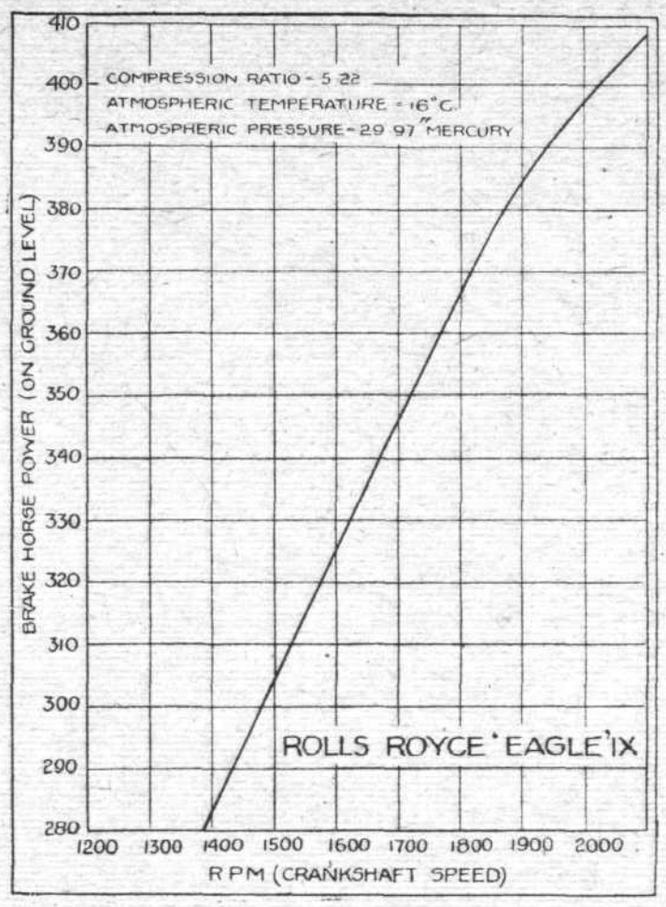
# THE ROLLS-ROYCE "EAGLE IX" AERO ENGINE

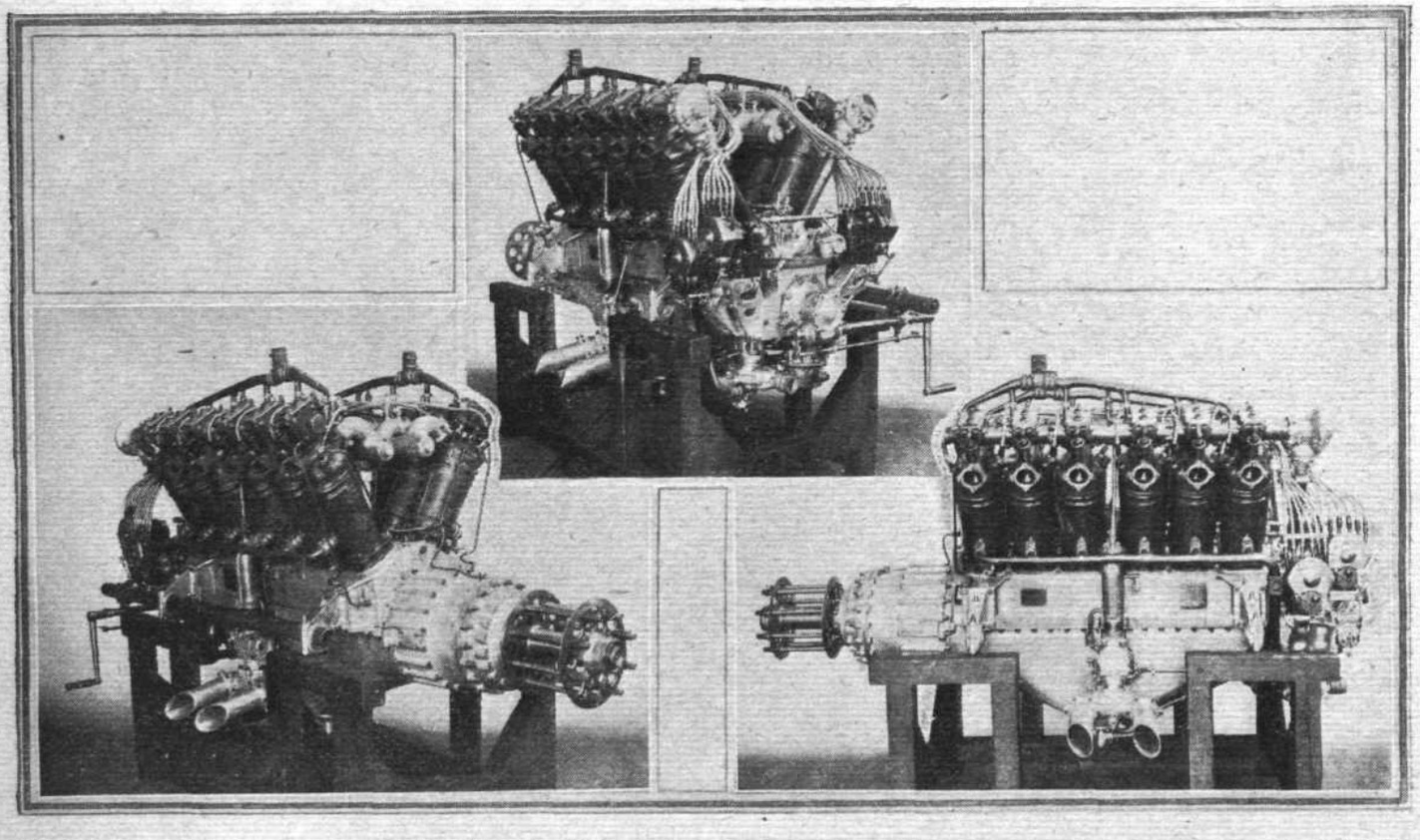
IN our issue of December 14 last, brief reference was made to a new aero engine that had recently been introduced by the Rolls-Royce Co., and we now give some further particulars, together with illustrations and a power curve, of this engine.

The engine in question is known as the "Eagle IX," and in general design resembles the "Eagle VIII," which has proved itself to be an exceptionally successful and reliable aero engine. As is well-known, the "Eagle VIII," originally a war product, not only achieved success in war-work, but later figured prominently in many peaceful record flights throughout the world—notably on the Atlantic flights of Alcock, and Lieut. Sacurdura Cabril. As practically all the surplus stock of "Eagle VIII's," necessarily left on the Government's hands at the Armistice, is by now disposed of to various concerns in all parts of the world—the reputation of this engine being such that it was "eagly" sought after—there is no question that the production of another engine of similar type, with promise of even better performance, will meet with a satisfactory reception.

The "Eagle IX," as previously stated, follows the same general design of the "VIII," being a 12-cyl. water-cooled, V, with a bore and stroke of 4½ ins. and 6½ ins. respectively, developing 360 h.p. at 1,800 r.p.m. From the considerable amount of practical experience in the air, followed by much experimenting and testing with the "VIII" it has been possible to introduce several important improvements into the design, resulting in the production of the "IX."

These improvements in design give the "IX" several advantages over the "VIII," the most important of which may be stated as follows: In place of the four carburettors as originally fitted to the "VIII" two are now employed, and these are located low down on the centre line of the crank-case, one on each side of the engine with the induction leads passing up between the third and fourth cylinders to the manifolds supplying each group of three cylinders. The substitution of two carburettors in place of four not only considerably facilitates engine tuning and improves the mixture to the various cylinders, but their low position enables gravity feed being used in as many cases as possible, the float feeds having been redesigned for this purpose. Thus the engine will now function satisfactorily with a head of petrol only 8 ins. above the centre line of the crankshaft—a feature of some importance. The danger of fire has also been considerably reduced by certain alterations in the design of the carburettors.



**Three views of the Rolls-Royce "Eagle IX" Aero Engine, an improved version of the famous "Eagle VIII." The power curve of this engine is shown above.**