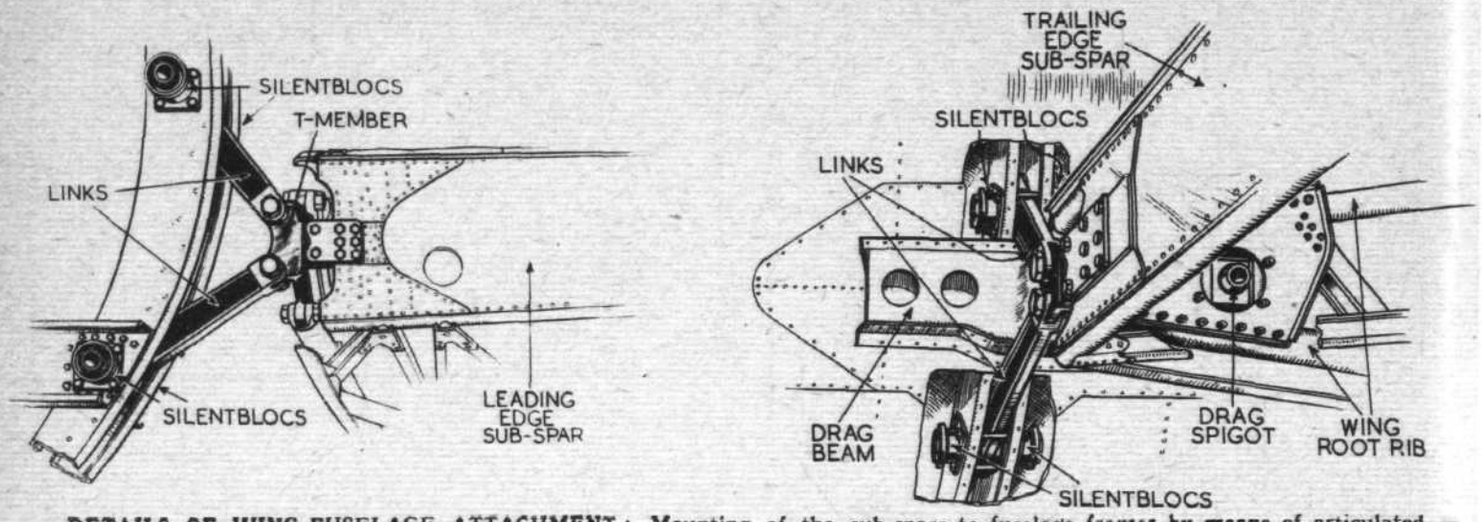
VICKERS VIKING (V.C. 1)

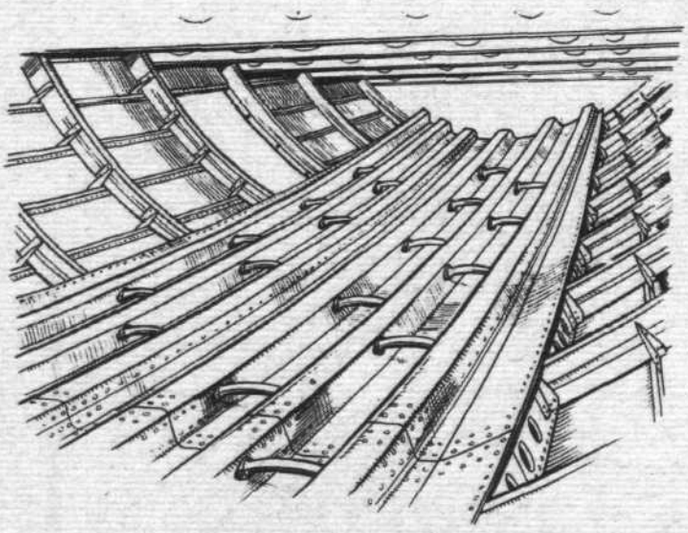


DETAILS OF WING-FUSELAGE ATTACHMENT: Mounting of the sub-spars to fuselage frames by means of articulated links carried in Silentbloc bushes is shown. Link arms are pin-jointed to a forged T-member secured to the sub-spar end and also to the wing-root rib. Starboard wing rear attachment is shown at right and port wing front attachment at left.

the frames with sandwich plates. This leaves an absolutely unobstructed space below in the hold.

Provision is made for an operational crew of three, i.e., chief pilot, second pilot, and radio operator. A steward or stewardess has a pantry to starboard aft. Layout of the control cabin is good, having been settled by consultation with the potential operators, but, as in other civil passenger aircraft, it favours the chief pilot. One would not cavil at this if one knew that the captain did most of the flying, but although admitting that the captain carries the responsibility, so far as the actual flying goes, it is usually the second pilot who does most of the work.

One thing that is very appealing about the "office," and which is new on British aircraft, is that the control column is a nearly horizontal push-pull shaft projecting through the facia board. This makes for a clear floor and less obstruction of instruments, and the writer feels that it could well be more widely adopted. Aileron control is afforded by upswept horns, which form a type of "spectacle" wheel without the top cross members, and each control column terminates at its front end at a small gear box mounted at the head of a vertical tube carried on a cross tube. This arrangement is a form of bell crank, and a drop arm off the cross tube is pivoted to the elevator control transmission. For aileron movement the gear box transmits rotation of the control column through a shaft inside the vertical tube to a bell-crank assembly at the lower end, each bell crank being connected by a "track" rod to ensure sympathetic motion for dual control. Transmission for all control surfaces is by push-pull rods carried in Tufnol guides with the usual three ball-bearings wherever a change of direction occurs.



Lashing rails are provided at frequent intervals in the luggage floor, and the way in which the floor edges are connected to the fuselage stringers and frames by shear plates can be seen

A point which, perhaps, will affect some pilots less than others is that, owing to the fairly sharp coning of the nose, the axes of the control columns are not parallel to the fuselage centre line; the neutral plane of the rudder pedals is also not perpendicular to the fuselage axis. Thus, each pilot is facing slightly off-centre relative to the line of flight but, as stated, this is a point with which some will be more concerned than others.

Visibility for each pilot is excellent over a really wide field, but the upward zone of view is restricted, as in many civil aircraft, which, in my opinion, is to be regretted. No one, least of all a pilot, likes to have the sun in his eyes, but this could be prevented by overhead sun blinds; in any case, many flights would be northerly. I firmly believe that the best possible *field* of view should be accorded the pilot, if necessary in spite of himself.

As stated, the captain is favoured by the layout arrangements, the control pedestal being off-set from the centre line to his advantage, although the second dickey can handle everything without too much stretching. Curiously enough, the undercarriage control is on the left of the throttles, etc., whilst the flap control is to the right; it would thus appear that the captain will raise the wheels himself instead of, as is more usual, delegating this duty to his subordinate.

Instrument layout appears curious after military machines for the standard blind-flying panel is not employed; instead each pilot has his own b.f. instruments, although their arrangement is different on the respective panels. The second pilot is presumably to act as navigator—at least, in so far as navigation in the accepted sense is required—for he has the variation-setting corrector under his control, whilst the D.R. compass is on the captain's panel. The captain is also favoured by the clock position, although it would appear that he needs it less than his co-pilot—each can see the clock, of course, but the second pilot will have quite a lot of parallax to contend with. It would appear that the operators who will use the Viking have their system of pilot duties cut and dried, but as a pilot I think I should not be very happy about it.

Pilots' seats are fairly comfortable but not of the same comfort standard as used on our heavy bombers. The seats are rather short-backed and are not fitted with head rests so one hopes that most of the pilots are not too tall; adjustment is provided, however, both fore and aft and vertically, and as the rudder pedals are also adjustable for leg reach, a compromise adjustment for optimum comfort should be easy.

The radio operator sits athwartships to starboard, behind the second pilot, and if an operational crew of two only is desired, the second pilot should be able to double as radio operator without too much difficulty. This arrangement