

(March 22, 1920.)

## Commercial Aviation

By MR. FREDERICK HANDLEY PAGE.\*

*Mr. Chairman and Gentlemen,*—The warmth of your welcome is so great that I can hardly credit that this is a dry country. I have often wondered what it felt like to be a bear or some other animal in a zoological garden, feeding, and being watched by a whole lot of people. To-day, gentlemen, for the first time in my life I have had an insight into that situation.

It is a great pleasure for me to be here in the city of Toronto to-day, especially as I am surrounded by so many good British friends. Here on my right I have my worthy friend Doctor, Professor, I am not sure which, Tommy Church. You must remember, gentlemen, that I am a stranger in Toronto; and in this great democratic Dominion if I sometimes do not get the titles quite right it is only because of my ignorance, because of the short time I have been able to spend here. Then there are others here, too, whom I have had the pleasure of meeting on the other side. Your worthy chairman has already referred to Colonel Bishop and Colonel Barker. It was my great pleasure on the other side to meet for the first time Colonel Barker before he made his remarkable expedition across the lines bringing back glory to me and to every one of us who are part of the British Empire.

Well, now, I have been asked to say a few words on commercial aviation. When I was over in the United States, I was told that there would be a great traffic between the United States and Canada; and I was told that the passengers would mostly be Scotchmen with glass eyes. Well, gentlemen, be that as it may; I think, quite apart from that, Canada makes an especial appeal to every one who is interested in commercial aviation. You have big distances here, distances which are enormous compared with that little country from which I come. You cannot fly very far in Great Britain before you are in serious danger of falling over the edge; and here, where

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\*Mr. Handley Page is the head of the great aircraft firm which bears his name. The bombing machines turned out by him during the War played an important part in reducing the Germans to submission.

you have widely separated towns, this new and latest means of transportation affords great possibilities to this new and beautiful continent.

In Europe distances are small before we reach another country; and the complications of continued Customs examinations, and the difficulty with passports—to say nothing of Bolshevik enterprise—make the development of air enterprises on the European continent very difficult. Then, too, there is the difficulty in Europe of the exchange. (This sounds like addressing a meeting of shareholders.) I understand that some countries not very far from this which won the war are now very earnestly arranging for other countries to pay for it. But, gentlemen, if you have bother with the exchange here, the situation is twenty times worse over in England—and Europe. I can illustrate that by supposing that we have an air line running between London and Berlin through Holland. Assuming that the pound is worth twenty shillings of normal currency in England, it is only worth fifteen shillings in Amsterdam, but it is worth about fifteen to twenty pounds in Germany. A service operating between those points has to employ men in each country at those varying rates of exchange and varying costs of living, and has to do with the difficult problem of paying pilots to fly in all three countries.

An English pilot paid at English rates would be a millionaire in Germany; and the German, paid at German rates, would be a pauper in England. That is a difficulty that we have to face in Europe. Of course, that is quite right. We won the war and they have got to pay for it. I don't think anyone will object. But it makes it very difficult when you are trying to arrange a service along such lines. You can realize how fortunate Canada is and how well placed for air development when you think of the great distances that can be flown without those troubles. I would remind you, too, that the way to China and Japan lies through the North-West of Canada through the Aleutian Islands.

Canada, too, has vast territories of undeveloped land which contain enormous undeveloped mineral resources. I would like to illustrate the use of the aeroplane for the development of your mining regions, by reading to you a letter written by a prospector who spent many years in New Ontario. There are a thousand and one other ways in which the aeroplane will help to make Canadian development. Lumber companies can patrol and survey the whole of their limits and see exactly where the timber lies and the most economical way of getting

it out; aircraft constantly patrolling those timber limits will detect at once the commencement of forest fires, be able to carry a fire fighting gang to the seat of operations and quench the fire long before it has had time to get a firm hold on the lumber. That has been most satisfactorily proven and great savings effected by the U.S. Government service in the State of Washington.

I am told that the loss to this country in forest fires runs into millions of dollars per annum, and a very small percentage of that amount invested in aircraft would be the best form of fire insurance that the country could possibly have.

Apart from the discovery of undeveloped resources, or from protection of known wealth, the aeroplane is the only means whereby a bird's-eye view can be taken and a photographic plan made of a developing township or a new site. When railways were originally made out in a country, surveys were made on foot and were necessarily limited in the extent of ground covered before a decision was reached as to the route to be followed. Very often the best country was missed. I had a very good illustration of that in discussing the survey of British Guiana with a deputation from that country which visited England. The Colony of British Guiana, situated in the Northeast corner of South America, is covered near the coast with vast forests and intersected with great rivers. As one proceeds inland, the forests are broken up by great prairie areas called "Savannahs," which become more frequent as one proceeds inland until, right in the interior of the country, there is one big tableland entirely free from forests. All that interior prairie land is of great agricultural value. To reach it roads have had to be cut through the forest at enormous expense. If, instead of going the straight route, there had been cut linking up the various "Savannahs" dotted through the forests, great sums could be saved; for the road across the "Savannahs" required no clearing.

Here, too, the people have played a very great part in obtaining air supremacy for the Empire; no country for its population provided so many pilots in the Air Forces. It is a record of which Canada might well be proud, that out of a population of eight millions no less than eleven thousand pilots, or one in eight hundred of the population took part in the great war in the air.

For me, Toronto has a particularly warm spot, as one of my brothers came here from Vancouver to be trained by the Curtiss Company and took his pilot's certificate at the school

here. He, like many others from this country, gave his life on the other side in the Great Cause. I had another relative, a cousin, who came in 1914 from Fort Ste. Anne, joined the first Canadian contingent; and, joining the Flying Corps, was shot down and killed by Immelman early in 1915.

In speaking to a Canadian audience one is, therefore, speaking to those who already know a great deal of aviation, appreciate its possibilities, and are willing to act as soon as they see the lines on which to move.

In England we have already made a move in commercial aviation; and have lines running between London and Paris, and London and Brussels. That has been possible because, not only were machines available there which could be readily converted for commercial work, but also the government had built many aerodromes, and has an organized meteorological service, which gave the necessary forecasts enabling the pilot to see exactly the weather he would have to encounter. Near London two aerodromes—one, our own, at Cricklewood; and the other at Hounslow—are available for entering or leaving from or to the continent; and customs and wireless facilities are installed.

There is a large chart of the map of Europe with small hooks opposite the big towns between which air services are operated. On those hooks are hung numbers representing the kind of weather that is prevailing at the place indicated. The weather is divided into sections; such as visibility, rain, clouds, etc.; and there are five grades, No. 1 being the very best weather, and No. 5 being the very worst for flying, with intermediate gradations, two, three, and four. Those charts are developed from wireless information sent every hour along the route, and flying is not attempted if five appears at the greater portion of the route.

Our greatest enemy is fog; as, unless there is good visibility, you cannot see where to land. With a good wireless service on the ground and in the machine, a pilot can be warned if fog has come over an aerodrome; and he can then fly on to an aerodrome free from it and have his passengers and express goods transferred into the fog area by automobile.

It is necessary, however, before a service is started which is going to run to schedule, that the full ground organization and weather forecasting should be installed. One would not think of starting a haulage or cartage system until you had roads and until you had repair stations and gasoline supplies prevailing. In the same way, it is of no use starting an aeroplane

service until there are landing fields along the routes and until there are wireless communications and meteorological services. If that is not done, the aeroplanes will soon be found lying about the country providing a very remunerative source of income to farmers showing them at ten cents a head to an inquiring population. The result, however, to the aeroplane owner, is not what he expected. Yet it is only what he would get if he attempted to run motor trucks before there were roads, ending up by leaving his equipment bogged beyond recovery.

It is essential, therefore, that every enterprising municipality should take a hand in this great air development by providing flying fields close to the cities, and attracting to them lines of aircraft, and so obtaining all the benefits of improved communications.

With the service that we have inaugurated from London to the Continent, up to the beginning of this month we had flown 83,000 miles, carried 4,200 passengers and 49,000 pounds of freight, without an accident of any kind to the passengers or loss of a single pound of freight.

With regard to the actual flying work, Canada is well ahead in formulating rules governing the use of aircraft along the same lines as those which have proved so successful during the past year in the Old Country. It remains only to develop the actual use of machines. Canada has already adopted federal legislation, I understand, to govern the navigation of aircraft and the licensing of them, with certificates of fitness, and so on. Private enterprise should develop the machines, in which there are changes from day to day owing to the great technical improvements that are being constantly made. It is impossible for any state or municipal body to take advantage of improvements as quickly as they are brought out and provide the funds and the services as well. Such work as is required to be done by the aeroplanes for public services should be contracted for as a private enterprise. Private enterprise, having to pay its way, will see that the equipment is the best possible to give a return on its money.

That large body of private enterprise, called into being to serve commercial needs of the country, can be utilized to form a very good defence force for the Empire's need. Whenever the call should come for aircraft for military purposes, the great body of commercial aviators, trained in flying under the strenuous conditions of peace time competition, and great numbers of machines used for air services, should be available

at once for the country's service. All those machines should be of British design and development, but suited to the needs of this country; so that a peace time air force, fostered on those lines, is organized and standardized on details which fit in with other sections of Imperial air strategy.

It is probable that, developing along those lines, Canada will play a very large part in the development of the world's commercial aviation, and become the aerial highway between Europe on the East and Asia on the West.

It has the spruce, out of which nearly every aeroplane is made; and, as well as that, rare and important metals out of which the high grade aeroplane components are constructed. It has the distances to be covered; the people who have had experience in air work; and, most important of all, it has that great energy and enterprise which alone can insure success, and which will carry forward the great Canadian nation to victory as great in peace as she has accomplished in the war now happily ended.

I think that the attention of everyone in this great Dominion should be turned to the development of air routes, and the opening up of aerodromes for every great city; so that you will be able to develop commercial routes across the country, which is so magnificently suited to the development of a magnificent air-transportation system.

In Canada we are part of a great Empire of which we may all well be proud. In crossing the frontier from the States, the first thing I saw was the Canadian Customs; and the man had a crown in the middle of his cap; and, gentlemen, I think you will all agree with me that we are very proud of that crown, which in Canada has had distinguished representation at the hands of the Prince of Wales who recently visited here. In the midst of all the materialistic development in this country, and the great commercialism that is going forward, it is nice to feel that at the head of it all is something which is not materialistic, but has a certain romantic lustre about it. When we think of that, we think of One King, One Country, and One Flag. If we are going to develop aviation in this great Dominion we want to remember that the development should be along British lines, that we should as far as possible organize and standardize our units so that this great country will fit in as one part of the great Empire in its equipment; and should it be called on again, (I hope the day is far distant), to take part in another great war, its equipment and men will be all working along the lines of those of other great Dominions across the seas. Gentlemen, I thank you.