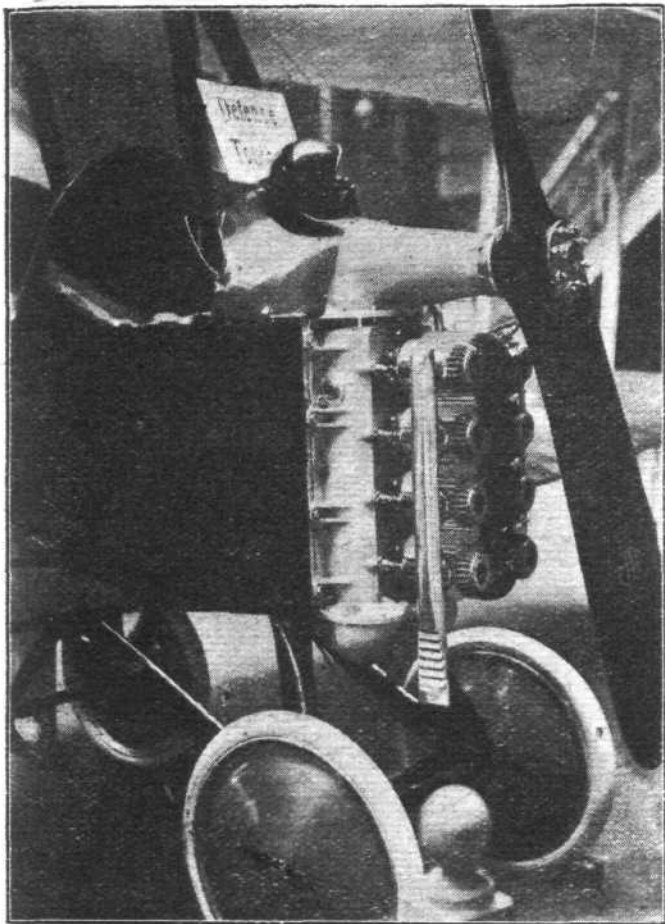


The Peugeot Engines

Two aero engines were exhibited by this firm. One of these was a 12-cylindered Vee type and the other had its cylinders arranged in the form of a letter X, that is to say, there are four banks at 90°. The former engine has 12

is of the four-cylindered vertical type, but is placed in the aeroplane with its crankshaft vertical and its cylinders pointing forward. At the upper end there is a bevel gear, serving at the same time as a reduction gear for the airscrew, transmitting the power from the vertical crankshaft to the horizontal propeller-shaft. The gear reduction is 2 to 1. The four cylinders, which are of aluminium with steel liners, are of the T-head type, with large valves, operated by two camshafts. As the cylinders lie horizontal, the fins are cast parallel to the barrels and not circumferentially. It is stated that reliability has been the first consideration in the design of this engine, and that no attempt has been made to reduce weight to a minimum. For an engine power of 50 h.p.,



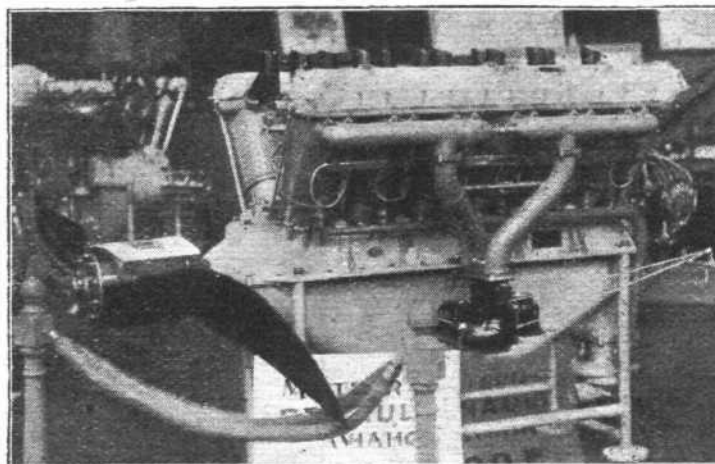
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THE POTEZ ENGINE : This air-cooled engine is placed in the machine with its crankshaft vertical

cylinders 160 mm. by 170 mm., and is said to develop 600 h.p. at 1,600 r.p.m. The weight (dry, presumably) is given as about 550 kgs. (1,200 lbs.). The two banks of cylinders are arranged at an angle of 60°, and carburettors as well as exhaust pipes are on the outside of the cylinder-blocks, the intake manifolds passing through the overhead valve casing to the inside of the Vee. The cylinders are of aluminium with steel liners, and the pistons also are of aluminium. The valves, of which there are four per cylinder, are operated from a single camshaft driven by a central gear. Four magnetos furnish the current to two plugs per cylinder.

The second engine is of less orthodox design, and is evidently an attempt to shorten the overall length, each of the four banks having but four cylinders. Whether the arrangement proves a success in practice remains yet to be shown, as the engine has not, so far as we are aware, been installed in any aeroplane. The cylinders are, as already mentioned, arranged in four banks of four each, forming an angle of 90°. Aluminium water-jackets around each bank give the neat appearance of monobloc castings. Overhead valves, four per cylinder, are employed, operated by overhead camshafts. The induction system is unusual, but is said to have given good results. Running along the side of each cylinder-block is a straight manifold, surrounded by a tubular water-jacket which forms the water outlet. At each end of this straight manifold is an adjustable air inlet as well as two petrol jets. The mixing-chamber is thus formed by the manifold itself. The engine, which has a bore and stroke of 130 mm. by 170 mm., is said to develop its rated power of 500 h.p. at a speed of 1,400 r.p.m. The arrangement would certainly appear to possess certain advantages, and it will be interesting to see how the engine comes out of its tests on an actual machine.

Henry Potez

Chiefly designed for, and exhibited in, the Henry Potez Type VIII aeroplane, the Potez engine represents an idea which might be generally applicable to small machines. It

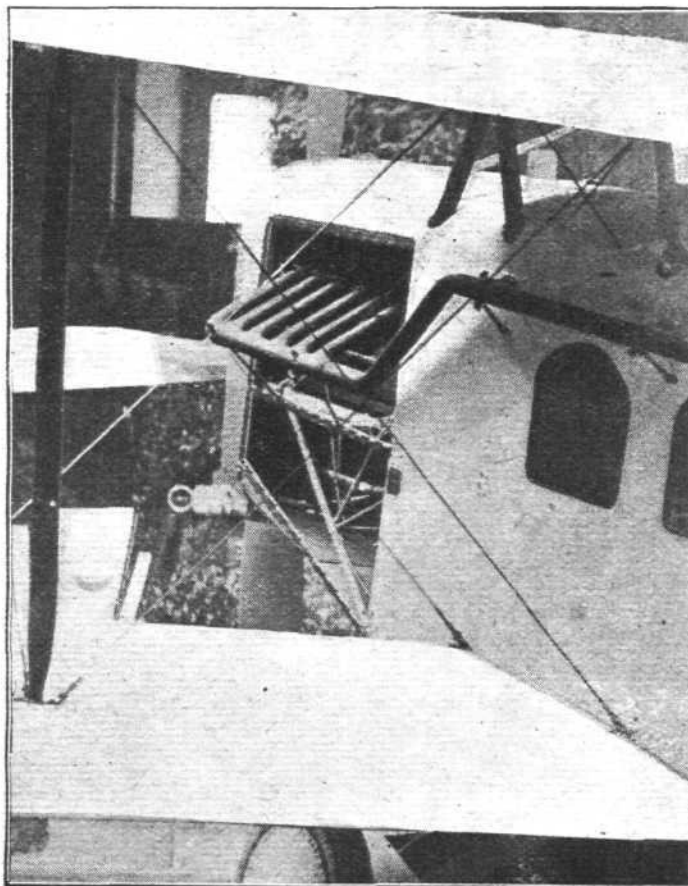


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THE 600 H.P. RENAULT ENGINE : Note the clean appearance, compared with earlier models

developed at an engine speed of 2,200 r.p.m., the weight is given as 100 kgs. complete (220 lbs.) or 4.4 lbs./h.p. The fuel consumption is said to be about 15 litres (3.3 gallons) per hour, or about .53 lb./h.p. hour.

The Renault Engines

As one of the oldest aero engine firms in France, special interest attaches to the exhibits of Renault engines. As is



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The Rolls-Royce Falcon installed in a Westland limousine