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by Kenneth Ward**

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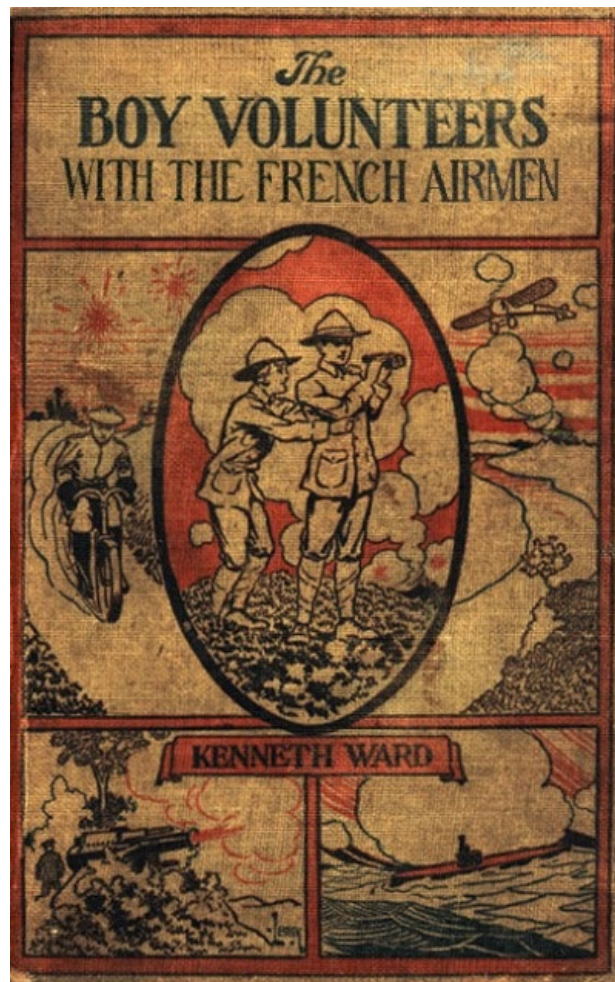
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*** START OF THE PROJECT GUTENBERG EBOOK THE BOY VOLUNTEERS WITH THE
FRENCH AIRMEN ***





The Seraph Made a Quick Glide Below Its Adversary

THE BOY VOLUNTEERS

WITH THE

FRENCH AIRMEN

BY

KENNETH WARD



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FRENCH AIRMEN

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THE BOY VOLUNTEERS WITH THE FRENCH AIRMEN

CHAPTER I

ANTWERP AND THE FLIGHT THROUGH NORTHERN BELGIUM

Antwerp was in a fever of excitement, as Ralph and Alfred marched up from the quay with the Belgian troops, and rumors of an immediate attack on the city were flying about.

"Look at the Zeppelin!" cried out a voice.

The boys turned to follow the gaze of the people who lined the streets. There, almost directly west, they caught the first glimpse of one of the monsters which appeared to be moving south, far beyond the reach of the encircling forts, but plainly visible.

"Nothing would suit me better than a trip in a flying machine!" exclaimed Alfred.

"Wouldn't that be fine?" replied Ralph.

The sight seemed to be an inspiration to the boys. Our story will tell how the idea so impressed itself on their minds that they almost felt it a duty to join a flying corps. That, however, seemed to be an impossibility.

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They had passed through Belgium, participated in the first battles of the war, had been captured, and escaped from the Germans, and had now reached Antwerp, with the retreating Belgian army, where Ralph had hoped to meet his father, whom they had left in Germany almost four weeks prior to that time.

As the father had not arrived, owing to the embargo which had been placed on all travelers from Germany to the warring countries, the boys found themselves stranded in a strange city. Fortunately, their connection with the army, and the fact that they had rendered Belgium some service, made it possible for them to get food and lodging.

"We have forgotten one thing," said Ralph.

"What is that?" inquired Alfred.

"Why, we never went to the Post Office," replied Ralph.

At the General Post Office they received a letter from Alfred's father, only to learn that he had been detained, as was the case with thousands of Americans, and that it would be impossible for him to reach Antwerp. Instead, he would be permitted to go through Switzerland, and from that country reach Paris where he hoped to meet them.

"But we have no money now, what shall we do?" asked Alfred.

"That's what worries me," answered Ralph. "Father supposes that Pierre is still with us, and that we are supplied with money."

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Three days after receiving the letter the boys heard the first definite news of the great movement of German troops designed to attack the forts. If they surrounded the city, and besieged it, the chances of reaching Paris would be small, indeed.

"Something must be done, and that today," said Ralph. "I am going to leave if I have to walk."

"Where to?" asked Alfred.

Ralph smiled, as he said: "We might walk to Holland."

Alfred almost shouted for joy, as he exclaimed: "That's a good idea. We have about ten francs left; that ought to take us through."

A map was consulted. "Why, yes," said Alfred, "we can go north to Eeckeren, and from that place to Capellen, close to the frontier. It's only twelve miles."

After this decision they again visited the Post Office, and immediately crossed through the city with a view of striking the main highway leading to Holland. Reaching the outskirts of the city, they were surprised to see great masses of Belgian troops encamped close to the forts, which guarded the highway. They soon learned that a strong German column had reached Brasscheat, three miles from Eeckeren.

They looked at each other in amazement. "Well, this beats everything," said Alfred, with a shade of bitterness. "The Germans seem to be in our way whichever direction we turn. We'll have to take another route."

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"Another route?" blurted out Ralph. "There isn't another way to go on this side of the river. It would be a long tramp to cross the river."

They were now in a serious dilemma, and stood there undecided as to the best course to follow, when they were startled by a voice: "Hello, boys!"

"It's Pierre!" shouted Alfred, who was the first to spy their friend.

"And how did you get here?" asked Alfred. "We thought they had captured you at Rouen."

"So they did, but we got away the same night. But where are you going?" returned Pierre.

"Trying to get to Holland," he was informed.

"I am afraid you will have to go south of the Scheldt to get there," Pierre then informed them.

"But I received a letter from father, and he wants us to meet him in Paris," said Alfred. "You know we don't want to be shut up in the city, if the Germans are going to surround it."

"Of course not," answered Pierre. "But in the meantime we must find some other way out. You know you are still in the army, in the messenger service, and come to think of it, you haven't received any pay so far, have you?"

The boys laughed, for that part of it had been entirely forgotten.

"Why, yes; the Germans paid us for work at the hospital," said Ralph.

"And you repaid them by skipping out the next day," said Pierre with a smile.

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"How much do you think there is due us now?" asked Alfred.

"I don't know what you are on the rolls for, but there must be a full month's pay due, and that would be about thirty-five francs apiece," said Pierre.

"Thirty-five francs!" mused Ralph. "Twice thirty-five is seventy,—about fourteen dollars. Good, that will take us through."

"I suggest that you come to headquarters and join us. We intend to cross the river. It will be the safest place for you," said Pierre.

"That will suit me," said Ralph.

Together they marched to headquarters where they were again installed and placed on the rolls. Late that night the regiment began its march, reaching the dock below Antwerp at ten o'clock, where they had a long wait before the crowded boats left the pier. On landing, the march was resumed, and did not halt for two hours, so it was nearly three in the morning before they were able to lie down for the much needed sleep.

It did not seem that they had slept a half hour when they were awakened by the heavy booming notes of cannon, and the occasional rattle and crash of small guns. The boys now knew the kind of music which the different weapons ground out.

"That's a machine gun, see how regularly the shots come," said Alfred.

"Yes; and that's a salvo from infantry," replied Ralph. "The Mannlicher guns have an awfully snappy way of talking. Do you hear it? There it is again. They must be rushing some of the outer works."

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The real fight, however, was between the forts and the heavy German guns, which continued during the entire day, principally on the southern and eastern sides of the city. The struggle was continuous for four days. Suddenly Pierre burst in with the startling information:

"The Germans have silenced two of the forts, and Antwerp is doomed."

No time was lost by the defending troops, and before noon the camp was dismantled, and the march begun.

"Do you know where we are going!" asked Alfred.

"Nothing more than that we are going to leave Antwerp, and try to reach the sea," replied Pierre.

The Belgian army had begun its famous march across the northern end of Belgium in order to reach the sea, and secure the protection of the English fleet in the Channel.

"I heard some one say that we intended going through Bruges," said Ralph.

"Yes; and from there the army may be able to reach France, after passing through Ostend," said Pierre.

In an air line Bruges is fifty miles from Antwerp, and from Bruges to the French frontier it is fully forty miles more. How the brave little army finally reached its destination, avoiding the large German forces sent out to intercept them, remains one of the most glorious exploits in the history of the Belgian army.

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"Next to Belgium I am glad to be in France," said Pierre. "Now you can get to Paris without difficulty," he added.

It thus happened that six weeks after the boys entered Belgium southwest of Liege, they reached Dunkirk on the French coast, and saw the immense fleet of warships and transports, which the British had in the harbor. It seemed that every spot around the city was taken up by tents, wagons, mules, horses, and heavy guns, to say nothing of the soldiers on every hand.

One regiment after the other entrained in cars, and were whirled to the south. Box cars, flat cars, some new, others dilapidated, were in service. It seemed that there were thousands of automobiles in line, and every one was anxious to get away. They even saw thousands of men, with full kits on their backs, march out to the east, as though they scorned to wait for railway or auto accommodations.

Pierre was at the door of the boys' tent early in the morning of the second day. "I am glad to tell you that the roll has been signed, and you can get your pay," he said. "But I am awfully sorry to have you go."

"Of course, we've had some pretty hard times," said Ralph, "but it was a great experience. Maybe we'll come back again."

"We're going to try to join the flying machines," said Alfred.

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Pierre laughed, and Ralph smiled, for, while that idea was uppermost in his mind, he had never discussed the subject with Alfred sufficiently to enable them to call it a plan that they really intended to follow out. It was more an enthusiastic feeling of something that they would like to do, without knowing just how they would go about it.

"So you are really going to start for Paris this afternoon?" said Pierre.

"Yes; we ought to be there now, for father will wonder what is the matter with us. You see he hasn't heard from us for six weeks, and it has been two weeks since we received his letter," said Ralph.

"Then why don't you wire the Continental Hotel, Paris, and tell him you are on the way? It will relieve his anxiety. Tell him to answer you at once, for it may take you several days to reach Paris," said Pierre.

"Several days?" queried Alfred.

"Yes, indeed. Troops occupy all the cars now," replied Pierre.

So the telegram was sent, and it was decided to remain where they were until morning so as to receive the reply before starting. But no answer came that night or the next day. In the meantime, the boys wandered from place to place, for, as they still wore the trim Belgian suits, they were privileged to visit many places barred from civilians.

In the afternoon they found themselves far down the road leading to Ypres, when they were startled at the sound of an unusual buzzing, and soon divined the cause as they saw a dozen or more airplanes flying around over the broad fields to the east. Nothing more was needed to give the boys an inspiration. They moved toward the great field, as though a giant magnet pulled them. Long before they were near the hangars they could see the flyers far above them, circling about. The scene fascinated them.

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Then something like a dull explosion startled them, and they looked at each other and then glanced about.

"There it is; look at it; directly above us," shouted Alfred, in great excitement.

"Something has happened; it's on fire," said Ralph.

In an incredibly short space of time, something struck and rattled along the ground not far from them, but the machine, although falling, was still some hundreds of feet from the earth. One of the operators could be seen frantically drawing back the levers, and trying to hold the badly damaged ship from overturning, but his efforts were unavailing.

The boys closed their eyes as the swiftly moving machine now actually rolled down through space, tumbling over and over, until it finally struck the ground with a crashing noise, not a hundred feet from where they stood. Terrorized at the sight, they stood still for a few moments, but this was no worse than the scenes they had witnessed in battle, so, without a word, they made a rush for the mound of debris.

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"They are both under the machine," said Alfred.

"Look at the smoke; it's afire," shouted Ralph.

"Use sand! use sand!" almost shrieked Alfred.

They had early learned that sand is more effectual as a fire extinguisher of burning oil than water, if properly applied. Handfuls of sand were scooped up and applied. A groan from one of the men arrested their movements.

Alfred jumped on the broken mass, and peered down. "There he is!" he shouted. Ralph crawled over the broken body of the airplane, and reached down.

"No; this man is lying still," he said. "Here he is; come on this side; he is under the framework."

The scene was one which well might inspire heroic work.

The imprisoned man was quite young, with handsome features, and it seemed cruel that such a fate should overtake him. The boys strained at the wreck until it moved.

"Brace it up on that side," said Ralph.

The truss from the fuselage was removed from the aviator, the man quickly drawn out from his perilous position, and carried clear of the wreck.

"Now for the other one," said Alfred.

Blood was still flowing across the face of the other flyer, as they crawled over the wreck to draw him out.

"This one is alive, I am sure," said Ralph.

"Why, yes; his heart is beating," replied Alfred, as the injured men were laid side by side.

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"I have heard that they have first aid packages in machines of this kind," said Ralph, as he sprang toward the remains of the machine. "I have it," he cried, as he leaped over the wrecked pieces. "Here is—a—*Restorative*, whatever that is,—half a wineglass at a time,—where's the wineglass?"

"Give each a good swallow of it," said Alfred, as he raised up the head of the one first rescued.

The other man opened his eyes. "Lieutenant!" he said. Then, as he gazed at the boys, he seemed

to smile, and as Alfred held up the bottle he feebly nodded.

It seemed to revive him in a few moments, and he struggled to raise himself. "I feel better now, but something hurts my legs," he said.

The lieutenant opened his eyes, and quietly looked at the boys without speaking.

"Can I do anything for you?" said Alfred.

"Is Jack hurt?" he asked.

"Yes; but he is all right," said Ralph.

"Here I am; still on top," said Jack, as he slightly turned, and moved his hand toward the lieutenant.

"And what are you boys doing here?" asked the lieutenant.

"On our way to Paris," said Alfred.

"But where did you get the uniforms?" asked the officer.

"Why, we've been in the Belgian army, and were in several fights," said Ralph proudly.

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The lieutenant's face brightened into a smile, which quickly changed to one of pain. An ambulance stopped alongside with startling suddenness, for the boys had been too busy to notice that the watchers at the hangars had signaled for assistance. The men were carefully carried to the van, and as they were about to start the lieutenant motioned to the doctor in charge, and said:

"I want the boys to come along with us."

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CHAPTER II

IN THE AVIATION CAMP

Once inside the ambulance the boys had an opportunity to watch the doctors, as they removed the clothing from the men, and began a search for the location and nature of the injuries. It was a gratification to be able to assist in this work. Jack's legs were both broken, and the lieutenant's chest, back and right arm were bruised and clotted with blood.

"I think they are all right," said the doctor in charge.

"But it's awfully hard breathing," said the lieutenant.

"You must have had a pretty good weight on top of you," remarked the doctor.

"I should think so," said Ralph. "It was all we could do to lift up the cross piece of the frame from him."

"We'll straighten you out in a few days," answered the doctor, "but your companion didn't fare as well. Compound fracture of one leg; but he has a good constitution; he's good for several trips yet."

The gratitude of the lieutenant was plainly observable, and the doctor was quick to notice it. "If these young men hadn't taken you out when they did it would have been all over with you, because the weight prevented you from breathing."

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The lieutenant tried to smile, as he gazed at the boys, and they understood.

When the ambulance reached the hospital there were fifty or more aviators from the station, awaiting the news. The boys leaped out, the attendants were on hand with the stretchers, while the excited men crowded around the boys to learn the details. It was not long before the story of the rescue was known. The chief of the flying squadron came out of the hospital, and approached the boys. The latter straightened up and saluted.

"You should be commended for the prompt work you performed in rescuing the lieutenant and his pilot. I understand you belong to the Belgian army; but you are not Belgians, are you?" he asked.

"No, we are not," said Alfred, slightly embarrassed at the question.

The Commandant smiled as he continued: "I take it that you are Americans?"

"Yes, Captain; you are right," replied Ralph. "We joined the Belgian army at Liege, and fought the enemy all the way to Antwerp, and we had some pretty hot times, too."

This speech was applauded heartily, while a young man sprang forward, held out his hand and

said: "And here's United States, too."

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"We are not with the army now," said Alfred, recovering; "we hope to go to Paris, if it is possible to get there."

"The chances for that are not very good at present," observed the Commandant, "but in the meantime, if you are not attached, you must put up with us."

"Thank you for the offer," said Ralph eagerly. "We want to get into the flying service; that will just suit us."

"I am afraid that the army provisions would not permit you to join," said the officer, and all noted the expressions of disappointment that indicated the boys' feelings at this announcement.

"Then I suppose we'll have to force our way in, just as we did in Belgium," said Alfred.

This was greeted with a sally of laughter. The boys had made a hit with the corps, and they accepted the offer of quarters for their accommodation in the firm belief that something would turn up to assist them in their desires.

Boys are really at a disadvantage sometimes. This story, as well as many others, shows that they are capable of doing things as well as men, and that they can do some things better than most men; but in military matters the service seems to have been made for grown-up people on the principle that war is too barbarous a thing for young men until they are twenty years of age.

The boys, who were now in their glory, had a portion of a small room in a wooden building assigned to them. At this time there were fifty machines of various types on the ground, the particular makes being the Bristol, the B. E., several Farman machines, and a half dozen Sopworth tractors.

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Tom Walton, the young American who greeted them at the hospital, was accorded the privilege of escorting the boys and introducing them. That they had been in the first battles of the war was sufficient to give them a coveted place in that company of enthusiastic men, for there was some glory in having been on a battlefield,—a thing which could have been said of only a few of those who entertained them that day.

"I suppose you want to see the machines," said Tom.

"Indeed, we do," said Alfred. "What is that big machine over there?"

"That is a Bristol," answered Tom.

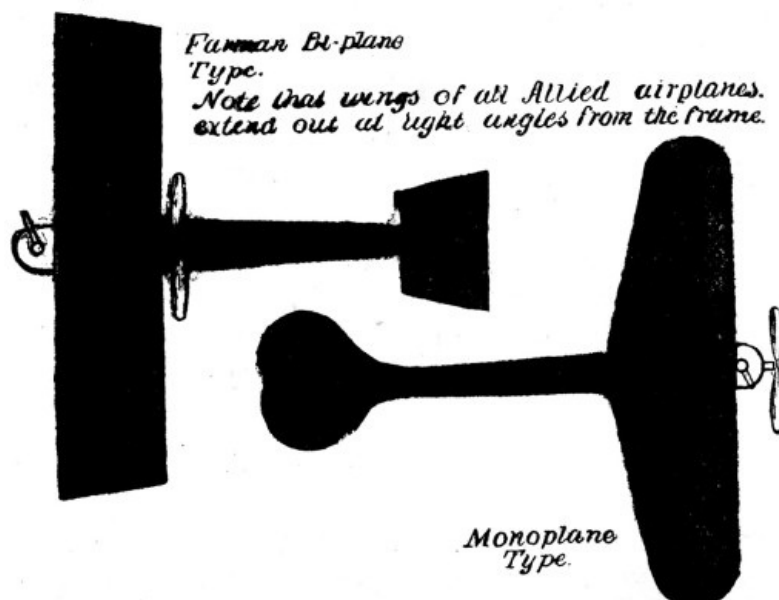
"And there is another one," remarked Ralph, pointing to a machine, which was being drawn out of the hangar.

"No, that's a B. E. biplane," answered Tom. "You will see the difference by observing the shape of the planes. The Bristol has the ends of the wings rounded so that the forward corners are cut away to a greater extent than the rear corners. In the B. E. the wings are cut to conform with the well-known Wright type."

"That's a Farman machine, I know," said Ralph, pointing to an aeroplane which had a huge revolving type of motor forward of the main planes.

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"Yes; but when that machine is high in the air it would be difficult to recognize it from that description," said Tom. "You will notice that the lower plane is much shorter than the upper plane, and that it has a great spreading tail,—larger than any other machine now made."



"Here is another kind, a little fellow. That certainly looks different from all the others," said Alfred, as they stopped in front of a hangar.

"That's the Sopworth tractor, a fine, speedy machine, with square ends to the planes, and a heart-shaped tail. It can be distinguished at any altitude," answered Tom.

"I notice that that has different tails," said Ralph. "Does that make any difference in the flying?"

"Not in the least. Shape has nothing to do with it. Surface is all that counts. They are made with distinctive forms so that they may be easily distinguished, one from the other." [Pg 30]

"We saw some German airplanes, several dozens of them, in Belgium, and the only one I could recognize was the Taube, as they called it. They have fan-shaped tails," said Alfred.

"But here is the machine for business," said Tom, as they halted in front of a gaily decorated hangar, and pointed to a trim little machine, which was being overhauled.

"I see you have the Stars and Stripes above the door," said Ralph.

"Yes; and this is my machine; isn't it a beauty?" said Tom with a considerable show of pride.

"What is it? I mean what make?" asked Alfred.

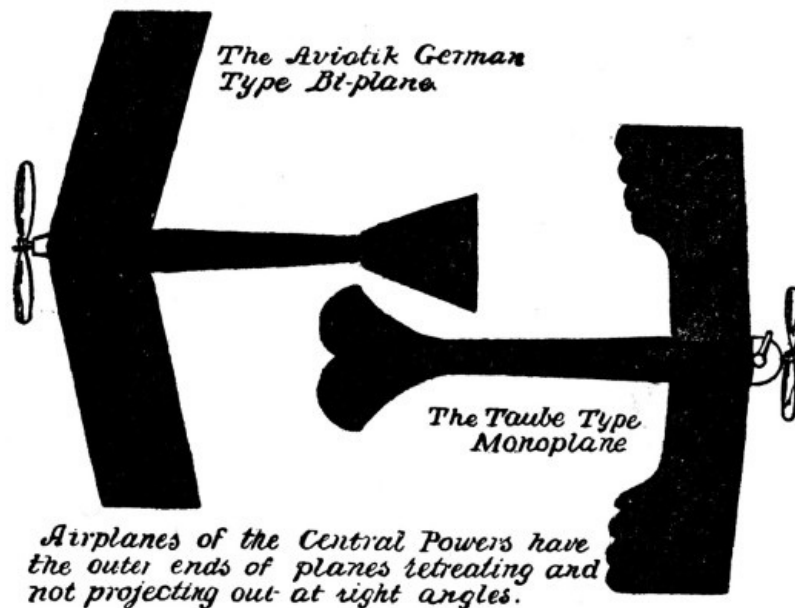
"It is a French Morane; I have made many trips in it," said Tom, "and now I am going to use it against the Dutchies."

Thus they were conducted from place to place, visited the machine shop, which had been set up for repairs, and then inspected the landing field, which was designed to be illuminated for night work.

"Do you mean to say that you use the flying machines at night?" asked Ralph.

"Why, certainly; that is going to be a great stunt," said Tom. "The only trouble is that where there are many lights about it is pretty hard for a pilot to hunt out the landing place, so the authorities have made special provision for returning aviators to enable them to land with as much safety as in the daytime." [Pg 31]

"How is it arranged so they can land without a mistake?" asked Alfred.



"Do you see that tall pylon, over there?" replied Tom. "That has on it the pilot light, much more brilliant than anything in sight. Now, look over to the left, nearly a quarter of a mile away; that pylon carries a brilliant red light. The other two pylons to the north and to the south have blue lights. The aviator knows that the bright light is to the east of the red light, and that he must make a landing somewhere between the brilliant light and the red light, between the limits marked by the blue lights."

"I should think that would be easy," said Ralph.

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"It is when the night is clear; but the trouble is that the fog from the channel gives us considerable trouble, and then we have to glide back and forth very low to get our bearings, and that is dangerous business in the night."

The inspection raised the enthusiasm of the boys to the highest pitch. For them there was now no other life than flying, and, indeed, things seemed to be coming their way. They had learned more about machines during the two hours thus spent than they had acquired in all their lives previous to that time.

"I want to ask a favor of you," said Alfred, as they were returning to their quarters.

"Go ahead," said Tom.

"I would like to go up in a machine with you," was the reply.

Tom stopped, and looked at Alfred. "Do you really mean it?" he asked.

"Of course I do," replied Alfred.

"That's what I want to do, too," chimed in Ralph.

"It's against the rules to take up any one but the observers during practice hours; but let me see, —we may be able to fix it up some other time," said Tom.

"Do you have to do much practicing?" asked Alfred.

"Only from six to eight hours a day," answered Tom.

"What! do you mean practice flying when you are not scouting?" asked Ralph.

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"Well, I should say so," was the answer.

"How long have you been flying?" asked Ralph.

"About two years," said Tom.

"And still they make you fly every day, for practice?" asked Alfred.

"Of course," said Tom.

"And what is that for?" asked Alfred.

"Flying airplanes for war purposes is something different to ordinary flying. The principal practice is to learn the methods of attack and defense. But that is not all. The airplane is the eye of the army; the observer must know how to observe. He must be able not only to see, but to put his knowledge into such form that it can be handed in in the form of a report. While he may get the information he must learn that the information is not for his own gratification, but for the use of the men in the field," said Tom.

"Do all the machines carry a pilot and an observer?" asked Ralph.

"Not by any means," answered Tom. "The first duty of a pilot is to learn how to control his machine when approaching an enemy, and how to attack or to avoid him. For that purpose he has a machine gun which he uses in flying."

"I had no idea that there was so much to do in the business," said Alfred.

"That is only part of the practice," continued Tom. "The most interesting part of the work is to practice flying in squadron formation, to observe the signals of the commanding officer and to execute movements. For this purpose two squadrons oppose each other, and sally forth, the object being to judge the objects of an attacking force and to devise means to repel the enemy."

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The boys sat on their improvised bunks until a late hour that night. They discussed the airplanes; the men they had met; their work in rescuing the fallen aviators, and the things they had learned in this, to them, the most eventful day.

"I wonder what father would say if he knew we were going to join the aviation corps?" said Alfred.

"Well, I wonder what he will say when he hears what we were doing in Belgium," replied Alfred.

"He must have gotten our letters by this time," said Ralph.

"Then why doesn't he answer our telegram?" asked Alfred.

"Why, we forgot to go back to the city and inquire for it," said Ralph.

"That's so; but we've been too busy for that; we must do that the first thing in the morning," said Alfred.

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CHAPTER III

THE WOUNDED AVIATORS

They were out early the next morning, and started for the tramway a mile distant. They passed Tom's hangar, and stopped for a moment to take a look at his machine. As they were leaving they heard his voice:

"Going to leave us?" he inquired.

"No; but we must go to the city to get our mail, and we are expecting a telegram," shouted Ralph.

"Get back by eleven o'clock if you can," was the answer.

"We'll be here, sure," said Alfred.

"He must mean that we can have a try in the machine at that time, I suppose," remarked Ralph.

"I imagine that's why he wants us back then," answered Alfred.

They covered the mile in record time. The idea of going up in a machine was a stimulus, and they talked about it all the way, and wondered what it would feel like to sail above the earth in a war-machine.

At the post office they had their first disappointment, and there was nothing at the telegraph office. They were perplexed at the absence of news, but consoled themselves with the thought that transportation from the Swiss frontier might be in the same condition as at the Western front, so they decided they would not remain long in the city.

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The city, containing a population of about 40,000, is located on the sand dunes. It takes its name from the old church of St. Eloi, and means *church on the dunes*. It has been in existence for over a thousand years, and was owned by the Dutch, the Spaniards, and the English, before it became permanent French territory.

Passing through the principal square, on their way to the terminus of the tram cars, they saw crowds of people moving toward the main landing place of vessels. They followed, and witnessed the debarkation of the first vessel load of Red Cross supplies, accompanied by a large corps of physicians and Red Cross nurses.

Fully fifty vans were taken from the ship and lined up, with their equipments, ready for a prompt start. A number of lorries (large motor trucks), carrying beds, bedding and like material, followed, and were placed behind the vans.

"Do you know where they are going?" asked Ralph, addressing a young man in uniform.

"To the general hospital, where they will be assigned to stations near the front," he replied.

"Do you mean the general hospital near the aviation ground?" inquired Alfred.

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"Yes," was the answer.

"Probably we can get a chance to ride there," said Ralph, addressing Alfred.

The man overheard the remark, and quickly turned to the boys.

"Are you attached to the flying squadron?" he asked.

"Yes," replied Alfred.

"Then they wouldn't object, I am sure," answered the officer, and he strode forward. After speaking a few words to one who seemed to be in charge, he motioned to them.

"Get in, boys," he said.

They were quick to respond, and, after thanking the officer, mounted one of the vans. Inside were three nurses and two physicians, who smiled at the boys.

"So you are going to war, too?" said one of the nurses, as she made room for them.

"Yes," said Alfred, rather shyly; "we are going back."

"Going back?" remarked one of the doctors. "Did you say 'going back?'" he inquired.

"Well, we were with the Belgian army from Liege to Antwerp, and came across the northern part of Belgium with them," said Alfred.

"Then you must have seen some fighting?" asked one of the others, much interested.

"Yes, indeed; we were in the first battles of the war," said Ralph.

The information was certainly an interesting bit of news. From that time on the boys were the center of interest, and many questions were plied and answered.

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"But where are you bound now?" asked one of the doctors. "If I understand correctly, you are attached to the aviation corps, is that so?"

"Yes, we are being put up by them, and we may do some flying in a few days," said Alfred.

"We do hope you will be successful," said one of the nurses. "Won't you tell us where you are from?"

"We are from New York," said Alfred.

"Then you are not English?" she asked.

"Oh, no," replied Alfred. "But that doesn't make any difference. It's just the same as though we were English. We want to help out."

There was a merry roar of laughter at this, and Ralph immediately chimed in with a sort of explanation: "The Germans didn't treat us right, when they captured us, and, anyhow, they had

no business to attack Belgium."

"Good for you," said a sweet little miss. "We like Americans, and especially those like you who have that spirit."

The vans covered the ground to the general hospital in quick time, and the boys were really sorry when the van drew up before the building, but they quickly recognized the place where they had accompanied the injured aviators the previous day.

"Ralph, we ought to go in and see the lieutenant and Jack," said Alfred.

"Who are they?" interposed the doctor.

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"Why, they fell with their machine yesterday, and we helped them out," said Alfred.

"What was the lieutenant's name?" asked the doctor.

"Why, we don't know; we forgot to ask for it; but maybe they will let us in," said Ralph.

"Come along," said the doctor. "We'll find a way to get in."

They followed him up the steps, and marched to the office, where the doctor was greeted by many of those present.

"Who was it that met with an accident yesterday?" he asked.

"Lieutenant Winston," was the reply.

"And was he badly hurt?" almost shrieked the sweet little nurse who had accompanied the party in the van.

"No; he is getting along well," said the attending physician. "He owes his life to a couple of brave lads, who happened to be near. He has been anxious to see the boys, and has asked where they were."

"We are the ones who helped him," said Ralph. "We want to see him; may we?"

"Oh, thank you, thank you so much," said the nurse.

"Do you know him?" inquired Alfred.

"He is my brother; may we go to him at once?" she asked.

"I will take you to him," said the physician.

"So you are Miss Winston?" said Alfred. "Isn't it funny how we happened to meet you?"

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She almost hugged the boys in her joy at the news, and at her good fortune in thus meeting the boys who were instrumental in saving her brother.

The lieutenant saw his sister approaching arm in arm with the two boys. The greeting was a most affectionate one.

"I met the two boys in Dunkirk; they just happened to get into our van. We learned after we got here what they had done. Isn't it noble of them?" she said.

"I have tried to find them all day," said the lieutenant, and he pressed the hands of the boys. "Yes, I was in an awfully tight place when the boys found me; but I am all right now."

They remained with the lieutenant and his sister for more than an hour. They had entirely forgotten their appointment with Tom. It was nearly twelve o'clock.

"I am afraid we shall have to leave you," said Ralph. "We promised Tom to be over at the hangar at eleven."

"Tom Brandon; the American dare-devil?" said the lieutenant, smiling.

"Why, yes," replied Alfred, somewhat hesitatingly. "Is he a dare-devil?" he continued, with wide-open eyes.

"Well, he doesn't seem to be afraid of anything; I suppose he would go anywhere, if he was ordered to make the trip. Is your engagement an important one?" asked the lieutenant, with a curious light in his eye.

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"Why,—yes,—we—we wanted to take a flight this afternoon," said Ralph.

"Do you think they would let us?" asked Alfred quickly.

"Rather against the rules and somewhat risky," said the lieutenant, slowly shaking his head, but his face relaxed, as he saw the crestfallen appearance of the boys. "We can get around the rules sometimes," he added.

"Tom said he would try to fix it for us," said Ralph.

"Then go at once, and tell him that Winston gave him permission," said the lieutenant. "Do you think it is safe, Addie?" he asked, turning to his sister.

"It seems to me it is safe to trust boys who have been in battles as they have, don't you?" she replied sweetly, as she arose and grasped the boys' hands. "Now, don't forget us, will you?"

"No, indeed; we intend to come over to see you in the morning," said Ralph.

The boys fairly flew across the broad grounds in order to reach the hangar. Their chagrin was great as they peered in to find that Tom and his machine were absent.

"Looking for Tom?" asked one of the men.

"Yes; do you know where he is?" asked Alfred.

"He's coming now, I think," was the reply, as the man approached the door and glanced upward. "Yes; there he is, winging it in."

Within two minutes the Morane gave a quick dive, then flattened out and skimmed the ground, and just before alighting the nose of the machine gave a short, quick, upward dart. [Pg 42]

"He does that the slickest of the whole lot. That was a quick stop, sure enough," remarked an attendant.

The machine had landed not two hundred feet from the hangar. The boys were over without delay, and accosted Tom, as he reached the ground.

"We are sorry that we couldn't get here in time, but we met Lieutenant Winston's sister coming over, and we were detained at the hospital," said Ralph.

"It's just as well, as I couldn't make it. The commandant wouldn't give me the time to take you out," said Tom.

"But the lieutenant told us to tell you that he gave you permission to take us," said Alfred.

"Did he say that? Well, that's another thing. I'll tell the commandant," and, without another word, he crossed the field, and disappeared. He was back in five minutes, and waved his hat as he appeared.

"All right, boys; we'll have an hour's flight; how will that suit you?" he said.

The boys were too much excited to know what to say in reply. Tom walked around the machine, observing every part of the control plane and the wires, then mounted the chassis, and with a wrench unscrewed the base of the machine gun.

"Here, boys; we'll take this off for the afternoon; it'll give you more room. There, take hold of it at both ends, and carry it into the hangar," he said, as he handed down the weapon. [Pg 43]

"Gee! but that weighs something!" said Ralph.

"Close to eighty pounds, I should say," observed Tom.

"Where shall we sit?" asked Alfred.

"You can easily crowd into the hole in front," said Tom. "Now don't get frightened and jump out; I can bring you down easier than that. If it seems to turn over, don't mind. That's part of the game."

The Morane was equipped with a self-starter, but three attendants were on hand to hold the machine. They took their places and Tom turned on the switch. Whir-r-r-r-r,—they felt the tremor of the machine. Soon Tom's hand was raised and came down with a swift motion. They felt the machine slowly gain headway, and then it seemed to spring forward with huge leaps. At first they could feel the oscillating motion of the wheels, and as the speed increased there was less jar until finally there was no further vertical movement, and they no longer felt the wheels traveling over the ground.

"We're up!" shouted Ralph in excitement, as he turned to Tom. The latter evidently knew what Ralph meant, even though the noise of the motor prevented him from hearing, for he merely smiled, and shook his head.

Alfred leaned over the side of the body, and gazed at the wheels, and as he did so something seemed to push the seat of the aeroplane upwardly. He quickly turned toward Tom and smiled. They were in the air. How glorious it seemed to Ralph and Alfred at that moment. The feeling was an indescribable one; they were now going up rapidly; ahead was a tall pylon, which seemed to be directly in their way. [Pg 44]

Ralph seized Alfred's arm, and pointed toward it, their eyes being intently fixed on the square flag which flew above the mast, but the machine seemed to whiz by it like a streak. After passing it the machine seemed to slow down. They were not aware that the closer you are to an object the faster seems to be the motion. Looking down at the earth they could note an object for some time, and as they went further up and up, things on the earth seemed to pass by with less and less speed.

The most confusing thing to them was the constant change of position. Instead of making a straight-away flight Tom circled around the aviation field twice, going higher on each turn. The great hangar was plainly visible each time they came around, but it grew smaller and smaller.

The boys leaned over the body of the machine, and scanned the earth below. It was too grand and inspiring for words. It was some time before they began to realize that the hangars were disappearing, and that the machine was now going forward in one direction. The country below was a confused maze of narrow yellow streaks, bordered by green and yellow spots, with innumerable rows of dark green and brown bands and patches, which they soon recognized as trees, while cottages and larger buildings dotted the whole landscape as far as the eye could reach.

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Alfred was the first to cast his eyes to the north. What he saw almost startled him. A dark vivid green spread to the horizon, blending with a pale mist, far, far away.

"Look! look!" he cried.

"That's the sea!" shouted Ralph.

Tom smiled as he reveled in their joy. He pointed ahead, and the boys quickly turned. Far off, in the distance, they saw what seemed to be immense fields of snow.

"What can that be?" asked Ralph.

Alfred shook his head, and gazed silently, then turned toward Tom. "Can you make it out?" he asked Ralph. The latter shook his head.

The machine went on for ten minutes more. Beyond the white fields something else arrested their attention; great clouds of smoke were observed. They were not clouds, and there was no fire visible on the earth. That was the second mystery.

"I know what that is now," said Ralph.

"What is it?" asked Alfred.

"Tents, tents," said Ralph.

"Yes, and that smoke must come from the big guns," said Alfred.

Ralph turned his head toward Tom, and raised his cap. The latter knew that the boys recognized the nature of the scene before them.

"That must be a battle," said Alfred, as he pointed to the great clouds of smoke.

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"Look way over to the left," shouted Ralph. "See that long, narrow road? There is something moving there."

"Why, that is cavalry; sure enough. See, they are turning a corner in the road. That's plain enough," said Alfred.

"I wonder if he is going to take us over the German lines?" queried Ralph.

"And suppose something happens, and we are compelled to go down; we'll be in a nice fix," remarked Alfred.

Ralph shook his head, and glanced back toward Tom. The latter, however, soon turned the machine. As he did so a dozen or more aeroplanes came into view. They noticed that the machine was going toward a field where a huge gas bag was moored near the ground. It was an observation balloon. Beyond were several dozens of flying machines drawn up in front of the hangars. Tom circled the machine around several times; the earth came nearer, and soon they observed a long stretch of green that seemed to invite them. In another minute they were several hundred feet from the earth, and they seemed to go faster and faster.

"Whew! but doesn't it scoot now," said Alfred.

They grasped the body of the car, while it seemed to fairly sizzle through the air. Closer and closer the earth crept up toward them. They felt that it would be necessary to hold fast when the shock came. The next sensation was most peculiar; the body of the car began to rock up and down; the din of the motor had ceased, and they were riding on the earth.

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CHAPTER IV

TRENCH WORK WITH THE BRITISH FORCES

Everyone seemed to know Tom, as he was heartily greeted on all sides. The appearance of the boys, however, was a puzzle to the group of aviators.

"Let me introduce my friends, Ralph and Alfred, genuine American boys, who were with the Belgians in their great fight from Liege to Antwerp," said Tom.

"How did that happen?" asked one of the men, as he grasped their hands.

"We were on the spot when war was declared, and we just pitched in and helped them out," replied Ralph.

"Were you in any battles?" asked another.

"Oh, in a dozen, or so," answered Alfred.

"Good boys!" shouted several.

"How did you happen to get here?" asked the first interrogator.

"We came over with the Belgians, from Antwerp," said Ralph.

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The foregoing information was enough to introduce the boys, and they were gratified to find several other Americans in the party.

The reception was cut short by the peculiar antics of a huge Farman machine, which was approaching in an erratic manner. It seemed to dart back and forth, and swing around in short circles, as though wounded.

"Something is the matter with Le Clere," shouted Tom.

At that moment the machine darted toward the earth, and the boys held their breaths at the anticipated calamity. Fifty feet from the earth the machine righted itself, and swooped upward, then, with a vicious plunge, it went down and struck the earth, the crash being plainly heard, although it landed more than five hundred feet from where they stood.

Every one on the ground rushed toward the fallen aviator. Before they reached the scene, two men extricated themselves, and stood on the debris.

"What was the matter?" asked Ralph.

"Look at the holes in the wings," said Tom. "That tells the story; pretty well riddled."

"Are you all right?" shouted one of the men.

"Yes, but that was a dandy fight, and we brought him down," replied Le Clere, a daring Frenchman, who handled the machine gun.

The Gnome motor was lying on the ground twenty feet from the wreckage. One of the planes was tilted up at an angle, and was uninjured, but it carried the marks of twenty holes, through which the sunlight streamed.

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"That will give you an idea of the fascinating work we are engaged in," said Tom, pointing to the bullet marks. The body of the machine was wrecked, and the fuselage a mass of splinters. It was, indeed, a mystery how the two flyers escaped without injury.

"What will they do with the machine?" asked Alfred.

"They'll build up another out of it in two days," said Tom.

"The Germans are marching west and south of Roubaix," said Le Clere. "They have already reached Mons, and are going straight toward Paris."

The boys looked at each other in amazement. It seemed as though their trip to Paris would be interrupted, after all. Tom seemed to read their thoughts.

"How far is it to Mons?" asked Alfred.

"About fifty miles south," said Tom.

"And what is the name of the town which we saw before we came down?" asked Ralph.

"Lille," was the response. "But we must be going back," continued Tom. "We are going to move south in the morning, and I have a few things to pack up."

After bidding good-bye to every one, they climbed into the airplane, and those present gave the boys a cheer, as the machine glided forward. Tom had promised to give them an hour's flight, and it was now four o'clock. They had heard about taking observations, while on the grounds at Lille, and they busied themselves in trying to do work of that character. How small the houses were! They could see little creeping things, that soon evolved themselves into horses and wagons, but they seemed unreal.

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The flight to Lille covered a distance of forty-five miles, and it took them an hour. It didn't seem that they could have been aloft half of that time. Now, on returning, the novelty had worn off, and they were so much interested that they forgot to look at their watches until the deep blue haze, which betokened the approach to the sea, aroused them.

"Why, it's past five o'clock," said Ralph. "Tom was going for an hour's flight only," said Alfred.

"He just said that in fun, I suppose," replied Ralph.

After alighting the boys did not know how to fully express their appreciation of Tom's kindness for the great treat, and they inquired whether they could not be of some service to him, as they were only too anxious to help him out in any way that would be useful.

"Why, no; I don't know what I can put you at," replied Tom. "Of course, there's always lots to do about the hangar, and the first thing to learn is how the machines are built, and how to handle them; and then, an important thing is to learn all the tricks in a gasoline engine."

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"That's just what we want to learn," said Alfred, enthusiastically.

"But I thought you had to go to Paris to meet your father?" said Tom.

"Yes," replied Alfred ruefully; "but we can come back. I'm sure there will be no objections."

"Of course, it's your first duty to go to Paris—that is, if you can get there," said Tom, rather slyly.

There was now nothing for them to do but to make an effort to reach Paris. Immediately after landing, they started for the tram way, and reached Dunkirk after six in the evening.

"I never was as hungry in my life," said Ralph.

"Do you know why?" answered Alfred.

"Come to think of it, we didn't get anything to eat at noon," was Ralph's answer.

After alighting from the cars, their first mission was to seek a restaurant, and from that point they soon reached the post office, only to be again disappointed. At the telegraph office they had the same bad luck.

"I wonder where father is?" said Alfred.

"I suppose we shall have to go, whether we want to or not," suggested Ralph. "Let us inquire at the transportation office."

At the main office they soon learned that the troops from England were occupying every coach, motor wagon and bus that was in sight, and that there was no encouragement in that direction. But an idea occurred to Alfred.

"We belong to the army, don't we?" he said.

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"Suppose we apply as soldiers, and tell them we must get to Paris at once."

They reached the main office of the Army transportation service, and boldly made their way to the room indicated by an attendant. In a few moments they were ushered in, and saw at least a score or more soldiers and officers in the room, at one end of which sat a white-haired officer, and several other officers, issuing orders.

"Your business?" said an officer, approaching them.

"We have been with the Belgians, and have just come from Antwerp. We are Americans, and are trying to reach Paris, and we wanted to know if we couldn't go on one of the trains?" explained Alfred.

The officer shook his head. "I am sorry to say that we cannot provide for any one unless connected with the army," he said.

"But we are connected with the army," said Ralph. "We were messengers, and have had a lively time, too."

"Yes, and we expect to join the flying corps, but father expects me in Paris," said Alfred.

The officer smiled, and pondered a moment. Then, motioning to them, he passed out of the room, the boys following. They crossed the hall, and entered a narrow room.

"Lieutenant," he said, "issue a permit for these boys to ride on any available train to Paris."

The boys expressed their thanks to the officer, and, after giving their names and home addresses, they received a card, which stated that the Army transport service permitted them to ride on any train where there was available room, at the discretion of the officer in charge of the train.

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"I should advise you to see the officer at the station in the morning, and get him to assign you to a train number, as the quickest way," said the clerk, as he handed them the permit.

"Nothing like determination," said Ralph. "It is bound to pull you through."

It was too late for them to return to the aviation field that evening, so after considerable search, they finally found a room, and after discussing the events of the day fell asleep, and awoke long after the sun had risen.

"We've got to do some hustling," said Ralph. "We ought to see Tom this morning and tell him of our good luck."

They partook of a hasty breakfast, and were at the station in order to get an assignment. But this was not an easy matter. They waited for nearly two hours before they were able to reach the proper official.

"I am sorry to say that we cannot take you today, but I will try to make a reservation for you tomorrow. Come here after four this afternoon," said the officer.

"Now for the aviation field," said Alfred.

They were detained for more than an hour watching several newly arrived regiments embark on a train, which slowly pulled out to the south, and it was nearly noon when the grounds were reached. There seemed to be a change in the place. The hangars were empty, and no machines visible. A score of men were taking down the temporary hangars and from them it was learned that the entire corps had started at eight o'clock for the southern station.

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"That's too bad!" said Ralph regretfully. "I wish we had started back earlier."

"Then we might go to the hospital," suggested Alfred.

The head surgeon remembered the boys. "It's too bad," he said. "Lieutenant Winston has been removed to the hospital at Dunkirk, and will leave for England tomorrow; but his sister is still here,—ah, here she comes."

"Oh, I am so glad to see you. Brother asked for you before he left. If you are going to England, you must go to see him. He is at Hempstead."

"We expect to go to Paris tomorrow, and we are sorry not to be able to see him," Alfred told her.

They at once returned to Dunkirk, and awaited anxiously until four o'clock. Before they had an opportunity to speak to the officer in charge, he shook his head, to indicate that there was no room. They lingered about, but it appeared to be a hopeless task. Four tracks ran by the station office, and these were constantly filled with empty cars, then loaded up, and drawn out. They watched the proceedings until the sun went down, when tired and hungry, they crossed the street, entered a coffee house, and ate a hurried supper.

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As they were moving out the doorway, Ralph stopped. Turning to Alfred, he said: "We are chumps; that's about the size of it."

"Why so?" asked Alfred.

"We have the permits, haven't we? Why are we waiting for that fellow at the station to get us an assignment?" replied Ralph.

"That's a fact; let's make our own assignment; come on," answered Alfred. "Is this train going south?" he asked, addressing a soldier who was about to enter a half-filled compartment.

"Aw! I dare say it is," was the jolly response.

"Get aboard," said Alfred.

Unabashed, they swung themselves up on the running board, and entered the compartment. The occupants glanced at them for a moment, and seeing the trim uniforms, at once became inquisitive.

"How did you happen to be directed to this train?" asked one of them.

"Oh, we attended to that ourselves," said Alfred.

"Our permit's all right, but we couldn't wait for them to make up their minds when we ought to go; so here we are," said Ralph, with a laugh.

"Well, you fellows'll do; but it's a long way to Tipperary," said a voice, which trailed off into the tune of the well-known song. His companions chimed in, and it was not long before the occupants of the adjoining compartments joined in the song. It was a jolly crowd, but no one seemed to know where they were going. All had heard of the rapid advance of the Germans toward Paris, and that General French was trying to impede their advance somewhere to the south.

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It was fully nine o'clock that night before the train made a real start. Before that time they were pushed around on the various sidings for an hour, and it was a relief to see the fields and feel the continual motion of the train as it finally speeded away.

There was no time for talk now. Each tried to find a comfortable place in order to get some sleep. They dozed and dozed, as most people are liable to do in uncomfortable surroundings, and some hours afterwards an orderly appeared at the door, shouting:

"All out, men; form in ranks."

"I suppose we shall have to get out, too," said Alfred.

"Why, no; this can't be Paris," replied Ralph.

"I know bally well it isn't," said a voice.

That settled it; tired and sleepy they swung off the running board, and looked at the long lines forming at the side of the train.

"Do you know where we are?" asked Ralph, addressing a soldier at his side.

"Don't know, my boy; we've had a steady run, though, for about three hours," was the reply.

"We are east of St. Quentin; we passed through the city half an hour ago; this isn't much of a hill we are on, but the Germans and French fought a battle on this very spot in the campaign of 1870-1," said an officer.

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Alfred saluted the officer, and asked: "How far are we from Paris, sir?"

"I think it must be fully a hundred miles," was the reply.

The men were ordered to line up, and soon the order came to march. As the boys had no other place to go, and the train was even then backing toward the city, they marched alongside of the column. The tramp was across open fields for a half-mile, where a road was sighted, but it was lined with troops, and heavy artillery, going eastwardly.

The column continued on, parallel with the road. It was dry, dusty and warm. There was a hum of sounds, and occasionally a boom or two, which the boys recognized from their previous experiences. The most emphatic voices were those of the drivers, who were piloting the horses drawing the artillery and caissons. An hour's march brought them to a small stream, which was crossed without waiting for boats or hunting for bridges, as it was easily waded.

Across the stream they ascended an elevation, at the crest of which was a line of soldiers busily at work with spades and pick-axes. Trenches were being formed. They were cheered by the workers, but there was no halting. On they went over level ground, only to meet another line of men similarly engaged. Several hundred feet beyond an order came like a shot: "Halt!"

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An orderly came riding up at full speed, and looked around. "We are waiting for orders, I suppose," remarked a lieutenant.

The orderly put spurs to his horse, and rode to the right, as he espied a group of horsemen. "Form your men along this line, and dig in," he directed.

The order was given: "File to the right; halt; stack arms."

Several lorries, which had been following them, came up, and at a word of command the men began to unload shovels and picks. This began to look like business. It was now growing light, but it still lacked a half hour before sunrise.

"Why can't we lend a hand?" inquired Ralph.

"Of course we can," answered Alfred.

They were alongside in an instant. Ralph jumped into the vehicle, and helped to hand out the implements, while Alfred tried to edge his way in. Their earnestness attracted the officer in charge, and he smiled, and nodded his head in approval. Thus two van loads were dumped out, and carried forward of the rows of stacked arms.

An engineer officer marked out the line of the trench, and the men were set to work. They were now doing the job for a *real* purpose, as during their month of training in England these men had been instructed how to go about the business of making trenches, and it was wonderful to see how quickly the furrows were dug out. They were about four feet deep, the earth being thrown up on the side toward the enemy, thus making a shelter trench five feet deep.

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As soon as the main line was thus completed, traverses were cut, leading out at right angle to the rear of the main trench. These were formed in zig-zag fashion, the object being to form shelter sections along the entire trench, so that those within would not be subjected to what is called an enfilading fire.

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CHAPTER V

ON THE FIRING LINE

"Look at the guns back there," shouted Ralph, as the company marched back to get their first breakfast after three hours of hard work.

"Come on, boys!" said the corporal in charge, smiling at the boys. "You've worked pretty hard for lads of your age; come and have something to eat."

"So we will," said Alfred; "but what are the guns doing back there?" he asked, as he pointed out a battery which had limbered up and was wheeling into position.

"You will see in a few moments," replied the corporal, and before they reached the mess wagon the guns began to roar.

"How far away are the Germans?" asked Ralph.

"About two and a half miles, I should judge," replied the corporal, looking at the battery.

"How can you tell by looking at the guns?" asked Ralph.

"By their angle," was the answer.

Before they ceased speaking, the first shot was fired, then another and another, all of them trial shots, as one of the soldiers explained. Then another battery to the left, heretofore unnoticed, began to fire, while one posted higher up on the right, and two more beyond, chimed in. This was a new experience to the boys, as the Belgians, with whom they had formerly associated, were lacking in field pieces compared with those they now saw and heard.

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The challenge was promptly accepted by the Germans, and within fifteen minutes the whole crest to the east of them, probably two miles distant, seemed to be ablaze. It was singular, however, that none of the missiles fell near the troops where the boys were located. On a little elevation to the right of the kitchen vans the boys noticed a group of officers with field glasses, intently scanning the rear of their position.

"The blooming blokes are shooting too far," remarked a soldier.

"Why are they doing that?" asked Alfred, who overheard him.

"Oh, they'll get the range in time," he replied.

"There's the first airship, to give them a pointer," said the corporal, as an airplane appeared in sight.

"Two of our machines are coming up," shouted Ralph. "Now there'll be a fight."

Ralph was right. The two English machines steered straight for the oncoming Fokker, the latter veering to the left in time to prevent too close a meeting. Within a minute three more German machines came into sight, their appearance being answered by four of their own machines, which came up from the rear, and sailed straight across above them to the German positions on the crest of the hill. They were much higher than the German machines, the reason being that the enemy had a number of anti-airship guns to meet any flyers who dared to cross the line at a low altitude.

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It was, indeed, an interesting sight to observe the numerous airplanes, which were employed by the two forces. They seemed to be flying back and forth in the utmost confusion, and, frequently, puffs of smoke would indicate that they were firing at each other.

The corporal with whom the boys talked seemed to be unusually well informed, and quite a number of the soldiers addressed him for information.

"How do they recognize an enemy?" asked Ralph.

"Oh, that's an easy matter," he replied. "I suppose the flyers in the air do it on the same principle that we are in the habit of recognizing automobiles. Why, I have a lad not ten years old who can tell the make of almost any auto the moment he sees it. Generally, if the make of the plane is similar to those attached to the aviator's side he is able to recognize it by the special mark it carries."

"What mark do you mean?" asked Alfred.

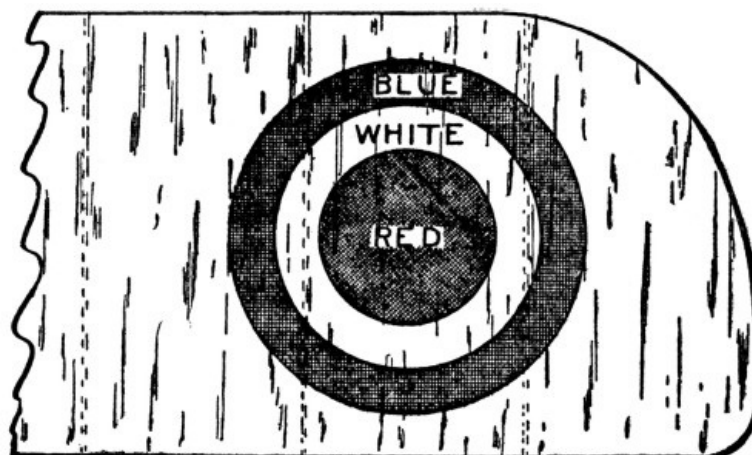
"Why, the English and the French mark is in the form of a circle, generally three, each circle being of a different color," was the answer.

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"There is one,—why, it's red, white and blue," said Ralph.

"That's correct,—those are the colors of the Allies."

"What are the German colors?" asked Ralph.



Allies' Distinguishing Mark

"Black and white," said the corporal.

"Oh, yes, they have a cross," said Alfred.

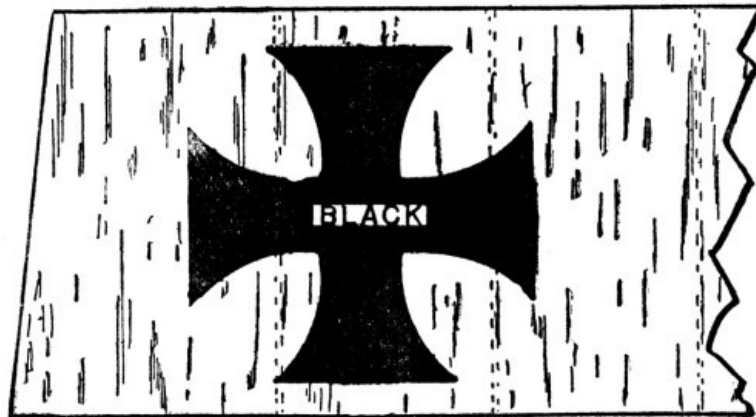
"Yes; a cross in imitation of the iron cross, so far as its shape is concerned," he answered; "that is, a black cross on a white field."

The company marched back to the line. During the next half hour there was nothing but expectancy, waiting, waiting,—that most trying thing for soldiers, who know that a battle is impending. Then a hundred feet to their rear there was a terrific explosion, which startled every one. This was followed by others, but none reached the trench line.

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Thus, during the whole day, there was an exchange of artillery, the greatest damage being done to those in the rear who were trying to get to the front.

"With the long range guns the great danger isn't always with the fellows in front," said the corporal.



Black Cross on German Flyers

At four that afternoon the company was startled by an order to leave the trenches and fall to the rear. Every one cast questioning glances, but the knapsacks and rolls were quickly seized, and within ten minutes they were in line with the regiments to the right and the left. There was no hurrying or disorder.

"I wonder why we are going back?" asked Ralph.

"I suppose it's our business to retreat," returned the corporal.

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They marched fully a mile to the rear, passing on the way at least half a dozen lines of trenches, which had been thrown up since the boys covered the ground the night before. Every trench line was filled with soldiers, those in the front being the first to retire. On the way they saw how the great shells had played havoc with many of the works.

They again crossed the river, and at six o'clock that night a new line was formed, and the spades and picks were again brought into use. The booming of cannon was incessant, and, although they tried to get some sleep after midnight, they were frequently aroused by the marching of troops. At daylight they were again marched out of the trenches, and a quarter of a mile from the last trench halted to partake of breakfast.

The march was directly south, and at noon they reached a town of some importance, called Chauny. They went through without halting, crossed the river Oise, and at four o'clock halted on the eastern banks of a stream, which flowed northwardly. Here they waited for orders. A picturesque bridge spanned the stream, and the boys wandered across. West of the river was a broad expanse of country, perfectly level, and thousands of people from the nearby villages lined the road, all crossing to the west.

All were excited, and seemed to be going toward the narrow road, which led to the left, and, naturally, the boys followed the movement of the crowd. Their curiosity was soon satisfied, for beyond was a sight which caused their hearts to beat with joy. Fully a dozen airplanes were drawn up in line, and the boys started forward on a run that seemed to instill the same activity in many others present.

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"There's a Morane," said Ralph.

"Yes; and that's Tom getting out of the machine," shouted Alfred, as they rushed up and greeted Tom, who looked at them in astonishment.

"And how did you get here?" he inquired.

"Came over with the troops," explained Alfred.

"With what troops?" he was asked.

"Don't know," answered Ralph, "but they are from Essex."

"Well, we've been on duty for a day directly over the lines east of St. Quentin," said Tom.

"Did you have a fight?" asked Alfred.

"I should say we did," answered Tom. "Brought down two, at any rate, and it was pretty hot for about an hour. So you are on your way to Paris; sorry you didn't get back before we started," he added.

"We got to the grounds several hours after you left," said Alfred.

"Glad you came; we can put you up, if you are willing," remarked Tom.

"Thank you for the invitation; we helped them on the trenches and have done considerable marching, so it's better than going back to camp," said Ralph.

The boys were up early in the morning, but didn't have the least idea what steps to take to continue their journey. Everything in the way of transportation was reserved for the troops. Thousands of people were leaving their homes, and people with household effects, mounted on all sorts of conveyances, were noted on all sides, although at this time the Germans were not within ten miles of the river. The nearest railway to the south, which ran east and west along the southern bank of the river Aisne, was fully ten miles distant from this point.

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Tom was on hand early, and greeted the boys most affectionately.

"I have been thinking I might be able to help you out a bit," he said, after a little talk. "We are ordered to the station near Villers-Cotterets, and that's only forty miles from Paris."

"How can you help us?" inquired Ralph excitedly.

"Probably I can give you a lift in the machine," he said.

"How far is that from here?" asked Alfred.

"Twenty miles," replied Tom, and the two boys looked at each other hopefully, as he left them.

Tom re-appeared at three o'clock, and informed them that they would start in fifteen minutes.

"If you are ready for the trip, jump in and make yourselves comfortable," he said, and they required no second invitation.

The dainty Morane just suited them, and they were in their seats in an instant. Tom then tossed them a light package, which they tucked away, and the engine began to buzz. As they glanced around, two more machines seemed to vie with them in taking the air, then, as they again looked around, four more machines began to move, and soon all were on the wing, flying side by side, excepting two large Farman machines, which were well in the lead.

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Up, up, up, they went, the machines on line with each other maintaining a height of about four thousand feet, while the Farmans were about five hundred feet higher. Within a half hour they saw in the distance what appeared to be a silver ribbon running east and west, which proved to be the river Aisne, and to the east they saw the city of Soissons. The beautiful aviation ground was reached within an hour, and they alighted in front of a magnificent group of hangars in the center of well-tilled fields, so located as to afford a view in all directions from the grounds. The machine was then put up for the night, and Tom and the boys were glad to turn in for a much-needed rest.

It was now the first day of September, and there had been nearly one month of war. The immense German forces had hewn their way through Belgium and entered France, reaching the cities of Laon, Epernay, and Chalons-sur-Marne, thus forming a huge circle. They were within forty-five miles of Paris.

When the boys awoke the next morning the first words that greeted them were: "The Germans are within five miles of Soissons."

They rushed over to the hangar, but the machine and Tom were not to be found. This was another source of grief to them, and they stared about, and wondered at this new turn of affairs until, meeting an attendant, Ralph inquired:

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"Do you know where the Morane has gone?"

"They all started on a reconnoitering trip at five this morning," was the reply.

"Do you think they will come back here?" asked Alfred.

"That is doubtful," answered the man.

"Then we shall have to make our way to Paris as best we can," said Ralph. "Do you think we would have any chances on the railroad?"

"It's doubtful. I should take my chances over the highway directly south, if I wanted to make Paris," answered the man. Then, after a little reflection, he added: "A large English force is expected to be here from Laon, and it may arrive before noon. Possibly the flyers will return, but if the German forces are too close, they will go on to the next station at Crepy, directly south of this place."

"Then that's the place for us," proposed Alfred, as he thanked their informant.

They had no trouble in getting breakfast and after waiting for an hour, during which all sorts of rumors were floating about, they concluded that their only course would be to commence the trip. It was not necessary for them to inquire the way, as the highway, in the distance was filled with fugitives, all trying to get to Paris, or, at least, to avoid the invaders while there was yet time.

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Reaching the highway, they moved along with the procession, and, shortly before twelve o'clock, reached Crepy, ten miles from Soissons. They were now twenty-five miles from the center of Paris, and after getting a good meal they again took up the march over a beautiful road, which ran southeast.

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CHAPTER VI

VIGOROUS RED CROSS WORK

A mile from the town they came within sight of a cross road, filled with an immense concourse, which seemed to be wending its way east. Approaching nearer, they recognized troops, artillery and horsemen, the latter moving along in the fields parallel with the roadway.

"It seems to me the firing is much nearer than when we started out this morning," said Ralph.

As they passed through the marchers, and proceeded along the highway, they saw that troops were noticed posted everywhere, and that batteries were lying in wait in every advantageous spot.

"I think we made a mistake in taking this road. We should have traveled the one which went to the west," said Ralph.

"Then let's go out the first road that crosses this," replied Alfred.

Meanwhile the sounds of battle came nearer and nearer. The artillery posted on the elevation began to speak, and before there was time to realize it the boys were within the battle zone, and bearing down on the road along which they were traveling. They had no trouble, however, in leaving the road, as all the fences were down, and many of the fields were cut up with the hoofs of horses, and creased by the huge artillery wheels.

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To add to the confusion, shells began to fall all about them, and occasionally a terrific explosion would follow, leaving them dazed and startled. They ascended a hill, and, looking back, saw nothing but dense clouds of smoke, and a scene of indescribable confusion.

"What's that down there?" shouted Alfred, pointing to a group of vans close by the side of a stream.

"That must be a Red Cross station; so it is," said Ralph.

Their footsteps were hurried, but before the place was reached they saw stretcher bearers, and also noticed the wounded being unloaded from a field van. Glancing to the left they saw fully a dozen vans of like character, as indicated by the great red crosses on their sides, rushing up the narrow street from the southeast.

"Let's give them a hand," said Alfred.

A business-looking surgeon stood at the rear end of one of the vans, as the boys approached. They saluted. "Can we do anything to help out?" asked Ralph.

The doctor looked at them for a moment, apparently non-plussed at their appearance.

"Yes, indeed; we need you and many more willing ones like you."

"What shall we do?" asked Alfred.

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The surgeon drew a pad from his pocket, wrote a few words on it, handed it to the boys, and said: "Present this to the officer yonder."

The officer indicated received the slip, while directing the disposition of a wounded soldier, glanced at it hurriedly, then looked at the boys. "Ah, want to get on duty? We can accommodate you; there, put those stretchers in the van. One of you can take this to the supply van," he said. Ralph seized the paper, and looked about.

"The van with the flag on it," explained the officer.

Ralph rushed across the intervening space, and presented the paper to a Red Cross nurse, who smiled sweetly as she glanced at the paper, and looked inquiringly at Ralph. She then turned, seized three packages, and handed them to Ralph, while he thanked her and quickly rushed away. The packages were stored in the van, water was supplied to the containers in the vehicle, and the moment the last article was on board, the van started.

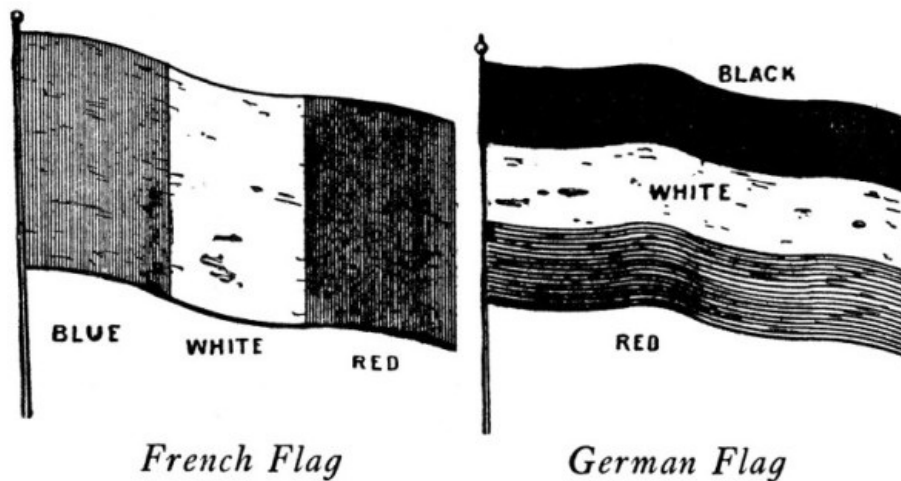
The boys were both within, as well as three men and a surgeon. They had heard no orders, but knew they were bound for the battlefield. There was no talking indulged in. The men were too intently engaged in listening to the din of the conflict, and watching the soldiers moving to and fro.

"Has there been much of a fight?" asked Ralph.

"They have been at it all morning," said one of the men. Then, glancing at the boys, he continued: [Pg 75]
"But this is a bad place for you youngsters."

"I am afraid you will regret it before you return. The scenes are awful," continued the man.

"We know what it is," said Alfred. "We saw the worst kind of fighting in Belgium."



"We were with the English in the battle east of Soissons, and had some experience there," said Ralph.

"Aren't you English?" asked the surgeon.

"Oh, no; we're Americans," replied Alfred.

At this point a lieutenant rode up alongside, and shouted: "There has been a tough scrap at the mill; we have driven the Germans back; take this road down to the river; you will find plenty of poor fellows there who will need you."

The French had made a terrific charge at this point, and many were lying dead, where the van slowed down, so as to give the surgeon and helpers an opportunity to pick out the wounded cases. [Pg 76]

Wherever there was a movement in a prone figure the men stopped and made an examination. In some cases the wounds were hurriedly dressed, and the victim's position rendered comfortable. In other cases the surgeon motioned to the helpers, who quickly brought the stretchers, and carried the wounded into the van.

On this single trip they attended, or gave first aid to thirty, but only the most severely injured were taken into the van, which now turned and quickly speeded along the narrow road to the field hospital. Reaching this station the men were carefully taken out, their wounds re-examined, and carried into a temporary shelter for a second operation or treatment.

A huge van then arrived from the southwest. Carefully and tenderly eight men were placed on the cots within, the boys being delegated to assist. When the order was given to leave, the boys remained in the van, as it started out on its journey, but they didn't have the least idea where it was bound, although you may be sure they were curious to know.

After every one had settled down,—that is, if such a thing as quiet and comfort were possible in a van load of wounded men, Ralph turned to the surgeon, and said. "Where are we going?"

"To Paris, if we can get through," was the reply.

The van had a wonderful set of springs, so that, although it was necessary hour after hour to go through fields, instead of traveling along the road, there was little discomfort to the wounded men. [Pg 77]

"Why are the men being taken to Paris?" asked Alfred.

"So as to relieve the emergency station behind the battle front," explained the surgeon. "That is one thing; the other is, that the great German forces are driving in our comparatively small army, until the Paris forts are reached. There they will be stopped, and we must take our wounded with us, and out of the reach of the enemy."

At Dammartin they saw the first Red Cross railway van,—an entire train load, filled with wounded from the emergency stations, and here also they were joined by fifteen vans taking the wounded on to the city. It was thus a fortunate stroke for the boys that they undertook to help the field hospital workers, for it directly assisted them in their effort to reach the end of their journey.

Traveling was slow, and many detours were necessary, so it was not until the fourth day of September that they caught sight of the walls of Paris, and they soon had the pleasure of driving over the beautiful smooth streets again. They went directly to the center of the city, passed down the rue de l'Opéra, through the Place de la Concorde, and over the bridge to a hospital near the

Place des Invalides.

Their charges in the van were soon provided for, and carried into comfortable berths. As they were leaving the ward, they heard a weak voice calling: "Ralph; Alfred."

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They were startled, and turned around with wondering glances. A nurse motioned to them, and pointed toward a figure with bandaged head and arms. They approached.

"You don't know me, I suppose?" said the voice.

"No,—no," said Ralph.

"I believe it's Tom," said Alfred.

"Right," said the voice.

The boys knelt down at his side at once. "How did it happen?" asked Alfred.

"Well, they got me first; but I brought down two of them before I was hit," Tom told them.

"What became of the machine?" was Alfred's next question.

"I don't remember anything about it," was the reply, "but they told me it made fine kindling wood."

"Too bad!" consoled Alfred. "I liked that little Morane; and to think it's all broken up."

"How did you get here?" asked Tom.

"Why, we came down with the Red Cross people," explained Ralph.

"You seem to get into all sorts of trouble, all along the line," said Tom with an attempt to laugh.

"But are you badly hurt?" inquired Alfred anxiously.

"The doctors say that there are only a few bones broken, several joints wrenched out of shape, and some of the bark peeled off, but I ought to be out in a few weeks," said Tom.

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"Tell us what we ought to do now?" Alfred asked him.

"What do you mean?"

"Why, I want to know whether they will expect us to keep on in the Red Cross service?"

"You volunteered, didn't you?" replied Tom. "You helped them out of your free will, and you can leave whenever you want to, if that's what you are getting at."

"I wouldn't mind volunteering in the aviation corps," said Ralph. "I would just like——"

"So they got you this time, eh?" said a voice.

The boys turned, and saw a handsome man with the uniform of a lieutenant in the aviation service, who approached, and leaned over Tom. Tom replied with a smile, and raising his injured hand, pointed to the boys.

"Lieutenant," he said, "I want you to get acquainted with two of my American friends, who have been in the thick of it right from the start. Now you'll be conferring a special favor if you can take them in to help you out. Oh, they're bricks," continued Tom, as he saw a shade of discouragement in the lieutenant's features, "they are made of the right stuff."

"We leave for Verdun in the morning," said the lieutenant, "but I will see what can be done in the meantime."

As they left the hospital the first thought was to go to the Continental Hotel to try to get a trace of Alfred's father. Arriving there a letter was handed them, together with two telegrams from Berne, Switzerland, one of the messages having been received that very day. The missives informed him that his father had not been able to leave German territory until the twenty-eighth of August, and as he had received word that the Germans were approaching Paris he thought it unwise to make the trip to that point, but would await word from them before deciding what to do.

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"How far is it from Berne to Verdun?" Alfred asked the clerk.

"About three hundred kilometers," was the reply.

"Let's see; that's about two hundred miles," said Alfred. "And it's a hundred and fifty miles to Verdun."

"Then we'll go to Verdun," said Ralph. "But how?"

The subject was debated for an hour, when it was decided to return to the hospital. They had forgotten to learn the lieutenant's name, although probably Tom knew how to reach him, they reasoned.

Arriving at the hospital they learned that Tom was asleep, and that no one would be permitted to see him, so they wandered around without the slightest idea what course to pursue. They even

discussed the feasibility of walking to Verdun, but that idea was soon abandoned.

"I wonder where the aviation grounds are?" remarked Ralph.

They soon learned that several corps were located at the great race course in the Bois de Boulogne, and they were soon on the underground railway speeding to the nearest station in that vicinity. Arriving at the grounds they approached the entrance, and their hearts sank as they saw a great crowd gathered, and one after the other turned away.

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"Chances of getting in seem to be pretty slim," said Alfred.

"Well, we might try it, anyhow," said Ralph, as he pushed forward.

They marched up to the gate, and passed through without the least objection on the part of the guards. This was the greatest surprise to both. They had forgotten that the uniforms they wore gave them admittance without question. Evidently they were taken for army messengers.

"See that American flag?" shouted Ralph.

"That's the place for us," replied Alfred.

Accordingly, they lost no time in making for the hangar on which the emblem appeared. They saw a Farman machine partly outside of the hangar, and in the body of it was seated a ruddy-faced chap.

"What's up?" he asked.

"Came over to help you out," said Alfred.

He looked down, and slowly said: "You did, eh?"

"Well, we've seen a little active service at the front, so far," explained Ralph, "been in battle several times, have been captured by the Germans, helped to build trenches, worked with the Red Cross people, and had a few flights in an airplane, and as we like aviation business best of all, we thought we'd come over and go to work."

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The airman raised himself, sat down on the side of the car body, and commenced to laugh, although Ralph's remark was said without the least tinge of pride or boasting. Several from the adjoining hangars came in to learn the cause of the boisterous mirth.

"Well, that's fresh enough to come from real American boys," he said, after he had sobered down a little.

"That's right; we're from the United States; we came here because we saw the flag on the outside; what shall we do the first thing?" said Alfred.

"From America?" said the man, climbing down from the machine. "And you are regular Yankees? Well, well; that's too good! I'm something of an American myself. By jingo, you're the kind of fellows to have around. Want a job? Where did you get your uniforms? They look all right."

"Oh, these are Belgian uniforms. We were with them, you know, and had a pretty hot time, too," said Ralph.

This information, as they now knew, was the best credential possible, and they were soon the center of an admiring crowd. Somehow the determined matter of fact and positive way which the boys adopted had the effect of winning their way, and it was thus that they had the satisfaction of entering a service which it is a most difficult thing to do even with the best credentials.

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The happiness of the boys was complete when their new friend told them to get up on the machine, and help him to take out the engine. Coats came off in a hurry, and they looked around for some substitute to protect their clothing.

Their friend supplied the necessary articles at once remarking as he did so that he ought to know their names.

After this information was supplied, he remarked: "My name is Martin; Bill Martin, Fifth Aviation Corps; don't forget the Corps or you may have trouble in getting into the grounds; and, by the way, how did you happen to get through?"

"If you mean the gates, why, we just walked right through," said Alfred.

"Just as though you had a right to do so!" said Martin, as he again commenced to laugh. "You said you were up in an airplane; where was that?"

"Up at Dunkirk, and back of the firing line, south of the St. Quentin," said Ralph.

"Do you know Tom Watkins?" asked Alfred.

"Do I know Tom? Why, we came over together; poor fellow, he got a bad fall," said Martin.

"We heard about it and saw him at the hospital today," said Alfred.

"You don't say? So you've been flying with Tom? I'm glad to know that," said Martin, as he nodded his head approvingly.

CHAPTER VII

BOUND FOR VERDUN

For three days more the boys wandered about Paris,—three days of the most fearful suspense; and then began the battle of the Marne. Every airplane in and about Paris was at the front, on the line somewhere, and the boys were deprived of the opportunity to see the new friend they had made at the Bois de Boulogne station.

They were so sure of being able to go to Verdun that Albert wrote to his father of their plans, in the hope that he would consider it wise to leave Switzerland for that point, where they might meet.

The Germans had been defeated; Paris was safe, the French line having held firmly all the way to Verdun. The determination to go there was firmly fixed in their minds, but they could see no way to accomplish the purpose. A visit to Tom at the hospital only resulted in their being told that the lieutenant was in the field, no one knew where.

"I have an idea," said Ralph, as they emerged from their room one morning.

"What is it?" asked Alfred.

"We might get attached to the Red Cross some way, and that would be sure to take us to the front," replied Ralph. [Pg 85]

"That would be just as hard as to get in with the flying people," answered Alfred.

"That may be so, too, but I can't see any other way."

They again called at the Continental Hotel in the hope that there might be some further news. To their surprise they found a letter from Alfred's father with a check for their personal expenses. While reading the letter they overheard a conversation which gave them the solution, as they thought, of their difficulties.

"No," said a voice, "they will not ticket us to any point near the firing line, but we might go to St. Dizier, and from there work our way north."

"Good idea; let's book at once," said the second voice.

"Come on," said Alfred. "That's the right tip. Let's find out where St. Dizier is."

The clerk informed them: "It is about a hundred and sixty miles east of Paris."

"Then it can't be far from Verdun," remarked Alfred.

"Sixty miles southwest, I should judge," was the answer.

"Do you think we would have any trouble in reaching that point?" asked Ralph.

"I think the trains are still running, but they may not adhere to the regular schedule. The line runs south of the war zone, you know," said the clerk. [Pg 86]

That settled it. They hurried to the Banque Française, and having secured currency for the check, started for the booking office as fast as they could walk. It was impossible at this time to get a conveyance as only the underground railways and a few tram cars were in service, the government having requisitioned all the horses, and automobiles a week previous to this time.

They booked second class, the official stating that the tickets were sold at the risk of the holders, and that they would have to take their chances on the trains, so they were at the eastern railway station before one o'clock, in the hope that the regular through train at two that day would be able to accommodate them. In this they were disappointed, so they waited about until five o'clock, and had the good fortune to have the tickets accepted by the gateman.

They passed through an immense crowd of newly arrived soldiers, and were jostled about by hosts of men, women and children who were departing for the southeast, most of them bound for Chaumont. Within an hour they finally found a train bound for their destination, but it was another hour before the train began to move.

The trip was a weary one all through the night, as they seemed to stop at every station, although it was the fast express. The intense excitement of the people all along the line; the passing of trains; the crying out of the latest news; and the bustle of the new arrivals in the already crowded compartments, made sleep impossible. The sun had been up two hours before the station of St. Dizier was announced. [Pg 87]

The boys were out and scampering along the platform ahead of most of the crowd. As they passed out the end of the station they noticed a sign on a train: "For Bar-le-Duc, 10 o'clock."

"Let's see where that place is," said Alfred.

The information was obtained. It was twenty kilometers northeast.

"That's the place we must go; it's twenty miles toward Verdun, and now is our time," said Ralph.

"Let's have something to eat first," said Alfred.

After the meal they booked for Bar-le-Duc, and this train started promptly. Only two coaches were reserved for civilians, the others being filled with soldiers. The town, which was reached shortly before noon, had the appearance of an armed camp. Here they received the startling news that the Germans were at St. Mihiel, thirty-five miles northeast of that place.

There was no sign of panic there, however. Verdun, Toul and Nancy were still intact, and there was no fear that either place would yield.

Before they had been in the city an hour they saw a dozen or more airplanes overhead, and it was not long thereafter until they learned that one of the most famous stations belonging to the flyers was located north of the place. A conveyance was readily obtained, as a line of busses paralleled the railway track, and in another hour they were on the plateau where the great hangars were located.

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As they were crossing the field, and approaching the first tier of hangars the boys noticed the two men whose conversation had been overheard in the Continental hotel. "They are the very men," said Alfred; "I wonder what they are here for?"

The men stopped and looked at the boys for an instant. Ralph approached them and said, with a smile: "You beat us here after all."

The men appeared to be puzzled at being thus addressed. Alfred saw that they did not understand Ralph's greeting, and said: "We are under obligations to you for telling us how to get here, and I want to thank you."

"I don't exactly understand," said one of the men.

"We heard you talking about making this trip, and as we wanted to get to the front without knowing just how to do it, your conversation helped us out," said Ralph.

"I'll bet you're American boys," said one of them, laughing.

"Indeed, we are," said Alfred.

"Belong to the service?" asked the other.

"Oh, yes," answered Ralph,— "that is, we did belong to it."

"Which branch?" asked the man.

"Messenger service in Belgium, aviation and trench service with the English, and Red Cross in the French army," answered Alfred.

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This response was answered by hearty laughter on the part of both men, and one of them responded: "That is a pretty comprehensive service, I should say."

"Where are you from?" asked the other.

"New York," answered Ralph. "Why, you look like Americans, too."

"We're from the same place," was the answer.

"And you look like newspaper men," remarked Alfred.

"That's a good guess," was the reply. "But how did you know?" he asked.

"I saw you taking notes as we walked across the field," answered Alfred.

"Good inference," he replied. "Are you looking for a job?"

"Yes, we're going into the aviation service," answered Ralph, with all the assurance of a winner.

"See you again," was the final reply, as the two men left them.

"Now, I wonder if they have any American flags at this place?" remarked Ralph.

They marched back and forth without a sign of that much desired emblem. At one of the hangars two men were tugging at a machine, and slowly bringing it out of the hangar. Without a word the boys sprang forward and assisted in the operation, an act which brought thanks from the men. Then, more in curiosity than anything else, they slowly walked around the machine and examined its construction.

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The aviator watched them for a few moments. Evidently, to his mind, the boys knew all about flying machines, or, at least, must have had some acquaintance with them. This seemed to interest him, and he began a conversation with them. He soon learned their history, and bestowed words of praise on them for what they had done.

"So you want to be aviators, eh?" he inquired.

"Yes, and we'll do anything to get in," said Alfred.

"To be aviators in the service of the Government it will be necessary to take the Regulation course," said the man.

"There isn't time for that," said Ralph. "We can help out now, even if we don't do any flying, can't we?"

The man chuckled. "I suppose you can tighten up bolts, examine, and stretch the stay wires, and things like that?" he remarked.

"As well as take out the engine and overhaul it," added Ralph.

"Well, yes; that's a pretty good job; do you think you could do that?" he asked.

"Why, yes; we know something about it," replied Ralph.

"Well, stay around here; we want some handy fellows; but I'm afraid you'll have a hard job to get on the pay roll," he added.

"Never mind about that end of it; we want to be doing something; that's the main thing," said Alfred.

It would not be interesting to go through the long details of work that the boys entered into under those circumstances. Each day for more than two months the boys found plenty of work to do. They became general favorites at the camp, and while their services were not recognized in an official way, as the regulations did not permit of the employment of minors, still, in view of the fact that they had such an interesting history, and had entered into the work with such zest the commandant at the station permitted them to remain, and eventually provided them with rations and quarters, to which was added a small pay, such as attached to those in the messenger service.

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During this period the boys had many opportunities to go aloft on practice drills, and on more than one occasion they had the privilege of operating the machines while in flight, accompanied, of course, by the regular pilots. Attached to the station were a half-dozen machines used for the purpose of teaching control, and to enable pupils to become familiar with the handling of the machines. They were designed merely to skim the ground, the power being so limited that they could not be raised from the ground except for very short glides. These the boys frequently used, and the experienced aviators were greatly pleased at their wonderful progress. It was a strict rule, however, that none but regularly licensed aviators should pilot the government machines, and that prohibited them from handling the machines on regular service.

It was during the second week of the third month that the boys had the first opportunity of showing their capabilities. During a trial flight with sub-lieutenant Guyon, while at an altitude of five thousand feet, Ralph noticed the machine dart downwardly, and, glancing back, saw Guyon's head fall forward, and his hand drop from the lever.

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Without waiting to inform Alfred he crawled out of the pit, and seizing the control lever, pushed it back in time to bring the ship to an even keel. Alfred saw the motion, and followed Ralph. Together they succeeded in drawing the pilot to one side, thus enabling Ralph to let himself down into the position which enabled him to handle the lateral controls, that were operated by the feet.

With Ralph thus fully in control of the machine, Alfred turned his attention to poor Guyon, who tried to raise his head, and occasionally gasped, as though trying to recover his breath. It was not until the machine was nearing the earth that he opened his eyes, and seemed to realize his position, but he was too weak to give any instructions or render assistance.

Ralph made a good landing, and the moment the machine ceased to move Alfred jumped from it, and ran to the office of the surgeon.

"Something is the matter with the lieutenant!" he cried, as he entered the door.

"What is the trouble? Where is he?" asked the surgeon, as he moved out of the door in response to Alfred's appeal.

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"He was taken sick while we were in the air," said Alfred.

"And how did you happen to get down safely?" asked the surgeon.

"We took charge of the machine," replied Alfred.

"Who are *we*?" he asked.

"Ralph and myself; we were up with him."

The lieutenant was being taken from the machine when the surgeon arrived. Restoratives were at once applied, and within a half hour the attack seemed to wear itself away, and he began to show a normal color.

His eyes rested on Alfred when he awoke from the first quiet nap, and raising his hand approvingly said: "That was a good job, Alfred; couldn't have been better."

"What do you mean?" asked Alfred.

"You brought us down all right, I mean," he replied.

"Oh, Ralph did that," was the reply of Alfred.

"Well, no matter; you fellows didn't get rattled; that's the main thing," said the lieutenant.

An incident of this kind could not remain a secret long in a camp of this character. The Commandant took particular occasion to commend them for their performance, and it was a long step in their favor when the corps moved to the north to take its place in the great aviation camp directly south of Verdun.

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CHAPTER VIII

AN AEROPLANE AMIDST THE LIGHTNINGS

Two days after the occurrence related in the preceding chapter, the first section of the Corps was ordered to proceed to the Verdun station. Lieutenant Guyon belonged to this part of the force, and, as he had now recovered, was instrumental in securing the assignment of the boys to his care.

"Then we can go along?" asked Ralph, with some doubts and misgivings, as they were packing the belongings of the lieutenant.

"I have arranged that," said the lieutenant.

"What is that?" asked Alfred, who appeared at the door of the hangar.

"We are going," shouted Ralph.

"Yes; you might as well get your things packed and put them in the machine," said the lieutenant.

The boys laughed, for outside of a few trinkets, and underclothing, they had nothing of importance to take along. They remarked that it was singular how few things seemed to be really needed, traveling, as they did, from place to place at a moment's notice.

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"When do you intend to start?" asked Ralph.

"Whenever we are ready," was the reply. "We intend to leave in squadron formation and manoeuver for an hour, and afterwards each is to make for the station on his own hook."

Shortly thereafter the first signal was given. The machine was pushed out and lined up. At the second signal the machines were mounted. At the third tap the motors began to hum, and soon there was a movement in the whole line. It was a splendid spectacle, as the machines left the ground, and rose majestically toward the west, the direction from which the wind was blowing.

The manoeuvres were particularly interesting to the boys, and the lieutenant led his section in the formation during the entire practice until the captain's flag on the great Duperdesson indicated that the machines were free. After making a great sweep to the west the lieutenant turned to the left, encircling the town, and pointed due east.

Before they had proceeded fifteen kilometers, something happened to the engine, for it ceased to hum. They were then at an altitude of a mile, and inability to start the motor made it necessary for them to volplane to the earth. Sighting a considerable town to the left, which was located south of a canal, the machine was directed toward a smooth, open field, not far from the environs, and after landing they learned that the place was Ligny-en-Barrois.

It was found that through some accident the petrol tank had started a leak, and that the liquid was slowly oozing out during the flight, without giving the first indication until the engines failed. It was just the kind of an accident which necessitated the removal of the reservoir in order to make the proper repair.

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"Which is the fastest machine?" asked Alfred, while they were waiting for the return of the reservoir.

"The Morane, by all means," replied the lieutenant.

"I thought the Caudrons were the best?" remarked Ralph.

"It depends on what you mean by *best*," answered the lieutenant. "The different machines are used for various purposes, and while speed is important, there are other things just as necessary."

"What other things?" asked Alfred.

"Well, bomb-dropping for one thing; then, some machines are better adapted than others for directing artillery fire, or for using machine guns," said the lieutenant.

"The captain has a Caudron," said Alfred, "and he doesn't use a gun on it either."

"No; the Caudron is admirably adapted for observations, and is used almost wholly in France for directing artillery fire," answered the lieutenant.

"It seems to me that this machine is good for observing," said Ralph.

"Yes; and it is used for that purpose, but it is now being put to use for photographing purposes,— that is, most of the Maurice Farman types are so used," answered the lieutenant. [Pg 97]

"Why is that?" asked Alfred.

"For two reasons; first, because you will see we can get a good view downward; and, second, because it is the most stable machine in flight, the latter making it especially well adapted to take good views," replied the lieutenant.

"Which are the largest ships?" asked Ralph.

"The Voisin and the Breguet, by all means. They are able to carry heavy loads, and are used as bomb-dropping machines, as their fuselages are especially well adapted to carry and release the missiles," said the lieutenant.

"But I saw a Voisin at one of the hangars which had a big gun on it," said Ralph.

"Ah, that was the Voisin Cannon, which carries a 37-millimetre gun," said the lieutenant. "That is used for bombarding captive balloons and Zeppelins, if the latter should ever make their appearance."

"A 37-millimetre gun?" repeated Alfred.

"Yes; that's about one and a half inch in your measure," answered the lieutenant.

Within an hour the reservoir was again in position, and there was no delay in again mounting into the air. "We might take a little trip due east, as far as Toul, and north of that point we may have the privilege of seeing some of the enemy," remarked the lieutenant, as they mounted the machine. [Pg 98]

A beautiful silver thread now appeared on the landscape to the east, as they reached their greatest altitude. Looking back there was a smaller thread to the west, and, apparently, the same distance from their viewpoint. They thus had the opportunity of seeing, at one glance, two of the most noted rivers which figure in the great war,—the Meuse to the east, and the Marne in the west, these streams at this point being within thirty miles of each other.

It was, probably, imprudent for them to take an out-of-the-way course to reach their destination, but the temptation was very great. The sun was still shining brightly when they started from Ligny-en-Barrois, but it was now growing dark from the overspreading clouds, and as soon as Toul was sighted the lieutenant turned the machine northward.

To the west it could now be seen that the threatening clouds were coming up, and they appeared to be sweeping toward the east with great speed, at right angles to the aviators' course.

"I wonder what the lieutenant will do?" queried Ralph half to himself, as he looked at the clouds, and then glanced back to the officer.

The lieutenant shook his head, and pointed the machine further to the left.

"Why, I believe he is going right into it!" remarked Alfred in amazement to Ralph.

But the officer now made a wide swinging turn. A view of the heavens indicated that the storm was an extensive one, and that the speed of the wind had increased most alarmingly, for, in looking down they seemed to stand still over the little hamlet beneath them. The wind, into which they were flying, was traveling at the same speed as the machine. [Pg 99]

There was but one course to follow. They must return to the earth, otherwise they would be driven far over into the German lines. By setting the control lever so as to depress the nose of the machine they rapidly descended, the lever being intermittently drawn back to a normal position, so as to keep the ship on an even keel and prevent it from performing a loop in the air.

The landing was easily made, notwithstanding the wind, and they found they were near Commercy, west of the Meuse, about thirty-five miles south of Verdun. A terrific rainstorm then followed, which lasted more than an hour.

"Were you ever in a rainstorm while flying?"

"Never but once," replied the lieutenant, "and that was in thunder and lightning, too, which was the most terrific thing I ever went through."

"Tell us about it!" said Alfred.

"I almost shudder at it when I stop to think of the hour when I faced the lightning right where it is made," said the lieutenant. "It was in the second week of the war, just east of Rheims, when the Germans were sweeping across the frontier and had passed Charleville. I had a double-seated Nieuport, with an assistant handling the machine, while I was making observations."

"Shortly after getting the first glimpse of the moving German columns I noticed that it was growing dark, but when you are aloft that is not noticed as quickly as when on terra firma. The great hosts of Germans interested me intensely, and we kept on until I estimated that we were fully ten miles behind the advance columns, when my assistant shouted through the tube: 'Look back; what are your orders?'"

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"I saw that to continue would be disastrous, so I gave the order to turn. This gave us the first opportunity to determine our speed, or, to state it more accurately, the speed of the wind, for you will recall that when we turned this afternoon, we seemed to stand still above the town.

"Within ten minutes of the time I turned the machine to the west the first heavy rolling clouds seemed to meet us. The earth was quickly blotted from sight, and heavy rumblings were heard, but no indications of lightning. I knew that heavy black clouds were dangerous, and they were so black that it was impossible to see my assistant, three feet distant.

"I could not decide what to do, so I finally shouted through the tube: 'keep on a straight course to the west,' for I knew that to land at that point would bring us right into the great German column. There was no rain falling at the time, but the cloud was like the densest mist. The machine was still moving,—that is, the engine was merrily humming, and my assistant's voice startled me as he shouted: 'There is something wrong; compass out of order.'"

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"During the flashes I could see him pointing to the compass, and I leaned over, and caught a glimpse of the dial. The pointer was swinging around violently. The lightning now seemed to be incessant, and the rumbling of the thunders was weird beyond description. Sometimes, immediately after a vivid flash, a thick spray would deluge our faces."

"What were you thinking about while all this was happening?" asked Alfred.

"What impressed me most was the wonderful difference between the appearance of those electrical discharges when viewed in the usual way from the surface of the earth. I did not notice any forked lightning, nor did it show itself in streaks, darting hither and thither. It seemed to be more like balls of fire, suddenly appearing here and there, and when each ball burst into flame, there would be a crackling sound, at any rate, so it seemed, for I dared not stop the engine.

"But the most remarkable thing was the odor which was present. It had a pungent smell, not at all unpleasant, but decidedly exhilarating in its effects. I suppose we were taking in ample doses of laughing gas, for I assure you that after the first experience, we had no particular sense of danger. It was most fascinating, and I felt as though I was being raised up on my seat. Occasionally I would try to figure out how this would end, but on the whole it was devoid of terror."

"How long were you in the storm?" asked Ralph.

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"Well, I was so fascinated that I had forgotten to look at the watch. I held it before me, and soon noticed that it was nearly five o'clock, so that we were over an hour and a half in the thick of it. During this experience what gave me the queerest feeling was the compass, the needle of which could not be seen, it swung around with such velocity. Were we going with the storm, or not? That was the thing uppermost in my mind. If we were being carried along we might be even in Belgium by the time I noted the watch.

"Then I tried an experiment. I ordered my assistant to make a turning movement. This convinced me that we were really going with the storm, and were now far over into German territory. Strange as it may seem, we were not thrown hither and thither; the ship sailed along smoothly. I feared to make the next experiment,—that is, to direct the machine toward the earth, for, while everything worked perfectly, I had a feeling that it would be safer to reach the earth with an engine running than with a dead one. Slowly the machine went down; it seemed to get lighter, but now the thunder came in sharp claps, and the form of the lightning changed. I could distinctly see what the observer sees when on the earth, long, zig-zag streaks multiplied a hundred times more than anything I ever witnessed while on earth."

"How high were you up when you got out of the clouds?" asked Ralph.

"Seven hundred and seventy meters (about 2,900 feet), as indicated on the barometer."

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"Could you see the earth?" asked Alfred.

"No, indeed; the rain was pouring down; it was splashing over us and all about us, and I signalled to go up again, and we soon entered the clouds; but during all this time the needle of the compass kept spinning, so that we knew nothing of the direction we were traveling."

"But couldn't you tell which way the wind was blowing?" asked Ralph.

"No; we were moving with the great air current, sometimes sailing with it, and at other times against it, but with nothing below to indicate the direction. We could not possibly say whether we were going north or south."

"I think if I should be in the air and couldn't see the earth I would know a way to tell which way the storm was moving," said Ralph.

"How?" asked the lieutenant, as he leaned forward.

"Why, the rain would come down at an angle, if the wind should be blowing, wouldn't it?" replied

Alfred.

"Quite true, that would be the case on the earth; but it would not be so up where the raindrops are being formed; there the little particles of water move along with the wind stream; but that is not all; when you are in a machine in a great wind movement, the ship must move through the wind in one direction or the other at all times so as to keep aloft, hence, whether you are going with or against the wind, the rain drops appear to be coming down at an angle, and this, in itself would be sufficient to deceive you, or, at any rate prevent you from determining the direction in which you happened to be sailing."

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"How did you get down?" asked Alfred.

"That was the interesting part of it. After a half hour more of flying I again ordered the assistant to go down two hundred meters. It was now evident that the storm was abating. Soon we again passed out of the rain clouds, and the assistant shouted that he had reached the level indicated. 'Go lower,' I shouted. As we did so it grew lighter, and we began to feel a relief. 'Lower yet,' I ordered. At 600 meters the rain poured steadily, but still nothing was visible."

"You were up then about a half a mile," said Ralph.

"Just about that," was the reply. "Soon we noticed a peculiar white patch, and then another. This was puzzle to me. 'Go still lower,' I shouted, and down went the machine. Then we saw some white houses, and I almost shouted for joy. But where could we be? We were passing over a city, a city located within the bend of a large river. I racked my brain to find out where and what it could be. If it was the river Meuse it might be Verdun, or Sedan, or Charleville. We were forced to go down still lower, and then I could see forts, and I felt sure we were over Sedan."

"We were even then going east. I was so agitated that I could hardly speak, and motioned to my assistant to turn around. He understood, and the ship was swung around; we were now going right into the blinding rain, but we were fifty miles behind the German advance columns, and in order to enable us to make more rapid progress I told the assistant to change the course nearly due south. We were flying very low, certainly not over a thousand feet."

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"Thus far we had not seen a soldier, or any evidences of warfare. In a half hour we sighted another stream. My heart leaped with joy, for I was sure it must be the Aisne. To assure myself of this we followed the stream for twenty kilometers, and then the forests of Argonne came into sight, thus assuring me of the position. I knew that the army of the Crown Prince was in that region, and it would not be safe to descend; I, therefore, directed the machine to the west, crossed the river, and was about to go still lower, when I heard a boom,—several of them."

"This startled me, you may be sure. 'Up, up!' I shouted. The machine obeyed. We rose to an altitude of eight hundred meters, then suddenly the engine stopped. My assistant turned and shouted: 'We have no petrol.' I crawled back and tested the tank. It was empty. 'Volplane to the south,' I said. It was the only thing I could do. Now that the engine was silent the sounds from the earth were startling. There was terrific firing to the right and left, and all about us; but we must go down; there was no help for that."

"Soon the earth again came in sight, and then the location of the batteries was made out by the volumes of smoke, which could be seen at each volley. My assistant tried to hold up the machine as long as possible, but we were now down to 300 meters, then the barometer registered 250. We both noticed a large, apparently smooth field, and the final volplane began. We landed a hundred feet from a first-line trench, and although the Germans made it hot for us for about fifteen minutes we were soon able to reach the laterals and thus escape their fire. But the machine was in a bad condition when we rescued it that night. It was literally shot full of holes. What is left of it is now in the end warehouse where the scraps are kept."

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CHAPTER IX

A CHAPTER OF LESSONS ABOUT THE AEROPLANE

Early the following morning there was intense activity in the camp, and Ralph was among the first to learn the cause of the excitement. Several army divisions had come up in the night, and were bound for the Verdun sector, and from the information obtained it was the intention of the commander to make a terrific assault in order to break the German lines north of the city.

The lieutenant, when approached, admitted that they were now in for double duty. "Every man in the corps must report and be ready in the morning. There will be two days of observation, and then look out for some business."

"When will we go to Verdun?" asked Ralph.

"We are expecting orders at any moment," was the reply.

During the previous afternoon more than fifty machines had assembled, and some of those were now leaving, a few going directly east, on observation tours, while others were circling about and testing the engines.

"I am expecting a big Farman machine," said Lieutenant Guyon, as he returned from headquarters an hour afterwards, "that is equipped for carrying bombs, but I am told it is one of the speediest machines in the service. It will easily carry six hundred kilos in bombs (1,200 pounds), and we are ordered to wait here until it arrives." [Pg 108]

When the boys were alone, Alfred, with a glint of joy in his eyes, remarked: "I think that will give us an opportunity to do some flying with the lieutenant."

"Do you think so?" replied Ralph, elated at the thought.

"I am sure of that," said a voice behind them.

They quickly turned and saw the lieutenant, who had entered unobserved. They saw by the smile on his face that the remark was an agreeable one, for he continued:

"Yes, and the machine is now here; the men are at work setting it up; so we might as well go over and help out."

A second invitation was not necessary. Ralph, who was outside in one bound, rushed across the field, but Alfred accompanied the lieutenant to the commandant's office, where they were provided with the receipt for the machine. The lieutenant remained here while Alfred carried the document to the warehouse. Within two hours the machine was in condition to receive the fuel and the supplies usually carried in the machines for emergencies.

When the lieutenant returned he made a careful inspection, and on this occasion the boys followed every movement of his to learn what were the essential requirements in inspecting. Naturally, the most important thing was to know that every part of the frame is not only properly set up and the wires made taut, but that the fastenings, the turnbuckles, are in good condition. That necessitated a minute examination of every one of them. [Pg 109]

Then the planes were sighted to ascertain whether they were properly aligned. Sometimes when the planes are not exactly parallel with each other, the end of one, for instance, being set a little higher or lower than the other, it is usually corrected by letting out one or more sets of brace wires and taking up on others. This observation was followed by a careful look at the control planes. These are the sensitive parts of the plane, and may be likened to feelers, for the slightest warping of the horizontal tail planes will frequently cause the machine to fly with a skidding motion, not dangerous, but exceedingly uncomfortable when flying at a high rate of speed.

"The wires leading to the control levers are always a source of worry to me," remarked the lieutenant, and he drew himself up into the rear part of the chassis. "You will notice that this one rubs along the side of that brace. I could not permit that," he said, as he glanced toward one of the workers.

"Do you think it would weaken the brace?" asked Ralph.

"No, it's not that," replied the lieutenant. "The difficulty is that all these wires are stranded, and as soon as one of the wires wears out by the frictional contact, another will give way, and the control wire is liable to part at the most critical time." [Pg 110]

The boys had occasion to remember the lieutenant's warning shortly thereafter. After an examination of the airplane structure an investigation was made of the engine. The mechanic turned it over to be sure that the compression was all right. Self-starters are provided on all these machines, as the French learned at an early day that it would be unwise to depend on cranking.

Then a thorough inspection of the pipes and tubing for the fuel and lubrication was made. The dashboard of an aeroplane is a much more wonderful contrivance than the dashboard of an automobile. The aviator must look out for several things not necessary when traveling on land.

The machine which they were examining had on it the most improved contrivances, which had been found desirable, some of which were entirely new to the boys, one of them being the inclinometer.

"That must be a dandy thing," said Alfred, pointing to it.

"I think there are only a few of the military machines which are supplied with them, but the order has been given to put them on all the new machines," said the lieutenant.

"What are the two rods for?" asked Ralph, as he looked at the inclinometer.

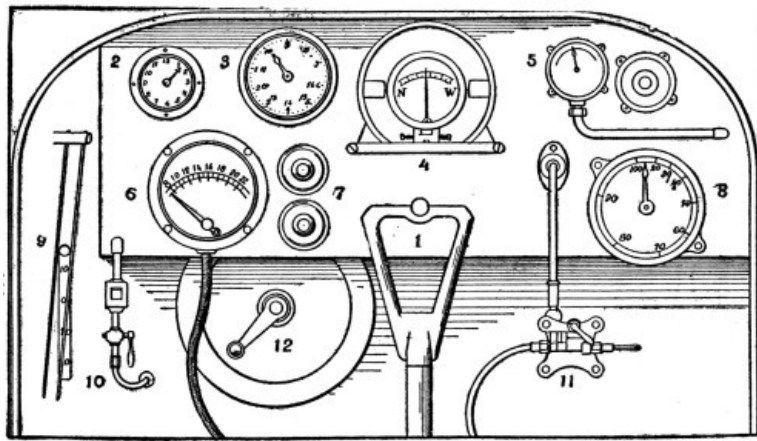


FIG. 6. INSTRUMENT BOARD OF STANDARD AIRPLANE.

1. Control Lever, with thumb switch. 2. Watch. 3. Altimeter, for registering height. 4. Compass. 5. Pressure Gages for two gasoline tanks 6. Dial to register engine revolutions. 7. Switches for two magnetos. 8. Air Speed indicator. 9. Clinometer. 10. Oil Pulsator. 11. Gasoline supply system. 12. Engine crank and fly-wheel.

"The two rods which swing past the vertical bar, on which you see the numbers, indicate the angle at which the machine is going. All that is necessary is to observe the crossing point of the rod over the marked bar, and it will instantly tell what the angle of ascent or descent is. You see an aviator now has so many things to think of that he must have devices of various kinds which will constantly tell him anything or any condition without asking for it."

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"Why, this also tells how fast the engine turns," remarked Alfred.

"Of what use is that?" asked Ralph.

"Well; if you knew that the engine was capable, under full throttle, to make eighteen hundred revolutions a minute, and the dial showed that the shaft was turning only one thousand, you would quickly get the idea that something was wrong," answered the lieutenant.

"Oh, yes; and then you would start to make an investigation at once without waiting for the engine to stop," said Alfred.

"Exactly; it is there as a warning, just as a headache is a warning that something is wrong, or a pain, which is nature's way to indicate that an investigation should be made without delay," answered the lieutenant with a nod.

Besides the foregoing, the dash had on it a watch. Now, a watch may be a convenient thing to have on an automobile, but it is not a necessity. On a scouting and observation plane it is one of the necessary implements. Alfred laughed, as he looked at the neat little clock face.

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"I suppose," he said, "we could get along without that."

"Of course we could," answered the lieutenant. "But why get along without it when we now find it such a necessary element?"

"Necessary how?" asked Ralph, in surprise.

"In determining distances, for one thing," answered the lieutenant.

"A watch to tell the distance?" asked Alfred incredulously.

"Yes, indeed," responded the lieutenant. "If you saw a puff of smoke in the distance, and shortly thereafter heard a boom, the distance could be determined almost instantaneously by roughly calculating 1,200 feet for every second. You see, the clock there has a second hand, which is very plain, for that very purpose."

"But suppose there is a regular battle on, it would be hard to tell about the boom from any particular gun, wouldn't it?" asked Ralph.

"Quite true; in such a case it would be useless for that purpose. Another use is in signaling," continued the lieutenant. "For instance, in sending information to a battery, arrangement is sometimes made to flash the distance by means of second intervals."

"How is that done?" asked Alfred, now growing intensely interested in the details of the dashboard mechanism.

"It is an easy matter to signal numbers," answered the lieutenant and a favorite plan is to fly over the area where the enemy's battery is located, then flash at that altitude. The gunner will take the angle, set his piece and fire, the aviator, meanwhile, noting the course and effect of the shot. By means of the watch he can determine the distance, counting either by the time of flight of the

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missile, or by the elapsed time between the flash of the gun and the landing of the shot.

The altimeter is another very important part of the equipment. It is a device which tells at a glance how high the machine is flying, and Ralph looked at it with a somewhat doubtful expression. The lieutenant saw the questioning lines on his face, and instantly divined the reason.

"You are in doubt whether the altimeter can be relied on? Am I correct?" he asked.

"Well, I suppose it is all right, but almost every time we have been up and took the readings, we found we were actually hundreds of feet less than the altimeter actually showed, so I am wondering if it is possible really to tell the exact height by that apparatus," remarked Alfred.

"Yes, I understand what you mean," replied the lieutenant. "The other day, when we made the long flight from Bar-le-Duc, the device we had showed 900 meters, for it was an automatically registering barometer, as all of them practically are. When we returned I noted on the report book 872 meters. Did you notice that?"

"Yes, and I wondered at it at the time," said Alfred.

"I knew that the general altitude of the country at that place, as indicated by the topographical charts, was 28 meters above sea level so I merely subtracted 28 from 900, and that showed how far up above the land we really were," said the lieutenant. [Pg 115]

"Of course, it's a satisfaction to know how high one is flying," said Ralph.

"It is not only a satisfaction, but it is an absolute necessity for an aviator to know how high he is flying, if his mission is to convey any information to the batteries in the rear," said the lieutenant.

"And how is that done?" asked Alfred.

"By a system of triangulation," he replied. "In a few days we may have an opportunity to use the system, and I will explain it then so you can quickly grasp the subject."

The air speed indicator was another interesting device, but at that the lieutenant shook his head as though doubting its general value.

"Don't you think it's accurate?" inquired Alfred of the officer.

"Oh, yes; it is as accurate as it can be made. In fact all devices, which are used to indicate the speed of the wind, are nearly perfect. That is not the difficulty. When it is used on a flying machine several new things enter into the problem, which makes it difficult for the instrument to be truthful."

"What is the main trouble?" asked Alfred.

"Well, suppose we are starting a flight against a wind, which is moving at the rate of, say, ten miles an hour," answered the lieutenant. "While in flight we note that, going against the wind, the air speed is sixty miles. Now, if we happened to stop suddenly so we were poised in the air, the indicator would show the air speed to be ten miles, so that we were really going only fifty miles. If, now, the machine is turned so that we are going at right angles to the movement of the wind, although we may be going actually through the air at a speed of seventy miles an hour, the indicator does not register the air speed at all, because it is in such a position that the air does not affect it and the only indication we have is the speed of the air relative to the movement of the machine,—or, to put it in a better way, I might say that the instrument only registers, in reality, the speed at which the aeroplane goes through the air, and no more." [Pg 116]

"But is that the only way to tell how fast we are going?" asked Ralph.

"The best test is to take the engine revolutions. A certain machine after it has been properly tested in a calm, and also in wind currents of different velocities, will show a record of speed with the engine running at certain revolutions. An experienced aviator can judge pretty well, by experience, what the speed of the wind is, and, knowing the propeller speed, and the direction he is going relative to the wind, he can make a fair estimate of the speed of the machine."

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CHAPTER X

A THRILLING EXPERIENCE IN THE AIR

It was with feelings of joy that the boys stepped out of their tent the following morning to learn that the lieutenant had decided on a trial spin in the forenoon, preparatory to the real start, which was to take place at two in the afternoon. The engine was turned over, and the machine held down while the usual hour's running test was going on. Everything seemed to be in order, the engine was stopped and another inspection made when the lieutenant gave the order to mount the machine.

In this type of military machine the swivel gun is at the extreme forward end, and the pilot directly behind the gunner, and at a slight elevation above the gun. Both gunner and pilot are housed in, and in most cases strapped to the body of the machine to prevent any accidental falling out, as there have been numerous accidents due to men being thrown from their perches.

The boys found ample room in the forward pit, and at a word the machine was released and glided forward. The new machine gave them a sensation different from the former one, as it appeared to ride more easily and steadily. In fact, there is just the same difference in the motion of flying machines as there is in autos, some, the small machines, seeming to glide over the ground and impart every bump to the occupants, as might be expected of a light machine.

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A heavy flying machine, however, seems to move along with the utmost ease, and does not sway from side to side when sailing through cross currents. Naturally, such a machine is a more stable base for machine guns as well as for observation.

Alfred's particular hobby was kodaking. On this occasion, the first time he had an opportunity, he prepared himself with a camera. The lieutenant, learning of Alfred's penchant in this direction, had a regulation government instrument sent over, and attached to the machine, to Alfred's surprise.

Before starting out, the lieutenant said: "I want to give you some points now, in using the camera. Photographs, in order to have any military value, must be identified,—that is, they must be made at such altitudes, and with reference to certain marked characteristics on the earth, that we may be able to place them on the topographical maps of the particular section, and thus verify them day after day."

"What do you mean by verifying them day after day?" asked Alfred.

"I mean by that to see what changes have taken place in the same view between the taking of the two pictures," replied the officer.

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"Well, what possible changes could take place in a day or two?" asked Ralph in astonishment.

"A great many, and very important ones, too," answered the lieutenant. "The camera sees what the eye does not notice. If a picture is taken of a certain section today, and the following day another picture is snapped, a comparison of the two will show whether or not there has been a movement of troops, or, whether or not a certain undistinguishable object was something movable, or not."

"Is that the way the map of the enemy's country is made up?" asked Alfred.

"Yes, and every detail is noted, so that when you commence the work be careful to notice something which will distinguish the exact place where you are located; also put down the direction of the flight over that same area, and the altitude at which we are flying."

As the machine glided over the treetops and the village on the northern border of the Meuse, the sun shone out with intense brilliancy. They were going directly east, and both boys turned toward the lieutenant, their eyes seeming to say: "So you are going to take a peep at the front, by way of experiment?" which was exactly what the lieutenant purposed doing.

The altimeter now registered 1800 meters, considerably over a mile high. From that point they could see to Verdun, and thirty miles east of Verdun, could be noted the blurred outlines and surroundings of Metz, that greatest of all fortified German defences. On they went for nearly three-quarters of an hour until a stream of some magnitude appeared to the east, which they soon crossed.

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They afterwards learned that this was the Mosel, which flows through Metz. The latter city now loomed up so it could be plainly seen, and to their right was another town, Nancy, a fortified French place. They were about midway between the two places.

Suddenly an aeroplane appeared to the right, and the lieutenant turned the machine in that direction. The boys were relieved to see the great circle on the control planes of the machine in the distance, which showed them it was a French reconnoitering airplane. In the east several other machines were noticed hovering about, and the lieutenant at first headed directly for them, but he soon turned to the north.

Below were seen numerous flashes of guns, and they knew from this that the fighting lines must be along the river. The most startling thing which occurred was a tremendous explosion that seemed to be right in the machine itself, and they looked around startled at the suddenness of it, for everything seemed peaceful enough to them at that altitude.

The lieutenant turned the machine, however, as he apprehended more trouble, now that the gunners below had so luckily secured a fair range. The first shot was followed in another moment by another, and the lieutenant now began to dart the machine back and forth, and turn it in short, sharp circles.

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Another explosion took place, this time remarkably close, and pieces of the flying machine came down, and brushed past the boys. The lieutenant shook his head, as the boys glanced back. The machine was now circling around, a peculiar manoeuver, the boys thought, as they looked at each other for a possible explanation.

Ralph looked back, and noticed that the lieutenant, with an alarmed look on his face, was constantly glancing back to the tail planes. The steering lever seemed to be jammed. Ralph had an idea that something was wrong, and crawled over the body until he was alongside of the lieutenant. The latter pointed to the control lever, and Ralph understood.

Without waiting for instructions from the lieutenant, he cautiously made his way along the chassis, following up the wires which were indicated by the lieutenant. Within four feet of the tail plane Ralph halted. Then, reaching down, he succeeded in grasping a dangling wire, and held up the end for the lieutenant's inspection. After several attempts he found the other end of the wire, which had been severed by a shot from a shrapnel shell.

The ship was still circling around, so without waiting to repair the break Ralph turned the rudder, and, glancing at the lieutenant, saw the latter smile, and then by motions direct him to give the control plane a still further push in the right direction. It was impossible for Ralph to hear anything the lieutenant said, but as soon as the airplane was fairly headed for the west, the power was shut off, and the machine began to descend.

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"Good boy!" shouted the lieutenant. "Can you fasten them together?" he asked.

"I am afraid not," replied Ralph. "A piece seems to have been shot away. But I can take care of it if you will only direct me to pull it to the right or to the left."

"All right, then. Do you see that great patch of green, directly beyond the castle?" asked the lieutenant.

"I can see it plainly," replied Ralph. "Shall I steer for it?" he asked.

"Oh, no. We must come up from the south. Note the direction of the wind from the smoke. Make a long sweep. We are now at an altitude of 1200 meters. We can volplane twelve kilometers from this height," remarked the lieutenant.

The turn was made to the south in a long sweep, Ralph continually glancing forward to note the direction indicated by the lieutenant.

"Now straight ahead, and hold steady."

They were now rapidly approaching the earth; the machine gliding over the tops of the trees at the border of the forest that ran along the river bank. To their right, across the river, was a large town, Pont-a-Mousson, and the castle ahead of them was a large school, from which even then hundreds of children were emerging, and excitedly rushing toward the approaching machine.

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Down went the machine at a sharper angle; then, when close to the earth, the rear control was sharply turned, and the nose of the ship raised up, but for an instant only, when the machine settled down, and, after running along a hundred feet, stopped.

The agitated children pressed about, and the lieutenant tried in vain to keep them off. Some more venturesome than others, after seeing Ralph and Alfred, began to question them. To the relief of the boys they learned that the French out-posts were less than a mile distant.

"Let us make the repairs as rapidly as possible," said the lieutenant.

An examination showed that not only was the control wire cut in two places, but the vertical plane had its pivot shot away, thus accounting for the peculiar action of the lever, which seemed to jam whenever an attempt was made to turn it to the right. Ralph did not know this, while seated astride the body and manipulating the plane, and it was obvious that even though he had succeeded in splicing the wire, it would have been impossible, with the rudder in that condition, to turn by means of the wire controls.

Assisted by the machinist from the garage belonging to the owner of the school, they completed the repairs in an hour, and, hungry though they were, they again went aloft and sailed for their camp, which was reached after an absence of three hours.

They thus had less than an hour to get a hurried meal and prepare to line up with the squadron, to carry out the orders for the movement to the north. They were now going to that section of the fighting line in France where the most intense struggles up to that time had taken place, and where, ever since the opening of the conflict the most stupendous operations were being carried out to gain the mastery.

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Imagine, if you can, the sight that met their gaze, as they took their place on the extreme right of the three squadrons, which were about to launch on this memorable occasion. They were about twenty miles south of the city of Verdun. The extreme northern aviation base was not more than eight miles southwest of the city, located on a level plain east of the forest of Argonne, and close to the Aire river, a tributary of the Aisne.

The trip was a short one, as the actual flying distance was less than fifteen miles. Long before they reached the scene of the great camp, they could see the thousands of vehicles, and the hundreds of thousands of soldiers, on the highways, in the fields, and around the villages along the two main railways which threaded their way along the wide valleys between the Meuse and the Aire.

During every mile of the trip they were under the constant vigilance of the officers, who moved them into echelon, formed them into squares, or caused them to trail in columns of two or three,

CHAPTER XI

A FIGHT AND A LANDING IN BELGIUM

The day following their arrival at the field base, as it was called, they found a wonderful change in the order and arrangement of the place. Everything was done in the most systematic way. So many machines, from each squadron, were told off each morning for certain duties. Those duties were as follows: First, scouting. This meant ascertaining where the enemy was most active; where the batteries were located; noting the movement of troops, and their general character.

Scouts generally operate in pairs, for if it is impossible to signal back from the ships, one continues the work while the other makes a signaling report from such point or points in the rear as will make the information useful.

The next duty is to protect the scouts from interference. This work is carried on by the large ships, which are usually provided with rapid fire guns. They need not, necessarily, be speedy, for they are to keep in touch with the speedy scout ships, the latter of which sail around over a small area so the observations can be carried on as leisurely as possible.

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Third come the bomb-throwers, usually heavy-powered machines, generally not armed, as all the carrying power is devoted to the transportation of bombs. These are also guarded by the heavily armed machines. Sometimes, as in the case of the Farman machine, which the lieutenant used, they were used for scouting, and were also serviceable for fighting purposes.

In the early period of the war there were not many pilots capable of doing the duty required in all branches of the service. It was frequently the case that the aviator would command a ship with a gun on it and do double duty, acting as scout, or he would chase and fight an enemy, manipulating the gun while manoeuvring the machine. It was the sort of duty in which Lieutenant Guyon was engaged at the time he was promoted to the command, and supplied with the new type of machine.

Naturally, as commander of the squadron, he was at liberty to take any one he desired in his flights, and as he had a real affection for the boys, he took delight in having them accompany him on many of his exploits. It was the custom for the lieutenant to entrust the piloting of the machine to one of the boys, while he acted as a scout. Frequently Ralph would perform this duty, while Alfred, with his camera engaged, under the direction of the lieutenant, taking such photos as were deemed necessary to supplement the Department maps.

Thus over a month was spent in scouting duty, and, as the weather became somewhat chilly, especially in the evenings, they never went aloft without being well muffled up. One morning the lieutenant called out to the boys that they were likely to have a busy day before them, as the weather was unusually mild for the season.

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When they arrived at the hangar the machine was already out of the shed, and the lieutenant was busy with the charts in consultation with the officer of the day. Evidently something unusual was afoot, for they waited more than an hour before the lieutenant re-appeared.

"You might wrap up well," he said. "I have ordered a good luncheon, as we shall have a good long scouting area to cover."

"Which way are we going?" asked Ralph.

"Directly across the city, and then to the east. There is some unusually active business going on between this and Metz."

"Think I had better load up the camera pretty well, even though it is a little misty," said Alfred.

"By all means," responded the lieutenant.

It was eleven o'clock before all was ready, when the lieutenant, addressing Ralph, said: "After we pass over Verdun, going east, we cross what is called the La Pietrie forests. The principal towns we shall visit are Conflans and Briey, both within the German lines. Through those towns are the principal railway lines which supply the enemy forces to the west with provisions and ammunition. We have eight bombs aboard to be used at convenient points. After lightening up the machine by disposing of them we may make a visit to Longwy, a town twenty-two miles north of Verdun. We ought to have good maps of the railroad sections over there."

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As they arose the weather was somewhat hazy, so it was difficult to make observations at high altitudes. They, therefore, ascended at available points, and took a number of snapshots. To the left the Meuse river, and the edge of the forest beyond were distinctly visible, although they were then registering an altitude of more than 5,000 feet, and were five miles east of the river. To the east was an impenetrable haze, so the lieutenant directed the machine toward the river, and soon

the German encampment and lines were visible through Barencourt.

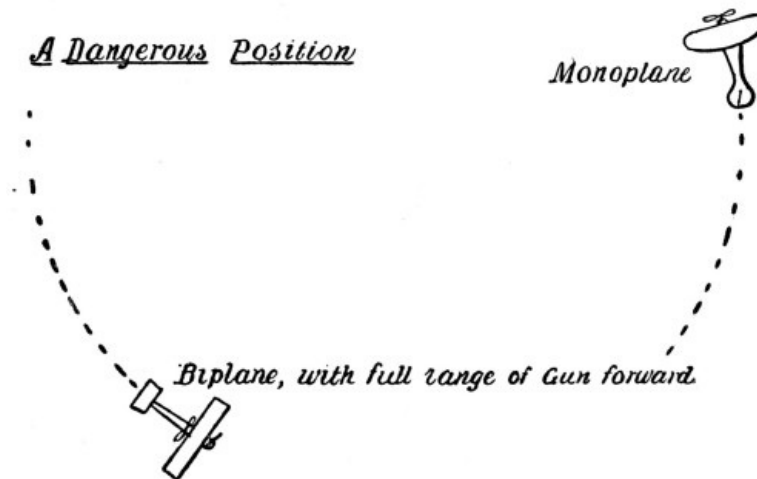
All were on the alert to notice signs of the enemy's machines, for they were now in such a position that the Germans would be most likely to observe them, but there was not an indication that they would be molested. They then turned the machine to the northeast where a bridge was visible in the distance, and the lieutenant shouted through the tube:

"Make for the first bridge; follow the track on this side for a quarter of a mile, so as to give me a chance to aim. Then take the second bridge to the north further on, and in doing so pass the factory beyond."

"I understand," said Ralph.

The track was reached, and directions followed. Long before they were over the bridge the lieutenant pushed down the lever which released a bomb, which could plainly be seen at first, but they soon lost sight of the flying missile. A moment later the second bomb was released. How long it seemed for even the first bomb to reach the earth! As they were directly over the bridge an explosion was plainly visible. The first bomb had missed the bridge, but before they had time to comment on it the second one burst at the end of the bridge, and one of the spans went down.

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The factory was now in view. "Go down lower," shouted the lieutenant.

Alfred nudged the lieutenant, and pointed to the north. "That looks like an airship," he said.

"So it is," replied the lieutenant, after a hasty glance. "But we must attend to this little business first," he continued, as his foot was extended down to the bomb dropper.

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"You have hit it!" shouted Alfred in glee. "Now for the other bridge."

They were not as successful with the last structure, although three bombs were expended on it.

"Now, where is the flyer you saw?" asked the lieutenant.

"It went easy just before we reached the second bridge," said Alfred. "I don't see it now."

"Then I suppose we shall have to go to Longwy to find where it is," said the lieutenant. "Can you see the city beyond?" he continued, pointing to the north. "Go to the left of the city," he said through the tube.

"Why did you tell him to go to the left?" asked Alfred.

"In that way we can avoid the long range aircraft guns, which we know are mounted in the forts to the east of the town," was the reply.

They were soon on the northern side of the town, and in looking south they were surprised to see two machines, one making for the east and the other seeming to fly directly toward them.

"That fellow will be a little surprised when he finds what he has to deal with," said the lieutenant with a chuckle.

"It's a Fokker, isn't it?" shouted Ralph through the tube.

"Quite right; when I give the signal turn to the left, and describe a sharp circle. I'll fool him," said the lieutenant.

The signal came; the machine veered around just as the Fokker came plainly into sight. As the turn was made the lieutenant turned the machine gun to the other side, and when the sight was cleared past the wings he gave the first turn of the crank to the gun.

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There was a hum and a succession of cracks, which seemed to surprise the man in the Fokker. He evidently thought that the French machine was trying to get away, or it never would have ventured so close.

"The other machine is coming!" cried Alfred.

"Here is where we can get in the fun," said the lieutenant. "Make a straight line for the one coming up in the east. Go on until I signal."

This was a most audacious move, and while Ralph was guiding the machine toward the stranger the lieutenant poured a constant stream of shot into the first comer. It must not be assumed, however, that the German machines were idle during this period. Both were firing, but the shots went wild, especially after the daring move just made.

"Up! up! as high as you can go!" was the next order.

The machine tilted, and the lieutenant looked back at Ralph approvingly. "She is a dandy climber," said the lieutenant musingly. "Now I'd like to see them follow a bit."

One of the machines actually tried to imitate them, but the other ship was noticed wavering and swaying from side to side.

"Something is the matter with that fellow," said Alfred.

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"Yes; he's done for, and we can easily polish off the other one," remarked the lieutenant, as he watched the falling machine. "Now turn around quickly and dive for the one who is trailing us," said the lieutenant through the tube.

Ralph banked the machine, and brought it around as quickly as possible. The machine was not a quick-turning one, but the oncoming machine was not prepared for the manoeuvre, for it seemed to hesitate which way to go. If it went to the left it would be impossible to use its gun, and if it turned to the right it would be at the mercy of the Frenchman's gun. The only remedy was to dive; down went the machine at a sharp angle. The lieutenant's shots went wild, but they were soon rid of their troublesome companion.

"I suppose we'll have the whole German flying corps after us now," said the lieutenant. "Turn for home."

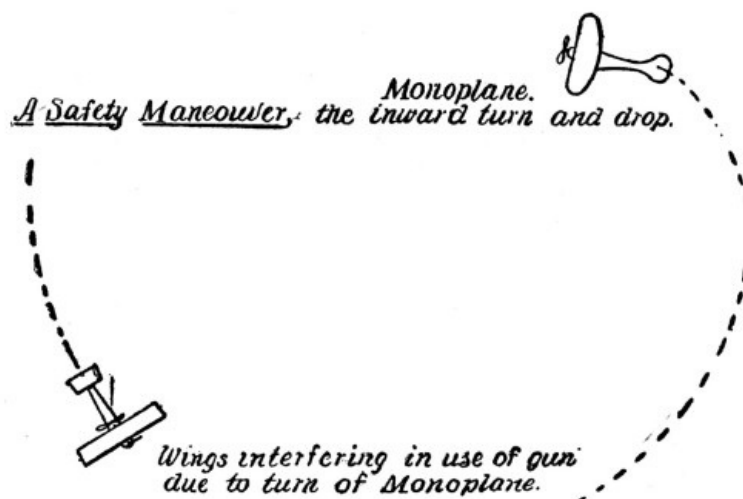
No sooner had they turned than another machine came up, this time a most determined fellow.

"Up! up!" again came the command, "and keep pointing that way. You might also veer to the left."

This time it was one of the well-known Taubes, with the disadvantage, however, that she was a tractor,—that is, had the propeller in front, like the Bleriot monoplane, so that it prevented the driver from shooting head on, whereas the Farman biplane was a pusher,—that is, had the gun mounted in front, and the propeller behind the planes. During the evolution of circling, however, the biplane had to present a broadside, which gave the Taube a chance to pour in a stream of shot, many of which took effect.

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"That was a close shot!" shouted Ralph through the tube. The lieutenant looked back, and pointed to the tube. A shot had gone through it, causing Alfred and Ralph to look at each other in undisguised dismay.



At every turn the lieutenant ground out the shot, and soon the barometer registered a height of 6,400 feet. Two miles more and the Taube made a peculiar turn, and glided to the right.

"You have hit him," said Alfred in excitement, and the lieutenant stopped churning.

"It seems like it," was the reply. "When we come back on the circle, go lower," he said to Ralph, "and I can finish him."

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As they crept up closer and closer, the lieutenant, with his hand on the crank, waited for the final chance. Like a dying gladiator the Taube turned, and a most terrific storm of shot came from the quick firer. This was the only time that the boys actually heard the thuds of the striking missiles on the body of the machine. It proved to be the last effort of the Taube; it dropped away, but still held its upright position.

Instantly the engine of the biplane stopped. The lieutenant, with his hand still on the crank,

turned and shouted:

"What is the matter?"

There was dead silence, and sudden darkness, for they could not see in either direction. They had entered a dense cloud.

"Have we started on the down glide?" continued the lieutenant.

"I am trying to hold it up," said Ralph. As he spoke they emerged from the cloud, but the Taube was nowhere in sight.

"Try the starter," said the lieutenant feverishly.

"Can't do it," was the reply.

"Then hold it steady while I examine the tank," said the lieutenant. He leaned over, and almost immediately exclaimed: "The connection is shot away."

"I will make a long glide if you can fix it in the meantime," said Ralph.

"No; I will connect the other tank," was the reply.

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It required less than a minute to perform this operation, but despite the repair the engine would not turn.

After another examination the lieutenant looked up from the pit, and said: "It's all up now. The other tank is also empty."

The barometer now showed that they were only a little over three thousand feet above the earth. A landing must be made, that was evident; but where? Alfred pointed to a forest, directly east.

"That might be a good place to come down, because there doesn't seem to be any houses there."

"Just the place if we can find a spot big enough," said the lieutenant.

With his field glasses he scanned the forest.

"Do you see that strip of dark green a little to the left? That is a clear space, I am sure. Steer for that after circling around. We are still high enough to enable us to make a careful observation of the spot."

The machine descended in its regular glide, and they passed over the indicated spot.

"That is a dandy place if you can hit it right," said Alfred.

It was narrow, not more than a hundred feet wide, but it extended diagonally up the hill, not the most desirable place to land, by any means, but it was the only thing to be done.

"Where shall I land?" asked Ralph.

"Try to strike the second clump of brush; do you see what I mean?" asked the lieutenant, his words tumbling over each other in his haste.

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"I can do it," was the reply.

"May you have good luck," said the lieutenant.

They approached the end of the open space between the trees. Fortunately the wind was not blowing, and the fuselage struck the first clump of brush, but they passed over it without difficulty. Ralph then threw up the elevator sharply, and the front end tilted, while the body of the machine sank down gently, and the landing was made without a jar.

"That was the most beautiful thing I ever saw. You deserve great credit for that piece of work," said the lieutenant, as he leaned back and patted Ralph.

They leaped from the machine, and for a moment stood there helpless with the reaction which set in, the boys, particularly, being influenced by the great strain. The lieutenant was the first to speak: "Well, here we are in a pretty fix; but it might be worse," he said.

"No; we haven't a drop of petrol left," said Ralph ruefully. "Both tanks were perforated."

They sat down to consider the situation. It was now past five o'clock, and although it was generally the custom to take luncheon with them on these trips, the extra amount which had been stored was barely sufficient for a half meal. The sun was going down, and they had no idea of their location except that, by calculating, the lieutenant judged they might be fifteen miles northeast of Longwy. Everything was still, except the evening chirrup of the birds.

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"It is too late to do any investigating tonight; but our first duty in the morning must be to arrange for food," said the lieutenant.

Fortunately, they had taken the precaution to carry plenty of wraps, so they were not at all uncomfortable. They gathered leaves, made up comfortable berths, and, after a most exciting day, slept soundly all night.

As soon as the first grey of the morning sun lightened up they arose, and began an investigation

of the surrounding vicinity. A reconnoitering journey was proposed, as, during the night, faint whistles of locomotives could be heard coming from the east.

"That is the direction we must go," said the lieutenant, as they prepared themselves for the trip.

They entered a dense forest, setting their course by the compass, and marched due east for an hour without seeing the first sign of habitation, when they were suddenly startled by a locomotive whistle, which could not be more than a mile away. They drew back and listened for a time, then cautiously crept forward, looking for an opening. A quarter of a mile to the left they discovered a wagon trail leading to the north.

This began to look as though some one might be living in the vicinity. The trail was followed, as cautiously and as closely as possible, and a mile beyond a cabin was sighted. This was the time for them to exercise care, but they felt sure the people living there would sympathize with them.

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"You see, we are in Belgium now, and they hate the Germans," said the lieutenant. "I suppose we are close to the border of Luxemburg, and the people there feel the same as the Belgians."

"Do you know a place in Belgium called Bovigny?" asked Ralph.

"Yes," responded the lieutenant. "That is on the other side of Luxemburg, close to the frontier. Why do you ask?"

"That is where we entered Belgium, and near where we assisted in capturing the auto load of Germans," said Alfred.

"Yes, Bovigny is less than forty miles from this place," said the lieutenant.

"Isn't that strange," said Ralph. "Here we are, close to the place where we started on this excursion. Why, we made a regular circle to get here," and they laughed at the situation.

It was now past six o'clock in the morning. No one was in sight, and they assumed it might be too early for the people, so they waited for an hour; still there was no sign that the cabin was occupied.

"I suppose we might as well go closer and investigate." They went forward without seeing a sign of life, except a dozen or more chickens, which were scattered over the lawn to the rear of the cabin. "If there is any one there a whistle might bring them out," continued the lieutenant.

There was no response, and after waiting a short time they circled about the house, and they saw that the front door was open, but there was no furniture within. They then boldly approached, and began to examine the contents of the rooms. Not a scrap of food was found, although ants and other vermin were numerous, and there was a mouldy smell in the second room, there being only two compartments or rooms. While they were searching about, two chickens appeared at the door, and with a common instinct the boys encouraged a closer acquaintance, to the amusement of the lieutenant. One of the chickens was finally trapped, and a meal was soon prepared and cooked in the oven. They had barely time to finish the repast, when a shot was heard in the woods to the south, at which they hurriedly left the cottage, and rushed to the nearest clump of brush across the clearing. A second shot followed, evidently quite near, but apparently from the same direction as the first.

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"They are probably hunters," remarked the lieutenant.

"Isn't our machine over in that direction?" asked Ralph.

"Undoubtedly," said the lieutenant.

"I wonder what they would do if they found it?" queried Alfred.

"I think it would be perfectly safe if the hunters are natives. I am sure they would suspect the truth, for they would at once recognize it as a French machine," replied the lieutenant.

"Would it be safe to go in that direction?" asked Alfred.

"That was in my mind," replied the lieutenant. "As we must find some one in this region, and they seem to me to be the most likely fellows to approach, come on," he added.

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They hurriedly went forward, expecting every minute to catch sight of the hunters. Their progress was slow, as the ground was full of leaves, and the wood thick; besides, there was considerable underbrush. They thus wearily tramped on and on for more than an hour, covering a distance which should have brought them close to the location of their machine. Despite all their efforts it could not be found nor the place located.

The only remedy was to retrace their steps and go back to the cabin, and from that place they could readily follow the wagon road back to the place where they emerged from the woods. The cottage was reached shortly after noon, and an hour was spent in catching several of the chickens and roasting them, so that it was in the middle of the afternoon before they again retraced their steps back to the starting point.

Here another difficulty presented itself. They could not find the place where they first reached the trail, so they sat down to wait for the welcome sound of a train to guide them. Even that aid was denied them, and as darkness was now coming on a suitable place was found to rest for the night at the base of an uprooted tree. There the night was spent in comparative comfort, as,

fortunately, the weather still continued mild and agreeable.

The matter of food now became a vital one, but so, also, was the necessity of locating the airplane. The matter was debated, and the lieutenant finally said: "We must find our machine; from that point I think we should strike to the west. It would be unwise for us to approach the railroad to the east, as that is in the hands of the Germans, and every mile of it is patrolled."

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By means of the compass they trudged to the west, and soon reached familiar ground. As they were about to enter the open space, which was recognized as their landing place, voices were heard. The three glanced at each other in dismay, until Alfred's keen ears detected a French word or two, of which he quickly advised his companions.

"I will call to them in French," said the lieutenant.

He did so, and the two men, for the lieutenant could now distinctly see them, were startled, but in another moment returned an answer.

"We are French," said the lieutenant. "That is our machine, and we have been reconnoitering."

"We are friends," said one of the men.

In another moment the lieutenant and the boys were at the machine, and grasped the hands of the hunters. "We are Belgians," continued the man.

"Where are we?" asked the lieutenant.

"In the forest, north of Messanoy," was the reply.

"Are there any Germans near?" asked the lieutenant.

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"Yes, at St. Leger, to the north, and at the junction of Arlon, to the northeast. But troops are constantly going along both roads to Longwy and Metz," replied one of the spokesmen.

"Where can we get something to eat?" was asked.

"Ah, we can arrange that," said one of the men with a smile. "Follow us."

On the way the lieutenant learned a great deal of the system in force by the Germans. They were conducted north, through the woods for fully a mile where they reached a wagon trail. Here the lieutenant stopped.

"Where does this trail lead?" he asked.

"From the railway station on the east line to a little village on the west side of the forest," was the answer.

"Then we were on this trail yesterday," said Ralph.

If they had gone a quarter of a mile farther, after reaching the cottage, they could have seen the first cottage in the village. It was also learned that the two men were the hunters whose shots were heard the previous day while at the cabin. The men lived a quarter of a mile from the village, in the elevated part, near the border of the forest, and like true Belgians were glad to help their French brothers.

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CHAPTER XII

EXCITING EXPLOITS ON LAND

"That is the place where I live," said the elder of the two men, as he pointed to a low cottage on the side of a hill, "and Raoul here lives below the turn. We must approach the house cautiously, for we know spies to be in this part of the country."

"I will go ahead," said Raoul. "Follow and go up to your house through the orchard."

They tarried by the roadside until the signal appeared. Upon reaching the house they were greeted by Felix's wife, for that was the name Raoul bestowed on his friend. A good meal was soon spread before them, and in the meantime the lieutenant was plied with questions, as the people in that section had no opportunities for learning what was really taking place in the outside world.

Finally the lieutenant asked: "Do you know of any place where we could get some petrol?"

The men mused for a while, and shook their heads. "You know," Felix said, "everything around here is controlled by the Germans, and petrol is one of the things that is kept strictly under guard."

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"Do you know the place where they store it?" inquired the lieutenant.

"Yes, but it would be dangerous to attempt to get any of it," said Raoul.

"I have a plan," said Felix, "but we cannot do anything before night. I know every step of the way to the station, and will take you there this evening."

"Good!" said the lieutenant. "In the meantime, give me a diagram of the station, and the roads leading to it. That will help me to become familiar with the surroundings."

For the next hour the lieutenant was busily engaged in learning all about the country, and where the stores and ammunition were kept.

"I think we might as well have some of that petrol," said the lieutenant with a smile, as he looked at the boys, who nodded their approval, as they were keen to participate in the plans which the lieutenant had formed.

That night, after ten o'clock, they appeared at their place of concealment, for it was thought wise to keep away from the house in the event any of the prying neighbors should happen in. Together they cautiously found their way to the railway and walked along the track until the first switch was reached. While waiting there so that Felix could point out the different objects, Ralph drew the lever, and set it so the first train would take the switch.

The lieutenant saw it and nodded approvingly. Ahead a few hundred feet was a low building, which was reached by the track which led from the switch. [Pg 145]

"The guards are stationed at that shed across the track, and sometimes they come over," said Felix.

"But is the building open?" asked the lieutenant.

"There are no doors; only open arches. The tanks can be loaded and unloaded from the tracks," was the answer.

They were carrying three vessels, such as are usually employed for transporting petrol in small quantities, and nearing the shed the lieutenant said: "Remain here and await my orders. I will go ahead and investigate."

With two of the receptacles in his hands he crouched as low as possible, and made his way along the track, but before reaching the structure he left the track, and approached the shed from the south side. He was gone for more than fifteen minutes, and when he returned with the receptacles filled he immediately seized the other, returning with it also filled in a few minutes.

"Now, take these to the cross road, and out of sight. I will be there in fifteen minutes," and saying this he quietly left them.

The boys and Felix carried the cans to the designated place with the greatest care, for the fluid was precious to them. No sooner had they hidden the receptacles when something like a flash of lightning illuminated everything about them, and this was followed by an explosion. [Pg 146]

Felix gasped as he gazed in the direction of the sheds, for he divined the cause. The boys, too, were startled.

"I wonder if the lieutenant did that?" asked Ralph.

"I have no doubt of it," replied Felix.

"Do you really think he did it? I wonder if he is hurt?" said Alfred, his voice in a tremor.

They waited for more than a half hour. What if the lieutenant had been caught in the catastrophe? They could see the soldiers at the station rushing hither and thither, and the people were going toward the station from all directions.

"Mighty good thing we hid in this place," said Felix.

Felix and the boys were now in consternation, and as they had about decided to go up to their former place of concealment, the headlight of a train approached from the south. It slowed down a little as it neared the station.

"The switch!" was Ralph's exclamation. As he said that the train reached the switch, and turned to the track leading to the fiercely burning shed. Half of the train ran through a sea of fire before it could be checked. It was a terrifying sight, and Ralph shook with fear at the sight. Fortunately, it was a freight train, or the toll of death would have been awful.

"This begins to look bad for us. I am afraid the lieutenant has been captured. This place is getting to be too dangerous, and we must leave at once," said Felix, as he seized one of the cans. [Pg 147]

"I will go down and see what the trouble is," said Alfred, but Felix shook his head. Nevertheless, although Ralph also remonstrated, and insisted on accompanying him, Alfred had his way. One would be safer than two, he thought, and without further words he crawled along the fence, avoiding contact with those who were in the near vicinity.

A few minutes after Alfred left, the lieutenant returned, and was shocked to learn of Alfred's journey.

"Take these cans up to the house, and I will go back and try to find him," he told them.

Alfred, meanwhile, had reached the track near the switch, and not far from the rear end of the burning train. As he was about to cross the track his foot struck an object, and he fell across the track. He was surprised to see several men appear and gaze at him, and it must be admitted that he was decidedly nervous over the situation. However, he did not venture to say anything, but quickly started at the fire, for he now stood with others, in the full glare of the flames. As no one paid any attention to him, it occurred to him that he had as much right there as the villagers.

All about him he heard criticisms of the calamity, and some one suggested that the fire and explosion was caused by a French airship, and, in fact, this seemed to be the general opinion.

Alfred wandered about listlessly, now feeling assured that the people knew nothing of the lieutenant, for he was certain that the news of the capture of a Frenchman would cause great excitement. Waiting the first opportunity, he slipped over the fence, and crawled along in the shadow of some brush for several hundred feet, when, to his consternation, a tall man arose in his path. [Pg 148]

He turned, and was about to leap the fence, when he heard a familiar voice: "Alfred."

He immediately recognized the lieutenant, and it is questionable which of the two felt happier at the meeting. They quickly ascended the hill, where they met a gloomy pair in Ralph and Felix, and the lieutenant told his story. He had allowed the petrol to run from one of the tanks after he took away the last receptacle, and when he returned he tapped three of the other tanks, expecting to wait five or ten minutes before firing it.

While thus waiting two of the guards approached, and he hid behind a box car on the opposite siding. He feared that his plans had miscarried, for he felt sure the guards would discover the petrol. They did not, however, go into the sheds, but remained outside, engaged in conversation for more than ten minutes. When they left he lost no time in again crossing the track.

He reasoned that the whole of the interior of the first set of sheds must have been flooded by that time, and the problem now was to ignite it, and get away safely, so he struck a match and lighted a small saturated cloth, which was thrown into the nearest opening. It caught instantly, and as the entire shed was now filled with the vapor, the explosion followed before he could get across the track. It was so great in violence that he was hoisted from his feet, so it seemed to him, and completely stunned. How long he remained in that condition of half stupor he did not know, but he soon heard a babel of voices, and saw everything about him as bright as day. Then, to his surprise, a train came up the switch, and rushed through the fire. It was this which probably saved him from being detected. [Pg 149]

"You may be sure," he said, "that as soon as my senses returned I knew what had happened, and that train started my sluggish brain into activity. I ran away from the train, and so did several others. No one cared to follow me, thinking, of course, that I belonged to the crew. That explains my long absence."

"Now, how are we to get the petrol over to the machine?" asked Ralph.

"We must ask Felix about it," said the lieutenant. "Probably you can help us out in that direction?"

"I have a light wagon," said Felix, "but we must not venture out with it until after midnight; in the meantime I will go down to the village and get all the news."

He returned in an hour. "It is reported that an airship did the damage," said Felix.

Shortly after two o'clock in the morning the light wagon was on hand, and Raoul accompanied them. After loading the wagon with the cans they started on the trip through the forest. Felix and Raoul both remained with the lieutenant and the boys until the tanks were repaired, and the sun had appeared. The machine was then turned around, and headed for the opening in the forest through which they had entered. Felix and Raoul, in the meantime, diligently cut away the underbrush and bushes in the path of the machine so it would be able to make a fair start. [Pg 150]

The boys now mounted the machine after shaking hands with the two men, and the lieutenant, reaching into his pocket, drew out a hundred franc note, which he tendered to them. They refused to take it. The lieutenant then threw it on the ground, saying: "This belongs to Belgium, and you had better take it."

"Good bye, and God bless you," shouted Felix, as the motor began to hum. The machine gliding down the incline quickly gathered speed, and it was soon in the air.

After reaching an altitude of a thousand meters, the lieutenant said: "It would be interesting to pay the village a visit after our pleasant experience there."

Ralph, accordingly, turned the rudder, and the machine swung to the right. It required only a few minutes to reach the scene, and there, notwithstanding the distance, they could see the blackened and still smoking ruins in the two immense spaces adjoining the station.

Now, for the first time, they appreciated the fact that a worthy task had been accomplished, for this station was one of the most important oil supply points along that whole line. [Pg 151]

The soldiers were rushing wildly about the station grounds, and the officials there were no doubt now assured, after seeing the machine, that the depot had actually been destroyed by a bomb

from that airplane.

The machine was now directed toward Longwy, and after giving that city a wide berth, flew directly south, with Verdun as the objective. The grounds below and to the west of that city were reached before ten o'clock, to the astonishment of the men quartered there, for it had been reported the night before that the lieutenant and the boys had been captured or killed in the fight at Longwy.

The lieutenant won the cross for the exploit, and the boys received honorable mention from the government.

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CHAPTER XIII

A DARING BOMB RAID TO THE RHINE

The exploits of the lieutenant and the boys soon became the talk of the camp. From enemy sources more was learned later about the results of the destruction of the oil station, which fully confirmed the earlier reports of the great damage which had been done. Although up to this time there had been some objection raised against the flights of the boys it must be said that after that event there was no one to criticise them.

During the winter months not much was done excepting scout work, as the weather was too severe for the men in the trenches to attempt any advances, but as the spring months came on everything became more active, thus imposing greater duty on the air fleet.

Not much of personal interest to the boys took place until May, when the great raid was planned to attack the munition factories and chemical works at and near Ludwigshafen, on the Rhine.

"Ralph, did you hear that there is going to be a big expedition this week right into Germany?" said Alfred, who had been with the lieutenant at headquarters early one morning.

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"No, although the boys are always talking about something of that kind," replied Ralph.

"But this is a sure go; the lieutenant told me so a few minutes ago," responded Alfred.

"Is the lieutenant going, do you know?" asked Ralph.

"Yes, I suppose that is why he told me about it," answered Alfred.

"I wonder whether they will let us go with him?" asked Ralph.

"Well, I didn't ask him, but I looked at him pretty hard, and I guess he knows how we feel about it," answered Alfred.

The rumor turned out to be true, for the following day orders were formally received to prepare eighteen machines for a raid to the Rhine. The lieutenant announced the news to the boys, and added: "I suppose, of course, you wouldn't like to go on such a venturesome mission?"

"Go!" exclaimed both boys in unison.

The lieutenant laughed. "Well, if you insist on it I shall have to take you with me. The Seraph (which was the name of their airplane, although it was officially known as No. 47) will be fixed to carry a dozen bombs for the occasion."

"But how about the quick firer?" asked Ralph.

"We must dispense with that on this trip. Bombs are more valuable," answered the lieutenant.

"Well, aren't we going to take any guard ships along?" inquired Alfred.

"Oh yes; six of the machines will be armed, but we must use every ounce we can carry on the Seraph. Before starting we must go over the route, as similar instructions will have to be issued to all of the flyers," remarked the lieutenant.

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"Do you know where we are to go?" asked Ralph.

"The objective point is Mannheim on the Rhine. The river is eighty miles due east, and Mannheim is about fifty miles farther down the river. That city is on the eastern bank of the river, and Ludwigshafen is a small town, on the opposite shore where the great laboratory of Badische Anilin and Soda Fabrik is located," remarked the lieutenant.

"So we are going to destroy a soda factory?" said Ralph with a grin.

"Not exactly," replied the lieutenant, amused at the intimation. "The principal thing turned out at the plant before the war was nitrate, a chemical most essential in the manufacture of explosives, and the importance of the place may be understood when I tell you that fully two-thirds of this product used by the Germans comes from that place."

"When will the start be made?" asked Ralph excitedly.

"Tomorrow," was the reply.

"Then I want to see the map," said Ralph.

"By all means," answered the lieutenant. "Now, you will notice that here is a canal shown on the map which runs due east. That is the Rhine-Marne, which parallels this river, the Zorn. The Zorn flows into the Rhine at Strassburg. You know, of course, that rivers, or canals, are the best guides for our purposes, so we must get these firmly fixed in our minds."

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"Yes, that and the towns are sure to carry us along without mistake," remarked Alfred. "What is that place, Saarburg? It is on the river."

"That is an ancient town, and you can hardly fail to recognize the place, for it is surrounded by a great stone wall. It also contains a strong garrison. Now note the next important place, twenty miles farther on; that is Zabern. From that place we can see the Rhine at various places, as we intend to fly at an altitude of two thousand meters, or, as you would say, 6500 feet."

"Why is it necessary to go to such a high altitude?" asked Alfred.

"Because at Saarburg, Zabern and Brumath they have long range anti-airship guns, and we cannot take any chances," replied the lieutenant.

The camp was a seething place of excitement the following morning. Twelve of the machines carried bombs exclusively; some of the airplanes had six bombs, each weighing 180 pounds; one had three bombs of 300 pounds each, and the Seraph carried ten 120-lb. high-explosive cylinders.

These were placed in a suitable case having compartments, the lower ends of the compartments being provided with outwardly opening doors, capable of being released by the pressure of the foot operating against a lever.

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"I am going to rig up the cameras so we can take pictures of the explosions," said Alfred, as they made their way to the hangar.

"That is a splendid idea," remarked the lieutenant. "Such an enterprise would be commended by the Intelligence Department of the War Office. By all means make the arrangements, for we expect to start in an hour."

Alfred rushed over to the supply depot, and soon had the cameras in his possession, together with extra rolls of films. Ralph accompanied the lieutenant to the hangar to note the placing of the bombs.

"Why are the bombs placed with the pointed ends up?" asked Ralph, as the men were placing them in position.

"So the fulminate cap can be placed on, preparatory to launching," remarked the foreman.

"Why, won't they go off without the cap on? Wouldn't a concussion explode them?" he asked.

"Well, it would require a pretty tough jar to make them go off," replied the man.

At the appointed time the eighteen machines arose, and started for the east. The sun was full in their faces, but the misty weather made it look like a great red ball, symbolic of the day's work. It was hard to get away from the glare of the sun as they arose to the height which the orders compelled them to take, and at Saarburg some of the machines were actually hit by missiles from the anti-airship guns.

The first city of importance to greet their eyes, after leaving Brumath, was Lauterbach, and then Karlsruhe, a city of over 100,000 was sighted.

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"We are now thirty-five miles from Ludwigshafen," shouted the lieutenant, through the tube. "Keep well to the west of the river, and maintain the same height, until the city is reached."

Two miles before Mannheim was reached eight of the machines swerved to the right, and crossed the river, their destination being the town of Oppau, several miles beyond the town, where large manufacturing establishments were turning out ammunition.

"We are bound for the chemical factories," said the lieutenant. "See the workmen running about. They have, no doubt, heard of our mission by this time."

"Which way shall I point the camera?" asked Alfred.

"Straight down," replied the lieutenant. "I am going to signal No. 62 to take the lead, so we will be the fifth in line. That will give you a splendid opportunity to notice the effect of the explosions and to snap them."

The lieutenant set the signal, "echelon formation," which means step formation, one machine being ahead and a little to the right or to the left of the succeeding one. In that manner the ten machines flew along, the distance between them being about eight hundred feet, and by this arrangement each succeeding machine was able to observe the effect of the bomb dropped by the machine ahead.

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Mannheim was avoided, and the machines steered straight for the chemical headquarters on the

left side of the stream where No. 62 released the first bomb. Alfred strained his eyes, and saw a flash below. It missed a building, and he shouted the information to Ralph through the tube.

"If that had gone a hundred feet to the right it would have taken a dandy building,—there, the second shot did it; that came from old Spic's machine; whew-w-w, but look at it! That smoke is as black as coal,—must be lots of chemicals there. Another,—and the second building smashed to flinders. The lieutenant is going to drop the first one,—down she goes! I took two fine ones just now. I'll bet the last picture will show it up just as it happened. Two more snaps. We are going to turn and go back. 62 is making the circle." Thus Alfred graphically described the first trip over the doomed town.

A dense cloud was now coming up, or, rather, bunches of them in various places where the missiles struck, and just as the Seraph was making the turn a tremendous explosion was heard, which actually seemed to jar the machine. Alfred arose from his seat, and the lieutenant's tense face showed that something unusual had happened, as he gazed below. All the buildings were emptied and scores of operatives were lining up along the river bank, and moving toward the great bridge south of the works.

"Did you notice that big explosion?" asked Alfred through the tube.

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Ralph nodded his head affirmatively.

"That hit the largest building in the place, and there isn't much left of it. Did you see that tall chimney at the left side of the town? Well, that looks just like a big cannon with the smoke and fire coming out of it," commented Alfred.

The ten ships crossed the town twice, discharging all their bombs, but they waited in the air for twenty-five minutes until the first of the detached airplanes from the north appeared. During this time there was plenty of opportunity to see the extent of the damage which had been done to the great factories.

At a signal the airplanes, constituting the squadron, were lined up in two columns, and before they had proceeded far the signals told the success of that part of the squadron which had gone to Oppau. The signal was now set for "Home," and the machines, by this time lightened of their missiles, made a tremendous speed, until after they left the Rhine, and were making the last lap of the journey, when the machine carrying Captain De Goye and his Adjutant Buanau-Varilla, was forced to descend, owing to an accident.

The different machines circled around, hoping to be able to render assistance, but shortly after the airplane landed it was discovered to be in flames, and it was conjectured that seeing relief was out of the question the aviators had destroyed the machine to prevent its being of any use to the enemy.

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CHAPTER XIV

A TERRIBLE FIGHT IN THE CLOUDS

The return to the base with only the single mishap alluded to was cause for congratulations, and the lieutenant came in for a large share of the commendation.

In turn he prepared a special report setting forth the work done by the boys on the eventful journey. He pointed out that Ralph piloted the machine the entire distance, giving him, as the commanding officer of one division, time to direct the operation of the machines and attend to the bombs, while he had the pleasure of presenting to the authorities a set of unique photographs taken by Alfred at the very time the bombs were thrown and exploded.

When the roll was called, two days thereafter, the men of the squadrons were lined up, an officer from headquarters passed down the line, and, among other places, halted before the boys, who stepped forward. On the breast of each was pinned a medal, and as the officer did so he kissed them on the cheeks, a custom which is faithfully observed, in accordance with the regulations, whenever a merit order is bestowed.

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There was a cheer as the two blushing boys stepped back to the line, and there were no prouder hearts than theirs as they heard the encomiums expressed on all sides for their bravery and devotion to duty. It was a pleasure to many other young Americans, who, like them, were volunteers serving in the aviation corps, and many of whom were afterwards also honored in like manner.

There was hardly a day that there was not some experience added to their store of knowledge pertaining to airships, and the work connected with flying, all of which was performed with efficiency and credit.

But the work which they performed was not all a series of jolly excursions without the

corresponding sorrows. The devotion of Lieutenant Guyon to them dated from the time when that brave officer was stricken while on a trial flight from the camp at Bar-le-Duc. He never forgot how they took charge of the machine, and brought it safely to earth and cared for him so tenderly. Thereafter, it was rarely the case that he went aloft without one or both of the boys in his company.

Shortly after the foregoing events, while the three were performing scout duty north of St. Mihiel, they were attacked by two German machines, an Albatross and a Taube, a combination which, especially when operating against a single machine, is capable of doing deadly work.

When the two enemy ships were sighted, Alfred was in the pilot's seat, and under the direction of the lieutenant, the airplane shot forward directly in the path of the first machine, while the lieutenant poured out a constant storm of shot. The Albatross dived, and Alfred at once moved the control to ascend, thus bringing their machine above the Taube. [Pg 162]

The object now was to so manoeuver their ship as to keep between the two enemies, and in doing so make it difficult for either of them to use the quick firers without danger of hitting the other. The Seraph was a rapid climber, due to the high power of her engines.

"Send her up as rapidly as possible," shouted the lieutenant. "Keep on going, and turn slowly to the left, so as to make a big circle; that will give me a chance to put in some shots."

Alfred knew the manoeuver, the purpose being to bring the two machines into line with each other, and thus enable the lieutenant to get his gun in the range of both machines.

"A little down now, and more to the right; there, steady," was the next command.

"Br-r-r-r-r" sounded the gun, as the officer turned the crank.

"The Taube is going down," cried Ralph excitedly, "and here comes another of the same kind," continued Ralph.

"Go straight for the second one," shouted the lieutenant, and Alfred knew that the same trick had to be repeated.

But the new arrival did not accept the invitation to fight on the lines that the first machine adopted. Instead, it began to circle about at a safe distance, endeavoring to secure the overhead position. [Pg 163]

"Follow that bird," said the lieutenant, "and keep going. They will learn something about high flying before they get through with us."

The Albatross was not making much headway in the climbing game. On the other hand, the new Taube was an extraordinary flyer.

"There is only one man aboard of her," said the lieutenant. "Take the glasses, and see if you can make out her number."

Ralph studied the machine for some time. "I am not sure," he said, "but I think it is D 28. No one but the pilot is aboard."

"That's good. He can't hit us head on. Trail him or get ahead of him and keep on ascending," said the lieutenant, now preparing his rapid firer with a new charge.

The Taube suddenly swerved to the right, and let loose a full charge from his gun. It seemed as though one side of the Seraph had the covering of the planes ripped off, for the hail of bullets tore right through the frame. Alfred shook his head as he cleared away several bits of wreckage.

"How high are we?" asked Ralph.

"Two thousand six hundred meters," was the reply.

The lieutenant had his revenge, however, for their own machine was now creeping up and gradually getting a rear position. This was what he had been aiming for. The stream of shots from the Seraph's gun now began to tell. In one despairing attempt the Taube turned fully half way around and answered, but it was evident that something was wrong with the ship. [Pg 164]

Suddenly the Seraph darted down. Ralph and the lieutenant looked back in surprise. Alfred's head had dropped to one side, and one arm hung over the side of the chassis.

The lieutenant leaned over and caught the elevating rudder, not a moment too soon, and corrected the machine. Ralph leaned over the side of the body, and drew Alfred toward him, as the lieutenant climbed into the aviator's seat. All this took but a moment's time, but meanwhile it was necessary for them to observe the enemy and avoid him.

"The Taube is falling," cried out Ralph, "but the Albatross is swinging around."

Before it was possible to correct the machine, and avoid the danger, the gunner of the oncoming aeroplane began to pump, and the shot began to tell on the Seraph's framework. The lieutenant now saw that it would be a terrific task to get above the Albatross, so turning the control rudder sharply, the Seraph made a quick slide below its adversary.

Alfred did not move, and Ralph tried to control himself, for in the great excitement attending the

above circumstances, he was almost distracted. He was leaning partly over the body of the machine when the lieutenant saw him crouch forward. He put his hand on the boy and tried to shake him, but there was no response.

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Down, down went the machine, still under absolute control of the lieutenant, who turned the machine in a circle in order to be sure to bring it down within the French lines. When within five hundred feet of the earth something seemed to go wrong with the steering mechanism. The lieutenant tugged and pulled the lever back and forth. The machine refused to move forward in a straight line, and landing while the machine is describing a circular movement is a most dangerous manoeuver.

Both boys were quiet, and the lieutenant feared for the worst. A hundred feet more and all would be over. In desperation he banked the machine to stop its terrific speed. This helped the situation, but did not prevent the spinning motion, and finally the crash came.

They landed in a newly ploughed field, the worst possible sort of place for a disabled machine. The lieutenant and Ralph were thrown out of their seats, but Alfred was held fast in the machine.

Many willing helpers were on hand, and they found all three of the flyers were unconscious when put into the van, but, fortunately, they were within a half mile of the emergency hospital south of St. Mihiel. On the way to the hospital a hurried survey was made to ascertain the extent of the injuries, but the physicians were silent.

Alfred regained consciousness before the hospital was reached. The doctors said that there was a severe bruise on the back of his head, as though he had been struck by some heavy object. The lieutenant opened his eyes, as he was placed on the operating cot. He glanced around wildly for a moment, and then asked: "Where are my boys!"

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"We have them here; they are all right," said a nurse.

He forced a weak smile, turned his head to one side, and was quiet.

Ralph had been shot through the body, too high up, it was believed, to touch the lungs. A second bullet had passed through the fleshy part of the left arm, and he was very weak from loss of blood. The three were placed on adjoining cots after the first examination was over, and after all had regained their normal senses a pair of stretcher bearers entered the door, and bore a wounded man to one of the adjoining cots.

The lieutenant was the first to observe the chevrons on the sleeve of the patient, and that he was a German. Ralph tried to raise up as he noticed them carefully lift the wounded man, and deposit him on the cot.

"That's the fellow who piloted the last Taube; I'm sure of that. He's the fellow I saw through the glasses," said Ralph.

Inquiry quickly established the truth of Ralph's observation. His machine had fallen within French lines, and not far from the place where the Seraph struck. It was an odd coincidence.

The lieutenant was the most severely injured, how badly no one knew at the time, for a certain time must elapse before the full extent of the injury in such cases develops. The next morning the boys were informed that the lieutenant was much worse, and then for two days they had no news.

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Meanwhile, Ralph's wounds were healing, and no excessive fever developed. Alfred's spine seemed to be affected by the terrific blow, but that would be all right again in course of time.

The sad intelligence came to them a few days thereafter that the lieutenant had died. It was, indeed, a grief to them. They had grown to love him as a friend, and they understood each other so well. It was learned that his heart was too weak to bear up against the internal injuries, which he received when the machine struck the earth.

It was two weeks before the boys were able to leave the hospital, and they were then not able to return to duty. The shock of their friend's death was so acute that, as Ralph expressed it, they never again wanted to see an airplane.

They were soon sent to Paris to recuperate, and while there they formed plans which took them into another part of the great war game, and we may be able hereafter to follow them in their new exploits.

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Transcriber's Notes:

Obvious punctuation errors repaired.

Printer errors and inconsistent spelling repaired, including:

- p. 15 "Eecheren" changed to "Eeckeren" (north to Eeckeren)
- p. 18 "Belguim" changed to "Belgium" (end of Belgium)
- p. 21 "incredibly" changed to "incredibly" (incredibly short space)
- p. 77 "d'l'Opera" changed to "de l'Opéra" (the rue de l'Opéra)
- p. 80 "Bologne" changed to "Boulogne" (Bois de Boulogne)
- p. 109 "aline" changed to "aligned" (were properly aligned)
- p. 127 "reappeared" changed to "re-appeared" (the lieutenant re-appeared)
- p. 152 "Ludwigschafen" changed to "Ludwigshafen" (and near Ludwigshafen)
- p. 156 "is" removed from phrase "without the cap is on" (without the cap on)
- p. 158 "th" changed to "the" (the first bomb)
- p. 161 "enconiums" changed to "encomiums" (heard the encomiums)
- p. 163 "disance" changed to "distance" (a safe distance)
- Advertisement page "to-day" changed to "today" (many boys today)

*** END OF THE PROJECT GUTENBERG EBOOK THE BOY VOLUNTEERS WITH THE FRENCH
AIRMEN ***

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