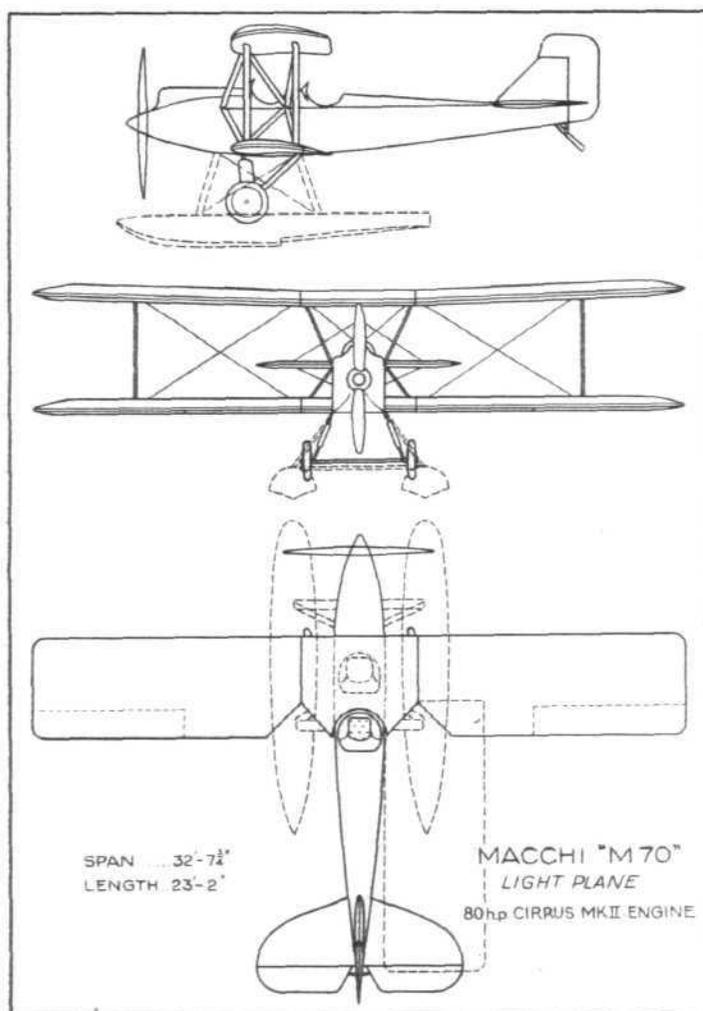


AEROPLANE TYPES

The Macchi "M-70"

A TWO-SEATER light biplane constructed by Aeronautica Macchi, of Varese, Italy, fitted with a 75-80 h.p. "Cirrus II" engine.

Special Features.—Convertible to either land- or sea-plane. Folding wings.



THE MACCHI "M.70": General arrangement drawings.

Wings.—Are of orthodox wooden construction, with fabric covering, having a fairly thick wing-section. Single bay bracing, the top plane being set at a dihedral angle of about $2\frac{1}{2}^\circ$, while the lower plane is horizontal. The top plane is in three sections, comprising a centre section—the span of which is somewhat wider than the fuselage—supported by a pair of N-struts sloping outwards, and two outer sections which are attached by hinged joints to the centre section. The lower plane, which has the same span as the top, is similarly divided, except that the lower centre section is in the form of two wing roots attached to the fuselage and braced therefrom by N-struts. The usual external piano-wire bracing is employed, and the interplane struts are steel tubes, faired. The upper and lower outer sections hinge on the rear spar attachments so as to fold back along the fuselage; when folding a false strut is inserted between upper and lower planes on the front spar roots of the outer sections. Unbalanced ailerons are fitted to the lower plane only.

Tail Surfaces.—Of monoplane type, with steel frames, covered with fabric. The rudder is balanced, but not the elevators.

Fuselage.—This is of usual rectangular section, with two open cockpits in tandem. It is of wood construction with plywood covering. The rear cockpit is normally the pilot's, but each cockpit is provided with a control, the front one being disconnected at will from the rear one.

Undercarriage.—Conventional V-type with straight axle. The front struts of each V embody a rubber disc (in compression) shock absorber. For the seaplane model, two long single-step floats, carried by four struts, replace the wheel undercarriage.

Power Plant, &c.—The 75-80 h.p. "Cirrus II" engine, or similar type, is mounted in the nose and drives a tractor airscrew 6.7 ft. diameter by 3.4 ft. pitch. The fuel tank is located in the top centre section, giving gravity feed.

Specification.—

Span	32 ft. 7 $\frac{1}{2}$ in. (9.95 m.).
Chord	5 ft. 0 in. (1.50 m.).
Length	23 ft. 2 in. (7.06 m.).
Height	9 ft. 7 in. (2.95 m.).
Wing area	305.5 sq. ft. (28.4 sq. m.).
Weight, empty	1,014 lbs. (460 kg.).
Total weight	1,632 lbs. (740 kg.).
Wing loading	5.3 lbs./sq. ft (26 kg./sq. m.).
Power loading	21 lbs./h.p. (9.5 kg./h.p.).
Speed range	34-96 m.p.h. (55-155 k.p.h.).
Climb to 3,280 ft. (1,000 m.)	7 mins.
Climb to 13,120 ft. (4,000 m.)	53 mins.
Ceiling	15,080 ft. (4,600 m.).
Duration	5 hours.



THE MACCHI "M.70": Three-quarter rear view of the Italian light biplane. It is fitted with a "Cirrus II." or similar type engine, and can be converted into a seaplane.