

THE BRISTOL "JUPITER" FAMILY—(III)

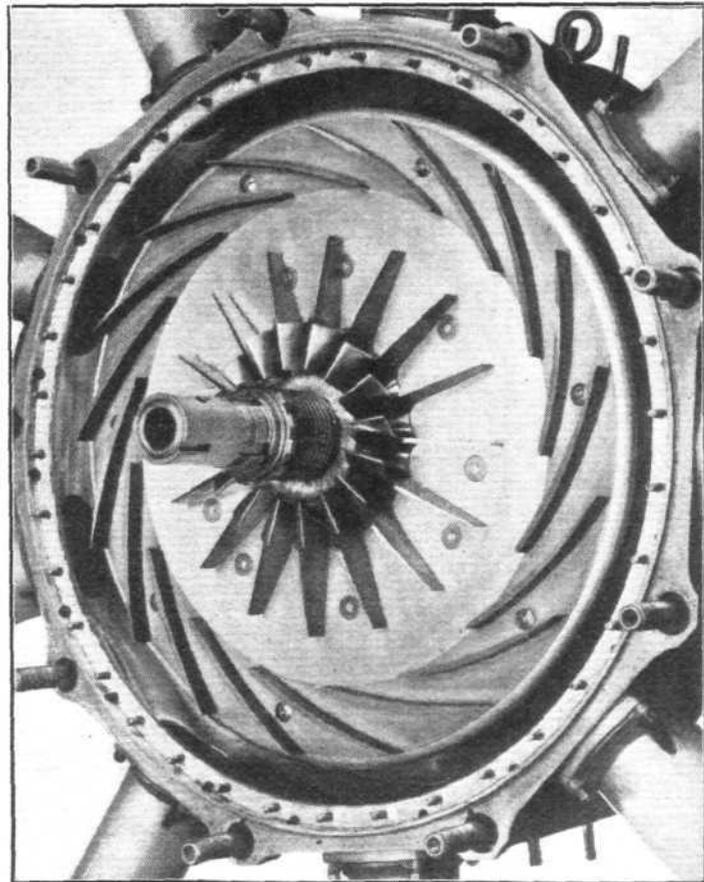
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In our article last week we described the standard "Jupiter" induction system as fitted on the Series VI A, VI AM, and VI AL, and the geared types VIII, IX and XI, in which a three-start induction spiral is employed for distributing the charge to the cylinders. So far, there is but one type of "Jupiter" in which this system of distribution is not used. This is the type known as the Series VII, which is a special engine, in that it is supercharged by means of an engine-driven induction fan or blower. Unfortunately, it is not permissible to describe in detail the method of driving this blower, nor to give data relating to the speed at which the blower runs, the sort of pressures attained by its use, and other information which it would have been of great interest to publish. It must suffice to point out that the Series VII "Jupiter" develops full normal power at 12,000 ft., so that the amount of supercharging may, perhaps, be estimated from this by those clever enough to do so.

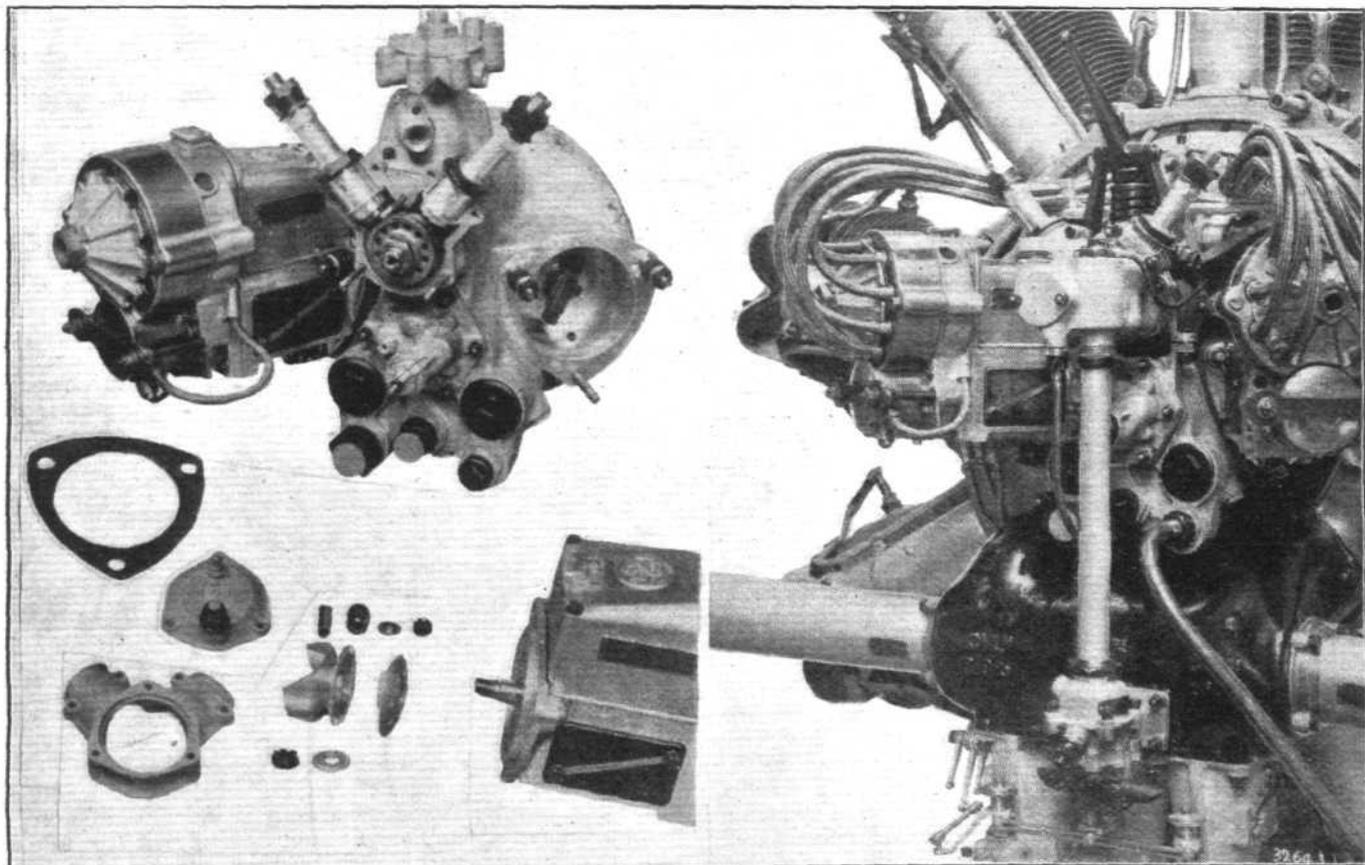
The blower used on the Bristol "Jupiter" VII is of the high-speed centrifugal type, and it embodies certain interesting patented features aimed at overcoming the inertia problems encountered with a mechanism of this type. A system of slipping clutches ensures that the impeller is protected from shock loads, and the torque in the blower drive is practically constant. One result of this, and of the low tooth loadings, is that the drive is exceptionally quiet and of good durability.

One of our photographs shows the Bristol blower, and from it it will be seen that the blower unit is mounted immediately behind the rear wall of the crank-case, in the annular chamber occupied by the spiral induction distributor in other "Jupiter" types. The Bristol "Triplex" carburettor is mounted on the intake side of the blower, and the mixture is drawn axially into the impeller and discharged radially or tangentially via a fixed diffuser into the annular induction chamber. From there the mixture is fed to the cylinders through the normal induction pipes.

Compared with the series VI "Jupiter," the supercharger enables the power to be maintained at 12,000 ft., where the series VI has dropped about 30 per cent. of its power. As



The gear-driven supercharger of the Series VII Bristol "Jupiter."



Rear view of geared "Jupiter," showing arrangement of engine-driven petrol pump, hand turning gear, gun gear generator, magneto mounting, etc.