

These two views illustrate the actual "giant" proportions of the Caproni 90 P.B.—especially the lower picture showing the landing wheels.

**CAPRONI 90 P.B.**

Six Isotta Fraschini 1,000 h.p. "Asso"

Length .. ..	29 m. (95 ft.).
Wing Span (top) ..	38.81 m. (127 ft. 4 in.)
" (bottom) ..	49.56 m. (162 ft. 6 in.)
Wing Area .. ..	563 sq. m. (6,057.78 sq. ft.)
Tare Weight .. ..	15,000 kg. (33,075 lb.)
Disposable Load ..	30,000 kg. (66,150 lb.)
Gross Weight .. ..	45,000 kg. (99,225 lb.)
Wing Loading .. ..	80 kg./sq. m. (16.38 lb./sq. ft.)
Power Loading .. ..	7.5 kg./h.p. (16.53 lb./h.p.)
Maximum Speed .. ..	210 k.p.h. (130.5 m.p.h.)
Landing Speed .. ..	90 k.p.h. (56 m.p.h.)
Ceiling .. ..	5,000 m. (16,405 ft.)
Normal Range .. ..	2,000 km. (1,243 miles)
"High-speed Figure"	$\frac{\eta}{2kD} = 15.1$

dihedral angle. The short upper plane is without dihedral, and is supported by two pairs of vertical struts from the lower centre section, and a pair of sloping (very much so, it will be observed) struts at each extremity.

The six engines fitted in the Ca.90 P.B. are 1,000 h.p. Isotta Fraschini "Asso" models, arranged in three groups in tandem, one group mounted centrally between the wings, above the fuselage, and the other two mounted on the lower centre section.

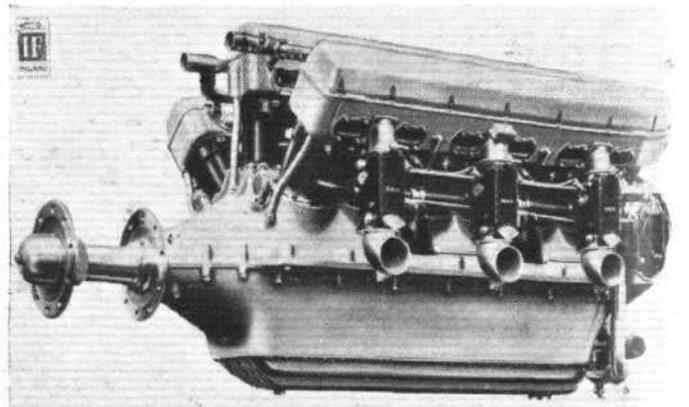
Although he fitted six engines in this machine, Sig. Caproni stated that, in his opinion, the tri-motor type of aeroplane was the best solution, and he would have installed only three in the Ca.90 had he been able to obtain suitable engines—the multiplicity of engines, he states, enormously complicates matters for the pilot who should be able to devote the maximum possible attention to the control of the machine itself.

However, the control of the Ca.90 is nevertheless stated to be exceedingly light, the Italian pilot, Domenico Antonini, who carried out the test flights, said he found the controls as light as those of much smaller machines, and stated further that he found the instruments, etc., so well arranged as to eliminate all the difficulties that might be expected on a machine of this size and with so many engines.

The Ca.90 carries a useful load of about 22 tons, using the international safety factor, or 35 tons using the German safety factor; it can carry this load over a range of 1,243 miles (2,000 km.). In addition to bomb gear, this machine is equipped with efficient armament, comprising a gun position in the extreme nose of the fuselage, another well behind the wings, and a third on the top plane.

It is stated that the Ca.90 can easily be adapted for commercial work, it being possible to provide comfortable accommodation, in a spacious cabin, for a hundred or more passengers. Furthermore, with but little increase in weight it would be possible to modify the fuselage so as to render it watertight, and thus allow of alighting and normal floating on the water, or convert the machine into an amphibian.

In conclusion, it should be mentioned that the pilot Antonini established several international records on this machine on February 22 at Cascina Malpensa, viz., with a load of 10,000 kg., 1 hr. 31 min. duration, 3,231 m. altitude, and others for various loads.



One of the six Isotta Fraschini "Asso" engines used on the Caproni 90 P.B. It has 18 cylinders and develops 1,000 h.p. at 1,700 r.p.m.; the weight, including air-screw hub is 800 kg. (1,764 lb.).