THE BOOK OF THE VELOCETTE

CHAPTER I

THE VELOCETTE RANGE

FOR the 1939 season, the makers of the Velocette are producing six models which cater quite adequately for a diversity of tastes.

The first model to be described is a worthy descendant of a long line of Velocette two-strokes, as the makers for many years concentrated solely on producing two-stroke machines.

The G.T.P. Model. This machine (Fig. 1) is designed to appeal to the ordinary utility rider who is concerned with ease of handling,

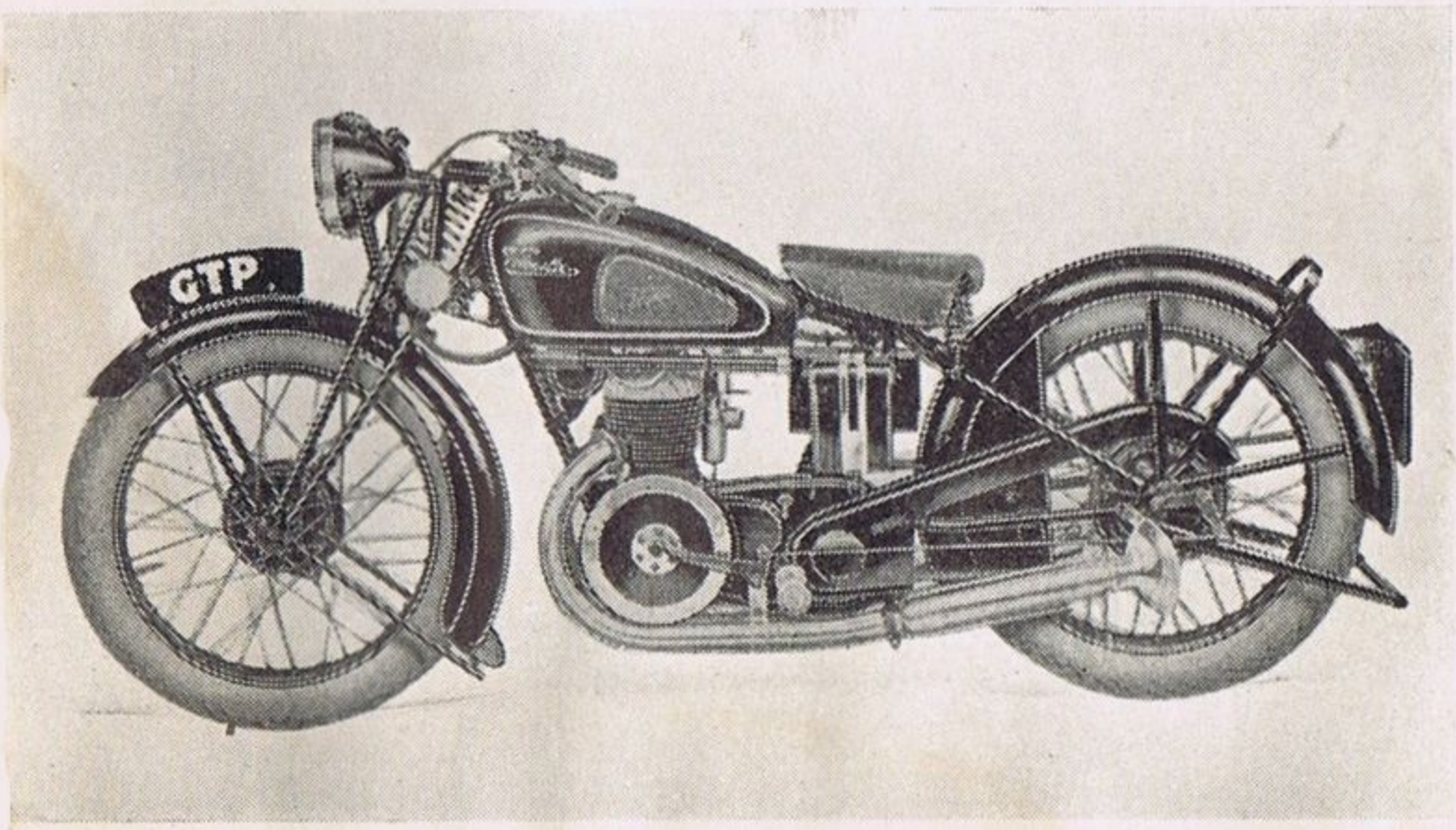

FIG. 1. THE G.T.P. MODEL

light weight, and freedom from attention more than tremendous acceleration and maximum speed.

The Engine. The cubic capacity of the engine (Fig. 2) is 249 c.c. which is obtained by employing a bore of 63 mm. and a stroke of 80 mm. The aluminium piston, which is fitted with a floating

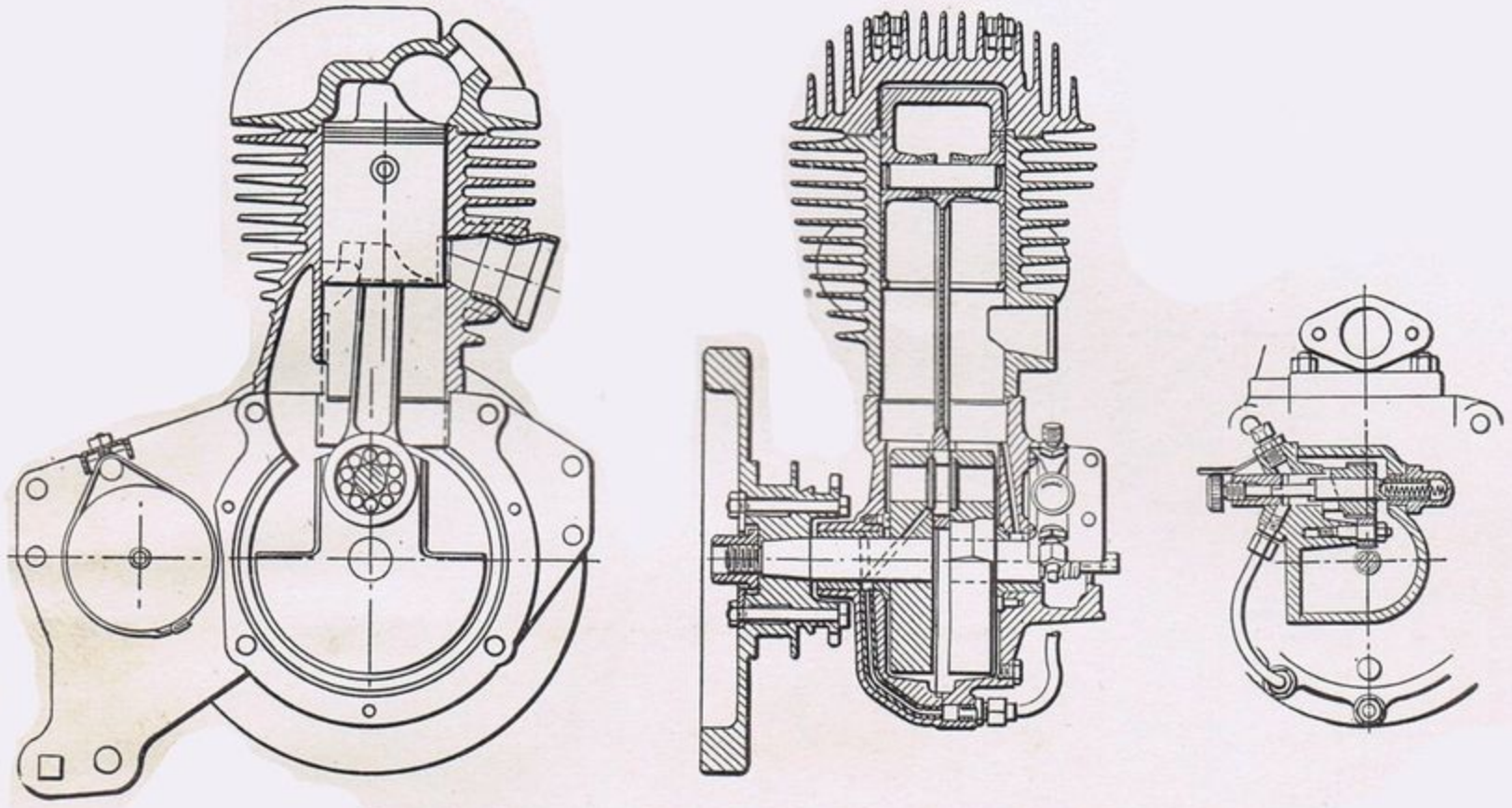

FIG. 2. THE POWER UNIT OF THE G.T.P. MODEL.

gudgeon pin and two rings, reciprocates in a cast iron cylinder barrel. An aluminium cylinder head specially designed to promote turbulence, and large twin exhaust ports ensure freedom from overheating troubles. The large diameter roller bearing big-end,

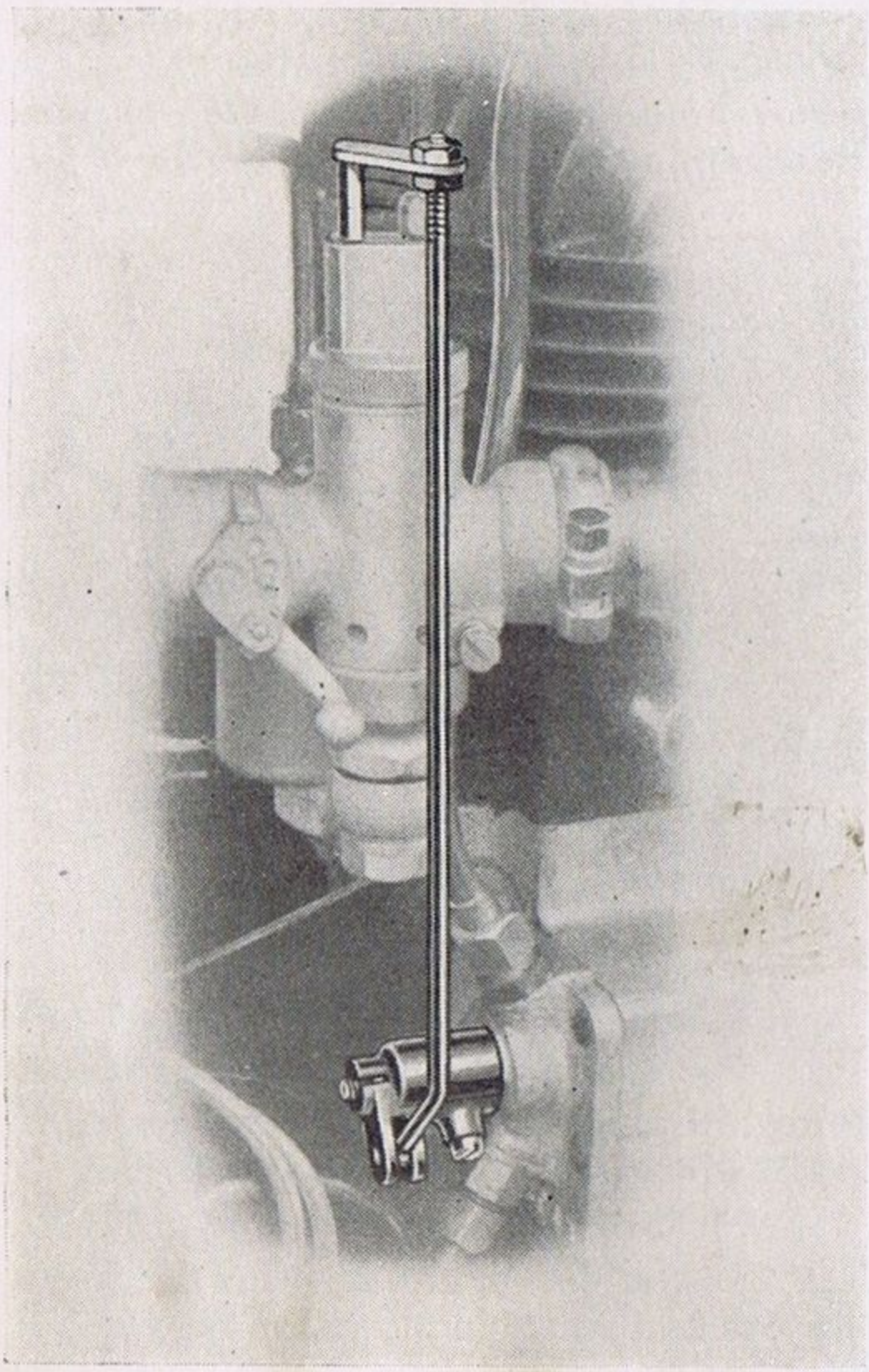

FIG. 3. THROTTLE CONTROL OF LUBRICATION

massive crankshaft and outside flywheel assist in making the engine singularly smooth in operation. Lubrication is by mechanical pump which is ingeniously connected to the throttle control, Fig. 3, so that as the load is increased, so the engine is given a more generous supply of oil. The carburettor is provided with a quick action, thin pattern twist grip, situated on the right handlebar and an air strangler is provided for easy starting.

Gearbox and Clutch. The four-speed gearbox is of Velocette manufacture and is fitted with a twin top and silent third. Gear

changes are effected by means of a right foot pedal, the gear change mechanism being located inside the box. The kick-starter is equipped with a folding crank. The three-plate clutch which is operated by a left handlebar lever is fitted with an extra strong clutch cable 2·8 mm. in diameter. The gear ratios with the standard 20 T gearbox sprocket are 5·3, 7·1, 9·3, and 13·6 to 1.

Frame and Forks. Large diameter tubes are employed in the diamond pattern frame and with the single compression spring fork, enable light and accurate steering to be obtained at all

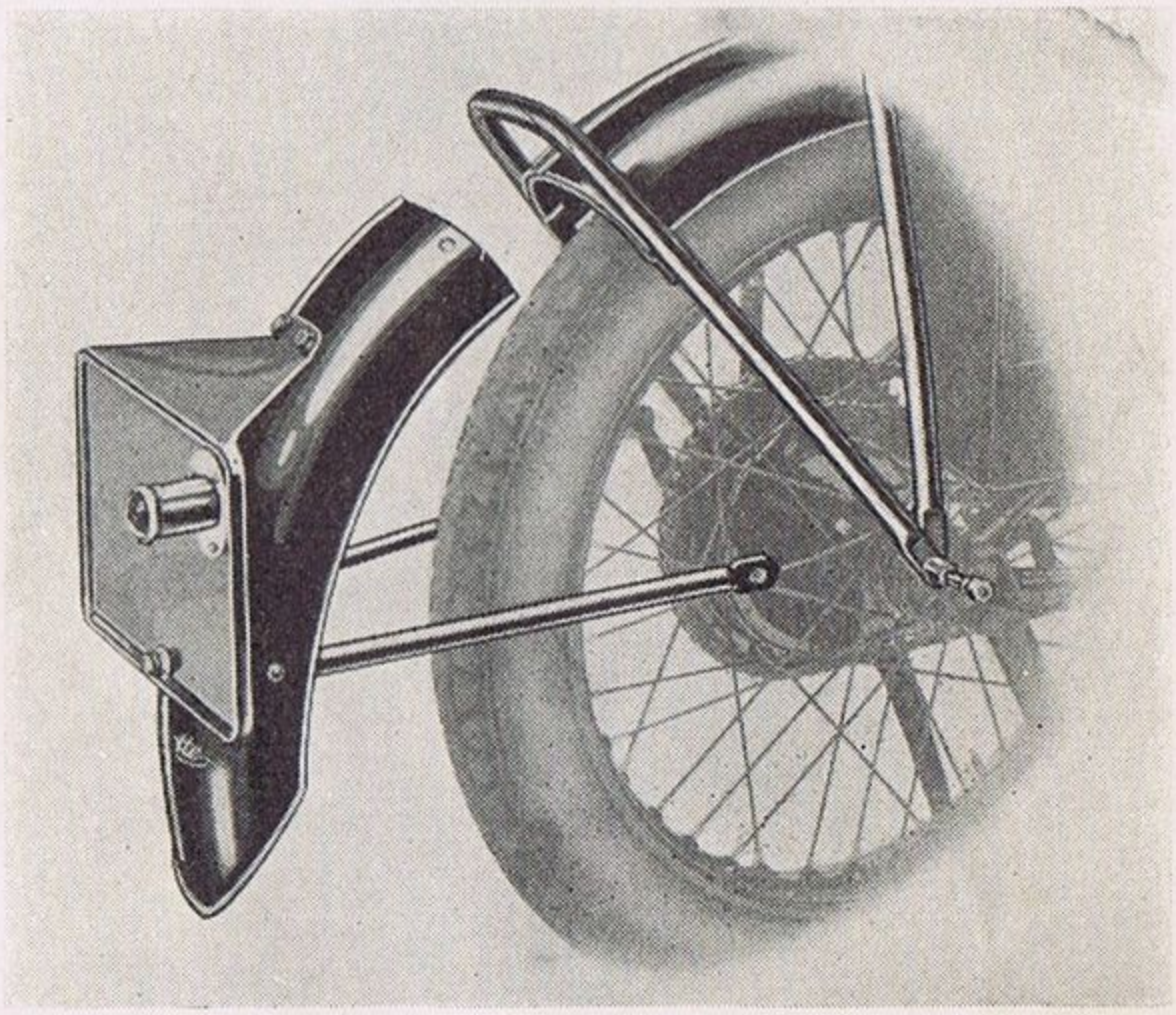

FIG. 4. SHOWING THE QUICKLY DETACHABLE PORTION OF THE REAR MUDGUARD G.T.P. MODEL

speeds. The fork shock-absorber and steering damper are provided with hand adjusters and suitable provision for the easy mounting of a speedometer has been made.

Transmission. The front chain operates under ideal conditions, being totally enclosed in an oil-bath. The secondary chain is well protected by an efficient guard over its top run.

Tank. The well-balanced saddle tank finished in the familiar black with gold line has a capacity of 2½ gal. petrol and 3½ pints of oil. Easily operated filler caps and large knee grips are provided.

Brakes. Large 6-in. diameter internal expanding brakes are provided for both wheels and individual hand adjustment for each brake is provided. Special provision has been made for taking the speedometer drive from inside the front brake drum.

Silencers. Twin chromium exhaust pipes, flange fitted to the cylinder, lead into two large silencers fitted with fishtails. The silencers may be easily removed in order to clean carbon deposit from the baffle plates.

Equipment and Finish. Mudguards 6 in. wide with ribbed centres are provided, the front being valanced for additional protection and the rear easily detachable (Fig. 4). The flexible top saddle is provided with a three-point fixing. The rubber covered footrests are easily adjustable for riding position. Both

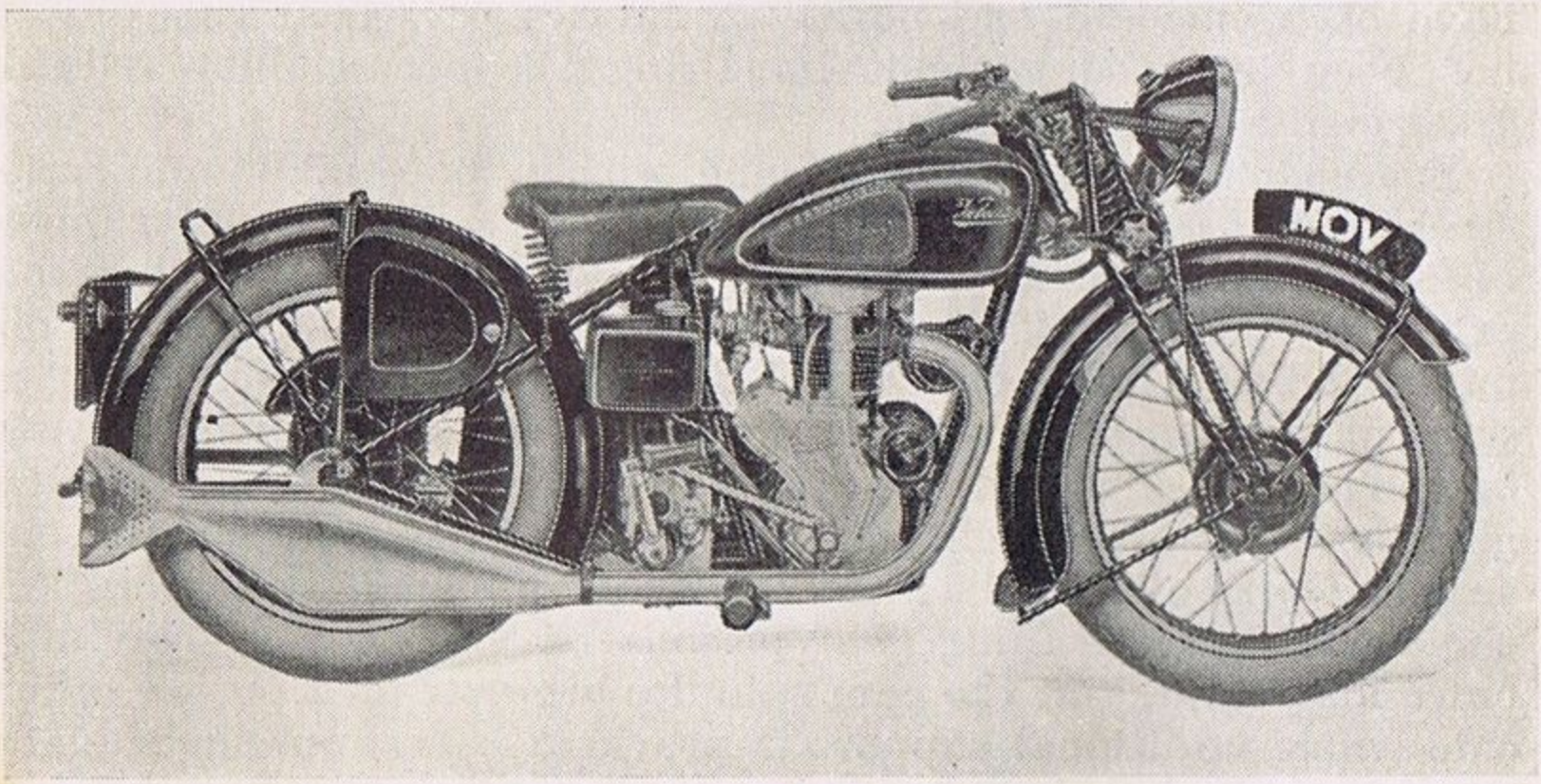

FIG. 5. THE M.O.V. MODEL

wheels are provided with stands. The front is held by a locking nut, and the rear is of the spring-up variety. The tyres are 19 × 3·00 in. A complete kit with all the tools necessary to carry out running adjustments, an inflator and grease-gun are supplied as standard. This machine has a ground clearance of 5½ in., wheelbase 50 in., height to top of saddle of 26¾ in., width over handlebars 27½ in., and a speed of 50 to 55 m.p.h. The standard finish is in highest quality black enamel, with the tank gold lined with transfers, and all the usual bright parts are chromium plated. The price, with full electrical equipment, high frequency horn and licence holder, making the machine ready for the road, is the extremely moderate one of £45.

Lighting and Ignition. The electrical system consists of a 6-volt belt driven dynamo which supplies current to the 13-amp.-hour battery which in turn supplies the spark for the coil. The headlamp is of 6½ in. diameter and is provided with a parking light, dip light and 24 watt head light. An ignition warning lamp is incorporated in the headlamp to prevent the battery discharging

through the coil. A safety key for the ignition which prevents theft is supplied.

The M.O.V. Model. This machine (Fig. 5) on its initial appearance created a great deal of comment as it was the first push-rod operated overhead valve machine made by Veloce Ltd. Its debut was so successful that the manufacturers were compelled to widen the choice of engine sizes and there are now 350 c.c. and 500 c.c. versions of the M.O.V. model. It was the intention of the designer to create a machine which would run for a long time without attention, and with this end in view all the high-speed components have been enclosed and positively lubricated. That this object has been attained without impairing the accessibility reflects great credit on the designer.

Engine. The single port engine with a bore of 68 mm. and stroke of 68¼ mm. giving a capacity of 248 c.c. was the forerunner of the "high camshaft" type of engine which has become extremely popular. The timing side pinion (Fig. 6) drives the oil pump and the timing cam wheel via an intermediate pinion. The short push-rods are operated by cup-ended enclosed rockers bearing on the timing cams and are totally enclosed. The overhead valve gear is enclosed in oil-tight aluminium cases and adequately supplied with oil. In the interests of long life and silent operation the teeth on the timing gear pinions have been very carefully cut and ground, and the cam spindles are extended on the outer side where additional support is provided by an outrigger plate which is bolted to lugs inside the timing case. The flange fitted magneto is gear-driven by a composition wheel. Two compression and one scraper ring are employed on the aluminium piston, the standard compression ratio being 6·75 to 1. The gear driven oil pump supplies oil under pressure to the various working parts, the surplus being drained off and returned to the ½ gal. oil tank situated under the saddle.

Gearbox and Clutch. The Velocette four-speed gearbox is fitted with twin top and silent third gears, the ratios varying between a 6·3 to 1 top, 8·4 third, 11·1 second and 16·1 bottom. The various gears are brought into engagement by foot pedal. The operating mechanism is located internally within the box. The kick-starter pedal may be folded out of the way once the engine is started.

Frame and Forks. All the joints in the frame, which has 1⅜ in. top and bottom rails, are brazed giving maximum strength and rigidity. The ground clearance is 5 in. and the crankcase is protected over rough going by the lower part of the frame. The single central compression spring fork is equipped with hand-adjusting shock-absorbers and steering damper. Bronze brushes provide the bearing surface for the ground steel spindles.