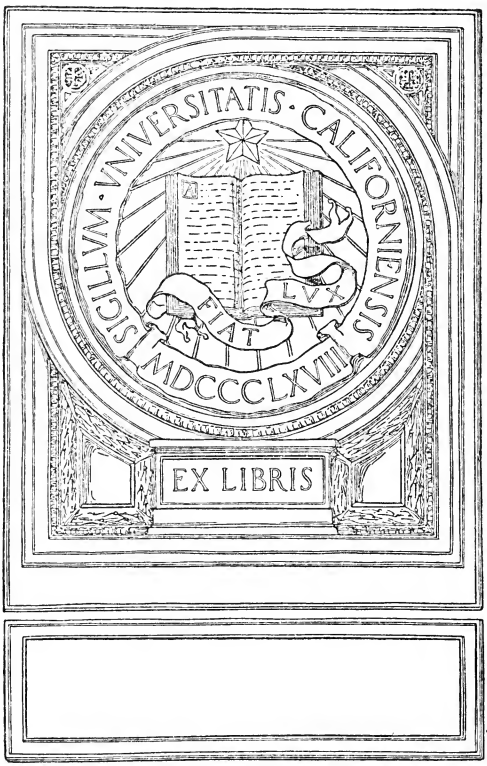
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THE ROMANCE OF AIR-FIGHTING

BY

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THE ROMANCE OF AIR-FIGHTING

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Now that thousands of Americans have enlisted in the Flying Corps, and other thousands are debating in their minds whether or not to follow their example, a few facts concerning the work of British flying men may prove of special interest. When the War began, flying was a side-line; with all its fascination, it appeared to most people to be of minor importance, compared with the traditional tasks of strategy and the problems involved in the employment of vast bodies of men. Is there anybody alive who still holds that view? "Minor importance," and the United States Government building 22,000 aeroplanes and arranging to spend on aviation the enormous sum of between six hundred and seven hundred million dollars!

What is the truth of the matter? The flying men will win the War. Victory depends,

of course, upon a large number of factors—upon the plans of generals, upon the supply of munitions, upon the use of marvellous inventions (the "tanks," for example), upon finance, food, domestic economy. But the historians of the Great War may conceivably tell us that the final rout of the Central Empires was brought about when ten thousand American airmen and ten thousand American aeroplanes arrived in Europe to destroy the enemy communications and cut off the German trench-dwellers from all their sources of supply. Is this possible? It is assuredly not impossible, and that is why the time has now come when American citizens are realising that fighting the Prussians in the air is one of the noblest enterprises permitted to the youth of the present day.

THE PILOT'S TRAINING

There are plenty of handbooks on the subject of practical flying, and no need exists to devote any part of this paper to technicalities. The novice, when he reaches the Flying School, will be surprised to discover what a tremendous

array of hints and instructions are given him, but he will be more surprised when he finds how easily they can be understood and remembered, and how simple is the task of mere flying. Later on, when he comes to study the art of war flying, he will encounter something different—something that really tests his qualifications and decides whether he is worthy to mix with the world's supermen.

The candidate for the post of fighting airman may be as young as eighteen or nineteen. He should not be much more than thirty-two, the age at which the English football player finds himself knocked out of the selected teams for "Rugger" and "Socker." It is true that S. F. Cody flew magnificently at forty-eight; but, when there is all America to choose from, the authorities are going to pick out men younger than that, and only men really in the prime of life; anyone tending to come into the category of the "aged" is likely to be rejected.

As has already been indicated, the first stages of tuition are simple. The pupil goes in the morning to the sheds and arrays himself in

helmet, overcoat, leather jacket, leather waistcoat, etc., adding gloves and goggles and muffler—protective devices against the cold above. With his instructor, he mounts a machine equipped with controlling levers in duplicate, so that any blunder that he may be guilty of is immediately corrected by the instructor, the "dual control" enabling the latter to pounce at any moment. "Pounce" is, however, not the right word, for it is usually by the most delicate and almost imperceptible action that the machine is righted when trouble threatens. Awkward and dangerous as the aeroplane was in the early days, it now possesses a stability of its own so automatic that the machine seems to help the pupil more than puzzle him. When the instructor has taken his seat behind the pupil, a mechanic, with his hand on the propeller, gives instructions—"switch off," "suck in," intoned ritual somewhat akin to that familiar to the learner of motor-car driving. After the big swing of the propeller and a short run over the ground, the pupil has the wonderful sensation of finding himself many feet aloft, and climbing briskly into the upper regions. A first flight may last only ten minutes; the

height may be a few hundred feet. The pupil is taught how to work the controls, how to deal with deviations in the machine's course, how to depress the head of the machine for a descent, how to cut off the engine when the actual alighting is to take place, and how to come to a full stop when the machine is again running along the ground.

At each lesson something additional is explained—what to do if a strange noise from the engine indicates something wrong in that direction, how to deal with "bumps," as the air-waves caused by the sun's action are termed, how to choose the right spot of earth to alight upon. The beginner gets to know that he must never ascend without examining every strut and wire on his aeroplane, or without ascertaining that every working part is in order. Thus for the first few flights the programme only varies slightly, until the learner knows how to steer the machine himself, taking turns to the right and left, and, in course of time, being permitted to bring the machine to the ground. A few more days, and the eventful moment arrives when the teacher says cheerfully: "Now

you can just go up by yourself." However long a man lives, and whatever may be his adventures, his first "solo" flight will remain an exciting memory.

Then come the tests for the "ticket." The candidate must prove to the testing observers that he can cut figures of eight in the air, that he can land without bursting a wire, and that, generally speaking, he can handle his machine correctly. The "ticket," once obtained, proclaims to all and sundry the joyful intelligence that its holder is a certified aviator; in course of time the Press may begin to speak of him as "the intrepid bird-man." In England this acquirement leads to an appointment as probationary Second-Lieutenant, and one of the next tasks set is generally the flying of types of machines different from that to which the "ticket"-holder has hitherto been accustomed.

Three months or thereabouts must be allotted to the "advanced" course of training, and while that stage is being gone through, the candidate presents himself before the examiners to obtain his "wings," a further guarantee

of capability that may cause him to be sent across the Channel to join in the fight for the liberties of the world, or, perchance, he may be simply allotted the responsibility of assisting in the defence of the British Isles against the raiding aircraft of the enemy.

WAR FLYING

There are censorship limits to a discussion of the aviator's daily life in the war zone, but some account of his work is permissible. In preparation for military or naval duties, the certified pilot has, first of all, to attend a new course of lectures. Some of them will "bore him stiff," but most of them may even enchant him by virtue of their direct relationship to his coming work. Dull theory is swallowed up in the practical details of many branches of science. The airman must indeed be scientist as well as pilot. If his work is to be merely the steering of the machine, with a comrade on board to do the scouting or fighting, the subjects that he must study will include maps, compasses, and meteorological conditions. To a mastery of the technicalities of his machine

he will have to add a knowledge of clouds and rain, of line-squalls and electrical disturbances in the air. He must know how, when a gale is blowing, to climb out of its delaying power. He may have to encounter sea-fogs or the smoky haze that hangs over a "black country."

The complete air-warrior must learn another dozen sciences. The information that he seeks in scouting must be accurately collected and intelligently reported; it is thus essential that he should understand, not only map-reading, but also photography and wireless telegraphy. It is the duty of the aerial photographer to provide his side with section pictures of the enemy's lines of communication, of the lay of the country miles and miles behind the enemy's front line, and of the zig-zag ramifications of the enemy trenches. The United States War Office did pioneer work in this department, and, more than five years ago, an American officer took excellent photographs from as high as 6,000 feet. Piecing the sections together, a commander has ready to hand a kind of ordnance survey map of the whole of the enemy's territory. Of course, the old-fashioned ordi-

nary camera is quite out of date; to-day, a special telephoto lens is held at the shoulder and aimed at the scenery as a man aims a gun at a bird, or, in other cases, a camera hangs below the 'plane and, automatically, by the mere pressure of a button, takes whatever landscape is being travelled over.

Wireless telegraphy, an immense aid to aerial reconnaissance, has been improved in countless ways since the period when the American, Lieutenant Beck, took up a transmitter and had the honour of being the first to manage to send a message to a receiving station two-and-a-half miles away. By wireless means the aviator now directs and corrects artillery fire, reports the disposition and movements of troops, and flashes back warnings of sudden emergencies. Men in the Royal Naval Air Service have heavier responsibilities of a long-distance nature; the wireless work that they carry out over extensive stretches of sea is invaluable to the Fleet, and to the Anti-Aircraft command on shore.

Let us now regard the aviator purely as a combatant. Bomb-dropping may seem a fairly

easy game to play. Will it surprise anyone to learn that it has to be elaborately studied as a separate art? The bomber who hits such objects as a railway train, a convoy of motor lorries, or a submarine on the surface of the water, is a genius. If he gets on his objective in a fair proportion of attempts, he is probably a man who has studied diligently the theory of falling bodies and the exact effect of his aeroplane's speed on the parabola described by his bomb in its descent. Should an aerial bombardment be undertaken by a squadron of machines, success or failure may depend entirely on special manœuvring, quite distinct from that involved in ordinary scouting. Finally, the air-fighter must be competent to use a light machine-gun rapidly and accurately, and know how to circle and dodge around cleverly in an engagement with a flying adversary so as to get him placed at an angle at which a "bead" can effectively be drawn upon him.

DUELLISTS OF THE AIR

Here we touch upon the one thing that distinguishes battles in the air from all the other

fighting in this War. It is the revival of the honourable courtesies of the duel—nay, more, the revival of the ancient chivalry of the Knights Templars. As he soars aloft, the airman has at the back of his mind the idea that he is out to meet a champion belonging to the same knightly order as himself, one possessing qualities resembling his own—trained skill, daring, the power of swift decision. In most of the land fighting the enemy's personality is indistinct, perhaps entirely invisible. The gunner who fires shells from afar off can hardly command our respect in any particular degree. The sniper, industrious as he may be, is no very heroic figure. The military chemist, projecting his gas waves, is a comic creature if he fail in his plan and a somewhat revolting sort of foe if he succeed. Even in the bayonet charge, where the combatants do at least face one another, the gallant deed is to a great extent merged in the rough-and-tumble of the crowd.

It is quite otherwise in the air. From their respective hangars Ivanhoe and Sir Brian de Bois-Guilbert sally forth to personal combat. Each has his machine-gun couched along the

upper ridge of the fuselage of his mount and pointed at his antagonist. Each knows that on the quick manœuvring for position and on the ingenious anticipation of the other's movements the issue of the fight mainly depends. Now consider the feelings of the victor, as he sees his adversary hurtling down to the ground. Did any tournament of old provide encounter more picturesque or more sublime?

Although the aviator detests the Government and system with whom he is at war, his own particular calling appears to him so noble that he can manage to retain some shreds of respect for the aerial foeman who comes out against him. When the youth Immelman, after a long series of triumphant duels, lay dead himself in the lists, the British honoured his memory by despatching one of their aeroplanes with a wreath to be dropped over the German trenches. Again, when two British airmen failed to return from an exploit on the Balkan front, the enemy hastened to dispel anxiety as to their fate. "Your brave men are safe," said a message that fell from an enemy machine.

Incidentally, it may be mentioned here that no honourable aviator attacks an aeroplane that is already on fire. Such a foe has enough trouble to deal with; he is regarded as out of the fight.

MISCELLANEOUS DUTIES

In addition to the big essential tasks, many minor duties fall to be performed by airmen on war service. Sometimes despatches have to be carried. Officers are very frequently taken from one point to another by air—far the quickest mode of transport. It is a common practice, moreover, to deliver aeroplanes on the Continent by flying them over the sea. A fine example of air work was the conveyance of food to Kut, when that place was besieged by the Turks; between April 11th and 29th, 1916, aircraft supplied the British garrison with 18,800 lbs. of provisions, together with various stores and even mill-stones.

In the Royal Naval Air Service, somewhat ticklish operations, not by any means to be classed among minor duties, have to be carried out at times in the forms of ascents from the

deck of a battleship, and, what is more arduous still, landings in that very limited space. The possibility of such landings was first demonstrated, it will be remembered, on the United States cruiser *Pennsylvania,* when it was a few miles off the coast of California. The late Eugene Ely, having started out from the shore on a Curtiss biplane, alighted on a platform on that vessel without the slightest mishap.

DEEDS OF HEROISM

Most wonderful aerial achievements have characterised this War day by day, but only a twentieth part of them are recorded. This is inevitable. In the first place, official etiquette forbids a description of the work of individuals, and the Royal Flying Corps and the Royal Naval Air Service object to the advertising of what they call "stunts." Fortunately for the British public which wants to hear about them, certain great deeds become known when King George confers honours upon those responsible for them.

Here are some examples picked out at random. The Distinguished Service Order was

conferred in April, 1917, on a Flight-Commander for conspicuous bravery in the field in attacking hostile aircraft. Since February he had taken part in fourteen combats; on one occasion, he had brought down a machine in flames; on another occasion, after he had fired thirty rounds, the German machine went down spinning and side-slipping completely out of control. Another Flight-Commander, attacked by two machines, had his collar-bone fractured. Suffering considerably, he nevertheless managed to steer his aeroplane home, saving his observer's life and his own by sheer determination and pluck. From the most remote parts of Europe come stories of similar fine exploits. Distinguished Service Crosses were, for instance, given to a Flight-Commander and a Sub-Lieutenant for gallantry in a seaplane reconnaissance of Damascus; they crossed two ranges of mountains, where the lowest ridges are 4,000 feet high, and returned with valuable information.

Now let us take an achievement that was considered great enough to earn a Victoria Cross. The best description of the event was

written by "T. N." in *Flying* (the English, not the American, journal).

Two single-seaters went out on a bombing expedition—where it doesn't much matter. When they were a long way from home, and a good stretch of sea between, No. 1 had engine trouble and had to land on a marshy plain. He did his best to start the "jigger," but it was no go, and, since the enemy—a ragged lot of ruffians—were making for him at the double, and while they were yet about a mile away, he pulled out his automatic pistol and started to blow up his bombs, and with them the machine. That in itself was a devilish plucky action, for pistol range is fairly short, and he might easily have made cat's-meat of himself in the process. Meanwhile, the enemy were rapidly advancing, when at the sixth shot the 'plane went up in a cloud of splinters, scrap-iron and petrol. Just then No. 2 alighted alongside him, picked him up and flew off amid a shower of bullets and a perfect babel of unintelligible and probably disgraceful language. It was No. 2 who got the V.C., and rightly so, because he ran a few separate and unpleasant risks. If he made a false landing, he might be made prisoner; if he deliberately smashed up his machine he might have been shot;

and to take a passenger on a single-seater was at least a dangerous proceeding. And, beyond all, he had a shrewd suspicion that he would make himself the set-piece of a Brock's benefit * if No. 1's machine went up when he was just over it.

One of the heroes of the War was Lieutenant Harold Rosher, who died in an aeroplane smash at the age of twenty-two. In a vivid letter to his father, he described his experiences in one of the historic raids on Zeebrugge. His account of the event shows that the airman's life may any day provide the most wonderful of all adventures. The letter was written from Dover in 1915; it is well worth quoting in full, but a summary must suffice here.

At 5.30 we were all up. I was one of the first off (in the dark). The weather was misty and cloudy, and very cold. Off Nieuport I was five miles out to sea, and four hundred feet up. Before I came abreast of it I saw flashes along the coast. A few seconds later, bang! bang! and the shrapnel burst a good deal short of me, but direction and height perfect. I turned out to sea and

* London fireworks display.

put another two miles between me and the coast. By now a regular cannonade was going on. All along the coast the guns were firing, nasty vicious flashes, and then a puff of smoke as the shrapnel burst. I steered a zig-zag course, and made steadily out to sea, climbing hard. The clouds now became very troublesome. Ostend was simply a mass of guns. After flying for three-quarters of an hour, I reached Zeebrugge. I had to come down to 5,500 feet because of the clouds. I streaked in through them, loosed my bombs, and then made off. I was hopelessly lost; I got clear, however, at 4,000 feet, heading straight out to sea and side-slipping, the earth appearing all sideways on. I then headed straight home and got back after one-and-a-half hours in the air.

In the Admiralty's official account of that raid, it is mentioned that "bombs were dropped on German mine-sweeping vessels at Zeebrugge, but the damage done is unknown." Nothing more!

These enterprises are not always successful, but they nearly always serve as material for alluring narratives. Here is the story, from the same pen, but much abbreviated, of a lively

exploit that had an "unsatisfactory ending." Harold Rosher writes:

Dinner was spoilt through a message from the Commander, which contained instructions for me to drop bombs on an airship shed at Gontrode, near Ghent. The moon rose soon after midnight, and at 1.30 a.m. I started off. When I arrived at the place there was a thick ground mist, and dawn was just breaking. I could not see the sheds at all, but two searchlights were going hard. I half circled round, when lo! and behold! I sighted a Zeppelin coming home over Zeebrugge. I turned off due east to avoid being seen, intending to wait until he came down and then catch him sitting. But my luck was out. One of the searchlights picked me up, and anti-aircraft guns immediately opened fire on me. Then a curious thing happened. The Zeppelin sighted me (I think the searchlights were signalling) and came for me. This was the tables turned with a vengeance, and the very last thing I ever dreamt of. It was a regular nightmare. I was only 6,000 feet up, and the Zepp., which was very fast, must have been 10,000. Without being able to get above it, I was, of course, helpless and entirely at the mercy of his maxim guns. I don't think I

have been so disconcerted for a long time. We had "some" race! He tried to cut me off from Holland, but I got across his bows. He was a huge big thing, most imposing, and turned rapidly with the greatest of ease. I hung around, north of Ghent, climbing hard, and reached 8,500 feet, but the Zepp. wasn't having any. He wasn't coming down while I was there, and I, on the other hand, couldn't get up to him, as he had risen to some fabulous height. So, after a bit, I pushed off home, feeling very disconcerted at such an unsatisfactory ending. What else could I do? I wasn't going back, on the chance of spotting the sheds, with anti-aircraft guns waiting for me below and a Zepp. ready to pounce on me from above. I disposed of my bombs in the sea, and got back after three hours in the air; eventually got to bed at something after 6 a.m. The Commander was kind enough to tell me I had done all that was possible.

THE FINEST AIR STORY OF THE WAR

In May, 1917, a correspondent of the London *Times* described the most remarkable air battle that the War has produced. It happened on a day of great heat, when the haze was

so thick that one could hardly see the ground from a height of 2,000 feet. At 5 p.m., five British aeroplanes were well over the enemy country, when they saw two enemy machines ahead, and tried to close with them. These two were decoys, bent on luring the British flotilla far from its base, and, as soon as they were chased, German air fleets came closing in in three formations of eight, eight, and nine machines, twenty-seven machines in all, counting the two decoys. The fight began at 11,000 feet, and afterwards ranged from 3,000 to 12,000 feet up and down the ladders of heaven. It lasted a full hour—an extraordinary time for five machines to "stick it out" against twenty-seven. In a few minutes, three of the German aeroplanes had gone down crashing or in flames. Then the British luck seemed to turn, and the engine of Lieutenant B. gave out. Another Lieutenant saw his crippled comrade slipping downwards and a German diving after him to finish him. Quick as a flash, he followed, and in another second the pursuing German turned clean over in the air and went down nose foremost. By a miracle, Lieutenant B.'s engine now caught its breath again, and he

climbed up 8,000 feet to rejoin his formation, just in time to see some more Germans fall. One of the British machines then began to drop, with flames bursting from its reserve petrol-tank, but, fortunately, it made a "topping" landing, as the men on the ground said. Will it be believed that, before this extraordinary battle had ended, four more Germans came utterly to grief? Altogether eight German machines were absolutely destroyed, and yet only one British 'plane had been burned, and the other four British, still lords of the air, came home with bullet-holes in their aeroplanes and dents on their spars, but otherwise none the worse for their fight with the twenty-seven.

A CHANCE FOR THE AMERICANS

Only part of the aviator's time has to be devoted to routine work and "stunts." He has his social life, and a merry time it is, with a full dose of the *joie de vivre*. "Bird-men" are the best company in the world; they are the cream of society, and yet modest; they love practical jokes and are always cheerful without being inane; they are well-informed, and do not in-

dulge in a pedantic display of their information.

One can well imagine that, from New York to San Francisco, men are wondering whether they happen to possess the qualifications that entitle them to become players in this great game. What are those qualifications? Reference has been made already to some of them, and a would-be aviator can ascertain the others by asking himself a few questions. He should say to himself, "What are my characteristics and aptitudes? Could I pass the usual medical test for the Army? Is my eyesight normal? Is my hearing normal, so that I can tell how an engine is running? Am I all right as regards heart and nervous system? Do I weigh under 14 stone? Are my lungs sound, so that I can stand sudden alterations in atmospheric pressure?

If anyone can answer those questions satisfactorily, he may straightway offer his services. Those who think that the catechism is at all severe may be reassured; it is not. Damaged goods are certainly not wanted in the Air Ser-

vices; but there are many successful flying men who do not fulfil all the conditions in the foregoing list. Shortsighted men are flying today, and even one-legged men. The physical strength needed for the mere steering of an aeroplane is little enough, and to fly a hundred miles calls for less effort and endurance than a march of ten miles.

As regards the risks attendant upon ordinary flying, it may be interesting to quote from an article written in hospital by a British Lieutenant (Royal Flying Corps), after an accident caused by too sudden a descent. "A crash," he writes, "can always be explained; I could explain mine. If the laws of flight are obeyed, if engines work, if stress and strain are well calculated—and, it must be added, if the human element is dependable—then flying is as safe as lying in a hammock." Apart from war work, the proportion of accidents to thousands of miles flown has been enormously reduced. We cannot make aviation as safe as golf or fishing, but it is certainly as safe as many of the pastimes of the sportsman. For instance, from the standpoint of controllability,

the aeroplane is superior to the sailing boat or the balloon, and it beats the horse hollow.

The real questions that a man should put to himself are: "Have I courage and nerve? Have I imagination and enterprise? Have I a desire to uphold my country's reputation?" Someone has said that the finest sport in the world is galloping down lions. The definition must be revised. The finest sport to-day is to ascend to the upper atmosphere and assist there in the supreme task of defeating the world's tyrants.