

CORRESPONDENCE.

To the Editor of the AERONAUTICAL JOURNAL.

DEAR SIR,—I have read with great interest Mr. Thomson's comments on my paper on the flying of twin-engined aeroplanes. Among other things he refers to the effect on the fins of twin-engined aeroplanes when the airscrews revolve inwards.

With the standard Handley Page o/400 and Vickers Vimy aeroplanes, in which the airscrews revolve the same way, there is a definite turning tendency noticeable. I believe that some of the early Handley Page o/400's had inward turning airscrews, and though I have no first-hand experience, I have been told by a pilot who has flown one that, as would be expected, there was no turning tendency. So far as I know, the Vimy was designed after Messrs. Rolls-Royce had standardised the sense of rotation of their engine.

Mr. Thomson states that a Vimy proved capable of flying on the port motor (an inward turning engine), but failed to fly level on the starboard one, owing to the nose having to be put down and a greater speed attained to overcome the turning tendency.

As far as my knowledge of the Vickers Vimy goes, the port engine turns outwards. If then "starboard" be substituted for "port," I have not noticed this to any extent when flying a Vimy, although I have not measured the rudder forces when flying on the starboard and port engines with the standard fins.

I think it may be for this reason. Take the case of a standard Vimy, flying on the starboard engine which turns inwards, the port engine being cut out. The starboard engine brings into play a couple tending to turn the aeroplane to port; the rudder is put over to starboard to counteract this, but at the same time produces an unbalanced lateral force, which, if the wings are to be held level, can only be balanced by the aeroplane sideslipping to port. The slipstream of the starboard engine, which would normally be exerting a force on the fin tending to counteract the turning tendency, is diverted by the sideslip; thus the fin is not affected, and the value of the inward rotating slipstream is practically lost. If this is so, the case for inward turning airscrews is considerably weakened.

I am afraid I have no specific information on the control at low speeds of the early aeroplanes built at Farnborough, but general experience would seem to suggest that with the present form of control surfaces, abnormally good control at low speeds is only to be had by making the control at high speeds excessively heavy.

Yours faithfully,

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