
 THE OUTLOOK (CONTINUED)

who have hitherto maintained the aircraft, engines and equipment on the carriers and catapult ships. The Navy has engine-room artificers, and it intends to have air artificers, but at present it has no nucleus on which to build. Hence the appeal for a thousand men for aircraft-maintenance work which is published in our Service pages in this issue. Complete replacement coincident with expansion is no simple matter. The engineering branch of the Navy has allowed the transfer to the air branch of a certain number of E.R.A.s, but as the former is itself expanding it wants more E.R.A.s itself, and is loath to spare any of those which it has got. It will be, perforce, a slow business before the F.A.A. has got all its air mechanics, including highly skilled petty officers, and in the meantime the R.A.F. has to supply the working personnel afloat while training the naval recruits at its technical schools.

Believe It or Not

FROM time to time one hears production figures quoted "by people in the know" purporting to reveal the relative aircraft output of Germany, Great Britain and France. Usually the source of "information" of this sort is of questionable authenticity. An exception is the latest story to come from America, where experts of the U.S. War Department have been collecting statistics for the President. They have come to the conclusion that at the time of the Munich Agreement Italy and Germany had six times as many military aircraft as France and Great Britain combined.

According to the American statisticians, Germany's average monthly output in 1938 was 500 aeroplanes, while that of Great Britain, although it had been doubled compared with 1937, amounted to only half that number. Germany's peak production occurred in November, when she produced the imposing number of 1,000 machines.

One cannot doubt that if it is possible for anyone to form an accurate estimate the U.S. War Department ought to be in a position to do so. But unless one knows what is included in these figures the picture may be very misleading. For instance, although the word "warplanes" has been used in connection with these statistics, it seems likely that the output figures include training aircraft. Necessary as these are, they are not first-line machines.

Aircraft Factories in Australia

WHEN Marshal of the Royal Air Force Sir Edward Ellington visited Australia recently to inspect the air defences of the Commonwealth and to make recommendations, it is reported that he expressed disapproval of the Australian policy of buying American types for the use of the R.A.A.F. Apart from any question of the comparative performance of any British and foreign types, it is obviously undesirable that two Forces, which would have to work in close collaboration, should not have similar spares and similar experience in their mechanics.

The despatch of a mission of senior R.A.F. officers to Australia to examine the possibility of setting up factories there to manufacture British types may be a sequel to Sir Edward Ellington's report. Australia could hardly be what we hope Canada will become, an aircraft arsenal for the supply of machines to the Royal Air Force. Canadian Hampdens, when they are made, will be able to fly the Atlantic for delivery to the R.A.F.

Aeroplanes made in Australia could hardly be delivered to Great Britain in large numbers in time of war.

None the less, factories in Australia could be very useful. In the first place the R.A.A.F. has need for many more aircraft than is the case with the R.C.A.F., and in time of war, as in time of expansion, the Home aircraft industry cannot supply all the needs of the Commonwealth. Australian factories would also be very useful to the R.A.F. Commands of the Far East, India, Aden, Iraq, and the Middle East.

Pep for the Rotor

"DORSEY-DORSEY, give me your answer, do," might well have been the refrain sung by all American rotating-wing enthusiasts when Mr. Frank J. G. Dorsey introduced his Dorsey Bill in Congress last session. So persuasive was the good Mr. Dorsey that the American Government is now to spend some two million dollars on development and "procurement" of rotating-wing aircraft. Procurement, it may be explained is American for ordering.

To all who believe in the future of rotating-wing aircraft that is good news indeed. From the time when Frank Courtney first flew an Autogiro over Laffans Plain before Lord Trenchard, Sir John and Sir Geoffrey Salmond and other prominent R.A.F. officers, *Flight* has never wavered in its belief in the ultimate success of the type, but has maintained it in the face of many scoffers.

The great point about the American decision to encourage research and development is that the work will now be taken over from the relatively small bands of enthusiasts (the brothers Weir will forgive us for including in this nomenclature their valiant efforts) which have hitherto shouldered most of the burden. The time is not yet ripe for "Big Business" to interest itself. No marketable type is yet in existence. But the work will be tackled properly. The American National Advisory Committee for Aeronautics has drawn up an ambitious and thorough programme of research, and there is little doubt that within a year or so the few remaining features of the rotating wing which are still obscure will become fully understood. The main theory ceased to be mysterious some time ago. The rest is mainly a question of mechanical engineering.

That Patent Question

SOME two years ago *Flight* ventured to suggest that one of the stumbling-blocks on the road to further gyroplane progress might be found not to be of purely technical nature, but might be rather a legal one. So many different designers and inventors have been at work, and so many have taken out patents on various aspects of the rotor mechanism, that a position has been reached when it is difficult for any one of the designers to know where he stands in the matter of patent rights. Scarcely one is able to move without running the risk of infringing someone else's patent. If we lived in a perfect world all the patent holders would pool their patents and ideas, and all would work together to produce the mechanism which contained all the most desirable features.

Hitherto the progress has been relatively slow, due mainly to the fact mentioned above that independent investigators have been working in watertight compart-