

NEW MAXIMOTOR 100 HORSEPOWER.

The advent of the flying boat, with its ever increasing popularity and safety's demand for larger and higher powered motors, has made it imperative that the Maximotor makers accede to this demand with the new improved Model "B," 100 h.p., 6 cylinder vertical type.

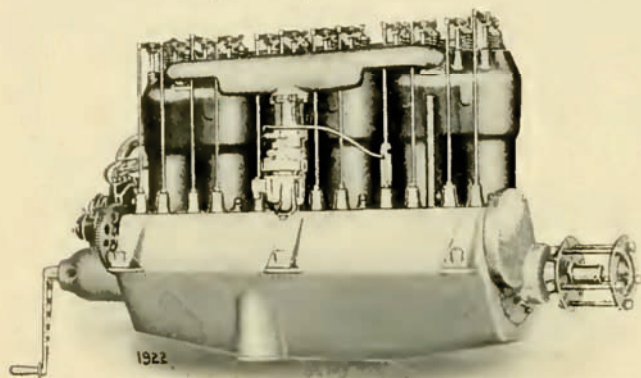
These improvements are the culmination of months of experimental work achieving toward the objective points, Power, Reliability, and Durability.

In a three hour test, the company states, coupled to a hydro-dynamometer, this motor developed in excess of 111 actual brake h.p. at 1,350 r.p.m., which is phenomenal for a 5 in. by 5½ in. six cylinder engine. (The A. L. A. M. rating for this size is 60 h.p.) During

head. They are machined both inside and out, so as to allow for uniform expansion, and equal weight.

The connecting rods are drop forgings of chrome-nickel steel, double heat treated, and are very light in weight, as, in fact, are all the reciprocating parts.

Some very fine detailing is to be found in the crankshaft design. This is cut out of a solid billet, or slab, of heat-treated chrome-nickel steel imported from Germany. After the shaft is cut, it goes through a machining process which brings it down to within several thousandths of its finished size. The shaft and crankpins are then hollow bored and the whole ground and finished to size to within one one-thousandth of an inch.



this test the motor consumed 8½ gallons of fuel and 7 pints of lubricating oil per hour and showed a throttle range, without skipping, of 350 to 1,400 r.p.m. under load. The weight of the motor complete as it was mounted on the stand was 372 pounds.

Among the numerous improvements to be found on the new Model "B" 6 is the improved overhead valve system, with parts strengthened and bearing areas increased; a double set of large ball bearings, carrying the propeller end of crank shaft and mounted in a steel disc housing, instead of aluminum, as heretofore; an arrangement for a double individual magneto ignition system; double force-feed oil pumps; wider wrist-pin bearings; and a strengthened crank case, especially the supporting arms which have been just doubled in size. Also a compression release device is provided where desired.

The new Maximotors are built of the highest grade of imported English and German materials.

As will be seen from the accompanying cut, the cylinders are of the overhead valve type (all valves mechanically operated by adjustable push rods), cast in pairs. This arrangement tends to produce a very compact construction, gives the cylinders greater strength for equal weight, and reduces the manifold joints and connections just about one-half in number. The material from which the cylinders are cast is a high grade vanadium composition, containing 30 per cent. steel. Strength and lasting qualities are claimed for the formula, as well as clean, smooth castings free from defect. Pistons, likewise, are cast from the same material as the cylinders and are heavily ribbed in the

Five imported annular ball bearings are employed to carry the crankshaft. The propeller end of the crankshaft is especially rigidly supported by two extra heavy combined radial and thrust ball sets. These heavy duty ball bearings are mounted in a vanadium steel housing which is in turn recessed and bolted to the crank case proper by six nickel steel stud bolts.

Lightness is secured in the cam shaft member by utilizing nickel steel tubing of large diameter and heavy wall. The cams are of special carbon steel tempered and ground and are held in place by taper pins. All the valves are operated by tubular push rods and nickel steel rocker arms from a single cam shaft.

An equalizing intake manifold of cast aluminum is bolted to the cylinder intake ports and a special manifold muffler (shown in the end view of the six cylinder motor illustration) can be fitted for silencing the exhaust.

In addition to the "B" 6 and the other stock models, the Maximotor makers are putting on the market as a standard a 125 h.p., eight cylinder, V-type along general Maximotor lines, the first of which will appear in the very near future.