

## PRE-WAR CIVIL AVIATION AND THE DEFENCE PROGRAM

## PRE-WAR DEVELOPMENTS OF IMPORTANCE

**Flying Clubs and Municipal Airports.**—A flying-club movement was started in Canada in 1928, with the primary intention of maintaining public interest in flying and building up a reserve of pilots and mechanics against a possible emergency. Twenty-two clubs associated with the principal centres of population, have been carrying on since that time. Each club was, by agreement, required to maintain an airport of a given standard, and these airports provided nuclei around which aviation activities centred. In all, these clubs have turned out approximately 2,800 pilots since their inception. Private clubs and schools have also done a great deal of training work and in the ten years preceding the War 5,400 licences of all types have been issued to pilots and 1,300 to engineers. A considerable number of these pilots were absorbed into the R.A.F., and a certain number of licences were permitted to lapse each year, but, on the whole, a reserve was created that has proved of immense value.

Co-incident with the encouragement of flying clubs, those responsible for formulating civil aviation policy in Canada had the foresight to stimulate the building, by Government subsidy, of civil airports adjacent to urban municipalities in all parts of the country. Many of these civic airports were used by the flying clubs and later, they formed key points in the Trans-Canada Airway system and, through Government assistance, were brought up to the standard required for that system.

The dependence of every industry upon technological and scientific skill is nowhere better illustrated than in the case of aviation. It cannot stand by itself. The aeroplane manufacturer is dependent on the metallurgical industries for many special alloys; on the production in great quantity of special types and grades of wood; on the chemical industries for advanced types of fuels, lubricants and plastics; and on a multitude of engineering industries for instruments and electrical devices of great precision and complexity. The operation of aeroplanes under present-day conditions requires the services of a highly trained meteorological service; of radio and other aids to navigation, together with the technicians to operate them; of overhaul plants to maintain flying equipment; of special airport lighting and maintenance equipment; of chartographers and a host of other specialists, as well as pilots, engineers, dispatchers and the entire operating staff trained and equipped for the safe and rapid transport of passengers and mail by air. If there is a good ground-work laid in time of peace, the transition to a war footing is correspondingly easy. If not, long precious years have to be spent developing these things. The military Air Force is as much dependent on civil aviation in times of peace as the Navy is on the merchant marine.

Civil aviation in Canada has been responsible for laying a very considerable part of the foundation on which the present war effort is being built. Some of this, such as the training of pilots, mechanics and aeronautical engineers, is indirect in form. In other ways, such as the construction of first-class airports and the organization of a staff of specialists trained in airport construction and maintenance, the contribution is much more direct.

**Commercial Aviation in the North.**—The most important aspect of early civil flying in Canada was the development of flying in northern areas. In addition to training pilots and mechanics to meet the problems of flying peculiar to this climate, some very valuable work was done in developing new air routes and exploring new territory. The experimental work done on new types of floats and skis