain as ever, at your service, whenever I can help.

A. I. Root.

1906-02-27, A. I. Root, "Letter to Wilbur and Orville Wright", February 27, 1906, 2 pages, Library of Congress, US.

Osprey Fla Feb 27 06

Please accept thanks for your kind letter of recent date with the good news it contains. I suppose I may be allowed to say, "May the Lord be praised for the excellent prospect that you will soon have the reward you two have so richly earned for your years of labor."

They tell me at home, there are a lot of people wanting to know the real truth of your deal with France, but as I take it; your recent letter is strictly confidential in that respect. I would be very glad indeed if you could let me know some time in advance when you prefer making trials again. Of course I will be on hand to "shifts the weights" etc. I am well & strong & ready for businesses. I expect to be back in Ohio about 1st week in April.

If you could see your way to give me just a few lines to be used in our journal in regard to the recent deal I would be exceedingly glad. You see it begins to look singular that all the papers have so much to say & Gleanings, the pioneer, in reliable news, is entirely silent.

As ever,
A. I. Root.

P. S.

I enclose a few of the clippings sent me but very likely you have seen them all.

A. I. R.

1906-04-30, A. I. Root, "Letter to Wilbur and Orville Wright", April 30, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF
Bee-Keepers Supplies.
TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

In reply to this refer to file No. _____
Medina, O.,
APR 30 1906

Wright Bros.,
Dayton, Ohio.

Dear Sirs:-

Dear friends, I am just starting for my place in northern Michigan to be gone a couple of weeks, and I hope you will remember to let me know when you want those iron weights shifted to one side of the field or the other. Do not forget that that was to be my job. Even if you should send word and I get down there when the weather is bad I wont mind it, and I surely want to be on hand when there is "something doing."

From your old friend,
A. I. Root.

BN
Now is the S. School?

A I R

1906-05-17, A. I. Root, "Letter to Wilbur and Orville Wright", May 17, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF
Bee-Keepers Supplies.
TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

In reply to this refer to file No. _____
Medina, O.,
May 17 1906

Wright Cycle Co.,
Dayton, Ohio.

Dear Sirs:-

All right, friends not a word shall be published either directly or indirectly in regard to your work until you give permission. I am so anxious however to see this thing go on that I continually regret there don't seem to be anything I can do to help the matter. What I had in mind when I was speaking about having your work last year known to the world was that perhaps some of the California millionaires might if they knew what you had done feel enough interested to furnish capital or get permission of you to go ahead availing themselves of what you have already done. I have been told, although I have not seen an account of it, that there is a syndicate formed (with over a million capital) in New York City to build air ships, working I suppose with a balloon. I do not suppose you are very much interested in such an undertaking but there is going to be millions put into it very soon. Now mark what your old friend says in regard to the matter. But

whatever happens I want to see you get not only due credit but get some substantial benefit for what you have already done. I suppose I need not repeat that nothing will give me more pleasure than to help in any way in my power to get the thing going.

Yours truly,
A. I. Root.

BN

1906-05-19, A. I. Root, "Letter to Wilbur and Orville Wright", May 19, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF
Bee-Keepers Supplies.
TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

In reply to this refer to file No. _____
Medina, O.,
MAY 19 1906

Wright Bros. Co.,
Dayton, Ohio.

Dear Sirs:-

Dear Friends, you may be interested in reading the enclosed from Munn & Co.. It came during my absence in northern Michigan. I hope you will excuse me for saying that I am exceedingly anxious to know just what you are doing. No doubt you have worries enough and inquisitive people enough, but if there is going to be any tests made very soon I sincerely hope you can see your way clear to permit your old friend, A. I. Root. to be somewhere in the neighborhood. Just a few words on the enclosed postal would be a great favor if you can afford to let me have it.

In regard to the Scientific American of course I shall not write anything until you have seen it or approve of it and I am not sure I would want to then. In my absence Ernest wrote them a very nice letter suggesting that perhaps I might furnish them some facts. If there are any facts however it wants to go through Gleanings first. If they cannot take it second hand why they will have to go without it as far as I am concerned.

Your old friend,
A. I. Root.

BN

See copy letter filed
Scientific Am.

1906-05-28, A. I. Root, "Letter to Wilbur and Orville Wright", May 28, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF
Bee-Keepers Supplies.
TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

In reply to this refer to file No. File _____
Medina, O.,
MAY 28 1906

Wright Bros.,
Dayton, Ohio.

Dear Sirs:-

Many thanks for your kind letter of May 26th, friends. I am very sorry indeed to know you are having bad luck with your engines, but I am very glad to receive your promise to let me know when there is anything doing. Should you decide to select a location that is not close to an electric car line just remember myself and my automobile are entirely at your service; in fact we would both be exceedingly glad to run errands for you or do anything else to help things along.

As ever, your enthusiastic old friend,
A. I. Root.

BN

1906-06-28, A. I. Root, "Letter to Wilbur and Orville Wright", June 28, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF
Bee-Keepers Supplies.
TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

A. I. ROOT, PREST.
E. R. ROOT, V. PREST.
J. T. CALVERT, TREAS.
A. L. BOYDEN, SECY.

In reply to this refer to file No. _____
Medina, O.,
JUN 28 1906

Wright Bros.,
Dayton, Ohio.

Dear Sirs:-

I am planning to be away two or three weeks but if there should be anything doing with the flying machine I could just as well put it off. Will you please tell me on the enclosed postal or otherwise what the prospect is.

Hoping I am not troubling you too much, I remain,
Yours truly,

BN
A. I. Root.

1906-07-30, A. I. Root, "Letter to Wilbur and Orville Wright", July 30, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No. _____</i> Medina, O., JUL 30 1906

Wright Cycle Co.,
Dayton, Ohio.

Dear Sir:-

Friends, I am just back from my Michigan trip and I am hungry to see something about how you are prospering. You might put it briefly on the enclosed postal.

Yours truly,
A. I. Root.

BN

1906-08-09, A. I. Root, "Letter to Wilbur and Orville Wright", August 9, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No. _____</i> Medina, O., 8-9-06

The Wright Cycle Co.,
Dayton, O.

Dear Friends:-

Within a week or ten days I shall be going to Xenia to take a nephew of mine to the Soldier's Home and while I am so near you I would like to make a little call, that is if there is anything doing with the air-ship or if you are ready to see your old friend A. I. Root. If for any reason you do not care to see your friends at present, just say so on the enclosed postal and there won't be any hard feelings I heartily assure you. May God speed you in the important work you are trying to do for coming generations, at least that is the way I look at it.

Yours very truly,
A. I. Root

GH

1906-08-17, A. I. Root, "Letter to Wilbur and Orville Wright", August 17, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No. _____</i> Medina, O., 817-06

Wright Bros. Cycle Co.,
Dayton, O.

Many thanks for your kind favor of the 15th, friend Wright. If you are not quite ready for work out doors I think I won't make the call I was talking about. I want to go out to South Dakota to see some property I have there and I shall be gone three or four weeks. Perhaps by that time you will be ready to be making some outdoor experiments. If you can let me know when you get going I would consider it a very great favor indeed.

Yours very truly,

GH

A. I. Root

1906-10-24, A. I. Root, "Letter to Wilbur and Orville Wright", October 24, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, President. E. R. ROOT, V. Prest. J. T. CALVERT, Treas. A. L. BOYDEN, Secy.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	

Medina, Ohio, Oct. 24, 1906.

Wright Bros. Co.,
Dayton, Ohio.

Dear Friends:-

Of course there has been a lot of inquiries in regard to the airship, but I have been obliged to tell all of them that I have no information up to date of what you two have been doing this season; and to tell the truth, as it is coming so near winter again I was getting a little discouraged, that is, so far as I have a right to be discouraged about something that is not my own affair. Well, I confess it gives me a happy surprise when my sister in Xenia forwarded me a newspaper clipping, probably from an Xenia paper, although I cannot tell for sure. The part of the clipping that interests me in particular is the following:

"Mr. Chanute states confidently that the brothers have developed their airship until now it is capable of a sustaining flight carrying two men and 200 pounds of additional weight, at an average speed of 28 miles an hour."

Now if the above is true, and I hardly think he would give it in a Chicago paper unless you gave him authority to do so, something has been doing after all; and I would be very glad indeed to make the above statement to the readers of Gleanings; but of course I won't think of doing so without your permission. If you are willing that I should copy the above you might indicate it on the enclosed postal. If, however, you prefer to keep it secret as much as possible, as Mr. Chanute states, just say nothing and I won't tell our readers that I have any information whatever until you give me permission. Of course you know that I am on the qui vive; but notwithstanding, I am "mum" when you say mum.

Your old friend,

BN
A. I. Root.
P. S.

I hardly need to tell you that any sort of an answer from you, even a line or two, on enclosed postal card would be worth more than its weight in gold to your old friend A. I. Root.

1906-10-29, A. I. Root, "Letter to Wilbur and Orville Wright", October 29, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
Bee-Keepers Supplies.	
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No. _____</i> Medina, O., OCT 29 1906

Wright Bros.,
Dayton, Ohio.

Dear Friends:-

I do not know how much interest you will take in the enclosed leaflet from the Automobile. Of course it is a little bit indefinite but it really seems as if Dumont had got off from the ground without any balloon. If so, he is going to push ahead. Now you know your own business best and perhaps I am meddling a good deal, but I am afraid there is some truth in the last sentence just over the picture of the big balloons.

Yours truly,

BN
A. I. Root.
P. S.-

Now I should be glad to give the readers of Gleanings something in regard to what Santos-Dumont has done; but of course I would not want to quote what was said in reference to the Wright Bros. But I won't say anything at all if you rather not; and in fact if I should tell what Dumont has

done everybody would be clamoring to know what the Wright Bros. had been doing during the past year. You see it puts me in a little bit of a dilemma unless I keep mum as I have been doing and say nothing at all.

A. I. R.

1906-10-31, A. I. Root, "Letter to Wilbur and Orville Wright", October 31, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF Bee-Keepers Supplies. TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No. _____</i> <i>Medina, O.,</i> OCT 31 1906	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
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Wright Bros.,
Dayton, Ohio.

Dear Sirs:-

Many thanks, dear friends, for your very full and complete letter of Oct. 30th. No, you had not told me that you did not expect to make any flights this year. I supposed, of course, that you were going ahead with the deal with the French people and have been watching all summer long for something like what Chanute gave or is said to have given. I very much regret that he made such a statement as that to the papers or that the papers put out anything of that kind. Under the circumstances I think it best to say nothing about it in our journal. I am very sorry indeed that such a statement should go out in regard to what Santos-Dumont has done; and I confess I have been a little surprised that there is nothing in any of the other periodicals to corroborate the statement made by the Automobile. I expect to be in Columbus during the Convention on the 12th and 13th of November and very likely I will go over to make you a short call.

As ever your old friend,
A. I. Root.

BN

1906-11-07, A. I. Root, "Letter to Wilbur and Orville Wright", November 7, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF Bee-Keepers Supplies. TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No. _____</i> <i>Medina, O.,</i> NOV 7 - 1906	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
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Wright Bros.,
Dayton, Ohio.

Gentlemen:-

I expect to pass through Dayton on Wednesday the 14th and I would like to call on you say some time about 3 or 4 o'clock in the afternoon. Will I probably find you in your shop at that time. I take a train for St. Louis to the National Anti-Saloon League Convention I think about 7 o'clock in the evening so I shall have two or three hours to spare in Dayton. You might tell me on enclosed postal if you will probably be in your place of business at the time mentioned above.

Yours truly,
A. I. Root.

BN

1906-11-24, A. I. Root, "Letter to Wilbur and Orville Wright", November 24, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF Bee-Keepers Supplies. TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No. _____</i> <i>Medina, O.,</i> NOV 24 1906	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
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Wright Bros.,
Dayton, Ohio.

Dear Friends:-

The enclosed clipping may not be of value to you but I thought I would send it so you will know what is going on.

Your old friend,
A. I. Root.

BN

Santos Dumont has gone most 1/4 miles
see last Sci Am.

1906-12-01, A. I. Root, "Letter to Wilbur and Orville Wright", December 1, 1906, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF Bee-Keepers Supplies. TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No. _____</i> <i>Medina, Ohio, Dec. 1, '06.</i>	A. I. ROOT, President. E. R. ROOT, V. Prest. J. T. CALVERT, Treas. A. L. BOYDEN, Secy.
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Wright Bros.,
Dayton, Ohio.

Dear Sirs:-

The enclosed clipping is from one of our Cleveland papers. I hope it is true and I shall be very much better pleased if our Government gets hold of it than some foreign power. I think I will venture to congratulate you even if it is only a newspaper statement.

Since dictating the above I saw by the morning Cleveland Leader it is contradicted that the Government has made you any proposition whatever.

By the way, in the magazine called the "World's Work", on page 8296 I find the following:

"The two brothers are said to have increased the stability of their machine by making a joint in the movable wings so that the outer end can be lifted, as a bird's wing bends, to relieve the pressure of gusts of wind. If this be true they have a device for shifting the center of pressure from side to side, as well as forward and back by means of the horizontal front rudder. These shifts, if they can be made rapidly enough, solve the problem of equilibrium--and the successful flying machine has arrived."

A large part of the December number of the above magazine is given to balloons and flying machines.

Yours truly,
A. I. Root.

BN

Before 1907-01-01, A. I. Root, "Letter to Wilbur and Orville Wright", Before January 1, 1907, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF Bee-Keepers Supplies. TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.	<i>In replying to this refer to file No. _____</i> <i>Medina, O.,</i>	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
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Wright Cycle Co.,
Dayton, O.

Dear Sirs:-

Friends, I do not know but I shall write you every day if I get so much flying machine matter. The enclosed leaves from the Century you have probably seen. As there is a chance that you have not seen them I take the liberty of forwarding them. You do not need to return them; I read them with great interest.

Yours truly,
A. I. Root.

BN

1907

1907-04-16, A. I. Root, "Letter to Wilbur and Orville Wright", April 16, 1907, 1 page, Library of Congress, US.

The A. I. Root Co. MANUFACTURERS OF Bee-Keepers Supplies. TRADE MARK THE A. I. ROOT CO.	<i>In replying to this refer to file No. _____</i>	A. I. ROOT, PREST. E. R. ROOT, V. PREST. J. T. CALVERT, TREAS. A. L. BOYDEN, SECY.
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MEDINA, OHIO, U.S.A.

Medina, O.,

Wright Bros.,

Dayton, O.

Dear Friends:-

I expect to get around to Xenia some time the forepart of next week, and although you may not be doing anything so early in the season I thought I would get around to make you a brief call, perhaps some time about Tuesday or Wednesday. I suppose I will find you at your usual place of business.

Yours truly,

A. I. Root.

BN

1907-04-30, A. I. Root, "Letter to Wilbur and Orville Wright", April 30, 1907, 1 page, Library of Congress, US.

A. I. ROOT,
Editor Home and Garden
Department.
E. R. ROOT,
Editor Apicultural Dep't.
J. T. CALVERT,
Business Manager.
A. L. BOYDEN,
Advertising Manager.

Gleanings in Bee Culture.

Devoted to Bees, Honey, and Home Interests.

Circulation 30,000. Reaches every State and sixty foreign countries. Established 1873. 64 pages. semi-monthly, \$1 per year.

Published by
The A. I. Root Company, Medina,
Ohio, U. S. A.

MEDINA, OHIO, APR 30 1907

Wright Bros.,

Dayton, Ohio.

Dear Friends:-

The enclosed is what I prepared to give with the clipping from the Dayton paper. Now if there is any part of it that you would rather I would not use just cross it out; or, if you prefer I should simply give the clipping from the Dayton paper and nothing else, just say so and it will be all right.

By the way, my son Ernest informs me there is to be a flying machine carnival at the Jamestown Ex on several different days during the coming month. Of course they would do almost anything to have one or both of you present. If you think it is possible you could go ~~then~~ please write to Ernest direct. See card enclosed.

Yours truly,

A. I. Root.

BN

1908

1908-07-28, A. I. Root, "Letter to Orville Wright", July 28, 1908, 1 page, Library of Congress, US.

A. I. ROOT, PRESIDENT
E. R. ROOT, VICE - PRESIDENT
J. T. CALVERT, TREASURER
A. L. BOYDEN, SECRETARY

**THE A. I. ROOT
COMPANY**
MANUFACTURERS OF
**Bee-Keepers'
Supplies**

ESTABLISHED 1873

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

CABLE ADDRESS:
ROOT, MEDINA

BRANCH OFFICES
CHICAGO - NEW YORK PHILADELPHIA
- WASHINGTON

FILE NO. _____

Medina, Ohio.

JUL 28 1908

Orville Wright,

Dayton, O.

Friend Orville:-

I am sure you will excuse me when I tell you that I feel very anxious about your brother Wilbur. The Woman's National Daily has just had a brief editorial saying that gangrene had set in in consequence of the burn he had a while ago, and it was feared it would interfere with plans he had in view. If you can assure me that he is all right and that burn will not result in anything serious I shall be exceedingly glad.

And, by the way, if there are to be some public demonstrations now pretty soon I hope you will give your old friend A. I. Root due notice. I need not tell you that I shall be greatly rejoiced should an opportunity offer so I can be of some use to you in some shape or manner.

Kind regards to your father and to your good sister. We are not only thinking of you all, but praying for your success in the work you have undertaken.

Your old friend,

A. I. Root.

VBN

1915

1915-09-14, A. I. Root, "Letter to Orville Wright", September 14, 1915, 1 page, Library of Congress, US.

A. I. ROOT, PRESIDENT
E. R. ROOT, VICE - PRESIDENT
J. T. CALVERT, TREASURER
A. L. BOYDEN, SECRETARY

**THE A. I. ROOT
COMPANY**
MANUFACTURERS OF
**Beekeepers'
Supplies**

ESTABLISHED 1873

TRADE MARK
THE A. I. ROOT CO.
MEDINA, OHIO, U.S.A.

CABLE ADDRESS:
ROOT, MEDINA

BRANCH OFFICES:
CHICAGO - NEW YORK PHILADELPHIA
- WASHINGTON

FILE NO. _____

Medina, Ohio

Sept. 14, 1915.

Mr. Orville Wright,
% The Wright Co.,
Mfg'rs of Flying Machines,
Dayton, Ohio.

Friend Wright:-

When you have time you may be interested in the clipping enclosed and if you haven't seen the book "The Story of Art Smith" I would be glad to send it to you if you would care to see it. I have been watching for some time to find something in the papers in regard to what your company is doing but I don't find very much. I did find, however, that your company was quoted at a million Dollars or over. Perhaps you may recall I once said that your invention would be worth a Million Dollars and I am glad to see my prediction, so far, verified.

I suppose your good father is still alive as I have heard nothing to the contrary and I trust your bright and able sister is still living to see the success of her brother's work.

Now if I won't be encroaching I should like to ask if it would be out of place for me to look over your establishment, or at least a part of it. Our departed friend, your brother Wilbur once said to me that I might write up whatever I saw, providing I told the truth, and I presume he meant nothing but the truth. With your many busy cares just now perhaps you won't find time to even write and it wouldn't matter very much anyway.

May God be with you and guide, direct and strengthen you in the work you are doing, and may the Flying Machine finally be an emblem of peace and good will to the world rather than an engine of warfare. Give my kindest regards to your father and sister and any others that may be interested in

Your old friend,

A. I. Root.

ENCL.

1917 - 1923

1917-08-18, Orville Wright, "Letter to the A. I. Root Company", August 18, 1917, 1 page, Library of Congress, US.

August 18, 1917.

The A. I. Root Company,
Medina, Ohio.

Gentlemen:

Kindly send me by Parcels Post ten pounds of beeswax.

Your early attention in this matter will greatly oblige,

Yours very truly,

Orville Wright

15 North Broadway.

L

1918-04-15, H. H. Root, "Letter to Orville Wright", April 15, 1918, 2 pages, Library of Congress, US.

A. I. ROOT, PRESIDENT
E. R. ROOT, VICE - PRESIDENT
J. T. CALVERT, TREASURER
A. L. BOYDEN, SECRETARY

**THE A. I. ROOT
COMPANY**
MANUFACTURERS OF
**BEEKEEPERS'
SUPPLIES**

H. H. ROOT,
GENERAL MGR.
H. R. CALVERT,
ASST. GEN. MGR
L. W. BOYDEN,
PLANT MGR.
A. L. BOYDEN,
SALES MGR.

CABLE ADDRESS ROOT
MEDINA

ESTABLISHED 1873
April 15, 1918.

BRANCH OFFICES:
NEW YORK - PHILADELPHIA
CHICAGO - INDIANAPOLIS
NORFOLK - SAN FRANCISCO
ST. PAUL - LOS ANGELES

MEDINA, OHIO

noted

Orville Wright,

Dayton, O.

My dear Mr. Wright:

On account of having been away several days last week, I have not yet, until this morning, taken occasion to express my regret at not being home that Sunday when you called. Mrs. Root found your card the next day and telephoned me, saying that we had missed seeing the man of all great men in the world whom I would most enjoy meeting, and when she told me who had come in our absence, I shared her regret, (which in fact was more than regret, - it was real vexation,) that we happened to be away. For years I have wished that I might have the opportunity of shaking your hand and telling you how much all of us appreciate your kindness to father in those early days when you were making those first, wonderful, revolutionary experiments. I feel sure that the interest that he took in your work then and that he has maintained thru the years that have elapsed since, has surely lengthened his life. He treasures every reference to you that he sees in the newspapers, and he has watched your work with what is almost a fatherly interest.

This last winter, in fact, for the past year, he has been studying windmills again, and three months ago installed a windmill electric outfit made by a Wisconsin concern, the one mill keeping the batteries of his electric automobile charged and furnishing in addition some light for the house. He raised the record crop of potatoes in Florida, this winter, and delivered them in an electric charged with a generator operated entirely by wind power. Pretty good for a man 78 years old.

Mother and father expect to be home toward the end of this week and he will be more than excited when he knows that you called.

Here is added success to you in this important work that you are now doing.

Yours sincerely,
H H Root

HHR-BN

More than once I have told Mrs. Root that if I were not married and had my family I should most certainly enlist for aviation work. What a wonderful privilege it must be to be one of the eyes of the notion! You and your brother made it possible for these eyes to see.

H H R

1923-04-30, E. R. Root, "Letter to Orville Wright", April 30, 1923, 1 page, Library of Congress, US.

A. I. ROOT, PRESIDENT E. R. ROOT, VICE - PRESIDENT A. L. BOYDEN, SECRETARY J. T. CALVERT, TREASURER	ESTABLISHED 1873 THE A. I. ROOT COMPANY MANUFACTURERS OF BEEKEEPERS' SUPPLIES	H. H. ROOT, GENERAL MGR. H. R. CALVERT, ASST. GEN. MGR. L. W. BOYDEN, ASST. SEC'Y. M. F. BRYANT, ASST. TREAS.
BRANCH OFFICES NEW YORK - PHILADELPHIA CHICAGO - INDIANAPOLIS ST. PAUL - NORFOLK		CABLE ADDRESS "ROOT, MEDINA"
THE A. I. ROOT COMPANY OF CALIFORNIA, LOS ANGELES, MAIN OFFICE AND FACTORY, SAN FRANCISCO, SALES OFFICE.		TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.
MEDINA, OHIO.	April 30, 1923	

Mr. Orville Wright
Hawthorne Hill, Oakwood
Dayton, Ohio

Dear Mr. Wright:

My father, A. I. Root, passed away early today. The end came peacefully and triumphantly, his last words being an expression of faith and thanks to God.

Father had a very warm place in his heart for you, and I am sure that he would be glad to have me express to you for him a final word of friendship.

The funeral will be held at two o'clock Wednesday, at the Medina Congregational Church, and burial will be here.

Yours sincerely,
Ernest R. Root

"THE HOME OF THE HONEY BEES."

All prices and quotations herein contained are for immediate acceptance unless otherwise stated. All agreements made contingent on accidents, delays in transportation, or other causes beyond our control. Prices subject to change without notice. Stenographical or other clerical errors subject to correction.

1923-05-08, Orville Wright, "Letter to Ernest R. Root", May 8, 1923, 1 page, Library of Congress, US. (The letter is not signed. This is likely a copy of the original sent to E. R. Root.)

May 8, 1923

Dear Mr. Root:

Your letter announcing the passing away of your father has been received. You and the other members of your family have my heartfelt sympathy.

Your father was a man of unusual character and intelligence, and his passing is a real loss to the World as well as to his family. I look back on the times when your father used to visit us while we were carrying on our early flying experiments with much pleasure; and though we had not had the opportunity of seeing him in his later years we often thought and talked of him.

If some account of his life should appear in "Gleanings" I would be very grateful if you would send me a copy of it.

Sincerely yours,

Mr. Ernest R. Root,
Medina, Ohio.

1923-05-16, E. R. Root, "Letter to Orville Wright", May 16, 1923, 1 page, Library of Congress, US.

A. I. ROOT, PRESIDENT. E. R. ROOT, VICE - PRESIDENT. H. H. ROOT, GENERAL MGR.	ESTABLISHED 1873 THE A. I. ROOT COMPANY	J. T. CALVERT, AUDITOR. H. R. CALVERT, SECRETARY. M. F. BRYANT, TREASURER.
TRADE MARK THE A. I. ROOT CO. MEDINA, OHIO, U.S.A.		
CABLE ADDRESS "ROOT, MEDINA"	MANUFACTURERS OF BEEKEEPERS SUPPLIES	PACKERS OF AirlinE HONEY
CODES WESTERN UNION UNIVERSAL & 5 LETTER	MEDINA, OHIO.	May 16, 1923.

Mr. Orville Wright,
Hawthorn Hill,
Oakwood,
Dayton, Ohio.

Dear Mr. Wright:

Your welcome letter expressing sympathy in the loss of our dear father, A. I. Root, was duly received.

Father often spoke of you two men and your sister Katharine, of the very high character of you all. While he claimed no credit in your great invention, he seemed to feel a great deal of pride in that he knew both of you men personally.

There will be a sketch of father's religious life in the next issue of Gleanings, and there will be write-ups from time to time. You perhaps will be interested in a copy of "Association Men" for February, that I am sending you under separate cover, where there is a write-up of Father and His Sons.

Father left us a very wonderful heritage that carries with it a deep responsibility upon us, his children, to carry out his life work.

Again thanking you for your good letter, I am

Most sincerely yours,
E. R. Root
Vice - President,
The A. I. Root Company.

ERR/SP

"THE HOME OF THE HONEY BEES."

All prices and quotations herein contained are for immediate acceptance unless otherwise stated. All agreements made contingent on accidents, delays in transportation, or other causes beyond our control. Prices subject to change without notice. Stenographical or other clerical errors subject to correction.

1930 - 1935

1930-12-19, E. R. Root, "Letter to Orville Wright", December 19, 1930, 1 page, Library of Congress, US.

CODES WESTERN UNION UNIVERSAL & 5 LETTER	ESTABLISHED 1869 Root QUALITY	CABLE ADDRESS "ROOT, MEDINA"
THE A. I. ROOT COMPANY BEEKEEPERS SUPPLIES HONEY		Medina, Ohio. December 19, 1930 IN REPLY TO YOURS OF

Wright Brothers,
Dayton, Ohio.

Attention: Orville Wright

Gentlemen:

As the oldest son of A. I. Root I read with very much interest the true story of the Wright Brothers which I assumed to be authentic. I appreciate very much the reference to A. I. Root.

A year or so ago there appeared a statement that A. I. Root had much to do with the development of your machine and that he has helped you finance the project. There was absolutely no truth in any of this. My father was one of the early observers, knew your father and if I am correct, made the first printed statement in his little journal of one of your first flights. I remember he sent you a check, I think, for \$25.00 to cover the use of the photographs which you kindly furnished him but this check I recall, was returned with thanks.

My father was loud in his praise of your wonderful sister who helped you in all your work.

This letter requires no answer but is to let you know that we didn't take any stock in that statement that was published a year ago to the effect that A. I. Root had helped develop the machine or had helped to finance it. I am showing this story to all of our executives and then will file it with the write-ups of my father's life. I am writing to my nephew, Homer Root, asking him to send me the continued story.

Yours very truly,
E. R. Root
President
THE A. I. ROOT COMPANY

ERR:WEB

All prices and quotations herein contained are for immediate acceptance unless otherwise stated. All agreements made contingent on accidents, delays in transportation, or other causes beyond our control. Prices subject to change without notice. Stenographical or other clerical errors subject to correction.

1933-01-03, E. R. Root, "Letter to Orville Wright", January 3, 1933, 1 page, Library of Congress, US.

CODES WESTERN UNION UNIVERSAL & 5 LETTER	ESTABLISHED 1869 Root QUALITY	CABLE ADDRESS "ROOT, MEDINA"
THE A. I. ROOT COMPANY BEEKEEPERS SUPPLIES HONEY		Medina, Ohio. January 3, 1933

Mr. Orville Wright,
Dayton, Ohio.

Dear Mr. Wright:

In going over the back volumes of our journal I discovered an article by my father on your early experiments in aviation when you made your first successful flight. I am enclosing a copy of our journal for January 1st, 1905, and refer you to pages 36, 37 and 38. This is practically out of print now. I thought you might like to keep among your papers regarding your early work.

I am enclosing a copy of letter just written to Jay Smith, who writes some for magazines. He desires the entire story regarding A. I. Root and his connection with your people of early days.

My father was not a little annoyed on account of the persistent reports that he, A. I. Root, supplied the Wright Brothers with funds to carry on their aviation work. We have denied this repeatedly, saying that you boys went ahead on your own funds and your sisters to develop your wonderful invention. If I am not mistaken, my father was the first one to tell the world of your experiments.

It might interest you to know that about that time I prepared an article based on my father's reports, for the Scientific American, telling about your work. That paper turned it down as impossible and then later on saw their mistake.

This letter requires no answer on your part.

Yours very truly,
THE A. I. ROOT COMPANY
E. R. Root
President

ERR:BMR

Enc. G

All prices and quotations herein contained are for immediate acceptance unless otherwise stated. All agreements made contingent on accidents, delays in transportation, or other causes beyond our control. Prices subject to change without notice. Stenographical or other clerical errors subject to correction.

1933-01-03, E. R. Root, "Copy of a letter, dated 12/2/32, sent by E. R. Root to Jay Smith", January 3, 1933 / December 2, 1932, 1 page, Library of Congress, US.

January 3, 1933
12/2/32

Mr. Jay Smith,
Vincennes, Indiana.

Dear Mr. Smith:

That portion of your letter to Mr. George Demuth requesting two copies of Gleanings that has pictures of the Wright Brothers flying machine has

been received. Usually the old numbers of Gleanings so far back are not to be had anymore except in bound volumes. I have secured one copy of Gleanings for January 1905 where my father gives a detailed account of the Wright machine and its first flight. I think this write-up was the first authentic printed account of the early attempts at aviation on the part of the Wright Brothers that was ever given.

I will make a further search and if I can find the copy that contains a picture of the Wright flying machine I will do so. I remember it, of course, very distinctly.

As our extra copies are very scarce I would appreciate it if you would return this copy when you are through with it.

In going over this article by my father you will see that it is very remarkable, in that he has looked ahead almost a generation, prophesying what would take place and has taken place. Father said that the Wrights had the only principle of flight which he thought was perfectly practicable. I will write you later.

Yours very truly,
THE A. I. ROOT COMPANY
President

ERR:BMR

1933-01-31, Orville Wright, "Letter to E. R. Root", January 31, 1933, 1 page, Library of Congress, US. (a not signed copy)

January 31, 1933.

Dear Mr. Root:

Thank you for the copy of Gleanings in Bee Culture containing your father's account of our flights of 1904. I believe this was the first published account of our 1904 experiments.

We never thought your father in any way was responsible for the reports -- I believe not widely spread, -- that he had been our financial backer. Our relations were purely that of friends.

Your father once told us of the "Scientific American" refusing to print an account of our flights sent to it. Was this a marked copy of "Gleanings" of January 1, 1905, or was it a specially prepared article?

Again thanking you, I am

Sincerely yours,

Mr. E. R. Root, President,
The A. I. Root Company,
Medina, Ohio.

1933-02-09, E. R. Root, "Letter to Orville Wright", February 9, 1933, 1 page, Library of Congress, US.

CODES WESTERN UNION UNIVERSAL & 5 LETTER	ESTABLISHED 1869 Root QUALITY	CABLE ADDRESS "ROOT, MEDINA"
THE A. I. ROOT COMPANY BEEKEEPERS SUPPLIES HONEY		Medina, Ohio. February 9, 1933 IN REPLY TO YOURS OF 1/31/33

Mr. Orville Wright,
Dayton, Ohio.

Dear Mr. Wright:

Your interesting letter has been received. The article offered to the Scientific American describing your first flights as mentioned in the journal Gleanings in Bee Culture, which you have, was prepared by myself and submitted to my father. He signed it and then I sent it on to the Scientific American. They returned the manuscript with thanks, saying that flying machines heavier than air were not a success and never would be, or something to that effect. As I look back upon the incident I can only smile. That publication lost a wonderful opportunity to make a "big scoop", as we say in newspaper parlance. That publication could have been the first to exploit your wonderful experiments in the early days.

Father was always greatly annoyed at the occasional stories that came up to the effect that he was one of the backers of the Wright Brothers. In one or two cases, at his suggestion, I wrote to the publications, offering a correction. Whether such corrections were published I do not now recall.

Should you be driving through this way we would be glad to have you call on us. We were all sorry that we were not at home when you called at Medina some years ago. It has always been a pleasure to us that our father was able to appreciate the possibilities of your invention back in the early days.

Yours very truly,

ERR:BMR

All prices and quotations herein contained are for immediate acceptance unless otherwise stated. All agreements made contingent on accidents, delays in transportation, or other causes beyond our control. Prices subject to change without notice. Stenographical or other clerical errors subject to correction.

1935-12-31, E. R. Root, "Letter to Orville Wright", December 31, 1935, 1 page, Library of Congress, US.

CODES WESTERN UNION UNIVERSAL & 5 LETTER	ESTABLISHED 1869 Root QUALITY	CABLE ADDRESS "ROOT, MEDINA"
THE A. I. ROOT COMPANY BEEKEEPERS SUPPLIES HONEY		
Medina, Ohio. December 31, 1935		

Wright Brothers
Dayton, Ohio

Attention: Mr. Orville Wright

Dear Mr. Wright:

I am enclosing in the larger pocket of this envelope a copy of Gleanings in Bee Culture that was formerly edited by my father, A. I. Root, whom you knew so well. I am sending you a copy of the January issue of that journal and refer you to page 20. I thought you would be interested in the reference in the second column referring to letters that were written by your brother or yourself to A. I. Root during the days when aviation was in its very infancy.

It has always been a regret that none of us were home at the time you called in Medina to see some of the members of A. I. Root's family. If you should ever be driving through this way we should be delighted to have you stop and see us.

Yours sincerely,
THE A. I. ROOT COMPANY
E. R. Root
President

ERR:Nf

enc.

All prices and quotations herein contained are for immediate acceptance unless otherwise stated. All agreements made contingent on accidents, delays in transportation, or other causes beyond our control. Prices subject to change without notice. Stenographical or other clerical errors subject to correction.

1943

1943-11-05, The A. I. Root Company, "Copy of a letter sent to Fred C. Kelly", November 5, 1943, 1 page, Library of Congress, US.

COPY
THE A I ROOT COMPANY

November 5, 1943.

Mr. Fred C. Kelly
Peninsula Ohio

Dear Mr. Kelly:

.....

Referring to your last paragraph, we have heard nothing further from the woman in Florida, but if you really want these letters I suspect we would have to go there in person and make copies of them. She seems to think the original letters of A. I. Root and Orville and Wilbur Wright ought to be worth a small fortune. Any letters of my fathers were probably done with a purple pencil and with no carbon copies. It is possible these contain no information not available to you in the Wright Brothers office. The next time I do down there I shall try to go over whatever letters she may have. She offered to show them to me when I was there the last time.

original of this letter in Kelly file.

Undated

1923 or after, "Undated hand note with a printed header reading: "From the desk of ORVILLE WRIGHT" ", 1 page, Library of Congress, US.

683

From the desk of
ORVILLE WRIGHT

A. I. Root died April 23, 1923

1938-12 or after, "Undated hand note with a printed header reading: "From the desk of ORVILLE WRIGHT" ", 1 page, Library of Congress, US.

From the desk of

ORVILLE WRIGHT

See letter Mrs A E Mc Laudon

Dec. 1938 offering for sale, letters W Bros to Root, clippings & pictures found in attic of Root home at Bradentown, Fla.

Section V

Articles in Gleanings in Bee Culture about the Wright Brothers
or that make references to them

1904

1904-03-01, A. I. Root, "When I came back from Northern Michigan last summer I was asked to take a particular class of boys in our Sunday-school", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., March 1, 1904, Vol. XXXII, No. 5, pp. 240-243 (p. 241), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

OUR
HOMES,
BY A. I. ROOT.

Blessed are ye when men shall revile you and persecute you, and say all manner of evil against you falsely, for my sake. — MATT. 5:11.

When I came back from Northern Michigan last summer I was asked to take a particular class of boys in our Sunday-school; I was also told that those boys, or perhaps I should call them young men, were not a very easy class to manage; and the superintendent said he hoped I would be able to keep them in order, and do them some good, as many of the best teachers had about given them up. In accordance with this I prepared myself carefully with the lesson, and did my very best to get the boys interested in some way, and hold their attention. It kept me pretty busy, but I succeeded rather better than I had reason to expect from what I had heard. They were really a nice lot of young men in many respects, children of well-to-do parents, and pretty well posted on what is going on all over the world; and for several Sundays I really enjoyed teaching the class. When I told them I was sorry I should have to be away again for a month or more, I had one of my pleasant surprises, for two or three expressed regret, and said they wished I could keep the class all the time.

While it is true I was succeeding fairly well with the class, it is *also* true that there was a good deal of disorder and outside talking. The secretary told me the class had had no quarterlies for a long time, because they just tore them up as fast as they were received. They had a lesson-paper each Sunday, but these were usually torn up to make wads to throw at each other.

I presume the average Sunday-school teacher will think, when I confess I allowed more or less of this work to go on, it is somewhat a question whether I was really doing the boys any good. When the class was small, or when the ringleaders were absent, I got along very well; but when the whole ten were present it kept me about as busy as any job I ever undertook. I almost began to dread God's holy day. Of course, it set me to praying for the class; but, with scarcely an exception, when the lesson closed I felt happy. The Holy Spirit seemed to say, not exactly, perhaps, "*Well* done, thou good and faithful servant," but it did say to me that I had done fairly well; and I felt happy because I had made the effort. I felt happy because I had reason to think I was gaining the friendship, little by little, of each one of those boys.

During Mrs. Root's sickness, however, I was absent several Sundays; and when I got back I seemed to have lost my grip on the class. I kept thinking each Sunday I would get back; but Satan seemed to have gotten the better of me — *he* had a *better* grip. The class kept getting worse and worse. Now, very likely some of these same young men will read what I am saying here in print. In view of this, may God help me to be "wise as serpents, and harmless as doves." In talking with the superintendent and the pastor of our church in regard to the matter, they both decided I had been too easy with the young men. Let me give you an illustration.

Our church has been recently warmed with steam radiators. There is a very pretty radiator in our class-room. When the class is all on hand, some of the boys are obliged to sit very near this radiator. Our radiators are all equipped with up to-date automatic air-valves that cost quite a sum of money. We were told the radiators would not be complete without them; but that when thus equipped there need be no shutting and opening of valves to let the air out. These valves are automatic, needing no manipulation or

handling. Well, these young men had got into a fashion of meddling with the air-valve. They would twist it one way and then the other, and change the adjustment, etc. First one boy and then the other would be meddling with it. When I mentioned the matter to our pastor he said I ought to insist on prompt obedience in such matters; and that if nothing else would do I should stop the lesson until I had gained obedience, even though it broke up the class. Just once in my life I sent a young man home because he deliberately disobeyed orders in the Sunday-school class; but I have been sorry since then that I did it. He felt very much hurt; and when he was transferred to another class he behaved himself like a gentleman. This would look as if it were the fault of the teacher rather than that of the boy. May God help us, who are trying to teach in our Sunday-schools, to be sure, before we resort to severe measures, that the fault is *not* with the teacher, but with the pupil. Now please, dear friends, do not jump to the conclusion that I would advise a teacher to resign, and conclude that he has no ability, just because he has trouble, or, say, such troubles as I have mentioned.

Yesterday, Feb. 14, my class behaved worse than ever. I finally stopped proceedings, and told them that I feared the class would have to be broken up. Several said, "All right, break it up;" but it had the effect of quieting them for a while. I said something like this:

"Boys, you are my personal friends — at least I believe you are. It will not only be a disgrace to *you* if the class is broken up, but a disgrace to me, because I shall have to admit that I am not equal to the task of keeping order; that I have not a faculty, even with the long years of experience I have had in Sunday-school work, for maintaining discipline. It will also cast a slur on our whole Sunday-school to have it publicly said that there was a class of boys in it that no one could manage. Now, I might send you home one by one because you refuse to obey orders; but I do not want to do that. Whatever I do, I wish to maintain your respect. I am praying that God may help me to hold your confidence and your good will, whatever may happen. Last of all, most of you are *church-members*."

We got along pretty well after that. Usually, before closing a lesson I give the boys a hint of what is going on in the scientific world. One evening I gave them a glimpse of my specimen of radium which I have told you about. On this particular Sunday I said, just before the last bell rang, "Do you know, friends, that two Ohio boys, or young men, rather, have outstripped the world in demonstrating that a *flying-machine* can be constructed without the use of a balloon? During the past few months these two boys have made a machine that actually flew through the air for more than half a mile, carrying one of the boys with it. This young man is not only a credit to our State, but to the whole country and to the *world*."

"Where do the boys live? What are their names?" said a chorus of voices.

"Their names are Orville and Wilbur Wright, of Dayton, Ohio."

"When and where did their machine fly?"

"Their experiments were made just before winter set in, on the Atlantic coast, at Kitty Hawk, N. C., at a place where there are several miles of soft sand blown up by the wind. They chose that sandy waste so that, in case of an accident, they would not be apt to be severely hurt by falling. For the same reason they managed it so as to keep the machine within five or ten feet of the ground. As soon as we have warm weather they are going on with their experiments. The machine was made something after the fashion of a box kite. A gasoline engine moved propeller wheels that pulled it against the wind. When they make their next trial I am going to try to be on hand and see the experiment."

This little story seemed to have the effect I expected it would. They seemed to have forgotten the unpleasantness about maintaining order, and I was thanking God that I had been enabled to talk as severely as I did, and yet not arouse any bad or vindictive feelings in their hearts; but as we passed out of the door of our room, however, one of the tallest and brightest of the group said something like this:

"If they take you up in the machine I hope they will let you drop; for we haven't any use for any such 'old thing' around here."

I glanced quickly at the speaker's face to see if it was a bit of pleasantry; but he simply looked hard and sullen, or at least I thought he did. He had been one of the worst offenders *that* day, and he seemed not to have forgotten my severe words after all, even though he had listened intently to what I had to say about the flying-machine. Let me digress a little.

Years ago, at an open-air meeting among a class of toughs, I read to them in the Bible about turning the other cheek also, when somebody hits you a blow. One of the hearers interrupted me by saying, "Mr. Root, if somebody gives you a clip on one side of the head, will you turn the other side and let him hit you again?"

I replied that I would try hard to show that kind of spirit. The reply came quick:

"All right; may be you would; but I should like mightily to see it *tried on*."

These words have rung in my ears a good many times since then, and it happened perhaps nearly thirty years ago. I have tried to school myself to receive all kinds of clips, and still keep cool and quiet, and not feel mentally troubled or worried. Sometimes I have felt as if it were too much to expect any speck of humanity to render, under all circumstances, good for evil. A few times I have succeeded in looking pleasant and good-natured, even while stinging from a blow, or when inwardly stirred up to fierce rebellion.

On the way home I kept thinking about that unkind fling. It seemed as if there was an almost satanic ingenuity in it. It implied, or at least I thought it did, that I was getting to be too old to undertake to teach a crowd of boys in their teens. Perhaps it was Satan that kept suggesting I had lost interest in boyish sports — that I was getting so well along in years it would be better all around if I should cease even trying to teach any longer. Could it be true I was getting too old to be of any further use among men or among boys? Why, just a week or two ago, our family physician said, when I started on a little run to catch up with the rest of the crowd, "Why, Mr. Root, you run as spry as a boy of sixteen instead of a man over sixty;" and I have prided myself on being as spry, both physically and mentally, and, I *hope*, spiritually, as I ever was. As I pondered on that speech about being too old to be of any further use here in my native town of Medina, I wondered *how many* of that class were of the same opinion. Had the boys been *laughing* at my attempts to control them? May be the *superintendent* thought I was too old to undertake to handle such a class. I told Mrs. Root about it, and she felt hurt too. I did not enjoy running my automobile home from Sunday-school; and during that whole afternoon when I attempted to read, that unkind speech kept haunting me. I told some of our people about it — that is, the grown up children — the parents of our grandchildren — and *they* were quite indignant. The idea that A. I. Root, who had helped to build up the town of Medina, was of no further use in it, and that it would be a general gain if he could be "dropped out of a flying-machine" or gotten rid of in some other way! As I thought it over it seemed to me as if the sting was greater than if I had been knocked over with a club; but, dear friends, *it did me good*. It set me to praying; and my prayers cleared the sky somewhat, especially when on bended knees I remembered the text at the head of this talk. *Then* I began to receive a blessing. The Holy Spirit reminded me that I was getting to be a little bit proud — proud, perhaps, of my past record and of my ability. I needed humbling, and God knows I felt humbled. Then a blessing came. I resolved to see my boys, and have a talk with them. The first one I met admitted, with rather downcast eyes, that I was right and that they were wrong. He said that, in some way, they had gotten into a rut, and it seemed hard to get out of it; and then he gave me a most happy surprise by saying that the tall young man had no thought of applying that cutting remark to myself. There was a mischievous little chap who generally helped along all the merriment going on in the class; and this fellow said, just as they were going out, that *he* would not be afraid to go up in a flying-machine clear up into the air, instead of keeping only ten feet from the ground. Then the tall one replied, and his answer, *to me*, came as he passed me, and, I thought, as he was looking at me. The answer was, "Well, if they do take you up I hope they will let you drop, for we haven't any use for any such 'old thing' around here." But my pride had received a stinging lesson; and while my young friend is fully exonerated I hope the lesson I received may do me as much good as if his remark had in truth been intended for my poor self.

I have had just one other experience lately in being humbled. There are some more strange words in that fifth chapter of Matthew — I mean the ones right after, where we are admonished to "turn the other cheek also." The Savior said, "If any man will sue thee at the law, and take away thy coat, let him have thy cloak also;" and in the 39th verse we read also, "But I say unto you, that ye resist not evil." These admonitions, as I take it, are to brace us up against the temptation to demand continually "our rights," or, in other words, to make a *big* fuss about a *small* injustice. A little difficulty arose about settling up an account. The transaction occurred during Mrs. Root's recovery from her recent sickness. She was still weak and rather nervous. We were taking great pains to have every thing quiet around the premises. But this particular business transaction could not well be managed elsewhere just then, and I felt sure, even if she were listening, she could not gather what was going on. Let me digress enough to say that the senses of sick people are sometimes extremely acute. I know by experience that, where one is obliged to lie still and watch the hours as they go by, listening

to hear the clock strike to see how time passes, they get so they “catch on” to things that ordinarily would be unnoticed.

In settling up this affair, which was, perhaps, a little complicated, I knew my neighbor did not feel pleasant toward me, and I made up my mind that I would not argue over a difference of three or four dollars; but when I was called on to pay him twice that amount, which it seemed to me I did not justly owe, I, in a courteous way, asked for an explanation. My opponent resented this, and, in spite of myself, I got somewhat stirred up. It looked then and there as if it were right and proper to resent extortion, no matter what the consequences were. I had good sense enough, however (thank God) to realize that it was not safe for *me* to open my mouth any further. That little alarm prayer that I told you about years ago began to ring loudly — that old prayer of mine, “Lord, help!” and I dropped the matter. I submitted to what seemed to me great injustice. Soon after, I passed through the sickroom. I was hoping that Mrs. Root had not overheard any part of what I have mentioned, but I was a little fearful. She beckoned me with her finger. When I told her I had submitted for *her* sake, if for nothing else, she suggested that I should beg my neighbor’s pardon. Now, right here came a big tussle. I do not know that it ever before occurred to me, circumstances might make it a duty, not only to give way to an unjust demand but also to beg pardon because you did not submit to the unjust demand with a *more cheerful spirit*. When a loved one is on a bed of sickness, it is of the utmost importance that there be no disturbance or discord going on, especially nothing that the sick one shall get hold of. Under the circumstances Mrs. Root’s slightest wish or even suggestion was a law to me, and I made haste to do all she suggested. In fact, after I had recovered a moment I considered I *could* honestly beg pardon of my neighbor for even arguing over the matter of only six or eight dollars at that time — that is, I could consent to give him whatever he asked for, whether right or wrong, to avoid any unpleasantness *then* and *there*. And *then* I could see how such a spirit will help us to get along in this world. One who follows Christ Jesus may be called on to give not only his coat but his cloak also; and that, too, when the demand for either of them is a piece of injustice. Do you not see, dear reader, how many lawsuits, foolish quarrels, fights among neighbors, and even *murders*, might be averted where one of the parties is willing to say that, for Christ’s sake, he would give up his coat and cloak also? or, in other words, if one of the neighbors who are in a quarrel should say, “My good friend, you are a neighbor; and, even though I can not but feel that your demand is unjust, I will submit to it rather than quarrel over a few dollars;” or, if you choose, over a small strip of land where there is a division line. I have prided myself all my life on being ready to be fair and honest in deal. I have always prided myself on thinking that I certainly am easy to get along with. I do not know but I shall have to admit here in my old age that, perhaps, I am not always easy to get along with after all. It is easy enough for me to agree to what I think is fair and just; but when I feel so sure that my opponent demands something clear out of reason, then I confess it is hard for me to give up. And then it is a pretty big task, after I have once given up, to be obliged to go and beg his pardon when I feel sure that I was exactly right and he entirely *wrong*.

Now, dear friends, if I have succeeded in making some beautiful passages in that old Bible shine out in a brighter light than they ever did before, then I shall be glad. If just one poor struggling brother or sister who reads GLEANINGS shall feel more inclined to read over and over again the wonderful words of the Savior — the words he uttered while here on earth, living just such a life as we live, then I shall say *again*, “May God be praised.”

1904-09-01, A. I. Root, “I confess, dear friends, that, with the war between Japan and Russia, and the various strikes now going on in different parts of the United States, it does not seem, especially to the casual observer, that the meek are making very much headway in inheriting the earth.”, *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., September 1, 1904, Vol. XXXII, No. 17, pp. 852-857, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

OUR HOMES, BY A. I. ROOT.

The meek shall inherit the earth, and shall delight themselves in the abundance of peace. — PSALM 37:11.

I confess, dear friends, that, with the war between Japan and Russia, and the various strikes now going on in different parts of the United States, it does not seem, especially to the casual observer, that the meek are making very much headway in inheriting the earth; but if we take a calm view of things, especially matters that are going on under the surface as well as above, I think we shall see that the Bible promise is being fulfilled. God’s people are surely making progress; intemperance is being put down, and wicked men, with millions of money back of them, are beginning to understand that there *is* “a God in Israel,” and that they must obey the laws of our land.

In a recent trip of 400 miles through Ohio I passed through Ashland, Mansfield, Marion, Delaware, Marysville, Springfield, Dayton, and Xenia, besides many other good-sized towns and cities. It was a pleasant surprise to find almost every one of these cities torn up more or less in the work of making better thoroughfares. I passed through so many different towns in a brief period of time that I can hardly remember now which was which; but in quite a few I found not only beautiful streets paved with vitrified bricks, but in three or four there were asphalt pavements where the automobile would run without a sound, and turn almost as easily as if it were walking on air. And, by the way, we are already, at least to some extent, ignoring not only mud roads, but roads of every kind, and climbing *through the air*, and I do not mean by means of the gas-balloon either. But I am not at liberty just now to tell all I know in regard to this matter.

Marysville, O., I found so torn up with their preparation for nice pavements that one could hardly get to a hotel, store, or restaurant without going on foot; and sometimes it was difficult to get there at all. There seems to be a general forward movement, and perhaps a little good-natured rivalry, in fixing up the towns and cities of Ohio, and in my opinion there is great need of it. The roads, in many cities, even on the principal streets, are full of mud-holes or round cobblestones, and I presume these things have been tolerated simply because the towns had planned to do a good job when they got at it, and they did not want to waste money on temporary improvements meanwhile. Our town of Medina is just now in that fix. The street most used has been in a horrible condition for a year or two; but as I write the surveyors are at work, great ditches are being dug across it to convey the city water, and to look after proper sewage, before laying the vitrified bricks that are being piled up in great heaps on each side of the roadway. God is already blessing our people in their efforts not only to fix up each individual home, but to take care of the streets and highways that are to be used by each and all. May he grant this work may be done in peace and harmony all over our land; and at the same time may he give us men of nerve and courage to rebuke and punish the “grafters” who would rob the people of the public funds.

The Philadelphia *Farm Journal* has gone further than any other agricultural paper in declaring that automobiles should be barred from the public roads. If I am making a mistake in this I shall be glad to be corrected; but in several recent issues they have at least intimated that the farmers who built the good roads are being driven off and being obliged to take byways on account of the autos that are, as a matter of course, selecting the best and most direct highways. In fact, there has been more or less of a disposition to quarrel over the right of way ever since automobiles have become so prominent. The *Farm Journal* thinks that what the owners of autos have done in the way of paying for our good roads is only a drop in the bucket. Now, this may have been true in the past, but it is not going to be so in the future. As a rule, the owners of autos have means, and the greater part of them certainly are not only able but willing to pay, and pay liberally, for whatever they want. Men of wealth are going to furnish the money for beautiful roadways in a way they have never done before; and the question as to whom the roads belong to, and who shall use them, is going to be settled in the line of our text: “And the meek shall inherit the earth, and shall delight themselves,” not only in peace, but in the “abundance of peace.” Very likely some of you will suggest that the men who run the autos are *not* exactly the personification of meekness; and I shall have to admit that some of them are not. There are others, however, who are coming rapidly to the front who not only practice but exhort meekness. There is a great organization, the American Motor League, that not only makes its business to see that our people have fair play, but also declares most vehemently that every man who owns an auto shall respect the law. Let me give an illustration:

In running our bicycles a year or two ago we were greatly annoyed by chickens and other poultry belonging to the farm homes. They had been educated, it seems, to calculate safely on their ability to get out of the way of a horse and buggy; but the wheel was so much swifter, and came on to

them so silently, they got “rattled,” and, instead of getting out of the way, or staying out of the way, some evil genius seemed to possess them to run right under the machine. Well, now, this is very much worse with autos. A hen with a dozen chickens will be looking after the welfare of her flock by the roadside. When the auto comes on her unexpectedly, she (and the chickens) at the last moment seem to think that the other side of the road will be much the safer, and so they run right into danger; and unless the driver slows up and turns his machine so as to avoid them he will be pretty sure to kill chickens more or less. Now, even as good a boy as Huber suggested that a chicken, especially a small one, is not worth slowing up for, especially if you are in a hurry. I reproved him, and I wish here to reprove every user of the highway who takes that ground. Some of the auto magazines have suggested that poultry is out of place on the highway. Even if this should be declared so by law, I would not consider for a moment asking the farmer to shut up his chickens or to keep them off from the roadway. You see, friends, it hits the same question as to whether bees have the right of way to go where they choose. A small chicken may represent only a nickel in value; and even if the driver would willingly hand over the nickel rather than stop, this does not help the matter. Paul says, “If meat maketh my brother to offend, I will eat no meat while the world standeth;” and killing chickens, and leaving them lie scattered along the highway, certainly does make, just now, a farmer “brother to offend.”* I am sorry to hear that, on the road that was chosen for automobiles to run from New York to St. Louis, not only dead chickens but geese, turkeys, and guinea fowls were mangled and scattered along the way. I have never yet killed a chicken, although Huber killed one or two when I was sitting by his side. That was when we first started out, more than a year ago. I have always slowed up rather than endanger the life of a chicken, out of respect to my farmer friends; and if I should be so unlucky as to kill one I will certainly stop my machine and pay for the fowl. We are told that, on that ride to St. Louis, an irate farmer drew a gun and threatened the life of one of the auto drivers unless the man stopped and paid him a dollar for a chicken. He said, “Of course, *you* did not kill my chicken; but one of your crowd did, and you can get your money back from the crowd.” He got his dollar, and the crowd did make good the man who handed it over to avoid being shot. But in this case the farmer was the one who was breaking the laws; and I think that, in order to avoid establishing a bad precedent, this farmer should have been arrested and punished. Getting your rights by using a shot-gun illegally is not according to the spirit of our text.

* Farmers, or perhaps I should say farmers’ wives, work hard to rear their chickens, and it is no small loss if they be run over, especially if they are run over with indifference, as if they did not amount to much anyhow. I stopped one night at a country home. The father and mother, with three or four children, had been for thirty years on a rented farm. Various mishaps had prevented them from purchasing the property outright. Just a few days before my arrival, the good wife said to the husband in the morning, “Why, husband, you let the chickens out this morning, didn’t you?”

“No, I have not touched the chicken-coop at all.”

“Why, dear me! I fear somebody must have stolen them.”

An examination showed that 73 chickens, worth 50 cents apiece for broilers, had been stolen during the night. These chickens were the result of days and weeks of hard work. The coop was securely fastened every night and opened every morning; and yet there are wretches in human form who would thus rob a poor farmer’s wife on rented land of her hard earnings. Only about a year ago their best horse was stolen out of the lot in like manner. Think of this when you feel like calling it a “small thing” because a chicken or two may be killed by an automobile.

I have already discussed about teams. We have good laws in regard to this matter, and horses are fast becoming educated as well as the chickens. We have good laws regulating the matter; and almost everybody understands now that an auto driver is legally obliged to slow up or stop whenever any person who is driving a horse gives him a wave of the hand. It may be annoying to be obliged to slow up and stop the engine when the horse pays no attention whatever to the machine; but it is the law, and we must obey it.

I wish I had space to tell you of the pleasant words and smiles I received during that long trip in arranging this matter of frightening horses. I made it a point to say, when I hindered anybody because his horse acted badly, “I am very sorry to have annoyed or hindered you. I try to avoid making anybody trouble.” In reply to such words, over and over again bright intelligent men and women have said to me, “I am exceedingly obliged to you, sir, and I fear I have hindered *you* needlessly. My horse has acted badly on previous occasions, but you have a fashion of going much slower than such vehicles usually do, and your machine doesn’t seem to make nearly as much noise as the greater part of them.” Of course, the replies are not

always in the above language, but something like it. Again and again people would say, when I began to slow up, “Go right along, stranger; I can handle my horse, I am sure, and I want him to get accustomed to these things.”

Unfortunately I came into the town of Xenia just as long strings of vehicles were returning with their occupants from the biggest day of the county fair. It was no use for me to take another road leading into town, for they were all in the same fix. I did think of stopping by the wayside; but that would have kept me till after dark, which would have made matters still worse; so I passed vehicle after vehicle. Let me remark here that there seem to be special towns where the horses act very much worse than in others. Where there are a dozen autos in the town, the horses have mostly become accustomed to them, and there is little or no trouble. Xenia and one other town are the worst I have seen; but in both places the people who drive the horses were more at fault than the horses themselves. They frightened their horses by making them think they were going to be killed sure. On one occasion I saw some women away off on top of a hill, piling out of the buggy in frantic haste. They were so frightened, and were trembling so, they could hardly stand on their feet. As soon as I was near enough I stopped my machine, and not only soothed the women but I would have soothed the horse also were it not that he did not see any thing to make a fuss about. The grandmother, who held the baby, said, “But you see, stranger, we have a *baby* here, and we can not take any chances on babies.” I told her she was exactly right, and I soon made friends with the baby and the baby’s mother. I tried to have them get back into their buggy, but they said their horse was just frantic at the sight of an auto, and they insisted on walking in the dust clear up to my machine and past it. The horse paid scarcely any attention to it whatever, although I led him right up to it. Now, these people were profuse in their expressions of gratitude. The grandmother said something like this: “If all men were as kind and careful as *you* have been, stranger, what a different world this would be!”

Of course, it took some time to get by all of these vehicles in this way; but it gave me a rare opportunity of showing forth the spirit of Christ Jesus. And when we come right down to it, what is the most important business we have in life? Why did the dear Savior give me a human life to live? and, finally, for what reason did he send me out on this trip, unless it was to show forth his spirit wherever I go and to all I may meet? Permit me to say right here I do not know that I ever thanked God for his mercies, and for giving me this life to live, any more than I did during that outing of two weeks; and I think my happiness was due to the pains I took to make friends, not only with men, women, and children, but with the horses, geese, and chickens. Whenever I stopped to oil the machine, make adjustments, or get gasoline, a crowd soon gathered. I was sometimes tempted to be vexed with the inquiring curiosity of small boys. There are always some in the crowd that look the machine all over intently, but never touch any thing; but there are others whose itching fingers can hardly be kept off the rubber tires, cranks, valves, etc. In vain I told them they must not touch a thing about the machine or they would make mischief; but when I was watching the oiling, something would be handled. What makes the difference in children? Why, my dear father and mother, it is the *home bringing-up*. If your child has not already been taught to avoid meddling with things when he goes around machinery belonging to somebody else, go right at it this minute. It will not only enhance his money value anywhere in the world, but it may save his life. In one town there was a boy who was so bent on getting hold of every thing it was next to impossible to stop him. I cautioned him repeatedly; but when my head was down under the machine I heard a sharp click, then an explosion in the cylinder, and a rap as if you had struck a boy with a ruler. I asked the boy what happened, and he whimpered out, “Why, that crank all at once flew around and struck me on the head.” He said he did not touch any thing; but the other boys said he turned the electric switch. The engine had been stopped with the compression on; and it happened that, when he moved the switch, it ignited the charge. I hope his punishment will cure him, at least to some extent, of his peculiar propensity.

I usually made friends with the boys and girls while on my trip, telling them I would give them a ride as far as they chose to go, providing they were willing to walk back; and the memory of their childish thanks is still fresh in my mind.

As it is now vacation time, I did not wonder there were large numbers of boys scattered through the Ohio towns, with nothing particular to do. But it did give me pain to see able men, and especially young men, loafing and smoking in front of the country stores. Not only were they smoking cigars and pipes, but in almost every town, if I made any sort of stop, somebody would roll up a cigarette and light it, and almost make me sick with its fumes, even when we were in the open air. I wonder if the use of tobacco

promotes loafing. My trip was made during harvest time, and through a part of Ohio where there are great factories employing thousands of men; and yet able-bodied men were loafing, and seemed to be trying to kill time at the country stores all through Ohio. The rural free delivery of the mail cuts off the excuse to go to the postoffice, and ought to discourage loafing. Some of the smokers of cigarettes were well dressed — apparently the sons of well-to-do parents; and with the cigarettes were almost always oaths.

During warm days I found that it was necessary to give our engine fresh water about once in ten or fifteen miles. I knew our water-pump was badly worn. While at Xenia the pump failed entirely; but I was fortunate in finding a factory where they were building automobiles. The proprietor said he was familiar with the Olds machine, so we proceeded to pull it to pieces, and then found a part of the pump had literally worn out. A new piece had to be made. Now, I am a little nervous about setting strange men at work on my machine. I was afraid, in taking it all to pieces, they might do harm as well as good. I was agreeably surprised, however, to find them really bright and capable mechanics. The young man who was set at work to make the new part of the pump especially impressed me. He was exceedingly careful to have every thing exactly right. When mechanics attempt to rush work of this kind, and quarrel with their tools and machines, it always tries my patience. But this man was a model workman in his line of business. The proprietor, however, although equally skillful, was inclined to be impatient. After we had been at work an hour or two he began to swear. Said I, "My friend, may I ask your name again?"

He replied, "My name is Baldner."

"Well, Mr. Baldner, if you will excuse the liberty I take, I am sorry to find you are a swearing man. Don't you believe you could get along just as well, and may be better, if you kept back those bad words?"

"Well, now, what is *your* name?"

"I am A. I. Root, of Medina, Ohio. I profess to be a follower of the Lord Jesus Christ, and it always pains me to hear such words as you have just been using."

He made some reply with a remark rather defending himself, and was a little inclined to resent my rebuke, so I dropped the subject. After a while, when the difficulty with the machine was gotten over, and he was pleasant and good-natured, I tackled him again.

"Friend Baldner, if you were hiring a new man, wouldn't you give more for one who is patient with his work, and never swears? Suppose the skill of two men to be exactly equal, wouldn't the man be worth more money, in your opinion, who, no matter how much he is vexed and tried, keeps a cool head and holds his temper without ever uttering a bad word?"

He looked at me a minute and then began to laugh.

"Why, Mr. Root, the man who never swears and never becomes impatient — that is, who never lets it come out — is worth the most money, of course. There is no question about it. But if you have worked much with automobiles, you know how things sometimes act, especially when you are in a hurry, as I am now."

"What does your wife think about it? I believe you are a married man."

"Oh! she is with *you*, and you are *both* right."

When the work was completed I could not only go 25 miles without filling the water-tank, but even 30 or more. The auto instruction-book says, "Give water about every 25 miles." Then I went on my way rejoicing. But on my way home the machine began to miss explosions. I went over all the connections, cleaned the carburetter, and did every thing I could think of. Sometimes my efforts resulted in bettering the matter for a time; but it kept gradually getting worse until I spent a good deal of time under shady trees along the way for almost two days, trying to find the defect. I had prided myself on being able to hunt up the cause of any failure in a very little while. I had had no trouble I could not locate very soon, for almost a year past. The machine would make four or five explosions all right, and then it would miss almost as many. Sometimes it would run up a hill almost without a miss; then it would miss three or four; and just about as it was ready to stop and go backward it would commence again. It was pretty hard on the engine to endure those shocks; but as I did not succeed in finding the trouble I thought I could get home, even if the auto was crippled some. Finally one afternoon about three o'clock, when I was just on the edge of a little town called Raymond, Union Co., my auto all at once stopped going forward, although the engine kept right on. It would not move ahead with either high or low speed. I found out, however, it would go backward all right, so I created no little merriment among the villagers by going into their town backward. As I had not learned to steer in that way, my course was rather crooked. I ran up to a blacksmith shop and inquired if there was an automobile owned in that vicinity. No such thing was within miles.

"Does anybody know of a mechanic who would be likely to be capable of pulling my machine to pieces?"

Of course, I could pull it to pieces myself; but to take the engine apart would be rather heavy work, and it would be a pretty hard task on the nerves of an old man like myself. I wanted a bright young man for a helper. I meditated sending for Huber, but he was about a hundred miles away. Unconsciously my little prayer welled up in my heart, "Lord, help! Give me wisdom and understanding to decide what is best to do under the circumstances." I am glad that I added, "Not only what is best for me to do, but what will be best for these my friends and neighbors who are all about me. Help me to be ready to carry any message that I can carry to these people who are all strangers."

Of course, the above was a mental prayer.

Almost as soon as it was finished, a one-armed man of the group who had gathered around the machine suggested, "Why could not Ed Lowe help him out?"

And then a small boy piped in, "Why, yes; Ed Lowe has built two or three automobiles already. He will be all right."

In a few minutes the one-armed man volunteered to pilot me to Mr. Lowe. He owned a shop for making gas-engines, in Columbus, O., but had just finished his job on the gas-engine at the grist-mill, and was ready to take the next train. When I told him of my predicament he said he thought he could help me out, as he had overhauled several of the Olds machines. We both got on our overalls, and began pulling the machine to pieces. I happened to remark to him that I would have undertaken the job alone, but I feared I should be considerably worried. Then he surprised me by something like the following:

"Mr. Root, if you will take all your cares and burdens to the Lord Jesus Christ you need not be burdened or worried by *any* thing."

This surprised me, because it is very unusual for me to find a man who *anticipates* me in recommending the gospel of Jesus Christ.

Let us now consider for a moment the many things included in that little prayer of mine for help — the many reasons I had for *thanking* God instead of feeling cross because of my breakdown. I found a man who was, by chance, right in the town where I stopped. He was not only an expert mechanic, but a professing Christian. But this is not all. Before we got the machine apart, a big thunder-storm came up and we had to hustle to get into the shop near by. Had the accident occurred when I was in the country, far from any town, just before the approach of the storm, I might have been in a very bad predicament. As it was, we made the repairs while I was waiting for the storm to pass by.

A gentleman at the hotel gave me a little sketch of my new-found friend. He was brought up on a farm close by the little village of Raymond. He always showed such a love for machinery that, as soon as he was old enough, he made machinery his business. He and his brothers first built two or three automobiles, but finally settled down on the building of gasoline-engines — the business they now follow in Columbus. He informed me that at the present time he is called for all over the country to do adjusting and putting in order gas-engines. If I am correctly informed, the trouble with the one he had just visited was about like this:

It runs a gristmill, and had been giving great satisfaction for nearly three years, when it suddenly refused to go. Mr. Lowe looked it over, and found every thing in proper order. Then he began tracing up the source of gasoline, and this is what he found: A few weeks ago the iron pipe that carries the gasoline to the engine rusted through or broke off, or something of that sort. The owner mended the break with a piece of rubber tubing; and as that seemed to answer every purpose he rather forgot about it, and let it remain. When Mr. Lowe saw the rubber tubing he took it out and made a connection with an ordinary iron pipe, throwing away the gasoline in the engine, or straining it. As gasoline dissolves rubber it had, after a time, rendered the gasoline unfit. Lots of expensive breakdowns are the result of some such carelessness as that. Perhaps I might mention that gasoline-engines are rapidly taking the place of steam power, because it may almost be said they require no engineer. Mr. Baldner, of Xenia, before mentioned, told me their gasoline-engine had run their own machine-shop for a year and eleven months with an outlay for repairs of only 25 cents. His explanation of this was, "Mr. Root, nobody ever touches that engine but me." Well, Mr. Baldner does not touch it very much, for he worked on my auto from morning till noon without ever taking a look at the engine; or if he did I did not see him do it. The trouble with my machine at Raymond was that five steel pins in the transmission gear had been sheared off, or broken by the hard knocks I had given it. I thought we could get some steel for pins or rivets at the hardware stores that would answer; but Mr. Lowe declared that

nothing was safe for such a critical place but the very best Stubbs steel rod; so he telephoned for it at their shop in Columbus. After the rod came we found it was a trifle too large, and we proceeded to grind it down on an emery wheel. I turned the crank while he did the grinding; but when my wind gave out, I looked about for some of the boys or loafers who had been hanging around; but, for a wonder, when I wanted them they were all missing. At this juncture a ruddy-faced red-headed farmer boy came into the shop perspiring freely. He wore on his head a broad-brimmed straw hat with many a rent. He happened to overhear my inquiry for some cheap hand. Finally he came up with a good-natured smile on his boyish face and said, "Brother, I will turn that crank for you. I think perhaps *my* wind will hold out."

I thought by his manner he had come in on an errand, and would have to get away again soon. But pretty soon Mr. Lowe explained that that red-headed youth was his brother, and suggested that they could get me on the road quicker if this younger brother turned in and helped. Then I found out he was one of the firm of Lowe Brothers, and that his name was Charley. I suggested to the boys that, after they got the pins put in and the machine set up, I was going to have some fun in seeing them cure the gas-engine of missing explosions. Charley is a little more talkative than his brother. He sailed his old straw hat away over in the corner, and went to work with a vim that was refreshing. I did not have any anxiety in regard to those two boys, the way they went to work on that machine. When I suggested they might fail as I had, Charley replied, "Oh! no, Mr. Root. If we fail it will be the first time in our lives. We will 'run down' the mischief and mend up the defect in a very short time."

Now, I want to stop right here and call your attention to the contrast between these two young farmer lads working on that hot day until the sweat fairly dropped from their ruddy faces, and the idlers that stood by. While thus at work a crowd of town fellows stood around doing nothing. Some of them were complaining, perhaps, that they had not a job; and I am not sure that anybody would have given them ten cents an hour; but the Lowe Brothers had all they could do at *fifty cents* an hour. They were called for by telephone before they finished my machine. I think their regular price is fifty cents an hour and traveling expenses, and they are full of business at that. If these friends of mine in Raymond should see this I hope they will excuse me for speaking plainly; for plain talk is the only thing that will do them good. These men not only had nothing to do, even though the storm had cleared away, and it was a most beautiful morning to do work of any kind, but they were almost to a man smoking pipes, cigars, or cigarettes, and each cigar seemed to have a different flavor. I felt so vexed by the nauseating smoke that I was tempted to use the term "villainous" flavor. Each one of the crowd who used tobacco did not mind it; but I felt pretty sure that the elder Lowe, at least, was annoyed by the nauseating fumes. He pulled his head out of the machine, and said:

"Jim, won't you be so kind as to bring us a jug of water?"

Jim looked a little astonished, especially when the owner of the establishment replied, "Why, I just brought a jugful;" then friend Lowe looked at me in a kind of comical way and said, "Well, Jim, I don't care very much whether you get the water or do something else, only so you get away off a little while." At this I suggested our two friends would get at the ignition troubles with much more comfort if all those who were smoking would go for water or *something else*. By the way, boys, did you ever think that the one who is carrying his burdens to the Lord Jesus Christ not only never swears, but, as a rule, he never uses tobacco in any form?

Now for the trouble that puzzled me for a good part of two days. One of the boys started the engine, and the other, the younger one, began listening so intently to every portion of it that I really thought his red hair would become tangled up in the machinery. At first they thought the trouble was with the induction-coil. I told them I examined that very thoroughly, and I did not think it possible. Then they tried other places. I confess I could not help being a little pleased to think *they* too were bothered for at least a little while. Finally the older one pushed a long screwdriver down into the center of the machine, and, presto! all at once the explosions commenced, sharp, clear, and perfect — no misses; it was just the regular pop, pop, pop.* I wish I could show the grimace on Charley's face as he raised his hand and looked at me with a serio-comic air. Some people pay out their dollars to go to the theater and see the prima donnas pose while the audience cheers and encores. Now, that is well enough, perhaps, if you choose; but give me the boy mechanic who has solved a problem, especially one in the line of electrical and chemical engineering, and you can have all the rest. Our text tells us the meek shall inherit the earth; and this nation of ours shall be saved and handed down to posterity by just such men as those two boys are

going to make — the boys who were reared on the farm, and take to mechanical engineering because they *love* machinery — the boys who have the grit to study out and conquer this world's problems — the boys who were saved from tobacco, profanity, gambling, and all these other things by *their trust in the Lord Jesus Christ*. I am sorry it is my duty, to be absolutely truthful, to add that Charley, the younger son, is not yet a follower of the Lamb of God that taketh away the sin of the world. He commenced once to swear just a little when something went wrong; but when I expressed astonishment and pain, he promised not to do so any more. The machine was all ready to run. It was pushed out of the door, and I told the older one to run it around town so as to be sure the adjustments were all right. He called Charley to bring him his hat, and then Charley clapped his own old straw hat on his brother's head just as the latter was pulling the starting-lever. This was done in boyish playfulness, for it would be quite a joke to see his brother sailing round town with all the inhabitants watching, for the machine was a new thing in that little town. At first the elder brother hardly noticed the hat; but when he did he stopped the machine abruptly and bade Charley bring him his own hat. And, by the way, the hands of both boys were too much covered with black grease to permit of touching a decent hat or any sort of clothing. Charley, with comic grace, took his brother's good hat between his two wrists, so as not to touch it with his fingers, and gently placed it on his head.

I paid each of the two boys fifty cents an hour for the time they spent in putting my machine in order; but I rejoiced at the *privilege* of doing it. It is right and proper to enjoy acknowledging the worth of those who have raised themselves up by their own industry and hard work to the level of skilled artisans or experts — experts who are wanted everywhere in this age of machinery.

Before closing I wish to mention how keenly I enjoyed my ride through the corn region of Southwestern Ohio. The roads were so fine I often ran well into the night; and as the auto reeled off mile after mile, with the cornfields on either side, lighted only by my lamps, so near the track, and with stalks so tall they almost seemed to meet overhead, it made me think of the Arabian Nights enchantments. In riding after dark, even on level ground, I can hardly resist the feeling we are going down hill; for *how else* could this new creation plunge ahead so unceasingly, without a horse to pull it?

* The whole trouble was because the steel spring: on the commutator, sometimes called the "brush," had become too weak, or perhaps worn, so it did not press with sufficient force on the cam as it comes around at every revolution of the shaft. This steel spring was easily removed with a screwdriver, then friend Lowe took my light hammer and gave the spring just one tap, screwed it back in its place, and the trouble that had puzzled me so many hours was over. I felt vexed at myself to think that, in all my researches, I had never thought of this spring. In fact, I remembered that Ernest had had one just such trouble before. Here is a great lesson for us. A single tap, with a very small hammer, when rightly directed, gave the machine life and abundance of power; but it wanted brains to "run down" the mischief, as Charley expressed it, and see just *where* this tap of the hammer was needed. And this whole world is constantly wanting brains and intellect to direct not only the *muscles* of human beings, but the thousands of horse power that our engines and power-houses are furnishing.

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OUR HOMES, BY A. I. ROOT.

No good thing will he withhold from them that walk uprightly. — PSALM 84:11.

I presume almost every one of our readers has at times been startled by the recent wonderful achievements in science, in the arts, and in mechanics. When I was but a child people were talking and holding up their hands in astonishment at the advance of the locomotive. A little later one of my schoolmates said, "On the way to Akron there is a lot of folks putting up wires on poles. On top of the poles there is a cross-piece like the letter T, and some of the poles have two or three wires. What in the world are they for?"

Just one boy in the lot was able to explain that people talked through those wires; but his explanation was received with a shout of contempt. "Talking through a wire!" Then a general exclamation of derision followed, because of even the idea of any thing so ridiculous. A few years later, when

I became crazy on electricity I went around to the schoolhouses showing a model of an electric engine operated by a battery, and I predicted that, in just a short time, say three or four years, electricity would supplant steam. Instead of three or four years, however, it took thirty or forty years. During this period there were various inventions and improvements in the lines of both electricity and steam. When the boy Edison began to startle the world I was full of interest and enthusiasm. At our prayer-meeting last Saturday afternoon our pastor said it was his belief the Holy Spirit was giving the world these great inventions; and he asked the question, "Does anybody know whether Edison is a professing Christian?" I said I believed he was not at the time of many of his great discoveries; but that, if I was correct, he married a devoted Christian woman, and soon after, probably through her influence, united with the church. Soon after, Marconi came with wireless telegraphy and startled the earth. Then Prof. Currie and his good wife (perhaps I ought to say Madam Currie and her *good husband*) gave to the world radium, startling and upsetting some established points held by the greatest scientists of the world. Well, we have not yet quite caught our breath since radium has come on the stage. We are waiting for the united scientists of the world to tell us what it is and what it is good for.

Now, then, is there a man or woman of average intelligence, and one who loves God, who has not been startled by these new and wonderful achievements? I should prefer to say *gifts* from God, and I presume a few, myself among the number, are beginning to believe that the great Father has some special purpose in this period of the world's history of opening his hand, and showering forth these new and precious gifts. I did not mention the telephone; but not a day passes that I do not start and almost tremble when I take in the fact that we are now talking to each other face to face, almost *oblivious* of distance. *What is coming next?*

This has been ringing in my ears for some time. I do not know how many other ears have caught on to that question or a similar one; but I think there must be a good many, especially those who love and reverence the great Ruler of this mighty universe, the loving Father, who perhaps also feels a thrill of gladness when we express to him our thanks, and recognize him as the great giver of all good. And now for our text.

Some may urge that these good things are, many of them, sent to those who do *not* walk uprightly; but may it not be true, dear brothers and sisters, that God thinks best to send his Holy Spirit just as he does the gentle rain, on the just and on the unjust? Yet it pains me all the same when I see the automobile mostly in the hands of those who recognize no God.

May be I am making a little mistake right here, and perhaps they *do* recognize God in some sort of fashion. But what hurts me most is that they seem to make no sort of recognition of his holy sabbath or his will concerning it.

Now just a word to those who say that great inventors are not all known as professing Christians. In my list I omitted the submarine cable; and while I recall it to mind (for I remember distinctly the years of hard work and almost a mint of money expended before it was a success) I remember with joy that Cyrus W. Field was a devoted Christian; and so were Morse and Franklin; and we should not forget Swammerdam, who knew so much about bees; and the list might be continued indefinitely. Well, friends, what *is* coming next? When somebody told me we were to shout so as to be heard across the ocean, I was startled again, and said to myself, "What *is* there in the future that *can* be more wonderful?" I need not tell you of the progress that has been made and is being made every day in more rapid transportation of individuals. For a long period a mile a minute was the desideratum; and when we got up to that there seemed to be a general agreement that it would not be safe to move human beings any faster; but the electric locomotive that I predicted in my boyhood has been getting in its work, and over in Germany they have already moved human beings at the rate of over two miles a minute; and just recently the automobile on a steel railway track has been covering long distances in a shorter time than either steam or electricity. A paper of this week announces that it is now possible for one to have breakfast in Chicago and supper in New York, and he can have both meals by daylight. But the automobile is the only "craft" that can do it just now.

I extract from the Cleveland *Leader* the following, which may suggest to you something of what I have in mind:

GREAT SPEED RECORDS.

On roads, on rails of steel and iron, in the water and in the air, man has strained body and mind to attain the highest possible rate of motion. He has used his mastery of nature's forces to transport himself from place to place in the shortest possible time. He has made engines driven by steam, by exploding gas, and by compressed air. He has harnessed the winds and chained the mysterious electric energy of the earth. He has run

the gamut from small to great in the devices he has constructed to help him move faster than he can on his own unaided legs.

What has he accomplished? Up to date what are the limits of speed reached on land, in water, through the air? How much has he gained over the animals? Bees, marked with paint, have been released exactly a mile from their hives, and reached home in 58 or 59 seconds. Lake gulls have been timed accurately by dropping bread over the rail of a steamer and taking the exact second when they rise to catch up with the vessel as the start of their flight. They do a mile a minute easily. Frigate birds fly for hours faster than any gull. Some naturalists believe they can cross the Atlantic, from Brazil to Senegal, where the ocean is 1200 miles wide, in a single night. Many homing-pigeon records surpass a mile a minute, for distances ranging up to 300 miles and more. For 100 miles the rate of 88 miles an hour has been proved.

Water creatures are much slower; but dolphins and sharks keep up with ordinary ocean steamers easily, making side excursions about the vessels much as lively dogs do when out for a country stroll with a man. It is believed that salmon make spurts at the rate of 25 to 30 miles an hour in ascending rivers. In water, as on land, man was hopelessly behind many other creatures until he called wind, steam, gas, electricity, and endless ingenious mechanism to his aid. Now he is faster than any other animal on land and in the water, but the birds still beat him easily in their own element.

I have for many years known that bees can make a mile a minute; and in the experiment given I think they did this with a load one way, and without a load I think they fly considerably faster. The fact the carrier pigeons cover a distance as great as 300 miles, at a mile a minute, suggests what men will do when they get to navigating the air. The closing sentence of the above extract intimates that the birds still beat us in their own element; but I want to tell you that the bees and the birds both will have to be up and dusting if they keep out of our way.

Consider for a moment the great saving of stone roads, railway tracks, and grading, to say nothing of the *enormous* expense of bridges.* The cost of bridges alone in and near some of our great cities goes way up into the millions. When we fly through the air, muddy roads cut no figure, and the price of rubber can go down again, for rubber tires (puncture-proof, etc.) are not "in it." Our machines for carrying passengers can be finished up in the highest style of art, and they can be kept clean because they will never touch mud nor any thing muddy; and there will be no dust to speak of — that is, if we can induce the railways, automobiles, and horsedrawn vehicles to let up a little in "kicking up such clouds of dust" continually. We can go anywhere and everywhere whether they have a railroad or a macadam highway or not.

*And, again, as an illustration of what good roads cost, or, rather what *bad* roads cost compared with not needing any roads at all, I submit the following, clipped from the Louisville *Courier-Journal*:

WHY FARMERS SHOULD ADVOCATE GOOD ROADS.

It is estimated that it costs the farmers \$950,000,000 a year to move their products to the railway stations. The distances to be traversed vary greatly in different sections. The minimum average is four miles, in New Jersey. In Arizona the average is 60 miles, in Utah 38 miles, and in Wyoming 40 miles. In the Southern States the general average is about 10 miles. It is supposed to cost about 25 cents per ton to transport farm products a mile, and it is estimated that two-thirds of the present cost might be saved if good roads were universal. That means an annual saving of over \$600,000,000 a year. Besides, the Agricultural Department estimates that the value of the farms would be increased to the extent of \$5,000,000,000.

Fourteen years ago a friend showed me a periodical devoted to automobiles. I do not know that the name had been coined then. This periodical was termed *The Horseless Age*. At the time, it really seemed to me that a magazine like that, even though published monthly, would hardly be supported. It is now a weekly, and there are toward a dozen periodicals on this same subject, most of them weeklies. I am sorry to know, however, that the greater part of them are mostly devoted to the sporting and racing feature. I wonder if I am the first one in the world to suggest that we now need a periodical devoted to the navigation of the air. *The Horseless Age* was started before any thing had been done worth mentioning; and it greatly aided progress by posting people up and comparing notes. Let me tell you *why* it is needed. An inventor whom I have visited (he will not permit me to give his name here) is spending thousands of dollars in making an air-ship, and years of time, sometimes working day and night; and this inventor would stop wasting money if he knew what was going on in some other parts of the world. The papers tell us there are still other inventors, but they prefer to keep their plans secret because each man will have it that *he* is right and *all the rest* are wrong. If these men could have a convention, and would trust each other, not only would time and money be saved, and probably also precious lives, but the new development would make a great stride. Please, dear friends, do not imagine that I am talking about air-ships held aloft by great bulky unwieldy balloons. I hope the progressive world has got past that idea. Santos Dumont may astonish us with what he has

done with a dirigible balloon; but this is not what we need at all. We want a machine that will float as easily and safely as the bees, the butterflies, and the carrier pigeons do; and, may the Lord be praised, it is already *in sight*.

1905

1905-01-01, A. I. Root, "Dear friends, I have a wonderful story to tell you — a story that, in some respects, out-rivals the Arabian Nights fables", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., January 1, 1905, Vol. XXXIII, No. 1, pp. 36-39, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

OUR HOMES, BY A. I. ROOT.

What hath God wrought ? — NUM. 23:23.

Dear friends, I have a wonderful story to tell you — a story that, in some respects, out-rivals the Arabian Nights fables — a story, too, with a moral that I think many of the younger ones need, and perhaps some of the older ones too if they will heed it. God in his great mercy has permitted me to be, at least somewhat, instrumental in ushering in and introducing to the great wide world an invention that may outrank the electric cars, the automobiles, and all other methods of travel, and one which may fairly take a place beside the telephone and wireless telegraphy. Am I claiming a good deal? Well, I will tell my story, and you shall be the judge. In order to make the story a helpful one I may stop and turn aside a good many times to point a moral.

In our issue for Sept. 1 I told you of two young men, two farmer's boys, who love machinery, down in the central part of Ohio. I am now going to tell you something of two other boys, a *minister's* boys, who love machinery, and who are interested in the modern developments of science and art. Their names are Orville and Wilbur Wright, of Dayton, Ohio. I made mention of them and their work on page 241 of our issue for March 1 last. You may remember it. These two, perhaps by accident, or may be as a matter of taste, began studying the flights of birds and insects. From this they turned their attention to what has been done in the way of enabling men to fly. They not only studied nature, but they procured the best books, and I think I may say all the papers, the world contains on this subject. When I first became acquainted with them, and expressed a wish to read up all there was on the subject, they showed me a library that astonished me; and I soon found they were thoroughly versed, not only in regard to our present knowledge, but every thing that had been done in the past. These boys (they are men now), instead of spending their summer vacation with crowds, and with such crowds as are often questionable, as so many do, went away by themselves to a desert place by the seacoast. You and I have in years past found enjoyment and health in sliding down hill on the snow; but these boys went off to that sandy waste on the Atlantic coast to slide down hill too; but instead of sliding on snow and ice they slid *on air*. With a gliding machine made of sticks and cloth they learned to glide and soar from the top of a hill to the bottom; and by making not only hundreds but *more than a thousand* experiments, they became so proficient in guiding these gliding machines that they could sail like a bird, and control its movements up and down as well as sidewise. Now, this was not altogether for fun or boys' play.* They had a purpose in view. I want to stop right here to draw one of my morals. If I allude to myself somewhat, please do not think I do it because I wish to boast. Some of you have read or heard me tell of the time when my attention was first called to bees. Almost the first thing I did was to go to the book-stores and see what *books* were to be found on the subject. I studied these books day and night, and read them over and over again. Then I procured the books and bee-journals from the old world; and when the language was something I could not manage I hired an interpreter to translate for me until I knew pretty nearly what the book contained. In less than one year I was in touch with the progressive bee-keepers of the world; and the *American Bee Journal*, that had been dropped for lack of support, was started up again. I mention this to show you that my success in bee culture, from the very first, was not luck or chance. It was the result of untiring energy and work. Now let me draw a contrast. During the years that are past, quite a number of men have come to me with their patented hives. A good many of these men had never seen a bee-journal. Some of them who had paid out their hard earnings to the Patent Office had almost never seen a book on bee culture, and they were not sure, from actual experience, of the existence of the

queen-bee. We have inventors at the present time who are giving their lives and money to the four winds in the same poor foolish way. If you wish to make a success of any thing, or in any line among the many lines that lie before us in this great world of ours, find out what the great and good men have done in this special line before you.

Well, these two men spent several summers in that wild place, secure from intrusion, with their gliding machine. When they became experts they brought in, as they had planned to do, a gasoline-engine to furnish power, and made a little success with their apparatus before winter set. As soon as the weather would permit, their experiments were resumed the past season. You may have seen something in regard to it in the papers; but as their purpose has been from the beginning to the end to avoid publicity, the great outside world has had but very little opportunity of knowing what is going on. The conditions were so different after applying power that it seemed at first, to a great extent, as if they would have to learn the trade of guiding their little ship all over again. At first they went only a few hundred feet; and as the opportunity for practice in guiding and controlling it was only a few seconds at a time, their progress was necessarily very slow.

* When I suggested that, even though sliding down hill on the air was very nice, it must have been quite a task to carry the machine back to the top of the hill every time, the reply was something like this: "Oh! no, Mr. Root — no task at all. Just remember that we always sail *against* the wind; and by a little shifting of the position, the wind does the greater part of the work in carrying it back." It just blows it back (whenever the wind is strong enough) up hill to the starting-point.

Let me digress again just a little.

I do not know exactly how many years ago it was, perhaps something like thirty, that I saw in the *Scientific American* that they had in France what was called at that time a velocipede. As soon as I saw the description I sent an order for one, and I think I had about the first machine in the semblance of a bicycle that was ever in Ohio — perhaps one of the first brought into the United States. The machine cost over \$100; and as it was a heavy affair, the express on it cost quite an item more. When it came to hand, after days and weeks of anxious waiting, neither myself nor anybody else could ride it at all. The whole town jeered at me, and the story of the "fool and his money" was hurled in my teeth so many times I almost dread to hear it even yet. Men of good fair understanding pointed their fingers at me, and said that anybody of good common sense ought to know that *that* thing would not stand up with a man on it, for that would be an utter impossibility. I worked at it, the crowd in my way, for several hours in the morning. Finally I rented the largest hall in the town, went in with one trusty boy who had faith, for a companion, and *locked the door*. After quite a little practice on the smooth floor of the hall I succeeded in riding from one end to the other; but I could not turn the corners. When, after still more practice, I did turn one corner without falling, how my spirits arose! A little later I went in a wobbly way clear around the room. Then my companion did the same thing, and, oh how we did rejoice and gather faith! A little later on, with a flushed but happy face, I went out into the street and rode around the public square. You can guess the rest of it. Well, these boys wanted just the same kind of privacy to try their flying-machine that I needed for my velocipede; but as it measures about forty feet from the tip of one wing to the tip of the other, instead of a large hall they wanted a large level field in some out-of-the-way place. I found them in a pasture lot of 87 acres, a little over half a mile long and nearly as broad. The few people who occasionally got a glimpse of the experiments, evidently considered it only another Darius Green, but I recognized at once they were really *scientific explorers* who were serving the world in much the same way that Columbus did when he discovered America, and just the same way that Edison, Marconi, and a host of others have done all along through the ages.

In running an automobile or a bicycle you have to manage the steering only to the right and left; but an air-ship has to be steered up and down also. When I first saw the apparatus it persisted in going up and down like the waves of the sea. Sometimes it would dig its nose in the dirt, almost in spite of the engineer. After repeated experiments it was finally cured of its foolish tricks, and was made to go like a steady old horse. This work, mind you, was all new. Nobody living could give them any advice. It was like exploring a new and unknown domain. Shall I tell you how they cured it of bobbing up and down? Simply by loading its nose or front steering-apparatus with cast iron. In my ignorance I thought the engine was not large enough; but when *fifty pounds* of iron was fastened to its "nose" (as I will persist in calling it), it came down to a tolerably straight line and carried the burden with ease. There was a reason for this that I can not explain here. Other experiments had to be made in turning from right to left; and, to make

the matter short, it was my privilege, on the 20th day of September, 1904, to see the first successful trip of an airship, without a balloon to sustain it, that the world has ever made, that is, to turn the corners and come back to the starting-point. During all of these experiments they have kept so near the soft marshy ground that a fall would be no serious accident, either to the machine or its occupant. In fact, so carefully have they managed, that, during these years of experimenting, nothing has happened to do any serious damage to the machine nor to give the boys more than what might be called a severe scratch. I think great praise is due them along this very line. They have been prudent and cautious. I told you there was not another machine equal to such a task as I have mentioned, *on the face of the earth*; and, furthermore, just now as I dictate there is probably not another man besides these two who has learned the trick of controlling it. In making this last trip of rounding the circle, the machine was kept near the ground, except in making the turns. If you will watch a large bird when it swings around in a circle you will see its wings are tipped up at an incline. This machine must follow the same rule; and to clear the tip of the inside wing it was found necessary to rise to a height of perhaps 20 or 25 feet. When the engine is shut off, the apparatus glides to the ground very quietly, and alights on something much like a pair of light sled-runners, sliding over the grassy surface perhaps a rod or more. Whenever it is necessary to slow up the speed before alighting, you turn the nose up hill. It will then climb right up on the air until the momentum is exhausted, when, by skillful management, it can be dropped as lightly as a feather.

Since the above was written they have twice succeeded in making four complete circles without alighting, each circle passing the starting-point. These circles are nearly a mile in circumference each; and the last flight made, Dec. 1, could have been prolonged indefinitely had it not been that the rudder was in such position it cramped the hand of the operator so he was obliged to alight. The longest flight took only five minutes and four seconds by the watch. Over one hundred flights have been made during the past summer. Some of them reached perhaps 50 or 60 feet above ground. On both these long trips *seventy pounds* instead of fifty of cast iron was carried on the "nose."

Everybody is ready to say, "Well, what use is it? what good will it do?" These are questions no man can answer as yet. However, I will give you a suggestion or two. The man who made this last trip said there was no difficulty whatever in going above the trees or anywhere he chose; but perhaps wisdom would dictate he should have still more experience a little nearer the ground. The machine easily made thirty or forty miles an hour, and this in going only a little more than half a mile straight ahead. No doubt it would get up a greater speed if allowed to do so — perhaps, with the wind, a mile a minute after the first mile. The manager could doubtless go outside of the field and bring it back safely, to be put in the little house where it is kept nights. But no matter how much time it takes, I am sure all the world will commend the policy so far pursued — go slowly and carefully, and avoid any risk that might cause the loss of a human life. This great progressive world can not afford to take the risk of losing the life of either of these two men. *

I have suggested before, friends, that the time may be near at hand when we shall not need to fuss with good roads nor railway tracks, bridges, etc., at such an enormous expense. With these machines we can bid adieu to all these things. God's free air, that extends all over the earth, and perhaps miles above us, is our training field. Rubber tires, and the price of rubber, are no longer "in it." The thousand and one parts of the automobile that go to make its construction, and to give it strength, can all be dispensed with. You can set your basket of eggs almost anywhere on the upper or lower deck, they will not even rattle unless it be when they come to alight. There are hundreds of queer things coming to light in regard to this new method of travel; and I confess it is not clear to me, even yet, how that little aluminum engine, with four paddles, does the work. I asked the question,

"Boys, would that engine and these two propellers raise the machine from the ground if placed horizontally above it?"

"Certainly not, Mr. Root. They would not lift a quarter of its weight."

"Then how is it possible that it *sustains* it in the air as it is?"

The answer involves a strange point in the wonderful discovery of air navigation. When some large bird or butterfly is soaring with motionless wings, a very little power from behind will keep it moving. Well, if this motion is kept up, a very little incline of the wings will keep it from falling. A little *more* incline, and a little more push from behind, and the bird or the butterfly, or the machine created by human hands, will gradually rise in the air. I was surprised at the speed, and I was astonished at the wonderful lifting power of this comparatively small apparatus.

* If these two men should be taken away by accident or otherwise, there is probably no one living who could manage the machine. With these men to teach them "the trade" however, there are plenty who could doubtless learn it in a few weeks.

When I saw it pick up the fifty pounds of iron so readily I asked if I might ride in place of the iron. I received, by way of assurance, the answer that the machine would no doubt carry me easily. You see then I would have the "front seat;" and even if it is customary (or used to be in *olden* times) to accord the front seat to the ladies, I think the greater part of them would say, "Oh! sit still, Mr. Root. Do not think of getting up to give us your seat."

At first there was considerable trouble about getting the machine up in the air and the engine well up to speed. They did this by running along a single-rail track perhaps 200 feet long. It was also, in the early experiments, found advisable to run against the wind, because they could then have a greater time to practice in the air and not get so far away from the building where it was stored. Since they can come around to the starting-point, however, they can start with the wind even behind them; and with a strong wind *behind* it is an easy matter to make even *more* than a mile a minute. The operator takes his place lying flat on his face. This position offers less resistance to the wind. The engine is started and got up to speed. The machine is held until ready to start by a sort of trap to be sprung when all is ready; then with a tremendous flapping and snapping of the four-cylinder engine, the huge machine springs aloft. When it first turned that circle, and came near the starting-point, I was right in front it; and I said then, and I believe still, it was one of the grandest sights, if not the grandest sight, of my life. Imagine a locomotive that has left its track, and is climbing up in the air right toward you — a locomotive without any wheels, we will say, but with white wings instead, we will *further* say — a locomotive made of aluminum. Well, now, imagine this white locomotive, with wings that spread 20 feet each way, coming right toward you with a tremendous flap of its propellers, and you will have something like what I saw. The younger brother bade me move to one side for fear it might come down suddenly; but I tell you, friends, the sensation that one feels in such a crisis is something hard to describe. The attendant at one time, when the rope came off that started it, said he was shaking from head to foot as if he had a fit of ague. His shaking was uncalled for, however, for the intrepid manager succeeded in righting up his craft, and she made one of her very best flights. I may add, however, that the apparatus is secured by patents, both in this and in foreign countries; and as nobody else has as yet succeeded in doing any thing like what they have done I hope no millionaire or syndicate will try to rob them of the invention or laurels they have so fairly and honestly earned.

When Columbus discovered America he did not know what the outcome would be, and no one at that time knew; and I doubt if the wildest enthusiast caught a glimpse of what really did come from his discovery. In a like manner these two brothers have probably not even a faint glimpse of what their discovery is going to bring to the children of men. No one living can give a guess of what is coming along this line, much better than any one living could conjecture the final outcome of Columbus' experiment when he pushed off through the trackless waters. Possibly we may be able to fly *over* the north pole, even if we should *not* succeed in tacking the "stars and stripes" to its uppermost end.

1905-01-01, A. I. Root, "My Flying-Machine Story", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., January 1, 1905, Vol. XXXIII, No. 1, Col. 2, p. 48, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

MY FLYING-MACHINE STORY.

For 32 years I have been ransacking the world — that is, so far as I could consistently — watching periodicals of almost every sort, and leaving no stone unturned to furnish information of interest and value to the readers of GLEANINGS. I have especially tried to have our own journal up to date in scientific matters; and until the past summer I have made haste to present *at once* to our readers every bit of information I could get hold of. In short, I have had no secrets whatever that I have withheld. But for the first time in my life, during the past summer I have been under a promise of secrecy. When the Wright brothers kindly permitted me to be present while they were making preliminary experiments they especially desired I should keep to myself, at least for the time being, what I saw. I recognized the justice of it, and of course assented. But it was a very hard task for me to keep my tongue — or pen — still when I knew the great outside world knew so little

(or nothing) of what was going on. Scarcely a dozen people in this whole universe knew what I knew, but I could not tell it. I have thrown out some hints, you may remember, of what was going on. But one of the brothers suggested "the best way to keep a secret is to avoid letting anybody know you *have* a secret to keep." We are told it is hard for *women* to keep a secret, and I think I must be to some extent feminine in my make-up. Well, just before Christmas my heart was made glad by a letter informing me that, as the experiments for 1904 were probably ended, I might tell the world what I knew about the flying-machine, and therefore I have been made happy. Yes, to-day, Dec. 26, I am not only enjoying a happy Christmas but I feel just like saying "A merry and a happy Christmas to you all." I hope you will enjoy my story about the flying-machine — as much as I enjoyed being out in that big field with the Wright brothers many times during the past summer and fall, watching that wonderful creation of the hand and brain of those two men, while it "learned to fly," very much as a young bird just out of the nest learns by practice to use its wings. A picture of the flying-machine up in the air will appear in our next issue, nothing preventing. We could not get it ready for this one.

1905-01-15, A. I. Root, "The Wright Brothers' Flying-Machine", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., January 15, 1905, Vol. XXXIII, No. 2, pp. 86-87, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS' FLYING-MACHINE.

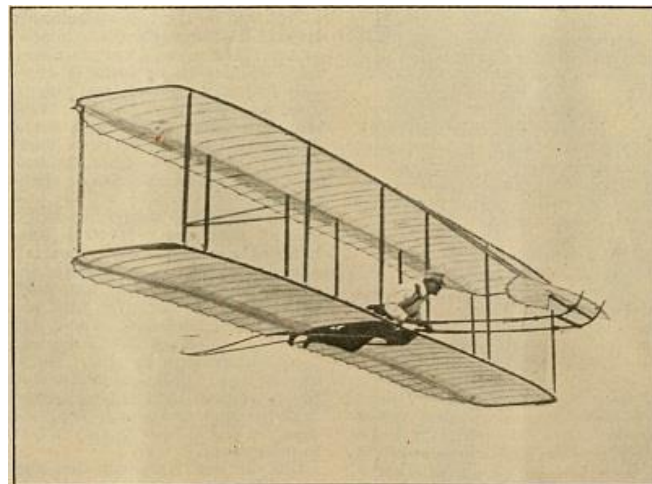
I shall have to apologize a little, friends, for giving a picture of the gliding-machine instead of a flying-machine; and I shall have to apologize a little more because the rudder in the rear that guides it from right to left is not shown in the cut; neither are the diagonal wire braces shown. You will recollect the machine is made of white canvas. The wires are also white; and with the clear sky for a background it was very difficult to get a clearly defined picture. To make it a little plainer the outlines have been marked with ink, as you will observe.

The back side of the planes shows the outline as it really appears. The cotton is stretched over a light framework of light sticks, giving it somewhat the appearance of a bird's wing; for both planes, upper and lower, are concave to some extent. The front rudder, that changes the course of the machine up or down, is a small independent plane that can be raised or lowered out of its level by the operator. The back rudder that does not show in the picture consists of two vertical planes that can be revolved on a pivot so as to turn the machine either to the right or left. The operator, Mr. Wilbur Wright, if I am correct, is shown very plainly.

It has often been remarked that one of the most beautiful sights in the world is a ship under full sail, especially a new sailing vessel with clean white canvas. There is something especially exhilarating about the way in which the canvas catches the wind and sends the ship scudding through the waves. But to me the sight of a machine like the one I have pictured, with its white canvas planes and rudders subject to human control, is one of the grandest and most inspiring sights I have ever seen on earth; and when you see one of these graceful crafts sailing over your head, and possibly over your home, as I expect you will in the near future, see if you don't agree with me that the flying machine is one of God's most gracious and precious gifts.

I mention at the outset that the picture represents the gliding-machine. Well, the flying-machine is the same thing with the aluminum engine which stands right close to the operator and the pair of propellers, one each side of the back rudder. When in flight the propellers are invisible. Their action is very much like the motion of a bee's wing — perhaps not quite as rapid. But the picture as we give it gives you a very fair idea of the new vehicle that requires no macadam road, no iron rails, and no expensive bridges. Its highway is God's free air; and as it has only the vaulted heavens above to fence off our domain, there surely should not be any dispute about the "right of way;" neither should there be any difficulty in the way of collisions or getting in each other's way. The automobile is largely restricted in making speed by other vehicles, especially where the driver does not wish to annoy or inconvenience any of his fellow-men. If anybody gets in our way with the air-ship we not only have ample space to go around him to the right or to the left, but we can "duck under" or scoot over his head if it seems advisable. There does not seem to be much danger in the way of loss of life unless something happens to the front rudder; and that is one feature that should be made safe beyond the possibility of an accident. While up in the air there is but very little to injure or to put any great strain on any part of the machinery. If you run into a tree or a house, of course there would be a

smash-up. No drinking man should ever be allowed to undertake to run a flying-machine.



THE NEW-FASHIONED SLED FOR SLIDING DOWN HILL ON THE AIR.

1905-01-15, A. I. Root, "A Good Word in Regard to the Flying-Machine", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., January 15, 1905, Vol. XXXIII, No. 2, col. 1, p. 101, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

A GOOD WORD IN REGARD TO THE FLYING-MACHINE.

Dear Friends: — It was with intense interest that I read in *Gleanings* for Jan. 1 the first notice of a practical flying-machine that has ever been published. You are to be congratulated. It seems appropriate, too, that such notice should appear in the greatest journal in the world devoted to the interests of the honey-bee, the only *flying* insect of economical value to man. We shall hope that our old friend A. I. Root may have a more intimate connection with this wonderful invention than now appears.

G. L. TINKER, M. D.

New Philadelphia, Ohio, Jan. 11.

1905-04-01, A. I. Root, "Our Homes", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., April 1, 1905, Vol. XXXIII, No. 7, pp. 373-376 (p. 375), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Long article unrelated to aviation. It just makes a short reference to the Wright brothers.

OUR HOMES, BY A. I. ROOT.

... When Wilbur Wright was working with the flying-machine last fall, in his shirt sleeves, during a pretty cool day, I declared he would take a severe cold and be laid up. He replied, "Mr. Root, I shall never take cold in working in the open air, even if I do get pretty well chilled. I have been having the grip, but I do not fear that working out here will make it any worse. The thing that gives *me* a cold is sitting in a room that is unpleasantly warm." And I think Mr. Wright is right (?), and his experience will apply to a great lot of us. We take cold when sitting in rooms that are too warm; but very rarely by getting cold — at least where we are at work at something. ...

1905-04-01, A. I. Root, "Flying-Machines up to Date; Wright Brothers Still Ahead", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., April 1, 1905, Vol. XXXIII, No. 7, Col. 1, p. 391, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

FLYING-MACHINES UP TO DATE; WRIGHT BROTHERS STILL AHEAD.

Since my write-up of this invention a great amount of correspondence has come in, and many newspaper sketches, extracts from magazines, etc., for which I am exceedingly obliged. But some of the friends seem to have overlooked the fact that this flying-machine I am talking about flies of itself

without any balloon to sustain it. Flying-machines held aloft by the aid of a balloon are comparatively old. Such experiments are being made across the ocean, in California, and all the world for all I know.

It was recently stated through the papers that a man in California, with a flying-machine that weighed only 42 pounds, had ascended 2000 feet by its own power. Investigation reveals, however, that it was a *gliding-machine* instead of a flying-machine that made the trip; and in order to make it a hot air balloon lifted the machine 2000 feet in the air and then let it drop. The operator managed it so as to sail like a bird, and was 18 minutes in coming down. No doubt some credit is due him for operating successfully a gliding-machine; but the Wright Brothers stand alone, I believe, in having a machine that flies like a bird, and may go with the speed of a bird, without anything like the expense of the balloon or air-ships. So far none of my correspondence has revealed that anybody *ever before* made a machine that would fly a single rod and carry a man to manage it. If such a thing has been done before, let us have the documents to show it.

From a letter just received from the Wright Brothers we are pleased to learn they are planning a machine for 1905 that will carry a passenger besides the operator. They did not say the passenger might possibly be A. I. Root (for, say, "one trip"), but my imagination caught on to it nevertheless.

1905-11-15, A. I. Root, "Navigating the Air.", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., November 15, 1905, Vol. XXXIII, No. 22, Col. 2, p. 1202, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

NAVIGATING THE AIR.

I wish to extend my hearty thanks to the readers of GLEANINGS who have, during the past year, taken pains to send me newspaper clippings in regard to dirigible balloons, etc.; and I should be glad to have any of our readers mail me whatever they find in the papers in regard to any experiments in navigating the air — more especially those that will work without the aid of a balloon. As I take the *Scientific American* and the magazines specially devoted to mechanics and science, I refer particularly to newspaper notices from different localities where experiments in aeration are being made. I do not care so much for sensational stories of what somebody is *going to do*; but I want reports of what has actually *been done* up to date. *At present I am not at liberty to give a report of the wonderful progress made by the Wright Brothers in the past few months.*

1905-12-01, A. I. Root, "The Wright Brothers' Flying-Machine to Date; Flying 24 Miles in 38 Minutes.", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., December 1, 1905, Vol. XXXIII, No. 23, Col. 2, p. 1258, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS' FLYING-MACHINE TO DATE; FLYING 24 MILES IN 38 MINUTES.

Our readers' attention is called to the articles in regard to the Wright Brothers' flying-machine in our issues for Jan. 1 and 15, 1905; also to the italics on page 1202 in our last issue. I have *now* permission to give you some further particulars. A great number of long flights were made during the past summer. Along late in the fall the machine made 24 miles, and was up in the air 38 minutes; and as this flying was all done in a circle, the speed was not as great as it might have been in a straight line. The reason why they have made no longer flights, say from one city to another, is because they are following the policy they adopted in the beginning, of working slowly and safely. This longest flight did not extend much outside of the inclosure I have described, where the building is located for storing the machine. For several reasons it is quite desirable that the apparatus should be put back in the house built for it, after every flight; and if they ventured very far away from where it is located there might be difficulty in getting it over fences or along highways.

In making these circles of about one mile in circumference they did not choose to go higher than perhaps 75 or 100 feet from the ground. In order to test the machine fully in case of accident the engine was shut off repeatedly while under full speed, and at a considerable height from the ground. There is no difficulty at all in alighting on any tolerably smooth field (that is, a field tolerably clear of trees, bushes, stumps, etc.) without accident to the machine or operator; in fact, they can strike ground at a speed of 40 miles an hour without injury. They even consider it safer to alight at a pretty fair speed than to drop straight down without speed. The reason why they

stopped at the end of 38 minutes was because their reservoir of gasoline held only enough for that length of time; but as they carried along about 40 lbs. of cast iron for ballast, the machine is amply capable of carrying gasoline enough for an hour or perhaps two or three hours. As nearly as I could find out, the amount of gasoline required to run it is but little if any greater than is required for a two passenger automobile. You see it is easier work *sliding on the air* than traveling over our best macadamized roads.

No one at the present time knows just what the outcome is going to be of this new achievement in the line of air navigation. I hope the friends who write me in regard to the matter will bear in mind that this apparatus has no balloon nor gas-bag of any sort. It can be started at any time almost as easily and as quickly as you start an automobile.

I am not at liberty to answer questions in regard to its construction more than I have given already, so there will be no use of writing me in regard to it. Until now they have endeavored to keep the matter from being mentioned in the papers as much as possible. These workers in this new field have not desired publicity.

1906

1906-03-01, A. I. Root, "High - Pressure Gardening in West Florida", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., March 1, 1906, Vol. XXXIV, No. 5, pp. 301-304 (p. 302), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Long article unrelated to aviation. It just makes a short reference to the Wright brothers.

HIGH - PRESSURE GARDENING IN WEST FLORIDA.

... As mulching to keep the berries out the dirt is a rather hard matter, the most of friend Rood's three acres is not mulched; but his berries are all carefully washed before being put into baskets. They are then taken right to the fruit-stores and sold at once. I was with him when he took in one lot, and his customers were sold out and waiting for his morning installment of fresh berries. Of course, mulching must be followed with berries that are to be shipped. The variety grown mostly by friend Rood is the Excelsior. It is rather tart, but a little sugar fixes that. I asked him how it was that he had the only strawberries in that region. He answered something like this:

"Friend R., the rest of the people have not learned how I have been years studying and experimenting. I once sent north for 2000 plants, and did not get a quart of berries from the whole lot. I had so many failures I was about to give up, *and should have done so* had it not been for my wife. I think I could *now* grow strawberries anywhere in Florida."

Now, friends, there are two or three big morals in that speech. His good wife had more sense and *grit* than he had, and the trouble with a whole lot of you is, you have not any wives.

Again he (and his wife) learned the trade by slow and gradual steps just as my friends the Wright Bros. learned how to fly. (I have got a lot to tell you about them soon. They have sold to the French nation the right to *France*, but not to the whole United States, as many of the papers have it.)

Friend Rood has done the same with peaches as with strawberries, and the peaches are so fine he sells his whole crop in strawberry boxes at 10 cts. per quart in his home market. I saw more peaches on one tree than I ever saw in the North. ...

1906-08-01, A. I. Root, "Navigating the Air", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., August 1, 1906, Vol. XXXIV, No. 15, pp. 1016-1017 (p. 1017), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

NAVIGATING THE AIR.

On page 832 I spoke about a young man who started to make a balloon ascension on Sunday. Well, I do not know whether he gave up making Sunday flights or not; but the following clipping from the *New Voice*, of Chicago, indicates that he is having better luck in making his ascents on week days:

Members of the present Congress naturally are interested in ways and means of getting off the earth.

Public business was practically suspended last Wednesday for several hours while Lincoln Beachy was giving a wonderful exhibition of aerial navigation in the suburbs above Washington.

The experiments are said to have been the most successful ever performed, particularly in the features of control and dirigibility.

FLORIDA "FLYING-MACHINES."

The airship, rude in construction, responded accurately to the will of the boy aeronaut. He compelled it to circle Washington monument and the great dome of the capitol, descended and made a landing when and where he pleased, and demonstrated to the satisfaction of the thousands who witnessed the exhibition that many of the rudiments of aerial navigation have been solved.

Santos-Dumont and others who have become famous because of successful flights in air-ships never accomplished what young Beachy did. In an airship sixty-two feet long and sixteen feet in diameter, suspended from a gas-bag with a capacity of 10,000 cubic feet, made of 750 yards of Japanese silk, with a two-bladed propeller in front and a large rudder, the daring aeronaut made a flight of nearly twenty miles without serious accident.

Employed to make ascensions at a suburban resort, young Beachy, in an airship patterned after that used by Roy Knabenshue, whom he had been assisting, decided to demonstrate its practicability by a flight around Washington, visiting the principal points of interest. From a point five miles down in Virginia, Beachy safely crossed the Potomac and headed for the Washington monument.

The framework of the airship, which looked like bamboo fishing-poles, consists of two parallel rods running lengthwise upon which he stands, and a third placed above upon which he sits.

A couple of small braces broke before he reached the monument, and Beachy decided to make repairs. Without any difficulty he brought the airship to earth by the use of a rope, and easily repaired the broken parts. Again he ascended. When fully 300 feet above the ground he circled the Washington monument, and, going higher, at 500 feet he repeated the operation. Then deliberately turning the airship in the direction of the White House he proceeded to call on the President. He alighted safely in the inclosure back of the executive mansion.

The President was attending a commencement exercise, and was not at home to welcome Beachy. Mrs. Roosevelt with keen interest watched his daring performances.

With the ease of a bird Beachy and his machine again sought the upper air currents, and safely above the towers of the buildings the first tour of the famous Pennsylvania Avenue by an airship was made.

Beachy circled the capitol dome, showing that he had absolute control of the airship, and made a landing on the east front opposite the rotunda. He was loudly applauded as he stepped from his machine and modestly received congratulations. After a brief rest he again ascended; and, passing over the capitol, returned to the Virginia resort, crossing three miles of housetops and a river one mile wide.

I am sorry, friends, I can not give you a report from the real flying-machine made by the Wright brothers; but one will come very soon if you will be patient. The one given above indicates what can be done by the aid of a balloon, and I am glad to see young Beachy with his home-made machine is making progress, even if he does require a balloon to keep him up in the air.

1906-11-15, A. I. Root, "The Wright Brothers and Their Flying-machine at the Present Date", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., November 15, 1906, Vol. 34, No. 22, p. 1454, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS AND THEIR FLYING-MACHINE AT THE PRESENT DATE.

In answer to a lot of inquiries in regard to the progress the Wright Brothers are making, I am permitted to give the following:

Dear Mr. Root: — If your readers are really anxious to know what we have been working at this year we have no objection to your telling them. We have been engaged in designing and building machines suitable for actual service rather than mere experimenting, and have given special attention to perfecting motors not only light but sufficiently strong and reliable to run for hours without attention.

WRIGHT BROTHERS.

Dayton, Ohio.

It would seem from the above that they believe their experiments of last season have sufficiently demonstrated the practicability of their machine, for they made several flights, staying up in the air until the gasoline was exhausted. Their next work will probably be with a machine for "actual service," as they state it. You may rest assured, friends, that I am always anxious to report progress from the Wright Brothers or anybody else as soon as I know the statements that appear in the papers are fully reliable.

1907

1907-02-15, A. I. Root, "Our Homes. Florida 'Flying-Machines' .", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., February 15, 1907, Vol. XXXV, No. 4, pp. 263-265 (p. 264), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Long article unrelated to aviation. It just makes a short reference to the Wright brothers.

Our Homes,

If anybody should ask you what A. I. Root is doing this winter you can tell him he is down on an island off the west coast of Florida, manufacturing flying-machines. No, that isn't quite right — *not* "manufacturing" but *creating*. But *that* is not right either, for it is not he that "creates," but "God," who "in the beginning created the heavens and the earth." A. I. Root has graciously been permitted to be present and to witness the "creating," and perhaps to help some by running errands, and, to a certain extent, in a humble way, assist in the creating. Yes, and we have the "flying machines" that not only *fly* but they are the most beautiful and *wondrously* wrought conceptions of the infinite mind that pen, poet, or painter could well conceive. ...

While I am writing I have just spread out one of the soft lacy wings in my fingers, and almost fear I shall lose my love for flowers in *admiring* these animated creatures, so full of life and energy. The Wright Bros. have done a wonderful work; but, oh dear me! when will mankind *ever* approach any thing so strong, light, and graceful as a chicken's wing? and when shall we ever get the wondrous power and strength for so little weight as was tied up in a tiny fragile eggshell only 18 days ago?

Did I forget to mention that my good old friend the sitting hen takes all the chicks as fast as they come from the incubator? Well, she does; and when the late arrivals get tired and chilly she broods them, while the older ones roam near by and scratch to their hearts' content. ...

1907-05-01, A. I. Root, "Flying Apiaries", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., May 1, 1907, Vol. XXXV, No. 9, p. 620, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

FLYING APIARIES.

The *American Magazine* for April contains nine pages, with illustrations, of the Wright Bros.' flying-machine. This is the machine described by Mr. A. I. Root in *GLEANINGS* last year, and Mr. Root's name is mentioned in the article. The Wright Bros. have traveled through the air at a speed of 50 miles an hour. In the no distant future I believe we shall move out-apiaries on these flying-machines — perhaps start out in the south in spring and follow the bloom as it opens up north. Those will surely be *strenuous times*.

1907-05-15, A. I. Root, "Flying Through the Air, Skimming Over the Water, etc.", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., May 15, 1907, Vol. XXXV, No. 10, p. 720, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

FLYING THROUGH THE AIR, SKIMMING OVER THE WATER, ETC.

For some time past I have had in mind something on the principle of a flying-machine, to be used on the water, not in the water, like a boat, but to skim over the surface of it the way flying-fish do sometimes. My plan is to have a machine propelled by propellers that work in the air, so that the craft could, if desired, get clear out of the water and skim on the surface or over the surface, sinking back into the water when the speed slackens or when the operator wants to stop. The higher the speed, the higher out of the water the craft would navigate. Of course, this is not new. Experiments along the same line have been made across the water as well as here in America. You may imagine with what interest I read over and over the following which I copy from the *Dayton Journal* of March 1, 1907:

WRIGHT BOYS SCORE ANOTHER TRIUMPH.

INVENT A HYDROPLANE AND ATTRACT WIDESPREAD ATTENTION BY THEIR EXPERIMENTS IN MIAMI RIVER NEAR BRIDGE-STREET BRIDGE — ENGINE REFUSES TO WORK AND TEST IS INCOMPLETE.

Orville and Wilbur Wright, the inventors of the famous Wright flyer, who have startled the scientific world with the wonderful progress they have made in connection with the difficult problem of aerial navigation, have diverted their attention for a time to new channels and have invented a hydroplane which bids fair to elicit widespread attention.

The art of secretiveness has been thoroughly mastered by the Wright Brothers, and entirely without the knowledge of their most intimate friends they have perfected their most recent invention. Yesterday they put their queer little craft to a practical test on the Miami River, near the River-Street bridge.

There is but little overt appearance to distinguish the boat from the ordinary vessel of its size, save the fact that there is no visible means of propulsion. The motive power is furnished by a 20-horse-power gasoline-engine, and this part of the entire device was the only obstacle in the way of perfect success in the experiment. The engine refused to operate properly, and, of course, the test was unsatisfactory.

Another distinction of the hydroplane, however, is the fact that it is so constructed that there is very little displacement of water, the craft being practical, even for water but a few feet deep. The front of the vessel has an upward tendency as if supported by aerial buoyancy.

This is not the first hydroplane that has been invented, although never before has such a craft been seen in local waters, or ever been devised by any one in this section of the country. It promises to become another triumph of more than passing interest for the Dayton inventors who have already attained international renown by their marvelous achievements in the degree of perfection they have realized in the field of aerial navigation.

In a talk with the Wright Brothers a few days ago they said such an apparatus might, without question, make more than a mile a minute, rivaling the ice-boats which fly over the frozen lakes in winter. They do not, however, seem to think it worth while to experiment further in that direction, since they have succeeded in flying so easily through the air. The machine described in the above clipping was operated first by one person. When they found it would go all right both the brothers got aboard, and finally one of their helpers besides. This sunk it so low in the water that the blades of the propeller made the water fly pretty lively. The craft was given buoyancy by a couple of hollow drums filled with air. The above experiment was made with one of their old discarded engines, and the power was hardly sufficient to make high speed. There would be one advantage in making experiments of this kind, for in case of accident the operator would be in the water where he could be rescued instead of being up in the clouds. Well, friends, I can not help thinking that some of us may live to see the time when we shall have crafts skimming over the water at a higher rate of speed than automobiles now move over the best roadbeds.

In regard to the above I have just received from the Wright Brothers the following statement:

Dear Mr. Root: — Our only objection to publishing any thing about our experiments is that it may cause people to write us for information, and we haven't the time for answering.

WRIGHT BROTHERS.

Dayton, Ohio, May 2.

1907-06-15, A. I. Root, "The Wright Brothers and Their Air-Ships", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., June 15, 1907, Vol. XXXV, No. 12, Col. 1, p. 869, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS AND THEIR AIR-SHIPS.

All the information we have at present is contained in the following, which we clip from the *Woman's National Daily*. The statements may be true, or they may be only a newspaper item:

PARIS, June 5. — Wilbur Wright, the American inventor, who is visiting here, refuses to talk about his aeroplane. He says he is merely visiting Europe for pleasure. He will have an opportunity to see Santos Dumont's air-ship, No. 16, which is ready for its trials.

BERLIN, June 6. — The Wright Brothers, of America, are here making arrangements for the construction of a number of air-ships for the German government.

Since the two above extracts were put in type a subscriber sends us a newspaper clipping which is evidently taken from the *Baltimore News* of June 8:

WRIGHTS SELL AIR-SHIP.

(Paris Cable Dispatch in *New York Times*.)

BALTIMORE, June 8. — The Wright Brothers, whose negotiations for the sale of their airship to the German government were announced exclusively in the cables of the *New York Times*, left Paris to-day for Berlin to conclude arrangements for the construction of a number of air-ships. It is understood that they will be paid \$10,000 for each machine constructed by them. While in Paris they purchased several light motors of 24 and 40 horsepower.

1907-08-01, A. I. Root, "The Wright Brothers' Air-Ship", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., August 1, 1907, Vol. XXXV, No. 15, Col. 2, p. 1038, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS' AIR-SHIP.

The latest thing we have heard from the Wright Brothers is the following, which I clip from the *Woman's National Daily*:

DAYTON, O., July 19. — The aeroplane built by Orville and Wilbur Wright is said to have been sold to the French government. The machine was intrusted to the Adams Express Company to-day for shipment to Paris via New York.

The above seems to indicate that they have sold their invention to France, and will at once make some flights as soon as the machine reaches its destination. With modern facilities the express company ought to deliver it in Paris so that we may soon have reports in regard to their success in teaching our friends across the water how to fly.

Later: — We clip the following from the *Cincinnati Enquirer*:

DAYTON, O., July 20. — According to information obtained to-day, Wilbur and Orville Wright, inventors and builders of the Wright flyer, the only aeroplane ever successfully tested in this neighborhood, have practically sold their machine to the French Government, and have received the first payment of the reported purchase price, 1,000,000 francs, equivalent to about \$200,000. Negotiations had been conducted on a basis of \$300 000; and that the sale has been effected at a handsome figure is a matter of great satisfaction to their friends.

1907-10-15, A. I. Root, "Civilized Out Of Existence", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., October 15, 1907, Vol. XXXV, No. 20, pp. 1335-1336 (p. 1336), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

"CIVILIZED OUT OF EXISTENCE."

Myself and a young companion were making a hurried trip on a train that stopped at a station only ten minutes for supper. It was after our supper time, and we were both hungry. I suggested to my young friend that it was not well to eat so hurriedly as to get through in ten minutes, and therefore we would each get a lunch in a paper bag and eat it at our leisure on the train. Without inquiring the price I called for a leg of fried chicken for each of us, and a sandwich and a piece of pie. I suggested to the boy that, if he cared for coffee, he would have time enough to drink that and take his lunch afterward. The waiter misunderstood, and brought *two* cups of coffee. I very seldom drink coffee; but I decided that, to save trouble, I would take the cup. Besides, I wanted to experiment a little as to the effect of a big strong cup of coffee. I cautioned my young friend when I found it was what the great traveling public would call "excellent coffee." It was very strong, with plenty of cream in it. At first I thought I would not drink it all, as it was so much stronger than I was accustomed to; but afterward I decided I would, just to study the effect. More of this later.

I threw down a dollar, but found that was not enough. The leg of chicken was 30 cts.; sandwich, 10 cts.; pie, 10 cts.; coffee, 10 cts., making \$1.20 for both of us. (I wonder how much the poultry-keeper gets as his share of the 30 cents for a chicken leg.) Now, I am not grumbling and finding fault. It was a splendid lunch-room. I have visited it many times, and there are always great crowds patronizing the long tables. The food is all excellent in quality, smoking hot, and ready for you to grab at a moment's notice and jump on the train. Of course, you have to pay extra for such accommodation. It is just what the rushing people of this great country demand. It is one of the evidences of our wonderful "civilization" that you can get a good square meal so quickly, and push ahead on your journey. But I wish to make a little protest on two grounds. It is an extravagant way to live, and it is certainly injurious to the health. The greater part of the crowd ate their full meal, toward the close of the day, inside of ten minutes, and standing up. There is no time to chew the food. We are wondering what causes appendicitis, cancer, consumption, and a score of other ills. Eating in such haste, and eating so much, especially without chewing, is one of the troubles. I should greatly have preferred a cent's worth of rolled wheat, another cent's worth of butter, and a little fruit, and perhaps some nuts if you choose, all costing when *at home* not over five cents.* You may put in an egg and call it six cents instead of *sixty* as at the lunch-counter.

Some of you may think that I am in small business having so much to say about economy in our food. People who get fair wages, and especially those who have plenty of means, do not stop to count pennies or nickels; and sixty cents for a meal in traveling is not unusual or extravagant. But there are lots of people, as you may know to your sorrow, who do not pay their debts. There are people in every community who do not pay their grocery-bills, to say nothing of bills at the clothing-store and shoe-store. Some of them do not even pay their doctor's bills; but if you lived as Terry and I do the bills for food and the doctor's bills would not exist — at least they would cease to a considerable extent.

*By the way, it is my custom when traveling to have some sort of lunch always in my grip-case. I tell Mrs. Root to give me some rolled wheat, or zwieback, and a bit of cheese, and to be sure to have all of the lunch something that will not spoil if I have no occasion to use it. Of course, I want a little jar of butter to go with my rolled wheat; and sometimes I carry along a jar or tumbler of the delicious cheese that can now be found in first-class city groceries. Such a lunch keeps me in health very much better than patronizing lunch-counters such as I have described.

Now a word about the cup of strong coffee. The boy, sixteen years old, drank it right down. He said it was not a bit too strong for him — the stronger the better. I usually feel very sleepy between nine and ten at night; but under the stimulus of that *good* coffee I felt very bright and wideawake until after twelve that night. I had some disturbing experiences that kept me awake, but I should have been very faint if it had not been for the unusual stimulus of that coffee. Some of you may say, “Why, Mr. Root, you have just given us a most excellent testimonial to the effect that coffee is a gift of God for those who are obliged to be up while traveling on important business, etc.” I do not agree with you. If I had the same experience to go through again I would go without the coffee. Remember what the Wright Brothers said about abstaining entirely from coffee on the day they were going to make a test of their flying-machine. I do not want nature lulled to sleep or unduly whipped up to greater exertion by means of whisky, morphine, headache-powders, nor even coffee. When the time comes for nature to demand sleep I want to respond to it.

Next day I passed the same lunch-counter in going back home, and the train stopped just ten minutes a little after the noon hour. I took a little more time and found two boiled eggs in a little dish with the shells removed. To my surprise these were only a nickel. A good-sized sandwich was a dime, and two apples a nickel, the whole dinner costing 20 cents instead of 60, and it was all the dinner I needed.

Before I left the train the car was crowded, and a bright looking man came and sat down by me. After a little talk he asked me how the Wright Brothers were progressing in France and Germany with their flying-machine. I could not answer him, and I can not answer you *just now* either. He was a construction engineer on a new trolley line that is running across our State. I told him I rejoiced to see what the electric lines were doing, and also to think I might live to see flying-machines outstrip every thing we have at present; but I told him I felt sad to see some things that the world calls civilization and progress. He asked me to explain. As he was soon to get off the train I told him I would be brief. I mentioned the lunch-counter business, and I said something like this:

“My friend, we *are* certainly making progress from one point of view. Everybody is busy, getting good pay, and has plenty of money to pay sixty cents for a ten-minutes meal when traveling. I am one of a family of seven children. My mother brought us all up, took care of us with the help of the older ones, gave us a fair education, and lived to be almost ninety years of age. She enjoyed life, and did not think she had a hard time. *Now* when a baby comes into a family a trained nurse must be kept for two or three weeks at three dollars a day, and you are lucky if you do not have to pay four. The hired girl must have her wages increased or else she will throw up her job. Another woman must be employed to do the washing, sometimes a fourth one to do the ironing. This is only a brief illustration of our magnificent civilization you have been defending. Young married people are telling me on every hand they can not *afford* to have a baby in the home; and a good many bright young men say they can not afford to get married. If they have any children at all, one is about all they can take care of; and where there is only one child in a family the chances are very great that that child will be spoiled. Now, if no more babies are to be born, how long will it be before there will not be anybody to patronize the lunch-counters or to make trained nurses and all these other things? Don’t you believe that you and I were lucky that we have had a ‘chance to be born,’ as Emerson T. Abbott expressed it a while ago?”

At this point my friend was near his destination; and as he got up he put out his hand and said he was glad of the privilege of having a talk with me, and said something like this:

“Mr. Root, to put it short you are afraid that, if the present stage of civilization keeps on, we may finally get to a point where we shall be ‘civilized out of existence;’ and to be frank about it I do not know but you are more than half right. Good by; and do not forget to tell us about the flying-machine.”

Now, my good friends, whoever you are and wherever you are, don’t you think our good President has called attention to one of the most important things to be considered by this present generation? He calls it “race suicide;” and my friend the bright educated engineer termed it “getting

civilized out of existence.” May God *help us* to learn the lessons he is trying to teach us.

1908

1908-05-15, A. I. Root, “Wright Brothers Make a Successful Trip in Air-Ship”, *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., May 15, 1908, Vol. XXXVI, No. 10, p. 658, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

WRIGHT BROTHERS MAKE A SUCCESSFUL TRIP IN AIR-SHIP.

I have been telling you several times of late that we should soon have some news. As I write to-day, May 9, the daily papers are full of accounts of their flights. From a column of matter in the *Cleveland Leader* I gather that they are making some flights from Manteo, N. C., over the sand dunes of what is called Kill Devil Hill. They have made as many as ten ascensions, covering in all over 30 miles. Every thing worked quite as well as when I witnessed their work two years ago last October. First one of the brothers made a flight and then the other. They seemed to show equal skill in handling the machine. “At no time did it seem necessary to direct the machine to the ground. Apparently it could easily have continued its flight many miles.” Their longest flight, which occupied two minutes, covered a mile and a half. The papers state that the present machine weighs 350 lbs. The engine, 30 horse-power, weighs just about as much as the rest of the machine. I quote from the *Leader* as follows:

The Wrights refuse requests for information regarding their machine, and little can be learned about it except by observation of its performances. Located as they are at Kill Devil Hill, and surrounded by sand hills with practically no inhabitants, their experiments were witnessed by only a few people. They are one mile from the Kill Devil Hill life-saving station, on the beach of the Atlantic. Its six surfmen assisted them in building and in handling the machine. These and several others witnessed the experiments to-day.

A herd of long-haired cattle, observing operations from afar, were frightened into Roanoke Sound when once the machine flew in their direction.

Probably by the time this reaches you there will be plenty of news of a more extended flight. May God grant that no accident may happen to these two young Ohio inventors who seem to have distanced the whole wide world in making a machine that will actually fly like a bird, without the assistance of any balloon.

I have had no recent information from the Wright Brothers themselves; but the above would indicate that there is going to be “something doing” pretty soon in the way of a real flying-machine — that is, a machine that does not need a balloon to hold it up.

1908-06-01, A. I. Root, “The Wright Brothers and Their Flying-Machine”, *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., June 1, 1908, Vol. XXXVI, No. 11, p. 720, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS AND THEIR FLYING-MACHINE

I suppose most of the friends have kept posted in regard to the Wright Brothers, for their exploits have been given in all the papers of the United States. The Wright Brothers themselves have not seen fit to make any report of their doings; but if the reporters are to be credited, who witnessed their flight (of course at a distance), they have made a record of eight miles in 7¾ minutes, which is a little over a mile a minute. They have also a machine that carries two people sitting up as one would in a buggy or an automobile. Lastly they made a trip out over the ocean, two miles and back; but their machine was finally disabled by an accident, obliging them to lie off for a time for necessary repairs; but as they have other machines here in Ohio, however, we shall expect to hear from them further very soon.

Later. — Since the above was dictated we find the following in the Bangor, Me., *Weekly Commercial*:

Thursday’s experiments proved but a repetition of Wednesday’s achievements, when the dauntless aeronauts accomplished four successful flights, two of them after sunset, covering three and a half to four miles each time, and doing four miles down the coast in two minutes and fifty seconds at an altitude of forty feet. The aeronauts alighted each time, moreover, at the place of starting.

Thursday’s flights were satisfactory to the inventors, and both the morning and afternoon were utilized. The inventors were astir early, and had their airship ready and in operation at an hour when it was impossible for the visitors to reach the immediate

neighborhood of Kill Devil from Manteo, a place where strangers can be domiciled, a good dozen miles across the sound. Every thing favored the test.

The inventors will continue their experiments there as long as they can do so without being hampered by too many curious eyes. The aeronauts are afraid some one may learn their secret, and they are taking no chances in safeguarding the machine. They keep it in a sheltered house behind a sand dune, near the lifesaving station, and they sleep close to it with a loaded rifle within reach. When any person, such as a newspaper correspondent or a photographer appears anywhere on the beach, the inventors lose no time in covering the aeroplane and carrying it to their house. Nevertheless, quite a number of visitors have arrived in the vicinity, mostly magazine and newspaper writers, and photographers.

1908-06-15, A. I. Root, "The Wright Brothers and Their Flying - Machine", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., June 15, 1908, Vol. XXXVI, No. 12, p. 781, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS AND THEIR FLYING - MACHINE.

Since the report in our last issue, the elder of the Wright Brothers has gone to France. The following, clipped from the *Woman's National Daily*, gives a glimpse of what is going to be done:

Paris, June 2. — One of the men associated with Mr. Wilbur Wright in the aeroplane trials that are to take place in the north of France said to day that Wright was confident of meeting conditions laid down by Lazarre Weiler, who has offered \$100,000 for the Wright aeroplane if it will make two flights of 50 kilometres within a week, carrying two passengers and enough gasoline for a 200-kilometer flight, or ballast equivalent to this. "I have already equaled this distance," said Mr. Wright, "in the flights at Manteo, N. C. Fifty kilometers is 31 miles, and I shall be disappointed if I do not sail further than this in a single flight. Our machine has sailed with two passengers, though we have never carried a weight equal to that imposed by Weiler."

With what is now going on in other parts of the world with successful flying-machines, I think it is quite likely that *some of us*, at least, will see them going over our heads before another winter.

1908-07-01, A. I. Root, "The Wright Brothers and Their Flying-Machine; Also Something in Regard to Other Flying-Machines.", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., July 1, 1908, Vol. XXXVI, No. 13, pp. 836-837, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS AND THEIR FLYING-MACHINE; ALSO SOMETHING IN REGARD TO OTHER FLYING-MACHINES.

If you want the full particulars of all that has been done by the Wright Brothers and others in America, as well as every thing that has transpired up to date in the whole wide world, you should subscribe for *Aeronautics*, published at 1777 Broadway, New York. The price is \$3.00 a year; but if you do not wish to subscribe for a whole year you should at least get the anniversary number for June, 1908. It is quite a good-sized magazine, and perhaps the most up-to-date document that has appeared on the subject of aeronautics.

The most valuable point to me in this number is the first article, which is a communication from the Wright Brothers themselves. After giving a schedule of every flight during May, 1908, they add as follows:

Our recent experiments were conducted upon the grounds near Kitty Hawk, N. C., where we experimented in 1900, 1901, 1902, and 1903. The flyer used in these experiments was the one used in making the flights in September and October, 1905, near Dayton, Ohio. The means of control remained the same as in those flights, but the position of the controlling levers and their directions of motion had to be altered in order to permit the operator to take a sitting position. A seat for a passenger was added. The engine used in 1905 was replaced by a later model, one of which was exhibited at the Aero Club Show at New York in 1906. Larger gasoline-reservoirs and radiators were also installed.

We undertook these experiments in order to test the carrying capacity of the machine, and to ascertain its speed with two men on board, as well as to regain familiarity in the handling of the machine after a period of almost three years without practice. No attempt was made to beat our record of distance made in 1905.

The first flights were made over a straight course against winds of 8 to 18 miles an hour. The equilibrium of the machine proving satisfactory in these flights, we began to describe circles, returning and landing at the starting-point. These flights covered distances of from 1 to 2½ miles.

On the 14th of May a passenger was taken on board. In the first flight the motor was shut off at the end of 29 seconds to prevent running into a sand hill, toward which the machine was started. But in a second the machine carried the passenger and operator for a flight of 3 minutes and 40 seconds, making a circle, landing near the starting-point. The wind, measured at a height of 6 ft. from the ground while the machine was

flying, had a velocity of 18 to 19 miles an hour. The distance traveled through the air as registered by an anemometer attached to the machine was a little over 2½ miles, which indicated a speed of about 41 miles an hour. A speed as high as 44 miles an hour was reached in an earlier flight, with only one man on board.

In a later flight, May 14, a false movement of a controlling lever caused the machine to plunge into the ground when traveling with the wind at a speed of about 55 miles an hour. The repairs of the machine would have necessitated a delay of five or six days; and as that would have consumed more time than we had allowed for the experiments we discontinued them for a time.

Besides this there is quite a long article by Byron R. Newton, correspondent of the New York *Herald*. From his account I extract as follows:

When the little band of correspondents arrived at Manteo they decided to feel out the ground by sending one of their number to ascertain if there was any change in the Wrights' policy of secrecy. It was a day's journey, and a fruitless one. When the scout reached the aerodrome, nestled between Kitty Hawk and Kill Devil Hills, the Wrights were about to make a flight; but at the approach of a stranger they wheeled the aeroplane back into the building, closed the doors, and advanced to meet their visitor. They were civil, but very firm. "We appreciate your good intentions," they said, "but you can only do us harm. We do not want publicity of any sort. We want to go on with our experiments; but so long as there is a stranger in sight we shall not make a move. Come back a month from now and we will show you something worth telling to the world. At present we are simply experimenting with new features of our machine."

Then one of the brothers and their assistant mechanic walked with the correspondent back to his boat and watched it far out on the sound toward Manteo.

The next morning at 4 o'clock, equipped with a guide, water, and provisions we set out determined to ambush the wily inventors and observe their performance from a hiding-place in the jungle. After a tedious journey over sand hills, through long vistas of pine forest, and through miles of swamp and marsh land in which two of the men narrowly escaped the poisonous fangs of moccasins, we found a spot opposite the aerodrome, commanding a clear view of the beach and sand hills for a distance of five miles in either direction. There for four days we lay in hiding, devoured by ticks and mosquitoes, startled occasionally by the beady eyes of a snake, and at times drenched by heavy rains. But it paid. We saw what few human eyes had ever witnessed before, and had the satisfaction of telling the world about it.

Often we wondered if those men ever slept. They were at work before the sun came up; they frequently made flights in the early twilight, and lamps were flickering about the aerodrome until late in the night.

The first flight we all witnessed was made early in the morning. As we crept into our hiding-place we could see that the doors of the aerodrome were open and the machine standing on its mono-rail track outside. Three men were working about it and making frequent hurried trips to the aerodrome. Presently a man climbed into the seat while the others continued to tinker about the mechanism. Then we saw the two propellers begin to revolve and flash in the sunlight. Their sound came to us across the sand plain something like the noise of a dirigible balloon's propellers, but the clacking was more staccato and louder. The noise has been described as like that of a reaping-machine, and the comparison is a very good one. We were told by a mechanic who assisted the Wrights that the motor made 1700 revolutions a minute, but was geared down so that the propellers made but 700 revolutions.

For several seconds the propeller blades continued to flash in the sun, and then the machine arose obliquely in the air. At first it came directly toward us, so that we could not tell how fast it was going except that it appeared to increase rapidly in size as it approached. In the excitement of this first flight, men trained to observe details under all sorts of distractions forgot their cameras, forgot their watches, forgot every thing but this aerial monster chattering over our heads. As it neared us we could plainly see the operator in his seat working at the upright levers close by his side. When it was almost squarely over us there was a movement of the forward and rear guiding-planes, a slight curving of the larger planes at one end, and the machine wheeled about at an angle every bit as gracefully as an eagle flying close to the ground could have done.

It appeared to be 25 or 30 feet from the ground; and, so far as we could judge by watching its shadow sweeping along the sand, it was going about 40 miles an hour. Certainly it was making the average speed of a railroad train.

After the first turn it drove straight toward one of the sand hills as if it were the intention of the operator to land there; but instead of coming down, there was another slight movement of the planes and the machine soared upward, skimmed over the crest of the mountain, 240 feet high, and disappeared on the opposite side. For perhaps ten seconds we heard indistinctly the clatter of the propellers, when the machine flashed into view again, sailed along over the surf, made another easy turn, and dropped into the sand about 100 yards from the point of departure. No sooner had it touched the sand than men started from the shed with two wide-tired trucks. These were placed under the machine, the motor started, and the aeroplane at once became a wind wagon, rolling itself back to the starting track with the power of its own propellers. After each flight all the mechanism was examined in most painstaking manner, and the operator always came down when the slightest thing about the machinery was found to be working imperfectly.

On several occasions we saw the machine sail straight away up the beach until it was a mere speck, scarcely distinguishable from birds and other indistinct objects near the line of the horizon. During these flights the sound of the propellers would be lost altogether until the machine turned about and came back, frequently landing within a few feet of the starting-point. These long flights must have covered a distance of four to six miles.

As our readers may be curious to know many men at the present time have actually been able to fly without the aid of a dirigible balloon, we give the following:

THE SEVEN MEN IN AMERICA WHO HAVE FLOWN IN MOTOR-DRIVEN AEROPLANES.

Wilbur Wright, Orville Wright, A. M. Herring, Thomas Selfridge, F. W. Baldwin, G. H. Curtiss, J. A. D. McCurdy.

Mr. Curtiss, so far as we can find out, has flown a greater distance — 1020 feet — on first trial than any other aviator in the world. The time was 19 seconds.

Last, but not least (in my opinion) I hold in my hand a card postmarked Montaigne, Paris. Underneath the picture of L'Arc de Triomphe there are just five words that I prize very highly. These words are, "With kind regards, Wilbur Wright." I prize them because they remind me that my good friend Wilbur Wright, even if he is "away up in the air," and traveling all over the world, still remembers his old friend A. I. Root.

1908-08-01, A. I. Root, "The Wright Brothers Flying-Machine, and Others, up to Date", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., August 1, 1908, Vol. XXXVI, No. 15, p. 965, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS FLYING-MACHINE, AND OTHERS, UP TO DATE.

We learn by the papers that, some little time ago, Wilbur Wright, the elder of the brothers, while making some experiments in flying, was pretty severely burned by the escaping steam of the cooling-coils of his engine. He said, however, he was not hurt, and to prove it he walked half a mile or more to his stopping-place; but as we go to press we learn by the *Woman's Daily* that the hurt was more severe after all, and will probably interfere with some of their plans for flights over in Europe. It is just like my good friend Wilbur to say he was not hurt, even when suffering severely, and we hope and pray that he may soon be fully recovered.

From the magazine called *Aeronautics* we learn that De la Grange, on the 30th of May, made ten circles with his aeroplane, staying up in the air 15 minutes and 26 seconds. The distance covered was from 14 to 15 kilometers. As a kilometer is equal to about 3/5 of a mile, the speed made was about 40 miles an hour. Farnam has also made a successful flight, carrying a passenger, and afterward won the \$2000 prize by making a 20-minute flight of 11 miles.

The "June Bug," as it is called, has also made some very successful flights here in America, in one of them winning the Scientific American trophy. This flight was made July 4, and the machine made something over a mile, at the rate of about 40 miles an hour. We are further told that De la Grange has planned to arrive with his machine in the city of New York about the 20th of August, that Farnam is probably here by this time, and the prospect is that "something will be doing" now right speedily. In fact, it may be that something has *already* been done while I dictate these words.

1908-08-15, A. I. Root, "Flying-Machines up to Date", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., August 15, 1908, Vol. XXXVI, No. 16, p. 1025, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

FLYING-MACHINES UP TO DATE.

I suppose most of you have noticed by the daily papers that my predictions are coming to pass. Farnam has been making a series of successful flights here in America, and Wilbur Wright has also made two or more successful flights in France. We have not heard from De la Grange and the "June Bug," but the thing is now so well started that flying-machines will probably very soon be an every-day occurrence, even if they should *not* be as plentiful as autos, right away. God grant that they do not duplicate the number of accidents that are being daily recorded with automobiles in the hands of those who can not be satisfied with a moderate and reasonable speed.

1908-09-01, A. I. Root, "The Wright Brothers and Their Flying-Machine, not only "Out in the Open" but "Up in the Air."", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., September 1, 1908, Vol. XXXVI, No. 17, p. 1097, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS AND THEIR FLYING - MACHINE, NOT ONLY "OUT IN THE OPEN" BUT "UP IN THE AIR."

While your eyes rest on these words the probabilities are that the Wright Brothers will be "up in the air," both in Europe and America. For the first time they permit photographs to be taken of the entire machine. We have space just now to quote only the following (in regard to Wilbur Wright in France) from the Chicago *Daily News*:

"On a carpenter's table in the shed are vases of fading flowers brought by women admirers from gardens near the sea. There, several unopened bottles of dry champagne share space with copper wire, a lathe, wrenches, a roll of canvas. All will be used but the champagne, for Wright, who does no stroke of work on Sunday, touches neither alcohol nor tobacco."

May God grant that no untoward accident may happen to these two intrepid brothers who not only have the eyes of the *mechanical* world directed toward them, but who are setting such a good example in the way of *morals* before the young inventors of the world, as is indicated by the above newspaper clipping. See the daily paper and magazines for an account of their doings.

1908-09-15, A. I. Root, "The Wright Brothers and Their Aerial Flight up to Date", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., September 15, 1908, Vol. XXXVI, No. 18, p. 1156, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS AND THEIR AERIAL FLIGHT UP TO DATE.

I suppose you all know that our two friends, the Wright Brothers, are not only "up in the air," but they are, perhaps, standing out more prominently before the whole wide world than and other two persons now living. Not only are the accounts of their successes found in almost every magazine and daily paper, but almost every periodical of any sort is giving them recognition. As we go to press, Orville has made his third long flight, each one of about an hour or a little more. He has been able to manage it perfectly, making figure 8's as well as circles, and making turns with the wind blowing at the rate of ten to fifteen miles an hour. It is true that it staggered the machine somewhat when he turned about from going with the wind, and proceeded directly against it; but after he had become accustomed to handling the craft he made each turn more easily than the one before it. Fifty-seven times the machine came around to the starting-point during a period of 70 minutes and 24 seconds. After this he took Lieut. Lahm, the army's aeronautic expert, along with him for a flight of 6 minutes and 26 seconds. This was the first time he had been accompanied by a passenger in the present series of tests, and the result was the breaking of all previous records for that sort of flight. The first time that he succeeded in making a flight of almost an hour, when his friends came around to congratulate him on his wonderful achievement, the papers tell us that he actually shed tears — yes, tears of joy to think the moment had come, after all the long years of hard work on the part of himself and his brother, when they had actually demonstrated to the world that men can fly as birds do, and make use of the air above for a general thoroughfare for trade and travel, as well as the waters and the solid ground underneath the skies. I especially admire these two young men because they have worked so slowly and carefully. When a young bird essays to make its first flight from the nest, it has to learn how to use the wonderful wings that God has given it, little by little. Well, these two men not only figured out how to build the machine by cutting and trying, but at the same time they were obliged to learn how to use it, just as the bird has to learn by *actual practice* how to use its wings. We may congratulate them on having had the good sense and steadiness of mind to work so carefully that no accident worth mentioning has ever happened to either of them; and above all and over all I wish to emphasize the fact that from beginning to end they have steadily refused to use their machine on Sunday, or even work with it that day. They have also set an example before the youth of our land and others by abstaining from the use of intoxicants in every form. When I was taking breakfast with them one morning I ventured to ask why it was that neither of the brothers accepted coffee. I think it was Wilbur who replied with his peculiar pleasant smile:

"Mr. Root, we expect to make some flights this morning, and we have learned by experience that our heads are clearer and our nerves steadier if we abstain from coffee at breakfast."

Is it really true that the time is coming (or *has* come) when the world will accord and pay a premium to those who live pure and temperate lives as do the Wright Brothers?

Many are just now asking the question why these brothers do not take a straight flight, say from one city to another, and let the whole wide world see what they are doing. I presume it will be better just yet for them to keep the machine reasonably near the workshop where their tools and appliances are kept. Another thing, they are just now negotiating the sale of one of their machines to France, and another to the government of the United States. When these preliminary tests are completed we may expect to see these machines, or similar ones, flying over the whole wide world, perhaps including even the *north and south pole* that have been so much talked about.

STILL LATER IN REGARD TO THE WRIGHT BROTHERS.

From the *Woman's National Daily* we clip the following:

CAN EQUAL BROTHER'S RECORD.

LE MANS, Sept. 13. — Wilbur G. Wright says that defects in his motor are all that have kept him from equaling the flights made by his brother Orville at Ft. Myer, in America. "My motor has not worked smoothly yet, but I expect to get it in shape soon. Just as soon as I find that it is all right I expect to make a flight that will be as startling as that of my brother. There is no reason why I should not, as our machines are practically the same."

From the same paper we learn that Orville Wright, when asked why he did not stay up still longer during the last and longest flight, replied as follows:

"Well, the fact is I came down solely because I was tired and hungry. I could have continued the flight another hour just as easily. I knew by the figures chalked on the shed-roof by my mechanic that I had bettered my previous record, and I thought that was enough for one day."

It seems that the city of Dayton, where the Wright Brothers have lived and experimented all their lives, has just been waking up to the importance of giving the brothers a reception or ovation on their return home. The *Dayton Herald* says in regard to the matter:

"Dayton may crumble in dust, but the name of Wright Brothers will endure as long as earth endures.

"Henceforth the names of Orville and Wilbur Wright will be enrolled beside those of Watt, Fulton, Morse, Bell, Edison, and Marconi in history's tablet of fame."

We make a further clipping as follows:

"No one read the reports of the three flights of the Dayton aeroplanist with greater avidity, or discussed the accomplishment with more zeal, hope, and inspiration than did the venerable father of Orville and Wilbur Wright — Bishop Milton Wright.

"The venerable churchman fairly radiated with joy, feeling that the toil, planning, hope, ambition of years had become a scientific reality — an accomplishment that would contribute immeasurably to the material wellbeing of society. The venerable gentleman, bowed with the weight of years, looked younger, felt younger. His sons effected a revolution in science."

1908-10-01, A. I. Root, "Navigating the Air; The Wright Bros. up to Date", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., October 1, 1908, Vol. XXXVI, No. 19, p. 1223, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

NAVIGATING THE AIR; THE WRIGHT BROS. UP TO DATE.

On page 1097, Sept. 1, I said, "May God grant that no accident may happen to these two intrepid brothers." I then had in mind, and have had in mind all along, that during these preliminary experiments there would be accidents, and, in all probability, loss of life. Well, an accident has happened; and although Orville Wright has been spared so that he may take up his work again soon, we regret the loss of the life of his companion who was with him. Most of you have seen accounts in the papers. One of the wings of the propellers broke in midair; and before young Wright could adjust his machine it came down to the ground with a crash. It is reported that he said if he had been 75 feet higher up he could have brought the machine into shape so it would have alighted safely. There is quite a misapprehension, I notice by the papers, in regard to danger with the Wright machines. Their first experiments were with *gliding* machines, so that if any thing happened to their engine they could still glide to the ground; and no

mishap would have occurred this time had Mr. Wright been able to cut off the power the very instant the wing broke. These propeller wings are selected of the very best Vermont spruce, or at least such was the case when I was with them. This spruce has more strength in proportion to its weight than any other known material, not even excepting aluminum; and these blades are most thoroughly tested before using them. The extra strain on the machine by having a second passenger is probably what caused it to break, although it has been suggested that a broken wire may have struck the blade and caused the fracture. Since this accident I suppose every wire and piece of wood will be still more severely tested than ever before. Wilbur, the brother in France, has said, we are told, that, instead of taking a passenger, he will, at least for the present, carry a bag of sand equal in weight to a passenger.

Orville's injury, so far as we can learn by the papers, was a broken bone in his thigh, and one or more ribs fractured. As we go to press we are told that his prospects for full recovery are very favorable. We learn from the *Woman's National Daily* that on the 22d of September Wilbur Wright broke all previous records by remaining in the air 91 minutes, and covering in all about 61 miles. Here is what the paper says about it:

"There was nothing marvelous in the performance," Wright said to a group of admirers. "The machine is built on the right principles; and as long as it is properly manned it has got to fly. I could have stayed up another hour or until the petrol was exhausted; but it was getting dark and I thought it best to come down. I am glad for my sake that the flight was such a success, but doubly glad on Orville's account. Many thought when my brother met with his regrettable accident last week that our machines were failures, and that we had been enabled to fly largely through good luck. Well, I think they ought to be satisfied now that the aeroplane is all that we have claimed for it, and that the coming machine will be built along the lines that we have laid down."

Ten thousand persons witnessed the record-breaking flight of Mr. Wright.

1908-10-15, A. I. Root, "Navigating the Air", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., October 15, 1908, Vol. XXXVI, No. 20, p. 1284, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

NAVIGATING THE AIR.

Since my remarks in the last issue, Mr. Wilbur Wright has not only carried a bag of sand, but he has carried several passengers, and one of them a lady. Yes, Queen Marguerite, of Italy, has *witnessed* his flight, and had quite a talk with Mr. Wright. And now the papers tell us she is begging to take a trip with him in his machine; but the people protest, and I believe my good friend Wilbur objects — at least I hope so. God forbid that President Roosevelt or any other important personage should take any unnecessary risk at this stage of the proceedings. I admire the courage and bravery of both our President and Queen Marguerite; but I do not think they really have the right to risk their lives unnecessarily. What I mean is, that many good innocent people might suffer if these dignitaries were removed from their important duties by sudden accident. Our good friend Wilbur has also succeeded in remaining up in the air over an hour with a passenger, and we are told he has been granted the \$100,000. It rejoices my heart to hear of this complete success; for these two young men have worked hard and faithfully for many years. They have been so careful at every stage of proceedings, that, even after having made hundreds of flights, no accident occurred until the fatal one of September 17. And, by the way, I am told that Orville's broken bone is knitting nicely, and that it will probably very soon be as good as ever. It has been suggested in the papers that Wilbur might undertake to cross the English Channel. With favorable wind he could make the trip in about forty minutes. But I want to protest again against any unnecessary risks. While sailing over land, if any accident happens the machine can glide down and *probably* be managed so it will alight in a favorable spot. Before making voyages across the water, a boat (or several of them) should be provided, and a series of experiments made, with plenty of help at hand, in dropping into the water and starting up again out of it. When they can do this we are ready to cross the channel, and, may be some time in the future, cross the great ocean. I have made mention of President Roosevelt and the queen of Italy; but would it be extravagant to say that *Wilbur Wright* just now is worth more to the world than *any* president, king, or queen? May God help both of these to continue to exercise the care and caution they have been showing since they commenced their work.

We find a notice in the *Woman's National Daily* to the effect that Wilbur made a short trip with half a dozen passengers. I think this must be a misprint or a mistake in some way; for their present equipment could not

possibly carry more than two people besides the operator, and these two people would have to be very light.

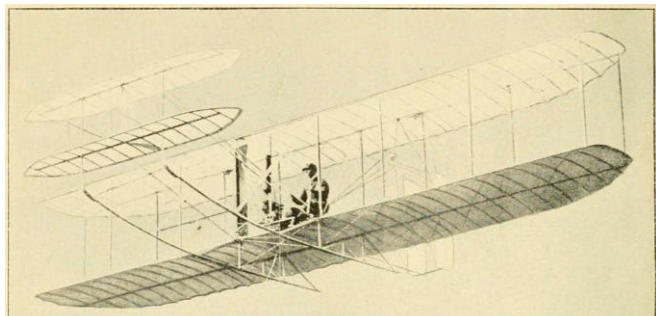
1908-11-01, A. I. Root, "The Wright Brothers' and Other Flying-Machines", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., November 1, 1908, Vol. XXXVI, No. 21, p. 1334, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS' AND OTHER FLYING-MACHINES.

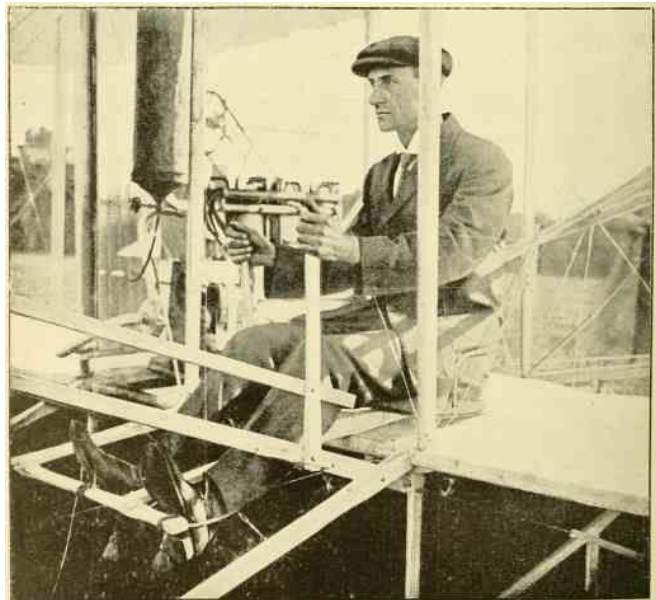
We are pleased to note that Wilbur Wright has so far recovered from his recent accident that he is going back to his home in Dayton, and probably is there at the present writing. The broken bone has made a very quick and satisfactory mend. The following, which we clip from the Cleveland *Plain Dealer*, indicates that the Wrights may soon have competition in their own town. The clipping was dated Oct. 27, and comes from Dayton.

Frank J. Heinfelt to-day made a successful flight of 1500 feet with an aeroplane materially different from that of the Wright Brothers. In this machine the single-plane principle is used, while the Wright machine has double plane surfaces. Although hitherto unknown in the aeronautic world, Mr. Heinfelt has built three machines, paying his expenses out of his salary as a stenographer. His motor was given him by a friend who took it out of an old automobile. The flight to-day was terminated by a lack of skill on the part of the manipulator, who brought the machine to the ground too suddenly and broke one of the wings. Repairs will be made at once. The flight was witnessed by several persons.

1908-11-15, A. I. Root, "Wilbur Wright in Aeroplane", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., November 15, 1908, Vol. XXXVI, No. 22, p. 1382, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).



WILBUR WRIGHT IN ONE OF HIS FLIGHTS, SUCH AS HAVE RECENTLY TAKEN PLACE AT LE MANS, FRANCE, DURING THE PAST SUMMER.



WILBUR WRIGHT AS HE SAT DURING A FLIGHT IN HIS FLYING-MACHINE.

We copy the above pictures from a French paper entitled *La Vie au Grande Air*. The article was written by Wilbur Wright himself.

1908-11-15, A. I. Root, "Our Homes", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., November 15, 1908, Vol. XXXVI, No. 22, pp. 1389-1390 (col. 1, p. 1390), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

The article is long and unrelated to the Wright brothers. It makes just a short reference to them.

OUR HOMES BY A. I. ROOT.

...
I can well remember the time when the newsboy Edison began to startle the world with his wonderful experiments. He had had but very little money, and he needed it so badly for chemical apparatus that not a copper was wasted. I have been watching him ever since boyhood (for he lived not far from Medina) much as I have been watching the Wright Brothers in their experiments.
...

1908-11-15, A. I. Root, "The Wright Brothers and Their Flying Machine up to Date", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., November 15, 1908, Vol. XXXVI, No. 22, pp. 1390-1392, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS AND THEIR FLYING MACHINE UP TO DATE.

A few days ago a prospectus of the *Scientific American* was placed on my desk; and in enumerating the many things that journal has done for the world I was surprised to see the broad claim made that theirs was the *first* publication to announce that the Wright flying-machine was a success. This statement vexed me a little because of the fact that GLEANINGS IN BEE CULTURE announced it to the world a long while before the *Scientific American* had taken any notice of this wonderful invention. In our issue for March 1, as far back as 1904, p. 241, I gave the first intimation of what was going on here in Ohio in the way of flying; and at frequent intervals during 1904 I visited the Wright Brothers at Dayton, Ohio, to witness their preliminary experiments. In our issue for January 1, 1905, I gave the result in detail, occupying three or four pages of GLEANINGS. Just as soon as an impression was off the press I mailed a copy of it to the *Scientific American*, and sent a letter accompanying it, thinking they would, of course, be glad to give it a wider publicity than we could give in our comparatively little journal. Well, what do you suppose happened? Not a peep, not a word of thanks for the trouble I had taken to give them full particulars of what I had been an eye-witness. Do you suggest that perhaps they did not get my letter with the proof-sheets? They *did* get it, and promptly asked me for *another* copy of our journal. Not a word of thanks then, and no mention of the Wright Brothers until more than a year afterward. If they have any thing to say in defense of their way of announcing inventions as they come up, we shall be glad to be corrected. In our issue for Jan. 15 I gave some further particulars with a cut of the gliding machine. At that stage of proceedings the Wright Brothers would not permit a photo of the complete apparatus to be given in print, for they had not fully secured their patents.

On page 48, Jan. 1, 1905, I gave my reasons for having kept back some news of this wonderful discovery as long as I did. Permit me to mention here that as soon as I had *permission* to give my write-up of the machine I sent the Wright Brothers a check for \$100; and, in fact, I would have been willing to send \$500 for the privilege of announcing to the world this wonderful invention. They thanked me for the check, but it was promptly returned, thus indicating that those two young men were not working altogether for the almighty dollar, but, rather, that they may benefit humanity.

While I am about it, permit me to say I am also a little surprised to see in the *Technical World* for November the following statement:

In June, 1906, the *Technical World Magazine* announced the success of the Wright Brothers, of Dayton, O., in the private tests of their wonderful aeroplane. The *Technical World Magazine* was the first publication to accord full credence to the Wright Brothers' claims, now so abundantly made good.

And the *Technical World* admits they did not give it to the world till 1906, while GLEANINGS goes back to March, 1904, with frequent mentions of what the boys accomplished step by step until the present.

At the time I gave my write-up there were several points in regard to the machine that I was not permitted to mention; but since these various features are now being fully discussed through the various periodicals I presume I am at liberty to tell what I know about it.

The first was an apparatus for putting a stronger curve on the tips of the wings when rounding a curve. Second, a device that would enable the machine to spring up into the air as a bird does in starting. When I first visited them they were obliged to run the machine along a single rail for, I think, 60 or 70 feet, in order to get up sufficient speed to "climb into the air." This long track had to be moved so as to face the wind every time the wind changed, making considerable labor for each successive experiment. I suggested wheeling the machine up on to a platform over the little building where it was stored, so as to get up momentum by running down hill. After I left them I figured out in my mind that a derrick from which a weight could be dropped something like a pile-driver in order to get up a good momentum in starting would be a good plan. I was so full of this idea that I made a second trip in a short time, and was astonished as well as pleased to find they had got hold of the same thing and had it in practical operation. They had a lot of iron weights, about the size of a small grindstone, with a rope running up through the hole in the middle. By hitching on more or less iron weights they could get up any desired speed. I think they used fully as much as 1500 lbs. for the experiment at Dayton. This weight dropped 15 to 18 feet, and by a system of pulleys to magnify the *speed* and *distance*, the machine was given a sudden impetus that threw it up into the air a sufficient height and with sufficient speed to start the vehicle for flight. The device was a complete success from the start.* I think the great wide world has had no intimation of this starting-device until the present summer. As I see pictures of it in the various magazines just now I suppose I am at liberty to describe it as I have done above.

* It really reminds one of firing a man into the air out of a cannon when the trigger is pulled to let that big weight drop.

I have from the start, perhaps, been more sanguine in regard to the value of their invention than even the Wright Brothers themselves. I may have forgotten; but if I am correct I think it took only little if any more gasoline to go a mile with the flying-machine than it does to run my automobile that distance; and this wonderful advance and achievement over all other methods of locomotion is that they are without any expense for tracks, macadam roads, or bridges. Right in sight of the bicycle-factory where these two men made their flying-machine is a bridge that cost, if I am correct, half a million of dollars. What will it be worth to the world to be able to go in *any* direction and any distance, *independently* of bridges? What do you suppose all the bridges in this world have cost, to make no mention of roadways and railway tracks and gradings?

In our last issue I said I hoped that Wilbur Wright would not be persuaded, *just now*, to attempt to cross the Channel or any other large body of water. I notice by a clipping from the Cleveland *Plain Dealer* of Oct. 19 that my good friend Orville backs me up in what I have said. See this:

ORVILLE WRIGHT SAYS HE WOULD ATTEMPT NO FLIGHT OVER ANY HIGH OBSTACLES.

The idea of flying over cities in a machine like the one with which he made his successful flights at Fort Meyer does not appeal to Orville Wright. He would not be willing to undertake a trip of that kind. The work he did at Fort Meyer was as hazardous as he is willing to perform.

The doctors attending the aviator are permitting him to see visitors, and the expression of opinion here set down is the first utterance from him by way of criticising the hopes of aerial navigation created by the work done in Paris and Washington.

He is afraid to trust any motor he has ever built or seen to the performance of such a task as has been suggested by the optimists who have expressed the opinion that Wilbur Wright should accept the challenge to cross the English Channel in his machine and continue across the country over cities and other obstacles requiring the aviator to go high into the air. The unreliability of the motor is what he fears.

Please notice in the above, he only says he will not *just now* "trust any motor he has ever built or seen;" or, in other words, at the present stage of proceedings it would be exceedingly unwise to fly over any but the most favorable territory on account of the possibility of accidents. Should any thing happen to the motor, we have found by repeated tests that a safe landing has usually been made over any farming territory; and a machine will alight easily and safely on any sort of farm crops without much risk of harm, with the stout runners I have described, gliding along on the surface of the ground without much risk of damage to the machine.

Of course, many more experiments will have to be made while the machine goes through an evolution something similar to that of the automobile.

I noticed this morning the statement made in the morning papers that Wilbur Wright said a flying-machine need not cost more than \$300 when a considerable number of them are made at a time with adequate machinery. I think *we* could easily make such a machine for less than \$100, aside from the cost of the engine, provided fifty or a hundred are built at a time. Whoever owns the patent, will, as a matter of course, need a pretty good profit in order to recompense him for what he has invested in the patent, and also for the investment in the necessary factory and equipment for building flying-machines.

1908-11-15, A. I. Root, "The Wright Brothers up to Date", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., November 15, 1908, Vol. XXXVI, No. 22, p. 1405, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS UP TO DATE.

While the French Senate was in session Wilbur Wright was called on to make a speech. Now, from what I know of Wilbur I do not imagine he would make a very *long* speech, but that when he did make one it would be right to the point, and I think you will agree with me when you read it. Here it is:

I sometimes think that this indescribable desire to fly through space after the manner of birds is an inherited longing transmitted to us from our ancestors, who, in their toilsome journeys through the wilderness in primeval times, looked up and saw the birds shooting at almost lightning speed wherever they willed in the unobstructed pathways of the heavens.

Mr. Wright concluded by saying that he told his brother Orville in 1901 that men would not fly in fifty years, and yet he said *they* flew in 1902.

JUST ONE OF MY BLUNDERS.

On page 1334, Nov. 1, in speaking of Wilbur Wright's "accident" I meant his brother, Orville Wright. I am very sorry indeed if any blunder of mine has conveyed the idea that any thing has marred Wilbur's very successful flights at Le Mans.

WILBUR WRIGHT INSTRUCTING PUPILS IN THE ART OF FLYING.

Several times I have remarked that if any accident should happen to the Wright Brothers it might be a difficult matter to find anybody on the face of our great round globe who could run the machine without some previous practice or experience with the Wrights as teachers. In view of this it rejoices my heart to know that the work of teaching is already under way, and that our good friend Wilbur has at least one pupil. See the following, which I clip from the Cleveland *Plain Dealer*, dated at Le Mans, France, Nov. 10:

Captain Lucas Girardville, of the French army, made a flight of 15 minutes with Wilbur Wright, the American aeroplanist, today, receiving his first lesson in piloting.

I suppose most of our readers are aware that Wilbur *has received the \$100,000* for the right to make and use his flying-machine in France.

Orville returned to his home in Dayton, O., in time to vote, and is able to get around, at least after a fashion, by the aid of crutches.

1908-12-01, A. I. Root, "Our Homes", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., December 1, 1908, Vol. XXXVI, No. 23, pp. 1448-1449 (col. 2, p. 1449), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

The article is long and unrelated to the Wright brothers. It makes just a short reference to them.

OUR HOMES BY A. I. ROOT.

...

I think I said recently, "May God be praised that he has permitted me to live and be in touch with such men as Edison, the Wright Brothers, Moody and Sankey," and last, but not least, with such a man and such a teacher as my dear old friend *Dr. C. C. Miller*.

1908-12-01, A. I. Root, "Navigating the Air by the Wright Brothers and Others", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co.,

NAVIGATING THE AIR BY THE WRIGHT BROTHERS AND OTHERS.

The latest report we clip as below from the *Chicago Daily News*:

WINS IN FIVE MINUTES A PRIZE THAT NATIVES HAD BEEN CAREFULLY PREPARING TO CONTEST FOR.

LE MANS, NOV. 14. — "I might as well have that 1000 francs (\$200), even if I don't exactly need it," remarked Wilbur Wright yesterday afternoon after suddenly deciding to try for the prize offered by the Aero Club of the Sarthe department for an aeroplane flying as high as 100 feet. In another half-hour he had shot up into the air on his machine without using the starting apparatus, and soon he soared twice around the big Auvours field at a height of fifty feet above the small captive balloons which marked the 100-feet height.*

It took Wright five minutes to win the prize, which several French aeronauts have been carefully preparing to acquire for several weeks past — not for the sum involved, but for what the Aero Club calls "the peculiar distinction of not only flying but flying at high altitudes."

GIVES LESSONS IN FLYING.

Wright is giving the last lessons in flying to a number of different persons, according to his contract. When these are concluded he will go to America via Cherbourg, because in the neighborhood of that seaport there still remains another prize to take — that for the straight-distance flying.

Yesterday's flight, made without using the sort of catapult which has caused so much gossip, has settled the question of the machine's being handicapped for long flights.

We gather from the above that our friend Wilbur has learned the trick of starting without his "catapult" (the starting apparatus I described in our last issue), and, in fact, I rather suspected they would, after they became better acquainted with the machine and its capabilities. The following clippings from *Aeronautics* for November give us glimpses of what is going on in the aeronautic world:

It has been figured that the total duration of Wilbur Wright's 72 flights in France, up to Oct. 15, inclusive, amounted to 13 hours 49 minutes (will it take place "all in one sitting" next year?). Thirty persons have been carried, including three women and a boy, a total distance of 431 miles.

On October 15, two flights were made of 1 minute 38 seconds, and 2 minutes 35 seconds, carrying MM. Mercanti and Gasnier. Wright stopped his motor when at a height of 120 feet and made a long smooth glide to earth.

On the 28th Count de Lambert began his lessons as an apprentice-aviator. For his first lesson he had three flights of 12, 8, and 15 minutes. On the following day the master and pupil made three more, 7 minutes and 5 seconds, 17 minutes and 34 seconds, and 19 minutes and 25 seconds.

* In a second flight of 11 minutes' duration, Mr. Wright is said to have risen to a height of 195 feet above ground. These are the first official records for height that the American aviator has made. — *Scientific American*.

In a recent interview Wilbur Wright stated that the success of his machine was especially due to the high efficiency of its propellers, that light motors were not essential, and flight could as well be attained with a steam-engine. He claims 70 per cent efficiency for his propellers.

Mr. Franz Reichel, who made the first "hour flight" as passenger on the Wright machine in France, has been the first one to describe accurately the wonderful sensation of human flying. He says: "If in an aeroplane going straight ahead is a delicious sensation, turning is a veritable intoxication. It was during these evolutions that I felt that the air was conquered, well conquered."

It is said that fully one hundred Wright aeroplanes have been ordered from the Societe Navale de Chantiers de France. They will be fitted with Bollee engines and be sold at \$5000 apiece. Count de Lambert and Vicomte de La Brosse will receive the first two. (This seems an "awful lie.")

On the 28th Farman made another long flight and again another of about a mile with M. Painlevé aboard. Following these, other alterations were made and for the first time in the history of aviation a flying-machine traveled from one town to another.

NEW PRIZES — IN FRANCE.

1000 francs by Aero Club de la Sarthe as a height prize, with conditions making it possible for Wilbur Wright to compete (he was excluded from the other prize for height for not starting by his own power only). Captive balloons must be flown over at a height of 30 meters.

First, it is an agreeable surprise, at least to myself, to know that thirty persons, including a woman and a boy, were carried; and the second item declares positively that the machine actually carried *two people* besides Mr. Wright himself. If they would only tell us the total weight of the three persons we could judge a little better of the capacity of the machine for carrying burdens. I am very glad indeed to know that 100 machines have

already been ordered, and that the others will be sold as low as \$5000 apiece. That is not any more than some of our automobiles cost; but I do not exactly understand the footnote by the editor of *Aeronautics*. Does the "awful lie" refer to the 100 machines to be built, or to the price, or to the fact that the Count de Lambert and the Vicomte de la Brosse will receive the two first?*

Our last item tells us that Farman is also making progress, and that he too is carrying a passenger; and that he has succeeded, at least to a small extent, in traveling from one town to another. When actual flying-machines begin to traverse the country by going from town to town as automobiles do, then we shall see such a stir throughout the whole wide world as has never been seen before.

My last clipping I have given to explain *why* it was that Wilbur Wright was induced to try *climbing up into the air* without the use of the catapult. Oh! is it not glorious to be alive when so much is going on in the way of invention and progress — not only on the face of the earth, but away up into the beautiful air above us, and, with a prospect in future, of enjoying companionship with the very *clouds* that float above us?

* Since the above was in type I notice by one of the papers that Wilbur Wright has at least once shut down the engine while high up in the air, and made a gradual glide down to the ground in perfect safety. This refutes the statement made by several of the papers that disaster would surely follow in case of the breaking-down of the engine. If I am correct, the engine might be stopped for repairs while up in the air, and, if up high enough, and the repairs did not take too long, the difficulty would be little if any greater than in stopping the engine of an automobile for repairs.

1908-12-15, A. I. Root, "The Wright Brothers up to Date", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., December 15, 1908, Vol. XXXVI, No. 24, p. 1533, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS UP TO DATE.

If I am correctly informed, Orville Wright has so far recovered that he has left his home in Dayton, Ohio, and is now on his way to join his brother in France; and the papers tell us that his brother, Wilbur Wright, now has hopes that he can construct a flying-machine that will fly without a motor. I can not understand what he means by this unless he has reason to think it possible to find ascending currents that will take him up into the air, and that, when once aloft, he can guide his ship so as to find other ascending currents that will enable him to fly as birds do for hours without flapping a wing. Perhaps this is only a newspaper fiction; but there may be a kernel of truth in it after all.

1909

1909-01-01, A. I. Root, "Wilbur Wright Still Breaking Records", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., January 1, 1909, Vol. XXXVII, No. 1, p. 44, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

WILBUR WRIGHT STILL BREAKING RECORDS.

On the 18th of Dec., Wilbur Wright (so the *Plain Dealer* tells us) "smashed two world's air records." He stayed up in the air *almost* two hours, went over 60 miles, and ascended higher than he had done on previous flights. He also encountered a gust of wind that made his machine back up and plunge like a restive young colt, but he pulled it back into shape while the (at first) "terrified spectators" cheered him with loud shouts. How about his pupils? Can any of them yet run the machine alone?

1909-02-01, By the Bee Crank (Walter S. Pouder), "As the Crow Flies", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., February 1, 1909, Vol. XXXVII, No. 3, p. 10, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

"If goods are wanted quick, send to Pouder."

Established 1889

AS THE CROW FLIES

By the Bee Crank

When the Wright Brothers have established their Consolidated Cloudland Atmospheric Express Service they may be able to clip off a few rods from the length of the present route from you to me. It is not yet established, and

they are not even likely to have it in operation before you are ready for your spring bee-supplies.

I mention this now because some of my customers are going to delay ordering until the last minute, and then find themselves in a great hurry for their goods. If you do, I shall be ready for you. But why wait? Isn't it better for you to take my catalog to-night, sit down in front of the cozy fire, look through it carefully, and check off the things you will need, and drop me a line telling me about them? If you do not want the goods at once, tell me when to ship them, and when the day comes they will be packed ready to go forward to you. This makes it easier for me, and it also relieves your mind and provides against overlooking it during the spring rush.

I handle Root's standard goods, and sell at Root's prices. If you haven't my catalog, a card request will bring it. I should like to show you what I have in stock by way of Danzenbaker hives, metal-spaced frames, smokers, veils, and all the necessities that belong to the bee industry.

Write for quotations on finest white-clover extracted honey in five-gallon cans. I am supplying many up-to-date bee-keepers with this fine honey, thus enabling them to hold their established trade. Send me your bees-wax. I pay 28c cash or 30c in trade.

I am running full blast in my new building, where I have increased facilities for handling this particular line of business. In fact, I claim to possess the most perfect and complete distributing house in all the world, outside of the large factories.

Every communication sent here receives an immediate and courteous reply.

Walter S. Pouder,

859 Massachusetts Avenue, Indianapolis, Indiana

1909-02-15, "Big Sum Offers are Spurned by Wrights", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., February 15, 1909, Vol. XXXVII, No. 4, p. 118, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

BIG SUM OFFERS ARE SPURNED BY WRIGHTS.

PAU, France, Jan. 19. — All the money which the Wright brothers have gained by taking prizes offered for aviation is insignificant compared with the sum they could earn by accepting the offers made by many local authorities, and the owners of certain fashionable resorts, as well as by the officials of French railways, to induce them to carry on their experiments in different neighborhoods. The town has gone mad on the subject of flying. Street musicians are singing impromptu melodies with words glorifying the American brothers. A number of French painters have arrived, with the view of committing to canvas their first impressions of a real flying-machine, and exhibiting them at this year's saloon. A legion of photographers is also in sight, while scores of dainty damsels belonging to French high society may be seen to-day going toward the aviation ground, with cameras under their arms, in the hope that they may be able to get a snapshot of Wilbur Wright, who slept last night with his two workmen beside his precious machine. Mr. Wright tells the correspondent of the *Chicago Daily News* that he did not expect to compete at the forthcoming race from Monte Carlo to Cap Martin and back, since the distance and other conditions will not be sufficiently interesting. He added, however, that he might go over there "by the side entrance" with his machine to see how his colleagues are getting along.

1909-04-15, A. I. Root, "Navigating The Air — The Wright Brothers up to Date", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., April 15, 1908, Vol. XXXVII, No. 8, pp. 258 and 29, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

NAVIGATING THE AIR — THE WRIGHT BROTHERS UP TO DATE.

So little has been going on during the winter I have not thought best to keep a record; but just now I give you a glimpse of what is coming soon by the following clippings from that excellent magazine, *Aeronautics*, for March:

FRANCE.

The Wrights still hold the eyes of the world. Despite all that is being done in Europe, it has to be admitted that it is Wilbur Wright alone who is showing the real conquest of the air. Others are flying, but with a difference. Wright has shown that he can do almost as he pleases in the air. The month, however, has been principally spent, since the first flight at Pau with the new made-in-France Wright engine, on Feb. 3, in

teaching his pupils, the Conte de Lambert and Paul Tissandier, and in receiving distinguished visitors. Except on a few days, when snow was falling and the cold was intense, Wilbur has flown every day two or three times. It has been noticed that he flies with ever increasing enjoyment. His obvious relish of his half-hour trips through the air has excited the greatest French enthusiasm.

ALFONSO LONGS TO FLY.

The next visitor was of still greater distinction. This was Alfonso XIII., the young king of Spain, who turned up at nine o'clock in the morning on Saturday, Feb. 20, and became wildly enthusiastic. He took off his coat and got into the machine, and afterward was so excitedly delighted that he insisted on remaining in his shirtsleeves. He was received by Hart O. Berg and the mayor of Pau, and, after shaking hands very heartily with the two Wrights and Miss Wright, asked every conceivable question, and made Orville tell him all about the accident at Fort Myer. Wilbur made a brilliant display for half an hour, doing every possible maneuver. After his return, and more questions had been answered, the king asked whether Wilbur would mind making another flight for him, taking one of his students with him. Count de Lambert was chosen, and, after a twelve-minute flight, the machine was brought back almost to the king's feet. The young monarch admitted that it was the temptation of his life to make a flight, and he could hardly tear himself away.

MISS WRIGHT'S FIRST FLIGHT.

Another interesting feature of the month was that Miss Wright made her first flight. This event took place on the 15th, and she soared around beside her brother for seven minutes. Before she would venture, however, the Comtesse de Lambert went for a five-minute trip. Miss Wright made another voyage on the 23d.

Perhaps our readers may care to know that, when the Wright Brothers were making their first experiments out in that pasture-lot near Dayton, it was my privilege to take this same Miss Wright on a little trip around the lot with the little Olds mobile that is giving Mrs. Root and me so much enjoyment down here in Florida. At that early date I believe I had more faith in the ultimate outcome of their experiments than the old father, the sister, or even the two brothers themselves; and you can imagine, therefore, how it rejoices my heart to learn I was not far out of the way about it. Read the following:

Both Tissandier and Count Lambert quickly picked up the knack of steering. For a few days they held the levers for the straight runs, and Wright manipulated the curves. Later Wright became the passenger throughout long runs. Tissandier says that driving is the most fascinating sport he has ever tried.

By the 16th, Orville was well enough to begin sleeping at the shed and to superintend the building of the new machine with which speed is to be obtained. Wilbur now describes his present machine as "a slow old thing suitable only for teaching."

On the 24th, Orville got into the air for the first time since his accident. With his sister he went up in the balloon Icarus with the Marquis de Kergarion.

In honor of their work for aviation both Wilbur and Orville have been made Doctors of Technical Science by the Technical High School of Munich.

Fifteen Wright aeroplanes have been sold during the month by M. Michel Clemenceau.

The popular fashion in Paris just now is the "Wright cap."

Bleriot has been dividing his time between watching Wilbur Wright and making skimming flights of about 600 meters in his small fast racer Bleriot XI.

1909-05-01, A. I. Root, "The Wright Brothers up to Date", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., May 1, 1909, Vol. XXXVII, No. 9, p. 30, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS UP TO DATE.

We clip the following from the *Cleveland Plain Dealer* of April 27:

ROME, April 26. — Wilbur Wright made a series of successful flights here to-day, making the starts without the aid of a derrick or rail. The aeroplane was propelled over the grass by its own power, momentum gradually increasing, until at the end of 150 yards the machine left the ground and sailed into the air.

1909-06-15, A. I. Root, "Animated Eggs — A Great Discovery", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., June 15, 1909, Vol. XXXVII, No. 12, p. 21, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

ANIMATED EGGS — A GREAT DISCOVERY.

While Huber and I were watching the movements of chickens inside of the egg (see p. 384) he declared that, in his opinion, the chicken not only had power to move around in the egg, and, in fact, go over to the opposite side when the egg was up against some object that was too warm, but he said it seemed to him also that the chicken had power to turn a somersault. This movement is particularly perceptible about the middle week of incubation. Finally I took an egg with my new egg-tester, sat down in an

easy-chair, and turned the egg up toward the sun and witnessed the chicken taking exercise, even while inside of the egg. Well, while we were commenting on this, Mr. R. R. Root communicated to us something that is (at least to me), a wonderful discovery. Take an egg from under a sitting hen or from an incubator, say some time during the last week of the hatch, and lay it on a ground-plate glass — a fine quality of looking-glass or hand mirror will answer nicely. Level up your glass so the egg will lie on it without rolling. Now, if this is a fertile egg, and contains a living chick, after a little interval the egg will twitch about and sometimes roll around on the smooth surface of the glass. This, in fact, might be one method of telling a live egg from a dead one, but you must remember that the chick *in* the egg has periods of sleeping as well as it does out of the egg, hence you may have to wait some little time to see the movements I have described. As soon as I can manage it I want to see forty or fifty eggs spread out on some smooth ground surface where the temperature can be kept up to about 103 degrees. What a sight this would be for some poultry show — a lot of eggs, say under a glass case, with more or less of them wiggling about and rolling over. Now, so far as I know, Mr. Root is the original discoverer of this wonderful phenomenon. If any of our readers can point out where this has ever before been described in print, I should be glad to see it. GLEANINGS claims to be the first magazine to exploit the great invention of the Wright Brothers; and if no one comes forward to prove the contrary we shall claim it is ahead of all other poultry books or poultry journals in announcing that not only the chickens, but the eggs *themselves*, may show “animation” before the chick gets out into the world.

1909-07-15, A. I. Root, “Our Homes”, Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., July 15, 1909, Vol. XXXVII, No. 14, pp. 446-448 (p. 447), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

The article is long and unrelated to the Wright brothers. It makes just a short reference to Katherine Wright.

OUR HOMES

BY A. I. ROOT.

Huber, the youngest of the Root family, on the 20th of June, received into his home a most precious gift in the shape of a girl baby.*

* As Miss Katherine Eva Root is only about three weeks old to-day, July 10, I can not say very much about her “accomplishments,” but as her father and mother are both very nice-looking young people, as a matter of course that baby is already about the handsomest one in the whole wide world. I congratulated them on having named her after Miss Katherine Wright, sister of the Wright brothers, who is just now, with those brothers, almost the center of attraction to the whole world.

1909-08-15, A. I. Root, “Our Homes”, Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., August 15, 1909, Vol. XXXVII, No. 16, pp. 515-518 (p. 516), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

OUR HOMES

BY A. I. ROOT.

Whosoever liveth and believeth in me shall never die. — John 11:26.

The above text has always been a very precious one to me — that is, since my new birth, which many of the older ones remember. When I was a child in the Sunday-school I read about this wonderful miracle of restoring Lazarus to life; and with a childish faith I accepted it, for it was right along in line with the teaching of my good old mother. Later on, when I permitted myself to be led into Satan’s snares I somehow lost faith in these precious Bible promises. But I found no *comfort* in skepticism and no *inspiration* in infidelity. When my eyes were opened, when I was about thirty years old, I awoke to the sinfulness and *hopelessness* of the way I was then traveling, and then this passage came out like letters of fire written on the blue vault above — “Whosoever liveth and believeth in me shall never die.”

After he had repeated this, the dear Savior said to Martha, “Believest thou this?” And I want to ask of every reader of GLEANINGS, young and old, friend and foe, black and white, rich or poor, “*Believest thou this?*” Do you, my friends, each and every one of you, honestly believe that whoever

lives and believes in Jesus Christ as the Son of the living God *shall never die?*

After the previous Home paper had gone to press I read it over a good many times, and I am going to read it more while I have reason to think that toward 30,000 copies of GLEANINGS are being dropped into the homes of our land. When I have dictated a Home paper that I think is going to prove helpful and do good it is a great pleasure for me to think, while I am reading it over, that *you, too*, are reading the same words; and I hope and pray that the Holy Spirit may be with you while you read, and that he may carry the message that I have tried with my feeble voice to send to you. May God in his gracious love and kindness send the Holy Spirit with the message I am going to give you now.

To be real honest, I suppose I shall have to confess to you that there are times when I am tempted to unbelief. We know very little about the future. Nobody has ever come back. I remember vividly when the spiritualists claimed to have made connection or established communication, if you choose, with the other world; but it never satisfied me. Through the years that have passed since the spirit rappings came up before the world, I have carefully investigated these messages from that dark *beyond*; but none of them have ever convinced me of their genuineness. None of them have the stamp of *truth* on them. I can not understand all the phenomena of clairvoyance and hypnotism and many of the other things, call them by what name you will; but I feel satisfied and sure that no communication has ever been received so far, from that other shore in any of these ways.

I have before stated it as a fact that we used to have infidels — men who rejected the Bible as the word of God; but so far as I know just now, they have mostly dropped out of sight. I think I know something of what is going on in the world, because, during the past few weeks, I have been hastily reviewing, or trying to review, all the periodicals that come to us by way of exchange or otherwise. I glance hastily at the magazines, agricultural papers,* and the scientific literature and religious periodicals, and two or three dailies printed in different parts of the United States. I see publications, too, from abroad, and some from the islands of the sea, but in all of them little or nothing that favors skepticism. All mankind seems, by common consent, to have united in acknowledging that there *is* “a God in Israel.” The Bible, too, is held in higher estimation than ever before since the world began.

* While I am about it I want to say that it delights my heart to note the splendid moral tone of almost all the agricultural papers printed in the different States. Just now almost every State, and perhaps *every* one in the Union, has its leading agricultural periodical. All these farm papers are strong and clear on the temperance issue, especially those in the South. They are all down on gambling and every dishonest undertaking. Of course they are misled occasionally (especially in their advertising columns); but it rejoices my heart again to note that they are fast coming to the point of refusing misleading advertisements. I long to see more of the poultry journals come up on “higher ground” in this respect.

Who is it that said, “Whosoever liveth and believeth in me shall never die”? Peter’s answer, that has been echoing all over the world from shore to shore, seems to be echoing still, “Thou art the Christ, the Son of the living God.” Years ago there used to be a few silly people who refused to accept the evidence of the scriptures. Some of the “higher critics,” as they style themselves, of recent date, have presumed to doubt the miracles or have tried to explain them away; but if I am correct they do not get a very large audience. The New Testament tells us who Christ was. In Matthew 3:17 we read that a voice from heaven proclaimed, at the time of his baptism, “This is my beloved Son in whom I am well pleased.” In order that the world might receive and accept this beloved Son as such, God gave him credentials. He went about healing the sick. By the way, friends, is there any other way in which our gracious Lord could have proven his divinity as he did by healing those who were in distress and pain? All mankind was in need, but there was no one to give relief from distress. Most of his miracles were along the line of healing.

Away back in my boyhood, when I went to Sunday-school one of the most wonderful passages to me was where Jesus stilled the tempest as recorded in the 4th chapter of Mark, 8th of Matthew, and 8th of Luke, and I often think of it now. He said to the boisterous winds and the lashing waves, “Peace, be still.” With all that has been accomplished with modern science we have never had any thing like that. No wonder his disciples asked, “What manner of man is this that even the winds and waves obey him?” This wonderful miracle paved the way in my boyish imagination for the raising of Lazarus, thus demonstrating to all the world that our Lord was not only master of the winds and waves, but at his bidding even death gave up its claims.

Any one who will take the time and pains to read carefully the New Testament will, I think, be compelled to decide that it is a *truthful* history. None of these things were done in a dark corner. Jesus came out in open daylight. Most of his miracles were performed before crowds of people — no midnight with its darkened room. In fact, his whole life attested what he said, “In secret have I done nothing.” There is a certain air of honesty that runs all through the New Testament that stamps its statements as truthful.

It has been my good fortune, at least as a general rule, to have my statements accepted. In only a few times in my life have I been accused of untruthfulness. When I first gave the story about the Wright brothers, and said I saw them fly with their machine and come around to the starting-point, I was disappointed because my report created so little sensation. The Wright brothers have *recently* made stir enough in the world; but when I first introduced them to the world I was surprised and disgusted. While at Dayton some years ago I met Mr. Chanute, the man who had made experiments with gliding-machines, even before the Wright brothers had, and a man who is widely known all over the world wherever there is any interest in flying-machines. When I was introduced to Mr. Chanute he paid but little attention to me. That did not hurt me at all, for God knows I did not care to be exploited. As the party broke up, Orville Wright handed Mr. Chanute a copy of our journal, turned over to the pages that gave my story, and suggested to him that he might be interested in reading it after he got to his hotel. The next morning, when we met again, Mr. Chanute’s face had changed. He came up to me with a very friendly greeting and put out his hand. When I told him that I was much disappointed, when I wrote the article, to find that it elicited so little interest, he replied something like this: “Why, Mr. Root, your readers all supposed that it was a made-up story. The way in which you talked about Christopher Columbus putting out on the unknown deep and all that, made people believe it was a sort of fairy story, such as we find in our magazines every little while — stories so much mixed up that one can not tell which is fact and which is fiction. The world did not believe you were *telling the truth*.”

I replied something as follows:

“Mr. Chanute, I am in the habit of having *strangers* doubt my statements; but those who are acquainted with me, and know my way of talking, and those who have read my department in our journal for years past, ought to know that I tell the truth. Furthermore, that article has the stamp of truth on it from beginning to end. I mentioned the locality, and the things that happened, in a way that would convince any reasonable person that what I related really occurred.”

He glanced over the pages again and said slowly:

“Well, I guess that is so to a great extent; but what you are telling is *too wonderful*. The world is not yet ready to take it in.”

I turned to Mr. Chanute and the Wright brothers, and then said:

“My friends, none of you know what you are doing. I am sure you do not recognize the unexplored field that you are opening up.”

They laughed at my enthusiasm; but today, this 30th day of July, 1909, I think most people who read this will say I was right. My enthusiasm was not misplaced. I did not think, however, that it would take so many years for this world to wake up as it has done.

I have used as an illustration the Wright brothers and their flying-machine, and I wish to say again that there is a still more wonderful unexplored region in the line of our text than in any thing else on the face of the earth. Those who are experienced in the affairs of the world can judge pretty well whether a statement is true or not. Certain people, certain books, and certain articles in the papers have the stamp of truth on them; and this New Testament account of our Lord Jesus Christ has the stamp of truth on every page. The narrators may have made some trifling mistakes, but they are honest. The Bible *is* the word of God. I know not the future; but I am satisfied to risk it with him who said, “I am the resurrection and the life. He that believeth in me, though he were dead, yet shall he live.”

When I am visiting in some distant State or city I feel lost and unsatisfied until I find a bee-keeper — somebody who has read GLEANINGS; and, oh what a pleasure it is to be shown around by some one in that locality! Now, when I go into that other world I expect to be received and welcomed in a similar way. He who said to the winds and waves, “Peace, be still,” and was obeyed, is my friend. I know he *is my friend* because I have been working for him all these years. I have been working with him, and know that he is pleased with my work in the temperance field. I know that he sympathizes with me in my efforts to discourage the use of tobacco. I said to the clerks years ago, when I was told what a lot of stamps it took to send out smokers that Dr. Miller has alluded to, “Do not worry. The great Father above will furnish the postage;” and,

dear friends, the money has come, and for every thing else I have undertaken *for him*.

Now just a word more about

UNEXPLORED REGIONS.

About forty years ago I was obliged to ride a good many miles on a freight train. On the caboose car, occupied by the train boys, I found only a Bible and an almanac to while away the hours; and as the train moved slowly I read the Bible and the almanac alternately. Now, it is a sad confession, but it is honestly true, the Bible at that time did not interest me nor take hold of me. I remember distinctly of thinking that the patent-medicine almanac interested me more than the Bible. The Bible at that time of my life was an “unexplored region.” I did not comprehend it nor understand it. The reason for it was because I was not living in harmony with its teachings; and, worst of all, I did not *propose* to live so. This *is* a sad confession for me to make, but it is the truth. Now, in one respect I was honest about it. The Bible *did not* interest me. My eyes had not been opened. The scales had not fallen from them. Let me illustrate:

I hold in my hand an instrument containing a very minute particle of radium. A label is pasted on the instrument reading as follows:

The radium in this spinthariscopes is in the form of bromide of radium, and has an activity of 300,000. The observer must remain in an absolutely dark room for four minutes before attempting to view the emanations.

WILLIAMS, BROWN & EARLE,

Sole American Agents, 918 Chestnut St., Philadelphia.

Now, if you take the instrument out in broad daylight, and put it up to your eye, you can not see any thing at all. You might as well try to look into an iron wedge. When I first received it I could hardly believe there was *any thing* to be seen in that opaque body. There was no light whatever. I went into a dark room and remained there for four or five minutes, and even then I could not see any thing. I was ready to exclaim, “Humbugged again!” for the instrument cost me ten or twelve dollars. However, I went over home and went into a very dark clothes-press and stayed several minutes. Then I began to get a glimpse of the glittering stars as they poured forth unceasingly from that little speck of radium. Then I discovered, almost for the first time, that the loving Father had so formed the human eye that one can accustom himself to seeing in the dark. If you look at the sun, or go out on a bright winter’s day, the pupil of your eye will contract so that, when you go back indoors, you can not see any thing for some time. The eye must change so as to adapt itself to the amount of light. In the same way, when you step out of doors on a dark night you will say at first, “Why, you can not see an inch before your face;” but stay out in the pitchy darkness for ten or twenty minutes and you can see a good many things quite plainly that were at first invisible. The label on the instrument says four minutes; but with me it takes fifteen or more for my “second sight,” if I may so call it, to get fully developed.

After I had had the radium quite a spell, one night I left it on the stand by my bedside, with the cover off; and when I had occasion to get up about midnight I was astonished to see the scintillations shining out from that little instrument so I could see them clear across the room; and I then discovered that the eye can see a great many things, after being a *long time* in pitchy darkness, that can not be seen otherwise. Within a few days this fact has come out quite vividly in my work with the new egg-tester. I have been studying the incubation of eggs for two or three years past; but it seems I have been so stupid that I never learned, until a few weeks ago, how to see the movements of the chicken inside of the egg. Well, I have just found out that the eye needs to be trained in the same way that it does to see the shooting stars through this spinthariscopes. Now, if you enjoy what I am going to tell you as much as I have enjoyed going through this great “unexplored region” you will feel very happy, and I shall feel very happy too. You want either a sitting hen or an incubator — one is as good as the other. But they should be, for convenience, in a room that can be darkened. Shut out every ray of light except a round hole where the sun can shine through, say in the forenoon or afternoon. Make an egg-tester as I have described, and let this ray of sunlight strike the egg on the end where the air-bubble is. You should have white thin-shelled eggs. The sunlight will go through the shell where the air-bubble is, and will illuminate the whole inside of the egg enough so that your eye, while in the dark room, will see much that is going on inside, and by making a test every day you can see just how the chicken grows. Your first glimpse will probably be from three to five days after the chick has started. On the thirteenth day I saw one of these chickens put its foot down against the shell as plainly as if the chick had stepped in ink and then walked on a white cloth. And I saw it put down

the other foot and make a step. Now, before I was enabled to do this I had to practice a good many days to get the conditions just right, and to see what is possible to be seen by a trained and enthusiastic experimenter.*

Well, friends, in order to see what is in the Bible you must go at it exactly as I have been doing to investigate animal life in the egg. The condition given in our opening text is that we must not only believe but “live” in Christ Jesus. I did not understand the Bible, and I could not comprehend it, because I was not living+ with the lowly Nazarene. Just as soon as I accepted him as the Son of God and began studying the New Testament to see what it said about him my eyes were opened. A new and heretofore unexplored region, to me, was opened up, and I comprehended for the first time what it meant to live for humanity and not self; and one who thus lives and starts out to live shall most surely “*never die.*” “*Believest thou this?*”

* If you are using spectacles you will need a pair for this purpose with very strong magnifying power. I use a pair of eye-glasses with only six-inch focus; and as you will probably have to get the egg rather close to the eye to see it to the best advantage you may be obliged to whittle down your paper box to let the eye come within the proper distance of the egg. Young people with cool eyesight will use the egg-tester readily, that I described on page 384, June 15.

+ Before I could get a glimpse of the shooting stars from the radium, or see what was going on inside of the eggs, I had to comply with certain conditions — keeping in a dark room until my eye had adjusted itself to see things that would otherwise be invisible. Well, in just the same way, in order to inherit everlasting life with Jesus Christ we must put ourselves in harmony with certain conditions. Notice the word “liveth” in our text. We must be living with him and making his work our work — his sympathies our sympathies; and, finally, when we are both living with and *believing* in him we shall *never* see death.

1909-09-01, A. I. Root, ““Coming Events Cast Their Shadows Before.””, Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., September 1, 1909, Vol. XXXVII, No. 17, p. 554, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

“COMING EVENTS CAST THEIR SHADOWS BEFORE.”

When I was eighteen years old I predicted that electricity would soon take the place of steam in transporting people from place to place; and as a proof I exhibited around at schoolhouses a home-made model of a little electric motor. From my boyish point of view I supposed we would travel by electricity in two or three years; but it took *thirty or forty* years. Later on I told you that automobiles would soon be more plentiful than carriages drawn by horses. This event, too, took longer than I expected, and it has not yet come to pass, except in certain localities. In 1904, when I told you about the Wright brothers, and a little later when I told you at length what I had seen with my own eyes, I said at that time that their discovery (that the air could be traversed without the aid of balloons or gas of any kind) would make a sensation in the world akin to the discovery of America by Christopher Columbus. I thought then that *before* the year 1909 we would see the air full of flying-machines. Now, it may take until 1910 for my more mature prediction to come true. But if nothing hinders, before the snow flies in the Northern States, *this year*, we shall see an excitement throughout the whole wide world that will eclipse any thing known heretofore. I need not take space here to give you the proof of what the Wright brothers and a host of others scattered almost all over the face of the earth are doing in this new lately developed gift from God. Automobiles will be comparatively out of date. Iron tracks and bridges that cost up into the millions will be no longer needed. While I dictate these words, every daily records with startling headlines “All previous records smashed and broken.” This morning we are told that our good friends the Wright brothers are left behind; but tomorrow’s daily may tell us that our old friend Wilbur is “up on his nerve,” and is not so much behind after all. If these boys will only be careful and not get killed, while they are almost wild with enthusiasm with the successes that are coming, we shall be very glad indeed. May God be praised that I have been permitted to live long enough to see flying-machines an assured success.

1909-10-15, A. I. Root, “The Wright Brothers not in the “Show” Business”, Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., October 15, 1909, Vol. XXXVII, No. 20, p. 23, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS NOT IN THE “SHOW” BUSINESS.

We are informed by the papers that both Orville and Wilbur Wright have declined making flights simply for an exhibition. From what I know of the

two men I can readily understand that they could not be induced by any offer of money to go around the country giving exhibitions. They are not in the show business; neither are they in the business of *getting rich*. God has given them their success and their great popularity for some better purpose. Wilbur recently said something to the effect that their first business was to establish a factory for making safe flying-machines; and the next thing is to establish a school to teach the art of flying. And there has already been some loss of life; and loss of life is almost sure to come when an inexperienced person, without practice or training, undertakes to fly. This school and workshop will prove to be a blessing to humanity. But how much good will come from this wonderful discovery if they circle round about the country in response to the one who makes them the biggest offer of money? May the Lord be praised that we have a couple of inventors who have the grace to say, no matter how tempting the offer, “Gentlemen, we thank you; but we are not in the show business.”

1909-11-15, A. I. Root, “Still More “Discoveries””, Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., November 15, 1909, Vol. XXXVII, No. 22, pp. 715-716 (p. 715), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Long article unrelated to aviation. It just makes a short reference to the Wright brothers.

STILL MORE “DISCOVERIES.”

Yes, I am making lots of progress with my new incubator and chickens. My discoveries may not be exactly new to the great Poultry world, but they are new to me, and I think they are to most of you. ...

The first hatch from my *newly invented* incubator, as described in the last issue, was only five chicks from ten eggs. One reason for it was that I put the ten eggs in the incubator before I had learned to handle it. It is one thing to invent a machine, and it is often quite another thing to learn how to manipulate it. Ask the Wright brothers what they think about this statement. ...

1910

1910-07-01, A. I. Root, “Our Homes”, Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., July 1, 1910, Vol. XXXVIII, No. 13, pp. 429-431 (p. 429), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Long article. This is a text with a religious character about authority, sincerity, credibility. Root mentioned, as an exemplification, the case of his January 1, 1905, story about the Wright brothers and the doubts some of his readers had about the truth contained in it.

Our Homes

BY A. I. ROOT

And they were astonished at his doctrine; for he taught them as one that had authority, and not as the scribes. — MARK 1:22.

And say unto him, By what authority doest thou these things? and who gave thee this authority to do these things? — MARK 11:28.

But the men marveled, saying, What manner of man is this, that even the winds and the sea obey him! — MATT. 8:27.

From our texts as given above you will notice that the Master was constantly challenged as to his authority. Hitherto all the great and learned doctors and teachers had been able to give only their opinion about certain things; and to-day, away along in the twentieth century, it is much as it was in olden times. There is a constant and unending discussion as to who is right and who is wrong. Sooner or later we are all made aware that the best of us are only human. Humanity is infirm, weak, and imperfect. We are making progress, it is true — wonderful progress — but every little while we are obliged to take a step backward. Somebody has made a mistake. In olden times the great doctors bled sick people to make them better; and, oh dear me! I need not say *olden* times, either; for many now living remember the time when the good doctor thought he had to take away a lot of blood, even if the thing the poor patient needed most was *more* blood and better blood; and it has even been suggested that the father of our nation might have lived longer had not the wise doctors in his time decided that taking away some of *his* precious blood was the thing to do. Well, if the doctors were the only people who made mistakes in olden times we should have been comparatively well off, and just *now*, “when doctors disagree, who shall decide?”

Whenever any thing new comes up, people at once ask for authority. When I said on these pages that the Wright brothers had a machine that would fly without any balloon, the statement was challenged on every side. People asked, as they had a right to, "Where do the Wrights live, and who are they?" When I published the account of their work and said I had seen them with my own eyes make a trip (of about a mile) through the air and come back to the starting-point, many people began to inquire who A. I. Root was; and quite a few decided my story was just a made-up piece of fiction.

Dear friends, the above is a little preface to a talk I want to give you this morning in regard to authority. ...

... Jesus explained and declared to all the multitudes that his power was a *miraculous* one. This world of ours is full of tricks and deceptions, not only in business, but our doctors who are healing the sick (or trying to do so) sometimes use tricks and deception; yes, and I say it sadly, not all of those who stand in our pulpits as God's servants are *entirely* free from the practice of little deceptions. Now do not understand, please, that your old friend who speaks to you on these pages claims that *he* is entirely honest, and that all the rest of mankind are bad. That simple little sentence uttered by the *Sunday School Times*, that "deception is always wrong," hits me every little while. God knows I am *trying* to be honest and sincere from daylight to dark, and every day in the week; but with shame I confess that a good many times I can look back and see that I have made bungling work of it. ...

1910-07-15, A. I. Root, "The Wright Brothers and Their Flying-Machines up to Date", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., July 15, 1910, Vol. XXXVIII, No. 14, p. 472, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS AND THEIR FLYING-MACHINES UP TO DATE.

I can not go into details just now, because there are so many of the Wright machines, and so much is being done with them all over the world. But as we go to press, notice comes in the papers that one of their pupils has made a flight of something over 6000 feet, or over a mile in height, as you will notice. When first making their experiments, if I remember correctly, the brothers did not expect to be able to reach any great height — nothing like that reached by a gas balloon, for instance; but it now transpires they can reach an altitude of at least a mile; and it *may* transpire there will be greater safety at a considerable distance above the earth. Perhaps we had better wait a little and see. And I predict and firmly believe we *shall* "see" with our own eyes very soon the aeroplanes gliding over our heads among the clouds.

OVER A MILE A MINUTE.

Aside from the above we learn from the *Plain Dealer* of July 11 that Leon Morane, at Rheims, has just broken the record by making a speed at the rate of a little more than 68 miles an hour. The paper does not state what aeroplane was used, but I presume it is one of the patterns of the Wright brothers.

1910-09-15, A. I. Root, "Then and Now. The Wright Brothers and Their Flying-machine up to Date.", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., September 15, 1910, Vol. XXXVIII, No. 18, pp. 602-604, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THEN AND NOW.

The Wright Brothers and Their Flying-machine up to Date.

At the close of Our Homes for Oct. 15, 1904, I used these words: "We want a machine that will float as easily and safely as the bees, the butterflies, and the carrier pigeons. May the Lord be praised, this is already *in sight*."

The above was the closing of an article on the new inventions of the age. Shortly after (see *GLEANINGS* for Jan. 1, 1905), I told you of seeing the Wright brothers make their first successful flight, and that included turning around and coming back to the place of starting; and *Gleanings* was the first periodical on the face of the earth to announce to the world the crowning success of their years of experimenting in order to make a machine that would fly without a balloon. Since then the Wright brothers have been held up so prominently, not only before the people of this country, but before the *whole world*, that everybody knows pretty well what they have been doing.

Day before yesterday, Aug. 29, it was my pleasure to get around once more to the old familiar field between Dayton and Springfield, Ohio, where they have so long made their experimental flights. I reached there about 2 P.M., and was at first somewhat disappointed on finding neither of the Wright brothers present, and to be told that they might not come out that day at all. Since my last visit a neat and convenient building has been erected, of sufficient capacity to hold a flying-machine, or, in fact, two of them, all ready to fly. A very plain notice, in black and white, met me at the gate, saying —

"POSITIVELY NO ADMITTANCE."

But I ventured to open the gate and go through, notwithstanding; and when I explained to the four bright young men that I had an invitation from one of the Wright brothers I was made an exception to the general rule.

Permit me to say right here, that, at the present time, not only hundreds but sometimes nearly a thousand are permitted to stand around *outside* the fence, for at present there is no more need of secrecy. When these young students in the art of flying informed me that they would very soon run out the craft and sail it through the sky without any assistance from the Wright brothers, my disappointment began to give way; for I reflected that, if the work had come to such perfection that the students could be intrusted to make flights all day long without the *presence* of the owners, things were indeed progressing far beyond what I expected or knew any thing about. As the wind generally goes down toward evening, a good many days most of the flying is done late in the afternoon.

In a little while people began gathering in from all directions, with automobiles and other vehicles. An ice-cream wagon came on the ground; the popcorn boy was in evidence, and one of the Wright machines was easily slid or pushed outside of the building. The track that the machine used to run on had been dispensed with, and also the weight dropping to shoot the machine up into the air. Two pairs of pneumatic tire wheels, not unlike what we see on automobiles, were so placed as to lift the car a little above the runners, made something like a sled-runner, although very light and strong, as I have explained in previous papers. One of the students took a seat near the engine. Two others took hold of the propellers to do the cranking, and the fourth young man sat on the ground and held the machine till the propellers got up to full speed. The starting-ground is simply a smooth piece of grass descending slightly a few rods. At a signal from the man in the machine the boys let go, and off it started. The rubber tires, as they bumped over the ground, made some little jolting, especially when the machine got up speed. Very gradually the rubber wheels touched more and more lightly on old mother Earth, and pretty soon the beautiful and wonderful fabric *slid* off into the air, and then it was as still and smooth in running as a boat going through the smoothest water. To me the sight was most inspiring. I remarked to bystanders that it was more wonderful than any story in the Arabian Nights. After the machine left the ground it rose gradually in circles, and then for the greater part of the afternoon — in fact, until dusk — the machine was, most of the time, in the air, describing circles, figure eights, and making all sorts of graceful maneuvers. In going with the wind it seemed as if the speed was pretty close to a mile a minute; but in making a turn it slackened up in velocity quite perceptibly; and in coming back against the wind the speed was very materially retarded.

The boys who read these pages have, in times past, had fun in sliding down hill. But you have to walk back laboriously, dragging your sled after you. Now, boys, what sort of fun do you suppose it would be to slide down hill *on the air*, and then, instead of having to walk back, you just "slide up hill" on the air to the point of starting, and then slide down again. And that is what those students do with the flying-machine.

Six years ago I tried to tell the world what was going to be accomplished by dispensing with roads and bridges, to say nothing of iron railways and railway bridges. I asked one of the Wrights what the comparative expense was going to be for gasoline compared with the amount needed, say, to carry four people in an automobile. He said he thought the flying-machine would take *less* gasoline to do the same work; and then he made a remark something like this:

"But, Mr. Root, perhaps you know by experience that the up-keep of the rubber tires is a much greater expense than the gasoline. This machine requires no *rubber tires* as it reels off the miles through the air."

Come to think of it, there is almost no wear or tear on any thing except the engine, chain, and the bearings of the two propellers. There are at present about half a dozen machines of this kind in service in the United States. I can not say how many there are in foreign countries; but there are several factories across the water turning out machines as fast as they can

possibly make them. The Wright brothers are at present employing 25 to 30 hands, and turning out machines as fast as they can. They are just now occupying a rented building, but have just completed the purchase of two acres of land near the Soldiers' Home, where a building 250 feet long and 60 feet wide will be put up this fall. I might mention here that there has been some criticism in regard to the price — \$7500 — for each finished and fully equipped machine. But even at this price they are *at present* unable to supply the demand. They often tell customers that, if they can wait another year, they will probably be cheaper. But men who have abundant means prefer to pay the present price rather than wait a year. Once more, all the inventors of the world, for ages past, have never made any machine that would fly even a few rods — that is, and carry a passenger — until the Wright brothers did; and, if I am right about it, no one has ever *since* made a machine that would fly without making use of some feature of the Wright invention. I believe this is quite generally acknowledged.* The Wright brothers commenced their experiments more than ten years ago, and they went at it in a scientific way, and have labored hard, early and late. We have often been told that in years past the real inventor of any great innovation has seldom had proper *credit* or even *pay* for what he has given the world. We hope this will not prove true with the Wright brothers.

*As evidence of the comparative safety of the machines as now made, I will mention that Miss Catharine, sister of the Wrights, has made several flights, and the venerable father, Bishop Wright, was up about 350 feet, and in the air several minutes, recently.

After one of the students made his first flight and sailed through the sky at different elevations for some little time, he came down easily and gracefully, and took in one of the others who was just learning to fly. With *two* good-sized men instead of one, the machine did not ascend from the ground quite as readily. As it ran a little further it went out among the weeds, and I began to fear it would not take the air; but in a little time it stopped its wabbling, and arose from the earth as easily and gracefully as a sea gull. Many times, in watching the pelicans in Florida I have seen them strike the water with their feet in order to get up speed so their wings would sustain them; and in this case it seemed as if these beautiful structures of wood and cloth must really in a like manner have life. Another reason why these machines are at the present time expensive is that the very best of material is procured, without regard to expense. They have made careful experiments to get the very best wood, cloth, and metal. The frame for the woodwork is made of the very best clear spruce, this wood proving to have more strength for its weight than any other they have yet found. The runners that slide along the ground while alighting are made partly of the strongest ash, and are reinforced so as to stand the shock of making a landing on almost any kind of ground. As so much depends on the propeller-blades, these are made of thin strips of spruce built up together with the strongest glue. They are then covered with the strongest canvas glued on. Their mechanics, especially those at the heads of the different departments, are probably as skillful in their line of work as any who can be found.+

+ Some of the papers reported the Wright Bros. had found a better engine in *France* than could be made in our country. Wilbur says this is untrue.

Consider for a moment how the very lives of good people depend on the faithfulness and fidelity of their work. The machine as at present made for carrying two people is about 40 feet wide, and it is almost as much from the tip of the front end to the end of the steering apparatus.*

While conversing with the brothers I made the remark that we had seen the bicycle go through an evolution, and that the automobile was also now so well along in its evolution that the inventors of both machines are now settling down to very narrow lines. Inventors have about ceased making changes in the bicycle, and most of the automobiles on the market are getting closer and closer to established lines. I then remarked to the brothers, "How long will it take for the flying-machine to go through a like evolution?"

Orville replied at once, "Mr. Root, the flying-machine has already *passed* the period of evolution;" and he pointed me to the fact that the machine I was looking at that day, and admiring, was but slightly different in its main features from the one I saw years ago. In talking the matter over afterward, Orville said he did not mean to say that there would not be great improvements, and very likely many important improvements, on the machine; but he felt pretty certain the successful machines are going to be either along the line of their invention, double plane or possibly monoplanes, such as they have now, and propellers to push it through the air. England,

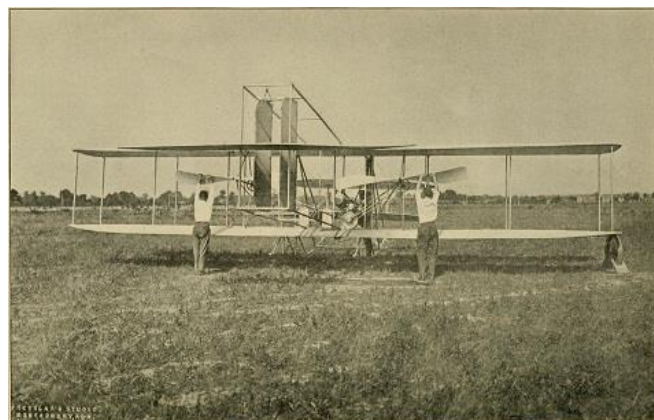
France, and Germany have each purchased the patent from the Wright brothers, and have factories turning them out more or less rapidly.

During my first visits, years ago, before their patents were secured, I was asked to omit certain things in my write-up; but when I to-day asked if I could describe all I saw Wilbur replied, "Mr. Root, you may tell any thing you choose about our work, providing you tell the *truth*." God knows we as a people want the *truth* always and everywhere.

Six years ago, in my write-up of inventions I referred to Columbus' discovery of America. When he looked abroad over this green earth and across the great waters he asked the question, "What is beyond and across the great sea?" But the world had lived 1492 years, and no one till his time had been able to tell what *was* away off across that watery waste. Just think of it, friends! Yankee ingenuity and Yankee curiosity have now got to such a pitch that we have compassed the North Pole, or at least have come pretty near it; and now inventive genius is at work to solve the mystery of the South Pole. Recent developments in Alaska indicate great things are destined to be brought to life in that region. Columbus was not content until he had pushed ahead and opened up a new world beyond the one known in his time. And let me predict once more in closing that the Wright brothers have by honest, faithful, hard, and untiring work, and *scientific study*, wrested from Nature this great secret, and we are just now on the eve of exploring the mystery of the great "upper deep."

* Inventors all over the world have tried "something different" — machines to float by the flapping of wings, as a bird flies, for instance; but their machines *did not fly* — that is, they do not fly unless they make it pretty near something in the line of following the Wright brothers from first to last.

1910-10-01, A. I. Root, "The Wright Brothers' Up-To-Date Flying-Machine", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., October 1, 1910, Vol. XXXVIII, No. 19, pp. 628 and 640-641, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).



WRIGHT BROTHERS' UP-TO-DATE FLYING-MACHINE FOR TWO PASSENGERS.

THE WRIGHT BROTHERS' UP-TO-DATE FLYING-MACHINE; SEE PAGE 628.

*Up above the world so high.
Like a diamond in the sky.*

In writing up my visit to the Wright brothers, p. 602, last issue, I said I hoped to give our readers a good picture of it soon; and through the kindness of Miss Catherine Wright, sister of Orville and Wilbur Wright, I received a very good picture of the machine I tried to describe in our last issue; and I tell you it is an imposing spectacle, even when it stands out on the grassy field, *ready* to fly. In steering an automobile the operator has only to swing it to the left or right; but after the flying-machine leaves the earth, it has to be steered in a like manner up and down. Just in front of the machine you see a pair of cloth planes, something like the large machine itself, except that they can be turned up or down with a lever. At the rear of the machine there are two similar planes of cloth, but they stand up and down vertically, as you see; and these can be revolved so as to make the machine turn either to the right or to the left. While the students were making their experiments during my visit they swung around in a very large circle, as there was quite a brisk wind. But Orville explained to me that,

when there was a little wind, or almost a dead calm, an expert aviator could tip the machine up almost edgewise, and swing around in a circle so small that it was almost like turning on one's heel. The skill to perform this feat, however, comes only with long practice. I noticed that, at the recent meet in Boston, some of the pupils were swinging their machines around on so short a curve that Wilbur Wright interfered, and forbade their taking any more such risks. Now, with this preface I wish to copy from a new periodical for owners of automobiles, called *The Lever*. You can get a sample copy by addressing The Lever Publishing Co., 141 West Ohio St., Chicago, Ill.* The following extract is from a statement made by Arthur L. Welsh, entitled "How it Feels to Fly."

Welsh had read many books on aviation, yet he had never touched an aeroplane previous to last March. He wished to buy one, so he saw the Wright brothers. It was his intention to tour the country at county fairs with his aeroplane, but a bigger opening came his way. He found that Wright brothers were delivering no machines until 1911, but that there was a chance to get on their staff as an aviator. Welsh applied and was accepted. He is 29 years old, next to the youngest aviator in this country, the youngest being a man of 21 years. His home is in Washington, and he has made some of the highest flights on record.

* Perhaps I might mention the fact that one of my grandsons, Howard Calvert, a boy of 19, when he first saw a copy of *The Lever* spoken of above, hurried off a dollar for the journal for one year. Then he desired his grandfather to make application to the Wright brothers for a place among their pupils to learn to run a flying-machine as well as an automobile. And, by the way, I might add that Howard is already quite an expert with all sorts of automobiles and motor cycles. Whenever his grandfather has "got stuck," Howard has been pretty sure to get him out of his trouble in a very short time. I am glad to add that the boy has just begun a course at Oberlin College.

"It took me," said Welsh, "just about four hours and a half of actual flying to learn the trick. This time was spread over a period of six weeks, more or less, for Mr. Wright never takes his students out in a machine unless there is a perfect calm, and for this we often have to wait weeks at a time. I had never flown before. I had no shop training, yet the game attracted me.

"First, Mr. Wright put me in the passenger seat, and we took a trip, merely an exhibition. I was simply a passenger. The second flight he gave me charge of the front control, which regulates the up-and-down movements of the aeroplane. This was the first practical work I had done. It was easy to learn, and after the fourth trip I was given charge of the lateral balance lever, which is in two parts. One part regulates the angle of the planes and the other the rear rudders, which enable the aeroplane to make curves and circles. After a few trips in which my whole attention was devoted to using this lever, I was given charge of both together, and controlled all the movements of the machine.

"At no stage of the game was I frightened. I guess I didn't expect to be — at least, the moment we rose in the air on our first trip I experienced a strange feeling of security that can be understood only by actually experiencing it. The rush of the machine, the whistling of the air about me, and the terrific speed wedged me back into my seat, and I lost all ambition to hold tight to something. Falling is probably what most people fear. Height seemed to cut no figure in my feelings, for I was firm in my seat, and soon all consciousness of the idea that I might be thrown out and go tumbling to the earth below disappeared.

"One peculiar thing about flying is the after-effects of the roaring of the motor. With open ports the shots are fast and furious, and the roar is deafening. Sometimes, just after a flight, it takes me several minutes to shake off the feeling of deafness, of ear pressure, caused by the roaring motors. But I've come to love that roar. It's like a human heart-beat. You miss it when it's gone.

"Up in the air I have practically no idea of how high I am. Of course I can guess, but the landscape is so varying and so deceiving that it is almost impossible to tell anywhere accurately. The time I care most about is the critical moment when the machine speeds up toward a flying clip and the rise is about to begin. It keeps me busy for a moment or two with the levers, then I shoot up, up, up, until I am clear of the earth. The tension caused by the anxieties of the get-away breaks, and I feel like cutting figure eights and doing other stunts. It's the get-away — that twenty feet just above the ground that's full of worries. I tell you, it's a relief to feel that you've made it all right.

"Speed? I never can tell — except by the hum of that cracking motor. When I am well up in the sky it often seems as if I were hardly moving. I can feel the rush of the wind as it whips about my face, and the suction of the huge propellers as they race around behind me. As for the feeling — every one will have a different sensation, I suppose. For myself, I never want to come down. When I start at early sunset I like to fly until dark. Of course, it is business with me; but then, there is nothing that can touch the pleasure of it. And this is not merely because there is an element of risk connected with it. The feeling is intangible. I'm not a writing man, and I don't know how to describe it — but it's great!

"There is one thing that I never forget, however. That is the simplest thing about the machine, and at the same time one of the most important of the parts of the aeroplane. On one of the cross-bars some few feet ahead of me is tacked a tiny wisp of a rag, light enough to let the breeze blow it about. That is my trouble-indicator. When I am making a big circle there is a certain angle at which that rag should straighten out. If it takes another angle than the one it should, I know I am drifting — which way, the rag shows. You may be sure that my eyes keep that bit of soiled cloth well covered at the critical moment.

"The sensation? Try it! You'll never know until you do."

FLYING-MACHINES IN FRANCE UP-TO-DATE; 1000 SOLD ALREADY, AND ANOTHER 1000 TO BE DELIVERED BEFORE THE END OF 1910.

We clip the following from the *Journal of Agriculture* for Sept. 22:

Next year French aeroplane manufacturers expect to sell 11,000 machines. More than 1000 aeroplanes have been sold in France since the first of the year, and another 1000 will be turned out and delivered before the end of the year. Three hundred Bleriot monoplanes and 200 Farnam biplanes have been sold this year, these two types being the most popular.

1910-10-15, A. I. Root, "Catching Chickens that Roost in the Trees; Flying-machines, etc.", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., October 15, 1910, Vol. XXXVIII, No. 20, p. 669, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Catching Chickens that Roost in the Trees; Flying-machines, etc.

Mr. Root: — You spoke of the difficulty of getting chickens out of the trees in Florida. I have used a very convenient device. Mr. McClave uses it a great deal. Take a piece of wire, one or two feet long. Insert it in a cane fish-pole. Bend the wire as here shown, and then you can catch your chickens very easily, even if they do roost twenty feet or more above the ground. Try it.

In speaking of the Wright brothers using spruce timber in their machines, I think that willow is the strongest and lightest wood we have. I have used a good deal of it for things that require very little weight but a good deal of strength. I have used it for ladders ten to fifteen feet long.

Now one thing more. I have said to my friends that I hoped Mr. Root would not risk his neck by going up in one of those machines. This world is not ready to spare him yet.

We expect to start south this season about Nov. 1. We will locate for a time, at least, at St. Petersburg.

New London, O., Sept. 23.

W. C. GAULT.

1910-10-15, A. I. Root, "From Chicago to Springfield by Flying-Machine", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., October 15, 1910, Vol. XXXVIII, No. 20, pp. 675-676, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

FROM CHICAGO TO SPRINGFIELD BY FLYING-MACHINE.

The *Chicago Record-Herald* for Sept. 30 gives a thrilling account of the above \$10,000 flight by Walter R. Brookins, one of the Wright brothers' youngest students. The *Record-Herald* offered a prize of \$10,000 for the feat, and the 22-year-old "cloud-explorer," as they call him, fairly won it. By means of telegrams, telephones, and other means of communication, the whole flight was heralded so the people might come out of their homes by the thousands and tens of thousands, and witness the wonderful spectacle. Not only were the wires kept busy, but the locomotives and factories blew their whistles when he came in sight, so that everybody might get out and see him as he passed overhead. If I am correct he not only excels all his opponents in high flying, but also in long-distance flying. A special train containing Wilbur Wright and a host of friends started to race with him; but he beat them at every point. He made three stops on the way; but had he not been obliged to wait for the coming of the train containing his gasoline with which to fill his tank he might have made the distance, 187 miles, with only two stops. At one time when the wind was strongly against him the train came pretty near getting ahead; but when this puff of wind let up a little he easily showed his supremacy, at this early stage of the invention of the flying-machine, over the locomotive. The papers call it "a new air-line through Illinois." Expensive railroad tracks and big bridges are done away with. With this new method of travel it is easy to make a beeline (exactly as the bee has always been doing it) not skipping around the hills and mountains and following the twistings of rivers as land-transportation lines and railways have been doing. I did not notice any mention anywhere on the route of people singing "Praise God, from whom all blessings flow;" but it seems to me it would have been very appropriate.

His average speed, leaving out stops, was 33 miles an hour; and if I am correct the greater part of it was against head winds. At one place where he

had to wait for the train containing his gasoline he threw himself down on the ground, boy fashion, and slept till the crowd with the gasoline woke him up. At one time he stopped in a cornfield. From the elevation at which he flew the cornfields looked like pasture lots; but the crowd soon cut the corn out of the way, and he started up out of the field without a particle of trouble. When he reached Springfield he ran up to a pretty good height and circled down like a bird; but the crowds were so great, ready to welcome him, that he really found trouble in finding a place to alight without endangering the lives of some of them.

The *Record-Herald* gives us not only a picture of the boy, but nearly a dozen other pictures of his machine, and of the crowds that gathered everywhere. A copy of the *Record-Herald* was sent us by our long-time friend Dr. C. C. Miller. If you wish to read the whole account, get a copy of that paper of the date mentioned.

Wilbur Wright expresses himself as being well pleased, not only with this new machine (very likely the one we pictured on p. 6) but he seemed also *exceedingly* well pleased with the management of his young pupil.

An old gentleman of Springfield said, as he witnessed the spectacle, "I have seen a horse fly, but I never before expected to see a man fly."

At one point on the route the aviator dropped a note where one of the spectators got it, saying, "Machine is working all right. Will make the trip O. K."

Divers accidents happened along the route to people who were so crazy at the sight of the flying-machine that they forgot every thing else. A little girl was run over, and a boy fell from the top of a box car; and a man fell and sprained his shoulder in trying to reach the roof of his house by an attic stairway.

At his elevation of something like 2000 feet Mr. Brookins caught sight of the city of Springfield when 44 miles away. He started from Chicago at 9:25, and reached Springfield in 7 hours and 9 minutes. He was in the air 5 hours and 45 minutes, and at one time made 88 miles without descending. In all respects he has broken all previous records.

After the above was in type the following came from our "long-time" friend, the editor of the *American Bee Journal*:

It may interest A. I. R. to know that I saw and touched the identical aeroplane that Brookins went on from Chicago to Springfield. A fellow by name of Hoxie flew there yesterday, using the same machine. It worked fine. There were probably more people at the fair yesterday, *looking up to heaven*, than ever before at that place!

Chicago, Ill., Oct. 6.

GEO. W. YORK.

1910-11-01, A. I. Root, "Our Homes", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., November 1, 1910, Vol. XXXVIII, No. 21, pp. 703-707, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Our Homes

By A. I. ROOT

The wages of sin is death. — ROMANS 6:23.

Remember the sabbath day to keep it holy. — EXODUS 20:8.

And the Lord took off their chariot wheels, that they drave them heavily: so that the Egyptians said, Let us flee from the face of Israel; for the Lord fighteth for them against the Egyptians. — EXODUS 14:25.

While I write, flying-machines seem to be in the air and in the minds of a great many of our people. I have been predicting for some time that we would soon see them overhead in such numbers that they would not call forth any more attention than the automobiles that are getting to be almost as common, even in country places, as the horse-drawn vehicles. When I announced the coming of electric railways in my boyhood, I was somewhat disappointed because they were so *slow* in getting along; and when I told you five years ago what I saw the Wright brothers do, I felt sure that flying would be a common thing in a year or two; and after its development across the seas about a year ago I said that before snow flew there would be plenty of them all over the United States. Well, we have not seen the snowflakes yet here in Medina; and flying-machines are not going to be as plentiful as I expected, during this year of 1910.

Now to get down to business, or to take up the subject I had in mind, let me remark that as much as three or four weeks ago a project was put on foot to have a lot of aviators attempt a flight from New York to Chicago. The matter was presented to the Wright brothers, and, if I am correct, they promised to enter into the contest. All together there were to be toward a dozen flying-machines. At first the date was fixed for the fore part of the

first week in October. As it might take four or five days, it occurred to me in the outset that they would have to start during the fore part of the week to avoid being out over Sunday, especially if they flew only in the day time and not by night. Well, as nearly as I can make out, the event was postponed several times until they were talking about starting on Saturday. I felt sure the Wright brothers would object, as they always have done, to any Sunday flying. They would do this out of respect to their old father, who is a minister of the gospel, if for no other reason. Therefore I was not surprised when told that only *four* were going to make the flight, and they were going to start on Saturday afternoon. Later still I was yet more pained to have the papers tell us (without protesting or commenting), that the flight was to begin on Sunday afternoon, October 9. I think the Saturday papers informed us further that all had dropped out but one — Eugene Ely — and he was to start alone on Sunday afternoon. Two others with their aeroplanes were to go a piece with him, and see that he got under way all right, without any mishap. I suppose that most of you know from accounts in the papers how it turned out. Here is what I found in the *Cleveland Plain Dealer* in regard to the matter:

HE MAY ARRIVE LATE.

Kissing his wife and assuring her that he would join her at the Hotel Astor, in New York, not later than next Friday noon, Eugene Ely sailed from Chicago in a Curtiss biplane Sunday afternoon.

Then he flew nine miles.

Let us pause a little right here. If I should say that I almost *knew* he would have had luck if he started on Sunday afternoon some of you would call me superstitious and perhaps fanatical. If you recall the matter, you will remember that once Agrippa told Paul *he* was mad.

Paul answered, "I am not mad, but speak forth the words of truth and soberness." I am sure, friends, if you will listen to me you will agree that *I* speak forth the words of "truth and soberness" in defense of our Christian sabbath. If I am right about it, starting out with a lot of flying-machines on Sunday afternoon is breaking the laws of our land, and I think the officers of the law, if they choose, could forbid such an undertaking; and it is most *certainly* breaking the laws of God. Did you ever think of and admire the wonderful wisdom of the way in which we are told or asked to observe the sabbath — "Remember the sabbath day to keep it holy"?

Now, in the above we are not told just what we *should* do and what we should not do on Sunday. The Pharisees tried that, and had over a hundred rules for it. We can, each one of us, if we desire to obey the great Father above, decide what course of conduct is *holy* and what is not. Please do not understand that I think Sunday particularly different from any other day. People generally, especially good people, have decided on one particular day of the week to be called God's day — a day of rest from all of our duties and cares, and a day to consider especially God's wishes and God's commands to his children.

I am well aware that there is much disposition of late to regard Sunday as a holiday rather than a holy day; and a certain class of people have seemed to think it proper and fitting to select that day for running automobiles, testing flying-machines, etc. When the Gorge Railway was opened some years ago they ran their first cars on Sunday — or, rather, *undertook* to run them on that day — but they had a bad breakdown. I was not surprised, for I rather expected it when the papers announced that the first car was to carry passengers through that gorge on Sunday. Since then various undertakings and enterprises of a similar kind have been started on Sunday. Recently a daring and reckless young man undertook to run the Whirlpool Rapids at Niagara, and took *Sunday* for the feat. He did not lose his life, but came so near it that he was fished out so nearly dead that he had just life enough left to grab hold of a rope. I do not know whether it taught him a lesson or not. So many awful accidents have happened on Sunday that the daily papers have made comments. They did not suggest that it was the *wrong* thing to do. They only said it seems queer that there should be such an array of fatalities and strange accidents to be chronicled *every Monday morning*. Now, then, for our words of truth and soberness, as Paul expressed it.

With the number of Christian people there now are (sprinkled like "salt") all over the land, it would seem as though anybody, whatever his belief, should have some scruple about shocking the feelings of the best class of people in the world, if nothing more. Out of respect to the ministers, good men and women, especially the old mothers in Israel, any sober and sane man should reflect a little about disturbing the peace and quietness of the ordinary sabbath. Shouldn't every sane and sober man also *consider* the words of our text — "Remember the sabbath day to keep it holy"? Is there any one who has never heard these words, and who does not know when

Sunday comes? When I was in Cuba I met a class of people, or whole neighborhoods, who had never been told or else had forgotten when Sunday came. Of course, *they* were excusable; and when they came to buy honey of us on Sunday morning, and had their pitchers and pieces of money, I recommended to our boys letting them have the honey as it was impossible (as they did not speak our language) to explain to them *why* honey was sold only on certain days, or perhaps, rather, why it was *not* sold on *one* certain day.

Now, there is a *reason* why more disasters happen on Sunday than on any other day. In fact, there is a reason for every thing in God's holy word if you will study it. The man or woman, boy or girl, who has no respect at all for the feelings of Christians, and who has no regard for God's holy command — such a one is not a proper person to be trusted where life and death are at stake. The employees on our street-cars object to Sunday work. They would avoid it if they could. They are often tired out because of overwork, and are more likely to forget, and make mistakes.

Within a few miles of Medina is a very pretty lake. During the past forty or fifty years several people have lost their lives in that lake — especially young people, and it has almost always happened on Sunday. A young girl, in spite of her parents' protests, went to that lake on Sunday with a crowd of reckless boys and girls. In the same reckless way she went out riding in a boat with several young men. I think one of them had been drinking. She fell out and was allowed to drown when the boat was upset; but the manly (?) young men all got ashore by some means or other. It was her reckless disregard for the advice of older friends, and a disregard, also, for God's commands, that caused her to lose her life. When this matter of Sunday sport came up in our town some time ago the pastor of our church remonstrated with a man who was running a billiard-hall. In answer to his kind and respectful suggestions, the fellow replied, "I would not give a d — for your Sunday." Now, would such a man, especially one who would not scruple to answer a minister of the gospel in this way — would such a one, I say, be a safe pilot for an automobile, electric car, or a flying-machine? This man Ely seems to have been the only one of about a dozen who was willing to start out on Sunday afternoon on this trip of flying from Chicago to New York. He had plenty of time to put his machine in the most perfect trim, for they had been waiting all the week for favorable weather; but before he had flown even *nine miles* there was something the matter with his carburetor. He came down and got it fixed, and got up in the air again; but just as he left the ground one of the rubber-tired wheels for starting and stopping caught an obstruction and was torn off. After several more delays he got started again, and then something *else* happened. In fact, by some strange fatuity — that is, so some people said — "bad luck" seemed to follow him. By the way, I just saw a suggestion in some of the papers, that, if you want to secure good luck, you should always go half way or more to meet it. Folks who start out on such enterprises on Sunday are certainly *not* going "half way" to meet good luck.

Please do not understand me that I would cut off *all* work or business on Sunday. Jesus told the Pharisees, who were criticising him, that when an ass or an ox or a sheep fell into a pit or well on the sabbath day it was right and proper to help it out, even on that day, as they did. And if a hurricane were to tear down fences so that stock get into the corn, by all means turn out, men, women, and children, and save the stock and the corn. Sometimes it is a little difficult to decide just how far we should go in our efforts to save property on Sunday. I have had some experience in my busy life in doing things on Sunday, not because they really *had* to be done, but because I *wanted* to do them. Our friend Christian, in Pilgrim's Progress, got out of the straight and narrow path once on a time. He received several warnings, but failed to heed them. Finally he saw flashes of fire flaming from a great rock over his head. He told "Goodwill" that he was afraid the fire might fall on his head and kill him if he went any further that way. Dear friends, I have seen the fire of God's wrath, as I verily believe, flash out from the great cliff above my head. I came back, however, and sought the straight and narrow path once more, asking God to forgive me. These reminders of God's displeasure, when we deliberately break his laws, I think come to all of us.

In our last text we are told that the Lord took off the chariot wheels belonging to the Egyptians. The poor fellows had been forbidden repeatedly to interfere with the Israelites; but they pushed ahead in an *awful* spirit of recklessness. I can imagine their utter dismay when they got into the deep mud. No wonder their chariots "drove heavily." When it was too late they were convinced that "the Lord" did in very truth "fight" for his people; but the floods swallowed them up as a punishment for their transgression.

I realize, while I make this protest in this Home paper, there are multitudes who are against me. In our great cities it seems to be more and

more the fashion to have big excursions and every thing else going on, even on God's holy day. On account of a belated train Mrs. Root and I reached New Orleans, once on a time, on Sunday morning. Neither of us will ever forget the shock we experienced to hear bands playing, auctioneers shouting the quality of their wares, and to witness a regular bedlam, or perhaps I might call it "vanity fair." Mrs. Root clung to my arm and said, "O husband! let us hunt up a church and some Christian people, if there are any such, in this awful place." So we joined in the throng that was on the way to the nearest church, for it was about church time, and looked after our baggage later in the day. Things are not so bad in our cities here in the North, but I am afraid affairs are tending that way. Railways, steamboats, and electric cars seem to be doing all in their power to encourage sabbath desecration. A prominent railroad man told me they would be *glad* to give it up. They say, however, the people demand it, and they have to abide by the will of the people. Years ago, as I have told you, the A. I. Root Co. (come to think of it, I believe it was plain A. I. Root then) declared that no Sunday excursion should pass the curve on our ground that connects our two railways. Our position at that time broke up the excursion business in this locality, and it has never been taken up since. It is *not* a very difficult matter, dear friends, to stem the tide of evil when God is on your side. Remember, "Five of you shall chase a hundred, and a hundred of you shall put ten thousand to flight." — Lev. 26:8. Who is there among us who will "dare to be a Daniel" in this needed reform?

AVIATION AT THE CLEVELAND CENTENNIAL.

While I am on the subject of aviation I have something further to say that does not particularly belong to starting out with flying-machines on Sunday. Through the daily papers and other means, Cuyahoga County's centennial, lasting from October 10th to the 15th, was very widely advertised all over this region, and particularly the aviation exhibitions. The following clippings from the *Plain Dealer* of Oct. 15 tell us something about it:

About 200 policemen guarded all entrances to the field yesterday; and any one who could think up a sufficiently persuasive argument to get by the bluecoats was entitled to admission without further parley. Employees of the railroad were about the only ones who saw the flights without going through the formality of buying a ticket.

Four machines will be ready for flight. Altitude, speed, climbing, and bomb-throwing contests will be on the program, which opens at 1 o'clock.

To-day's program will be the most interesting one of the entire meet. Altitude flights, glides from the clouds, speed contests, and bomb-throwing experiments will be staged. Post, Mars, McCurdy, and Ely will be the contesting aviators.

Fair weather is promised, and it is expected that fully 30,000 persons will attend the meet. Saturday is the last day.

These exhibitions of flight were given in Lakeside Park; but, unlike the exhibitions I described on p. 675, last issue, where thousands could view the spectacle, high or low, rich or poor, black or white, without money and without price, this exhibition was guarded from the public at large by means of canvas fences so high that no one could well look over them. As it extended clear around Lakeside Park it must have cost quite a sum of money. Then the first one of the clippings tells us that 200 *policemen* were employed to keep the small boys who could not raise half a dollar from crawling under, and getting a glimpse of this wonderful flying-machine. At the gateway we were further informed that the fifty cents entitled us to only a seat on the side-hill. If we wanted to go down near the machines and get a view of their construction, it would cost another half a dollar. But even after we had paid the fifty cents, or had even got inside, we were not furnished a program. The program agents were exceedingly busy all during the entertainment in holding said program under the noses of the people, and telling them they could not understand the flying-machine unless they had a program. The program cost ten cents. One of the clippings above tells us that 30,000 people were expected to pay fifty cents each, or a dollar each, and then a dime more for a program. Well, perhaps I would not have said any thing about the ten cents for the program were it not for the clips all the way through it at the Wright brothers. Here is a sample of them:

It takes the combined efforts of a dozen men to haul the Wright flyer around on its cumbersome, wide-tired wheels and adjust it on the starting-rail before it is as nearly ready for a flight as is the Curtiss machine at all times.

The Wrights are content, on the other hand, with a machine which trundles along at forty miles an hour, and which must either return to its starting-rail before flying again, or else have the starting-rail brought to it.

Let us stop and consider a minute. The advertisement says there were to be four machines on the ground, and seven different aviators were advertised to make flights. We got our seats about one o'clock — the time the flights were advertised to begin. After an hour or more, two machines

were run out of the tent. After trying one of the two for about half an hour, and failing utterly to make it get off the ground, they confined their attention to the one remaining machine. During the afternoon this one machine made four flights of three to five minutes each. There were no trials for duration, no trials for altitude, no speed contests, no flights with passengers, and no feats to compare with the ones the Wright students made on the afternoon I visited them. In fact, the whole afternoon seemed to be spent in fussing with the machines to make them go. After it got so near dark that it was difficult to see, I am told that a machine made a flight over the lake; and it seemed to me that the four brief flights I witnessed were purposely kept near the ground so people outside of the canvas inclosure would be unable to get a glimpse of them. I suppose the seats on the side-hill would hold, say, 20,000 persons; but I felt glad to notice that only a small part of the seats were occupied. Huber said that, the day before, the seats were nearly all filled; but instead of following the advertised program, *one machine* made quite a few brief flights of four or five minutes each. It certainly was a grand sight, and worth going miles to see, especially when that one machine ran along the smooth ground and gradually climbed up into the air. But what a poor tribute, to put it mildly, these people were paying (I do not know exactly who was responsible for it) to the Wright brothers who first demonstrated to the world that a machine could be *made* to climb up into the air without any balloon at all — what a *poor tribute*, I say, to pay, to have a man around peddling these programs containing such matter as I have quoted; yet the vender of those leaflets actually pushed them under our noses while the machines were leaving the ground. He got in my way so many times I was sorely tempted to push him over down hill, especially after reading what they said about the Wrights.

Let us now take that up for a minute. It *never* took a dozen men to haul around the Wright flyer, even in their first experiments. I know, for I was there; and at the very time this statement was made, it did not take any men (or boys either) to get the Wright flyers up to the starting-place. The aviator just starts his engine, and the propeller which carries it over the ground or through the air takes it up to the starting-point, even if it is *up hill*. The Curtiss crowd, or whoever it was, kept that crowd of 30,000 people, more or less, waiting while a couple of men *ran themselves out of breath* to help get the machine back to the tent for more gasoline. Why in the world he did not put on his propellers and *run* back I could never tell. The Wright brothers have not used a starting-rail this season, and perhaps not last season nor the one before that. Several times they have been asked or have been offered money to go into the “show business;” but they have always declined, and God will honor them for it, even if the people do not; and I believe, too, they have refused to *sell* machines to those who wanted to go into the “show business.” I have been informed on good authority that Glenn H. Curtiss visited the Wright brothers before he made a flying-machine at all. They extended to him every courtesy, and permitted him to look their machines all over at his leisure; but it would seem that, as soon as he left, he copied their machine as near as he could without too flagrant an infringement on their patents. At present I know nothing about the suit for infringement. God forbid that the “graft business” or any thing like it should be permitted to go any further in the field of aviation. Flying-machines are a gift from God to his children of this new century; and it ill becomes us to use this gift for taking the money from our hard-working people, especially taking the money and *then* not furnishing the entertainment that was promised and paraded through all the papers. May be I have found fault enough for one time; but right here I must put in another protest. Many of the aviators (but not the Wright brothers, thank God) are users of cigarettes; and when they alight from a flight the first thing they do is to fish a cigarette out of their pocket and light it while thousands of country boys and Sunday-school children too are looking on. What an example to set before the rising generation!

Later. — This is Monday, Oct. 17. It occurs to me that perhaps the Cleveland officials, or whoever is responsible, had a few twinges of conscience about taking the people’s money during the week and returning them so poor an equivalent; so they decided to give a free exhibition on Sunday. This morning’s paper tells us:

When J. A. C. McCurdy had reached an altitude of about 3300 feet yesterday afternoon in his trial for altitude. Robertson’s band struck up “Nearer, My God, to Thee.”

Just as soon as I read the above I wondered if the thoughts suggested by the singing of that beautiful hymn did not send the cold chills down *somebody’s* back. I suppose the thought was that being high up in the air was getting nearer to God, especially in that great city of about 2000 saloons;

and I am right glad to know there was one aviator who recognized the awful inconsistency, for we read:

Aviator Mars, who has been doing daredevil stunts all his life, is very superstitious. He refused to fly while the band was playing a doleful melody.

God bless brother Mars. I hope we may all have a little more of that “superstition,” especially when Sunday aviation is going on. It seems, however, that some of the flying-machine speculators felt a little sore because the law would not permit them to charge admission into that inclosure on Sunday. See the following:

If the regular rates of admission had been paid at the gate of the aviation field yesterday there would have been more than \$100,000 in the box office.

Later. — I notice by the Cleveland *Plain Dealer* that they have just had *another* aviation on Sunday (or tried to) at Belmont Park, Long Island. I will make just two clippings from the account. The first is a sentence from the opening of a long article:

There were two smash-ups, Oct. 23, no flights, and 7500 disappointed spectators at the second day of the international aviation meet at Belmont Park, Long Island.

And here is the concluding paragraph:

The Wright team, Hoxsey, Brookins, and Johnstone, were all willing and anxious to fly; but Wilbur Wright allows none of his machines to go out on Sunday; and, although the management pleaded with him over the telephone, he remained obdurate. At 4 o’clock the events for the day were definitely called off.

Please notice that word “obdurate.” One can not help wondering what sort of bringing-up some of the newspaper reporters have had. Instead of the word “obdurate” I would suggest the sentiment implied in an old hymn:

Oh! who is there among us, the true and the tried, Who’ll stand by his colors — who’s on the Lord’s side?

A sabbath well spent brings a week of content,
And strength for the work of the morrow;
But a sabbath profaned, whatever is gained,
Is a sure forerunner of sorrow.

1911

1911-02-15, A. I. Root, “Sunday Papers, E. G. Lewis, Etc.,” Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., February 15, 1911, Vol. XXXIX, No. 4, p. 119, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

SUNDAY PAPERS, E. G. LEWIS, ETC.

Mr. A. I. Root. — As a reader of Our Homes I make bold to write you. I find many helpful things in your sermons; but I am just wondering why you do not give a sermon on the “funny sheets” of our Sunday and daily papers as to their ruinous effects upon the children of our land. I am astonished when I see people of apparent refinement reading those “sheets,” and deliberately teaching children to do so. I am a teacher, and probably able to judge more of the evil than most people; but I certainly feel something should be done to make such unpopular.

I have been much interested in what you have had to say about E. G. Lewis and his “League.” I am a member, “full paid,” of the League, and altogether have forwarded him about seventy dollars.

But I have just been wondering what my duty might be. To tell the truth, I have lost faith. But I, too, feel that the good that has come to me indirectly from my connection with this affair is far more than fifty-two dollars’ worth. Indirectly I have been able to earn nearly \$1500, which I could not have done had I not been a League member. The incentive came-through the League.

I am taking the “dress-making course,” and I find it *all* they claim for it. I can follow it minutely, and am learning to sew. There are several other courses I should like to take. But the question with me is, Should I, feeling as I do regarding Mr. Lewis, go on? I have paid for them. I am satisfied with treatment received, and have been benefited thus far. Now, what do you think one should do, you who are experienced in the world’s ways, and a good judge of right and wrong?

It was the educational feature of the League that led me to enter it. I never expected to get rich, nor even to get *all* that was promised.

I enjoy reading your experiences with poultry. I am also interested in that.

With best wishes for you and Mrs. Root, and trusting you may reach your one hundred years,

I am MRS. JESSIE BAIRD.

Elm Grove, W. Va., Oct. 21.

My good friend, I have been pained for years whenever I have picked up or examined one of the average Sunday daily newspapers. I wonder, as you say, why parents can be willing to submit such papers to their younger children, who are just looking about and grasping every thing that comes

along, especially the sensational things. I have wondered how good careful parents should want their children to look at even the pictures — that is, the greater part of them. One would naturally suppose that the Sunday paper would be at least as truthful and as dignified as the average daily. But I have several times commented on the fact that the very worst and most mischievous things somehow seem to find a place in the Sunday daily. During the St. Louis exposition a daily came out giving an account, with pictures, of the different flying machines competing for prizes. The statement was given with date, residences of the inventors, etc., in such a way that I was myself completely fooled. I submitted it to the Wright brothers, and they at once informed me that no such machines were on exhibition at St. Louis, and never existed at all except in the imagination of the reporter who was *paid* for “telling lies,” and perhaps paid *extra* for doing it on *Sunday*. If parents would refuse to let these papers come into their homes the publishers would probably drop them on account of a lack of patronage.

I am very glad to get so good a report concerning the Lewis Woman's League; but I am glad, *also*, that you have refrained from making a further investment.

1911-03-15, By Dr. C. C. Miller, Marengo, Ill., “ALIN CAILLAS, *L'Apiculteur*, p. 464, estimates that a bee carrying .0007 oz. of honey at a load will make 12,632 trips”, *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., March 15, 1911, Vol. XXXIX, No. 6, p. 160, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

ALIN CAILLAS, *L'Apiculteur*, p. 464, estimates that a bee carrying .0007 oz. of honey at a load will make 12,632 trips to fill a section 4 inches square and 1 inch thick. If it average 5/8 of a mile to the trip, it will travel as much as a third of the way around the world. In a colony of 120,000 bees, if 80,000 are fielders, and each one makes 10 trips of 5/8 of a mile daily, the total travel for the day will be more than twice the distance to the moon. As flyers, the Wright brothers are not in it with the bees. [If a bee carried .0007 oz. of *nectar* it would have to make nearly twice 12,000 trips in order to make enough honey to fill a section 4 inches square and 1 inch thick. — ED.]

1911-03-15, A. I. Root, “The Question of a Winter Nest and Its Relation to Locality”, *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., March 15, 1911, Vol. XXXIX, No. 6, pp. 190-191 (p. 191), HathiTrust Digital Library (original from University of Massachusetts Amherst, US). Article unrelated to aviation. It just makes a short reference to the Wright brothers.

THE QUESTION OF A WINTER NEST AND ITS RELATION TO LOCALITY.

... There have been no more aviation experiments up to date. They evidently think *aquatics* preferable.

Right here I want to whisper a word to my good friends the Wright brothers. A year or two ago they made some experiments on a craft partly in water, and partly in air. Well, my ducks are experts in that trick. ...

1911-04-01, By Mrs. H. G. Acklin, Glendora, Cal., “In looking at that picture on page 628 of the Oct. 1st, 1910, issue, I am reminded very forcibly that the Wright Bros. ought to perfect their flying machines”, *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., April 1, 1911, Vol. XXXIX, No. 7, p. 198, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

In looking at that picture on page 628 of the Oct. 1st, 1910, issue, I am reminded very forcibly that the Wright Bros. ought to perfect their flying machines so that moving bees, supplies, and honey, to and from our mountain canyons, in that way, will be feasible. Just think what a boon a safe flying-machine would be to California beekeepers! Last winter nearly 200 colonies of bees, including many fixtures, were moved from Corona to Glendora; and the trials and tribulations of that moving expedition were something awful. Part of the bees had to be unloaded before the last stiff grade into the canyon could be made, although there were four horses to each load. Just imagine, if you can, the vast difference there would have been in moving by aeroplane — no roundabout roads to follow, no grades to overcome, only straight sailing and landing at the right spot while it was still daylight. No danger of the airship getting stung, so plenty of time could

have been taken to have unloaded the bees on their proper stands, instead of setting them down anywhere to be shifted later. But this is only one of the many instances in which a reliable flying-machine would come handy for California bee-keepers; so, won't you please, Mr. Editor, write the Wright Bros. a letter requesting them to “hurry up”?

1911-08-01, A. I. Root, “Potatoes Shipped From Florida To Alaska”, *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., August 1, 1911, Vol. XXXIX, No. 15, p. 478, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

POTATOES SHIPPED FROM FLORIDA TO ALASKA.

We clip the following from the Jacksonville, Fla., *Times-Union*:

The Hastings potato-growers closed the most prosperous year they have known, Wednesday of last week. About 1200 cars were shipped from the entire section. Something of a sensation was created in the produce world by an order from a Seattle firm for three carloads of Hastings potatoes which they wanted to fill an order from Alaska — one extremity of the United States supplying another with this delicacy.

I am very glad to know that raising Irish potatoes for the early northern markets is getting to be a great industry in Florida. Growing potatoes in Florida to ship by the carload north is certainly a praiseworthy undertaking, providing, of course, the railroad companies will do their best to help their fellow-men by making the lowest possible rates of transportation. The great reason why we have peace and plenty, at least to a considerable extent, in every spot of our glorious country, is because of the tremendous strides that are being made in the way of transportation. When we get to sending potatoes by the Wright flying machines from Florida to Alaska I will give a write-up of the event — that is, if God permits me to live long enough.

1911-11-01, A. I. Root, “The Wright Brothers up to Date, and Something About Flying-Machines”, *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., November 1, 1911, Vol. XXXIX, No. 21, p. 674, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS UP TO DATE, AND SOMETHING ABOUT FLYING-MACHINES.

Over fifty years ago I “forecasted” that electricity would soon take the place of steam in transportation. In fact, I went around to schoolhouses, when I was only 17 years old, to proclaim in my “lectures” (?) what was coming to pass. Like the Weather Bureau, however, things did not always come quite as soon as I predicted. It was *forty* years instead of *four* or *five*, and steam has not *quite* been done away with yet. Later on I “forecasted” that automobiles would some time take the place of horses. That has not yet come to pass, but is coming; and finally GLEANINGS was the first periodical in the whole wide world to announce the Wright brothers had made a flight of something like a mile, and whirled round and come back to the place of starting. Well, we have wireless telegraphy, fireless cookers, fireless brooders for chickens; and a fireless incubator is not exactly in sight, but it is under way. And now it is my privilege to announce — that is, to the best of my belief — that flying-machines will in time be as plentiful as automobiles. Perhaps I shall be dead and gone, however, before that happens. But there is still one thing more coming. With the fireless cookers and wireless telegraphy we are going to have powerless flying-machines. Orville Wright has already left the ground on a glider, without any power whatever, and has gone up in the air and remained stationary for almost ten minutes. Perhaps he is away up in the clouds by this time if a merciful Providence has spared his life* to go through with these daring experiments.

Most of you have seen great birds away up in the sky, sailing hither and yon without a movement of the outspread wings. Mankind has speculated for years past as to how this is done. Well, if I am right, these birds have simply learned the trick of hunting up a current of ascending air. The air is constantly in motion, as you may know; and whenever a body of air sinks downward, somewhere else a body of air will go upward, and *vice versa*. The sun, in its daily course, keeps up these moving currents. Well, the Wright brothers have only to acquire sufficient skill to find these ascending currents of air; and after taking advantage of these they can get to a sufficient height, and from this point they can glide down hill or go anywhere they wish to; for aviators frequently shut off the engine when up at a great height, and go many miles without making any use of their power whatever. A glider without any engine or propellers will be very much *lighter*.

Now, look out, friends, and see if my predictions do not come true. I am not a prophet. I am simply a forecaster, just as our good friend Leonard forecasts (or tries to) the laying hen. "Coming events (usually) cast their shadows before," as you may recall.

* Please notice the frequent losses of life among aviators are all or nearly all with other machines than those made by the Wrights.

1912

1912-03-01, A. I. Root, "Fireless Cookers, Fireless Brooders, etc., and, Finally, the "Fireless Aeroplane" ", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., March 1, 1912, Vol. XL, No. 5, pp. 147-148, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

FIRELESS COOKERS, FIRELESS BROODERS, ETC., AND, FINALLY, THE "FIRELESS AEROPLANE"

By the way, when I spoke some time ago about a fireless *incubator*, several friends took the trouble to explain to me about a hot-water incubator, and called it *fireless*. Now, this is not only very old, but it is in no sense fireless, as you have to have a fire to heat the water, and a lamp is ever so much simpler and less trouble. Now about the fireless aeroplane: My attention has just been called to it by the following, which I clip from the *Cleveland Plain Dealer*:

The Wright brothers announce the completion of a fireless aeroplane. Anybody can fly now — there's no danger of being drowned if one wears a cork belt, and why be hanged if you have a good lawyer? And now that one can't get burned up while flying, immortality is assured.

We don't know how much of the above is newspaper pleasantries and how much is truth; but the clipping calls to mind that I have neglected, until just now, to thank the kind friends who sent Christmas greetings to Mrs. Root and myself about the first of the New Year; and, while thanking you all, I want to tell you that I feel a lot of pride in pointing to a neat booklet on our center table that contains inside the following:

1911 — 1912

A MERRY CHRISTMAS AND A HAPPY NEW YEAR

WILBER WRIGHT,
ORVILLE WRIGHT,
KATHERINE WRIGHT.

When I go back to Ohio in May I am planning to go and see that "fireless" and then I can tell you more about it.

1912-03-15, A. I. Root, "Chicken Thieves; What Shall We Do to Protect Our Valuable Stock From Their Depredations?", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., March 15, 1912, Vol. XL, No. 6, pp. 182-183 (p. 182), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Article unrelated to aviation. It just makes a short reference to the Wright brothers.

CHICKEN THIEVES; WHAT SHALL WE DO TO PROTECT OUR VALUABLE STOCK FROM THEIR DEPREDACTIONS?

In our issue for Feb. 15, p. 106, I spoke of losing a duck and a drake. Well, about the middle of January two more were gone when the flock came home at night; and finally on Sunday evening when they got home my only remaining drake was gone. It was not so much the loss of the five ducks as it was the fact that I must stop letting my ducks run at large in the drainage canal that adjoins my five acres. ...

... Let me here repeat a little story I told you some years ago. When I was witnessing the early experiments of the Wright Bros. I boarded with a farmer whose wife was on a decline with the great white plague. To prolong the life of the poor woman (and they were poor financially) the doctors advised poultry-keeping in order to have her in the open air as much as possible. She became quite enthusiastic, succeeded with the poultry, and was improving in health, when one morning as she went out to liberate her pets that she had labored so hard for, to get them up to broiler age, she found every chick gone, and just the still empty coops. The shock and disappointment were so great she went into a decline, and not long after went down to her death. A neighbor, who had been having similar losses, got up in the night and attempted to stop some thieves who were just

making off with a load of his chickens, and the thieves turned a gun on him and ordered him to go back. He aroused his neighbors, and they followed them until they were lost with their booty in the saloon haunts of the great city of Dayton, Ohio, with its hundreds of saloons running day and night. How long, O Lord, shall this devastating curse afflict and discourage our hard-working and law-abiding citizens?

1912-04-01, A. I. Root, "Our Homes", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., April 1, 1912, Vol. XL, No. 7, pp. 215-218 (p. 216), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Long article unrelated to aviation. It just makes a short reference to the Wright brothers.

OUR HOMES

A. I. ROOT.

... What is to be the outcome of the great inventions and discoveries that are now coming so thick and fast? We have wireless telegraphy, the dictaphone (that I am using now while I am talking to you), the flying-machine that the Wright brothers are still pushing further and further, that is to be the great excitement of the whole wide world in just a few weeks more, and other discoveries that are coming thick and fast. The question naturally arises, "What about the future, and what is coming next?" ...

1912-06-15, A. I. Root, "Wilbur Wright; What our President and Army Officers Have to Say in Regard to His Untimely Death.", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., June 15, 1912, Vol. XL, No. 12, p. 21, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

WILBUR WRIGHT; WHAT OUR PRESIDENT AND ARMY OFFICERS HAVE TO SAY IN REGARD TO HIS UNTIMELY DEATH.

After Our Homes was in type I came across the following, which I clip from the Bangor (Maine) *Weekly Commercial*:

DESERVES TO STAND WITH FULTON, STEPHENSON, AND BELL.

Washington, May 30. — President Taft, who presented the medals granted by Congress to Wilbur Wright and his brother Orville, and who had frequently seen Mr. Wright fly, Thursday dictated the following statement:

"I am very sorry that the father of the great new science of aeronautics is dead, and that he has not been permitted to live to see the wonderful development that is sure to follow along the primary lines which he laid down. He deserves to stand with Fulton, Stephenson, and Bell."

Secretary Stimson said:

"Besides being probably the foremost exponent of aviation on this side of the Atlantic, Mr. Wright was a citizen of whom America may be proud for his manly qualities, his perseverance, modesty, skill, and attention to his profession."

Major General Leonard Wood, chief of staff of the army, said:

"The death of Wilbur Wright removes the foremost figure in aviation in America. The man has done more for the practical development of aviation along safe and well-thought-out lines than any one else; was a citizen of the best type, and the army has lost a man who taught it most of what it knows of aviation."

If I am correct, it is almost without precedent to have the President of the United States take notice or make public mention of the death of a comparatively humble citizen.

1912-06-15, A. I. Root, "Our Homes. Death of Wilbur Wright, the Older of the Wright Brothers, of Dayton, Ohio.", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., June 15, 1912, Vol. XL, No. 12, pp. 385-387, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

OUR HOMES

A. I. ROOT.

The Lord gave, and the Lord hath taken away. Blessed be the name of the Lord. — JOB 1:21.

Buy the truth, and sell it not; yea, wisdom and instruction and understanding. — PROV. 23:23.

He will not always chide; neither will he keep his anger for ever. — PSALM 103:9.

DEATH OF WILBUR WRIGHT, THE OLDER OF THE WRIGHT BROTHERS, OF DAYTON, OHIO.

For the past half-dozen years or so the whole wide world has been discussing and reading in regard to the Wright brothers (and their flying-machines) more than, perhaps, any other two people on the face of the earth. In every clime and in every language people have been eager to learn all about the two young men who have succeeded for the first time in human history in making a machine that would fly, and carry passengers, purely by mechanical means without the aid of a balloon or any thing of the sort. In the March 1st issue of GLEANINGS for 1904 I first made mention of the two men, Orville and Wilbur Wright. It was in the fall and winter of 1903 that they first succeeded in applying a gasoline-engine to a gliding machine they had been experimenting with. In the summer of 1904 I wrote the Wrights, asking permission to pay them a visit and witness some of their experiments. This permission was kindly granted; but they preferred that I should make no mention through our journal of what I might see until later on. I made many visits to the field just outside of Dayton, where they were experimenting during the summer of 1904; and finally, in our issue for Jan. 1, 1905, I was given permission to write up what I had witnessed, this being the first detailed account, if I am correct, given in any periodical in the world of the experiments and final success of the Wright brothers.

It was my privilege to be present when they made their first flight of a mile or more, and turned a circle and came down to the place of starting. My write-up of the event was so astonishing that many people thought it was a piece of fiction to advertise our journal; and even so good an authority as the *Scientific American* did not see fit to credit my account, although afterward they apologized for their want of faith at first, in my plain and simple story.

In times past it has been my good fortune to become more or less intimately acquainted with some of God's noble men and women; and I shall always regard it as one of the privileges of my life that I was permitted to become intimately acquainted with these two great characters (and I might say *benefactors*) of the human race. Wilbur Wright, the elder, was a little peculiar. Usually he was rather quiet and taciturn; but when he got going he was quite a talker. There was a peculiar twinkle in his eye, and an expressive working of the muscles of his face when a new idea occurred to him or when he had something pleasant to tell. While the two men worked together in perfect harmony, they often had lively discussions. Sometimes, one would think these discussions were becoming pretty nearly heated ones; but all of a sudden they would both stop and pitch into the work, and perhaps in a little while demonstrate *who* was right and who was wrong.

As Wilbur was the older of the two, for a time he seemed to do rather more flying than his brother Orville. I once asked their assistant mechanic which one of the two, in his opinion, was the more expert. He said he could not tell — sometimes one and sometimes the other. They first made quite a good many experiments by simply flying ahead in a straight line. Then the machine at that stage of the invention had to be wheeled back to the starting-place by hand. One day I came on the ground just as they had succeeded in making it turn a curve so as to fly at right angles to its course. They were getting ready to make another attempt; but a thunder cloud loomed up in the west, and they were about to abandon the experiment for the time being. As every thing was all ready for another flight I took the liberty of suggesting that they would have plenty of time to get around and get the machine safely housed before the blow would come up. In thinking of it since, I have considered that it was rather presuming on my part for me, an outsider, to offer such advice. Finally Wilbur, who was, I think, rather more venturesome than his brother, said *he* was ready to try it, and accordingly they started off rather hurriedly. Wilbur turned the curve at the end of the field, as before, and turned still another curve, and came around to the starting place, where we expected him to alight; but to our great surprise and astonishment he went right on, over our heads, and was heading for a lot of telephone wires, thorn trees, etc. The other brother, the mechanic, and myself, were greatly alarmed. It was so long ago that I can not exactly recall the details; but for a time it seemed to us he turned the rudder with the apparent intention of going over the obstacles and out of the field; but when he had sailed high enough to clear every thing the engine stopped, and the machine gradually slid back on the air, and alighted as safely and as gently as a feather, in their own field. We all rushed up to where he stopped, to see what was the matter. As I was considerably older than the other two, I did not get there in time to see what started the "discussion," but Wilbur was evidently considerably stirred up, and he and his brother were disputing rather hotly as to whose fault it was that he could not get the engine *stopped* when he came back to the starting-place. I finally interrupted the discussion by putting my hand on Wilbur's shoulder and remarking, "Why, my good friend, can't you stop long enough to look

pleasant, and thank God for having permitted you *just now* to make the first flight since the world began, turning corners, and coming around to the stopping-place?" He looked at first a little vexed at the interruption, but finally his countenance softened, and that peculiar — I might almost say bewitching — smile spread over his countenance as he put out his hand and said, so far as I can recall, "Why, Mr. Root, I guess you are right; and I *am* glad and thankful that I succeeded, even if I could not get my engine stopped when I wanted it to stop."

I do not remember now what it was that made the engine keep going after the switch was turned off. I only remember that he put the blame on Orville, and I suppose it came about on account of the excitement of the moment in consequence of the thunder cloud, that caused the accident.

Later, after they succeeded in getting the machine to make circles in the air as long as they wanted to stay up, I made them a visit and happened to be there at the same time as Mr. Chanute, a man who had made experiments with gliding machines before the Wright brothers ever took it up. I believe he is still living, and that he is also, perhaps, one of the best authorities in the world on aeronautics. They were discussing finances. Mr. Chanute thought a *million of dollars* would be needed to put the invention on a sound financial footing. I remember I noticed the peculiar twinkle on Wilbur's face as he said something as follows:

"Mr. Chanute, I have no ambition to be a millionaire. So far as I am concerned, I think a hundred thousand dollars would be all I should ever have use for in this world."

And this was characteristic of the man.* When he crossed the water and went over to England, France, and Germany with their invention, crowds followed them everywhere — not only common people but the nobility, crowned heads, kings, and queens came to recognize and do homage to the Wright brothers of Dayton, Ohio. Well, in some foreign lands, as you may know, where they do not know or *care* when Sunday comes, Wilbur always paid respect to God's holy sabbath day, and several times the nobility (and, I think, once or twice members of the royal family, great lords and ladies) wanted to see the Americans and the American flying-machine on Sunday. Now, here comes a true test of courage and of fearless manhood. I use the word "manhood" in the best sense of the word. Wilbur Wright said gently but firmly that they had been taught to "remember the sabbath day to keep it holy," and kindly asked to be excused, not only from making any flight, but from exhibiting the machine on the generally recognized Sunday of the world. He added that, as soon as the day was passed, he and his brother would gladly and cheerfully be at their service. This has been heralded world-wide; and, no matter what *opinions* people may have in regard to sabbath desecration, I think one and all, good and bad, reverence and respect the memory of Wilbur Wright for standing up and living up to his honest convictions. I do not mean that his brother Orville was any less conspicuous in this matter than Wilbur; but Wilbur, being the elder, generally took the responsibility of being spokesman.

During my first visit, and while the Wrights were making application for a patent on their invention, there were certain things I was asked to avoid mentioning in print. On my last visit, Wilbur invited me to go over and see their great factory. This was described on p. 602, Sept. 15, 1910. On starting out I asked if I might be permitted to describe in our journal what I saw. Wilbur replied with that same expressive twinkle, "Mr. Root, tell any thing you like, providing you *tell the truth*, and only the truth." How many proprietors of our American establishments nowadays would instruct a reporter of a magazine (who is writing it up) to avoid exaggeration or overstatement in his relation of what he saw? I mentioned this incident in my talk to our Bradentown Sunday-school, in Florida, and urged the youngsters who were listening to my account of the flying-machine, in the language of our last text, to "*buy the truth and sell it not*."

* In connection with the above I may mention that the Wright brothers were many times offered considerable sums of money if they would exhibit their machine at State fairs or great expositions; but their invariable reply has been, "Gentlemen, we are not in the show business." The years they labored in perfecting their invention were not for the purpose of making money. It was to bless humanity. I suppose they recognized full well that an advertisement saying the Wright brothers would be present with their flying-machine would draw a bigger crowd than the mention of any other two men on the face of the earth. But they have never been and are not now catering to the curiosity of the crowds that frequent great fairs, expositions, etc. They felt and now feel, as I have tried to express it, that God was calling them in another direction.

One day we were all out in the field with the machine while there was a cool northwest wind. Wilbur was in his shirtsleeves while I, if I remember correctly, had on my fur cap and overcoat. I urged him to put on his coat lest he "catch cold." He looked up to me with one of those smiles I have

mentioned, and said, "Mr. Root, I shall not catch cold out here in this breeze. That is not the way people catch cold as a rule. They 'catch cold,' as you express it, by keeping themselves shut up in hot and poorly ventilated rooms; and perhaps they may take cold by going out from such places warmed by artificial heat; but people who live outdoors, as God intended they should live, do not take cold, even if they get to feeling a little chilly."

I believe this was his rule of life. A great strong man, full of life, blood, and energy, has been cut off by typhoid fever; and at least a part of the responsibility rests on you and me. "God will not always chide."

It was my pleasure several times to share their noonday lunches put up by that good sister Katherine. May God bless and sustain her in this great affliction. Well, their food was always plain, wholesome, and in keeping with their ideas about the importance of open air, etc. *Why* should he have been permitted to die when the world needs *such* men so much? "The Lord gave, and the Lord hath taken away."

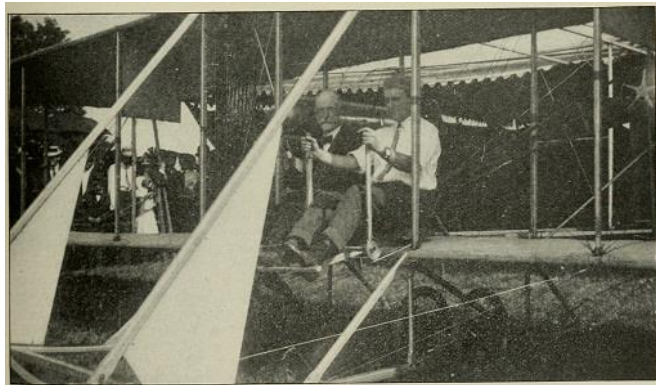
I suppose the whole world knows that, while I write on this 31st day of May, 1912, Wilbur Wright is no more. He died on the early morning of Decoration day; but before the day was fairly closed, messages of condolence and regret came from those same foreign nations where they censured him but a few months ago, because he so firmly, as they put it, refused to fly on Sunday. May God be praised that such a man as Wilbur Wright has lived for 46 years to bless the world. His sad, sudden, and untimely death came from typhoid fever; and almost at the very time when the sad news reached us I had in my hand a little bulletin sent out by the Department of Agriculture a few months ago, entitled, "How to Prevent Typhoid Fever."* As nearly as I can make out at this early date, he caught the fever while absent from his own beautiful sanitary home in Dayton.

In a recent issue I spoke of the way the Titanic disaster had taught us a lesson that the world could not be taught, perhaps, *without* such a loss of life. It has long been recognized, I believe, that typhoid fever is the result of ignoring well-known and sanitary laws. Is it possible that the loss of this good man, of so much value to the world at just this moment, is a part of God's plan to teach us not only to banish the *flies* that carry contagion, but to banish the filth that is feeding the flies even around farmers' homes, enabling them to increase and multiply? This bulletin I have been speaking of, says typhoid fever is more to be dreaded than smallpox; and may God help us to learn from this lesson what he is striving to teach us. When these government bulletins are furnished free, and when our farm papers, daily papers, and magazines are exhorting us, and we *still* sit down with folded hands, shall we not consider out text, "He will not always chide"?

* Another recent bulletin is on my desk entitled, "House Flies," and it has considerable to say in regard to the "typhoid fly," and the way in which the common house fly carries the typhoid germs. In fact, Prof. L. O. Howard says:

The insect we now call the "house fly" should in the future be termed the "typhoid fly," in order to call direct attention to the danger of allowing it to continue to breed unchecked.

1912-09-15, A. I. Root, "The Wright Brothers' Flying Machine in The Year 1912. See P. 589", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., September 15, 1912, Vol. XL, No. 18, pp. 589 and 593, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).



An up-to-date Wright Brothers flying-machine. The persons shown in the cut are your humble servant, A. I. Root, and Mr. Oscar Brindley, the aviator See page 593.

THE WRIGHT BROTHERS' FLYING MACHINE IN THE YEAR 1912. SEE P. 589

BY A. I. ROOT

Some time ago a few of the leading business men of Medina became enthusiastic over the idea of having a flying-machine exhibition on our fairground on the Fourth. Correspondence with the people who send out flying-machines brought out the fact that it would cost a good deal more money on the Fourth than later during fairtime. Indeed, the demand was so great for machines on that special day that the best arrangement our people could make would be \$1000 for a man and machine to make three trips — the man to remain in the air not less than 45 minutes all together. The question was whether our county of Medina would turn out in sufficient numbers at 25 cts. admission to make up the thousand dollars. But it transpired that something like 10,000 people were on hand to witness the flights. The flights were a perfect success in every respect. The operator handled his machine with almost the ease that a bird in the air flaps its wings. He went up something like a quarter of a mile, and went off over the country for two or three miles in different directions — executed a variety of sharp turns, dives, etc.

The machine, as you see, p. 589, is made to carry a passenger; but as it requires a longer space to get off the ground with a passenger than our fairground afforded, no attempt was made to carry a passenger. As I was close at hand, however, during all the flights and preliminaries, a request was made that I occupy the vacant seat while the machine was standing on the ground, and have a picture taken of myself and Mr. Brindley. Perhaps I should explain that the Wright Brothers manufacture the machines, but they have nothing to do with renting them out for fairtime, exhibitions, etc. All correspondence in regard to this matter should be directed to The Mercurial Aeroplane and Entertainment Co., 803 Central National Bank Building, St. Louis, Mo.

You will notice the operator has hold of two levers, besides other levers operated by the feet. As it would be inconvenient for him to take his watch out of his pocket, he has a pretty little timepiece strapped to his wrist, as you will notice.

I had a long talk with him during the day, and he entirely agrees with me in thinking that there is but little danger of loss of life if the instructions furnished by the Wright Brothers are strictly complied with. The deaths of at least a part of the aviators have been because they became excited, and wanted to make a display that was evidently unsafe, or started out when the weather was unfavorable. Somewhere out west during a fair, I think it was, the aviator declared it was not safe to undertake the flight just then. But the crowd hooted and jeered, called him a coward, and said "the machine would not fly anyhow," etc. He was a young fellow, and finally, in desperation, he said he *would* fly, even if it broke his neck, and he did. He was killed almost instantly. That crowd was *guilty of murder*. In another case a young fellow undertook to exploit "sliding down hill on the air," at a breakneck speed, expecting to turn the machine up again when he neared the ground. This time, however, he had a heavier machine than he had ever operated before. He failed to calculate the consequences of a sudden change in direction and the momentum occasioned by the increased weight. The consequence was that the sticks of wood and wires of steel would not stand the shock. The machine was crushed, and he was killed. In one or two cases I have seen the operator smoke a cigarette before starting, to give him courage (?); but I am glad to say that Mr. Brindley, who sits by my side, never touches tobacco nor stimulants of any kind whatever. I know there is quite a mental strain on the aviator because on one occasion, owing to a little gust of wind at an inopportune moment, he failed to get off the ground. On the flight just before this, one of the wings touched a telephone wire. Had the wing been an inch or two closer to the wire the result would have been a smash-up and very likely death to the operator. Well, after this failure to get off the ground he went and lay down on a cot in the tent, and rested some fifteen or twenty minutes while his assistants got the machine back to the starting-point. God forbid that any more lives should be sacrificed through want of care, or a disposition to take risks in showing the wonderful things that this new vehicle or transporter is capable of.

1913

1913-03-01, A. I. Root, "The High Cost of Living, etc.; Something About God's New and Precious Gifts.", Gleanings in Bee Culture, Medina, Ohio,

US, A. I. Root Co., March 1, 1913, Vol. XLI, No. 5, pp. 166-168 (p. 166), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Long article unrelated to aviation. It just makes a short reference to the Wright brothers.

THE HIGH COST OF LIVING, ETC.; SOMETHING ABOUT GOD'S NEW AND PRECIOUS GIFTS.

To-day is January 2, 1913, and so far it has been indeed a happy New Year to me. Let me tell you a few things that have made me happy. On New Year's day a beautiful lot of Buttercup chickens came out of the incubator, and on that same day one of my Indian Runner ducks that *would sit* brought out a brood of ducklings, hatching every egg. I tell you it is wonderfully nice and enjoyable to have a nice little room for a new brood of chicks and another nice room for a brood of ducklings; and then a nice little yard adjoining each one of them. My first brood of Buttercups are now a little over three weeks old; and when I open the door in the morning to let them go out they go out on the wing. The doorstep is a little bit high, so they have learned, in order to save the trouble of climbing over it, just to spread their gauzy wings and sail out like a Wright flying-machine, for all the world. Now another thing that makes them so handsome is their spotted wings, looking for all the world like a brood of partridges. Besides, we have a very pretty garden of sweet potatoes, common potatoes, early peas, lettuce, mustard for the chickens, etc. The thing that has made me happy and set me to thanking God most of all, *just now*, is a new vegetable sent out by the Department of Agriculture. I saw it mentioned in some of the rural Florida papers, and so I sent to Washington and asked them if they could furnish me some of the tubers. The night before Christmas, when I went to the postoffice I found in my box a card saying, "Package too large to go in the box. Present at the office." This was Christmas eve, remember. When I presented my card, a little bag holding perhaps a couple of quarts of something that looked like potatoes was handed me. I at once decided that it was the new "dasheen," and I also decided that, of all the Christmas presents I have had in seventy years, I do not know that I have ever gotten hold of one that I liked more than this little bag of dasheen. ...

The little bag which was my Christmas present contained just nineteen tubers; and although these little tubers were very precious, at least to me, I decided that we would have to make a test of one of the smaller ones by having it baked for breakfast. So on Christmas morning we had our first feast of the new potato, or whatever you might call it, served for breakfast. The tuber is remarkably hard and solid. I think they are heavier for the bulk than any potato. When I tell you that the first taste convinced me that it was the most delicious baked potato I ever got hold of in my life, that does not half tell it. Mrs. Root quite agreed with me, although she isn't gifted in becoming over-enthusiastic on new and comparatively untried things. The remaining eighteen tubers were carefully planted, and at this date, Jan. 17, they have all begun to sprout, but none of them are, as yet, above ground. ...

In a letter that I have recently received from the Department of Agriculture, they promise to furnish me more tubers if I can make use of them. Now, I tell you confidentially what my plan is. As soon as I can get enough of them I want to make a present of a dasheen tuber to every reader of GLEANINGS — that is, to every one who sends the subscription price for one year. It seems to be more exactly suitable for Florida soil and Florida conditions than for any other part of the United States. ...

1913-07-01, A. I. Root, "The High Cost of Living; How our Missionaries May Help to Reduce It.", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., July 1, 1913, Vol. XVI (XLI), No. 13, p. 471-472, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE HIGH COST OF LIVING; HOW OUR MISSIONARIES MAY HELP TO REDUCE IT.

Friend Root: — I presume you will not remember meeting me in Medina some ten or twelve years ago; but knowing that you are interested in our work, and have taken a part in it, I think I may venture to address you as above. It was through your kindness in sending me a letter of introduction to the Wright Brothers, while I was at home on furlough year before last, that I met Mr. Orville Wright (also father and sister), and saw him fly. The fact that GLEANINGS has been coming to me for years I take to be a substantial proof of the A. I. Root Company's interest in foreign missions in general and in our mission in particular. I have read your department with much interest and pleasure; and seeing your interest in every good work I can only regard you as one of our number — a missionary. I have often felt like writing you after reading your kind and helpful messages, but have felt that it would not be wise to impose on your time; but upon reading what you say about the "dasheen" in GLEANINGS for March 1,

1913, and noticing that I am left out of your proposal to send a "dasheen tuber to every reader of GLEANINGS — that is, to every one who sends the subscription price for one year," since I receive it free, I have decided to write to see if I can not arrange to receive a tuber also.

Now, I suppose we must have something like the "dasheen," only we know it by the name "amadumbe." There are several varieties here — some very large, but almost worthless; others smaller, and highly esteemed as food. By the time this reaches you and I can receive a reply from you, our amadumbe will be about ripe, I think, and it will also be a favorable time for sending them so far by post. Now, if you would like to try some of our best variety of amadumbe, and compare them with the dasheen, and will so notify me, I will endeavor to send you a sample packet registered. We also have very nice sweet potatoes here. One variety we prize higher than the others, because of its very vigorous and quick growth combined with excellent eating qualities. It is quite the opposite of "vineless," but my experience has been the less vine the less vigor. If you would like a sample of these also, I will send them. Now, if in exchange for the above-mentioned samples you are willing to put me on the list of recipients of one of the Trinidad dasheen tubers (I should like to see how it compares with our amadumbe), I shall be pleased; otherwise I think I shall have to send my subscription to GLEANINGS.

I, too, enjoy hunting up "God's gifts."

I am addressing you at Medina, as this will reach you in summer; but presume the samples should go to your Florida address.

W. L. Thompson, M. D.

Mount Silinda, Melsetter, Rhodesia, South Africa, April 25, 1913.

My good friend, I was not only delighted to receive your kind words and your offer to take me among you as a "missionary," but I am grateful to you for the opportunity of testing some of God's gifts that come 'way off from South Africa. I presume likely my Florida home will be the place to test them; but I am so anxious to get hold of the tubers, both amadumbe and sweet potato, that I wish you would send me a very small package here, Medina, and a larger one in time to reach me at my Florida home some time in November; and if you will tell what the postage will be I will remit that also. I should like a good-sized package sent to Florida. I will see that you get a small "bagful" of dasheens. Your kind offer is one of my "happy surprises," and I am also happy to think that our missionary friends can help reduce "the high cost of living."

1913-09-15, A. I. Root, "Remember the Sabbath Day to Keep It Holy", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., September 15, 1913, Vol. XVI (XLI), No. 18, p. 659, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

REMEMBER THE SABBATH DAY TO KEEP IT HOLY.

The following, which we clip from the *Sunday School Times*, explains itself:

WILBUR WRIGHT'S ANSWER.

Today is a sabbath unto Jehovah. — Ex. 16:25. The Wright brothers, the famous aviators (of whom one died in 1913), are clean-limbed and clean-minded. From their father, good old Bishop Wright, they inherit two sterling traits — character and a shrewd business sense. When Wilbur was at the high tide of his first foreign success, and was acclaimed everywhere as "the emperor of the air," the king of Spain came to see his machine. An orderly approached and said, "His Majesty would like to see you fly." "I am very sorry," was the reply, "but we never fly on Sunday."

It is especially interesting to me, because I was so well acquainted with our good friend Wilbur Wright, his father (Bishop Wright), and the rest of the family. God grant that we may have at least a few men left who are not afraid to stand up before men, even kings, and confess their respect for God's holy word.

1914

1914-01-15, A. I. Root, "Flying-Machines up to Date; 900 Miles in 900 Minutes.", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., January 15, 1914, Vol. XLII, No. 2, pp. 78-79, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

FLYING-MACHINES UP TO DATE; 900 MILES IN 900 MINUTES.

AS GLEANINGS was the first periodical on the face of the earth to give an eye-witness account of the Wright brothers' first flight to make the machine come back to its starting-point, it is no more than proper that GLEANINGS should occasionally notice the progress that is being made in navigating the air. The steps of progress are so rapid now, and as our daily newspapers and magazines are full of it, it would take too much space to give here an account of *all* that is being done. Just now, however, the world

is startled by M. Pegoud, who not only “loops the loop,” but flies quite a little distance with the machine upside down. Of course he has straps to hold him securely to his seat. At first the world was inclined to say his success was accidental — that he could not do it again; but he has done it again and *again*, and I think he says it is no very difficult trick. The whole thing is described, with some very good illustrations, in the *Independent* for Oct. 23. We give below the closing paragraph of the article:

At the present time the cost of aeroplanes still ranges from \$5000 to \$10,000 per machine, which is too high for the average man; and the sportsman and enthusiast has an extremely safe craft in the water aeroplane — the airboat, which is essentially a boat with wings, and the hydro-aeroplane, which is an aeroplane with floats to enable it to land on water. Water-flying is much more safe than land-flying, because the water always presents a flat surface to start from and land on; and, in case of a spill, the aviator, who is dressed in a floating coat, just gets a drenching. A score of American sportsmen acquired airboats in the past summer and flew them continually, and made from 60 to 80 miles an hour while they flew them; and two of them actually flew from Chicago to Detroit, 900 miles, which they covered in 900 minutes, going through a succession of storms which no boat could have weathered; but there were no accidents, not even a drenching. The demonstration of the safety of water-flying was so conclusive that scores of other sportsmen were converted, and the four principal aeroplane constructors — the Wrights, of Dayton, Ohio; Curtiss, of Hammondsport, New York; Burgess, of Marblehead, Massachusetts, and Benoist, of St. Louis, Missouri, are working overtime turning out this sort of machine.

New York City.

I am not prepared to say exactly who should have the credit for the water aeroplane, as it is called above; but I do know that the Wright brothers made experiments with a craft to skim over the water of the Miami River, that passes through Dayton, a good many years ago, and before any thing of the kind was mentioned in the papers. This I did not get from the Wright brothers themselves, but from one of their workmen. The Wright brothers certainly have the credit (and I guess it is acknowledged world-wide) of making the first heavier-than-air machine to rise up from the ground; and I am inclined to think they were the first in the world to experiment with hydro-aeroplanes. Somebody will probably cross the ocean very soon with such a craft. If they can go a mile a minute, and skim along in spite of wind and wave, there will be comparatively little difficulty in making the trip. We clip the following from the *Cleveland Plain Dealer*:

TESTS NEW AIR-CRAFT; ORVILLE WRIGHT SHOWS ONE PROPELLER
MODEL AT DAYTON, OHIO.

DAYTON, Ohio, Oct. 6. — Orville Wright, himself driving to-day, tested out his latest aeroplane model in a series of successful flights.

The new model has but one propeller, which with the motor, seat, and drive, is in one unit in the center section, as compared with the former two-propeller machines, with blades in opposite directions. The new model “E” is made especially for exhibition purposes, and is capable of dismantling in short time.

Much of the machine is built of aluminum. In a test against time a flight was made, and the entire machine dismantled and loaded ready for shipment in twelve minutes. This model has been viewed by representatives of the International Club. Another test will be made Oct. 15.

1914-02-15, A. I. Root, “Flying to be Made Safer in the Near Future”, *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., February 15, 1914, Vol. XLII, No. 4, p. 159-160, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Eye hath not seen, nor ear heard, neither have entered into the heart of man the things which God hath prepared for them that love him. — I. COR. 2:9.

FLYING TO BE MADE SAFER IN THE NEAR FUTURE.

I am sure the friends who have followed me in my reports in regard to the development of aviation by the Wright brothers will read with interest the following, clipped from the *Cleveland Plain Dealer*:

DAYTON, O., Jan. 5. — Orville Wright, premier aviator, to-day discussed the possibilities of his automatic stabilizer, which, he declares, will make flying “fool proof” and as comparatively safe as transportation by land. It means that an unskilled operator may make a trip from Dayton to New York and return with comparative safety. He said:

“We have invented an automatic stability device which will revolutionize flight,” said Wright. “It is more accurate than any aviator can be, and will make flying fool proof, or as nearly fool proof as any thing can be. I have flown many miles with it and have never touched the controls. We are now simplifying, and expect to be able to bring it to the point where it may be put in general use by early spring.

“We believe in making aerial work as safe as any on land,” he said, “and we will continue to labor in that direction. We hope to see the day when it will be just as safe to board an aeroplane and take a long trip as it is at present to make this journey behind a locomotive.

“The stability device will go a long way toward making this dream a reality, and we are enthusiastic about it. Our device insures lateral as well as fore-and-aft stability. It depends in part on electricity, and we shall soon have the mechanism so perfected that it will not get out of order, and that means safety in flight.

“As may be generally known, many of the accidents in aviation have been due to what is called stalling. The aviator lets his speed sag below a certain point, the point necessary to secure sufficient wind pressure on the wings to sustain the machine, and it falls. Nothing can stop it.

“If he is traveling on an even keel when he reduces his speed below the danger-point, his machine will slide back, tail first, to the ground. Our device prevents the plane from rising too sharply; and if the speed falls below the danger-point it automatically directs the machine to the ground so that it will acquire speed enough to sustain it.”

Discussing the future of the aeroplane, Wright said:

“The aeroplane will be used for commercial purposes, especially as a means of speedy transportation over vast distances. Over waste places and deserts the aeroplane will be used; in fact, wherever water is not available.

“Mails will be thus carried, doubtless, over large stretches of territory in Texas, Utah, and New Mexico. Automatic stability is all that is needed to make it wholly practical, and I believe we have solved the problem.”

Judging from a pretty close acquaintance with Orville Wright, I feel sure he would not express himself so hopefully were it not that he has some very good reasons for so doing. I wonder if they will not be coming down to Florida to test this great invention.

1914-02-15, A. I. Root, “Dasheen, Flying-Machines, and Something About God’s New and Wonderful Gifts to Us in 1914”, *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., February 15, 1914, Vol. XLII, No. 4, p. 160, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

**DASHEEN, FLYING-MACHINES, AND SOMETHING
ABOUT GOD’S NEW AND WONDERFUL GIFTS TO US IN
1914.**

Some of you will think, no doubt, my heading embraces a queer combination. Well, perhaps it does; but the idea was suggested by a picture Huber has just sent me of our Medina plant that is to come out in our new catalog. When I stirred the world up on bee culture years ago I had, as people thought, some extravagant day dreams of the outcome of the honey industry; but it is all coming to pass, and even *more* than I ever dreamed of. Later, when I visited the Wright brothers, and told what I had seen, the world laughed again; and I confess events *have* crawled along a little slower than I expected; but just listen to what has been going on almost “under my nose,” and I didn’t know it. About a week ago our good friend Mr. Gault (of “Gault raspberry” fame) wrote me as follows:

Dear Mr. Root: — As you are interested in airships I enclose a circular which you may care to look over. If you come over, call on me.

St. Petersburg, Fla., Jan. 6.

W. C. GAULT.

Below is a copy of the circular.

ST. PETERSBURG-TAMPA AIR-BOAT LINE; FAST PASSENGER AND
EXPRESS SERVICE.

Schedule: — Leave St. Petersburg 10:00 A. M. Arrive Tampa 10:30 A. M. Leave Tampa 11:00 A. M. Arrive St. Petersburg 11:30 A. M. Leave St. Petersburg 2:00 P. M. Arrive Tampa 2:30 P. M. Leave Tampa 3:00 P. M. Arrive St. Petersburg 3:30 P. M.

Special-flight trips can be arranged through any of our agents or by communicating directly with the St. Petersburg Hangar. Trips covering any distance over all-water routes, and from the water’s surface to several thousand feet high at passengers’ request.

A minimum charge of \$15 per special flight.

Rates: \$5.00 per trip. Round trip \$10.00. Booking for passage in advance.

Note. — Passengers are allowed a weight of 200 pounds gross including hand baggage; excess charged at \$5.00 per 100 pounds; minimum charge 25 cents. Express rates, for packages, suit-cases, mail matter, etc., \$5.00 per hundred pounds; minimum charge, 25 cents. Express carried from hangar to hangar only; delivery and receipt by shipper.

Tickets on sale at hangars or city news stand, F. C. West, Prop., 271 Central Ave., St. Petersburg, Fla.

I confess at first I could hardly believe that an airship right here in Florida was carrying *passengers* and *express matter* on a schedule, and I wrote asking if it was *true*, and if they really were making daily trips. In response I received a copy of the St. Petersburg daily for Jan 6, from which I clip as follows:

SWIFTER THAN ANY CRAFT IS THE AIR-BOAT; ST. PETERSBURG-TAMPA
LINE AVERAGED TRIPS YESTERDAY IN 22 4-5 MINUTES.

Averaging twenty-two and four-fifths minutes per trip the St. Petersburg-Tampa Airboat Line is carrying out the schedules advertised, and is making time between this city and the terminal across the bay which few express trains could equal. Yesterday in the two trips to Tampa the time was, first trip, 24 minutes over and 22 back; second trip, 21 over and 24 back. This is time which is unequalled in the South by either passenger trains, automobiles, or any other passenger-carrying flying craft but the Benoist.

Tom W. Benoist, who is the head of the manufacturing company in St. Louis which makes the Benoist air-boats, is rushing his works to capacity in order to send several more machines here as soon as possible. Jannus and Fansler state that they are expecting to hear from him any day with the information that the machines have been placed in transit. With the arrival of the additional air-boats the service to Tampa will be greatly improved, and more passengers can be carried every day. With additional air-boats new trips may be arranged, and it is possible that Bradentown and Pass-a-Grille will be put on the list of ports of call. With a variety of trips which may be made by the air-boat more passengers will be carried, and the entire fleet of machines kept busy every day, is the belief.

That the inauguration of this, the first commercial line of flying craft in the world, St. Petersburg is becoming known in a way she was never before heard of, and by people who otherwise would likely never hear of this city.

Later. — After being in operation for two weeks, during which time the air-boat line has maintained its schedule without any serious mishap, the little air craft, after completing the flights made yesterday, had traveled 1002 miles. During the past week the air-boat has made its usual record in aeronautics, having completed the week by not only maintaining its regular schedule but having made the trips without any delay or engine trouble.

The air-boat will be pressed into service Sunday, Feb. 1, to bring Don C. McMullen, president of the State Anti-saloon League, who will deliver a lecture on that day in this city on the saloon question. Mr. McMullen is anxious to attend Sunday-school in Tampa in the morning of that day, and that will make it too late for him to catch the steamer and be in this city in time to make the lecture. Rather than take an automobile he made arrangements to come over by the air-boat.

The air-boat has proven a decided success for commercial travel since the inauguration of the line in this city. The eyes of the aeronautical world are upon St. Petersburg, and the air-boat line and many of the prominent aviators of this and foreign countries are watching with interest the results of the air-boat line in this city. — *St. Petersburg Times*.

I find the daily flying machine between St. Petersburg and Tampa, Fla., mentioned above, is really a *hydroplane*. It *starts* in the water, *alights* in the water, and drops in the water again if any thing goes wrong, and in fact keeps only a few feet above the water on the whole trip of about 30 miles. Notwithstanding, passage is engaged a long way ahead. At present they carry only one passenger at a trip.

1914-11-15, A. I. Root, "Our Homes", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., November 15, 1914, Vol. XLII, No. 22, pp. 913-916 (p. 915), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Long article unrelated to aviation. It just makes a short reference to the Wright brothers.

OUR HOMES

A. I. ROOT

... It was my privilege to see oil brought out of the ground, and to see it go through the different stages of refining; to see utilized the waste product running out into the creeks and rivers until it got to be a great and dangerous nuisance. I have lived to see these waste products utilized in a thousand different ways, while the doctors' shelves now contain more medicines made from the refuse from the refinings than from almost any other source. One invention or discovery seems to pave the way for another. The Wright brothers could not have invented their flying-machine without gasoline. Gasoline-engines are now not only moving great factories, but they are supplying strength to the farmers and to the farmers' wives. They are moving little electric-light plants to have the farmer's house and barn lighted in a way that lamps and lanterns could *never* do. During the past fifty years the whole wide world has roused up and come to life. I have not only been permitted to be present at the birth-time of oil and gas, but I might almost say I have seen electricity in a like manner ushered into this world of ours, and grow to the mighty proportions of the present day. ...

1915

1915-08-01, A. I. Root, "The Flying-Machine — A New Use For It.", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., August 1, 1915, Vol. XLIII, No. 15, p. 649, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE FLYING-MACHINE — A NEW USE FOR IT.

When I was having such an enjoyable time in being with the Wrights when they made their first experiments, my enjoyment was greatly marred on being informed by Wilbur Wright that the flying machine would probably be of more use in war than as a vehicle to assist commerce and travel; and it has saddened my heart again and again to see this prediction fulfilled before my eyes. Well, just now I find the following clipping in *Farming Business*.

HUNT FIRES IN AEROPLANE.

Jack Vilas has received an appointment as forest ranger, and will range the north woods of Wisconsin in his hydro-aeroplane instead of sitting on top of a 90-foot tower and looking at a limited range of country. By using his machine he can rise to such heights as to discover a fire 50 miles away, and quickly fly to the scene and report for re-enforcements if needed.

From the above it seems that this same flying-machine is destined to do great work in preventing forest fires from getting such a start as to destroy miles of timber, and sometimes almost whole towns and villages. May God hasten the time when the flying-machine will prove to be an aid to peace instead of an aid to war.

1915-09-15, A. I. Root, "The Story of Art Smith." ", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., September 15, 1915, Vol. XLIII, No. 18, p. 782, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

"THE STORY OF ART SMITH."

The above is the title of a paper-bound pamphlet of 94 pages. It was sent me by my grandson feeling sure I would be interested in it because of the fact that I was with the Wright brothers when they made their first flight that succeeded in bringing the machine back to the place of starting. The book interested me for two reasons: First, because it was all about experiments with flying-machines; second, because the boy started out when he was only 15 years old — nearly the same age that I was when I started out giving "lectures (?)" on chemistry and electricity. There is still *another* reason why the book took a mighty hold on me. This boy, Art Smith, it seems to me, had more mishaps and discouragements and failures than I ever heard of falling to a single human being; and yet he is now, at the age of only 21, turning somersault after somersault away up above the clouds, leaving a trail of smoke by day and a trail of fire by night, to show the path that his machine actually made through the sky.

I think that when I first opened the book I was standing up; and in a little while I got off by myself where nobody would interrupt me. As it came dinnertime I felt I could not stop for dinner nor anything else; and I am afraid I was unfeeling enough to get off with the book where Mrs. Root could not ask *why* (for once in the world) I was not ready for dinner. I doubt if I ever before got hold of any book that held my attention as did that one. Here is a brief extract from page 4:

"Of course, there are only a few of us now who feel at home in the air — really at home, knowing the air and its ways, so that we can roll about up among the clouds like a kitten in a basket. Because we are pioneers in the air, with difficulties and dangers to overcome, it is interesting to know how we do it, and what it feels like.

"The story of how I learned to do it is doubly interesting to any one who is trying to do anything difficult in the world, because I think no one can have a harder time realizing his ambition than I had in learning to fly."

In the middle of the book we read of the way his machine turned over sidewise and was going crashing into the ground with the heavy engine, etc., and when within twenty feet of the earth it suddenly righted and skimmed off like a bird, unharmed. When his good mother (a *praying* mother, by the way) saw that death to her venturesome son seemed *inevitable*, she fell on her knees and said, "O God, save my boy!" and, *while* she was praying, the machine righted itself in a second of time, and her boy was saved. Below is the finishing paragraph of the book:

"The world is carried forward by man's great dreams. The greatest dream of all is the conquest of the air. What it will mean to human life we know no more than Watt knew when he watched the lid of the kettle and dreamed of the first steam-engine. Aerial navigation will mean, as the steam-engine did, more than we can imagine now.

"Big men are working on it. Big men will some day conquer all the difficulties which we are fighting.

"We are only pioneers, but we are pioneers with a great idea. Some time in future centuries the whole world will be revolutionized by that idea. Then

it will know the value of the hope and the thrill we feel as our aeroplanes rise from the earth, pass through the clouds, and fly high in the clear upper air."

The price is 25 cents postpaid; but every one who sends us \$1.00 for GLEANINGS may have the book for 15 cents. I am well aware that some of my good friends may criticise me for encouraging what has cost so many lives already; but my reply is that the book will help to *save* life; and it will also encourage patience and perseverance among the young inventors now growing up more than any other book that I have ever read or heard of. The book is not fiction, because every event mentioned occurred out in the open air in the plain sight of hundreds and thousands gathered to see Art Smith fly — the boy who was born and brought up in Ft. Wayne, Ind.

1915-12-15, A. I. Root, "The Wright Brothers' Flying-Machine Factory at Dayton, Ohio.", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., December 15, 1915, Vol. XLIII, No. 24, p. 1047, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

THE WRIGHT BROTHERS' FLYING-MACHINE FACTORY AT DAYTON, OHIO.

Ever since the Wright brothers succeeded in making a machine fly, I have given you occasional notes as the years have gone by. Just now I clip the following from the *Ohio Farmer*:

WRIGHT PLANT SOLD.

Orville Wright, aviator and aeroplane inventor, has sold his factory at Dayton to a syndicate of eastern capitalists. He now intends to give all of his time to scientific research along the lines of aviation.

It may be of interest to know that this Dayton factory is now quoted at something over a million dollars. I have been wondering if it were not possible that Orville Wright has sold out because he is averse to furnishing machines for war, as his father has been all his life a minister; and from what I know of the man I can readily imagine that he would be strongly averse to the manufacture of any machine designed for the purpose of killing people.

1916

1916-04-15, A. I. Root, "Aeroplane Development", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., April 15, 1916, Vol. XLIV, No. 8, p. 335, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

AEROPLANE DEVELOPMENT.

The war has revolutionized the aeroplane. We no longer hear about the dangers of mere flying; mechanical ingenuity has apparently overcome them. In almost any kind of weather except the severest gales, the fliers now sweep along at over a hundred miles an hour, under 150 horsepower. Waldemar Kampffert, in a recent article, writes that there are over 5000 planes of various models in use in the different armies, and that the perils from armed aerial enemies and from aeroplane guns on the field below are such that the average flying life of a plane is not longer than two weeks! Very few of the machines used at the beginning of the war are now in service, and to repair the waste it may be necessary to build 50,000 aeroplanes a year while the war lasts. There have been no radical departures from the early models of Orville and Wilbur Wright, altho there are many varied arrangements of the wings. Types may vary, but the original principle persists. No longer is the aeroplane the toy of sport and adventure. It has become a surprisingly dependable machine.

1917

1917-04, A. I. Root, "Wilbur and Orville Wright", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., April 1917, Vol. XLV, No. 4, pp. 300-301, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

WILBUR AND ORVILLE WRIGHT.

As I was with the Wright Brothers when they made their first success in getting the machine to turn around and come back to the starting-place, you can realize somewhat the pain I felt when I saw, as the years have passed, efforts to rob them of their hard-earned title to being the originators of the

art of flying. In view of this you may realize how it rejoiced my heart to find the following in *Collier's* for Jan. 6:

THE TITLE TO AN HONOR.

We should have thought that, if the authority of the great inventions of history were investigated, the one upon which the least shadow of doubt could be cast would be the invention of the aeroplane by Orville and Wilbur Wright. Of course there will always be a certain number of whimsical persons who instinctively resent giving credit where credit is due, and who, when anything big is done in the world, begin to look around for a village obscurity "who really conceived the idea." They like to be cheated and fooled. They are the same kind of people who still believe in the Keely motor, think Dr. Cook discovered the North Pole, Bacon wrote Shakespeare's plays, and Rostand stole "Cyrano de Bergerac" from a Chicago dealer in suburban real estate. But it is surprising to find that so well informed a man as Dr. Eliot — to whose judgment on any subject we usually defer — is reported to have ascribed the creation of the flying machine to Professor Langley. Professor Langley was a brilliant, ingenious, and modest scientist. We mean no disrespect to his memory when we say that Langley was, no more than Darius Green, the inventor of the essential contrivances for flying.

The attempt to discredit the originality of the Wrights, and to rob two fine Americans of an honor that will outlive all marble, started with a group of men who took out of the Smithsonian Institution the old Langley machine which had been wrecked in launching, changed the shape and weight of the ribs, the shape of the propellers, the controlling device, the starting and landing gear, added a number of devices which were peculiarly the inventions of the Wrights, secured a competent press agent, and turned the machine over to a skilled aeronaut, who, after much effort, succeeded in making the flying-machine — not fly — but *hop*. Between this confection and the Wright aeroplane as much difference exists as between a squat toad and a swallow. And, bad as it was, this was not the original Langley machine, but an industrious improvement on it. The old Langley machine, we are told on good authority, "failed to fly because the wings collapsed from not being strong enough to carry the strain; even if it had been strong enough it would not have been a practical flying-machine, because it had no means of control except in a perfect calm; it was the discovery of a means of control, the solution of the problem of equilibrium by the Wright brothers — and by them alone — that conquered the domain of air for mankind and brought in the age of flying."

Langley's unsuccessful attempts were made only after the Wrights had completed their invention and progressed far in the actual use of it. They had proved out their system of control by gliding flights in 1902, and had thereby solved the problem of human flight, and they filed their application for their fundamental patent in March, 1903. It was not until more than six months after the latter date that Langley made his unsuccessful attempts at flying — the only ones that he did make. These attempts were made on Oct. 7 and Dec. 8, 1903. They proved nothing but failures, and added nothing to the contribution that the Wrights had made to the science in the previous year. On December 17, 1903, the Wrights again made completely successful flights, but this time with a power-driven machine, and as a result of their quiet, unadvertised, and well-directed work.

Collier's takes a special interest in this question because it had the good fortune to be among the first of American publications to believe these two modest young men had solved the problem of aviation which had baffled inventors for centuries; and it does not intend to stand by in silence while a predatory attempt is made on the just renown of the two great geniuses who conceived the idea of the aeroplane and worked it out with infinite patience and self-effacement. The fact that these two men disdained advertising their own achievement is all the more reason why their countrymen should defend their reputation. The example they gave in the steady pursuit of their object without haste and without pause, their refusal to put out reports of their incomplete work, their avoidance of publicity, is as refreshing as anything we know in an age when inventors get almost as much space in the newspapers as chorus girls. There never was a finer character than Wilbur Wright. He was the American we read about more often in books than meet in actual life. It was delightful to observe this composed, shrewd, humorous, well-balanced product of Ohio coming out of his workshop to meet with level eyes and imperturbable smile the gushing world, putting his own and nobody else's value on what he saw and heard, and treating even flattery with perfect good nature. We don't think the American people will consent to see the memory of such a man deprived of any of the fame that belongs to it, or that they will hesitate to display, if the need arise, their gratitude for the honor the Wrights have brought to their country.

Misinformation cannot long obscure this fact of history — that *the Wright brothers were the first persons to leave the earth in a mechanically propelled plane and to invent the means of controlling that plane.*

In connection with the above it may be well to state that GLEANINGS was privileged to give the first account, by an eye witness, of their invention of any magazine or periodical in the world. See GLEANINGS for January 1, 1905, p. 32.

Just a word in closing about Wilbur Wright. We had many discussions during the days I was with them in regard to the value to the world of their invention. I insisted it would result in something like Columbus' discovery of America, etc., but Wilbur, with a sad, far-away look on his face, declared its first use would be for *war purposes*. God knows he had no sympathy for anything along that line. As the years have passed, and we hear of the invention only in connection with war, I am reminded of his prophecy.

1919

1919-02, A. I. Root, "Aviation and Stimulants. Saloons and the "Chicken Business."", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., February 1919, Vol. XLVII, No. 2, pp. 110-112, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

AVIATION AND STIMULANTS.

In the *Sunday School Times* for October 3 was an item that brought to mind a couple of incidents of years ago. Below is the clipping:

ALCOHOL NOT GOOD FOR AVIATORS.

When the Wright brothers visited France with their perfected flying machine a number of years ago, they surprised those who sought to do them honors with their total abstinence habits. An opinion against the use of alcohol in flying expressed by one of the brothers was widely circulated. But since then there have been flyers who have thought they could combine alcohol with the dangers in the air.

If you want to know how it turned out with the young man who thought a drink might help him handle flying machines, you had better get that number of the *Times* and read the whole of it. When I first had an intimation that the Wright brothers were experimenting with a flying machine, I told our people here that I felt as if I could not rest unless I went down to Dayton to see the brothers work. I had just succeeded in getting one of the first automobiles, and with this I started on my trip. I found them on the very same aviation grounds that are now occupied, a few miles east of the city of Dayton. In order to be on hand, I obtained board and lodging at a farmhouse near by. At first I was somewhat worried for fear the brothers would not care to have a spectator hanging around, and maybe meddling while they experimented with an apparatus that might mean death instead of success in navigating the air like a bird. As the neighbors seemed to take no particular interest in the experiments, we three were, most of the time, a good deal alone, and we soon became fairly well acquainted with each other; and it was one of the happiest of my "happy surprises" when the brothers insisted that I should go home with them and get acquainted with their bright sister, Katharine, who was at the time the housekeeper for the two young men. Perhaps I might mention incidentally that this good sister, who was at the time a school-teacher, had helped more or less in financing the boys in their novel undertaking. Next morning at breakfast Katharine passed me a cup of very fragrant coffee. I took it as a matter of course; but when both of the young men shook their heads, declining the coffee, I ventured the question, "Why, look here, friends, I wonder if you have been making coffee just for myself when I never drink either tea or coffee unless it is on an occasion like this, to be like other folks."

Now, friends, listen to the reply. I can not remember now whether it was Wilbur or Orville who spoke; but it was something like this:

"We do use coffee to some extent ordinarily; but today we expect to make one or more flights; and when we are going to handle that flying machine we want every bit of strength of mind and body to enable us to do just the right thing at just the right time; and we have learned by experience that a cup of coffee is a detriment and a hindrance; therefore no coffee in the morning when we expect to make flights during the day."

Well, here is the moral to rising young men, especially those who are doing their best to rise. Cut out or cut off, whichever you choose to put it, everything in the way of stimulants. Use milk as a beverage, not only in the place of booze, but in place of tea and coffee.

SALOONS AND THE "CHICKEN BUSINESS."

Just one more incident that occurred during that eventful summer. The farmhouse where I had board and lodging was kept by a renter by the name of Beard. Mrs. Beard was an invalid suffering from lung trouble. The doctors declared that her only hope was to get outdoors and keep outdoors. They recommended gardening or raising poultry, or something that would keep her in the open air. Nights and mornings, before the Wright brothers got around, I became quite well acquainted with Mrs. Beard. I think she had girls who did most of the housework, and she spent a great part of her time outdoors in raising chickens. Of course I could sympathize with her, as I had been more or less of a "chicken man" all my life, and was able to give her some advice. She succeeded in growing a beautiful flock of chickens — I think something like a hundred, and she got to be quite enthusiastic in the work and was evidently fast getting the better of her lung trouble. What do you suppose happened? When the chickens were of the very best size to be sold as broilers in the big city of Dayton, some chicken-thieves came in the night and took every last one — not a chick was left. Mrs. Beard was heart-broken. As the family was short in finances the blow seemed all the harder.

Her hard work for weeks and months was all swept away in a single night; and before the winter's snow came on, Orville Wright wrote me that my good friend Mrs. Beard had died of "quick consumption." The loss of her chickens and the discouragement had spoiled her enthusiasm, and so her old trouble came back. The loss of that beautiful lot of chickens, the outcome of a summer's hard work, had certainly much to do with hastening her death, even if not the real cause of it.

Where does temperance come in in this part of my story? you may ask. It comes in right here: The neighbors all around the Beard home lost chickens in a like manner. One farmer got up and attempted to stop the thieves; but they raised a shotgun and told him to go back into the house or take the consequences. With a telephone, however, he raised the neighbors and they followed the load of chickens into the city of Dayton. The driver finally evaded them by going into a part of the city where almost every house was a saloon. Of course the police were notified; but they excused themselves in some way, and said nothing could be done about it.

My good friends, the above is a sample of the sort of policemen we *used to have* years ago when the liquor gang put in officers that were according to their liking. Even the city police were of a class that could be persuaded to look the other way when somebody called on them to interfere with the liquor-traffic.

Once more may the Lord be praised that we have a better class of city officers, and that the saloon business, like the slavery of olden times, is largely a thing of the past.

This is dictated the 19th day of October, so I can not tell now the outcome of the coming election.

1919-06, A. I. Root, "Our Homes", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., June 1919, Vol. XLVII, No. 6, pp. 392-394, HathiTrust Digital Library (original from University of Massachusetts Amherst, US). Long article unrelated to aviation. It just makes two short references to the Wright brothers.

OUR HOMES

A. I. ROOT

... When I first got on to the idea of an automobile propelled by wind power, some of the sons and sons-in-law said with cheerful alacrity, "Go ahead, father. Get yourself a nice little car and put up the windmill and we will see that there are funds to carry out the experiment." If they did not say it in words, they said it in acts. Huber and his little daughter Catharine (named after the sister of the Wright brothers) recently made a trip to Florida to see the experiment of harnessing the wind. If he does not tell you about his trip himself, I will try to do it later on. ...

... Your old friend, A. I. Root, not only did find his burdens lifted by his grandson Howard, but our long trip together, gave me a chance of becoming better acquainted with him than I had ever been before. To give you a little glimpse of him I give below a clipping from the *Hummer*, a little periodical of which he is the editor:

At last we are glad to be able to say that we have seen A. I. Root's electric windmill. We saw it at midnight for the first time down in Bradentown, Florida, and it was faithfully turning the little electric generator, storing up juice in the electric automobile battery, and converting wasted energy into useful power, light, and heat — another case of a dream come true! The vision of the man who has persisted in making his dream come true is a prophecy of the future, a solution to the problem which future generations will have to face when the coal supply is used up in this country, when the gas supply is exhausted, and when the great oil wells have been pumped dry.

Then, when these are all consumed, humanity will look to powers in the air, the gentle breezes, and the mighty trade winds. God has always provided, and he always will provide as long as the world lasts. By utilizing these forces which have been ever present but which have been but little used, save for pumping water, we shall be able with but small initial outlay to have our own private power plants in our own back yards. We then can get our lights and heat from the air, run our automobiles from wind-made electricity, and probably do many other things just as A. I. Root is doing with his electric windmill in Florida. As he predicted the success of the Wright Brothers' airplanes several years before aviation was perfected, so will the success of his prophecy regarding wind power be assured in years to come — just how many years we will not venture to say. But as on that balmy Florida midnight we looked up at the big wheel, turning, turning, ever turning, generating electricity enough to light several lights, and yet turning with such a slight breeze stirring that it was scarcely perceptible where we stood on the ground, we knew then that the electric windmill was a success. The voice of the night told us, and that voice never is wrong.

1919-06, A. I. Root, "From San Diego, Cal., to Jacksonville, Fla., in 19 Hours and 15 Minutes.", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I.

FROM SAN DIEGO, CAL., TO JACKSONVILLE, FLA., IN 19 HOURS AND 15 MINUTES.

I have mentioned one or more times that it was my great privilege to be with the Wright brothers when they first made their flying machine start out and turn around and come back to the starting place. Therefore you can realize with what interest I note progress in flying as the years go by. While flying machines were first used for war purposes, somehow I did not feel like keeping track of them as much as I do now when war is at an end. Below is a clipping from the *Cleveland Plain Dealer*, dated from Fort Worth, Texas, April 18:

Maj. T. C. McAuley, commander of Taliaferro field, who has flown from coast to coast in 20 hours at an average speed of 137 miles an hour, arrived here safely this morning from Jackson, Miss., where he spent last night. He landed in his plane at 11:30 a. m.

Maj. MacAuley flew 5,500 miles in 44 hours and 15 minutes. His flying time across the continent from San Diego to Jacksonville was 19 hours and 15 minutes, setting a new record.

Of this distance, 880 miles, from Tucson, Ariz., to Sweetwater, Tex., were covered without a stop. He used a de Havilland plane with a Liberty motor.

The motor, according to the airman, never missed a stroke, and the only work done was to remove two dirty spark-plugs.

Years ago Mrs. Root and I enjoyed the privilege of going by rail from San Diego to Jacksonville. So far as I can remember it took nearly a week. Well, from the above clipping it would seem *possible* for one to get an early breakfast in San Diego and get a late supper in Jacksonville all in one and the same day. May God be praised for what has come to pass, or perhaps, rather, for what *is* coming to pass.

1919-08, A. I. Root, "Our Homes", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., August 1919, Vol. XLVII, No. 8, pp. 535-537 (p. 536), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

OUR HOMES

A. I. ROOT

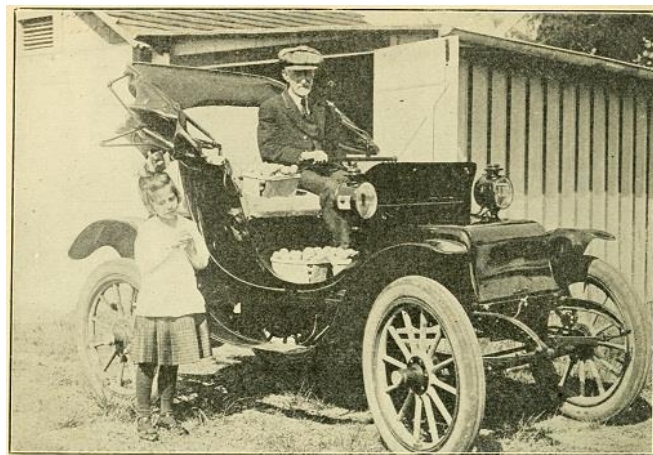
... My good friends, I have made quite a few predictions during the 60 or 65 years that I have looked over God's creation. One of the first things that impressed me was that bee culture, when it came into its own, was going to place honey side by side with milk, butter, eggs, and cheese, to be sold at every corner grocery and every day in the year. I thought it might take a score of years to bring it about; but it took almost three score. Then when I was delivering my talks on chemistry and electricity around in the schoolhouses I said that, instead of steam, we should soon run our cars by electricity. Of course I was laughed at. I thought it might be three or four years, but it took *forty* or *fifty*. When the Wright brothers first made that wonderful flight and whirled around and came back to the place of starting, I said that the feat would some time be recorded side by side with that of Columbus when he discovered America. That event, too, (flying) might have taken 40 or 50 years to bring it to pass; but this terrible war hurried things up so it has taken only 12 or 15 years from the first to enable us now to get across the great water with a flying machine in the matter of hours instead of days or weeks. ...

1919-08, A. I. Root, "Our Florida Garden and Some Glimpses of Our Florida Home", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., August 1919, Vol. XLVII, No. 8, pp. 538-540, HathiTrust Digital Library (original from University of Massachusetts Amherst, US). Long article unrelated to aviation. It just makes a short reference to the Wright brothers.

OUR FLORIDA GARDEN AND SOME GLIMPSES OF OUR FLORIDA HOME.

... The little girl in the cut is Huber's daughter, Katharine. She was named after the sister of the Wright brothers who invented the flying machine.

The garage for storing the automobile is seen in the background. Miss Katharyn Root was born shortly after the Wright brothers made their first successful flight and got back to the starting place. An account of this was first written up (and first given to the world) in Gleanings in 1905. ...



No. 5. — The electric automobile with a load of potatoes ready to take to market.

1919-10, A. I. Root, "Away Up High, Papa's Baby", Gleanings in Bee Culture, Medina, Ohio, US, A. I. Root Co., October 1919, Vol. XLVII, No. 10, pp. 679-682 (p. 680), HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

And a little child shall lead them. — ISAIAH 11:6.

"AWAY UP HIGH, PAPA'S BABY."

On the very day that the first copy of Gleanings, Vol. I, No. 1, came off the press, God sent into our home a little blue-eyed girl baby. She seemed to recognize me as a particular friend, with almost the first opening of her blue eyes; and I in turn seemed to recognize her as a "Godsend" at that particular time of my life. ("Love at first sight.") Of course, we two commenced from that moment, almost, to become acquainted. When she was able to walk fairly well, when I came home her favorite pastime was to come up to me; and while I held her baby hands so as to steady her, she would walk up my body to her perch on my shoulder; and when I used the words, "Away up high, papa's baby," she would greet me with a glad smile and shout of delight, grasp my hands, and repeat the everyday performance. I think I have told you before, that little did she, or I, dream that her childlike mission here on earth was to lift the poor *father* "away up high," compared to where he stood, when she got that first glimpse of him, with her baby blue eyes.* A little later, when this same father was engaged in starting mission Sunday schools, especially in places where strong drink was rampant and making great havoc, she used to go with him and stand up on the stage before the school, and with babyish accents sing a little hymn that started something like this:

I am Jesus' little lamb;
Happy all day long I am.

She was so very little that sometimes she forgot and did not render the hymn correctly. On one such occasion, instead of closing with the "I am" she got it "I are;" and her roguish brother Ernest had no end of fun in saying to her during the week, "Happy all day long I are." Let me now digress a little.

* Some years ago we used to hear a good deal about "What is home without a mother?" Just now I would add also, "What is home without a baby?" Is it not possible that a baby in the home — yes, even a *girl(?)* baby — may "convert the sinner from the error of his way," "save a soul from death, and hide a multitude of sins"?

Our county fair has just closed. Among the other inducements to get the people to come was a flying-machine; and passengers were to be carried up for about seven or eight minutes for the sum of \$15.00. Inasmuch as I was with the Wright brothers during their experiments, and witnessed their first successful flight in getting around to the startingplace, everybody took it for granted that I would be the first one to fly. I first refused, on the ground that I was getting to be too old; and finally, to my great astonishment, that same blue-eyed baby (of almost 50 years ago) came forward, bright and smiling, and almost as handsome in my eyes as when I first used to say "Away up high" to her. This same blue-eyed matronly woman, even tho she is the

mother of a couple of fair-sized men, announced that *she* was going to fly, and, amid a crowd of expectant and admiring citizens, off she went up, if not into the clouds, she was pretty near their neighborhood. Little did I dream in the years gone by, and little did she dream, that in the years to come that same "away up high, papa's baby," would be repeated while she was away up above the earth and all things earthly.+ Perhaps she will tell you about it herself. But she came home so full of enthusiasm, and the children and grandchildren and the friends at the factory urged me so much, that I finally consented.

+ "Up above the world so high,
Like a diamond in the sky."

By the way, a few months ago, in order to preserve my health I consented to an X ray examination of my teeth. Quite a number of them were badly ulcerated at the roots and had to come out. For the first time in my life, I took an anesthetic; but I became so excited before doing so that my heart beat so wildly (at the thought of something so near death) I felt as if I could hardly stand it. As consciousness slowly gave way, I do not think it was altogether the little prayer, "Lord, help," but it was a prayer that the dear Savior should go with me side by side while I went down into oblivion. Huber stood by my side, and I remember asking to have him where I could see him as I went down to death, or at least it *seemed* to me much like it. When I came to, it seemed as if I had been gone *somewhere* for about a couple of hours; but Huber announced that it was only *four minutes*, and there lay the heap of ulcerated teeth just as the X ray showed them.

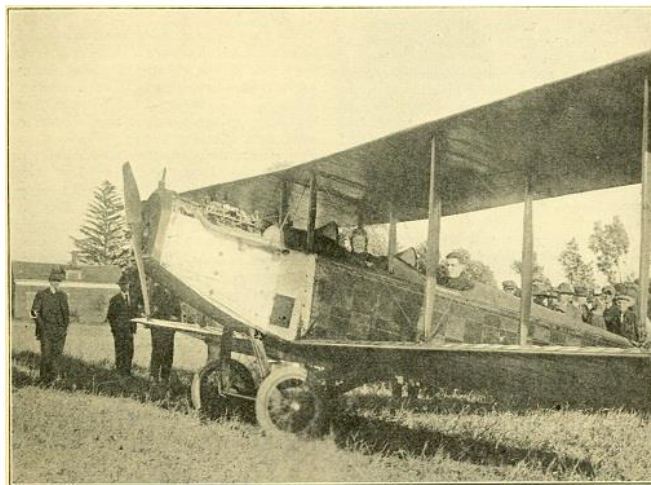
Now, I did not intend to talk dentistry right here; but so many of you want to know whether my health has improved since that "expensive" operation, I will just say that for a time I was better, and then I had my old troubles again. It has been a sort of up and down. But just now, and for the past few weeks, I have been feeling remarkably well — almost as well as I ever did in my life. Now for the flying trip:

Just before starting my heart beat almost painfully from the excitement, just as it did on this other occasion which I have been mentioning; and when the machine bumped over the rough meadow lot, uphill toward the north, I almost regretted that I had undertaken it; but when all of a sudden the beautiful machine slipped up noiselessly into the air, a wonderful thrill of thanksgiving and praise came into my heart, that it was finally my privilege to go up in a flying-machine. We have been having recent rains, and crops were looking fine. The sun was over in the west, just right to illuminate the landscape to the best advantage; and, altho I have all my life been an ardent admirer of beautiful fields and growing crops and happy homes, I never saw anything like this before. Our town of Medina seemed like a veritable paradise. Beautiful homes, well-kept lawns, abundant shade trees and shrubbery, combined to make it something brighter and more entrancing than perhaps any other view I ever had before. But as we went up higher and higher things dwindled down until the Root factory and the various offices and other buildings seemed like a chicken-yard with nicely painted coops. A train of cars passed just under us. I looked down and said to myself, "Why, can that possibly be a *railroad*?" It seemed to me more like a string of ants following each other on a black wire and, had it not been for the smoke of the locomotive, I could hardly have been sure it *was* a train of cars. Not far from our factory there was a beautiful little garden, or so it seemed to me. There was an oblong or oval road going clear around in the center, with a lawn and trees in the middle. At one side of the yard was what I took to be a very pretty and artistic chicken-coop. We passed over it several times, and I was wondering how it was possible that such a pretty little spot could be so near our factory, and I had never seen it. After I got down and had been inquiring about it some one said, "That was the fairground;" and what I took to be such a pretty fixed-up chicken-coop was the grand stand. I was disappointed because I could not see further away from Medina. Far off were some beautiful hills and a rocky ledge about 16 miles away. But this I could see only dimly. The city of Akron, 20 miles away, was hidden by dense masses of smoke; and, altho the air seemed to be very clear, as it was just after a rain, I was unable to see in any direction more than 15 or 20 miles on account of the smoky horizon. I do not know whether this is always the case or not.

I was particularly impressed with the wonderful skill with which the machine was managed.++ It responded to the lightest touch, not only as readily as any automobile, but even more so; and instead of feeling dizzy or fearful while up in the air, it occurred to me (and I still stick to it to a considerable extent), that traveling thru the air will ultimately be as safe as the automobile, and perhaps more so.

++ Since the above was dictated I am told that during the three days they were here they carried up something like 30 passengers. The machine with two passengers weighs just about a ton. By means of an aneroid barometer they decided that at one time I was up almost 1,000 feet. Furthermore, they claimed to have carried 12,000 passengers on similar trips and that they never had a mishap. If that is true, is it not likely that this new method of transit may be even safer than railroad cars, electric cars, or even automobiles?

When we came down to the place of starting we whizzed thru the air at such a terrible breakneck speed it seemed there would have to be a crash of some kind when we struck the ground; but the operator tilted the machine so that the rubber wheels first just skimmed the grassy slope uphill; and the stop was quicker and easier than we stop our best railway trains, with our most expert engineers and latest improvements.



In the above picture your humble servant is shown on the front seat. I wanted to wear my ordinary cap, but they said it would be blown off, and so I had to be equipped with a sort of fur-lined hood. The driver of the machine is shown just back of me. The propeller is in front. Does it not really look as if that little propeller was wholly inadequate to the task of pulling that big machine a mile a minute, or more, up in the air? No matter how it looks, the little "whirligig" certainly *did* "deliver the goods."

Just a word about the cost of such a trip. One reason why I objected at first was that I was afraid I might be setting a bad example before the younger ones around me. One son, two sons-in-law, three grandchildren, and several of our office girls made the trip. Perhaps they could afford to pay \$2.00 a minute for 7½ minutes of such experience;° but the whole wide world is just now talking about the *high cost of living*. Our good President and the good men and women back of him are right in warning our people to be careful, and to be saving of their money, even if we are getting better wages than ever before, and to economize in every way. No doubt, the price of a trip will soon come down. There is going to be plenty of competition very soon. One of my grandsons said something like this:

"Grandpa, if you will buy me a flying-machine, which will cost you only \$2,000, I will take you down to Florida in about *six hours*."

I think the above is a little exaggerated, but it may soon come to pass. And, by the way, can somebody tell me something about what is being done by means of this wonderful gift from God toward helping missionaries in spreading the gospel? Is it the only thing that can at present do the work? They are talking about exploring the north pole in this way, and perhaps that is all right; but is it not of far greater importance that we should use it for following out the dear Savior's injunction. "Go ye therefore and teach all nations," and, "lo, I am with you, even unto the end of the world"?

° I suppose most of you have noticed certain birds that have the remarkable faculty and skill of being able to remain stock-still while in the air. The hummingbird in particular shows this trait. Well, when we were up at the highest point there was quite a brisk north wind, and the operator almost stopped the engine; in fact, I could see the blades of the propeller quite plainly, and then I discovered he was regulating the speed so that it would just about equal the wind; and there we were for several seconds suspended, as it seemed to me, stock-still. It may have been dropping just a little. I was afraid there was something the matter with the engine, and that we were going to drop to the ground right on top of our factory; but after he had let me see that standing still was possible when the wind was just right, the motor speeded up and we were off again.

A "SKY PILOT" AND NO MISTAKE.

After the above was dictated I found the following in the *Bible Societies' Record* for August:

SCRIPTURES BY AEROPLANE.
By Rev. A. Wesley Mell.

Dan Davison, the aviator who piloted the Bible plane, was called the world's first "sky pilot" for the Scriptures.

At 3:30 p. m. the aeroplane circled the field and flew out over the Pacific Ocean, circling higher and higher until it had reached an altitude of 4,000 feet. It then started eastward for its one-hundred-mile journey, flying over San Francisco, Berkeley, and other cities, en route. Two hundred Gospels were dropped from the skies on these cities.

1921

1921-03, The Editor of *Gleanings*, "A. I. Root As His Daughter Sees Him", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., March 1921, Vol. XLIX, No. 3, p. 171, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

A. I. ROOT AS HIS DAUGHTER SEES HIM.

The *Farm Journal* for January, on its page of "Workers and Work," published an article "unbeknownst" to Mr. A. I. Root, under these headlines: "One of the *Farm Journal's* Oldest Friends, Amos I. Root, the Bee Man." The author was his daughter, Mrs. Constance Root Boyden — in the old days her father's "Blue Eyes." The editor of *Gleanings* makes bold to publish this well-done sketch of the father without consulting either the subject or the author of it. Here it is:

"My father might be described as a man who has never been without a hobby. Perhaps this explains why at eighty years of age he is mentally keen and has the enthusiasm and zest for life of a boy, altho always he has been handicapped by a frail constitution which necessitated his husbanding his health.

"When only sixteen his hobby was electricity, and he even went about giving lectures on what was then a little understood subject. Later when he had a growing business as manufacturing jeweler, he happened to notice a swarm of bees going overhead, and paid a workman a small sum to capture them for him.

"That little incident altered the course of his whole life, and shaped the lives of all his descendants to the third generation. From that time on bees became his hobby, and he gave all his spare time to their study. Since the books of that period did not give him all the information he wished, he studied his pets at first hand to such purpose that he afterward wrote the well-known "A B C of Bee Culture."

"But electricity and bees were by no means his only hobbies. He was one of the first keenly interested in aviation, being a confidant and friend of the Wright Brothers when they were making their first secret attempts at flying.

"And he has had a lifelong love for out-of-door work and "seeing things grow," both in his garden and chicken yard. You will notice I use the expression "out-of-door work." If father ever deliberately started out to play, I never knew it. He would probably not know a golf stick from a tennis racquet, nor has he any first-hand acquaintance with a fish-pole or gun. And yet, I am not sure but that he has taken more recreation than any other man I know. You see much of his work is recreation because he works along the lines of his hobbies. He can extract more pleasure from a combination of hoe, garden soil, and growing crops than other men can find on ideal links with the most expensive golf sticks.

"His latest hobby is to generate electricity by wind power. By windmills, at his little Florida home, he charges storage batteries and thus runs a little electric runabout and lights his house. He likes to mystify small boys by telling them his automobile runs by wind.

"Although father's life-work has seemed guided by his hobbies, there is a dominating principle over all, and that is, and always has been, his great desire to serve humanity.

"Here is a rather strange fact about father; he has never been employed by any other man, not even for one day.

"Now, at eighty years age, father is a busy, happy optimist."

1922

1922-06, A. I. Root, "Flying-machines Versus Horses, Trucks, Railways or Steamboats", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., June 1922, Vol. L, No. 6, pp. 402-403, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Flying-machines Versus Horses, Trucks, Railways or Steamboats.

"Coming Events Cast Their Shadows Before."

Right close to the office where I dictate is a hive of unusually energetic Italian bees. They are just now scampering into the hive, not only with great loads of honey but tremendous loads of golden-yellow pollen. The honey comes from the fruit bloom, but I have not yet decided where they get such big loads of pollen. Well, now, this thing has been going on, I might say, ever since the time of Adam; and yet so far as I know no one has as yet even suggested that the bees demonstrate to us that the cheapest way to move freight of any sort is by the "AIR" route. Here in Ohio, as I have told you before, we have a clay soil on which, sometimes, without good roads, a team can do but little more than pull an empty wagon, while we are spending millions in making good hard roads, only to find that these newly invented trucks that carry so many tons spoil our roads almost as fast as we can make them. Then we have to go to a still larger expense to lay tracks through hills and valleys for steam and electric cars. When Wilbur Wright made his first trip out into the great free air and back again with his flying-machine, I told him that he had that day demonstrated the possibility of travel without macadamized roads or railways.

Now, will somebody get right to work and tell what proportion the honey and pollen bear to the weight of the bee that carries them? and has not the bee been demonstrating for ages past the superiority of the "air route" over anything else for moving things, whether it be human beings or carloads of grain to feed the starving, somewhere, on this big earth of ours?

One of my hobbies in childhood was windmills, to get hold of the wind and use it. A little later on it was electricity. Praise the Lord, it *did* get into my head that the two could be linked together, when I was near 80 years old; and it seems likely that the third hobby of mine — the possibilities of the outcome of bee culture — might link in flying also, with the work of the honeybee.

1922-12, A. I. Root, "Modern Surgery: What it Has Accomplished.", *Gleanings in Bee Culture*, Medina, Ohio, US, A. I. Root Co., December 1922, Vol. L, No. 12, pp. 802-803, HathiTrust Digital Library (original from University of Massachusetts Amherst, US).

Long article unrelated to aviation. It just makes a short reference to the Wright brothers.

Modern Surgery: What it Has Accomplished.

... The general manager of our institution had only one little girl. You may remember I suggested naming her Kathryn, after the good sister of the Wright brothers, with whom I was in touch, some years ago. ...

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• Letters sent by Amos Ives Root to the Wright Brothers and a few other related documents

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1904-03-22, A. I. Root, "Letter to Wilbur and Orville Wright", March 22, 1904, 1 page, Library of Congress, US.

1904-05-10-or-16, A. I. Root, "Letter to Wilbur and Orville Wright", May 10 or 16, 1904, 1 page, Library of Congress, US.

1904-05-28, A. I. Root, "Letter to Wilbur and Orville Wright", May 28, 1904, 1 page, Library of Congress, US.

1904-07-06, A. I. Root, "Letter to Wilbur and Orville Wright", July 6, 1904, 1 page, Library of Congress, US.

1904-07-12, A. I. Root, "Letter to Wilbur and Orville Wright", July 12, 1904, 1 page, Library of Congress, US.

1904-07-20, A. I. Root, "Letter to Wilbur and Orville Wright", July 20, 1904, 1 page, Library of Congress, US.

1904-07-26, A. I. Root, "Letter to Wilbur and Orville Wright", July 26, 1904, 1 page, Library of Congress, US.

1904-08-23, A. I. Root, "Letter to Wilbur and Orville Wright", August 23, 1904, 1 page, Library of Congress, US.

1904-09-12, A. I. Root, "Letter to Wilbur and Orville Wright", September 12, 1904, 1 page, Library of Congress, US.

1904-09-22, A. I. Root, "Letter to Wilbur and Orville Wright", September 22, 1904, 1 page, Library of Congress, US.

1904-09-22, "Undated clipping, from a newspaper, sent to Wilbur and Orville Wright, on Sep. 22, 1904, by A. I. Root who had received it from a relative in Xenia, Ohio", see the September 22, 1904 letter of A. I. Root to the Wright brothers, Library of Congress, US.

1904-09-between 22 and 26, A. I. Root, "Letter to Wilbur and Orville Wright", 1904, 1 page, Library of Congress, US.

1904-09-27, A. I. Root, "Letter to Wilbur and Orville Wright", September 27, 1904, 1 page, Library of Congress, US.

1904-09-30, A. I. Root, "Letter to Wilbur and Orville Wright", September 30, 1904, 1 page, Library of Congress, US.

1904-10-05, A. I. Root, "Letter to Wilbur and Orville Wright", October 05, 1904, 1 page, Library of Congress, US.

1904-10-08, A. I. Root, "Letter to Wilbur Wright", October 8, 1904, 1 page, Library of Congress, US.

1904-10-08, A. I. Root, "Letter to Wilbur and Orville Wright", October 8, 1904, 1 page, Library of Congress, US.

1904-10-17, A. I. Root, "Letter to Wilbur and Orville Wright", October 17, 1904, 1 page, Library of Congress, US.

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