

LOOKING BACK

been added to its load, and so greatly has the wing loading increased, that the delightful characteristics of the old Blenheim have gone by the board. Perhaps the most difficult machine to handle is the Marauder, which holds the unenviable distinction of having the greatest wing loading of any aircraft in service. The run to take off is consequently long, and the opportunities for "swinging" are many.

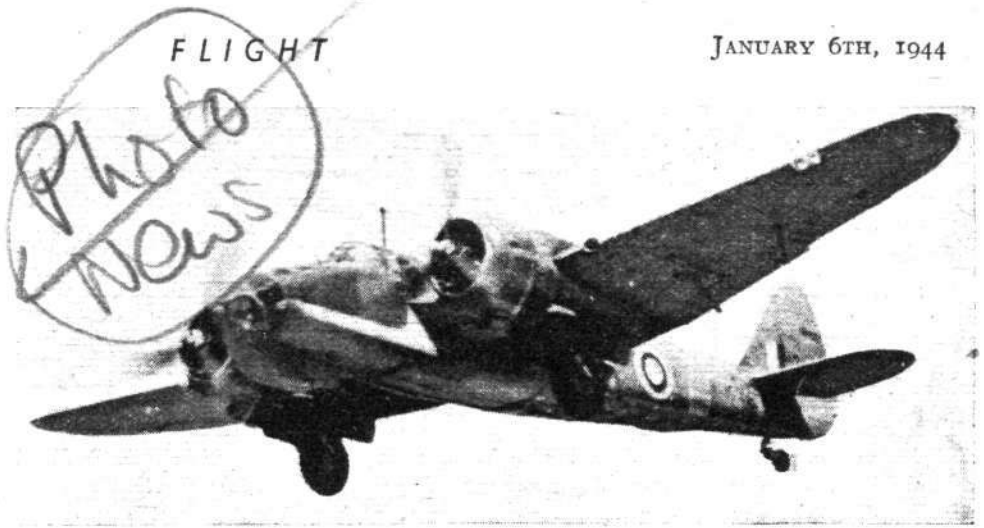
Arising out of the high-power engines that are now available, and the greater speeds attained, many types of aircraft have suffered from somewhat obscure tail troubles, some of which have given rise to structural failures. It appears that at these high speeds, reaching the speed of sound locally, the air flow does peculiar things and shock waves cause unexpected disturbances. However, in all instances the trouble has been cured, even if the cause is not fully understood. It was so, too, years ago with aileron flutter, tail buffeting and similar phenomena.

Limited Usefulness

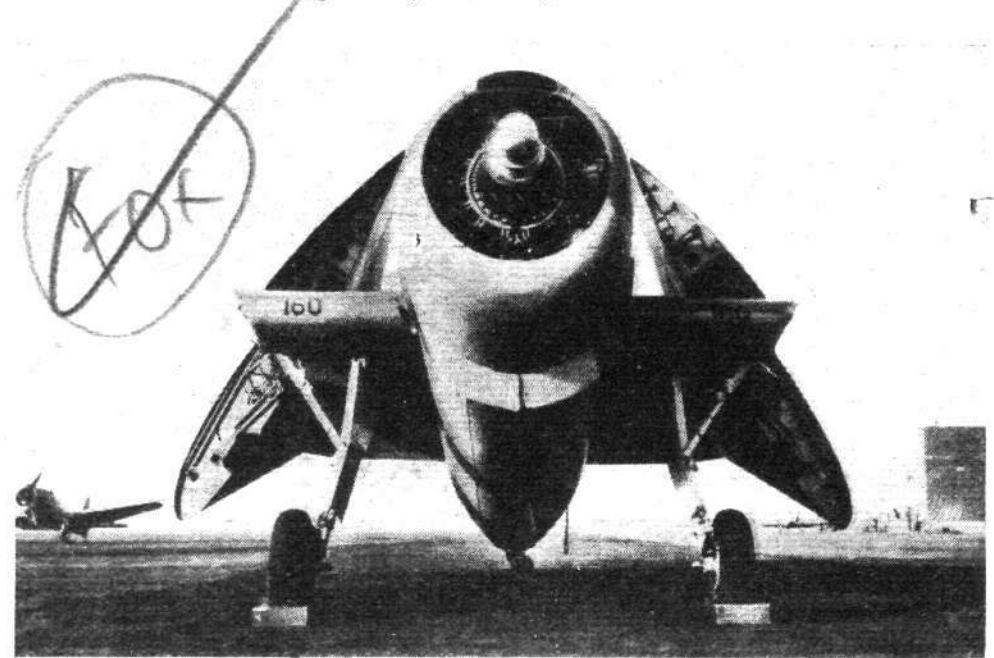
A type of aircraft which was at one time expected to do great things appears to have been pushed into the background. The troop-carrying glider, which its enthusiastic advocates thought would solve the problem of conveying soldiers to strategic points, has not figured largely in the war news, although gliders were used in the landings in Sicily. The notion of "trains" of gliders rushing troops to key points has not materialised, and in this country at any rate the view seems to be that airborne troops, either landed in the normal way or dropped by parachute, are a more practical proposition.

The success achieved by the Sikorsky experimental helicopter at one time led to the belief that this type of aircraft could do useful work in connection with U-boat spotting in the Atlantic. There is, however, a long way to go before the helicopter can carry a really useful load for any considerable length of time, and in the meanwhile the U-boat menace has become less serious, and it is more than doubtful that the helicopter will be developed and produced in time to be of real use in the Atlantic. That it will some day form a valuable addition to the types of aircraft of practical value there is little doubt. But that day has not arrived yet. Many schemes are "cooking," but it will be some time before the lid is lifted off the pot.

No startling developments in structural materials are to be recorded for 1943. Plastics continue to be used in relatively small sizes and for lightly stressed parts. They have not yet begun to take their place in the primary structure. It is interesting,



Bristol Blenheim V or Bisley is an outstanding example of over-development of a type. Blenheims I and IV were good aircraft; the Bisley has nearly twice the wing loading of the original Blenheim.



It is customary for American shipborne aircraft to fold by raising the wing tips vertically. In the Grumman Avenger or Tarpon, however, the wings swivel and hinge on the rear spar.



The Sikorsky R4 helicopter, shown here landing on a 20ft.-square deck, is the first helicopter ever to go into production for military purposes.