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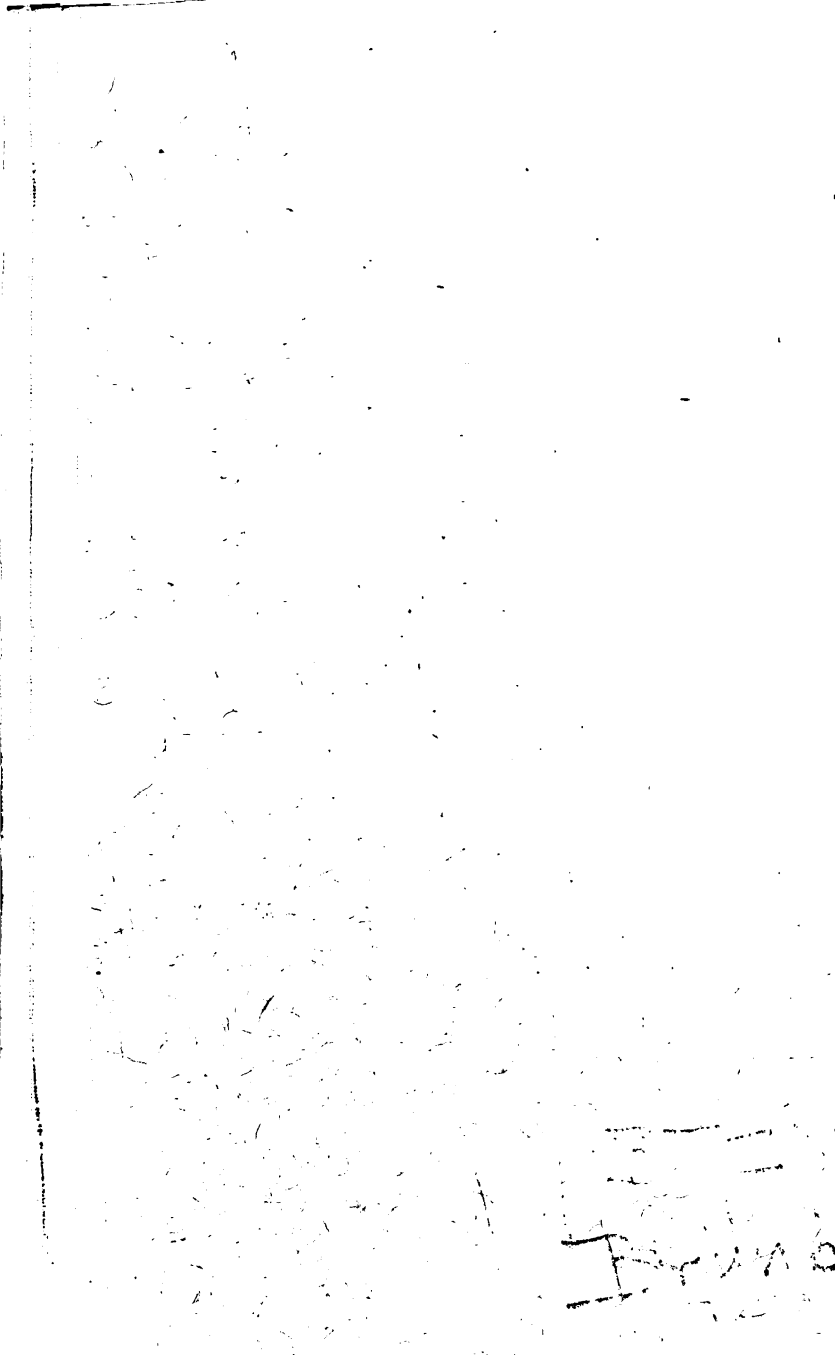

was surprised to see how much information he had gathered

THE FLYING YANKEE

BY

"FLIGHT"

WITH ILLUSTRATIONS BY
EDWARD C. CASWELL

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CONTENTS

ILLUSTRATIONS

and Mother bound on, what they jokingly called, their second honeymoon.

There was no more work for me that afternoon. I went home to the best pal I ever had —my brother Frank. For days afterwards we watched and waited, hoping that if not both, at least one, of our parents had been spared to us. But two weeks later both bodies were found and the uncertainty was at an end. We got the news on Saturday and that evening held a family council.

"I'm off to Canada," said my younger brother Frank. "I don't care what I join, as long as there is a chance to get at those murderers."

We two, Frank and I, were all that remained of the family, and my first impulse was to pack up and go with him. Calmer thoughts finally prevailed and we decided that Frank should go alone, I to follow later when our affairs were straightened out.

Two days before Frank was to leave the shock proved too much for him and he went to bed with a nervous breakdown. It was three months before he entirely recovered, and then

we found that the settling of our parents' estates would take over a year. As Frank was still a minor he was advised to wait until he became of age before going to the front.

The beginning of 1917 found the United States preparing to enter the war on the side of the Allies. Early in January I had the good fortune to meet Lieutenant Colonel I. Thord-Grey, late commanding the Eleventh Northumberland Fusileers. Colonel Grey was quietly organizing a brigade of British Americans which he intended to offer to the United States immediately after the declaration of war. We were living at this time in Montclair, our home town, and Frank and I conceived the idea of raising a New Jersey Division for the British American Brigade. Colonel Grey was enthusiastic over our plan and gave us authority to go ahead. When the newspapers heard of our determination to avenge our parents' death by raising this regiment they gave us plenty of publicity and inquiries and applications poured in on us. Then came the declaration of war and the refusal of Congress to recognize Colonel

Roosevelt's volunteers with which we were unofficially attached.

Colonel Grey and I met at the Collingwood Hotel in New York, after the Government's decision.

"Well, Harry," he said, "what are you going to do now?"

"If you were in my place, Colonel, what would you do?" I asked.

"Enlist and fight," was his laconic response.

I did not make up my mind right then, but talked it over with my brother.

Frank was anxious and eager to be off and was continually asking: "Well, do we go?"

The next day my brother's and my own applications for a commission in the United States Air Service went to Washington. But there were delays and neither of us would wait.

This time Colonel Grey came to the rescue.

"Go under the British flag, boys, it's all for the same cause," he said.

Armed with a letter from him, we went to the British Recruiting Mission, at 280 Broad-

way, New York, and learned that applications for the Royal Flying Corps had to be made to Toronto, Canada. This was before the Flying Corps opened their office on Fifth Avenue.

We were excited boys when a letter came from Toronto asking us to report there for physical examination.

It wasn't until I got on the train—April 25, 1917—that the full realization of what I was about came to me and, as the sleeper sped swiftly on, I wondered whether I was doing the right thing in leaving my country, perhaps forever. Still pondering over the problem I fell asleep and didn't awake until the train pulled into Toronto.

Almost the first person we set eyes on was a wounded Canadian. The sight of his empty sleeve and trouser made me sick. What if I should come back like that?

Frank was as full of fun as ever. The uniform of the policeman or "bobby," as the Canucks call them, caused him much amusement. So much so that it attracted the mighty one's attention and I was afraid Frank would

end up in jail. He got out of it by calling him "Captain," and asking the way to the Armories. Well, we got there and it certainly looked like war. On the front steps was a recruiting meeting, and a gruff-voiced Sergeant pleading for recruits. How that chap could talk, in a broad Lancashire accent, too. His points evidently got over, as we saw several young chaps being escorted within by soldiers. Inside the building we were taken before Captain Thompson of the Royal Flying Corps.

I think a squarer or more decent man never wore the King's uniform. He looked us both over, examined our credentials, then dismissed us with, "You'll do."

Frank laughed when we left Captain Thompson's office and said, "If it's all as easy as that, we get by."

The Corporal who was showing us the way grinned as we reached the end of the corridor, and said curtly, "Go in there and strip."

Frank took off his coat slowly. "This is where we go through it, old man."

Well, we did. I have had several physical

examinations in my young life, but this one had them all beat.

The first was the eye test. Besides reading different-sized letters at various distances we had to pick and shade all the colors of the rainbow. Ears came next; for they are very strict about hearing in the Flying Corps. Before going any further I must admit that I am thin, painfully so. That is one reason I chose the Aviation branch of the service.

Three doctors began examining our chests, lungs, etc. They held a consultation over me, and I was afraid that it meant a turn down.

"You are under weight, young fellow," the chief examiner said, "but you are painfully sound. If you pass the nerve test you get our O. K."

I didn't know what the nerve test was, but I soon found out. Frank had been taken into another room, so I assumed he was already going through the mill. You can imagine how you would feel if you knew someone was going to test your nerve. There wasn't a thing occurred in that room that I failed to see. Then

came the order to move on. I followed my leader into a room that was as dark as pitch. Somebody put a bandage around my arm and chest and drew it tight. I don't know whether my hearing was supersensitive, but I heard a revolver hammer click. Five times that revolver was shot off behind me, but I had been given notice in time. Both Frank and I passed this test.

Then came the whirling chair. The object of the whirling is to displace the fluid in the labyrinth of the ear, the fluid that controls your sense of balance and tells you whether you are standing on your feet or head. The examiner kept a record of the time it took for me to recover poise. Believe me, if you ever have the chance to sit in a whirling chair, pass it up; you'll feel better.

The next thing we had to do was to kneel and then jump up straight. Sounds easy but it isn't.

The examination lasted almost two hours. Frank and I began to get hungry.

"Are we through, sir?" I asked.

To my great relief he replied, "Yes, both of you; get dressed and report again to Captain Thompson."

"Well, boys, do you want to be sworn in now?" the Captain asked, when a few minutes later we stood before him.

We did; but also wanted several weeks to fix up our affairs at home. He said that we needn't be sworn in until we came back ready for duty, and that we were to report in two weeks.

We spent the rest of the day until train time, seeing the sights of Toronto, these sights consisting mostly of marching soldiers. I had never had militaristic tendencies, but the sound of the drums and marching men made me thrill as I never had before. The contrast, too, between the new recruits and those war-racked heroes who had done their bit brought home to me the meaning of the World War. Somehow, I never looked upon the *Lusitania* tragedy as an act of war, but rather one of willful murder. The knowledge that these men were to make war on the ruthless beasts who were re-

sponsible not only for the *Lusitania* but for thousands of other crimes against humanity, made me with them body and soul.

At the Union Station we met a Royal Flying Corps Cadet who proceeded to enlighten us as to what we might expect when we "joined up."

"I suppose you like being hazed?" he said.

We assured him we did, inwardly deciding to make ourselves scarce when the time came.

"Of course, they won't beat you up very much," he continued, "but all new rookies have to stand for it. They stripped me and chased me through the park, stark naked at 1 A.M., and at that I got off easy compared to what some of the other chaps had to go through."

This was pleasant news. Evidently joining the Royal Flying Corps was like going back to school again.

"I thought the fellows were in this thing to learn to lick the Huns in the air," said Frank.

"Right, old top," cheerfully answered our friend, "but you'll get enough war drilled into you at the University and be in the real thing when you get overseas. It's a short life and a

merry one for us of the R. F. C. I suppose you know what the other branches of the service call us, don't you?"

We did not and the answer was discouraging.

"The Suicide Club. So long, boys, here's my train."

We watched him swing aboard and heard no more from him until later—but that's another story.

The journey home wasn't very lively. We were both busy with our thoughts. I realized that two weeks was far too short for me to see all my friends, but the die was cast and I was a soldier, or, I should say, an airman, and anxious to fight.

If you have ever prepared for a long journey you know what a rush we were in. But have you prepared for a trip from which you perhaps will never return? Each day, hour and minute seems to fly. Our last week was spent in the country, away back in the hills. There were nights when I lay awake, thinking that perhaps everything was a dream, from which there would be a pleasant awakening.

The day came at last and my good-bys were hurried, as we could not stand much more. I left with the memory of the best girl in the world smiling wanly through her tears, waving her hand in a final farewell. Frank, too, left his heart behind him. Just two days before we came away his engagement had been announced.

The trip to Toronto was uneventful. We went direct to headquarters and took the oath. A few words, repeated after a young Lieutenant, and we were bound to defend the British Empire, with our lives if necessary. Immediately after being sworn in we both received a jolt.

"Whom do you wish to be notified, and where do you wish your remains to be sent, in the event of your being killed while learning to fly?" was the question.

The desired information was given and we received orders to report to the Equipment officer for uniforms. I think we both realized as we left headquarters that at least we were started on a serious enterprise,

and both determined then and there to do our best.

The Royal Flying Corps had taken over the entire University of Toronto for the use of its young birdmen, and the Equipment office was in the Engineering Building. There were about twenty young chaps there ahead of us, and to my surprise I found that seventeen of them were from the United States. Talk about a reunion. It sounded like a meeting of old pals at Times Square. All were of that type of young manhood common to the United States and Canada.

Then came our turn for uniforms. The British Government is not at all stingy when it comes to equipping its birdmen. This is what I drew: One private's uniform, coat and riding trousers with brass buttons, great coat, private's hat with R. F. C. gold badge, and white band to distinguish me as a Cadet of the Flying Corps. Two pairs of heavy shoes (my first look at them nearly finished me), a kit bag containing one sweater, two flannel shirts, two sets heavy woolen underwear, two pairs woolen

socks, one set cloth puttees, flying helmet, wool, needles and thread, two towels, razor, hair brush, clothes brush, shoe brush, tooth brush, shoe polish, completed the outfit. Our next stop was the Orderly room where numbers were issued. We were told to mark our numbers on all clothing and equipment, and that they would stick with us through our entire enlistment. My number was 70461. At the Orderly room we were turned over to a non-com or "Ack Emma" as we learned to call them. A. M. stands for air mechanic, which translated into the Wireless man's language becomes "Ack Emma."

After a short march through beautiful Queen's Park, we arrived at our quarters, known as the East Residence of the University. Frank and I were assigned to an electrically lighted room on the ground floor, containing a table, a bureau and three iron beds.

Joe Wood was our roommate, a short, stocky, good-hearted New Yorker. What made him drift into the Flying Corps we never found out. In fact, he said he didn't know himself.

We were placed in Class 9 as, indeed, were

all the Cadets who came in that week. And we were tipped off to get into our uniforms at once, as we would be expected to fall in at the supper parade, and woe betide the unlucky Cadet who should dare to appear in civics.

Who invented spiral puttees? I know at least ten husky young men who would like to meet the gentleman. Frank and I wrestled with ours for over an hour, until an old-timer, Cadet Brown, passing by, saw our plight and fixed each one in less time than it takes to tell it. Believe me, there wasn't a thing that Cadet Brown, of Pittsburgh, Pa., U. S. A., couldn't have had of ours, when he completed the job.

I am going to touch on a sore subject now: army boots, the British type, I mean. The kind issued to the U. S. boys are bad enough, but the British boot! Ye gods, what a raid on foots-ease powders there was during the next few days. Of all the instruments devised for the torture of mere man the B. B. (British boot) is it.

We finally got "togged up." Take it from me, boys, when you get a uniform on your back,

be it private or officer, if there is any red blood in you it will swell your veins with pride. Patriotism is a wonderful thing, but it can't compare with the wearing of the uniform that represents it.

At five-thirty that night the whistles blew, then came the hoarse command "On Parade." Classes 6, 7 and 8 were quartered in the same building and we "rookies" who tumbled out into the parade ground could not help but admire the way the boys formed up in two ranks, class by class. We newcomers stood in a group to one side, but we didn't stay there long.

"Wot's this, h'i sye, wot's this?" roared a red, bull-necked man, who I afterwards learned was a Sergeant Major—lord over the N. C. O.'s and Cadets, and ranking next to a Second Lieutenant. "This ain't a bloomin' tea party. Fall in," he continued. "Two lines, smart now."

We did it somehow. It is remarkable how like sheep otherwise intelligent men become when they take their first lesson in Army Discipline.

We had a ten-minute march to the mess hall. Ten miles it seemed to me, plus the new army boots. The meal was an agreeable surprise: soup, roast lamb, mashed potatoes, green peas, apple pie and tea, milk or coffee. Immediately after supper we were dismissed for the evening, with the reminder that everyone had to be in by 10 and lights out at 10.30. We turned in early, being dead tired. I dropped asleep trying to puzzle out the why of the army boot.

CHAPTER II

YOUNG AIRMEN

Arrival in Toronto—Swearing in—First uniform and equipment—Description of the University and daily routine—Two weeks' drill and discipline—Humorous incidents of drill ground and classroom—Graduation day and class banquet.

REVEILLE sounded the next morning at six o'clock. We had fifteen minutes to shave, dress and fall in on the parade ground. This time Class 9 fell into line with a rapidity that was amazing. There was a reason—

"H'if you don't form up smartly," said the Sergeant Major, "H'i'll give you three hours' extra drill."

In later days I sympathized heartily with that Sergeant. He had a heart-breaking job. "Rookies" seem to be all feet and no brains.

The first time we got the command, "Right Turn," half the class turned to the left. One unfortunate Cadet snickered.

"Tyke 'is name," roared the Sergeant and forthwith a Corporal stepped up to the offender and he went down on the black-list. We were standing at attention or thought we were. My luck was out that day, for the Sergeant spotted me. Now, I firmly believed that I was standing strictly at attention, but I was soon disillusioned.

" 'Ere you, stick that stomach in."

"It is in," I thoughtlessly answered.

You remember I have said that my luck was out; well, it had left me so far behind, I didn't think it would ever catch up again.

" 'Oo told you to talk back to me? I've 'alf a mind to put you in the guard 'ouse," he continued.

Right then and there I learned the golden rule of the army—obey the word of command and keep your mouth shut—and I never forgot it either. For two hours we learned the first laws of military discipline. We right turned,

and left turned, about turned, formed fours (sometimes) and marched.

Let me say a few words about the British slow march. If you do it before breakfast it has a wonderful effect on you—somewhat similar to being run over by a steam roller—and as a muscle hardener, it has no equal. The method of operation is simple. Hold your hands stiffly to your sides, and at the command, "Slow March," kick out your left foot sharply, hardly bending the knees. The toe must be pointing towards the ground. Then bring it down quickly, and repeat the operation with the right foot. Head must be erect and eyes front. Keep this up for ten hours with one or two short breathing spells, and you get the full benefit of it.

At 8.30 we sat down to a real breakfast of cereal, eggs and bacon, toast, marmalade or honey, and choice of tea or coffee, a meal we thought fit for the gods.

Every morning at 9.30 on the University Campus our officers held morning parade and inspection. Brass buttons and cap badges had

to be polished until they shone like gold, and shoes had to be really shined; it takes three times as long to shine an army boot as it does one that ordinary mortals wear. That first parade was one that I shall never forget. We stood stiffly at attention for almost half an hour, as the officer passed slowly down the ranks. Not even an eyelash flickered as the commanding officer looked me up and down.

"Buttons not polished sufficiently, collar hook unfastened, and puttees slovenly," was the report on my appearance. Certainly my first morning on parade was nothing to be proud of.

Frank and Joe Wood got by the inspection, but an unlucky rash remark of Joe's caught the ear of a non-com and down went his name and number. Discipline is discipline in the army, and moving or talking on parade is a serious offense. At last came the command, "Interline left turn, left wheel, quick march," and we were off. Then followed drill until noon. If you have never done much physical exercise and then drill almost seven hours a day, by supper time you are about all in. We were almost

too tired to eat and turned in immediately after supper.

For two weeks this was the routine we followed: Reveille 6 o'clock, first parade 6.15, drill until 8 o'clock, breakfast 8.30, dress parade 9.30, drill 10 until noon, lunch 12.30, rest until 2, drill until 5, supper 5.30, dismissal at 6.15. Saturday we were released at 1 o'clock and Sundays were free all day.

The Royal Flying Corps being the only imperial branch of the service in Canada and, therefore, the leader of all branches, our conduct was watched very carefully. It was in orders that no Cadet should "walk out" (go to town) without carrying cane swagger stick and wearing gloves. Particular attention was called to the saluting of officers, whether walking or riding. Failure to salute an officer meant severe punishment, probably several days C. B. (Confinement to Barracks). The necessity of absolute secrecy regarding the activities of the Corps was also impressed upon us. Two burlesque theaters and a café in Toronto were placed strictly out of bounds.

As our Commanding Officer, Major Vernon Harcourt, once said, "You Cadets must remember that you are training to be officers in an organization made up of gentlemen. Your conduct at all times should be that becoming not only a soldier but one who is proud to belong to the Royal Flying Corps, and who is, above all things, a true gentleman. I feel sure that not one of you will dishonor the distinguished uniform you are in."

A feeling of pride took possession of us all after that little talk and I am glad to record that not one man in Class 9 ever brought disgrace to the Corps. Credit must be given not only to Major Harcourt, but to Adjutant Captain Bryans and the other Staff Officers of the University for the way in which they whipped our class of men into shape. I learned more here in five weeks than I had learned elsewhere in a year.

We finally passed the last day of drill and were graduated into the ground school. Then began the actual study of the theory of air-fighting. Our teachers were Royal Flying

Corps officers invalided back from active service. A fine lot of fellows they were, strict disciplinarians, but off duty the best of friends. There were also several "non-coms" from England who explained the mechanism of the machine guns, engines and aeroplanes in such a way that all could grasp their meaning.

The uniform which was issued to us the first day of enlistment was only temporary, and the entire class was measured the following day for our "walking out suits." This uniform is the same as that worn by our officers, with this difference—Cadets wear a white band around the dinky Glengarry cap, and a belt without the shoulder strap—no stars, the mark of a Second Lieutenant, are worn. Instead of a long overcoat a snappy British "Warm" was issued and worn over the uniform in bad weather. The whole outfit gives a man a trim, soldierly appearance.

The day Frank and I discarded the brass buttons uniform for our new outfit was a red letter one. We felt like old-timers as we walked down Yonge Street, Toronto, that night.

I'll never forget the first inoculation, about which I am frank to admit I was nervous as we stood in line waiting to be "jabbed." One or two of those in front became paler and paler as they neared the room where the job was being done, and one chap did actually faint before he saw the needle. Cadet Deeds who had served at the Mexican border saw my nervousness and he said that inoculation didn't amount to much and it would soon be over. But he didn't know this particular doctor. I thought that needle was going to stick out of my back. The funny part about the whole business is that you don't get the after effects for about four hours. Then your arm and side get stiffer than a piece of plank, and you finally conclude to go to bed. It isn't everyone that is affected this way. Some chaps don't mind it, but I do.

For amusement on Saturdays and Sundays we would go down to one of the beaches on the shores of Lake Ontario and swim or row. The Cadets, taken as a whole, were not inclined to go in for any wild times during off hours, and more often you would find them sitting in one

of Toronto's parks discussing the many problems that came up during the day.

The boys of Class 9 were a bunch of good fellows, and many friendships were begun at the University that will no doubt last as long as the boys themselves.

It was in my fourth week of the University that the first intimation that death was nearer to us than we thought, came upon us. The news that Johnny Teesdale of Course 7, who had left for the flying field the week before, had been killed on his first solo flight, was a shock to Officers and Cadets. Johnny was a likable chap, a native of Toronto, and the leader of more than one hazing party. His funeral was held in Toronto and Frank and I were two of twenty Cadets chosen from the entire school to act as escort and pall-bearers. I will always remember the solemn and serious bearing of those Cadets, as they filed past the bier of one who but a short time ago had been their chum. The interment was to be in a cemetery eight miles away, and we gathered in the garden, waiting for the cortege to start.

We were under the command of Lieutenant Stewart and I remember his saying what a shame it was that that young life should have been sacrificed before he even had a chance to fight a Hun. During the slow march to the cemetery we led the cortege, and not a man on the street as we passed failed to remove his hat and pay his respects to the young airman who had given his life for his country. For days afterwards the thought and mention of Teesdale made many a young man turn away and clench his hands.

By this time we of Class 9 knew how to drill, if not too well, at least well enough to get by with our Sergeant Major. Then came a day when a new Sergeant took us in charge. He had just come over from England and was a martinet when it came to drilling. His commands were quick and clear—like a well-oiled machine, we responded—then came the order, "Stand at Ease."

We waited for the words of praise we certainly expected. This is what we heard:

"After seeing you Cadets drill all I can say is—thank God for the British Navy."

The story went through the entire University—Course 10, which came in after us and were "rookies" in our opinion, rubbed it in whenever they got the chance. This naturally caused bad feeling between us and, the week before we left the University for good, plans were made for a raid on the "Tenners." The South Residence where they were quartered was only a stone's throw from East, both buildings fronting on the parade ground. After lights out that night we gathered in the common room of our building and outlined a plan of action. Every man was masked, with a red mask, a safe way of identifying friend from foe. The plan was simple. Four Cadets were assigned to each room with orders to turn over every bed, rout out the occupants, and capture as many as possible without arousing the noncoms who slept in the building.

Somebody in "South" with a voice worthy of a longshoreman gave the alarm before we had really got under way. The fight that followed

was bloody and long. It was the first and only one that ever happened in the Corps. Up and down the three flights of stairs, and along the windows the battle swept. Just then some of our boys made a grave mistake—they collared a non-com, tore off his night clothes and put him under the ice-cold shower. He was a plucky man but outnumbered and finally they let him go. He ran for his whistle and in a few seconds was sounding the call for the guard. Sergeant Major Sedgewick, with Flight Sergeant Cooper and several Corporals, was quartered in our building. Sedgewick was a master of strategy—he knew we had to get back to our own building, so he waited in the dark hallway for our return. Frank and three other Cadets were the first in his net. But as he was too busy to unmask them just then, they were placed under guard of two Corporals and told to wait in the dark. It was a bad move on the Sergeant's part. The Corporals were upset, Frank and company were out of the corridor windows in no time, had doubled around the building and climbed into our room.

In the meantime another Cadet, George Morton, of Winnipeg, came dashing in. He saw the Sergeant in time to elude him and dashed upstairs only to find some N. C. O.'s lying in wait on the third floor. He doubled back to the second floor, seized a large tin waste-paper can, and although he was only a short stripling, picked it up, charged downstairs and neatly dropped it over the Sergeant's head.

The next morning Courses 9 and 10 were placed under open arrest. This resulted in a stern lecture by Major Harcourt and the confinement of all of us to barracks for the remainder of our time at the University. Months later I learned that while annoyed at the breach of discipline, our Commanding Officer was pleased at the high spirits shown by the boys. He expressed his change of mind by canceling the C. B. (Confinement to Barracks) three days after it was given us.

It has been the custom since the Royal Flying Corps came into existence for the class graduating from the School of Military Aeronautics to give a banquet to the Officers the night before

the final examinations. Our banquet was given in the Hotel St. Charles, Toronto, June 26, 1917. The guests of honor were General Ryerson, Surgeon General, Canadian Expeditionary Forces, and Lieutenant Allen of the U. S. Navy. After the dinner, which was excellent, the toast to the King opened the ceremonies. The toast to the King is a feature at every formal dinner of the School when British Officers are present. It is proposed by the class president who says:

"Gentlemen, the King."

The vice-president also arises and acknowledges the toast with:

"Gentlemen, the King."

All rise and the toast is drunk—never in anything but wine or water.

Immediately following this toast came one to "The General Officer Commanding the Armies in France," proposed by Lieutenant Earl. "The Boys in Active Service," proposed by Cadet Martel. "Our Officers," proposed by Cadet

Darroch and responded to by Major Vernon Harcourt. "Our Guests," proposed by Cadet Gray and responded to by Lieutenant Allen. The final toast, "The Royal Flying Corps," proposed by Lieutenant Drake, was responded to by General Ryerson. We liked the General the moment we saw him and as he rose to speak heads were inclined attentively towards the place where he stood. I remember his speech, which ran about as follows:

"Less than two months from to-day," he commenced, "most of you young men will no doubt be engaging the enemy several miles above the clouds. Your opponents will be men skilled in the art of air-fighting, ready to do any dastardly trick to bring you down. The Hun knows no chivalry of the air as we do, and while he is brave in numbers, in single combat if you are aggressive he will generally turn and run. I have been observing you during this enjoyable banquet and I must say that never have I seen a cleaner, finer lot of young airmen. Your Commanding Officer tells me that seventy-five per cent of you are boys from the

United States. You have come from all corners of the North American Continent to take your place as members of the Royal Flying Corps. Your enlistment being voluntary shows the fine spirit which animates you all. Gentlemen, I consider it an honor to be present among you this evening and can only add in closing that after the war is won nothing would please me better than to greet you all again under this same roof, and in the same spirit of good fellowship."

The banquet broke up early, as on the following day came our examinations and graduation. I studied far into the night, as there were two or three subjects I was dubious about and didn't want to take the chance of "flunking."

The examinations were harder than I expected, but late in the afternoon I learned that we had passed and would be posted away to the flying field in the morning. There was much speculation as to where we were going. You see there were two flying schools, one at North Toronto, and the other at Deseronto, about 170 miles away from Toronto in the direction of

Montreal. There was a great deal of disappointment the following morning when Class 9 learned that it was to be split in two—half going to one flying school, and half to the other. Frank and I were posted to Deseronto together with Joe Wood, George Morton, Jack Deeds and Bill Reid. We six had chummed together a great deal and were tickled to death to be going to the same school. Twenty-six other "Class Niners" made up our company.

At 10 o'clock we formed on parade and were presented with our anticipated diplomas. At 10.30 headed by an air mechanics' band we marched to the Union Station, Toronto. The people of the city, used as they are to the sight of marching soldiers, gave us a great reception. We were a fine-looking bunch of men as we swung along in fours and entrained in the special car waiting at the depot.

We didn't travel fast, as our car was attached to a Canadian Northern local, and this railroad is held in the same high esteem in Canada as the Erie is in the States. To make matters

The way our fellows stormed that depot would have done credit to a raiding party on the Somme

worse there was no diner in the train, although our coach was comfortable enough, being a Pullman observation car. By 3 o'clock some of the boys began to get restless—hunger is not conducive to comfort, particularly when the hungry ones are young, virile men used to eating three big "squares" a day. The only place at which the train stopped consisted of a depot, a road, and plenty of lovely country.

Joe Wood first called my attention to a mysterious conference going on at one end of the car. The conductor and our champion eater, Billy Bray, were comparing a time-table with their watches. Billy's face was wreathed in smiles, something unusual when Billy was hungry.

I whispered to Joe, "What's the game?"

"Darned if I know, but I will soon find out," he replied.

Then the conductor made a move, "Osahano —Osahano," he called, and the brakes began to scream as the train slowed down and came to a stop. Bray quietly made his way to the door and Joe was right after him. I stuck my head

out of the window. The depot was almost a twin of the one we had last stopped at, but I caught sight of Bray and his shadow ducking into the combination freight and ticket office. No sooner had Joe disappeared inside than out he popped again.

"Grub, fellows, quick," he shouted.

The way our fellows stormed that depot would have done credit to a raiding party on the Somme. Inside we found that Bray had cornered the sandwich market. He had bought them all, about thirty, together with several pies. Poor Bray, I think he did get a piece of pie in the end, but he had no chance to defend his hoard against our hungry boys, and we made a clean sweep. Of course, we all chipped in and handed Bray what he had spent, but what did he care for money when his stomach was empty? For the rest of the journey he never cracked a smile. In a way I couldn't blame the poor fellow. Just think how he had been counting the minutes and miles as the train drew near his filling-up place. We found out afterwards, that with characteristic thought-

fulness he had wired sufficiently ahead for the sandwiches to be ready, plus the pie—which was delicious. We finally pulled into Deseronto at a quarter to six that evening.

CHAPTER III

LEARNING TO FLY

Arrival and impression of flying field at Deseronto—My first air joy ride and crash—Fun at camp—Camp amusements—Scaring the natives—Forced landings and country hospitality—Some serious airplane accidents—Machine-gun practice on ranges—Aerial wireless work—Graduation after five-hour solo.

WE were all thinking about supper as we lined up in formation, two deep, everyone hungry as a bear. A Sergeant Major took us in charge and ordered us to identify our kits and baggage, which had come in on the same train. My first impression of Deseronto was not encouraging. It is a little more than a village, situated on the shores of Lake Ontario, in the heart of Indian territory. The more I saw of it, the less I liked it.

While waiting at the station for the motor

tender which was to take us on the three-mile trip to Camp Mohawk we had our first real glimpse of aeroplanes in battle formation. We heard the low humming of the motors before we saw the planes. When they came into view it was a sight well worth seeing. The sun was sinking in the West and gleams of gold were reflected from the white wings. Seven aeroplanes were swooping and diving and there wasn't a man among us who did not envy the men up in the sky.

Evidently something had happened to the tender, as we were kept waiting for more than half an hour. It was a relief when it finally did arrive and we started on our way to the camp. I managed to sit in front with the chauffeur, a young Corporal, who informed me that the flying field at Camp Mohawk was the best in Canada. We were halted by an armed guard where the road turned into the camp.

"New Cadets," sang the Corporal.

"Pass, new Cadets," and we were inside the camp. The road wound through a wood, then came out upon the flying field. It was a remark-

able stretch of flat ground more than three miles long. The hangars which housed the aeroplanes were built around the edge of the field. Several planes were in the air as we drove around the outskirts of the field and two landed while we watched. I marveled at the way their pilots swooped earthwards, then straightened out and gently landed with hardly a jar. The activity of the field fascinated us all and I asked the Corporal if there was any chance of getting a ride before supper. It's funny how our hunger vanished at the thought of a flight. To my disappointment he said there was no chance at all until morning.

Camp Mohawk was well laid out. The Cadets' and Officers' quarters, although separate buildings, were built alongside each other and on top of a hill overlooking the lake. The Officers' mess, in which we ate, was at the back of these buildings, together with two recreation rooms, beautifully furnished and equipped with a piano and Victrola and also all the current magazines. It was almost a mile from the flying field to our quarters. On the way we

passed the long, low buildings in which the air mechanics were housed, also their mess hall and canteen.

After a hearty supper we were finally settled in our quarters. There were ten of us in one large room and each had a bed, four blankets, table, chair and closet. The building was two stories high with large verandas on each floor. Several fresh-air fiends asked permission to sleep out on them and were told to go ahead. There were four squadrons at the camp. Numbers 80, 83, 84 and 87. The Commanding Officer was Major Lord Wellęsly, a wonderful organizer, and a man who had seen service during the first two years of the war. He deserves a great deal of credit for the number of Cadets graduated as successful flyers from his camp. Frank, Joe, and George Martin and I were assigned to Squadron 84 and we were surprised to learn that our Squadron Commander was Lieutenant, later Captain, Vernon Castle.

I had thought that life at the University was hard enough, but the routine at the flying field

began with dawn and did not end until dark. Before turning in we were shown the notice board on which all orders were posted. All the new Cadets were up for early flying the next morning.

At precisely 3.30 A.M. I was awakened by the simple method of having my bedclothes pulled off by a non-com. The large room was ablaze with light and the Cadets were sleepily beginning to dress. It was pitch dark outside and at first I did not feel like getting up. Frank, in the next bed to me, snored away utterly oblivious of the fact that he was not covered. I woke him up by pulling him out of bed and we hurriedly dressed. We wore our sweaters under our tunics and carried flying helmets. By 4 o'clock, as dawn was breaking, we marched over to the Officers' mess for hot coffee and biscuit. Believe me, when you get up at that hour you need something warm in your stomach.

That first march to the flying field certainly seemed longer than it really was. As we rounded the hill and saw the hangars and field

before us, I for one could not wait to reach our hangar. As luck would have it, number 84 was the farthest away. Lights were still ablaze in the hangars, although the darkness was rapidly fading. Already several aeroplanes were lined up waiting for us and as we drew nearer the number was increased to twelve. The field was beginning to show signs of activity. At the other squadrons' quarters planes were also being turned out, and suddenly we heard the sharp explosion of a motor coming to life. It seemed like a signal, as others joined in from different parts of the field.

Back of our hangars was the Orderly room and we paraded there before Captain Castle. He was a likable chap and soon put us at our ease. From him in a short talk we learned that there were certain rules of the air which must be obeyed. For instance, if a red flag should be flying from the signal pole we would know that we should make right turns in the air, if a white flag, left turns. This is important, as you can easily see that should two planes be making different turns, there would be danger of

a head-on collision. He also gave us each a "Pilot's Flying Log Book" in which the record of every flight we made was to be entered; which book had to be kept accurately right through our service and would be our property when we left the Corps. Then our instructors arrived: Lieutenants Ward and Snyder and Cadet Instructors Teeporten and Parrish.

Lieutenant Ward, a young Canadian from Vancouver, chose Frank and me as his pupils and gave me the first trip. An Orderly brought me a leather flying coat and a pair of triplex unbreakable goggles. Encased in this outfit plus my flying helmet I did not feel very comfortable. I wasn't exactly nervous but just a little anxious. I had driven automobiles far beyond the legal speed and done seventy miles an hour on a motorcycle, but of course all this was on mother earth and different.

Many planes were in the air when I came out of the Orderly room, and the East was beginning to show signs of the coming sun. Lieutenant Ward was already in the back seat of the

Curtiss training plane and he motioned me to hurry up. I climbed into the front seat, carefully adjusting and drawing tight the safety belt. Standing up in his seat and bending towards me he said:

"You understand this is a joy ride. Do not touch the wheel or other controls. Keep your hands on the fuselage and sit tight. We'll just circle the field once and come down."

An air mechanic stepped to the front of the plane and grasped the propeller.

"Switch off, petrol on, suck in, sir," he called.

"Switch off, petrol on, suck in," repeated the Lieutenant. The husky mechanic turned the propeller slowly about four times, then "Contact, sir." "Contact," came the answer. Round spun the propeller and the motor started. The rush of wind in my face was terrific as the motor speeded up, and I hastily pulled down my goggles to keep the tears out of my eyes.

The motor was finally throttled down and I eagerly looked out of my cockpit at the group of Cadets who were watching the start.

"Sit tight," came the command as the motor

sprang to life. Slowly we started to bump along the ground, gradually increasing our speed. Suddenly the bumping ceased and as I peered over the side I saw the earth dropping swiftly away. My first feeling was one of surprise, the next terror. I admit I was more than scared—absolutely frightened stiff. The cause of my upset feelings was a sharp left turn accompanied by a bank of 45 degrees. In plain English, one second I saw the earth below me, the next as one wing of the plane rose in the air and the other went down, it seemed to be rising to meet me. We got back on an even keel again and my next trouble was the gale caused by the propeller which almost took my breath away. It didn't take me more than thirty seconds to straighten my goggles which were nearly blown off. When I looked over the side again the earth was far below. The flying field looked unreal and the planes on the ground appeared like tiny white butterflies. Several hundred feet below us another plane was flying and I could see every motion that the pilot made. He seemed to be having a won-

derful time and I envied him his coolness. It appeared impossible to me that I should ever be able to take one of those magnificent machines up into the air alone.

Then something happened that almost made my first air ride my last. The motor was going full blast, but I could feel that we were dropping. Our instructors at the ground school had taught us that when an engine loses power and the revolutions of the propeller slow up it is time to look for a soft landing ground, as you have a case of bad motor trouble. I looked back at Ward and I could see that the situation was serious. Panic-stricken as I had been when we first took the air, I kept cool now and wondered just where Ward intended to try to land. We were flying into the wind—a lucky thing for us. The country below which was rapidly coming up to meet us was heavily wooded, and we seemed to be in for a bad crash.

About 500 feet from the ground the motor stopped altogether and I almost fell out of my seat as Lieutenant Ward turned the nose of the

plane down to keep up our flying speed. Below us was a farmhouse, in the center of a small wood. There was just one small patch of open ground and that was a promising oatfield with oats shoulder high. By a piece of brilliant maneuvering, one of the best I have ever seen, Lieutenant Ward "pancaked" the plane down into this small field. Just before the crash I tried to brace myself, but the force of impact was so great that it tore one side of my safety strap loose and caused me to crack my head against the top plane. The last thing I saw before the crash was an Indian squaw throwing up her hands and dropping the basket of washing she was carrying.

Outside of a headache and a sore rib I was unhurt, and Lieutenant Ward wasn't even scratched. It was indeed a lucky escape.

Meanwhile, back at the camp Frank was running wild. The observation post had reported our crash and he thought I was surely killed. We fell about four miles away from the camp and "Hungry Lizzie," the white Packard twin six ambulance which was always on the field,

had gone sixty miles an hour towards the place where we fell. Everyone was relieved when we turned up safe and sound.

There was no more flying for me that day. The next morning, however, Captain Castle took me up for over an hour. That was some flight. We went over Lake Ontario at about 3,000 feet, then he started to climb in large circles. We reached 12,000 feet and the view from that height was magnificent. It is impossible to talk while the motor is on full, and it is customary when up high enough to throttle the motor down, put the plane at a glide and carry on a conversation.

When Captain Castle throttled her down the silence was profound. Instead of the roar of the motor there was just the gentle whistle of the wind singing through the wires.

"I'm going to loop," he said. "Tighten up your belt as far as it will go, and hold fast."

I nodded my head and held on for dear life. Up came the nose of the plane again and once more the motor roared. We flew along level for a minute, then up went the plane, up and up

some more. For a second we hung almost vertical then over we flopped upside down. What I remember best was the straight nose dive after we had completed the loop. The only acute sensation was one of nausea. I frankly admit I felt deathly sick. Twice more did we loop then came to earth in big spirals.

Captain Castle was kindness itself when we landed. "Too much for you, old man?" he asked. I told him it was only my second trip and that I wanted to go somewhere and die. If you have ever been seasick, multiply it ten times and you know what airsickness is like.

That night as I lay in bed I wondered whether I would ever become an aviator. I was still thinking about the matter when Frank leaned over and whispered, "Can you get the hang of it, Harry?"

"No, and I don't think I ever will," I whispered back.

On the other side of my bed was a Cadet Instructor named Lancaster. He evidently overheard our conversation, for he broke in on us and we listened far into the night to his sug-

gestions and advice. One thing he told me has saved my life more than once, "If you ever get into trouble above 3,000 feet in the air such as a side slip or nose dive, don't lose your head. Stick all controls in neutral and sit tight. The plane was built to fly and if nothing is broken she will come out of it after a steep drop, on an even keel, and then is your chance to regain control."

After the third day at the flying field we were all working like beavers. Reveille 3.30 A.M.; early morning flying from 4 to 7.30; breakfast at 8; rest until 9; wireless class 9.30 to 10.30; machine-gun class 10.30 to 11.30. Then one hour's drill. Lunch at 1 followed; rest until 3; tea at 3.30; another hour's drill until 5; flying from 5.15 until dark, succeeded by supper and bed. This schedule applied both to Sundays and weekdays.

As the time went by Frank and I began to handle our planes like veterans. It is customary for Cadets to have about five hours' dual instruction, before being allowed to take up a plane alone. One morning Captain Castle

called me over and told me that Frank had just left the ground on his first solo—he made one circle of the aerodrome and a beautiful landing. My younger brother had beaten me in learning to fly!

Lieutenant Ward refused to let me start off alone the same day, as he said my turns were rotten, and that I did not give the machine enough bank to allow it to get round properly.

All the next day I begged to be allowed to start my solo, but didn't get permission for two days. To my knowledge there isn't a man who can truthfully say he was not nervous the first time he took an aeroplane into the air alone. I felt all right until I got into the air and then my troubles began. In the first place it was very bumpy with a nasty thirty-mile cross wind. I had to keep the controls constantly in motion to keep her level. Unless I had done so I don't know what would have happened. An air bump is an unpleasant thing to encounter, particularly on your first solo. Your plane may either drop suddenly or rise, either way is just as bad. Should it catch you under a wing,

you will have the pleasant feeling of the plane banking itself, and if not caught in time, down to earth you crash via a nasty sideslip.

With so many bumps I hesitated to bank the plane, but knew I had to, otherwise I would have continued out over Lake Ontario. I got it round somehow and then had to buck the cross wind. The motor was a good one and pulled me through, but when I looked down for the familiar landmarks and aerodrome, I could not see them.

Imagine yourself in my place. I had got off the ground safely, could fly, but wasn't so darn sure about landing. And I had lost my bearings, which meant a possible forced landing in a strange field. The plane was now flying in the teeth of the wind, and progress was slow. One of the first things taught a new birdman is to hold the plane level by keeping the horizon on a level with the rocker arms of the motor. In my anxiety to get my bearings I hadn't watched this, with the result that the nose of the plane rose above the horizon and I was steadily climbing. But this climbing was my

salvation, for it enabled me to see a great distance, and I finally discovered the aerodrome.

That was the best little view I have seen in a long time and I didn't hesitate to bank the old bus. I got down safely, making a rotten landing. Maybe I wasn't glad to step out of that plane!

At Mohawk we were many, many miles from Broadway, but that did not prevent the New Yorkers from getting up a concert one night in camp. Captain Castle was the main attraction and he certainly "put it over." It was an all-star show and furnished amusement not only for Officers and Cadets but also for the mechanics.

It was at Camp Mohawk that little Georgie Morton was killed. He had only half an hour's time to put in, and in his anxiety to get it over, crashed in landing one morning on early flying. He sat at the head of our table at mess and at breakfast we thought he looked rather white. He wouldn't tell us how it happened and seemed rather sad that he should have wrecked an almost new machine.

"You're not going up again after breakfast, George?" I asked.

"Sure I am," he said with a grin. "I want to finish my time to-day, and meet dad in Toronto to-morrow."

We knew his father was coming on from Winnipeg to see him before he went overseas, and I envied him the anticipation of the coming visit. We were in the machine gunnery building near the end of the flying field, when it happened. There came a sound like the bursting of a paper bag, greatly intensified.

Wallace Borden, an excitable chap from St. Louis, gave one look out of the window, then shouted:

"My God, what a wreck!"

We were out of the building in a couple of seconds, and saw not a hundred yards away a small heap of wreckage. At first, to me, it did not look like a plane, but the rudder with its red, white and blue stripes and black number, quickly answered my unspoken question. Never in later days did I see a more complete wreck than this one, except two that caught fire in

falling. "Who is it?" was the question on every tongue, and we didn't know until the timekeeper came over.

"It's George," said Joe.

"George who?" I asked, as there were several Georges in Squadron 84.

"Morton," he answered and walked quickly away. At first it seemed hardly possible—but there was no mistake. We Cadets of the gunnery class had reached the wreck first and began frantically to tear the twisted wreckage apart. The motor was in slivers of steel, smashed like an eggshell. The first and last thing I saw was George's hand, severed above the wrist, with his watch still intact. I am thankful I saw no more. Several Officers ordered us away, and we went back to our quarters. That ended work for the day. There was no more popular boy in camp than little George; his death cast a shadow on us all. With all their faults I have found the lads of the Flying Corps the most sympathetic bunch I ever met. The remainder of our time at camp no one slept in George's bed, or sat in his place at table.

Call it superstition if you will. I call it respect for his memory.

Right after that we had a run of bad luck in our squadron. Two more Cadets met their death within three days, as the result of a collision in mid-air. Neither of these, however, affected us as much as the death of poor George.

It was while we were at Camp Mohawk that we had the first actual range practice with machine guns. Three times a week we used to go up on the range and learn to operate both the Vickers and Lewis guns. The guns were not of the aerial type but were standard trench models. We fired at a target placed 50 feet away. It sounds easy to make a hit at that distance but it isn't. The target was a large sheet of white canvas with different-sized squares on it.

The first time Frank, who is a crack shot with a rifle, saw the range he jubilantly exclaimed that he'd blow the black squares off the earth. He tried the Vickers first. After using up half a belt of cartridges and distributing them anywhere but in the right spot, he tackled the

Lewis, with the same result. The difficulty, as explained by the Gunnery Captain, was that he did not press hard enough upon the handle grips, and thus allowed the barrel to wabble with each recoil. Inasmuch as our lives would depend later upon our ability to shoot straight and hard, we both tackled the guns, determined to learn all we could.

CHAPTER IV

AERIAL GUNNERY

I go to Camp Borden—Description of airplane and machine gun—Shooting at target on ground from the air—Camera gun shoot—Co-operation between pilot and gunner—Death of three chums—Shooting at balloon target towed by another plane—Trick flying—Return to Toronto—Receiving of commission—Home for a last good-by.

SEVENTEEN miles away from camp is the city of Belleville. After I had had about two hours' solo flying, and began to consider myself an aviator, I flew there and back one morning. It was my first cross-country trip and I was really proud of the feat. I did not hesitate to tell the boys about it either, and Frank was the first audience. He said little, but in the late afternoon Captain Castle told me that Frank had made a forced landing forty-

five miles away and would stay there all night and fly back after repairs had been made. A ninety-mile round trip; can you beat it?

When he got back the next day, and we learned that he had stayed at some country banker's house and been entertained royally, there was great commotion in the camp. As a result of that flight there were five forced landings in the late afternoon of the following day, all at different points. But the adventurers did not get away with it. Captain Castle had ordered a tennis court made for the Cadets and a gang of "Ack Emmas" had been working on it. Five of them were relieved from the job and the doughty cross-country fliers took their place. Needless to say, forced landings went out of style immediately.

Some of our boys were trained for observers and I was posted at the Aerial Wireless Squad as a pilot for a couple of days. My job was to pilot a plane equipped with wireless while the observer sent down his observations on the instrument. It was tame work, as it consisted of flying in a circle until the ground station got

tired of receiving our messages and put out the signal to come down.

It was the custom in the Royal Flying Corps at that time for a Cadet to be posted to the finishing school at Camp Borden after the completion of five hours' solo flying. Frank and I finished our course almost together and were glad to leave Mohawk behind. To reach Borden you have to go back to Toronto and then seventy miles out in another direction. The first time I saw the camp I thought it was the sandiest place I had ever seen. We got so used to that sand after a while, that we wondered how we would ever get along without it. Sand in our beds, sand in our food, sand in our clothes, sand everywhere. If a "movie" man wants a good fake location for the Sahara Desert tell him to go to Borden.

At this camp we met several of the old Class 9 boys who had been at North Toronto. I could not help noticing the difference in their looks. Tanned, and the picture of health, it was hard to remember them as they were the day I saw them outfitted with uniforms. I suppose I too

had changed. I knew that I felt lots better, weighed more and really had developed some muscles on my shoulders and arms, which previous to my enlistment had been flabby and useless.

While at Mohawk we had not been allowed to "stunt" or do tricks with our planes, but at Borden we were encouraged to loop the loop, stall, etc. I found that in my looping, once you were over the first move, the plane finished the job itself, and I kicked myself for not doing it before.

Formation flying was taught us at Borden and our first attempts resulted in a collision between two planes in the line and the blinding of a Cadet in one eye. The start of a formation flight is a pretty sight for the spectator but risky for the aviators. We used to form up in a long line, side by side, fifteen planes in all, and at a given signal the leader, distinguishable by black streamers suspended from the wings, would take the air, followed by each plane in line in succession. When about 3,000 feet was reached a V would be formed with

the leader at the head of the V. The two planes immediately behind him would be a little farther apart. The reason I disliked formation so heartily was because the machine in front used to present me with a beautiful air wash, and my plane acted like a rowboat in the wash of an ocean-liner. The accident already referred to happened on Sunday. A Cadet lost his head and sense of direction with the result that he landed on top of another machine, escaping uninjured but breaking the other Cadet's leg, giving him internal injuries and causing him to lose an eye.

Learning to fly, you see, is no pleasure game. Formation and cross-country flying occupied our time until we had done fifty hours in the air. Then came our transfer to the Aerial Gunnery School and the last period of our training before we received our commissions.

It is difficult enough to shoot a machine gun on the ground, but this is mere child's play compared to actual firing in the air. A standard Curtiss two-seater training biplane was used for this work, but altered so as to allow a gun

to be fitted on it. A bay is built out from the top plane, over the front seat, and the fabric is re-enforced, making an arm rest for the gunner. The gun, an 18-pound Lewis, is mounted on a special gun cradle fastened to the rim of the plane and supported by several center struts.

The target was a square white canvas, with a reproduction of the German Iron Cross in the center. This was laid on the ground and two signal flags raised to warn people away.

The first time I saw this gun-mounted plane I took a violent dislike to it. Instead of sitting comfortably in the back seat as before, I had to straddle the cowl back of the front seat and hang my feet in the cockpit. The gun moved up and down about eight inches, and I knew that the only way to get a shot at the target would be for the pilot to shut off his motor and dive nose first to within a few feet of it, during which time I would have to grind out my shots before he brought the plane up again. The instructor was also the pilot, and the chap I had certainly knew his business. The first time we swooped down I opened fire too soon with the result that

the instructor called my attention to the fact, with emphasis, when we made a landing.

I had to sit in a most uncomfortable position and the wind almost tore me loose from the plane. It took days of practice before I became a good enough shot to pass my test. Once my pilot miscalculated his distance and failed to swoop up in time. The result—a crash and a perfectly serviceable plane gone to pieces, plus a trip to the hospital for the pilot; as for me, I lost three teeth and considered myself lucky.

Another kind of shooting which is not so difficult or dangerous is known as the camera-gun shoot. In place of the real machine gun we used a dummy beneath which was a camera. By pointing the fake gun at a moving object and pulling the trigger a picture was snapped. The print showed what kind of a shot you were.

The death rate at Borden was higher than at the other schools, chiefly because there were more Cadets and also because more hazardous things were attempted and done there.

The most exciting thing we did was known as

the "Air Hunt." I took part in several and enjoyed all the thrills of a real air-fight. We used the same gun-mounted plane as before, but instead of a stationary target on the ground, chased another aeroplane of our squadron which towed a pear-shaped balloon target at the end of a long towline. That target, rushing through the air at eighty miles an hour, swaying this way and that, was not an easy thing to hit. If there was any kind of a wind blowing it was doubly difficult. Besides there was always the danger of stray bullets hitting the plane which did the towing. In rare instances that has happened, once causing a fatality.

Speaking of trick flying, that done by some of our returned officers was surprising to say the least, but I know of one chap that had it on them all. One Sunday several fliers were looping and doing other stunts when one of them seemed to hang in the air a moment, then fall earthwards—turning over and over. Several officers, old campaigners too, gave one look at the falling plane, then turned their backs, saying that they didn't want to see the end of a

good man. A short distance from the hangars to my surprise the plane righted itself and swished down over our heads in a beautiful fast landing. The amazed men who ran out to meet the pilot as he turned in were still more surprised when the smiling face of one of our "boob" fliers became visible.

The commanding officer stammered, choked and spluttered out his admiration. "Hang it, man," he said, "that fall and landing were beautiful."

In the general excitement the fact that Standish had taken up a plane without permission passed forgotten, and it was not until I found him alone that the truth came out.

"You know what a rotten flier I am, Harry?" he confided. "Well, this morning I determined to loop or bust."

"But you didn't loop, you idiot!" I burst out. "You gave the prettiest imitation of an aviator falling to death that I ever saw." He held up both hands and I saw that they were trembling. "Pal, that fall wasn't a fake. It was the real thing. I can't tell you how I got out of it, be-

cause I don't know. I remember fighting to right her, then came the glide safely down to earth."

From that time on Standish refused to step into a plane again and a short time later was discharged as unfit for air service. I cannot see how anyone but the most expert aviator could have got out of that fall alive, and it is still a mystery to me how he escaped.

The day after this happened, Frank and I finished our course, and were ordered to Toronto to receive our temporary commissions. At Toronto we received a surprise—orders had come to hold Frank in Canada as an instructor in flying and to send me overseas with the next draft of Flying Corps men. Frank had to report immediately to the flying camp at Long Branch and I was given three days' leave to dash home and say good-by once again. We were both disappointed that we would not stick together, but war is war and we had to make the best of it.

I had just one day and night at home with my friends, but it did me good to be with them

once more. I had not expected to see them again until I should come back for good.

On the return journey to Toronto there were three New Yorkers, and one chap from Ohio, the son of a Congressman or Senator, I don't remember which, going up to enlist in the R. F. C. They told me that there were even more chaps enlisting from the States in the Corps than when I joined. Which was good news, as we needed all the men we could get.

My two months of hard training had never made me forget the main purpose for which I enlisted, and the knowledge that at last I was almost trained to give battle to the Huns in an element where it was every man for himself, and the best man wins, was a source of great satisfaction to me.

CHAPTER V

FINAL TRAINING

Back to Canada—The uneventful voyage—The English flying school—Learning to fly at 130 miles an hour—Formation flying—Playing 'possum—Pride in our aeroplane—Flight from factory to base near Channel—Over the Channel to France—Reporting to base headquarters within sound of the guns.

MY orders were to be back in Toronto in time to join the forty-six other chaps who were going over in the same draft as I. The train was late in getting in, with the result that it required a sprint from our track to the one where the Montreal-Quebec train was waiting. The special car was attached to the Grand Trunk express and this being a limited train we had a diner and smoker aboard. There were not many people to see us leave. Most of us were from the States, and our relatives were

far away. However, the few people that were there gave us a great send-off.

One incident brought tragedy into an otherwise gay scene. Just before the train pulled out a little old lady in mourning broke through the group gathered around our coach. At almost the same moment that I saw her, Jack Saunders, one of the boys going with us, cried, "Mother," and the next instant she was in his arms.

Jack had often spoken of his mother while at Camp Borden, and was terribly disappointed when headquarters refused him leave to go home and say good-by. Unfortunately his home was in Los Angeles and it would have meant missing this draft if he went away out there. We learned afterwards that the plucky little woman, on receiving the disappointing telegram, had immediately started on the long transcontinental trip, quite alone, despite the fact that she was weakened by mourning over her oldest son's death. He went over with the first contingent of Canadian Scots and was killed in his third year at the front.

Then came the conductor's "All aboard," and as Jack climbed into the coach the brave old lady tried to smile, but collapsed in the arms of those standing by. Our last glimpse of her, as the train rounded the curve after leaving the depot, showed that she was being carried into the waiting room. It was all we could do to prevent her son from jumping from the observation platform. He was terribly cut up until the train stopped at Belleville, when he received a telegram bidding him Godspeed and saying that his mother was better.

We were in charge of a Major who had been in many air battles, and the journey was enlivened by his stories of action at the front.

It was a relief, I assure you, when we finally arrived at Quebec and boarded the transport waiting for us. There was a regiment of Engineers and a company of Foresters on board when we arrived. Aviators of the Royal Flying Corps are always given first consideration, when crossing the pond, and three other chaps besides myself had one of the first-class cabins on what was once the saloon deck of a liner that

in pre-war days had been known as one of the most luxurious ships afloat.

I am a wretched sailor and for five days didn't care whether the ship was torpedoed or not. We ran into bad weather almost all the way over, but it took more than five days to get my sea-legs. Nearing the war zone we all wore our life-belts, but the voyage ended without sight or sound of a submarine. We disembarked at Liverpool, which recalled dim memories of the time I had sailed for America from that port in 1907 on the Cunard S.S. *Carmania*. We were the first off the liner and were driven in motor tenders through Liverpool to the Midland Railway depot. The sight of our Flying Corps uniforms and a Canadian flag which one of the chaps waved from the car, created intense enthusiasm among the people of the city.

To most of the boys the sight of an English train with its box-like coaches was intensely interesting. They acted for all the world like babies with a new toy. After an uneventful ride we arrived at our destination, one of the

central flying schools, where aviators receive their final training in the art of air-fighting. The entire contingent was quartered in a fine old English mansion, a short distance from the aerodrome.

Bright and early the following morning we were driven over to the flying field. My first glimpse of the aeroplanes made me gasp. Those that were in the air were moving like bullets at a speed that I had never believed possible. Most of them were smaller than our Canadian training planes. But the way they were handled and their speed made them superior to anything I had ever seen. In addition to these planes there were several mounting four guns and carrying from three to seven men, huge affairs like kites but wonderfully stable in the air. The machine allotted to me was a single-seater Spad with 160 H. P. Hispano-Suiza motor. The Flight Sergeant in charge of this particular bus pointed out to me its peculiarities. "She goes off the ground at sixty miles an hour," he exclaimed, "and it is dangerous to land her under sixty-five."

This was some difference from the old Curtiss plane, which left the ground at forty miles an hour and could be landed safely at forty-five. The Spad was a beautiful craft, small and compact with a built-in machine gun of the Vickers type carried in front of the pilot's seat. The gun's delivery is synchronized with the motor so that bullets shoot between the blades of the propeller while that mechanism is spinning at the rate of 1,650 revolutions a minute. The control was slightly different from that which I had been used to. The Curtiss elevator and aileron control was a wheel and the Spad had a stick which I came to like a great deal better than the wheel. The rudder is controlled by the feet in both machines.

My first flight in that Spad was both a delight and a surprise. It seemed to me that I left the ground after about ten feet and climbed rapidly. How that machine did climb—five, ten, fifteen thousand feet, and at that I was content. The Sergeant had warned me not to give the motor all the petrol on my first trip, but I wanted to see what she could do. The

roar of the motor increased as I opened the throttle wide and my air-speed indicator slowly went from one hundred and ten to one hundred and twenty miles an hour. It hit one hundred and twenty-seven before I eased back the throttle. The machine was as sensitive as a magnetic needle is to electrical impulses. Moving the stick to the left an inch and giving her a little rudder would put the plane into a clean beautiful bank and left turn. It was not until I started to descend that I realized what a beautiful "bus" she was. With the motor throttled and the nose down I spiraled from left to right, descending all the time at about ninety miles an hour.

We landed at about seventy and the wheels came to earth with hardly a jar. The descent had been so rapid that the plane rolled along the ground for quite a while before it slowed up enough for me to turn it around and "taxi" back to the hangar.

Turning an aeroplane on the ground is a great deal harder than turning it in its natural element—the air. Too much petrol in turning

will bring one wheel up and the other down, the result being either that it will stand on its nose or turn completely over.

At luncheon that day those who had been fortunate enough to get hold of a Spad were enthusiastic about the planes. Speaking of eating reminds me that we were greatly disappointed at the food set before us. There was plenty of it—but no variety. Many a chap cast his mind longingly back to Canada and the glorious meals there.

If any but an aviator sat at our table during that meal I am sure that he would not have been able to understand half that we said. Just as Tommy in the trenches invented words and phrases of his own to fit the occasion, so did we, in terms aeronautical.

"How's the Spad?" queried Alex West.

"A buzzer," I answered, "swift on the shoot at the start, quick on the bank and snappier than any Vickers."

"Cold as the devil upstairs to-day," chimed in Tom Rogers, our star airman. "It was so cold my hands almost froze to the joy stick,

and I sideslipped once and zoomed like a wounded duck."

"Not many bumps," I observed, "but a nasty rudder tapper blew east across the pylons."

We were eager to be in the air again, and two o'clock saw us back at the hangars. I was lucky enough to secure the same Spad, number E781, and just before ascending was told by the Adjutant to try her out on stunts, as he hoped to graduate me from the school within a week.

"They need men badly, Allen," he said, "it's your duty to grasp the operation of these warplanes as soon as you can. The other boys are out to get through within that time, are you?"

I assured him I would, and a few seconds later was in the air again. The anxiety to get through caused a death that afternoon. One of the fellows from Winnipeg lost control at 12,000 feet and crashed almost twenty miles away from the aerodrome. I heard about the accident when I came down for petrol about 4.30, and learning the approximate location where he had fallen, flew off to give assistance if necessary. Several other planes were off on

the same errand and it developed into a race. Two other Spads, a Bristol fighter, and a Sopwith "Bull-Pup" besides myself rose to 16,000 feet and swung west. Pretty soon it developed into a walkover for the "Bull-Pup"—that plane must have hit one hundred and forty miles an hour, as I was going at one hundred and twenty-nine, and the others about the same.

Before long I saw the wreck below, but several planes had already descended in a convenient field near by and a motor lorry and another motor were alongside the remnants of the machine. I volplaned down to make sure that no further assistance was needed, made a rotten landing, and almost turned turtle. Fortunately I caught the Spad before it turned and got it into the position in which it was originally intended to land. Not being needed, I ascended again, watching my control carefully. The sight of that wreck warned me not to take chances.

Overconfidence has been the direct cause of many a promising young airman's death. A really good aviator will never say he under-

stands all about flying, because he doesn't. The air is never the same, and something can always happen that will catch him off his guard. The secret of successful flying is to be eternally alert. Never for a second relax that watchfulness which will perhaps save your life. A typical instance of the harm overconfidence does, occurred at this school. Overton, a clever flyer and holder of the loop-the-loop record, had performed this feat so many times that he used to say if a chair could fly he would make it loop. A new machine had just come from the factory. It was a late model with a different method of control than he had used. Overton took it up on a test and, although warned against "stunting," put the plane into one of his famous loops.

None of us could tell afterwards just what happened. We saw him fall straight as a plummet in the deadly spinning nose-dive, but he crashed far away from the aerodrome. The Commanding Officer used Overton's death as a warning to us and explained that the airman who was overconfident carried death with him

as a passenger. It took several days for me to learn to control the aeroplane with my left hand, using my right to operate the Vickers gun. At first my firing in the air was pretty erratic, but I managed to improve with each practice shot.

The Vickers gun is stationary, and firing as it does through the propeller, the only way to aim is to point the plane at the object you are firing at, and when near enough to your target, let your bullets go.

After about ten hours of Spad-flying we were transferred to reconnaissance planes. These are two-seaters with a Vickers machine gun stationary in front, and a Lewis on a swivel in the rear which the observer operates. While flying this type of plane I went through a special course of map-reading, checking up towns, roads, railroads and buildings and rivers. I had to find places I had never seen by the aid of my map. Fortunately I had studied the theory of map-reading well at the School of Military Aeronautics in Toronto, and although the new problem was difficult at first, I man-

aged to get the hang of it sooner than I expected.

Thirty-two of the original forty-seven which came over in our draft finished within the time requested. I was one of the lucky thirty-two. We were passed as air-fighters and sent by train to a city not very far from London, which is rapidly becoming famous as the home of aircraft factories.

How proud we were when we arrived at the factory and saw our brand new fighting planes with which we were to fly to France and give battle to the Hun.

My machine was an improved Spad of the Nieuport design. A single-seat fighter, it was equipped with two machine guns, mounted the same way as in the two-seater reconnaissance training plane. At 1.30 A.M., one after the other took the air in what we call an air test. At its completion there wasn't one of us who did not exclaim enthusiastically at the perfection of these new planes.

Our kits and baggage were to go direct from the Flying School to our squadron in France.

At the factory, orders from London awaited us. I found that I had been appointed to Reconnaissance Squadron No. 680, somewhere in France, and my orders were to fly from the factory to an aerodrome the other side of London, take on petrol there and wait for the convoy. The rest of the thirty-one fellows were distributed among different squadrons in France. Only two others, Deering and Macklin, were appointed to my squadron.

We all felt pretty badly about being split up in this manner. Genuine friendships had been established during our training and when we realized that perhaps we should never see our comrades again, we were nearly broken-hearted.

Deering being the senior in number over Macklin and me, was made Wing Commander of our little squadron of three. Obedient to his command we said final good-bys to the rest of the boys and climbed aboard.

I'll never forget my sensation as we flew across London. We were only up 8,000 feet, and flew at this height so that the Allied insignia

on our planes could be distinguished by the anti-aircraft batteries on the ground. Below me was the greatest city in the world. I had come 3,000 miles across the sea to do my little bit in saving it from invasion. It was the first time I had seen Westminster Abbey and the Tower of London in over ten years, and even at 8,000 feet I could readily distinguish the historic landmarks despite the camouflage with which they were hidden. The Thames looked like a silver thread which grew larger as it neared the sea.

Obedient to a signal from Deering I shut off my motor and spiraled down in a swift glide towards the aerodrome which I could plainly see stretched out below. After a safe landing, and while our petrol and oil tanks were being looked at, we reported to the O. C. for news of our convoy. We found that they were waiting for us and the Captain in charge had a record of thirty-nine Huns to his credit. Addressing Deering, he said:

"You chaps are going to fly direct from here to your squadron back of the battle lines.

There is a possibility that a stray Hun raiding squadron may attack you. In order that you shall be insured of every chance of getting over safely, I and four other men will escort you to your destination. In the event of an attack, hold to your formation. To straggle will perhaps mean death. Don't fail to watch for my signals."

It was with mingled feelings that I got back to my plane. You may be sure that I paid particular attention to the belt of my Vickers, and the bullet drums of the Lewis. Home seemed far, far away that day as I tested my motor preparatory to starting off. Deering was nervous too, I could see that. His machine was next to mine and he was fiddling with his Lewis, where something evidently was not just right. Macklin to my left was nonchalantly puffing a cigarette. That chap had no nerves.

Looking over the cowl of my plane, I saw our Captain wave his hand, and then he was off. Deering went after him and I followed, with Macklin and the others bringing up the rear. We ascended to 18,000 feet and at that height

I could easily see the Channel ahead of us. We flew in V-shape formation as we had been taught to do in Canada. Our convoy with the exception of the Captain, who was in the lead, brought up the rear. If an attack came, the rear would catch it. That is why the expert air-fighters hovered there to protect us.

It was beautiful flying, no bumps, or air currents, and I was able to hold my joy stick (control lever) between my knees, allowing both hands to be free. At the height and speed we were traveling, even though it was summer, I suffered a great deal from cold. My greatest fear was that my hands would get numb, making me helpless and unable to operate my guns.

Suddenly our leader fired the warning signal, and I anxiously scanned the horizon for aircraft. Yes, there were nine black specks rapidly approaching us, and as I looked they formed into attack formation.

At the first glimpse of them I became almost numb with terror, but a sudden lurch of my plane brought me back to life. As a rat with its back to the wall, attacked by terriers, will

fight with desperation, so I took hold of my Vickers and determined that if I had to go down, I might as well go fighting. Nearer and nearer came the squadron. Then I gave a sigh of relief as the Captain signaled by two shots of his machine gun that it was one of ours.

We passed each other over the Channel, and one plane flew close enough for me to see that it was a "dud," a machine that had outgrown its usefulness at the front, and was being flown home either for repairs or to be used at some training school.

A few minutes later I looked down and saw that we were evidently over France. Obedient to the signal from our leader we turned to the left and followed the coast a short distance, then turned inland again. Above the roar of the motor I could hear a heavy rumbling like distant thunder—big guns near the battle line. We dropped to 14,000 feet and the country became more distinct. I could see white roads on which were slowly moving black smudges—evidently infantry on the march. Now and again a rapidly moving black speck would pass

through these smudges—ammunition carriers and ambulances in a hurry.

It began to get bumpy as we were flying over heavily wooded country, descending slowly all the time. Eagerly I watched for the aerodrome, which I knew was somewhere back of the battle lines of northern France. I was cold, hungry and tired. The trip had been a long one and the shock I had received, when I thought we were in for action, had upset me quite a bit. I had another worry too—my petrol was getting low. Evidently the cold atmosphere had caused the motor to use more than usual.

You have no idea how lonely it is in a long flight—I began to sing and the only song I could think of was "Smile, Smile, Smile." Mind you, I couldn't hear the beautiful melody I was wasting on the wind, but these are the words I kept repeating over and over:

"Pack all your troubles in your old kit bag
And Smile, Smile, Smile.
What's the use of worrying?
It won't do any good.
So pack all your troubles in your old kit bag
And Smile, Smile, Smile."

The song stopped abruptly when the signal came to land. That plane of mine came down fast, too fast in fact. I did not know that aerodromes near the battle lines are not the same smooth landing grounds I had been used to. The plane was left wing down when the wheel touched. Ordinarily on smooth ground this is all right, but on this particular occasion the wing tip hit a hummock of grass, the plane spun round ungracefully, then stood on her nose. I was swung about like a sack but unhurt. As for the plane, it needed a new wing tip and propeller, mere minor repairs. And so I came to France.

CHAPTER VI

MY FIRST RECONNAISSANCE

A flight over the German lines—Final orders—First impressions of the battlefield—Activities behind the lines—Effect of anti-aircraft shells—The bush railroad depot—A new enemy battery—Chased by Huns—Safe at our base after long chase.

DEERING and Macklin "guyed" me unmercifully for making such a "hash" of my landing. What mortified me most was to have my new O. C. remark that that was a blankety-blank way of reporting to his squadron.

That first night in France was a restless one for me. We were quite a distance from the battle lines, but the thunder of the guns was plainly audible. At supper, too, I listened with interest to the veterans of hundreds of air-fights as they told of their daily encounters with the Huns. Later I went over each air-fight

that had been described, trying to imagine myself in the other fellow's place.

In the morning we were up at dawn, but even at that early hour we found several planes already off on some mission or other. At 7 o'clock we three new airmen were called before the O. C., who gave us a fatherly talk on our duties and what was expected of us. He wasted no time in sending us into action. I got my orders to join a reconnaissance flight over the German lines, which was to start within an hour, and the other two were detailed for another flight. Back at our hangar we were disappointed to find that our Spads had been transferred to an "attacking squadron" and that we each had to pilot a reconnaissance plane. This was the same type as the machine we used at the English training school with the exception that it had an even more powerful motor.

The observer whom I had to carry over the lines was a young Englishman, Herbert Douglas. I liked him the moment I saw him and I knew we would get on well together.

"So you're the chap to whom I am going to

trust my life?" he laughed. "If I didn't think you valued your own as much as I do mine I would refuse to go up with you."

He showed me his little bunk as he called it, meaning his seat in the plane. Neatly fastened in front of it was a map similar to mine, and a pad and pencil securely clamped to the dash. On each side of his seat were six fully loaded drums for the Lewis gun.

"The drums on this side," he explained, indicating his left, "are loaded with explosive bullets. Great little beggars for giving a Hun plane indigestion."

There were three planes going up on this reconnaissance. The Royal Flying Corps never send a green man up alone, but always accompanied by one or two experienced fighting pilots. My companion pilots were both "Aces," that is, they had dropped more than five Huns each in individual combat. One of them had just turned nineteen and had only been in action seven months.

The O. C., in giving me my instructions, had told me to take orders from the senior pilot, who

strolled over to where Douglas and I were getting ready to ascend.

"How soon do we start?" I asked.

"Immediately," he replied, "and I want you to remember that until you get my signal you will keep flying over the territory marked on your map. Start at about ten thousand feet, but if Douglas signals to go lower do so, but no lower than six thousand feet. If we are attacked, give battle until I order otherwise. Should I be shot down Norcross, the other pilot, will take command. If he goes, too, get back as well as you can."

Douglas had climbed into his seat, and as I clambered into mine he slapped me on the back, with a cheery word of encouragement. The mechanician spun the "Prop" and the motor came sweetly to life. It was a wonderful piece of mechanism, never missing a revolution, and I came to love it as the days went by. There are really two things between the fighting airman and the Great Beyond—one is his machine gun and the other the motor. Both are well worth giving attention to, for you never

know when they will be indeed your friend in need.

Receiving our signal, up we went, mounting in wide circles. In addition to keeping my course I had to watch out for hostile aircraft, as Douglas was sweeping the ground below through powerful field glasses.

It was with a strange thrill that I at last neared the battle lines. Douglas poked my back with his glasses, and when I turned, motioned to go higher. Responding beautifully to my control, the plane mounted to fifteen thousand feet. I soon saw the reason for this. The thunder of artillery fire had grown incessant, and ahead of us, but fortunately below, shrapnel was bursting thick as hail. It was an awful and awe-inspiring sight that I looked down upon. To my untrained eyes, from that height I could distinguish nothing definite except the bursting shrapnel and high-explosive shells which seemed to be spewing up ground far below.

Strange to say, I felt no fear, but rather a wild curiosity. I did not forget to watch the

sky around me and also keep in touch with our other two planes. Suddenly I saw our leader glide swiftly down into the hail of shrapnel. We had passed the front-line trenches and No Man's Land and were over the German lines. Norcross was the next to dive down to the ten-thousand-foot level. I could see him twisting and banking amid the shrapnel. Then Douglas signaled for me to drop. By the map I noticed that we were approximately over the territory on which our Commander wanted a report.

I really expected every minute to be my last as I shut off the motor and dropped. I used all my ingenuity to keep that plane from gliding straight. To do so would give the Hun gunners the chance they wanted and a shell would get us. Anyone who has ever heard shrapnel bursting in the air near him knows what an unpleasant sound it is. Instinctively I kept ducking as blast after blast went off below or above us. A poke in the back and a look at Douglas's grinning face brought me to my senses, and I looked back at him again.

That chap was one of the most unperturbed under fire I have ever had the good fortune to meet. He was calmly making his observations just as if he had been safe on terra firma, without a care in the world.

Far below the plane I saw a wisp of white smoke, which meant nothing to me until I realized that it was a German train winding on its way to the front. The way those shrapnel shells tried to follow us made me think that the Huns had "Archies" planted like corn over every inch of the ground below.

The next time I looked earthwards a white road attracted my attention. Douglas signaled to go still lower. Obedient to his request I dropped the plane to seventy-five hundred feet. The reason soon became apparent. On the hitherto deserted road was a large black smudge and a cloud of dust—a regiment of infantry on the march. If they had been cavalry I knew the dust cloud would hang in the rear and the men on horses would look like black specks. A little farther on three black specks moved rapidly down the road. Motor trucks with sup-

plies, perhaps. On each side of our plane, about a mile apart, were the other two pilots, with their observers watchfully noting each move below. Our plane was over a railroad depot by this time and I circled around it three or four times to give Douglas an opportunity to see if there was any rolling stock on the rails and the number of motors parked beside them. I saw several working parties run to cover as we hovered over them like a hawk. Evidently this was an important railroad station, as seven anti-aircraft guns started to throw shrapnel up at us. "My word," I thought, "they are getting the range."

Being green and badly scared I acted on impulse—shut off the motor and started in on a side to side nose dive. I went from bad to worse—machine guns opened on us from somewhere and I flattened out in a hurry, opened the throttle and climbed skywards, twisting and turning. Still the shells came close, so I started "zooming." This is a simple stunt and is similar to the motion of a roller coaster, up and down. We got away somehow and I went up to

ten thousand feet before I leveled off again. The whole thing happened in less time than it takes to tell it, but the effect on me was to make me heartily sick of the trip, the Flying Corps and the war. I wanted nothing more than to be back in Montclair, New Jersey, U. S. A.

Then came the signal to return; around went the plane and we were homeward bound. Once more the battle lines came into view and again Douglas ordered me to drop. I began to hate that chap cordially. We hovered over the trenches at the six-thousand-foot level when I caught the danger signal from the leader.

It did not take me long to spot the reason. Eight large battle planes were rapidly approaching from behind the German lines. Glancing back over my shoulder I saw that Douglas had his Lewis ready for action and was already lining up his sight. I was headed full speed for our own lines and with the valor for which they were already famous, Norcross and the leader had circled above me and were now in my rear endeavoring to break the shock of the attack. Suddenly the eight would-be

attackers veered off and fled back to their own lines. I saw an attacking squadron of ours rising from an aerodrome near by. One after the other these fighting scouts passed us in hot pursuit of the Huns.

The sight of our own aerodrome was indeed welcome and this time in landing I did not stand the plane upon her nose. Douglas wrote out his observer's report and I was surprised to see how much information he had gathered. In the afternoon when we were smoking our usual cigarettes and resting after the strenuous flight, I asked Doug how he got all the information he did, particularly over the trenches which appeared to me to be nothing but shell-torn earth.

"The first thing I looked for," he explained, "was new enemy trenches. I spotted several and was careful to note whether they were traverse or communication trenches. The condition of the barbed-wire entanglements also attracted my attention. Where they were broken by shell fire I saw smudges and spots."

I was intensely interested and urged him to go on.

"The one thing that we observers are eager to discover," he continued, "is the position of new enemy batteries and in this trip I discovered a big one. Two small narrow-gauge tracks terminating in pits gave me the clew. I had to see the gun flashes before being sure. I saw them all right, not one but five. I made doubly sure by seeing the blast marks in front of the battery. They meant I had made a find."

Deering and Macklin came in then with an account of a trip over the lines in a different sector where a violent attack was in progress.

"Bumps," exclaimed Macklin; "there were so many I couldn't hold the blamed plane steady. Generally they never bother me, but this time they sure had me worried."

I have heard other airmen remark on the same thing, that heavy artillery firing disturbs the air to a great extent and makes flying difficult.

Our quarters were plain but comfortable. I learned that twice the aerodrome had been bombed by Hun night raiders but that very little damage was done. Somehow or other the

thought of being bombed out of bed that night didn't bother me at all. I turned in at 6 o'clock and was lulled to sleep by the muffled detonations of the guns in the distance.

The next morning it rained, first a drizzle, then a downpour. It rained for two days. The planes were useless and we amused ourselves by playing cards, bridge being the favorite game. The afternoon of the second day we were visited by several aviators from a French Escadrille d'Armée. They were amusing chaps, particularly one—Dubois. He and I immediately chummed up when he discovered I was a New Yorker, or rather had been a resident of that city for several years.

"Oh! New York, Monsieur," he chuckled with an expressive wave of his hand, "it is two, three years since I visited that wonderful city. Tell me, is it the same or has it changed?"

I told him it was the same, with the exception that now its immense business interests were devoting their time to one thing, and that the winning of the war for the Allies. He waxed enthusiastic over our entrance into the

war and eagerly asked when the first of America's great air fleet would be coming over. He knew, of course, that many young Americans were already training at France's air schools, but he was referring to the promised and long-expected aeroplanes.

He had been decorated with several medals including the Croix de Guerre, but would not say when or where he won them. It was not until he had gone that I learned the reason they were given to him. Not only was he an "Ace" but also under heavy fire he had flown his avion de chasse during a recent German retreat low enough to rake the retreating Huns with his machine gun. The execution was terrific despite the heavy fire directed at his plane. When he returned his machine was riddled with bullets and only a miracle brought him back alive.

CHAPTER VII

AN AIR RAID ON BELGIUM

The gathering of the air-fleet—Composition and personnel—The start—Follow your leader—Attacked by Hun squadron—My first big air battle—Bomb dropping on Ostend—Estimated damage—Loss of several planes from anti-aircraft shells—Daring in attack—Rescue of a Lafayette Escadrille "Ace"—Safe return.

THE weather was ideal for flying and I was disappointed to find that I was not posted for duty that day. Deering's name was up for special duty, but Macklin was not mentioned either. The artillery fire seemed louder that morning and I wondered whether anything unusual was up. Douglas, who had learned to sleep late on the days he was not posted, joined Macklin and me at breakfast. Two of our chaps who had been on an early morning reconnaissance reported a brush with a Hun squadron

above the clouds. But no damage was done to either side.

At 5 o'clock in the afternoon, Douglas and I had our plane run out and took it up for twenty minutes. I only circled the aerodrome to become familiar with the surrounding country. The motor was running like a clock and altogether it was an enjoyable joy ride. As we were descending I saw one of our reconnaissance squadrons making for the aerodrome. They landed shortly after we did and Deering was one of the bunch. He told me that the squadron had flown into Hun territory, but that, from what he could judge, the information gained was not new.

After supper most of us turned in as is the custom at aerodromes on active service. A man needs every minute of extra sleep he can get and all the time I was in the R. F. C. I don't remember getting entirely enough. There was always room for more.

At a little after 11 that night we were awakened by the crashing roar of our anti-aircraft batteries. This aerodrome's defense

against nocturnal raiders was very complete. In addition to powerful anti-aircraft guns, Lewis machine guns were mounted on the roofs of the hangars and on the pylons. These quick-firers awoke to life with the rat-tat to which we were already well accustomed. All the lights in our building were out and I fumbled around for my trousers and coat. Someone threw open the door and I caught a glimpse of many search-lights flashing back and forth across the sky. It did not take us a minute to get out in the open, but we didn't stay there long.

"Get back to the doorway, boys," called one of our experienced airmen, "our shrapnels are dropping here pretty thick and someone will get hit."

It must have been a considerable squadron that had come over to visit us. We could hear the noise of their motors even through the racket made by our guns. The sight was wonderful and awe-inspiring. It was my first experience of a night raid and in my excitement at watching the drama unfold in the sky I forgot that perhaps one of those bombs which the

Huns were dropping might find a billet on our quarters. The bombs dropped with a dull, distinct boom that could be clearly heard above the rest of the din. The machine guns on the hangars were hurling luminous bullets skyward by the thousands and their course could be traced by the trail they lit in the darkness as they searched out the foe. The burst of flame which came from the exploding shrapnel shells contrasted strangely with the glare higher up formed by the brilliant rays of the searchlights. Once I saw two Huns as the glare caught them and silhouetted their planes against the sky. Only for a second did I see them, then they were lost in the darkness again.

Evidently our fire, which became hotter every minute, was too much for the enemy, as we heard the drumming of their motors dying away in the distance. Not for almost an hour afterwards did those searchlights stop their eerie flickering back and forth across the sky. Gradually the "Archies" stopped hurling lead into the air and we turned in again when we saw that the show was over.

Back in New York before I enlisted I remember reading how crowds of curious Londoners used to rush from houses, theaters, etc., to the streets in order to catch a glimpse of the air raiders who were dropping death and destruction over the city. At that time it sounded like some creation of a war correspondent's agile brain, as it did not seem possible that men, women, and even children would run the risk of being killed just to see the enemy who was doing his best to destroy them. To-day I realized that it is possible—for not only I, but many others have done the same thing, and the first time was during the raid I have just described. Somehow or other you don't seem to realize the danger—your curiosity is stronger than your caution.

Despite the excitement of the night I quickly feel asleep only to be awakened before dawn by a non-com who presented me with orders. Now no man likes to be aroused from a sound sleep at 3.30 when he did not turn in until after 12. My temper was not of the sweetest when I did finally get out into the damp air. Early

mornings in northern France in September are generally damp and chilly and on this particular day there was a heavy ground mist.

My orders were to report to the Quartermaster at 4.15 for my new flying equipment. On the way across the aerodrome to his office, I stopped to examine one of the Hun raiders' planes which was brought down the night before by a lucky shot from one of our anti-aircraft batteries. It wasn't badly damaged and I was particularly interested in the vicious-looking little machine gun carried back of the pilot's seat. A few minutes later I was in the Quartermaster's room. Each aviator upon arriving in France at his respective aerodrome is immediately issued a new outfit. As luck would have it the day I arrived no equipment was in stock, hence the delay.

I received a leather coat and trousers large enough to go over my uniform, which were lined with wool. Two close-fitting woolen caps and a leather aviation helmet, fur lined; a new pair of triplex goggles, woolen muffler and woolen vest with sleeves, two pairs of extra

heavy long drawers came next. Two pairs of loose fitting boots and woolen socks, and one pair of rubbers—these last are essential, as wet feet should be avoided when preparing for a flight. Two pairs of gloves were also included, one leather and the other wool, to be worn over each other. And last but not least was a jar of Yankee vaseline, which is used to prevent the hands and feet from getting cold. My flying outfit in which I had flown from England to France was turned in, as the new clothes were of much better grade. Macklin and Deering came in as I was leaving, to draw their equipment.

At 6 o'clock eleven of us, all pilots, were ordered to report to the O. C. (Officer Commanding) ready for action. It hadn't taken long to get into my new outfit and I felt decidedly warm and uncomfortable as we went into his office. Two other chaps besides myself were pilots of reconnaissance planes; the others were pilots of bombers and fighting scouts.

Our orders were to penetrate into the enemy's territory in a certain sector, and while the

bombing planes did as much damage as possible, the reconnaissance machines were to study the ground, the fighting scouts acting as a convoy. Outside, the planes were lined up ready for the start. Maps of the territory over which we were to fly were issued to us. Douglas and I studied ours carefully, taking particular notice of the relative positions of the marked places, railway stations, sidings, woods, etc.

Our Wing Commander who was in charge of our squadron flew a Sopwith "Bull-Pup," a machine to which he was very much attached. It is the Wing Commander who decides the course to be followed, and who works out the compass bearings, time and distances to be covered. The result of his figuring is handed to each pilot and observer and posted in a conspicuous place in each aeroplane. He often has a difficult task in making his deductions, as the strength and direction of the wind has to be counted on. There were four bombing planes, huge, heavy affairs with two motors. These were of the pusher type with the Marcelle or fuselage in front of the main planes.

Our three reconnaissance planes and four fighting scouts completed the squadron.

A little before 7 A.M. we got under way. At the four-thousand-foot level, obedient to a signal from the Commander, we formed into raiding formation. The scouts were above, the leader in front, two others behind and the other brought up the rear. Just below them I flew with the other two reconnaissance planes at the same level, but a little bit behind. Below us were the four bombers, their powerful twin motors drumming away fiercely. We slowly ascended, circling the aerodrome until we reached twelve thousand feet, then our Commander turned his plane direct for the enemy lines.

Again we were presented with the Huns' compliments in the shape of "Archie" shrapnel shells. They burst below us, exploding it seemed in impotent rage that we were beyond reach.

In a talk which I had had the previous day with our Wing Commander I learned the easiest way to avoid being hit by shrapnel. When

two reconnaissance planes together with the scouts went round and round in a close circle, each one of us watching for an attack from the sky. We were over the aerodrome now, the shrapnel shells came thick and fast, then one after another the bombs fell. The detonations were terrific, and I could see that already considerable destruction had been done. I wasn't able to give a very clear description of that aerodrome, as my whole attention was concentrated in piloting my plane and keeping an eye on the sky and also on our leader. I did see, however, that two Hun machines were rising slowly to meet us through the destruction that was going on below. Other planes were being frantically run out of camouflaged hangars, but as yet none but these two were in the air.

Somehow, the sight of these planes ascending aroused me and I wanted to dive down at them. The change came over me suddenly. But a minute before I had been a spectator, watching from the sky, being intensely interested in the behavior of my plane and the havoc wrought

below. Now I wanted to kill those Huns and my fingers itched to shoot my trusty Vickers.

Then occurred an incident that won its participants the coveted D. S. O. (Distinguished Service Order). Obedient to the signal, two of our fighters dove to the attack. Our bombers were still at their task, seemingly oblivious to the menacing planes rising to meet them.

I was still circling above, an interested watcher of the drama rapidly being unfolded before my eyes. Suddenly an "Archie" caught one of the fighters, tore off a wing and sent plane and gallant pilot crashing down to death. There were only three "fighters" left and one was already opening fire on the two Huns. Evidently thinking that their two airmen were capable of putting him out of business the gunners on the ground concentrated their shells on the bombing planes, which were climbing now in an effort to get away.

I almost cheered as I saw one Hun plane waver, then fall over and over towards the earth. I could hear the machine guns' sharp snickering as our pilot engaged the other Hun.

Nose down he attacked, spitting bullets straight at the oncoming enemy. A burst of flame and the second Hun went earthward—out of the fight forever! It was my first actual view of a fast air-fight and both Huns went down in a few seconds. We swung into line formation and, as the bombers came back to the fold safely, headed back towards our own lines, miles away.

Considerable damage had been done and our raid was evidently a success. I felt sad as I recalled how that one plucky pilot went to his death, but remembering accounts of how seven or eight pilots were often lost on raids, thought that after all we had got off rather lucky.

I congratulated myself too soon, however, for a few minutes later as we were speeding home, I saw waiting in the sky a squadron of huge planes. They were a long way off when I first saw them, but our Commander signaled for battle formation. The four bombers were centered in our midst and we prepared for the attack. There must have been at least fifteen planes and suddenly I saw the black cross on the wings of the leader. Now that it looked like a fight,

I was not so anxious to get into it. We climbed rapidly, endeavoring to get above our opponents, but we were unable to do so, as the heavy "bombers" were slow climbers and we had to protect them at all costs.

Some people imagine that an air-fight consists in two planes continuously shooting at each other until one goes down. Really there is very little shooting done, as most of the time each pilot is jockeying for position. When he gets it he dashes at his enemy, firing as he comes. Once past his opponent he stops firing and tries again for position. That is the practice with one-man machines; with two-seaters the observer generally fires as long as he is within range.

The Huns evidently were trying to circle us, hoping to break our formation and get at the "bombers" and also at us in the reconnaissance planes. It was especially desirable for them to bring us down, as we were carrying back information on their aerodromes, etc. I glanced back at Douglas, who was ready for action with both hands on his Lewis. Then we were in the

thick of it. Machine guns came to life and spat viciously; the crackle of the Lewis operated by Douglas gave me an awful shock which I soon got over in endeavoring to hold the formation and yet maneuver the plane so as to get in some shots myself.

It is funny what foolish things a man does in his first air-fight. I kept repeating over and over, "Hold your fire!" "Hold your fire!" "When he's in range give it to him!" The particular he I was speaking about was a German biplane which had evidently singled me out. I'll never forget the sensation I had as his first bullet ripped a piece of metal from the cowling over my fuselage. Then I got him head on and pointing my plane's nose at the center of his machine I pumped the bullets at him from my Vickers. He was a foxy bird all right and nose dived as I opened fire, shooting up as he went down. His game was to come up under my tail, but Douglas raked him with the Lewis when he tried it, and he sheered off. One of our "bombers" was out—I saw it sagging and slowly dropping. Not content with the dam-

age already done to it, two Huns swooped together and sent it crashing below.

The reaction from the first flush of battle caught me and I began to think that my plane would soon follow our comrade to earth. The renewed rattle of our Lewis and the shorter bark of a Hun gun made me realize that another enemy was upon us. This plane, as well as I can remember, was a three-seater and armed with three guns. It was larger than my plane, but seemed to handle better. I "zoomed" to get out of range and dropped swiftly in a tail slide. My opponent dropped too, but in flames. Our Commander had got him while he was fighting us. I distinctly remember one of the Hun gunners throwing up his hands as if in despair as the plane whirled past. Our formation still held and as suddenly as it commenced the attack ceased. As the remainder of the enemy drew off, the absence of machine-gun fire seemed strange. Despite the roar of our motors and the shrapnel from below there seemed a blessed quiet after that cursed rat-tat-tat of the quick-firing guns.

Our squadron was reduced to eight—two planes being downed in this fight and one over at Courtrai aerodrome. Another of the "bombers" was flying slowly and evidently having trouble in getting along at all.

I was so tired and excited that I flew the plane almost unconsciously. It had been a long flight and a hazardous one, and I would be glad to get back to our base. There was a feeling of relief that I had come through it unscathed, but I was not very happy as I thought that on the morrow I would be up again.

We made our aerodrome after an uneventful trip across the lines. I was so stiff and cramped that I had to be helped out of the plane as did Douglas. However, before turning in we went over our faithful old "bus" and counted seventeen bullet holes in different parts of it. "Not bad for my first air-battle," I said to Douglas.

"Let's hope that they all land in the same safe spots next time," he laughed, and echoing his wish I tramped to our quarters for a good long snooze.

CHAPTER VIII

CONTACT PATROL

A brush with Gothas—Chivalry of the air—Mortality in our squadron—Baron von Richthofen's Squadron of Death—A praiseworthy feat—Destruction of three Hun reconnaissance planes—Food and living conditions in the R. F. C.

RECONNAISSANCE SQUADRON No. 680, to which I was attached, had lost nineteen pilots in six weeks of bitter fighting, but had crashed thirty-seven Huns during this same period. The German method of estimating the number of aeroplanes shot down is very unfair and typical of the Hun. Every one of our planes seen to fall disabled is counted as a crash, and adds another to their list of supposed victories. When an Allied pilot reports the crash of an enemy plane, his report has to be borne out by other Allied airmen, who have seen the Hun fall to earth.

It was during the summer of 1917 that numbers of the new German Gotha planes appeared. In early September of the same year they were using a great many of this type of fighting machine which did a vast amount of damage to our squadrons. It's a queer thing about this Gotha machine, that while the Germans have taken all the credit for the invention of the gun-tunnel under the fuselage with which they are able to protect the hitherto blind spot on the tail of the plane, it really was a British invention. Here is the true story of how the Gotha originated: A well-known British aeroplane designer built a machine similar to the present Gotha and equipped it with the so-called gun-tunnel. The use of this tunnel allows the aeroplane to be equipped with an extra gun, which is placed on the bottom of the fuselage. The gunner lies extended inside and out of sight, with his machine gun pointed through a long tunnel terminating just under the tail. When the designer finished his plane he turned it over to the British Government. A pilot of the R. F. C. was ordered to fly the plane to an Allied

port near Belgium. On the way over he lost his way in a sea fog and landed in a part of Belgium occupied by the German troops. It is understood that he did his best to destroy the plane before being captured but was unable to do so, and died resisting the infantry that discovered him. Three weeks later the first Gotha appeared over our lines and downed two of our pilots in single combat, one after the other. I cannot give details, but I am happy to say that both England and France now have a battle plane equal to the Gotha and in many respects far superior.

There is a certain chivalry in air-fighting that seems to be recognized by both sides. It doesn't take long for pilots of squadrons opposing each other to recognize individual members of each unit. Every airman generally has some distinguishing rank on his plane, always a number, and more often than not some design or initial painted on the fuselage next to the insignia of the country to which he belongs. Often pilots recognize each other by the style of their flying. No two aviators fly alike.

Not all German air squadrons abide by this air chivalry; though there are certain of the enemy air pilots who seem to have some of the real sportsman's blood left in them. The German aerodrome nearest to us was a small one, but its pilots were mostly brave men and very careful to observe the unwritten code of the air. For instance, should a pilot attached to our squadron be shot down while on duty, our O. C. immediately posted him as missing, or dead. If a pilot from this particular Hun squadron had brought our pilot down he would try to collect the airman's personal belongings, and very likely, some fine morning, bright and early, would appear over our aerodrome and drop them, together with a note describing the pilot's death. We used to return the compliment, and in that way both sides generally knew what happened to their missing comrades. As I write, however, the war in the air is getting fiercer, and the Germans are fighting tooth and nail, using fair means and foul, mostly foul. Evidently all the good German sportsmen have been shot down.

A different class of men belong to Captain von Richthofen's squadron. This Hun air-fighter is credited by the Germans with bringing down sixty-one English and French planes. The machines of his squadron are all painted red, his idea being to try and frighten our pilots. He has surrounded himself with the cleverest and trickiest fighters in the German air service, who do not know the meaning of the word chivalry. Baron von Richthofen came into unsavory prominence by his exploits over the English Channel by sending several of our untrained air-fighters to their death as they were flying from England to France. Until he appeared on the scene new pilots who had just completed their training in England used to fly undisturbed to their bases across the Channel. After one day's onslaught by Richthofen among these green men the heads of the Flying Corps decided to send the next lot of men over escorted by some of the best English airmen. What was the result? The Huns, under their unsportsmanlike commander, swooped down from behind the clouds on what they sup-

posed were only new men at the game. That was their aerial Waterloo; the same Channel that had received the bodies of England's young airmen caught twice that number of surprised Huns. Unfortunately Captain von Richthofen got away, having no stomach for a worthy opponent. For several months after that nothing more was heard of him until he suddenly appeared again with his squadron of red planes. Although not a brave fighter he is a master at strategy, and directs his airmen at Allied squadrons whenever the odds are overwhelmingly on his side.

I was not posted for early flying the morning following my reconnaissance flight over the German lines, so slept through until 8 o'clock. Deering and Macklin were off duty also, and after breakfast we three, with the addition of Douglas, who strolled in still half asleep, played poker. It was my lucky day, and I almost cleaned them out. Fortunately for me a noncom came in with a message from the C. O. that several Hun reconnaissance planes were headed our way. It was very seldom that these gentry

dared come over in daylight, but evidently they wanted some information as to what was going on over in our sector. Several fighters had already left the ground as we four dashed to our machines. It was while Doug and I were clambering into our aeroplane that the first of our anti-aircraft guns opened fire, and we both saw the Huns. They were flying high—about twenty-five of them—and as I pulled back my joy sticks and threw open the throttle, nine other planes of our squadron drummed up into the air. The fighters who had gotten away first were climbing rapidly, endeavoring to head the raiders off. My machine, although considered a fast climber, seemed as heavy as lead as it forced its way upwards. Planes rising to attack are at a great disadvantage, as the top dog generally has the chance of the first shot.

As we had risen in the air our ground batteries started a barrage fire to prevent the Huns from flying low on their way back. It was a fine clear morning, and the sun was strong. I hated that sun more than once as its beams

flashed on my goggles. Ordinarily I wore slightly tinted goggles which would break the glare, but in the hurried get-away I had grabbed a pair of plain ones, and regretted my carelessness now. It's remarkable how quickly a pilot gets used to air-fighting. If he is lucky enough to live through his first one, or two, the others don't bother him. I felt like a seasoned veteran as we climbed at a steep angle at the enemy. Our planes up above opened fire, and we were soon in position ourselves. My motor was running as sweetly as ever, and I blessed Corporal Jackson for the motherly care he expended every day on his baby, as he called it.

The other air-fight seemed like a joke compared to this healthy young scrap. There were seventeen of our planes in action, with at least six more coming up, and no doubt other squadrons had been advised by wire or telephone, and would dispatch some of their planes to assist in beating the Huns back. Some of the enemy machines I saw were Gothas, and I made a mental note to beware of that third gun cunningly hidden away from sight, but more dan-

gerous than the other two which they carried.

I got into action at about ten thousand feet and picked out a German machine that I saw had only two guns. I flew the plane so that Douglas could commence what is known as collision firing. In other words, I flew level with the Hun in the same direction, but gradually easing in so as to cut him off. He would either have to duck under or "zoom" over me, unless he scored a hit before our paths crossed. There was no chance of my firing my Vickers, as I had all I could do to control the plane, and, anyway, the machine would have had to be pointed straight at the other plane before there was any chance of my opening fire.

At collision firing Douglas was a crack shot and with the first sharp clatter of his Lewis the pilot of the enemy plane collapsed in his seat. It was almost like a "movie" drama; we were flying near enough to see each other plainly and I kept easing the rudder to the left ever so slightly, bringing us nearer and nearer. The enemy observer regained control as the plane lurched sideways, and continued firing

with his right hand until it was apparent that he was losing control again. He fought hard to control the plane, but evidently he was not experienced enough to fly and shoot at the same time. His bullets were coming nowhere near us, and suddenly he turned all his attention to the operating of the plane. I don't know whether airmen are gifted with second sight, but I instinctively knew he was going to dive. He went down with the motor full on—a dangerous and desperate trick, as the propeller would cause the motor to "over rev" (turn too fast), which if continued would burn out the bearings and possibly cause fire. I had to do likewise or he would have got away. Doug got his eye in again, and landed several explosive bullets in the Hun machine. The last I saw of him as I throttled down and pulled the plane to a gentle glide was his machine dropping swiftly earthward in a mass of flame.

We had drifted away from the main scrap, which was almost over, and I opened the throttle, giving the plane full wheel in a swift ascension. I felt no elation at seeing the other plane

crash to earth. The observer's fight for life had been a hard but losing one, and the bout between us had been clean. Up in the air while actually in action a man feels deadly in earnest in trying to down his opponent; it's his death or the other man's, but there is none of that blood madness which soldiers battling in the trenches so often experience.

The remnants of the German squadron had ascended above the clouds and were no doubt speeding for the shelter of their own lines. Several of our planes were descending in leisurely spirals, but most of the fast fighting scouts were off after the raiders. We had to land at the left end of the field, as the "Archies" were still firing shrapnel up above. One of our reconnaissance planes had crashed, killing both pilot and observer, and two fighting scouts were wrecked; both belonged to a neighboring squadron. What made our chaps so happy was that three of the valuable German reconnaissance planes had been downed, in addition to four others, a total bag of seven.

There was a lively discussion of the fight that

evening. One of the pilots who chased the raiders back over their own lines had had a narrow escape from death, and while at first he was reluctant to talk about it, after much persuasion he finally yielded.

"I lost them in the clouds," he began, "so dived down below the mist to get my bearings. What did I see but a Hun sailing along merrily below me, and I laughed as I thought of how beautifully I would drop on his tail and send him down with a fusillade of shots. Down I started, but luckily for me, just as I was about to open fire my Vickers jammed temporarily. It was a number one stoppage, and pulling the plane level I fixed it in a jiffy. The Hun meanwhile was flying farther away from me. Suddenly from out of the clouds swooped three of his mates and the truth burst on me that he was a decoy for the waiting hawks above. Fortunately I had the start on them, and I turned tail and flew like the wind back to our own lines and safety."

This is a common trick of the Germans; but very seldom does an Allied aviator bite, these

days. However, when they first tried it, many a dashing pilot of ours swooped on the bait and went down, hopelessly outnumbered.

During my second week at the aerodrome General Pershing and his staff visited it, and displayed great interest in our organization. I was greatly disappointed at not seeing him, but unfortunately was off on a reconnaissance flight, and when I returned he had gone on. Deering had the good luck to see him, and said that he appeared to be a fine soldier, rather silent but very observing.

The arrival of mail at the aerodrome was an event looked forward to by everyone from the mechanic to the O. C. I received five letters in a bunch from home, and I tell you that, to me, they were worth their weight in gold. If those at home could only realize what joy and pleasure their letters bring to the boy or man in active service, they would never miss a mail. Somehow the sight of the long-familiar U. S. stamp and postmark seems to bridge the gulf of miles and bring your loved ones nearer to you. Mail time draws each chap closer to his chum and fel-

lows, and home news is discussed perhaps with one who lives many thousands of miles away from you, yet seems to understand and enjoy the news as much as you.

CHAPTER IX

ARTILLERY OBSERVATION

Ranging guns on targets from the air—Use of wireless—Flying in bad weather—Attacking balloons and blimps—The camera kite—Treachery of the air — Swift punishment for two traitors — A funeral behind the lines.

FOR almost a week things on our sector were very quiet. Douglas and I averaged about four and a half hours in the air each day, sometimes doing reconnaissance work, and at other times testing our new machines that had just come over from the factories in England. The longest day's flying I have ever done was six and a quarter hours and I was all in at the finish.

One morning during the third week in September I was ordered to pilot an artillery observation plane, a large two-seater biplane of

"Archies" started searching us out, with loud explosions, but I knew by experience how to dodge them, and did not worry. There is a set rule to follow when conducting a range shoot in conjunction with a battery, and this is to fly back and forth between the target and the battery. The line of flight forms a large figure eight. The reason is that wireless signals always carry strongest when the plane is flying towards the receiving station near the battery. When flying away from the battery and towards the target the observer does not send, but concentrates his attention on the target, watching the effect of the shells.

Douglas had located the target—a big enemy battery which had been causing our men a lot of trouble. As I banked the plane round, his wireless key flashed out the signal "Fire," and as we flew towards the target after another sharp bank, I eagerly watched for the bursting of our first shell. Shrapnel, to burst effectively, should explode well up in the air about fifty yards short, as the bullets will be blown into the target. High explosive shell when ex-

ploding in soft ground throws off a black smoke; if it fails to detonate the smoke is white. As the observer has to judge what kind of shell to order the battery to use, he must have a thorough knowledge of the effects of the different kinds. Shrapnel is very effective against troops either when they are charging, in trenches, or on the march. High explosive shells must land and burst on the target to do the greatest amount of damage.

Our battery was using shrapnel, and the first shell fell wide of the target. As we flew back, Douglas flashed down the correct range. This time the shrapnel burst almost over the target and he flashed the signal for concentrated H. E. (High Explosive) fire. Six guns commenced dropping the heavy shells on the doomed Hun battery and soon we were able to see that it was out of action. Douglas wirelessed, "Stop firing," and I drove the plane farther over the lines, while we looked for a new target.

It did not take us long to spot another, but this was of a different kind. Far below I could see a small column of troops and a motor trans-

port rapidly approaching the trenches. This is what we airmen call a fleeting opportunity, and the exact location is immediately flashed to the battery, which in turn 'phones all other batteries within range. Then at Douglas's signal to fire, a terrific hail of shells was poured on the target. Tremendous execution was done and the action was soon over. For two hours we kept flying back and forth, reporting each new target, and going through the same procedure in each case. You can readily see the damage that can be done by the intelligent co-operation of an observer in a plane equipped with the wireless and a battery of some good gunners. During the entire time we were over the Hun lines nary a sign of a hostile plane did we see. The shrapnel, of course, continued to come up from the "Archies" on the ground, but not one shell came near enough even to give us an unpleasant shock.

In landing I found this big plane was rather clumsy and my first attempt was a failure. I had to level off, open up the motors and circle the aerodrome before I tried again. This time

I was successful and the moment we stopped rolling along the ground, Doug was off to the 'phone to confirm his report from the air and also see whether it had been received entirely correct.

During the afternoon the wind began to rise and I was hoping that my flying for the day was over. No such luck, however. Orders came again to go over the same territory on a reconnaissance and see if the Huns had tried to replace the damage done by the artillery fire of the morning. Repairs at the front are made very quickly, and it was possible that a new battery was being put in position.

"Blowing up squally, old man," said Douglas, and it certainly was. The clouds were hanging low and moving fast; anything but ideal flying weather.

My old reconnaissance "bus" was waiting for us and I was glad to get back into it again. It doesn't take long for a pilot to become attached to a plane, and less time for him to despise one if he doesn't care for it. Like automobiles, no two aeroplanes are alike, each hav-

ing its little differences which the sensitive airman instantly feels. The plane I had used in the morning was supposed to be a far better machine than the one I was going to take up, but I would rather take my chance in the latter any day, particularly in bad weather.

When the O. C. wants information from the air he generally gets it if it is humanly possible. No matter what kind of weather there is some pilot who will take a chance. Even my motor didn't like the atmosphere, as the carburetor had to be adjusted twice before it ran to my liking. Then with a glance back at Douglas to see whether he was O. K., I opened the throttle and we sped along the field. The wind, which was very gusty, threw the left wing up sharply as we cleared the ground, but quick work on my part righted it before a crash occurred.

The wind was responsible for the eruption of a flock of camera kites from the German lines, and as it was in the right direction for them, they were carried over our positions. Kite gunning is great sport and reminded me of

the old days when I used to chase the balloon target back at Borden. We shot down three of these kites with their precious cameras and the Huns pulled the others down as rapidly as possible when we flew over them.

We were instrumental in saving an Allied observer that afternoon under rather peculiar circumstances. The balloon branch of the R. F. C. often send captive balloons up over our own lines with an observer armed with field glasses to spot anything new that goes on behind the Hun trenches. One of these balloons was being blown around about a mile away from us and I guess Douglas saw what I did at the same moment, as he leaned over and tapped my shoulder. A Hun plane, evidently of the newest fighting scout type, was swooping down on the unlucky observer. Even as we watched the Hun opened fire and using explosive bullets set the balloon on fire in a second. As it burst into flames the observer jumped and I saw the parachute attached to his shoulders open up. When I swung our plane over and headed for the scene, I saw that the Hun plane was painted

a brilliant red, one of Baron von Richthofen's squadron. Aviators with less than a month's actual fighting experience were warned not to tackle one of these red planes alone, as they are always piloted by some German "Ace" noted for his cleverness and devilish fighting qualities.

True to his reputation, the Hun was evidently going to try to catch the observer before he reached safety and kill him as he was falling. I could not hang back and see this chap of ours done to death in this manner without trying to save him, so opened fire with my Vickers. The range was far too long, but I did this with a purpose, as I wanted to lead the Hun to believe that I was a green pilot who was wasting his ammunition before getting within range. The ruse worked. Up came the Hun, determined no doubt that it would be better to crash a plane and two men than just one lone observer. Once before I remember saying that Douglas was a crack shot with his Lewis and I preferred to trust my life to his arm rather than to my own. Shooting with any accuracy was going to be difficult as bumps and gusts rolled and tossed

Douglas went into action at once with his gun

the plane around like a feather in a gale. This particular Hun had the strangest method of attack I have ever seen. He came on at about one hundred and thirty miles an hour, swaying from side to side.

The clouds, which were hanging low, seemed to drop down on us, but in reality it was our plane that was ascending. Both of us emerged above the clouds at almost the same time, and Douglas went into action at once with his gun. It was only a matter of seconds, as Doug's first burst caught the Hun's tail and tore loose his controls. He was a desperate fighter, that Hun, and knowing that he was done for, made a last effort to get us. The bullets landed home somewhere on our plane, the motor missed once or twice, then recovered. For an instant I thought we were gone and I will never forget the awful fear that gripped me as we wavered, then straightened out. The Hun had dived below the clouds and I shot down after him. He fell fast, however, and I saw him crash, a faint smudge on the earth below.

As there was no sign of the balloon's observer

as we flew over the spot where he had been descending, we judged he had landed safely. It started to rain and I headed for the aerodrome. There is nothing more uncomfortable than flying in the rain, which gathers on the pilot's goggles, making it hard to see. The revolutions of the motor were dropping, and I knew it had been hit. Fortunately I was able to land before it gave out entirely. An examination later showed that the petrol tank had been punctured, allowing the petrol to leak out slowly. A tappet rod had also been shot away.

I was pleased that Douglas had downed a "red" Hun, and I was anxious to report it, as I knew that he would be bashful about his prowess. That was the thing I liked about him; he would very seldom mention his exploits.

The mechanics ran out in the rain to bring the plane in, and I hopped out, anxious to get my wet things off. Then I saw something that I can never forget—Douglas, doubled up in a limp heap in his cockpit. It was the work of a second for the men to lift him out, but one look at his body and at the bullet holes in the

fuselage of the plane told me that another young chap had "gone West." When he died I lost a loyal chum, and the Royal Flying Corps a brave, efficient officer.

He was buried the next day, and an impressive ceremony was held over his grave. Seven of us, all pilots, winged our way across the field to where the upstanding propeller marked his last resting place. Several times we circled in honor of the dead, then came quietly to earth. Douglas was well liked by all, and there wasn't a man that did not miss his cheery smile, and "How do," around the aerodrome.

Air-fighting has developed so tremendously in the past year that all kinds of tricks are tried by both sides to outwit the other. Here is one trick that the Huns did not get away with: One morning while on patrol duty two of our planes saw three others approaching from the German lines. Two were readily distinguishable as Huns, but the one in the center was an Allied machine. The design and insignia left no doubt in the minds of our pilots who were circling high overhead. The most extraordinary thing about

it was the fact that the three planes were flying together in harmony, just like old friends. And the German anti-aircraft guns were silent. Arriving over "No Man's Land" the two Huns banked round and turned back the way they had come, but the Allied plane came on alone. Before he could get far, down from the clouds swooped two of our planes, their machine guns opening fire as they came within range. The pseudo-Ally machine crumpled up and crashed down—defeated before it had time to try any deception over our lines. The Germans had somehow captured this plane intact and manning it with Huns had sent it over on the chance of being undiscovered and thus securing valuable information about our movements. I wonder how they felt when it failed to return?

The care taken of our machine guns is worth mentioning. Should anything serious happen to your gun while in action the consequences would be more than one would care to contemplate. Therefore, immediately after an aeroplane is wheeled into its hangar both machine guns are removed from the plane and turned over to the

N. C. O. in charge of the mechanics, whose duty it is to see that they are thoroughly cleaned at once. Afterwards they are placed in waterproof boxes until the plane is to be used again. The same care is bestowed on the wireless instruments of the artillery observation planes, except that an electrician takes them in charge and is personally responsible for their condition.

A spell of bad weather set in, accompanied by rain and hail. The field became a mass of slippery mud, making landing extremely difficult. Two pilots who were unlucky enough to be detailed for flying turned over when landing after their trip. Both escaped with mud-baths and a slight shake-up and at that they were lucky.

In bad weather the Huns seldom ventured into the air, although once they departed from their usual tactics and came over in a blinding rainstorm. Bombs were dropped indiscriminately—doing little damage. Two of their machines lost their way or were driven down out of control. A short time later we added them

to our trophies and the pilots in both instances were taken alive. Reports came filtering through once in a while as to the treatment of our chaps who were unfortunate enough to be captured by the Germans, and what we heard was not pleasant. It was so much the other way that I heard more than one pilot say he would kill himself rather than be taken alive and be made to suffer the indignities and tortures that some of our boys had undergone. Our treatment of captured German aviators is in accordance with the rules of civilized warfare. I for one think they are treated too well.

The arrival of a shipment of magazines helped to pass the time away during the wet spell, but even with this entertainment we were all glad to see a clear sky again. Work in the Royal Flying Corps is so fast and furious that, although we welcome a break for a while, if it lasts too long we chafe at the delay and want to be back at our old jobs of "strafing the Hun."

The first clear day saw every pilot in the air at some time during the morning or afternoon,

but the official communiqué said " All was quiet along the Western front," and no brushes with Huns were reported.

Rumors of a great aerial offensive had been circulating around the aerodrome, and I understood that on the morrow a large reconnaissance squadron was to go over the lines and map every inch of the territory in preparation for the advance of the army which was to co-operate with us. The list of pilots assigned to this squadrón was posted late in the afternoon, and both Macklin and I were down for it. Needless to say we were both enthusiastic at being selected, and hoped for fair weather.

CHAPTER X

AERIAL PHOTOGRAPHY

Ideal days for photos—The start at 4.30 A.M.—Enemy camouflage—Effect of a previous raid—Greeting a victorious squadron—The danger signal and a rush back home—A bad landing and its consequences—Ordered back to England for Home Defense Work.

JUST as dawn was breaking the next morning I rose and swallowed a cup of black coffee before going out into the damp air. In the dim light the shadowy shapes of the planes which were to go on a picture-taking trip looked dim and unreal. My job was to pilot a two-seater biplane from which the photos were to be taken. This machine was a slow, unwieldy tractor, but the most valuable of the whole squadron. Fastened to the fuselage were two aerial cameras with their lenses pointing down. These same lenses took panoramic pictures of the country

over which the planes were flying. Such cameras are operated by pulling a string which unwinds the shutters. Immediately after the photos are taken new plates are placed in position by pushing a small lever near the operator's right hand. These cameras are the last word in photographic construction and with them photographs can be taken from as high up as fifteen thousand feet, providing, of course, the weather conditions are perfect. Ordinarily observers seldom operate these cameras, as it requires an experienced photographer for the work. He must take into consideration the various strata of mists, the size, color and relative positions of the clouds to the sun, and it rests with him as to what height the pilot shall keep the plane when over the desired objective.

General Headquarters have a large photographic map for reference and our object in going out was to photograph certain sections of the enemy's territory which were not at present included in this map.

My plane had only one gun attached and that was a stationary Vickers, firing through the pro-

peller. It is not considered necessary for photographic planes to carry more than one gun, as there are always ten or more fighting scouts as escorts when a flight over the lines is attempted. As we were going on quite a long trip, fourteen of these fast fighting scouts were detailed as an escort and the silence was suddenly broken as the different motors came to life preparing for the start.

The photographer detailed to work with me was Captain Falconer, an expert, and one who had been over the lines continuously for almost a year. He thought no more of a trip such as ours than he did of going to bed. His cockpit was behind mine and had a glass panel in the floor giving him an accurate view of the country and showing him just what territory he was going to photograph.

The motor in the plane was a 260 H. P. Rolls-Royce, one of our best—capable of lifting and flying the big "bus" at one hundred and twenty miles per hour. As I tuned it up it sounded very sweet and I could easily tell that the advertised reserve power was certainly there.

The squadron was in command of Wing Major Stevens, who was killed in December following while conducting a similar flight.

Major Stevens and the Captain were in consultation over the weather conditions and I heard the Captain say that he had never seen a better day for such work. Indeed it was almost perfect. The sky was free of clouds and there was practically no wind.

Immediately after the Major climbed into his "Spad" he signaled for the start. One after another our escorts sped along the ground, and rose gracefully into the air. Then came my turn, and the powerful motor roared out a happy song as we gathered speed, and without so much as a tiny bump slid upwards to take our place at the apex of the V formation. Accustomed as I was by this time to flying all types of machines, I could not help growing enthusiastic over this big white bird of mine which responded so easily to the slightest touch on the joy stick or rudder. We had so much wing surface that bumps, of which there were a few, did not bother us at all. Steadiness is

essential in a photographic plane and this one certainly was a beautifully steady flyer.

As we approached the enemy's lines and the Hun shrapnel began seeking us out, our squadron commenced twisting, diving and turning, doing everything except keeping to a straight course. Bringing up the rear of our formation came our cleverest pilots and bravest air-fighters, always on the watch for any attack by Hun machines, who would no doubt try to cut us off. There was a speaking tube attached to my machine, making communication between Captain Falconer and me easy. He was able to give me clear directions as to what height to go, and so forth, my only difficulty being in hearing, as the motor made a tremendous noise.

We saw two Hun machines evidently on patrol, but they made no move to attack us, knowing that they would stand no chance. Our formation was a strong one and, should we be attacked, would be held to as long as possible. If more than five of our planes got into the fight, the remainder would form closely about us and we would immediately turn for home.

No enemy squadron appeared, and as we arrived over the territory that was to be photographed, I cut off the motor and started gliding down into a veritable maelstrom of shrapnel sent up by the "Archies" below. The escorting planes formed a large circle above us as we rapidly descended towards the enemy's territory.

"All right, steady now," came the command, and pulling the plane up level I advanced the throttle again ("giving her the gun," in aeronautical terms). Twice I circled over the objective until I got the welcome O. K. It was with a feeling of great relief that I started to climb again, as the shrapnel fire was growing fiercer every second. Up, up, up! until we rejoined our convoy, then back towards our own lines we turned. The sun was up and after we had climbed out of range of the guns below I was able to get a good glimpse over the battle lines, both our own and the German trenches. It was a strange scene and seemed horribly unreal; the guns on both sides were hurling death in all directions, and no doubt many of

our boys were at that very moment fighting and dying that our cause should be victorious. I would rather face death in an aeroplane than go over the top on the ground any day. And yet I know many soldiers who have been through the hell in the trenches who said they wouldn't step into an aeroplane for all the inducements in the world, which just goes to show how different many of us are.

Arriving over our own aerodrome again the formation was broken and each machine made its landing, coming down one after the other. As I "taxied" in from the outfield towards the hangar the men of the developing division ran out, and with a few quick motions dismounted the cameras, and were off for the photographic shed, in which were all the newest devices for turning pictures out quickly. The developing and drying of the plates, together with the time consumed in printing from the negatives, seldom takes longer than an hour and a half. These prints are immediately forwarded to General Headquarters, where they are reduced to scale and pasted into the large

map. A comparison of these prints with others of the same sector probably taken several days before shows at once what changes have been made by the Huns.

Camouflage is used a great deal to deceive airmen, but often a good memory will expose an excellent piece of work which ordinarily would have deceived the aviator.

Captain Falconer was a rather taciturn man, but it was he who told me how his memory had been the undoing of a beautiful piece of Hun camouflage.

"It was in the spring of this year," he said, "and I was doing quite a lot of photographic work on the Somme. One day when the 'Archies' weren't so active as usual—perhaps a consignment of beer had come in and the Huns were all spifflicated—I had the pilot descend lower than usual. Anyway, as I watched the landscape flash by through my floor window, I recognized a certain ruined church which had stood at a crossroads. As I peered down I thought I must have mistaken my location, as this ruin stood in the middle of a field."

"Well, Captain," I asked, "was it the church?"

"By Gad, sir, it was," he answered, "and as we dived down lower still I saw that the roads had been cleverly covered by boughs and branches of trees intertwined, making, no doubt, an archway or rather a tunnel through which troops and supplies could be moved through unseen. That camouflage lasted only until I got back to our lines and communicated with the head of our batteries."

"Then what happened?"

"Up in the air again we went and I watched with much pleasure the utter obliterating of the crossroads, camouflage and all."

This is only one of the many instances where camouflage has been discovered through a good memory and quick action on the part of our airmen.

Macklin was the victim of an unfortunate accident one afternoon, just after he started out on his flight. Something went wrong with his motor and he was forced to make a quick descent. He fought hard to make a good land-

ing, but instead crashed through the roof of B. hangar. The poor chap was rather severely injured, but I believe he is back in the game again.

Several days later we received four new pilots from England to make up for those who had died during the first three weeks. Two were boys from the U. S., who had been in Class 10, following ours, at the University of Toronto. One hailed from Lincoln, Neb., and the other from somewhere in New York State. The night of the arrival was a jolly one and we went over the old days of our training in Toronto, and particularly the memorable fight between the two classes.

They brought news of several Hun air raids over England and while we had heard vague reports of the damage done the actual information and additional details made our blood boil. I, for one, am strongly in favor of reprisals when it comes to having women and children murdered night after night, and nothing would have given me greater pleasure than to have been one of a squadron raiding Germany. It is my firm belief, based on experience

at the front, that the day when one or more divisions of, say, five hundred planes go over into the heart of Germany dropping death and destruction, that day will see the first real big step toward victory.

We counted noses a little later the same evening as I was curious to know what manner of chaps were in our squadron. I found that it was principally composed of sportsmen. There were three famous American football stars, a runner, and two fairly well-known baseball players, a Canadian hockey champion, two English college oarsmen, a Welsh Rugby fullback, and last but not least four cricketers. In the unknown class, to which I belonged, were two Wall Street clerks, an advertising man (that's me), two former gentlemen of leisure, a vaudeville actor, a bank messenger, a high school boy, and bringing up the rear a book agent and an insurance agent. Twenty-four fighting pilots of the Royal Flying Corps representing almost every section of the globe, and as jolly a bunch as ever gathered together anywhere. Out of the twenty-four, fifteen were

from the North American continent. The new boys came plentifully supplied with cigarettes, which were welcome, as our supply was getting very low. Nearly every pilot in the R. F. C. smokes. I myself find that a cigarette is indeed a soothing friend after several hazardous hours in the air.

There was a great deal of talk about the proposed new offensive which Haig was said to be preparing and speculation was rife as to where and when it would be launched, also what share our squadron would have in it.

It was about this time that I began to feel the strain of the work we were doing. You must remember that I averaged almost five hours a day in the air, which is a terrible strain. My flying was not affected, but at night I began to lose sleep. A few weeks attached to a squadron at the front changes a man's outlook on life. One cannot go hand in hand with death every second without feeling some effect from it. Of course, in the air there are so many things to occupy one's attention that you have no time to get an attack of nerves.

Our O. C., who was indeed a fine old scout, came over to me one day after I had been on patrol and said that he would recommend that I be given a week's leave to go to London and get away from the thick of it for a while. Needless to say, I was more than pleased, but the promised leave did not materialize. It was a sad disappointment. I received orders to go to England, but it was for coast patrol work.

The Royal Naval Air Service has charge of the defense of the coast against aerial raiders, but the raids were becoming so frequent and were carried out at such a high altitude—twenty thousand feet—that the R. N. A. S. was unable to handle the situation. As a result, several pilots were recalled from France and I was one of the number.

The job of flying a "dud" machine back to Hendon, England, was presented to me, which I did not relish much. When the time came to leave the squadron I felt really sorry at saying good-by to the boys. My life with them had indeed been strenuous and risky, but even at that it had not been unpleasant.

The moment I heard the motor of that "dud," I knew what a rotten trip I was going to have. We of the R. F. C. can tell in a minute by the sound of the motor just about how it will perform, and in most cases our deductions are right. The plane, a single-seat flyer with a 160 H. P. LeRhone rotary motor, was a badly battered Sopwith "Bull Pup" Special. It had seen considerable service and been pretty badly peppered. Seven pilots including myself comprised the "dud" squadron and I was glad when the word came to start. My get-away was better than I thought it would be, but the climbing almost broke my heart.

If you have ever driven an automobile that was once the peer of its class, and at the time you were driving it was nothing but a broken-down wreck, your feelings were just about what mine were as I turned the old "buzzer" towards the Channel. Arriving over the water a stiff wind caught us although we had managed to reach eight thousand feet. I cursed that plane until I caught a glimpse of a couple of others of my squadron, then I realized that mine

wasn't so bad after all. Two of those nearest me were having bad motor trouble, as I could tell by the way they were slowly dropping, and I fully expected to see at least one of them fall into the sea. Once over Dover it did not take us long to locate the aerodrome. Down we came like wounded ducks and to the credit of our boys I want to say that all arrived safely.

We learned that the Huns had been over London again the preceding night and had got away without any casualties. My orders were to proceed by rail to a place called Southend on Sea, somewhere near the mouth of the river Thames, and report to the Aerial Home Defense Station there. A non-com accompanied me, carrying my outfit, and I found it hard to believe that I had just come back from the firing line of the air. The sight of the city seemed strange after the aerodrome, and made me wish I had time to stop off and see a show and go to the Savoy for a bite. Unfortunately the orders read report at once, and I soon found my way with the aid of the non-com to the railway station where the trains for Southend departed.

The ride, which was not a long one, opened my eyes to the damage done by the Huns, and I hoped that I would have a chance to down one or more when they came over the next time.

I found Southend to be a thriving city across the river's mouth from the naval base of Sheerness. At the latter place the R. N. A. S. had a station and keen rivalry developed between the two aerial branches as to which could do the more damage to the raiders.

The R. F. C. aerodrome, having been erected in a hurry, was not half as well built as the one I had left in France. The accommodations at the time were as good as could be obtained under the circumstances and the boys were making the best of them. Our squadron was known as Home Defense No. 64, and there were fifteen pilots including myself stationed there. The O. C. was a R. F. C. Captain who had been severely injured during the first days of aerial warfare, but he was still on the job and a good commander. Only one other pilot besides myself had seen service in France, the rest being

new graduates of the flying school. We two were appointed temporary Squadron Commanders, my squadron having six pilots, and his seven.

If the accommodations were not so good, the machines were, and I was pleased to draw a fast one-seater fighter, mounting two guns, the usual combination of a Vickers and a Lewis. This plane was a machine of new design with 200 H. P. Gnome rotary motor. The aerodrome was studded with machines, guns and anti-aircraft batteries which no doubt would give a good account of themselves when the enemy appeared. I tried out my plane as soon as I could conveniently get into my togs and it was all I expected it to be. One of the R. N. A. S. boys rose up in a hydroplane and evidently tried to catch me, but his slow-going plane with its heavy pontoons had no chance against my machine. I went to twenty thousand feet and was then above the clouds. Spiraling down after reaching this height, I was able to see the coastline of France and faintly hear the distant rumble of guns in action miles away. A cruiser

and several small coast patrol vessels were all that were in sight.

Supper was a slow, tedious meal, as we were busy discussing the possibilities of a raid that night. The general opinion was that a storm was brewing and that to-night would be the first out of five that the Huns did not come over.

CHAPTER XI

COAST DEFENSE WORK

An enemy air raid on London—Chasing the Huns to sea—Spotting a submarine—Lonely hours in the air—Atmospheric conditions on the coast—Three days' leave.

THE predictions were right; no Huns appeared, and as a result everyone at the aerodrome had a good night's sleep. Bright and early the next morning found me examining my Vickers machine gun, which was a little later model than the one I had used before. It carried 300 rounds of ammunition of three kinds: Armor Piercing, a solid 303-caliber steel-nosed bullet; Explosive, used for "strafing" balloons and airships and sometimes for planes; Tracer, a bullet which leaves a trail of black smoke in the daytime and is luminous at night. The gun mounting was so arranged that it allowed

the largest possible area of traverse, elevation and depression.

My duties were to patrol three-hour stretches twice a day, one in the early morning and the other in the late afternoon. There was a map of the coast, marked so that I could tell at once what my aerial beat was to be, fastened in the cockpit where I was to sit.

This plane was equipped to the finest detail. On the dashboard were instruments which would tell me the height I ascended, speed I traveled, angle at which I flew, amount of gasoline, etc. In a small compartment under the seat was a complete tool kit: oil tiller hammer, three spark plugs, roll of insulating tape, four feet of soft iron wire, screwdriver, large and small adjustable spanners, wire cutters, quick-grip pincers (pliers), and several feet of copper cable. There were also complete waterproof covers for the propeller, motor and cockpit in the fuselage, and on the arm of the seat was a cloth to be used for wiping moisture from my goggles. One thing I liked particularly about this bus was its rapid climbing speed.

I could reach ten thousand feet in fourteen minutes, ascending at the rate of eighty-two miles an hour. When flying level it would do one hundred and twenty miles an hour. When throttled the gliding angle was so easy that I could come down at sixty miles an hour.

Before ascending I went to the orderly room to see what new orders were posted. The only one that interested me stated that pilots on patrol should watch the coast-guard stations for indications of the passage of every aeroplane. If a hostile squadron passed over a station before I arrived a large white arrow pointing in the direction in which they went would be displayed on the ground together with a code signal telling me the time that had elapsed since the enemy passed and I appeared. By using this simple method Allied planes on patrol are able to pick up the trail of the Hun invaders and speed after them.

When I returned to the hangar again a mechanic had the motor turning slowly over, making slight adjustments to the carburetor on account of the cold air. A non-com brought me

a powerful pair of field glasses and a wrist compass, both of which articles are absolutely necessary when going up on coast defense work.

I carefully rubbed my hands with vaseline before pulling on my two pairs of gloves. The mechanician reported O. K., and climbing into the small comfortable cockpit I fastened the safety belt, pulled down my goggles, waved for the rigger to let go and once more was in the air. At five thousand feet I stopped climbing and leveling the plane, started off up the coast. My aerial beat was no more than ten miles long, and while at first the quiet, uneventful flight seemed a blessed relief after the stormy ones over the German lines, I became sick of it long before the three hours were up. Twice during that time I landed, once on account of a missing cylinder and the other time just to relieve the monotony.

The air was calm and I flew the plane holding the "joy stick" between my knees, an old stunt of mine. This left my hands free, and I used the field glasses to scan the sky and sea for signs of enemy activity. A big naval hydro-

plane passed close to me once, traveling in the opposite direction, and its crew of three men signaled greetings as we flashed past. This incident reminded me of the time in 1907 when, as a passenger, I saw the *Carmania* salute the *Baltic* as the two ships sailed by, one bound for New York, the other for Plymouth. If anyone had told me then, a youngster of fourteen, that ten years later I would be piloting a fighting aeroplane over the British coast, I sure would have thought him crazy.

Up in the air, when one is alone, seemingly trivial things cast the memory back to days gone by, and I flew the plane almost unconsciously. Suddenly faint but clearly distinguishable above the drumming of my motor I heard the booming of heavy guns. Instantly I became the air pilot again, and forgetting my dreaming, scanned the sea below through my glasses. Just coming into view were three long black ships throwing off dense clouds of black smoke. Destroyers they were I knew at once and evidently in hot pursuit of something. From the naval station at Sheerness two of the

big hydros were starting out. I watched them skimming the water, then as they took the air I turned my own plane out over the sea. The water was smooth and I cut off the motor and started to glide down to about fourteen hundred feet above it.

Signals fluttered from the aeroplane signal platform on the foremost destroyer and I read the message that a submarine was lurking in the vicinity. The naval planes had arrived on the scene by this time and were flying at about seven hundred feet over the water, the observers eagerly looking down, hoping to spot the sub. I dared not go any lower, as I had no apparatus to keep me afloat should I be forced to descend. Then one of the hydros caught the scent—crack—crack went its Vickers, and like hounds after a hare the destroyers sped to the spot. They let go depth charges and sped away. The water boiled violently as the heavy explosive got in its deadly work. Then like a cork, the blunt nose of the submarine poked itself above the waves. It came up in a sickly fashion and as it rolled over the conning tower disgorged

the terrified crew. The destroyers closed in, guns trained on the wounded sub. Her crew jumped into the water and not a moment too soon. An interior explosion tore the end of the sub to pieces and it plunged beneath the waves. Evidently some member of the crew had blown it up to prevent our men towing the prize to port.

I still hovered over the spot, watching for a possible attack from the sky. The naval hydros had settled on the water and were assisting sailors from one of the destroyers in rescuing the German crew. As a glance at my watch showed me my patrol time was up I banked around and headed for home. Back at the aerodrome the report of the sinking had already been received over the telephone from a coastal station, but I was able to tell an interested audience particulars from the ringside, as it were.

I slept from 1 o'clock in the afternoon until 4.30, then had some tea and was ready to go out again on my afternoon stretch. The day had been beautiful and it looked as if the night was going to be an ideal one for the Huns to

pay us a visit. On the afternoon patrol naval planes also were on the job, and I amused myself for a while, once I was in the air, by flying rings around the steady old naval "sea-boats," as we used to call them. These same "sea-boats" are slow flyers but have three guns to our two, carry three men and are formidable antagonists in an air battle, their only trouble being that they cannot be handled as easily as the "scouts" nor are they anywhere near as good climbers.

Then it happened. Far out to sea a battle cruiser opened the ball by firing its anti-aircraft guns skywards. I was flying at six thousand feet and the naval plane was about the same height. I saw the Huns almost at once, at least fifty of them in two V-shaped formations rapidly making for England. It was then almost 7 o'clock in the evening and ideal weather for the purpose. I saw the wireless aerial on the naval plane unwind and I knew the alarm was being flashed inland. Both of us started to climb, as the Huns must have been at almost twenty thousand feet. It would take me some

time to reach that height and no doubt they would would have passed inland by then. Our "Archies" along the coast came to life and a maelstrom of steel was soon flying through the heavens. The naval plane was already left behind as I rose rapidly. Back at our aerodrome, which I could see in the distance far below me, planes were rising one after another.

The sight of those raiders made me want to kill. I talked to my motor as you would to a baby, begging and coaxing it to carry me up in time to take a whack at least at one of the enemy machines. Just as I thought, however, they were far inland when I reached their level. I had hopes one would detach himself from the formation and attack me, but there was no such luck.

In the event of a raid, my orders were to follow the hostile fleet once they had passed and try and intercept them on their return. When they were almost over London one formation flew towards the south, evidently trying to find Aldershot, but the other commenced dropping their missiles of death and destruction on the

city. Nearly twenty Allied defense planes were in the air, and we attacked simultaneously. It was my first air battle in which I had to depend on my own shooting for safety, as in each previous scrap poor Douglas did the pleasant work of crashing the Huns. The raiders were all three-man Gotha "bombers," big planes armed with the usual three Maxim guns eight pounds lighter than ours and fore rapid firers.

We had the choice of doing two things, either to crash the Hun machines by shooting or force them down nearer the ground where the shrapnel was exploding thicker than hail. Hun raiding squadrons seldom stay and fight, but drop their bombs and streak for their base in Belgium. Singling out a plane I dove to the attack, withholding my fire until I was certain that I was within range. I had the advantage in one way because I could maneuver a great deal more quickly than the Hun could.

I felt no excitement as I opened fire with my Vickers. My plane was nose down and I had a direct bead on the fuselage of the enemy plane. Some of my shots got home, as it wavered and

rolled like a waterlogged boat. His bursts came unpleasantly close to me but none landed in a vital spot. A quick turn and I raked him with the Lewis, using explosive bullets. I guess I must have been a better shot with this gun than with the Vickers, for the Gotha went down for good and I had got my first Hun.

To say that I was not pleased would be telling a lie. I had seen the wreckage caused by German bombs in London, had also seen the dead and injured in the streets, many women and children among them. The thought of them made me see red, and I dashed at another Hun who was attempting to get away. The sky was alive with fighting planes and I caught a glimpse of another Hun whirling to death near by. Truly the boys of the R. F. C. were taking a heavy toll from the invaders. Another one of "ours" also singled out the same Hun I was trying to destroy. We both attacked him at once, one at each side. This plane was a red one and manned by crack shots of the German Air Service. My fellow attacker caught it first, as the gunner on the left side of the Hun got a

burst full on the Allied plane, evidently killing the pilot, who whirled with his machine downward to crash somewhere far below.

I was firing again with the Lewis, but in my anxiety to get the Hun I am afraid I forgot to keep the plane twisting and turning, for I ran full into the fire of his rear gun. Part of my ailerons were shot away and the motor badly damaged. Fortunately I was not hit and neither was the petrol tank, but I was out of the fight and hard put to it to make a landing.

The fact that I am alive to-day is due to the prompt work of a pilot of "ours" who came to my rescue. I cut off the motor and started on a wabbly glide to earth from fourteen thousand feet. It is impossible to describe my sensations as I looked up above and saw the red Hun descending after me, evidently intending to finish the job he had started. Then occurred an act of heroism typical of the type of men in the Royal Flying Corps. One of our new pilots, recently graduated from the air school, opened fire on the descending Hun. Knowing that my only chance for life depended on that

lad, I watched the battle with one eye on my descent.

The Hun's machine scored first as the lad's plane pitched over to one side. He must have realized that he could not continue the fight and also that if he got away safely I would be downed. What followed happened so quickly that it was over almost before I realized. The Allied plane under the guidance of its young pilot swooped straight at the huge Gotha and they crashed in mid-air. They were locked together as they fell, both in flames.

So engrossed was I that I did not notice how rapidly I was falling. I must have been near the outskirts of London, and I was able to land my crippled plane on a common, much to the amazement of the residents of houses near by.

I made my report by telephone, and leaving a "Bobbie" to guard the plane was driven by motor all the way to Southend by a man near whose residence I had landed. After making my report I asked who the pilot of plane No. 1192 was, and learned that he was a youngster from West New Brighton, Staten Island, U.

S. A., who had arrived from the finishing school but two days previous. I have never met his people, but I was able to write and tell them that their son had given his life that a comrade of his might live. Truly a gallant death and one worthy of any man.

The day that this happened was Thursday and I was pleased to find a pass good until Monday waiting for me at the aerodrome. I was fagged out from my air-fight and narrow escape, so did not attempt to leave until Friday morning. The journey into London seemed longer than it really was, but I was soon fixed up with rooms at the Great Western Hotel, in Paddington. While strolling around looking over the sights that afternoon, I came to Trafalgar Square. Over near the Nelson Monument was an enormous crowd gathered about something at which they were all craning their necks. I am as curious as the next chap and was soon in the thick of the crowd. One thing I noticed was that a London crowd is more orderly than one in old New York. If it had been across the water, that crowd would have been

surging back and forth like the Atlantic Ocean in a storm.

My uniform secured me a passage through and I was surprised to see that the center of interest was a Gotha engine which, a large sign said, had been brought down in yesterday's raid. I examined it with mingled feelings, wondering whether it was the one my lucky shot had brought down or one that some other pilot had crashed. Anyway I looked it over with a sort of proprietary interest. It was a six-cylinder heavy motor evidently of the Mercedes type and was badly knocked about.

The Huns lost nine planes altogether in their trip over London, and five of our planes were also downed in the defense of the city. One of the Gothas was forced to land intact near Worthing on the Sussex coast by a R. N. A. S. aviator. This was a nice bag and brought the lucky pilot the D. S. O.

I happened to see its crew brought into London and a more villainous-looking set of men I have never seen even on the Bowery in New York, where there certainly are some tough

birds. There were three of them, pilot, gunner and mechanician, and the last was the best-looking one of the bunch. I could not help contrasting our young, clean lads with these types of Hun airmen. They evidently expected rough treatment and they certainly deserved it, but as is the British custom they were treated like other prisoners, which is one hundred per cent better than our men are when they fall into German hands!

London was normal in the daytime but at night it reminded me of a tomb. I would have given a whole lot to have been able to spend three days' leave at home, but as I couldn't make over six thousand miles in that time I stayed in London. On Sunday I ran into a bunch of American boys who were over as cadets getting final training before being commissioned and fighting in the air for Uncle Sam. Sunday night was a lively one for all concerned and I was sorry when the party had to break up. I was relieved from my first patrol Monday morning, but had to be back by noon, ready for work in the afternoon as usual.

CHAPTER XII

REPELLING A ZEPPELIN RAID

Rumors of Zeppelins—The anxious watch—'Phone news of their coming—Watching 20,000 feet in the air—The attack and escape of the Zeppelin—New and deadlier machine gun carried on the big balloon.

THERE was a great bustle at the aerodrome when I arrived because seven motor lorries had brought in some new planes, which I was given to understand were to be used for night flying. It appeared that our O. C. had put in a kick to G. H. Q. (General Head Quarters) that his squadron could not do effective patrol work unless one or more planes were up during the night. He could not send us up with machines regularly used for daylight flying, so he requested ten night flyers, and got seven, which wasn't so bad.

Our O. C. was a jovial old scout and one who

considered the welfare of every officer and man under him before anything else. At mess he would keep us all amused by his stories of the front and military life in general. I remember one that was particularly amusing although the truth was stretched a little.

A regiment of Ghurkas, the great little fighters from India, was stationed in the front line trenches near Ypres. It is not generally known but the Ghurka's chief weapon is a long keen knife which he carries between his teeth in an attack. This knife is so sharp that the man who is stabbed seldom feels the blow, it is all over too quick. One night a little Ghurka Sergeant told his comrades he was going to crawl out and cut the head off a Boche. True to his word, a few minutes later saw him crawling like a snake over "No Man's Land" in the direction of the German trenches. Suddenly Fritz stuck his head up from his trench and this was the Sergeant's opportunity. With a quick movement for which his race is famous, the Ghurka drew his knife across the German's throat.

Fritz stared for a second at his opponent,

then said in broken English, "You missed me, pig, you missed me."

Back from the darkness where the Sergeant was crawling towards his own lines again came the sibilant whisper, "Try and shake your head, Fritz."

My patrol that afternoon was uneventful as far as sighting Huns was concerned, but flying was not pleasant, as the weather was bad. Landing was difficult, even more so for the naval pilots than for me. One of them tried to land on the choppy sea, turned turtle, and as the plane landed upside down its crew were rescued by a patrol boat. My landing wasn't any too good, but I avoided breaking anything. I had a plane similar to the one in which I made the forced landing during the Gotha raid.

The next day it rained, as the story books say, and none of our planes went up above. The R. N. A. S., however, had their usual machines out as the pilots get wet landing and taking off, and a little more dampness does them no harm.

Our O. C., with his usual appreciation of our welfare, 'phoned London and arranged for England's star "Ace" to come down in the afternoon and give us a talk about air-fighting and the best methods to use. This particular aviator, whose name I cannot give, was the chap that won the V. C. for his exploit in "sitting" over a German aerodrome one morning and crashing six Huns one after the other as they rose up to meet him.

We found him a quiet, unassuming chap, slightly built, with a thin, fair mustache. If you met him in civilian clothes he would never receive a second glance. Even in uniform (I trust he will pardon me) he looked insignificant and not the kind of fellow one would expect to be the holder of the V. C. When we heard him talk, however, our opinions changed, for he certainly knew what he was speaking about. He faced us with a smile and with his opening words secured our earnest attention.

"You know, fellows," he began, "that in the air a quick climbing, speedy machine gives its

pilot a great advantage, but speed is less important than skill, which every fighting air pilot must have to be successful and live through air battles. One way to get a Hun is to concentrate the fire of two aeroplanes upon him; another is to maneuver for position so as to obtain the most effective use of one's own guns while preventing the enemy from using his. Accuracy in your fire can be greatly increased by changing the position of your plane. When chasing a Hun remember that you must endeavor to keep the enemy in view, remaining yourself at the same time as much out of the way as possible. Keep your plane between the Hun and the sun and also, whenever possible, the Hun on your gunner's left side. Never fly on the left of the enemy unless it puts the rays of the sun into his eyes, nor let your machine got either immediately below or above him. When you have to turn do it towards the Hun plane, never away from him. If you should turn away from him you may lose sight of his plane and thereby lose an excellent opportunity of following him."

He paused a moment and someone wanted to know what was the best range at which to open fire.

"That's a difficult question to answer," he continued, "but never fire at a long range unless you see that it will be the only chance you'll have. When shooting across a Hun, aim well in front so that he will run into your shots and go down for good."

Before he left for the city again we learned that there were possibilities of a Zeppelin raid, soon. How he got the information I don't know, but subsequent events showed that it was true.

All that night mechanics were busy installing electric launching tubes in the "fighting scouts," through which bombs could be dropped, for use against Zeppelins. This little device has proved very successful against the big balloons. It is placed between the pilot's legs, and in a little rack at his right hand are several small hand bombs, incendiary flares and parachute flares, and an ordinary walking stick. The bombs explode by means of a contact at

the bottom of the tube. You can easily imagine what would happen if one should stick in the tube and explode. We take no chances—hence the use of the stick.

Five o'clock the next morning found me up on patrol again. It was a little cold even at five thousand feet and far from comfortable. The atmosphere affected my motor, which under and over "reved" continually. There is nothing more annoying to an air pilot than to have his motor run unevenly, and I finally came down for adjustment. The balance of my patrol was uneventful and I landed hungry as a bear who had been fasting for a week.

In the afternoon a sea mist came up and I knew I should have to climb above it if I was going to patrol at all. Further news had been received that three Zeppelins had passed over Holland that afternoon headed out above the North Sea. I had never seen one of the huge monsters while in France and was anxious to see if they really looked like their pictures.

Up into the fog I went but found it was clear

over four thousand feet, although "upstairs" a stiff breeze was blowing. It is an extraordinary sight looking down on a sea of fog. It looks almost solid and I was half afraid to drop into it. I kept my course by means of my compass and, as I was unable to see the horizon, used the instrument provided to tell me that I was flying on an even keel. In the early days it was not unusual for pilots to come out of fog banks and clouds upside down! This was before a device was invented to guide the aviator and keep his machine level.

At exactly 5.25 I caught sight of the first Zeppelin. It was very high and traveling fast under the impetus of its motors and the stiff wind coming in from the sea. Compared to its tremendous size my little scout looked like a pea against a watermelon, but I knew that could I get above it my incendiary bombs would bring it down if one or more should land in the envelope.

I climbed at the steepest angle I dared but even then saw it would be impossible to get above the Zeppelin. My orders were to attack

if possible, and if unable to attack to report by wireless its position, height and estimated speed. Out behind me flew my aerial as I flashed word down below of the coming of the raider. It was dropping bombs indiscriminatively, as I could hear the dull muffled boom of the explosions. They had seen me from the big balloon and opened fire with what must have been a long range machine gun, as the bullets began to "zip" around me. Fortune was with the Hun that hour, for the fog arose from below and enveloped my plane, effectively shutting off the raider from view. For a while I could hear the roar of its powerful motors, then they too died away.

I came out below the fog to find several of our planes flying aimlessly around looking for the Zep. I landed as quickly as possible, and made my report and was ordered to take up a squadron of seven "fighters."

Proud? Well, I guess I was, but I was more anxious to be off after that slippery Zep. The sky was clear as I led my squadron into the air. The later reports said that one raider had

come over the Essex coast, evidently the one I had seen, another over the Lincoln coast, and a third over Kent. Their objective no doubt was London, as all the Huns try to reach that famous city. We went straight up until the entire squadron was at nineteen thousand feet, then I turned and signaled for battle formation. One by one the pilots swung their planes into the now famous V. Far below, at about ten thousand feet, was another of our planes, scanning the ground beneath for the arrows pointing out the direction in which the Zeppelin had gone. All I had to do was to keep one eye on that plane and the other ahead. The booming of anti-aircraft guns told us we were on the right scent. Then the Zeppelin came into view. This time we were above it and I felt sure we would get it. The men in the balloon saw us at the same time we did them and once again it started to rise, twisting and turning like a big snake! They were still dropping bombs, and signaling for the attack, I turned my plane toward the Zep. Their machine gunners were crack shots, and as my men swarmed around it like hornets,

two went crashing down, reducing my squadron to six, including myself.

The cigar-shaped bag was below me and I placed an incendiary bomb into the tube and let it go. The beauty of this type of bomb is that it is surrounded by little fish hooks which fasten like glue to the envelope of the Zeppelin, holding the flaming bomb in place until it ignites the gas inside. All the other planes were hovering above the Zeppelin also dropping bombs, with the exception of one pilot. He being more brave than discreet, dropped to the level of the Zeppelin and fired burst after burst at the huge rudder controls. He succeeded in blowing them to bits but gave his life in the attempt. A machine gun from one of the little egg-like compartments under the gas bag caught his plane with several rounds and he crashed to earth.

Rudderless the Zep was practically uncontrollable and I signaled to stop dropping incendiary bombs and concentrate on the machinery, with the hope that we could bring it down practically undamaged. One edge of the balloon was in

flames already and it looked doubtful if we would succeed in saving it from destruction. Lower and lower it dropped as the flames ate into the envelope.

Then came a terrific explosion as the great gas bag flew into bits and my plane tossed about almost out of control in the rush of air from below. All was over. Leaving behind a trail of black smoke the remnants of the Zeppelin with its crew fell earthwards, a fitting end to the trip of murder and destruction on which it had embarked.

Collecting the remnants of my squadron I turned for home, dead tired. But the exciting day was not over. The guns below were still roaring fiercely and in the fast gathering dusk I saw the second Zeppelin, also rudderless, drifting lower and lower, entirely out of control. Just then the thing I had feared happened; the sea mist rolled over the ground again and enveloped us all. Gone was the idea of getting the Zep, and our efforts had to be concentrated entirely on getting back to the aerodrome.

Fortunately all landed safely. We were overjoyed to hear that the second Zeppelin had come down near Harrow outside of London and been captured almost undamaged. The commander was shot while resisting capture, but the rest of the large crew gave up without a struggle. The third Zeppelin had managed to get back to the coast and was last seen headed out over the North Sea, flying fairly low. Two R. N. A. S. pilots followed in pursuit, but lost it the same way we lost the second one, in the fog.

I am not a superstitious man, but I carried a mascot as did every other air pilot in the Royal Flying Corps. Mine was a ring once worn by my mother, who died on the *Lusitania,* and that ring was with me on every flight I made, from the first until the last. To-day it is the most treasured relic of my service, and is proudly exhibited whenever anyone asks, "Did you have a mascot?"

Speaking of superstition, there is one thing that we airmen will not do, and that is light three cigarettes with one match. Those that

have laughed at this curious belief and defied it have invariably died in training or in action. This may be coincidence, but I for one would never take a chance that it is only coincidence.

The following day the O. C. and I motored to Harrow and had a good look at the Zeppelin that had been brought down the evening before. I was particularly interested in the armament, which was very complete. The guns were heavier than those on the Gotha planes and of a hitherto unknown type. They were mounted so that they had large arcs to swing in, giving a wide area of traverse, elevation and depression.

I was relieved from duty that day and we had an enjoyable time, in London, after the inspection of the Zeppelin, arriving back at the aerodrome around midnight. It is generally understood that food is scarce in London, but all I have to say is that I ate so much I was violently ill the next day and remained glued to my bed. The condition of a man's stomach should be absolutely O. K. before he steps into a plane. My attack was diagnosed as acute indigestion,

and the M. O. (Medical Officer) suggested that I take a few more days' rest. I had no objections, and the O. C. being willing, the first train available saw me bound for my old billet, the G. W. Hotel, again.

CHAPTER XIII

NIGHT FLYING

My first flight alone at night—Fear of losing way—Use of wingplanes and searchlight bombs in landing—The stars a guide—Deadly solitude nerve-racking—Making a landing under difficulties.

IT was a jolly time on leave for me, as you may imagine, and when I reported back to Southend for duty I was feeling fit as a fiddle. I found that I was to be nighthawk from then on, and was detailed to night patrol, flying one of the new two-seater F. E. 2. B. pushers. This plane was fitted with a 120 H. P. Beardmore engine and was not fast. Speed is not necessary for night work, rather a machine that will fly steadily and has large wing surface will be found most suitable. Seventy miles an hour was the best it would do on the level, and it took thirty-five minutes to climb ten thousand feet.

With the motor throttled it would glide safely at a speed of fifty-five miles an hour.

From 10 o'clock until midnight were the hours during which I was to patrol and a young Second Lieutenant but recently posted to the aerodrome was to be my companion. It was the C. O.'s desire that this chap was eventually to be my relief, and he wanted him to get the feel of night flying by going up with me. Mind you, I had only been up at night once or twice before, and then always as a passenger.

At a little after 9 I went over to the hangar to study my machine. It had the usual equipment, but everything in the cockpit was illuminated. The lighting of the instruments was done with electric bulbs, covered by black shades to prevent the light from being reflected. These lights were wired to two sets of accumulators (batteries) and switches, so that if one set failed the other could be thrown in. Leaving nothing to chance, the dials of the watch, compass, etc., were painted in luminous paint. Under each wing tip were Hoats wing-tip flares which were wired to the accumulator in the fuselage. But-

tons controlling these flares were in both my own and the other cockpit. The under sides of the planes and the fuselage were painted black to prevent the reflection from the flares being thrown back into my eyes.

Upon the floor of the cockpit, as in the plane I had used for Zeppelin work, was another electric launching tube, and the four parachute flare bombs were stacked neatly by the dash. The arrangement of the guns was new to me, for instead of having a Vickers fixed to fire through the propeller I had a Lewis fitted in a bay cut out of the top plane, and located directly over my head. In order to fire all I had to do would be to lean forward and shoot straight overhead. This method gave an excellent sight. Perhaps you are wondering how one could draw a bead on anything at night. It's simple—the foresight of the gun is painted with luminous paint which serves the purpose admirably. On each side of my seat were six drums holding forty-seven bullets, and each one of the drums was loaded with tracer, explosive and ordinary bullets. These tracer bullets are very effective at

night, for after they leave the gun and have traveled five hundred feet they can be seen for more than one thousand feet. They are combustible, and if a hit is scored will usually set the enemy machine on fire.

Another Lewis was carried behind me on a swivel, so that the observer had quite a large range of fire and could effectively protect the tail of the plane. On each side of the fuselage, between the upper and lower planes, fastened to the struts were several rockets. These are used against Zeppelins, and all that is necessary to aim and fire them is to point the plane at the Zep and press a button. The rocket will do the rest, and if you have aimed correctly you may bag the big balloon with just that one shot. Close to the electric launching tube was a smaller one, used for signaling. Wireless is never used at night by aeroplanes. Right near this pipe, or tube, were twelve cartridges of different colors, plainly lettered so I could not mistake them. When dropped through this tube a contact is made at the bottom and the cartridge catches fire. If it is red it will fall to

earth leaving a trail of red fire, and cartridges of other colors act the same way.

It was almost 10 o'clock as I finished my examination, and I ordered my observer to climb in. The gunnery mechanic warned me about the effect of the night air on the guns.

"If it gets cold, sir," he said, "the oil is liable to congeal, and should it do so you will have a number two stoppage [a bad jam]."

I determined to watch that gun of mine carefully, and told the observer, Shannon, to do likewise.

The aerodrome was bright with powerful lights as I tuned the motor up ready for the start. The night looked black and forbidding, but in my little cockpit those dim shaded lights were as comforting as a log fire at home. One final glance around and I signaled to let go. For a few seconds we were in the glare of the lights, then suddenly we were off into blackness. There were no stars, which made things worse, as I could easily have seen my way by them. I pulled the wheel back so that the heavy

bus would climb as fast as she could. I did not, however, intend to go any higher than four thousand feet. As I looked over the side, the aerodrome landing lights were lit and formed a brilliant letter L. In order to land on good ground, all I had to do was to glide down and come to earth inside the long arm of the L, and no farther than the short arm. I knew that all ground inside the L was perfectly safe for landing.

Getting my compass bearing I headed off up the coast. As the friendly lights of the aerodrome faded away, I began to feel lonely. I turned and looked back at Shannon, but could just make out his shadowy figure in the blackness, and even he seemed part of the night. I am not a nervous chap, but there is something about night flying that sets a man on edge. Finally I began to see things. One can't stare into the dark for long without getting the feeling of being watched by something or someone unknown.

"What's that?" The involuntary exclamation was wrung from me against my will, as a

quick-firing gun awoke to action with its devilish rat-tat. It seemed almost at my back.

Acting on impulse more than anything else, I changed my direction sharply and dove down. Still that cursed firing followed—gracious, how close that Hun was! I expected every minute to feel the rip of a bullet in my back, until suddenly the truth broke upon me. Shannon had seen things as I had begun to think I did, and had opened fire on the mysterious shadows. Shutting off the motor I put the plane in a gentle glide, then turned towards Shannon. He had stopped firing and was huddled up in the seat. My own teeth were chattering so that I could hardly talk, but I managed to shout at him:

"You blasted idiot, what the devil do you mean by firing off that gun?"

He muttered some incoherent reply and I saved him further explanation by opening up the motor and ascending again. I really had to sympathize with him, as I had been scared stiff myself. I told the story the next day at mess and spared neither Shannon nor myself. In

fact I considered that I was worse than he, as I was supposed to be an experienced air pilot, and had acted like a two-year-old.

A glance at my watch showed that it was nearly midnight, so I turned and headed for the aerodrome. I felt pretty groggy when I suddenly discovered that if my bearings were right the lights of the aerodrome should be in sight, but they weren't. All I could see below were about two tiny points of light, which might be anything at all. The truth forced itself upon me that I was lost. To make matters worse my gauge showed that I did not have much petrol left. I throttled the motor and warned Shannon of the predicament we were in. He had recovered his nerve and took the news calmly.

"Suppose it means a forced landing?" he said, and it certainly looked like it.

Now if there is anything more unpleasant than being four thousand feet up in the air around midnight over strange territory and forced to come down, I would like to know it. I pictured the beautiful crash we'd make, and how the chaps would remark how funny it was

that I should have lived through so many air-fights and finally been killed in a plain, every-day forced landing. I shook these morbid thoughts off and began to prepare to descend.

My corps signal lights, one green and one red, were lit, so that I knew if we were spotted by an anti-aircraft battery we would not be shot at as a Hun raider. With the motor throttled I dropped to two thousand feet, then let a parachute flare bomb go through the electric launching tube. It exploded and floated away below, with the magnesium attached to the parachute sending out a brilliant white light. This lasted over five minutes, giving me time to see that I was inland and over heavily wooded country.

I flew on a little farther, then dropped another parachute flare. This showed me a small farmhouse and several large fields which might be safe to land on. It was almost a case of have to land, as my petrol gauge registered "empty." Shutting off my motor I glided down to five hundred feet, then switched on the right wing-tip flare, which cast a brilliant light below, at

the same time looking over the left side of my fuselage.

The ground looked fair and, trusting to luck, I swooped down. Fortunately we landed fairly, although we almost crashed into a fence before we stopped.

I sent Shannon to wake someone up in the house which was near by, and proceeded to stop the motor, take out the switch, and cover the vital parts of the plane with the covers provided for the purpose. Then I removed the bombs and signal cartridges in order to take them with us. Shannon returned with a farmer, who hitched up his horse and wagon. After seeing that one of his help would stand on guard over the plane we let him drive us into the village. I discovered that we were thirty-six miles away from Southend, and after reporting by telephone to the O. C. we found beds in the village and turned in.

The next morning we returned to the machine with a supply of petrol, and after Shannon had turned the "prop" about thirty times (the motor was very cold), we finally got under way

and arrived back safely at our aerodrome, none the worse for the little adventure.

For a week after that Shannon and I patrolled our aerial beat regularly between 10 and midnight. Most of the time the stars were out and keeping our course was easy. Nary a sign of a Hun did we see, and it began to get monotonous. In the daytime there is generally some activity going on below which keeps us interested, but at night the darkness and the loneliness gets on one's nerves. It's the loneliness more than anything else that gets a man and makes him wish he were anywhere than on patrol.

One night I was dead tired, and after we had been "upstairs" a little over an hour I shut off the petrol and told Shannon to take charge of the bus. As soon as I felt him grasp the controls and open the throttle I slumped down in my seat and dropped quietly off to sleep. I make no excuse for what I did, as I realize that it was a serious thing to fall asleep while on guard. If it was bad for a private on sentry go below to do the same, how much worse

was it for an officer in the air. As the wheels bumped along the ground on the aerodrome I awoke and was so ashamed of myself that I made a vow never to do a thing like that again —and I never have.

Orders came out a few days later to equip every pilot and observer on coast patrol work with an automatic pistol of the finest and latest design. The day after I received mine our patrol hours were changed from 3.30 A.M. until 6.30—an extra hour of duty, too. I did not object to the change so much, as some part of the time flying would be by daylight.

The news of Deering's death reached me one afternoon. He had been brought down by an "Archie" while flying low on reconnaissance work over the German lines. I was the only one of the original three left from Class 9 that had been posted to Squadron 680 in France, and I wondered how long my good luck would last. The war in the air has taken a terrible toll among our younger generation. The work is very dangerous, yet of the kind that appeals to young high-spirited men such as those who are

now in the ranks of the Royal Flying Corps and the Aviation Section of the U. S. Signal Corps. It has not been England's policy to publish the deeds of her aviators; but when the reports are given to the public the nature of the deeds and the large number of boys from the United States who are cited for bravery will surprise the whole world.

Personally, I have seen within a week eleven mere boys wearing the coveted D. S. O. ribbon under the wings of the R. F. C., and every one of them is an "Ace" and has seen a great deal of air-fighting. Advancement, too, is rapid in the Corps. One young Canadian came over as an aviator Cadet; to-day (five months after he joined) he is a Captain, and is, I believe, slated to become a Major. His age? Just turned twenty-four. Another man enlisted as a private in the mechanical division of the R. F. C. rose to a Sergeant through his ability to understand machine guns, and one day after two observers had been killed a pilot took him up. He did such deadly execution with his machine gun that he was commissioned a Second Lieutenant

and detailed to a school for observers, where he learned the many other things a man must know in addition to shooting a machine gun. To-day he, too, is a Captain and has brought down nineteen Huns.

It was the second week in October that our O. C. was killed. The old boy used to like to keep his hand in at flying, and would often take up a plane for ten or fifteen minutes at a stretch. That morning a new plane had just arrived and the O. C. decided that he wanted to take an air test with it. The flying of a new plane is dangerous work sometimes, as there may be something wrong which has been overlooked in the hurry to turn out planes. This bus had been carefully examined and seemed trim and fit. The O. C. got off the ground well, as he was a beautiful though careful flyer, and climbed in slow, lazy spirals to about three thousand feet. It was when he started to come down that we sensed something was wrong. Twice he pulled the nose of the plane up and leveled off before turning down again. To me it seemed as if the gliding angle was not right

as he was gliding down, and just about at the one-thousand-foot level the plane got into a sideslip, from which it turned into a straight nose dive. Almost in the center of the field the plane crashed with a horrible sound. I helped to get the O. C. out, but the poor chap died as we carried him to the ambulance. G. H. Q. sent out a Major Malling to take the O. C.'s place, and I found him a pleasant fellow He was a Canadian, too, which made it even more agreeable.

CHAPTER XIV

MY LAST AIR BATTLE

Surprised on patrol by four raiders—Jamming of Vickers machine gun—Driven over the sea in effort to escape—Rudder controls shot away and engine put out of commission—Sensations on falling from 11,000 feet—Last minute attempt to break fall—Recovery on coastguards' patrol ship—Two broken ribs and nerves shattered—Kindness of sailors.

THERE is not a pilot in the Royal Flying Corps on active service who does not believe that eventually he is going to crash either by a bullet from a Hun plane or shrapnel shell from an anti-aircraft gun or a plain everyday garden smash-up in landing.

The very same week that our beloved O. C. died, and on a Sunday, too, I was shot down by Hun airmen. It happened while I was on patrol under peculiar circumstances. The week had

been quiet, no Huns appeared, and patrol work was nothing more nor less than a pleasant joy ride. Shannon, who had become an efficient night flyer and was doing patrol work in a small single-seat Spad fighter, came down that Sunday morning at 3.30, having been up since 1 A.M. I had been taking up another young pilot, breaking him in on the night work, and as Shannon's plane landed my two-seater was wheeled out. They say our destiny is worked out by a Higher Power, and if so I was ordained to be shot down and my passenger to escape. The motor of the two-seater absolutely refused to "rev" up to its minimum, and rather than waste time I decided to go up alone, using the plane Shannon had flown. The pilot who was supposed to go up with me was sent back to bed. He realized later how lucky he was.

While the Spad's petrol and oil tanks were being filled I examined the Vickers and Lewis guns. As is usual with night-flying Spads, the Vickers is stationary and fires through the propeller. The Lewis was mounted above my head and very handy to get at. The oil had congealed

in this gun and I had a new one hurriedly mounted in its place.

Receiving O. K. from the mechanics I signaled them to take hold of the "prop," and climbing into the small comfortable cockpit turned on the petrol. With the word "Contact" I threw in the switch and the motor awoke the silence with its low humming as it ran idly on closed throttle. It had been a fine night and was still pitch dark, although the sky was filled with stars which would make holding to my course very easy. A final glance around and I signaled to stand clear. The wind, what there was of it, was blowing across the hangars, and I had to tear down the field for position before I could start. The take-off was without incident, and I drummed up over the hangars and headed out to sea. Reaching five thousand feet I swung up the coast on the first leg of my aerial beat. Seven o'clock was the time I was due back, so I resigned myself to the inevitable, held my joy stick with one hand and slapped the other up and down in the air. It was bitter cold, the sort of cold that cuts you like a knife,

and my hands and feet felt it first. Only once did I hear anything unusual and that was a little after 5 o'clock, when I could have sworn I heard the low humming of another plane. Almost as soon as I heard it the sound died away, and I put it down to imagination or overwrought nerves. No matter how much night flying a pilot does he never can get used to the awful loneliness and the Stygian darkness.

A little after 6 faint signs of dawn began to appear, and I want to say that there is no more wonderful or beautiful sight anywhere than the breaking of day over the sea, viewed from an aeroplane five thousand feet in the air. One by one the stars, true friends and guides of mine, faded away as if snuffed out by a giant hand. By this time I was almost frozen and was flying with my joy stick between my knees, trying to bang some life into my hands. I guess I must have been concentrating my attention on the problem of my cold hands, for suddenly I heard a sound that made my heart stand still—the "rat-tat" of a machine gun. You can never mistake that noise, for there is no other like

it in the world. My startled glance showed me that I had been surprised by four Hun raiders, all Gothas, each with its regular crew of three men aboard. Evidently they had been flying at fifteen thousand feet, and seeing me below apparently oblivious of them, they had decided to swoop down and pay their respects to me in the shape of steel bullets made in Germany.

For an instant, as the truth flashed upon me that I had only one chance in a thousand of getting away, I knew what sickening fear was. Then that instinct of self-preservation latent in all of us awoke and I went into action. All the Huns were above me, swooping down. Already one was within range and it was he who had opened fire. Even as I sighted my Lewis and pressed the trigger which released the hail of steel, I was wondering how my brother would receive the news of my death. I could see him opening the fateful telegram, then my imagination ceased.

The sun was just rising and I remember looking at it for a second and bidding it good-by.

I missed the oncoming Hun with my first burst and decided to maneuver so as to use my Vickers. Obedient to my control, down rushed my plane in a steep nose dive, motor roaring full blast. For all I knew the plane might never come out of it and would continue down into the sea, which seemed to wait hungrily for me to drop into it. Fortunately I managed to level off without breaking the back of the fuselage, and turning sharply ascended with the nose of the plane on a bee-line with one of the Huns.

The "snickering" of my Vickers was sweet music to me, as I aimed in front of the oncoming plane. He nose dived sharply but I anticipated him, and as he swooped down lowered the nose of my plane so that a full blast from my gun caught him in a vital spot.

"One gone," I shouted and went quickly into a stall, avoiding by this trick the cross-fire of two of the other Huns. The fourth was my Nemesis, however. He came up on my tail and shot my rudder and part of one wing away. Then my Vickers jammed as I was getting a

good line on one of the other planes. To have a machine gun "jam" in the middle of a fight is bad enough, but to feel your plane wabble and swerve is even worse. Combine the two and the situation becomes serious.

My bus was not entirely out of control, as I could still operate the elevators and ailerons, which seemingly by a miracle had escaped being hit, and the motor was O. K. I tried maneuvering again, but the plane was sluggish and without the rudder I could do practically nothing but fly straight or up and down. One of the huge Gothas came in range of my guns, however, and I shot off one of his wing-tips which fell clear, carrying with it an aileron. This put it temporarily out of the fight and I had really only two to combat. Then came the crisis. The Huns' cross-fire caught my motor, splintered the propeller and punctured cylinders and petrol tank. There was a horrible crashing sound from the wounded motor which stopped suddenly, leaving me helpless in the air. Instinctively I pulled off the ignition switch in an effort to keep the plane from catching fire.

The machine began dropping swiftly to the sea, ten thousand feet below. Somehow I knew that my only hope was to put the nose down and thus keep my flying speed, which would insure the plane remaining on an even keel. With the motor silent, the only sound was the shriek of the wind through the bracing wires of my plane and the drumming of the Huns' motors above me. I knew I would not reach the sea alive, as both enemy planes were swooping down to finish the job they had started. A third plane was flying out to sea, left wing down like a wounded duck.

Boom! Boom! Boom! The sound of heavy guns below forced itself upon my senses, and I saw a destroyer of ours, firing upwards at the two Huns who were diving towards me. My petrol had dripped almost away, and I thank God that it did, for a burst of flame appeared as the small supply left in the tank exploded. Little tongues of flame fanned by the swift breeze caused by my downward rush curled over the cowl like fiery snakes.

I forgot all about the Huns in the face of this

new terror. If there is one thing an air pilot dreads it is fire. Louder and louder shrieked the wind through the wires and nearer and nearer came the sea, rushing up to meet me. I never lost consciousness during that awful drop through space. I died a thousand deaths in a few seconds. I had no time to pray, but held on to my joy stick as a drowning man clutches a straw. Then I heard a voice. It seemed to speak to me above the whistle of the wind. "Flatten out if you can. Flatten out." Almost unconsciously I pulled back the joy stick, unclasping my safety belt at the same time. The stout old Spad must have responded, for I suddenly felt an awful blow and then drifted into the land where one cannot hear machine guns, motors or any sound at all.

I came to myself on the deck of one of His Britannic Majesty's destroyers, lying in a cool, clean bed in a tiny cubbyhole of a cabin. My left side seemed on fire and I was strapped so that I could not move. Everything seemed vague and unreal, and my head rang and eyes

I never lost consciousness during that awful drop through space

ached. Then from a distance I heard a voice speak.

"How are you, old man?" it said, and a kindly-faced ship's surgeon knelt beside me.

I whispered hoarsely, "Where am I?"

"Safe, my boy," came his answer. "You had a miraculous escape, due entirely to the fact that the aeroplane landed flat on the water instead of nose first as we thought it would."

I lay quiet for some time after that, the motion of the destroyer as it rolled in the swells soothing rather than irritating me. My side ached terribly and my eyes were twitching and jumping so that I could not control them at all.

"I must be dying," I thought, and with this came memory of the loved ones at home. Then a sailor came in bringing me food and drink. I could not touch the food, but I drank every drop of what he had with him. He spoke to me and arranged my pillow more comfortably, moving gently as a girl.

I must have dozed for a little while, for when I awoke again there were three men in the cabin.

Someone was feeling my chest and as he touched my left side the agony became intense.

"Ribs gone and nerves shattered," said a voice.

"He got off lucky at that," someone else chimed in. Then I lost all interest in my surroundings. I suppose I fainted again.

If you have had nightmares you can perhaps imagine what I went through after that. It seemed that one Hun had a machine gun strapped to my side which he was taking a fiendish delight in shooting. Two other Huns were stationed at each ear, also grinding away at machine guns. I could not escape that devilish rat-tat-tat. I recovered consciousness with a start, and instead of the Huns waiting to shoot saw a Red Cross nurse standing beside my bed. Evidently the boat was at anchor, I thought, as there was no motion at all. Then I was lifted upon a stretcher, and I remember that every move gave me a twinge of pain in my side. Tenderly two sailors carried me on deck, from where in a few seconds I was moved to a waiting ambulance. I was barely conscious

as the ambulance got under way, and it was four days later that I came to understand where I was and what was going on around me.

I was in a small clean room, there was a vase filled with flowers on the white table, and a quiet little woman in a nurse's costume, who seemed almost too frail for the work, sat reading by the open window. That same nurse had four other patients in adjoining rooms to care for besides myself, and never once did I hear her murmur as one or the other called her to their bedside. Often I have seen her sink into the chair with a tired sigh only to get up again immediately as the call came.

I learned her sad story one afternoon when she had a chance to talk to me. Originally from Lancashire, she had emigrated with her parents to Canada, twenty years before, and in fact had been brought up in the great Canadian Northwest. When war broke out her father, who was a Major, came overseas with the first contingent. He was killed in the battle of Mons and her three brothers "joined up" to avenge the old chap's death. One brother died at

Neuve Chapelle, another at Salonika, and the third, a pilot in the R. N. A. S., had been killed that spring in a raid on Ostend.

"So you see," she said simply, "Mother died when I was a youngster, and as I am the only one left, I had to come over to do all I can for the boys who are giving their all in this great struggle against autocracy."

There are hundreds, yes, even thousands, of brave, patriotic women like her in the many military hospitals doing their bit for their country just as surely as if they had donned a uniform and gone over the top with the boys. Whenever I see a woman in the uniform of the Red Cross my hand instinctively goes to the salute. God bless them and give them strength to carry on their noble work.

I found that I was in the naval hospital at Sheerness—across the Thames from my old aerodrome at Southend. Once through the open window of my room I heard the drumming of a plane. The old familiar sound affected me strangely. It brought back that last air-fight and the fall to the sea. That night I hardly

slept at all, for again I heard the shriek of the wind through the planes, again I saw those tiny tongues of flame burning up the framework which was the only thing between myself and death. I lived that fall all over and over again, and through it all was the devilish rat-tat-tat of a thousand machine guns, each busy in bringing me down into the sea.

After a week, thanks to the care I received, I was able to sleep at night fairly comfortably. During the day I lay quiet in the darkened room. The shock had been a bad one and affected my whole nervous system, particularly my eyes. While in the hospital I made the acquaintance of a wounded Canadian named Young. He was wheeled into my room by an orderly one afternoon when I was feeling lonely, sick and discouraged. This chap had lost an arm, and was suffering from shell shock and exposure to gas. Through it all he was the most cheerful man it has ever been my good fortune to meet. We became quite chummy and from him I learned of the awful horrors that he had faced in the trenches.

"You know, pilot, old top," he would say, "I often used to envy the chaps up above us in the aeroplanes. They were fighting for life, it's true, but it was individual combat and the devil take the worst fighter. Out there in the front line trenches, standing knee-deep in water and Flanders mud, I seemed like a rat in a sewer, afraid to lift up my head for fear that Fritz would nip me for good."

"Tell me about your being 'done in,'" I asked, and it was some time before I could worm the story out of him. Huns are easy compared to a British soldier who has "got his." He will talk freely about the wounding and death of his mates, but when it comes to his own turn, never a word. I had to tell him my story before he would commence.

"It was on the Somme," he commenced, "and I was one of a party detailed to cross 'No Man's Land' and surprise Fritz. The night was ideal for a raid, black as ink and with not a star visible. Out we crawled ready for business. I had done it so often that it had no terrors for me. We worked our way on our bellies, and I

gave the neatest imitation of a snake you ever saw. Just as we arrived at the Huns' trenches, hell broke loose as star shells poured into the sky, making everything as bright as day. Out of their lines came the Boches, wave upon wave. We were right in the advance of a strong night attack. There was only one thing for our little party to do, and that was to get up and at 'em. I drove my bayonet into one big Fritz, and as I did so felt a rap and sudden burning in my arm. Then the heavens opened and I lost consciousness."

The patient nurse came in and interrupted the story, but stayed only long enough to give us some appetizing fruit.

Between bites at a huge apple Young continued: "I awoke and at first did not realize where I was. Then a weight across my body attracted my attention and I looked into the staring black eyes of a dead Boche. My left arm was useless and I could feel the blood trickling down my hand. I don't know how I managed it, but after what seemed hours of agony I finally wormed myself free and started

to get my bearings. I was evidently in a shell crater, and through the mist which hung heavily all around could dimly make out the entanglements of the Hun trench in front of me. Firing was desultory and I knew I was out in 'No Man's Land.' Then shells began to drop around me, and as I was weak from loss of blood I waited for the one that would end my suffering. When it came, I felt a terrible blow and knew nothing more until I was at the base hospital. From there I was sent to the coast and finally arrived here."

The amazing spirit of the man showed itself when he cursed the bullet that caused the loss of his arm, and regretted that he could not go back for just once more crack at the Hun.

CHAPTER XV

BACK TO NEW YORK

Removal to hospital—Living the fall over again—The nerve-racking rat-tat of the machine guns—Quick recovery—Kindness of people when I was convalescent—Motor trips and entertainments for wounded—Receive discharge and cable home—Last train ride in England—The best sight in the world—New York Harbor.

THE hospital at Sheerness was a very comfortable place and I was rather sorry to leave it. I was transferred after three weeks to a convalescent home for wounded officers of all services at Westcliffe-on-Sea. The trip from one hospital to the other was uneventful and I received an agreeable surprise when I saw the magnificent mansion in which I was to be nursed back to health. The house, which stood in large grounds, had formerly been the ancestral home of some Englishman of title and its turning

into a hospital had not spoiled its beauty at all.

Here, under careful attention and the influence of perfect quiet, I rapidly began to get well. The broken ribs healed quickly, but my nerves were jumpy and did not seem to improve. Several other Royal Flying Corps chaps were there, also two naval pilots and about thirty infantry officers. Two of us were allotted to a room and I had the pleasure of having Sous Lieutenant Rolland Duprez, of the famous French Escadrille Number 3, as my roommate. He had been loaned by his government to ours, so that he could assist in repelling some of the Hun raids on our coast. On one of these raids, outnumbered and outfought, he was sent crashing to earth in his plane and only escaped with his life by a miracle.

Duprez's squadron, Number 3, is world famous. Nicknamed by the French "the Cigognes," it has had as its members some of France's best "Aces," the leader of course being Guynemer, with a record of fifty-three German planes shot down. Another famous flyer of

the same squadron was Pere Dormer, who, with a record of twenty-three Germans, is reported missing.

One day when I had been wheeled in from a tour of the grounds I found Duprez leaning on his crutches and gazing steadily out of the window.

"What's the matter, old man?" I asked, and I must have looked my astonishment at seeing the gay Duprez so silent, for he hastened to explain.

"It has come, Monsieur, my orders. They have posted me to a school of instruction and refused to let me go back on active service. Come and look."

I accepted the paper he handed to me, and saw that in addition to being retired from active service the lucky fellow had been cited for the Croix de Guerre. There were actually tears in his eyes as I handed the order back to him.

"But the Croix? Are you not pleased?" I asked.

"What do I care for the Croix?"

"Well, what do you want?" I queried.

"Want, Monsieur?" he added. "I want another chance to get back at the Boches. I want to feel again the thrill of seeing one crashing down to earth. I want to be back with my brother air pilots fighting joyously for France."

This is only one of several cases that came to my attention. Every wounded French airman that I met said the same thing, and anxiously waited for the day when he could return again to the front. Their spirit is wonderful and they explain it with a shrug of their shoulders by four words, "It is for France."

Duprez and I became fast friends and I learned that he had a wife and two children awaiting his return to his beloved France. It was at his suggestion that I did not write my brother about my fall.

"He would worry," he said. "Far better let him think you are still on patrol and well."

So my letters were full of patrol flight and gossip of the war and aerodrome.

The same care that was given me at the Sherness hospital was also bestowed on me at Westcliffe. Nurses and orderlies were ready

at the beck and call of any of us, and whenever possible we generally got what we wanted. Three times a week the women living in the vicinity used to drive up in their luxurious cars, bringing fruits, flowers and comforts for the convalescent men. Those who were well enough were taken out for motor rides, and in every way life was made enjoyable and comfortable for us all. The spirit of self-sacrifice seemed uppermost in these devoted women. Nearly all had loved ones serving with the colors, and rather than sit home in idleness they decided to serve, too, but their task was the humane one of making the lives of wounded soldiers as happy as they possibly could. The most welcome gift of all that I received was a box of one hundred cigarettes, and to me they were worth their weight in gold. To those fathers and mothers who have boys overseas I say, Don't forget your lads' smokes. Often that little roll of paper and tobacco has proven a life saver to some chap who has been without smokes for days and is starving for tobacco. In my own case, as I lay racked with pain in the first

days at Sheerness hospital, I would have given everything I possessed for a cigarette, and when I finally did get one, the enjoyment of those first few puffs will never be forgotten.

The first week in December, and a few days after Duprez had left for France, I was pronounced well enough to leave the Home and received orders to report at the Royal Flying Corps Headquarters in London. Having still to walk with a cane or rather a "prop" stick, I was driven into London by motor. I had to wait quite a while before I saw the C. O. (Commanding Officer), and as I sat in the anteroom began to wonder where I was to be posted. Somehow the thought of flying again made me uneasy and I realized that my confidence and nerve had gone. When I was finally paraded before the C. O., my feelings may well be imagined.

The chief and several staff officers were in the room as I entered.

"You wanted to see me, sir?" I began.

"Yes," was the reply. "We want you to be examined by the M. O. [Medical Officer]."

I followed the M. O. into another room and anxiously awaited his verdict. He went over me thoroughly but made no comment as to whether I was fit or not. Back before the C. O. again, I watched with interest the whispered discussion between the M. O. and him. It terminated only when the C. O. came over and placed his hand on my shoulder. I won't set down what he said, but the substance of it was that my flying days were over and he had decided that I was to return home. At first I could not realize my good fortune, but the sight of the honorable discharge he handed me, together with an order for a passage back to New York, convinced me that I really would soon be homeward bound.

Leaving Headquarters my first stop was at a cable office. The writing of that cable gave me more pleasure than anything else I had done during the entire year. In imagination, I could see it delivered—see the anxious look as my brother tore it open, expecting bad news, then the smile of happiness as he read the welcome words, "Am coming home."

My second stop was at the Paymaster's office, where I drew my back pay, then on again to the steamship office. I found that there was a steamer scheduled to leave Plymouth for New York late the following afternoon, and I booked passage on her.

I spent my last evening in London in my room at the hotel. There were two reasons for this. One was that I had sent my only uniform out to be cleaned and pressed, and walking around in B. V. D.'s being not considered exactly proper, the sanctuary of the room was necessary. Besides, I was far from well and the excitement had brought on another attack of nerves. That night, December 5th, I slept very little. It seemed hardly possible that I was discharged and on the morrow would be bound for little old New York. My eight months' service in the Royal Flying Corps had been filled with excitement almost from the first day of my enlistment. I remembered the time before I entered the Aviation Service when, as one of the thousands of workers in the big city, I used to walk up Broadway from the Hudson

Tube station at Thirty-fourth Street to my office uptown. I remembered also being one of the many who stared open-mouthed at an aeroplane high above the city and wondering what the sensations of the aviator might be. Believe me, I know now. I felt rather sad as I thought of the sterling fellows who had gone overseas with me and of the many who would not return. A lump rose in my throat as I pictured those waiting at home for news of their lad, who perhaps at that very moment was away up in the sky on his lonely night patrol.

In the morning, just before I left for the railroad station a bundle of letters came over from the R. F. C. Headquarters. Among them was one from my brother Frank stating that he had obtained his transfer from the Royal Flying Corps into the Aviation Section of the U. S. Signal Corps and was at the time of writing stationed as Flying Instructor at one of the aviation fields in Texas. I was glad that my "kid" brother, as I always called him, was not coming over just yet; and even more glad that he was doing a big share in preparing Ameri-

ca's Army of the Air, to which we all look for victory and peace.

Arriving at the Great Western Railway station at Paddington, I found the old terminus alive with signs of war. On one track stood a train of mud-soaked, cheering "Tommies," back from the trenches on leave; on another a train-load of heroes, returned now for good, their usefulness in the army over. Still another track showed a train pulling in with several hundred able young women munition workers on a holiday excursion at the expense of the Government. Nowhere were there signs of depression. On the contrary, everyone was cheerful, even to a "Tommy" minus a leg and an arm. The spirit and courage displayed by everyone was marvelous. A nation with such people cannot know defeat.

Cheers from another part of the huge terminus attracted my attention, and still having a little time to spare I went over to have a look. It was a regiment of "Sammies," and I joined in the cheering. Our boys looked fine, and as they swung along in fours I could almost imag-

ine I was back again on Fifth Avenue, watching a parade. The last of them passed all too soon and I hunted up my train. The ride to Plymouth was uninteresting, and one old lady worried me by persistently asking questions concerning aeroplanes.

"My son's training to be an aviator," she said, "and I'm so afraid he will have a bad fall. He always was a reckless boy."

I assured her that he would no doubt be all right, and she was silent for a while; then—

"That thing you call a propeller," she queried. "I suppose it is used to create a wind so that your motor won't get cold?"

I launched into a lecture on the whys and wherefores of an aeroplane propeller, and the little old lady showed her appreciation by dropping off to sleep.

Arriving at Plymouth, though still in my uniform, my credentials and discharge were gone over carefully. The British Government takes no chance of spies leaving England in Allied uniform and the examination of all passengers leaves nothing to be desired. Once on board I

found that I had as a fellow passenger an American Major who had been studying the methods of teaching aviation in England and France. We were held at Plymouth over two days and not allowed to leave the ship. The Major and I became quite chummy and he told me from figures he had obtained just what the percentage of crashes and casualties had been on both sides.

"My figures are only up to October 1, 1917," he said, "but Germany alone had sixty-four Aces who had vanquished nine hundred and eighty-five Allied aircraft. Of this number of Aces, thirty-eight had been killed or captured. France, with fifty-seven Aces, had brought down five hundred and forty-nine German aeroplanes, and only fifteen of their Aces are captured or dead."

"How about the Royal Flying Corps?" I interrupted.

"That I cannot tell you," was the answer. "You see, England does not publish the list of her Aces and enemy planes downed, but you can see, by computing the total number on both

sides, that Germany has more than held her own against the combined strength of the Allied air-fighters during these three years, by almost one hundred victories. I don't doubt, though, that the unknown figures of the missing British scores would equal this German superiority."

"You know that the German scores are computed unfairly," I told him.

"Yes, I believe they are; and when I was in France, I found that the French accused the German officials of deliberately lying in order to swell the high records of their best flyers; and I believe that their accusation is true."

In the early morning of the third day our ship got under way. There were two other liners besides ours, all under one convoy. Submarines held no terrors for me after what I had been through, but just as a measure of precaution I wore a life-belt until we were well out of the danger zone.

As was always the way, I suffered from a bad attack of seasickness and did not recover from it until we had been four days at sea. There was a mixed crowd on board, several

nurses returning from active service, and quite a few French officers coming over to instruct our boys in the art of trimming the Boches. The voyage seemed endless, and the night before we were to dock found me more excited than an emigrant on the way to the land of his dreams.

The morning broke clear and cold and I was one of the first on deck watching for a sight of the good old U. S. A. The Long Island shore was the first to come into view, then old Sandy Hook with its twin Highland lights. The sight of the long familiar landmarks brought tears into my eyes. Years before under those same twin lights, Mother, Dad, Frank and I spent several summer vacations, the last being in September, 1914, after war had started. I remembered Dad with his marine glasses sweeping the seas for a glimpse of the British cruiser said to be lurking off the Hook, outside the three-mile limit.

We passed a transport loaded with soldiers, at anchor inside the Hook, and the sight of the boys and Old Glory at the vessel's stern brought

my hand to salute. In the old days the Statue of Liberty had been a familiar sight to me as I passed it twice a day on the Sandy Hook line steamers commuting from the Highlands, but that December morning as we slowly passed the huge statue it seemed a living symbol of Liberty enlightening the World. It seemed to welcome me home, back to the land of Freedom and Liberty.

Seeing again the skyline of New York City made me forget war and scan eagerly for the place where our ship was to dock. After what seemed hours the panting, puffing tugs swung the vessel into its berth.

My mascot, my mother's ring, lies in a drawer upstairs with my uniform and some relics which I brought back with me. Included with these things is a menu card of the Class Nine banquet in Toronto. Thirty-one of the names on that card are marked with a cross—they are the gallant comrades who have given their lives for the cause. Twenty-six of the thirty-one were American born, and not one of them failed to fight in the manner for which our forefathers

were famous. In making the supreme sacrifice they have carried out the glorious traditions of the United States. May their deaths inspire other young Americans, who are fighting under the Stars and Stripes, to be as brave and true as they were.

The possibility of my ever piloting an aeroplane again is remote. My fighting days in the air are over and but a memory. I must sit back and watch other lads going over to give battle to the Hun, probably above the same spots where the pilots of my squadron fought. The result in the long run will be victory for our boys and a triumphant return. May that day come quickly and with its coming mark the end of war for all time.