

THE MOTOR CYCLE, 22 JUNE 1950

631

Cyclaid Attachment

31 c.c. Two-stroke Unit Employing Belt-Drive

A NEW motor attachment for cycles is the 31 c.c. Cyclaid (32x35mm) two-stroke. An interesting feature is that it employs belt-drive to the rear wheel.

The engine has an aluminium cylinder head and barrel, the latter with cast-iron liner. Light alloy is used for the crankcase, which also incorporates a countershaft housing. Supported on two ball bearings, the countershaft is driven at its outside through helical spur gears giving a reduction of 3.7 to 1, and carries a vee-belt pulley at its other end. Lubrication of the reduction gears and the countershaft bearings is by petrol. Three ball bearings support the crankshaft—one on the nearside, one between the crank web and the primary drive pinion, and the third between the pinion and flywheel magnet; the last-mentioned is a Wico Flyc Bantamag. The hardened-steel connecting rod has a roller-bearing big-end and a phosphor-bronze bushed small end.

The piston is deflectorless, but has a slightly domed crown. Compression ratio is 5.6 to 1.

Mounted horizontally over the rear wheel, the unit is carried on front and rear engine plates. The former are bolted to a cast-in lug on the cylinder head and are provided at their forward ends with Silentbloc rubber bushes through which is passed a specially strengthened saddle-pillar pinch-bolt. The rear engine plates are attached by set-screws to a sliding block located at the top of an inverted U-shaped member; bottom ends of the legs of the member attach to special wheel-spindle nuts which have threaded tubular extensions. (The fact that they are tubular permits normal operation of, for example, a three-speed hub.) Movement of the sliding block is controlled by a coil spring. Thus the engine mountings pivot at the front and are sprung at the rear.

To provide for adjustment of belt tension the rear engine plates are slotted. Attached to extensions of the front and rear engine plates, the petrol tank forms a link between them and is specially strengthened for that purpose. Tank capacity is 3

pints. The petrol proportion recommended is 1 in 50.

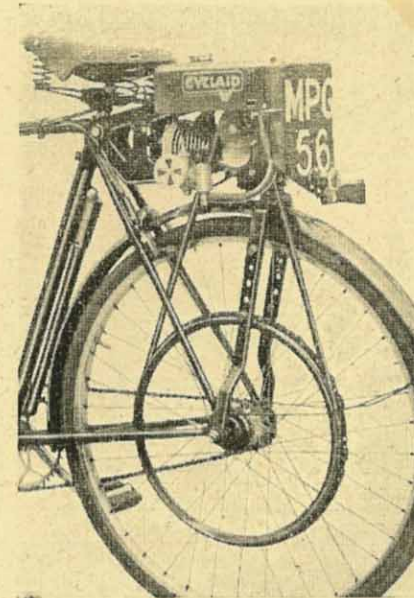
The belt-wheel is fastened to the nearside of the cycle rear wheel by small clamp plates over the spokes. Incidentally, this wheel is drilled so that the clamp positions can be varied to fit both 40-spoke (British) and 36-spoke (Continental) cycle wheels.

The drive from the engine can be disconnected by slipping the belt from the engine pulley and looping it over the carburettor air intake. The carburettor is an Amal 308/5 and has its intake projecting from the nearside of the unit. In this position the strangler can be operated quite easily from the saddle. Sparking plug type is Smiths KLG F50.

Pulling Power

A cycle fitted with a Cyclaid attachment was tried on the road by a representative of *The Motor Cycle* and the all-round impression received was excellent. There are two handlebar controls, a decompressor lever and—most unusual but very welcome—a twist-grip throttle control. With the strangler shut, the engine fired within a pedalling distance of 10ft, and the strangler was opened after a further 20ft had been travelled. The response to the twistgrip of such a small engine was very good—the term "acceleration" might even be used! There was no belt slip so far as could be judged. Two-stroking was excellent. On up-gradients, the engine showed very good pulling power and at full throttle a cruising speed of 10 m.p.h. was maintained. Running became erratic at peak revs. on the level. Maximum speed on a flat stretch of road was approximately 18 m.p.h.

Total weight of the unit, less fuel, is 15lb, and it makes very little difference to the handling of the cycle at low speeds. Minimum speed before the engine's power impulses were felt was between 4 and 5 m.p.h. Throughout the entire speed range there was no vibration. Silencing was adequate.



The Cyclaid attachment fitted to a cycle

Deliveries of the Cyclaid will begin about the end of June. The makers are British Salmson Aero Engines, Ltd., Raynes Park, London, S.W.20. The price is £20.

T.T. Awards

...many overseas riders competing in the ... there was very keen competition this ... the Association's representatives ...

of the Association, Major H. R. Watling, told the members that the Manufacturers' Union had decided to allocate 50 guineas to help preserve the historical records and encourage the good work. Harold Karslake is the Hon. Librarian of the Association. ... in ... Den ...

Selfe (497 Ariel), 11m 49s; 2. A. White (348 Velo-cette); 3. A. C. Kirby (498 Triumph). **12 Fastest Riders (6 laps)**—1. L. R. Archer (348 Velo-cette) 16m 24s; 2. J. H. Sheehan (348 Velo-cette) 16m 48s; 3. ...