

Thirteenth of the Second Series

FRIEND or FOE ?

*Two Distinctive Bomber Tails :
Wellington and Heinkel IIIK*



WELLINGTON. A tall, shark-like fin and rudder, wide-span tapered tailplane and a power-operated "stinger" gun turret.

MOST aircraft have some particular feature of design which constitutes an outstanding characteristic—the Spitfire's elliptical wings, the Defiant's triangular fin and rudder, the Roc's gun turret, to quote some familiar examples—and chief among such easily recognised peculiarities is the tall, shark-like fin and rudder of the Wellington bomber.

German aircraft are no exception to this rule, and it so happens that the Heinkel IIIK, which may be taken as the Wellington's opposite number in the operational sense, also provides a distinctive aid to identification in its tail unit. In this case both vertical and horizontal surfaces are equally easy to spot at a glance, for the tailplane, with its elevators, forms a perfect ellipse, while fin and rudder constitute a half-ellipse.

No other military aircraft, British or German, has a tail unit of this particular shape, although those of the obsolescent Heinkel 70 and Heinkel 118 resemble it fairly closely. Both these machines, however, are single-engined aircraft, which still leaves the He. IIIK in a class by itself so far as tail design is concerned. Another typically Heinkel feature visible from a rear view is the "bite" in the trailing-edge of each wing root.

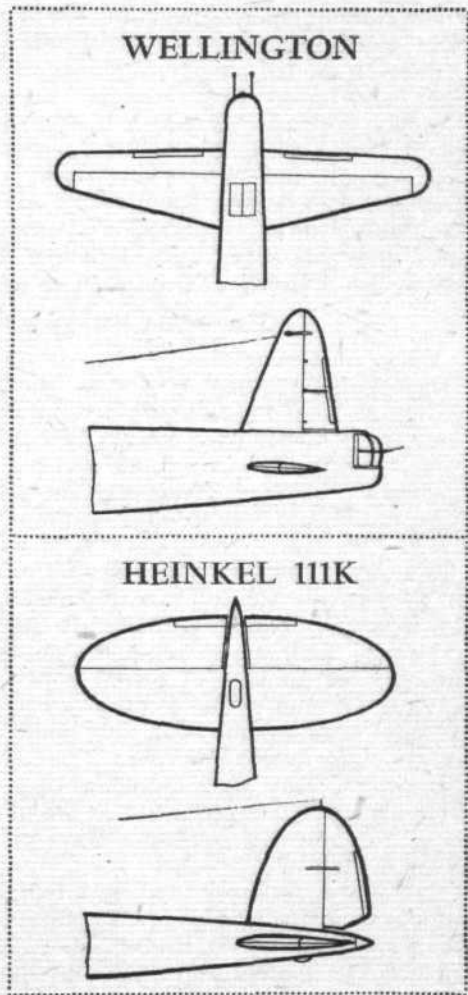
The Wellington fin and rudder also matches the form of its tailplane in general appearance, but with this difference, that whereas the trailing-edge of the horizontal surface is straight, that of the rudder has a slight but unmistakable taper. Both, however, are of similarly high aspect ratio, have a moderately tapered leading-edge and small rounded tips.

Incidentally, the rudder of the Wellington has mass balances placed near the apex and a trimming tab which occupies the lower two-thirds of its trailing-edge. The elevators also have long, inset tabs and horn balances which preserve the uniform outline of the complete horizontal surface. The tailplane is mounted in the mid-wing position and immediately behind it is the power-operated rear gun turret.

The Heinkel fuselage, having no "stinger" turret, tapers to a sharp point, the base of its rudder being shelved up a little to give adequate clearance to the inner edges of the elevators, which have no "bite" in their trailing-edge.

Another important difference between these two bombers when seen from below and behind is that the belly of the Wellington makes a smooth, unbroken curve from nose to tail, whereas the Heinkel has a streamlined under-turret approximately amidships.

*Next Week : Curtiss
Mohawk and Macci
C 200.*



HEINKEL IIIK. A perfectly elliptical tailplane with fin and rudder forming a half-ellipse. The fuselage terminates in a sharp point and has a streamlined under-turret flanked by "bites" in the trailing-edge wing roots.

