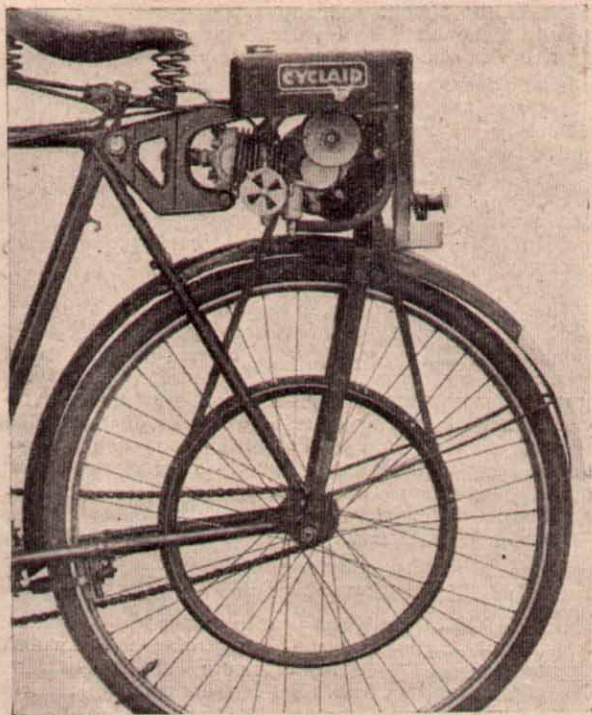
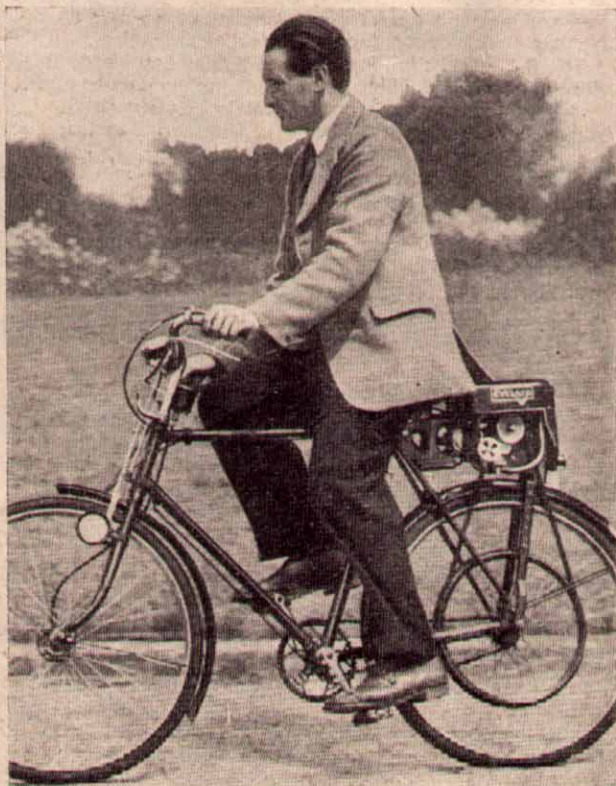


# CYCLEMOTORS

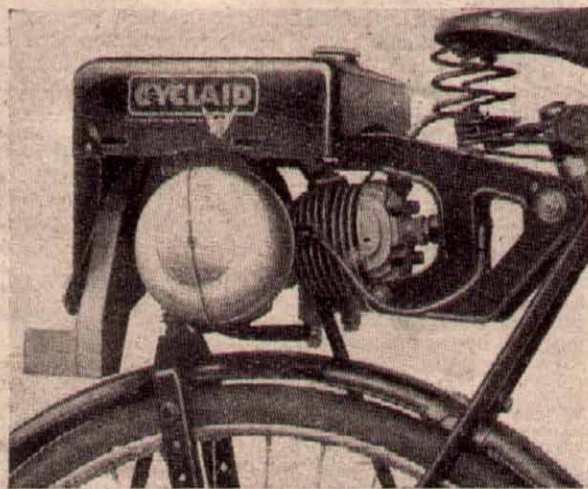
"Motor Cycling" Describes and Tests a New 31 c.c. British Two-stroke Attachment with Belt-drive, and a Modified Foreign 2-speed o.h.v. Unit of 48 c.c.



Belt-tension on the Cyclaid is maintained by spring-loading the pivoted engine mounting bracket. (Right) A Cyclaid equipped bicycle on the road. It is stated to be able to cover 300 miles on a gallon of fuel.



(Left) The 3-port engine has a domed piston and the compression release valve exhausts into the silencer.



## THE BRITISH SALMSON "CYCLAID"

PRODUCED by British Salmson Aero Engines, Ltd., of Raynes Park, London, S.W.20, a concern that has for a number of years maintained a high reputation for engineering craftsmanship, the new Cyclaid cyclemotor attachment was recently road-tested by "Motor Cycling."

A conventional three-port two-stroke engine of 35 mm. by 32 mm. giving 31 c.c.—one of the smallest road-going engines on the British market—the Cyclaid is fitted above the cycle's rear wheel, which it drives through the medium of an endless V-belt. The pressed-steel mounting is pivoted at the front end on a special bolt replacing the bicycle saddle clip bolt. This arrangement, by means of distance pieces, allows the rubber-bushed engine plates

to move slightly whilst still pinching the saddle tube. The rear end of the unit is spring-loaded on a strutted adjustable support—fitted to extension nuts on the back wheel spindle.

The engine parts are beautiful examples of precision engineering. The crankcase, cylinder barrel and cylinder head are all die-castings of light alloy, giving an attractive exterior and a "clean" interior finish. A detachable steel cylinder liner, spigotted into the crankcase, is fitted, while four long studs hold both barrel and head to the crankcase, thereby imparting exceptional rigidity to the unit.

A roller-bearing big-end is fitted, while the built-up crankshaft is carried on ball-journal bearings. On the left-hand side is the helical gear reduction

drive to the external belt-pulley—affording a primary reduction of 3.7 to 1, whilst the right-hand shaft carries the Wipac flywheel magneto. At 3,500 r.p.m. the engine develops some 0.7 b.h.p. Further points on the unit are the flat-topped 3-pint petrol tank—slotted to take straps—which may be used as a carrier. At the rear, a bolted-on downwards extension forms the rear number-plate, in front of which is fitted the neat welded-steel silencer. A twist-grip throttle and a lever for the decompressor are the only engine controls carried on the handlebars. The choke control is directly fitted to the carburettor air-cleaner.

The use of belt drive might, at first glance, appear to be a retrograde step, but the road-test soon showed that such a view would be completely incorrect. The most flexible of all positive drives, the V-belt still possesses many protagonists and combines high efficiency with an ability to absorb shocks. Its cleanliness, silence of operation and sheer simplicity are all points likely to appeal to the market at which the unit is aimed. Suffice to say that "Motor Cycling's" man, offered a run on a Cyclaid-equipped bicycle, immediately fell under the charm of the little engine. One single turn of the pedalling cranks, and the decompressor was





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pushed home. Immediately, the engine started, and pulled away at walking pace; slower, in fact, for the cycle-type speedometer fitted registered only some 3 m.p.h. The ability of the unit to pull at so low a speed is due, in no small measure, to the flexibility of the transmission. This, in turn, means that, in traffic, only the throttle need be operated—a quality which will be well appreciated by the potential but so far unskilled user.

The unit's pulling power and its smoothness were most impressive. A sharp incline was climbed comfortably at a steady 12 m.p.h. against a stiff breeze and, on the downhill side, the speed rose to nearly 20 m.p.h. without any sign of protest. An uphill run with the wind was next made at a steady 15 m.p.h. and then the same climb was tried again, this time throttling down at half-distance until the speedometer registered 0 m.p.h. The throttle was

then opened smartly, and immediately the Cyclaid surged forward until the needle was again near the "15" mark.

The handling of the machine proved to be excellent, feet-up turning under power in a narrow road being quite an easy manoeuvre, while cornering was effortless. Although no opportunity was available to test the Cyclaid's thirst, a fuel consumption of about 300 m.p.g. is claimed. The price, tax free and including fitting is £20.