Italian Military Aeroplanes

Interesting Types of Craft for Air and Water

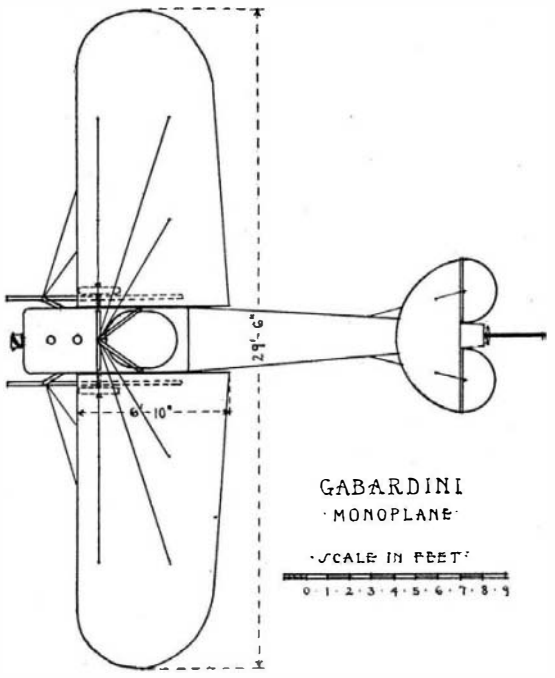
By John Jay Ide

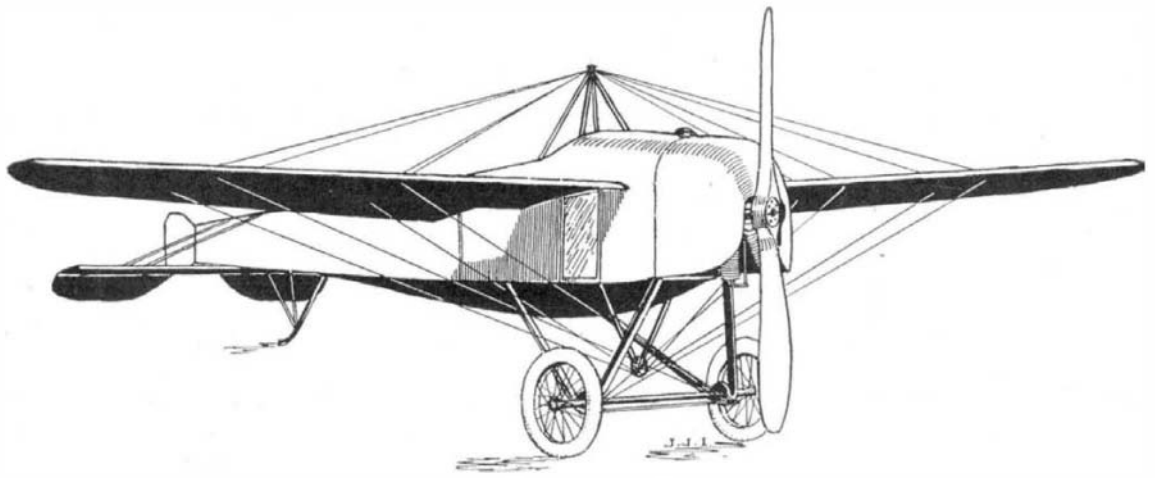
MILITARY aviation in Italy dates back to the winter of 1908-9 when Wilbur Wright after his triumphs in France taught Lieut. Calderara to fly at an aerodrome near Rome. The government did little to encourage the industry and by the end of 1911 there were only 20 aeroplanes in use. There are now almost 200 machines of which 150 are of the latest models.

The machines of domestic design and construction are generally of the monoplane type inspired by Nieuport with sometimes a dash of Blériot or the defunct Hanriot. Only two makes of native biplanes are used: the Spa-Faccioli and one model of the Asteria. Both makes are comparatively slow; fast scouting biplanes have yet to make their appearance in Italy.

Until 1914 all the Farmans used by the Italian army were imported from France. Early last year, however, the Savoia Company which had acquired the manufacturing rights for Henry and Maurice Farman biplanes opened a huge factory at Milan covering 20,000 square yards where large contracts are being carried out for the government. Other foreign machines produced under license by Italian firms are the Blériot, Bristol, Deperdussin and Nieuport.

One of the most successful Italian monoplanes is the Gabardini produced at Camari, Novara. Although the machine is not dissimilar to the Nieuport in general outline there are several special features incorporated in the design. The fuselage, constructed of steel tubes reinforced with wood, has quite an original form. The forward part, from the nose with its 80 horse-power Gnôme to the rear of the cockpit, is rectangular in section. Behind the seats, however, the lower longerons meet and from this point to the stern the fuselage is of triangular section. The above arrangement while giving a good stream-line form allows ample room for the engine, fuel tanks and occupants. The triangular portion of the fuselage can be detached for purposes of housing and transport.





The Chiribiri monoplane.

The two spars of each wing are of tubular steel. On these the ribs are loosely mounted so that they possess a certain amount of flexibility when warping takes place. The ribs are of I-beam section with the webs drilled for lightness. The fixed tail plane and elevating flaps are copied from the Nieuport but they are placed well forward of the rudder giving the latter a wide range of movement. All the members of the empennage are constructed of steel tubing covered with fabric.

A lever mounted between the pilot's knees operates the elevators and wing warping. The rudder is controlled through pedals.

The chassis, on Hanriot lines, consists of two skids joined to the fuselage by three struts each. A tubular axle carrying a pair of wheels is slung from the skids by means of rubber bands.

The characteristics of the Gabardini two-seater are as follows: Span, 29 feet 6 inches; length, 24 feet 2 inches; supporting area, 193 square feet; weight (empty), 770 pounds; useful load, 770 pounds; speed, 40 to 85 miles per hour. A hydro-aeroplane model is also produced by the Gabardini firm. It differs from the land machine in dimensions and in the alighting gear, the latter of the two-float type.

Another prominent monoplane is designed by Sig. Caproni and constructed at Vizzola Ticino. Several models are made including single, two and three seaters, generally furnished with Gnôme but occasionally with Anzani motors. With an 80 horse-power Gnôme the two-seater is slightly faster than the Gabardini, due in part to the stream lining of the top and bottom of the fuselage and the small head resistance of the chassis. Sections are cut out of the wings at their roots to improve observation. The Caproni works also build Bristol biplanes under license.

The Chiribiri Company of Turin build both single and two-seaters equipped with motors of their own make. Their 60 horse-power racer is credited with a speed of 103 miles per hour. The standard models are by no means rapid, doing only about 70 miles per hour with an 80 horse-power motor. The general design presents nothing unusual, the chief claim to distinction lying in the employment of a stationary motor. The Antoni monoplane is also of the conventional type, the Nieuport design being followed throughout, even to the chassis, consisting of two wheels and central skid.

The latest Macchi production is a Nieuport of the "parasol" type (having the plane over the pilot's head) with a Morane landing gear. The Friuli monoplane is a small Blériot type, single-seater, equipped with a 35 horse-power Anzani radial motor and a Hanriot landing carriage. Very few machines of this make are used in the army.

Biplanes and monoplanes are made by the Asteria Company located at Turin. Both types are driven by propellors instead of the more usual tractor screws. Gnôme motors are used on the monoplanes and Renaults on the biplanes. The only other Italian designed biplane is the SPA-Faccioli manufactured by the SPA automobile firm of Turin. It is a two-seater equipped with a 50 horse-power SPA motor and has a simple two-wheeled landing chassis.

An interesting seaplane is Lieut. Calderara's "hydrovol," a hydro-monoplane of over 60 feet span. The passengers are carried in a hull forming the center float of three, connected by a couple of spars. The axis of the propeller, driven by a 160 horse-power Gnôme is slightly below the huge wings which are mounted almost 8 feet above the floats and joined to them by vertical struts. From the outer struts spring the booms carrying the tail plane, elevators and rudders.

The outer floats, equipped with small water rudders at the stern, are divided into a number of watertight compartments with internal lattice frame. The hull is formed of three skins of wood with sailcloth between adjoining skins. If necessary the wings can be cut away and the central hull used as a boat.

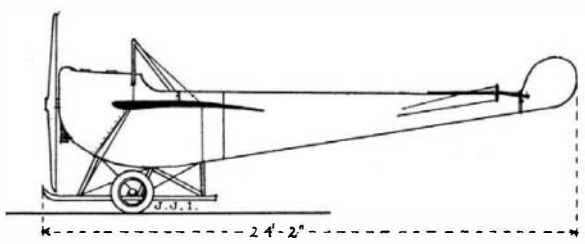
Flying boats—in this case biplanes—are also built by the Bossi Company. Many of these craft have been sold to foreign navies and they are likewise popular in the Italian navy.

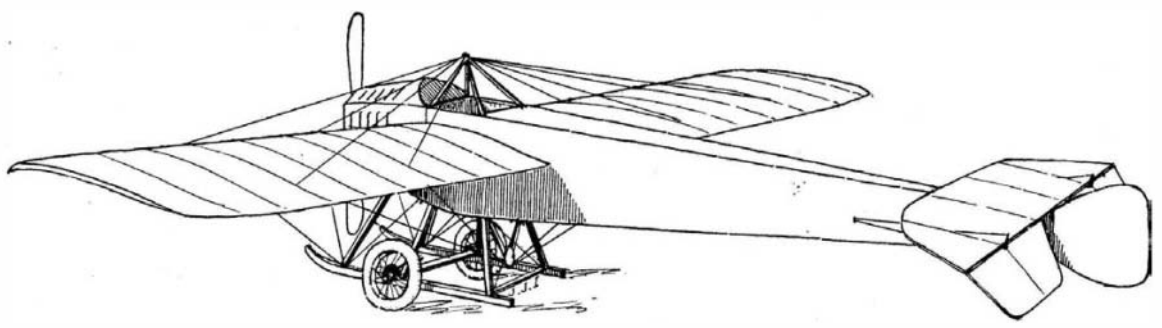
Captain Guidoni supplies Farman biplanes and Nieuport monoplanes equipped with special floats of his own design. In each case there are two long floats, each fitted with parallel fins.

The Italian navy has acquired a large number of Curtiss flying boats, including a duplicate of the "America." The fleet of the 90 horse-power standard model is now being considerably augmented. In this connection a paragraph recently appeared in the daily press to the effect that Italy was about to place an order for 800 aeroplanes with American constructors. Our manufacturers in their present condition would take several years to fill such an order. The training of pilots and observers to man this multitude of machines would be incidentally a formidable task. From an authoritative source I have learned that an order would probably be forthcoming but would not amount to one tenth the above mentioned number. American firms, therefore, need not start work on additions to their plants just at present.

The Italian army machines are divided into squadrons of ten aeroplanes each. Seven machines in a squadron are always on active service while three are held in reserve. The Mirafiori aerodrome near Turin is the principal military flying ground. Acceptance tests for aeroplanes and motors, and examinations for pilot certificates are made here. The central school for brevets is at Aviano and three miles away at Pordenone is the training ground for those who desire to obtain superior brevets. There are several other aerodromes restricted to certain makes of machines. The central marine flying school is at Venice.

The most popular motor is, of course, the Gnôme made under license at Turin. The Anzani radial motor is used to some extent, as are stationary motors produced by FIAT and SPA. These last, however, are generally restricted to airship work.





The Chiribiri from the rear.