

PARIS AERO SALON.—View of the 4-cyl. Duthheil-Chalmer Aero motor, which has its cylinders opposed in pairs.

Such water as is turned into steam passes automatically by expansion into a large aluminium tubular condenser, mounted longitudinally in the sides of the car frame, and is there converted into water again by air cooling. The condensed water is returned to the tank by a small belt-driven pump.

The eight cylinders are arranged V fashion upon an aluminium base-chamber, to which they are fastened by loose yokes at their flanges. They are made of forged steel, and are in one piece with their heads and valve-chambers.

Anzani.

Three-cylinder air-cooled engine, built on the Anzani motor bicycle engine lines, with radial cylinders set close together in one plane. The cylinders are made of cast iron and have perforated fins for cooling. The atmospheric inlet-valves are placed over the exhaust-valves.

E.N.V.

Eight-cylinder V water-cooled engine with electrolytically deposited copper jackets. No special attempt has been made in this engine to depart from proved principles in respect to valves, &c., for the sake of lightness, and it therefore has a more substantial appearance than many aviation motors. A special feature—the subject of a patent—is the shape of the joint between the jacket and the casting at the lower end of the cylinder.]

Duthheil-Chalmer.

Horizontal 4-cylinder engine, with the cylinders opposed in pairs. The cylinders are held in place on an aluminium base-chamber by long bolts which pass through lugs on a cast-iron yoke, which forms a cap over the cylinder-head. This engine is installed in the Pischoff aeroplane.

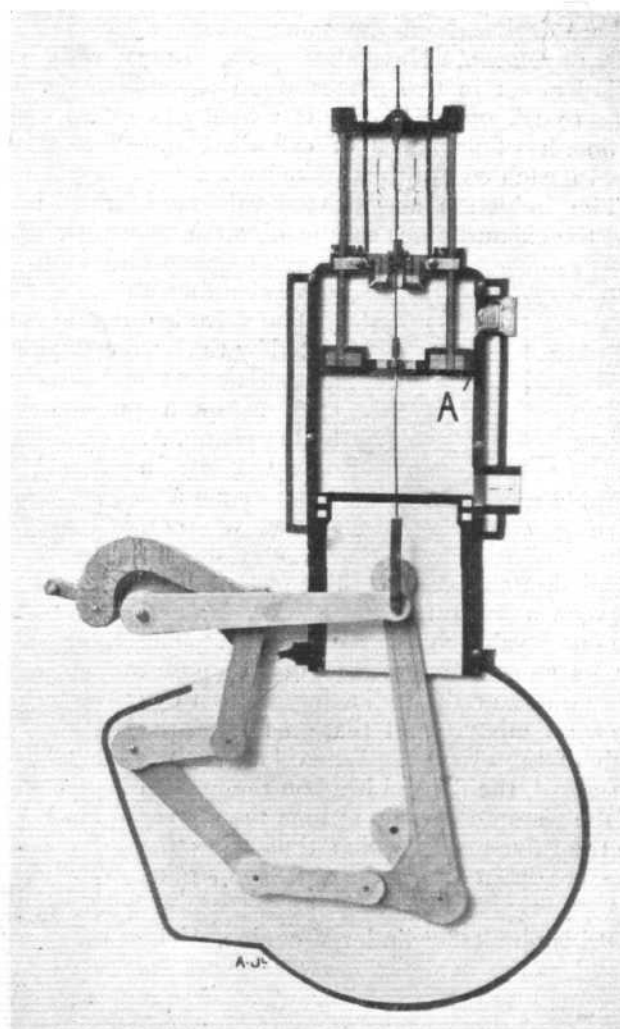
De Korwin.

Six-cylinder semi-radial air-cooled engine, constructed by Buchel, and fitted with a mechanically-operated distributor in the mixing-chamber. The cylinders are mounted in four planes upon a semi-circular base. The object of the distributor is to isolate the induction-pipe which is in action at any moment from those which are idle and thus to obtain a greater suction on the jet; an advantage of 10 per cent. is claimed for the arrangement.

De Korwin "trois temps."

Model of an engine which completes its cycle in one revolution, and gives complete positive scavenging and fixed compression with a variable charge, without any

supplementary external pumps. It belongs to the four-stroke category, but is called by the inventor "trois temps," because the cycle is divided into three periods: (1) explosion; (2) exhaust and suction; (3) compression and transference of charge. These operations are all performed inside the working cylinder by the aid of a false head, which is caused to descend after the piston, when the latter has uncovered the exhaust-ports at the end of its working-stroke. The false head, which is in effect a second piston, scavenges the gases



PARIS AERO SALON.—Photograph of a sectional working model of the De Korwin "trois-temps" engine, showing the false head, A.