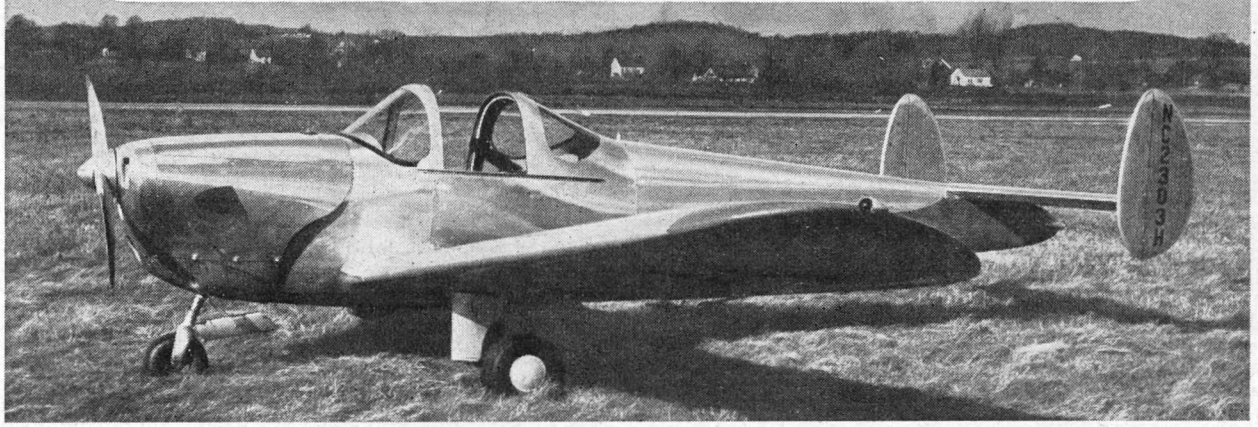
AIRCRAFT DESCRIBED
No. 33 BY
C. RUPERT MOORE A.R.C.A.

THE ERCO 415c

# ERCOUPE



THE Ercoupe is the product of the Engineering and Research Corporation of the U.S.A. It is a two-seater, dual controlled, private owner type of all metal construction and with a tricycle undercarriage.

This aircraft is the culmination of a series designed by Frederick Weick. During his period with the "National Advisory Committee for Aeronautics", he experimented with spin-proof aeroplanes. On joining the Engineering and Research Corporation he designed the smaller prototype from which the second prototype, the 415, was evolved. Both these aircraft had 55 h.p. Erco engines which were also prototypes themselves. This experimental engine was replaced by a 75 h.p. Continental C.75 air cooled, 4-cylinder horizontally opposed engine, when it became known as the 415c.

The most unusual feature of this aircraft is its controls. There is no 'joystick' but a horizontal control column projecting from the dash board. This is capable of sliding horizontally fore and aft and is connected to the elevators. The "spectacle" wheel at the end of the column controls both rudders and ailerons with the same movement, these two controls are interconnected, making a rudder bar unnecessary. The object of this is to prevent spinning.

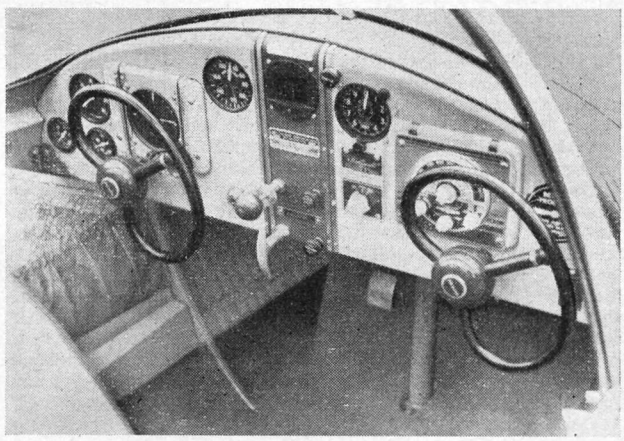
This aeroplane, with its generous dihedral, cannot be either spun or rolled. In spite of the unconventional controls the few experienced pilots I have spoken to, who have flown this type, speak highly of it.

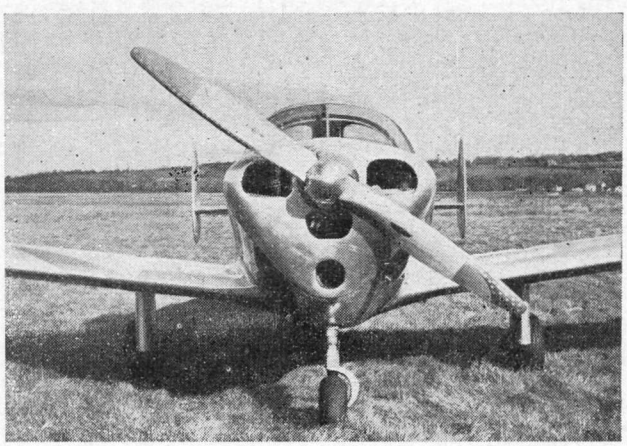
**Construction :** The fuselage is an all metal, stress-skin monocoque structure. The centre section which supports the main wheels and has the fuel tanks as the leading edge, is metal covered. The outer wing panels have a single main spar of metal, in front of which are stamped sheet riblets and the stamped sheet ribs themselves are triangulated. The L.E. and ailerons are metal covered. The tail unit, including control surfaces, is metal covered.

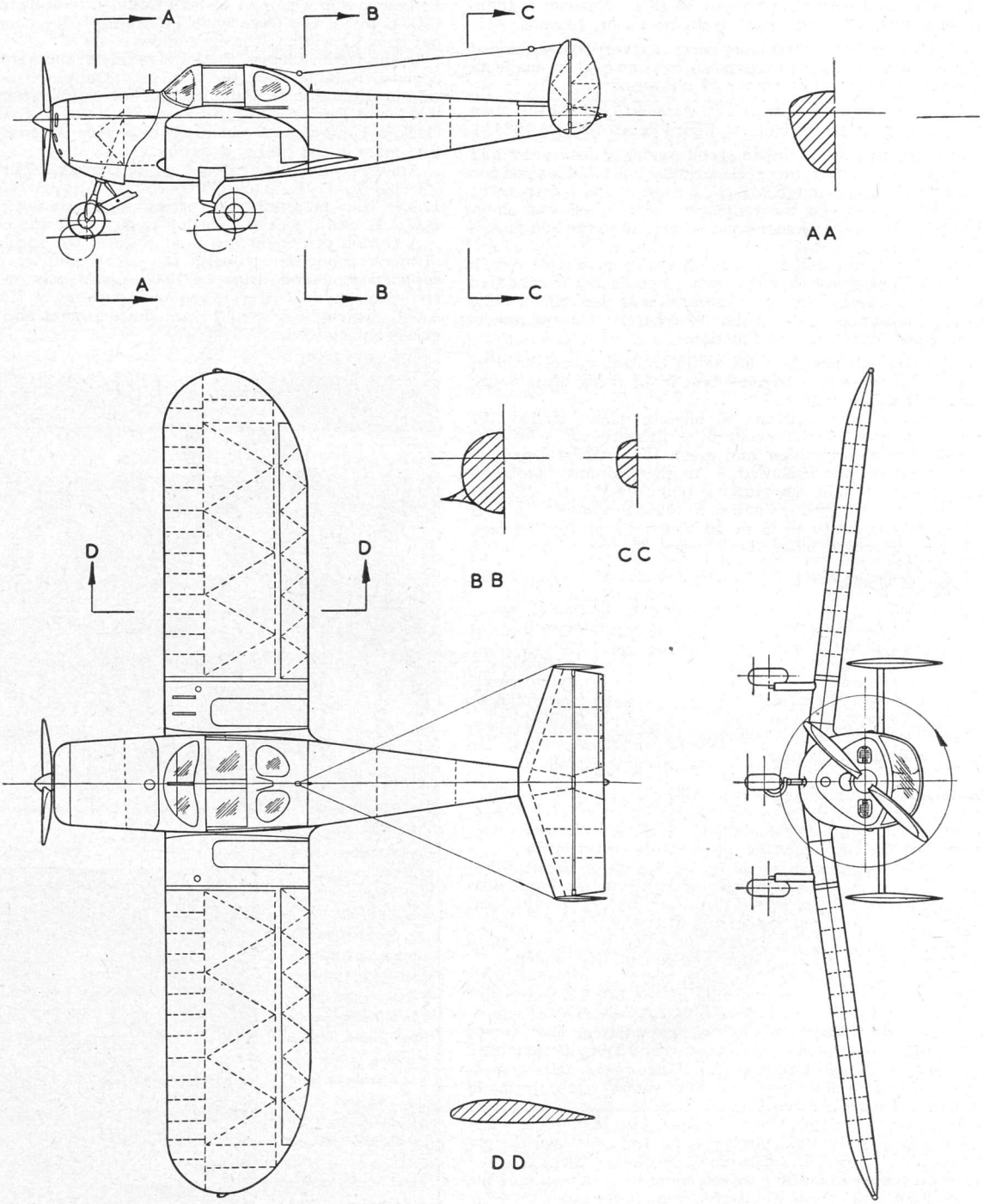
The undercarriage deserves some mention. All wheels have a very large travel up and down, the front wheel being 9 in. below the grounded position in flight. This leg has a very neat fairing which is fixed to the anti-shimmy link. The fairing projects aft when on the ground but as the wheel drops and the link opens, the fairing lines itself up behind the leg. This wheel is also interconnected with the rudders and ailerons and steers. The cockpit canopy is very neat, being in two halves, each half of which slides down into the fuselage side. No flaps are fitted.

**Colour :** Very few Ercoupes have been seen in this country, and there is no reliable source of information of American registration, at short notice. The Belgian registered OO–WAG, shown on the cover, is natural metal with indigo letters. G–AKFC was also metal with black letters.

**Specifications :** Length : 20 ft. 9 in. Span : 30 ft. 0 in. Height : 5 ft. 11 in. Wing area : 142 sq. ft. (gross). Loaded weight : 1,260 lbs. Tare weight : 750 lbs. Max. speed : 127 at sea level. Cruising speed : 110 m.p.h. at 1,000 feet. Stalling speed : 48 m.p.h. Range : 500 miles. Ceiling : 14,000 ft.





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