

## THE ROGERS B.4 AIR-COOLED ENGINE

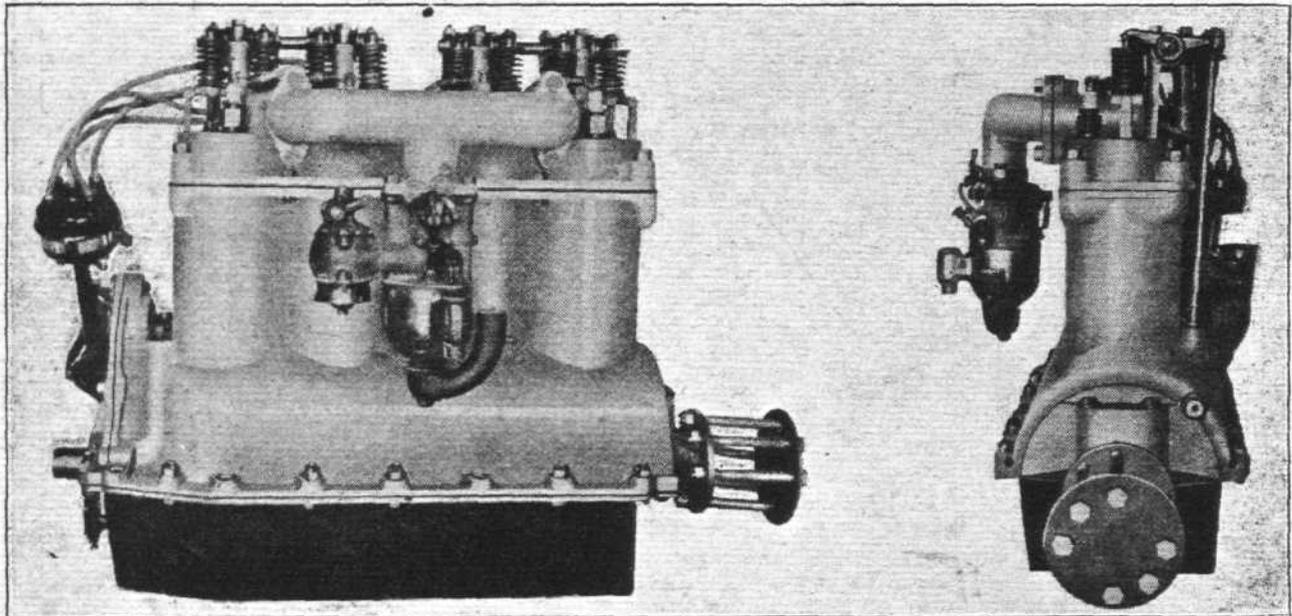
THE accompanying illustration shows a four-cycle four-cylinder air-cooled engine produced by the Rogers Aircraft Co., of Fort Worth, Texas, U.S.A., developing 45 h.p. In designing the "B.4," as it is called, the makers have aimed at producing, at low cost, a durable and efficient light-weight power plant suitable for use on a sport plane, ice-land or "air-car," and one with which inexpensive replacement parts are readily available.

Direct cooling is achieved in this engine without projecting fins, the valve springs, rocker arms, valve stems, valve cages and rocker-arm parts being designed to give additional surface to carry off the surplus heat. The manufacturers

to be 40 per cent. lighter than aluminium, having at the same time exceptional wearing qualities. The physical characteristics of this metal are: Specific gravity, 1.85; elastic limit, 14,000 lbs. per sq. in.; tensile strength, 22-24,000 lbs. per sq. in.; melting-point, 1,100° F. The piston, complete with bushings, weighs 14 ozs.

Strong, light and durable cylinders have been obtained by employing the finest grey iron, which metal is also used for the cylinder-heads. The intake is an aluminium casting, free from sharp bends and having an inside measurement of 1½ in.

Lubrication is by splash, and a model "L" Schebler car-



Two views of the Rogers "B.4" air-cooled engine, a new light four-cylinder 45-50 h.p. motor of American origin.

claim that numerous tests have demonstrated that this engine cools perfectly in flight.

Both inlet and exhaust valves are carried in the cylinder-head, and the charge is thus led direct to the top of the piston, whilst the exhaust is forced out with minimum effort—there being, as may be seen from the illustration, no pockets or exhaust manifolds as in other types of engines.

The connecting rods are of 60/40 carbon steel, and in spite of the fact that they weigh only 1½ lbs. each, are stated to be exceptionally strong. The pistons are of "Dowmetal," and are fitted with four rings, three compression and one wiper—the latter carrying oil back to the crank-case and preventing the fouling of the plugs. "Dowmetal" is claimed

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The principal characteristics of the Rogers B.4 are:—

Horse-power .. .. .	45-50.
Bore .. .. .	3½ ins.
Stroke .. .. .	4 ins.
Number of cylinders .. .	4.
Weight of motor dry .. .	140 lbs.
Weight per horse-power ..	2.8 lbs.
Petrol consumption .. .	0.412 lb./h.p./hr.
Oil consumption .. .	0.011 lb./h.p./hr.

### Fokkers for Russia.

FROM Helsingfors in Finland it is reported, and confirmed in a message from Holland, that the Russian Government has just placed a large order for aircraft with the Fokker works of Amsterdam. The figure 500 is mentioned, and although this is probably somewhat exaggerated, there seems little doubt that the N.V. Nederlandsche Vliegtuigenfabriek has received a very large order. It is stated that a Russian Commission is now staying at the Schiphol aerodrome, where, out of every five machines, one is officially tested by the Russian representatives.

### Roland Garros' Aeroplane Brought Back.

A FEW days ago the remains of the aeroplane on which M. Roland Garros, the famous French pilot, met his death on October 5, 1918, were brought back to Paris and placed in the Air Museum at Chalais-Meudon. The machine was escorted by a number of leading French aviation personalities, and the route was laid *via* the Arc de Triomphe, a halt being made at the tomb of the Unknown Warrior, and a minute's silence was observed.

### Amundsen to Make Use of the "Shenandoah"?

FROM America it is reported that Mr. Roald Amundsen, whose attempt to fly from Nome, Alaska, to Spitzbergen, last summer failed, has been offered by the U.S. authorities the use of the Z.R.1, or, as she is now called, the "Shenan-

doah," for his proposed attempt next year. Amundsen is to use for his next effort Dornier all-metal flying boats of the type exhibited at Gothenburg, and if he accepts the offer of the loan of Z.R.1 the airship will probably be employed as a supply ship. It is expected that Amundsen will accept the offer.

## PERSONALS

### To be Married

The engagement is announced of Flight-Lieut. R. W. GORDON WEST, R.A.F., son of the late Rev. J. O. West and Mrs. West, Beacon's Hill, Lichfield, and ELISE, only child of Capt. H. N. GARNETT, C.M.G., R.N. (Retd.), and Mrs. GARNETT, "Qui qu'en Grogne," Dinard.

The engagement is announced between Flight-Lieut. F. G. C. WEARE, M.C., only son of Mr. and Mrs. F. Weare, of The Dell, Tunbridge Wells, and ELEANOR RACHEL, only daughter of Mr. and Mrs. H. D. CHERRY-DOWNES, of Southfield House, Newark-on-Trent.

### Death

The death has occurred from pneumonia of Flying Officer ABBOTT, R.A.F., of Henlow Aerodrome, near Hitchin. Flying Officer Abbott, who was 42 years of age, accompanied Captain Scott on his last expedition to the Antarctic. Military honours were accorded at the funeral at Northampton on November 26.