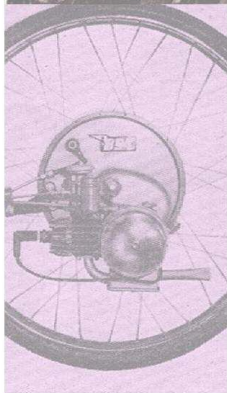


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## CHAPTER XIX

### THE TEAGLE

W. T. TEAGLE (MACHINERY) LTD.  
Blackwater, Truro, Cornwall

THE Teagle cyclemotor is made by a firm of West Country agricultural engineers, and is basically a "square" (40 × 40 mm., 49 c.c.) two-stroke driving the rear wheel from the carrier position. It is retained by clips attaching it to the saddle tube and rear down-members, and by a stirrup mounting to the rear spindle ends. Three-point rubber insulated suspension is used.

**The Power Unit.** Cylinder barrel, crankcase, and outrigger-bearing bracket form a single casting, eliminating gaskets throughout these parts. The detachable aluminium cylinder head is heavily finned and has a brass insert to receive the 14 mm. sparking plug, which can thus be removed and replaced indefinitely without damage to the thread.

A Wellworthy liner and piston assembly is used, the liner having a bridged exhaust port. The piston is of the deflector type. The liner is inserted by differential expansion at 750°F., and the piston pin is inserted through the inlet ports. The gas transfer-passage is outside the cylinder liner and the incoming gases enter the head opposite the exhaust port giving unidirectional flow.

The engine lies horizontally with the head to the rear, and there is a shield between it and the tapering three-quarter gallon "petrol" tank, so that in effect the power unit is largely enclosed. Cooling is not dependent upon exposure to the air, as the Bantamag generator, upon the near-side end of the crankshaft, has cooling fins cast upon the flywheel. The engine is in fact blower-cooled, in the makers' own description.

Since cooling is thus positive, it is claimed that a "cool" plug, as distinct from the heat-resistant types usually fitted to two-strokes, can be employed. A cool-running plug has a greater resistance to oiling up than a "hot" one. The makers also state that long periods are possible between successive decarbonizings since there is no tendency to pre-ignition from hot carbon deposits in the head or on the piston crown. Maintenance, in other words, should be considerably reduced.

The tubular exhaust system can be removed and taken apart

by unscrewing two nuts, at the same time exposing the exhaust ports: the point at which it is most essential to keep a two-stroke engine clean. The overhead shield which covers the engine and acts as a cowl to the fan draught is removed with the cylinder head, by removing two studs and four nuts. A tool-kit of five spanners and a screwdriver is supplied with the engine.

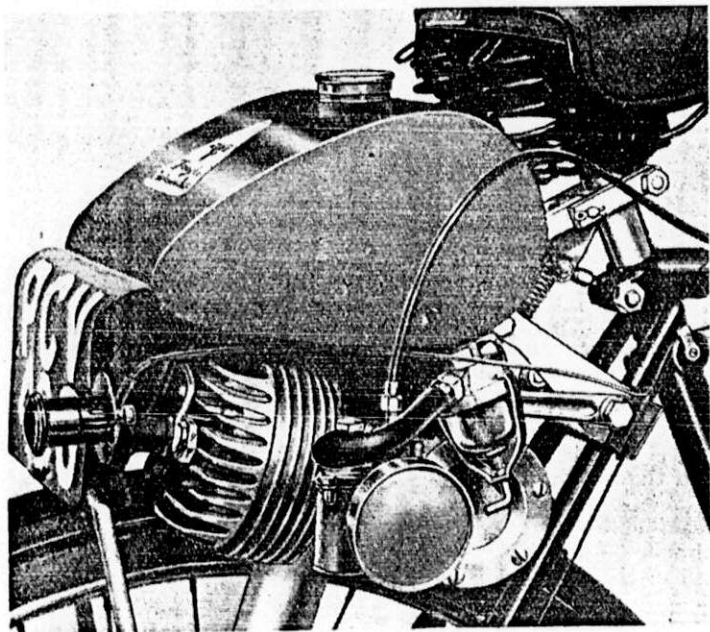


FIG. 32. THE TEAGLE

The connecting-rod is drop-forged from R.R. 56 alloy and the bearing bores are burnished. The fabricated steel crankshaft is ground to fine limits and there is the refinement of a centrifugal lubrication system to the crankpin. Oil seals protect all bearings, which should thus be assured of a long life since they do not have to depend upon "petrol" mist.

**A Replacement Engine.** If, after a considerable mileage major engine reconditioning is required, a replacement engine, less carburettor and flywheel magneto, can be supplied from Teagle

agents in exchange at £4. Alternatively the engine can be sent back to the makers for reconditioning at a low price. This ensures accurate work and a better result than the amateur can obtain.

**Fuel and Carburation.** Carburation is by a needle-less B.E.C. carburettor and petrol to oil strength is 20 to 1. Mixture strength is regulated by a screw behind the main (single) jet which varies the vacuum. A separate starting chamber can be filled to any

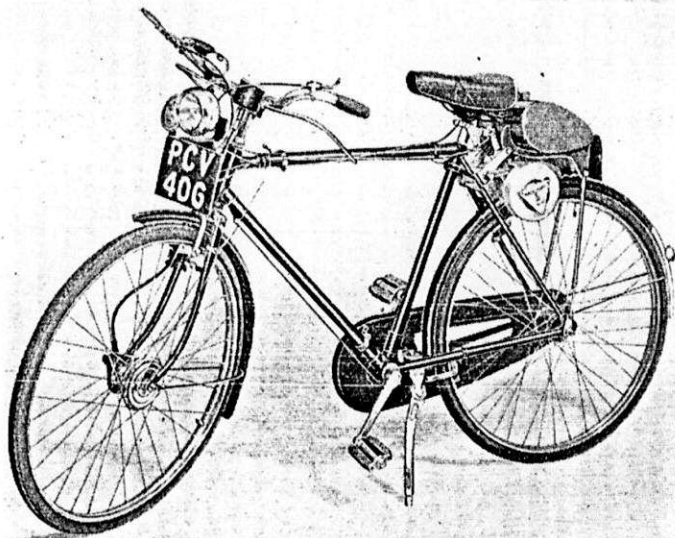


FIG. 33. THE TEAGLE AS FITTED

desired level, high in cold weather or not used at all in the summer. For very cold weather SAE 10 oil, a very light grade, is recommended, and SAE 20 for other occasions.

A sediment-trapping bowl filter passes the fuel to the carburettor, in the inlet of which there is also a gauze, so that clean fuel should always reach the engine even if it is not strained into the tank. The filler cap of this has an anti-splash device and an oil measure.

**The Controls.** A toggle lever on the handlebars controls the pressure of the hardened steel drive roller. This is cut with gear teeth which soon become in effect geared to the tyre. Rollers are

supplied in  $1\frac{3}{8}$  in. or  $1\frac{7}{8}$  in. for hilly or level use, and the handlebar toggle varies the pressure to suit wet or dry weather. Owing to its toothed construction the roller should not be lowered on to the moving tyre when starting—one should pedal away with the teeth engaging the tread. The only other extra control is the lever throttle.

The engine is claimed to develop up to  $1\frac{1}{2}$  h.p. Equipment, in addition to the tools already mentioned, covers both number-plates, licence-holder, and rear lamp. The Teagle has a year's guarantee.