

when Great Britain was lagging somewhat behind with the single-seater fighter, but the last year has seen that shortcoming remedied, as far as experimental types are concerned, although it cannot yet be claimed that all the R.A.F. Fighter Squadrons are equipped with the most up-to-date machines which the industry could give them. But the fact that machines with excellent performance exist as experimental types proves that whenever the authorities concerned come to a decision, there is no difficulty, from the manufacturers' side, in producing equipment for the Fighter Squadrons which will place them well ahead of the corresponding units of other nations. Other classes of aircraft have been developed also during the past year, but the most intense work has been done on the single-seater fighter class, and the results have been correspondingly good in that class.

On the civil side, the year has seen the introduction of a large number of types, some of which have already gone into quantity production as standardised types, while others are still, to a great extent, in the experimental stage.

In the two-seater light 'plane class, there has not been a great deal of development, due, doubtless, to the fact that this class of machine is already well established. This is not to say that the class has not been successful. On the contrary, the British type of two-seater light 'plane leads the world, and has been sold in increasing numbers during the past year. But its development, technically, is already fairly complete, and except for detail refinements, the class has not produced anything startlingly new. Before leaving this class, however, reference may be made to a new type of two-seater, the experimental model of which has been flown a good deal, and with rather remarkable results. This machine, a monoplane, has been fitted with an "inverted" engine, and has been found to have a performance greatly superior to that of the biplane type of the same power, which it was designed to supplement. This increase in performance cannot be accounted for merely by the change from biplane to monoplane, but must be regarded as being very largely due to a reduction in the interference between the wing and fuselage, etc., and to the better streamline flow around the whole machine. The new type, in fact, goes quite a long way towards Professor Melvill Jones' "ideal streamline aeroplane," and this fact goes to show that we may still hope for considerable improvement in aerodynamic efficiency, even if no revolutionary discoveries are likely to be made.

In the low-power, single-seater light 'plane class, there has been quite a crop of new types. None can be said yet to have entirely proved itself, nor to have gone into mass production as a standardised machine, but some very interesting experimental types were among those produced, and the present year will decide whether or not there is a market for this class of machine, a class which has been called "the motor-cycle of the air." Apart from the fact that the initial cost is low, and the running cost and upkeep also very low, and that, therefore, the class should appeal to many who cannot afford the price of the two-seater light 'plane of greater power, there is a considerable need for a cheap machine on which pilots who have obtained their "A" licence can "pile up hours" in order to qualify for their "B" licence. And as time goes on, the vacancies for pilots with the requisite number of flying hours will increase, and the need for cheap practice machines will grow more acute.

The "feeder line" type of machine, *i.e.*, the small passenger-carrier class, has received quite a number of additions during the year. Some of these have already gone into fairly general use, while others will doubtless do so during the present year.

When one comes to the large commercial class of machine, the year has been less satisfactory as regards new types. Imperial Airways have, in the main, carried on with types already in their possession at the end of 1928, although new versions of the types have been acquired. But there has not been in evidence that determination to explore further possibilities which one could have wished. However, several new types are now under way in various works, and will make their first appearance during the early summer, or even the spring of this year. The seaplane, in flying-boat as well as twin-float form, is receiving a goodly share of attention, and this is all to the good. As FLIGHT has maintained for many years, the British Empire *must* develop the seaplane to the utmost of its ability. But that is not sufficient. Other types also call for exploration and development, and we cannot afford to neglect any type of machine which gives any promise of bringing us nearer to the day when civil aviation can "fly by itself." Among the types which, in our view, urgently need consideration, is the out-and-out mail-carrier. The British policy has hitherto been to rely, on the Empire air route, very largely on passenger traffic. Mails have been carried, certainly, but not in anything like the quantities which should be available. And that is very largely due to the policy of making one type of machine serve both for passengers, mails, and to some extent, goods. We have come to the parting of the ways, and the mailplane is, it seems to us, the type which offers most prospects of immediate success. A single-engined type will probably suffice, and a very efficient machine could be designed, with a cruising speed much higher than that of the passenger machine. The saving in time that would result from the use of such machines would do much to popularise the regular use of the air mail.

In racing aircraft Great Britain has produced, during 1929, the two types built for the Schneider contest, and both were very remarkable machines, although engine trouble prevented one type from taking part in the contest.

With the progress made with aero engines during the past year, Great Britain has every cause to be satisfied. The lead established in previous years has been well maintained, while some new types have been produced which will add, during 1930, very materially to that lead.

And then there are the airships. Whether or not the airship ultimately attains the position which its advocates expect, the completion of the two largest airships in the world is an achievement which is at least of very high technical value, and many of the results of which may be expected to be applicable to branches of aircraft engineering outside the immediate sphere of airship work.

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OUR THANKS

So many readers have written to us in terms of praise, concerning the Birthday Number of FLIGHT last week, that it is quite impossible for us to reply by post, and we would ask them to accept our sincere thanks for their kind appreciation.