particular aeroplane with any particular equipment in any particular conditions.

In the case of the K.L.M. Douglas it seems to be proved beyond question that the machine swung to one side after running 200 yards. What was the cause of this was not ascertained. It may be that in an aircraft travelling at something like 70 m.p.h. the white line is more easily lost than in one which takes off at just over 50 m.p.h. That, however, merely raises the question of a possibly better form of thick-weather guide for pilots. It does not introduce the need for taking away from the pilot the right to give the ultimate decision on whether or not to take off.

Let Us Simplicate!

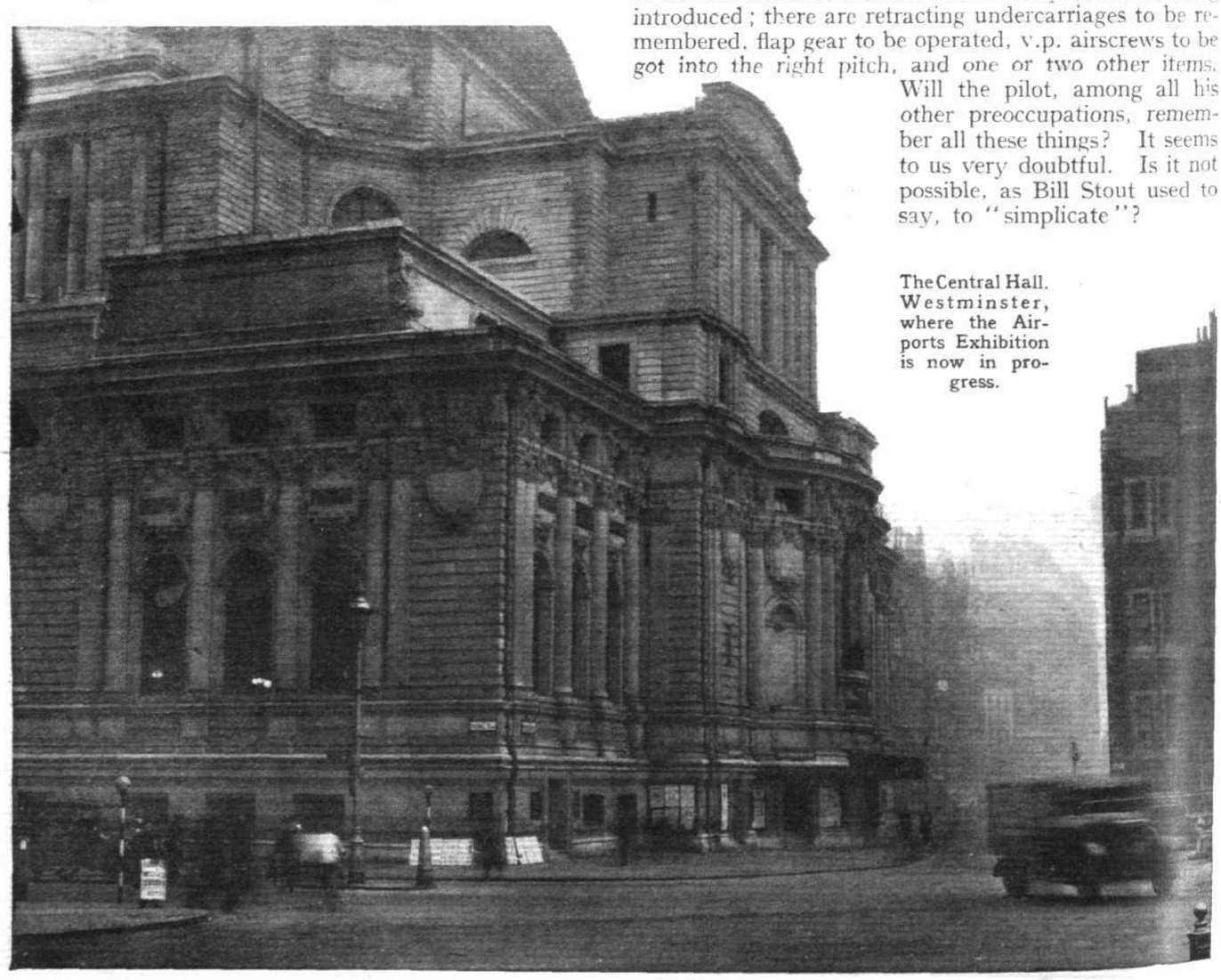
IT is impossible to visit one of our aircraft works nowadays without being appalled by the degree of complication which is gradually creeping into the installation of equipment of military aircraft. If one is examining a single-seater fighter with girder-type fuselage, for example, it is *sometimes* just possible to see, here and there, as through dense undergrowth in a forest, bits of the primary structure. Cylinders, boxes, leads, pipes, and dials are everywhere. Of the aeroplane itself little is to be seen.

Obviously, the duty of a military aeroplane is to carry military equipment aloft, but one cannot help wondering what would happen in the unhappy event of war breaking out. When aircraft designers first turned to metal construction, their main preoccupation was with the primary structure. As *Flight* pointed out several months ago, the primary structure is now of secondary importance from a production point of view, and it is the installation of all the complicated equipment which runs away with the number of man-hours. Therefore, should an emergency arise, the installation of equipment is going to be the bottleneck of production. From that aspect the growing complication is sufficiently disturbing.

There is, however, another side to this subject. In the early years of the war 1914-18 the fighter went off with a gun or two, an A.S.I., a compass, an altimeter and a rev. counter, and, of course, the ammunition for the gun. A single petrol pipe was usually all that connected the petrol tank with the engine, and, although this represented, from one point of view, a great many eggs in one basket, there was the offsetting advantage that the target represented by one petrol pipe was a very small one.

The modern single-seater fighter, with its multiplicity of vulnerable "smalls" scattered over a considerable area, will present a fairly good target. Almost any one of the dozens of leads, connections, and what-nots will, if hit, bring the machine down sooner or later. The thinking observer cannot fail to ask himself whether we are on the right track; whether, should a war break out, one of the first actions would be to remove from many types of aircraft half of the "junk" which they are now condemned to carry.

The unfortunate pilot not only has to carry much more military equipment than formerly, but in the operation of the aircraft itself more and more complication is being introduced; there are retracting undercarriages to be remembered, flap gear to be operated, v.p. airscrews to be got into the right pitch, and one or two other items. Will the pilot, among all his other preoccupations, remember all these things? It seems to us very doubtful. Is it not possible, as Bill Stout used to say, to "simplicate"?



The Central Hall, Westminster, where the Airports Exhibition is now in progress.