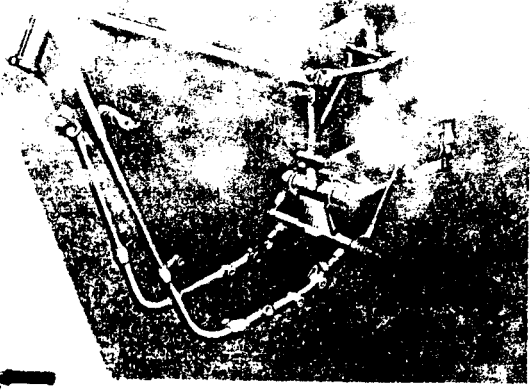


# NOV

Right: The new duplex frame fitted to all A.J.S. models except the new three-fifties and two-fifties. Malleable lugs are employed at the steering head and rear-fork pivot



## A.J.S.

**A** NEWCOMER in the A.J.S. 1960 programme is a light and particularly neat three-fifty single which is offered as an alternative to the more familiar 347 c.c. Model 16. But novelty does not end there, for every other over-250 c.c. machine in the range adopts, for the first time, a full duplex-cradle frame. In addition there are redesigned cylinder heads for the five-hundred singles and all the twins.

Virtually a scaled-up edition of the attractive little two-fifty introduced last year, the new 348 c.c. Model 8 incorporates such unusual design features as a cylinder head in which the inlet and exhaust tracts are offset from the fore-and-aft axis of the machine, and a *désaxé* cylinder arrangement with the cylinder axis forward of the crankshaft axis so that piston slap is minimized. Hairpin valve springs are featured. Fitting snugly against the rear of the crankcase, the four-speed gear box has a cylindrical shell and can be rotated in its mountings to tension the primary chain.

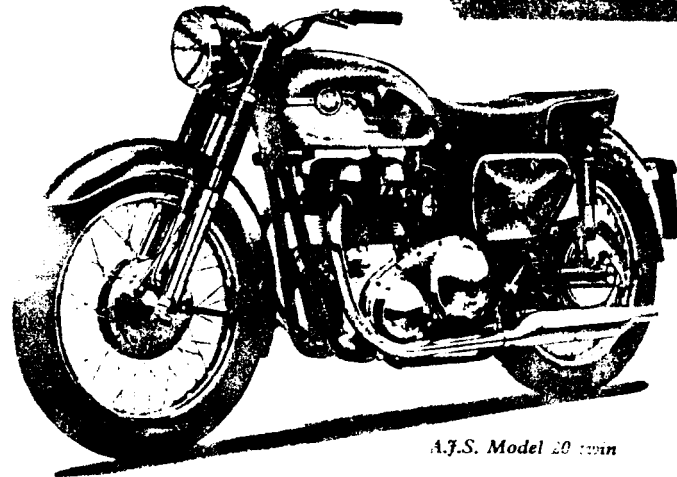
For trials, the 347 c.c. 16C is continued, now with reinforced support for the rear mudguard and a modified rear-fork pivot. Scrambles riders have the choice of the 497 c.c. 18CS single or the 646 c.c. 31CS twin, both supplied in stripped form ready for racing. Normally there is no lighting but an a.c. generator can be supplied if required.

Roadsters comprise the two three-fifties already mentioned, the 498 c.c. single-cylinder Model 18 and twin-cylinder Model 20 and three six-fifties—Models 31 and 31 de Luxe and the 31CSR Sports-twin. As before, hairpin valve springs are used for the singles but the twins have two-rate coil valve springs. Final model in the range is, of course, the formidable 346 c.c. 7R racer.

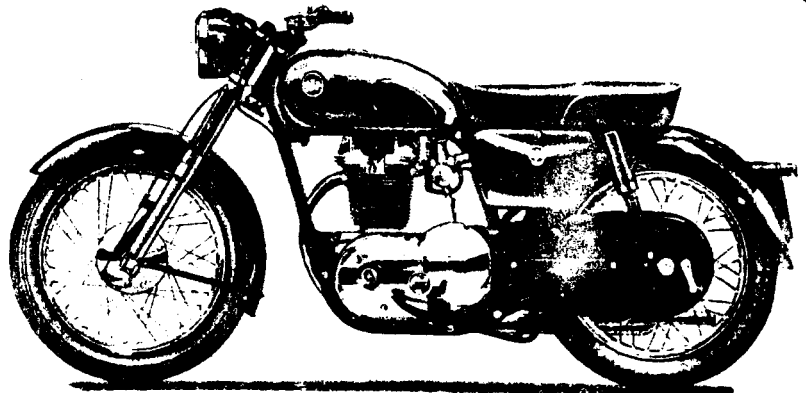
## B.M.W.

**F**OR more than a quarter of a century the name B.M.W. has been synonymous with the very highest standards of motor-cycle engineering. These sleek German transverse flat twins had a reputation for excellence well before the war and today that reputation continues undiminished. Three models are available in Britain. Pride of place goes to the super-sporting 595 c.c. R69. Its powerplant has larger valves, polished ports and bigger carburetors than the R60 standard version which is designed for touring and leisure work. Third model is the 494 c.c. R50 which differs from the R60 only in its displacement and compression and rear suspension.

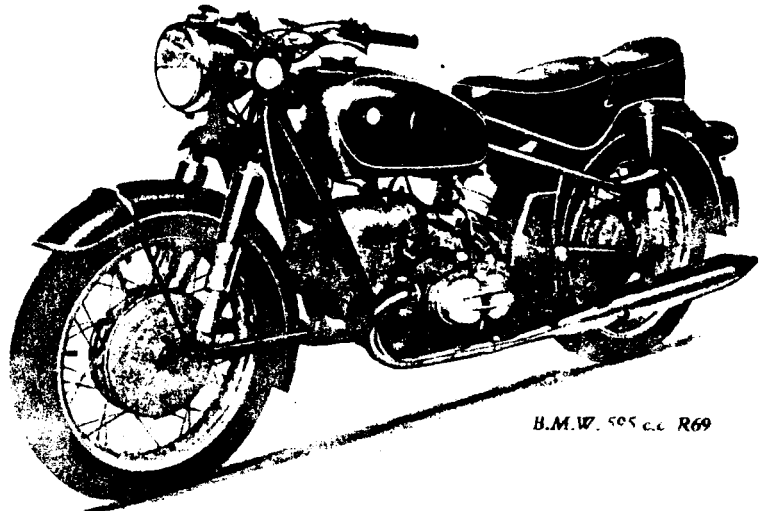
All these feature that we shall mention in detail in the engine and gear box and inverted-fork suspension front and rear. The all-black finish is as quietly impressive as the engine.



A.J.S. Model 20 twin



Lightweight three-fifty—the A.J.S. Model 8



B.M.W. 595 c.c. R69

## Jawa

**L**ARGEST of the colourful Czech motor cycles imported into Britain, the Jawa Senior has a most attractive appearance and is powered by a sleek 344 c.c. (58x65mm) two-stroke twin in unit with a four-speed, foot-operated gear box. Claimed power output is 16 b.h.p. at 4,750 r.p.m. Unusual to British eyes, the kick-starter and gear-change pedals are mounted on coaxial shafts on the left of the machine and the rear-brake pedal is on the right. Actuation of the gear pedal automatically operates the clutch for changing on the move but an overriding handlebar lever is provided for getting under way.

The frame is constructed from square-section tubing and elegantly curved steel pressings. Control of both the telescopic front fork and pivoted rear fork embodies hydraulic damping. The light unit is mounted in a neat nacelle. A foam-rubber dual-seat is fitted. Both chains are fully enclosed and both wheels are quickly detachable.

## Matchless

**B**Y any other name, it is said, a rose would smell as sweet. London built, Matchless machines are distinguishable from their A.J.S. counterparts chiefly by the tank badge—yet such is the fierce partisanship of the motor-cycle fraternity that the Matchless enthusiast will loudly defend his choice of marque against the rival claims of an A.J.S. man. This year the Matchless adherent can propound the merits of a very full series of over-250 c.c. models—and with all the advantages of a duplex-loop frame of brazed-lug construction on all save a brand-new 348 c.c. light-weight.

Designated G5, this latest three-fifty from Woolwich is a trim machine which weighs but 340 lb—over 40 lb less than the more conventional 347 c.c. G3. Weight saving is achieved by employing a frame with a single front-down tube and pressed-steel engine cradle and in various other ways such as the carriage of oil in a crank-case compartment instead of a separate tank. For ease of parking, the centre stand of the newcomer has curved, roll-on feet and is provided with an auxiliary lifting pedal.

The new frame used for the remaining Matchless mounts features twin front-down tubes which pass below the engine and gear box. A single top tube, and a short seat tube which meets the massive bar carrying the rear-fork pivot, complete the main assembly. The upper ends of the front-suspension units are pivoted in brackets welded to a bolted-on sub-frame.

In other respects the G3 is unchanged but for the 498 c.c. G80 and 497 c.c. G80S

scrambler a hemispherical combustion chamber is now specified together with an arcuate inlet tract to impart gas swirl and so promote better combustion. In addition, the cylinder-head finning is modified to improve cooling in the region of the exhaust port.

Similar light-alloy heads are adopted for the 498 and 646 c.c. twins and in their case the valve included angle is reduced to 40 degrees and two-rate coil valve springs replace the original single-rate components.

Embracing the standard G12, the G12 de Luxe and the road-burning G12CSR Sportstwin, the trio of six-fifties benefit by a more compact headlamp mounting which improves frontal appearance. A fourth six-fifty which employs the same basic power unit but is stripped for racing and has a narrow, two-gallon petrol tank is the G12CS scrambler. Normally the machine is not equipped with lights but, should they be required, a crankshaft-mounted alternator can be added at extra cost.

## Norton

**A** REALLY worth-while modification to the world-famous duplex frame for the parallel twins, rear enclosure and up-to-the-minute styling on the 497 and 597 c.c. Dominator de Luxe models, a new cylinder block and head for the five-nine-seven twins, revised gear ratios for the 348 and 490 c.c. singles—design never stands still at Nortons!

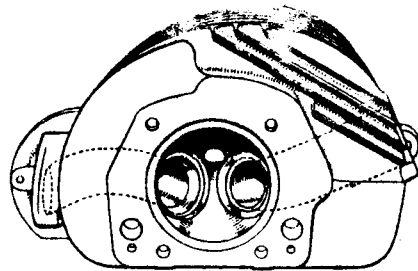
The underlying reason for the frame change was to provide an improved riding position—to reduce the distance between the tank rails and hence the width of the tank at the rear. This has been achieved by setting the rails inward from the forward cross brace. The de Luxe Dominators are styled very much on the lines of the two-fifty Jubilee. There is a similar tank and also a likeness in the rear enclosure and dual-seat.

Already famous for their performance, the Dominator twins are faster now. Inlet valves are bigger, the cams provide quicker lift, the compression ratios are stepped up and the cylinder and cylinder-head finning is deepened. The gear ratios, too, have been modified and the gap between top and third is markedly narrowed. Finally, for all the Dominators there are new-pattern absorption-type silencers.

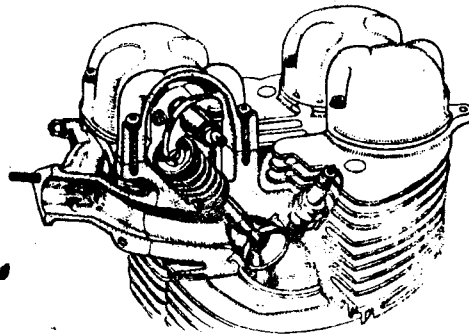
The singles also have altered gear ratios. On the 348 c.c. Model 50 the ratios for top, second and bottom gears have been lowered while third has been stepped up. For the 490 c.c. ES2 third gear has been raised and the other ratios left unaltered.

For riders overseas there is a very special Norton—a model that can probably best be described as a scrambler with lighting equipment. Designated Nomad, the machine is available with either of the two Dominator power units. The frame is of brazed-lug cradle type.

No mention of Nortons would be complete without reference to the models which have done so much to enhance the reputation of the marque the world over. The 348 and 499 c.c. Manx racing models are undergoing development in the light of experience gained during the past season. Hence details of the latest changes will not be available yet awhile.

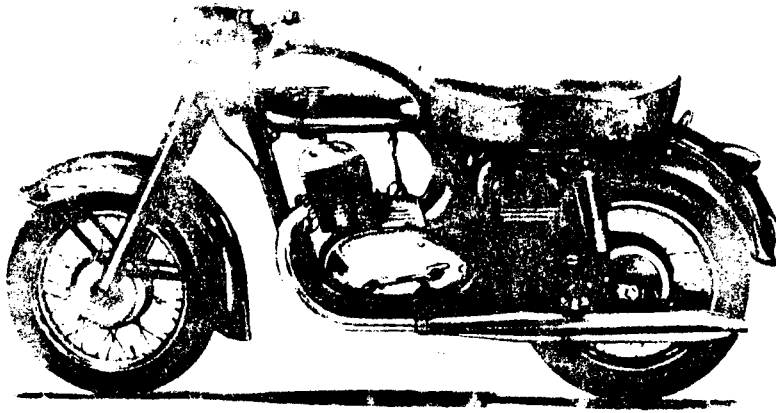


Above: Diagrammatic drawing showing how the inlet ports of the new Matchless twin-cylinder heads curve between the port and valve. Below: Cutaway of one of the new heads



Above is a close-up of the Norton Dominator 99 power unit and below a rider's-eye view of the nearly-straight handlebar featured on the de Luxe Dominators

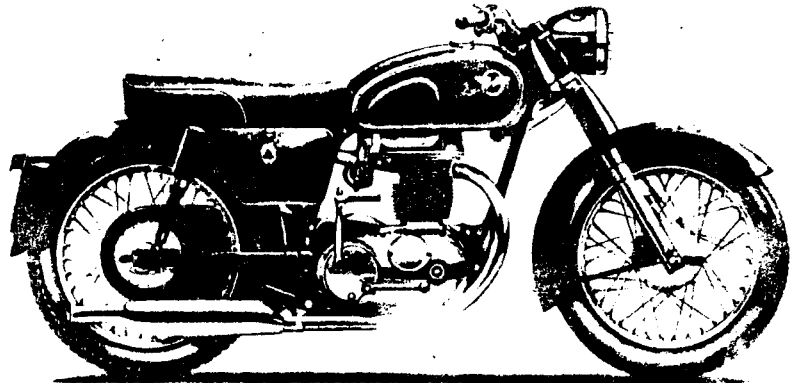




344 c.c. Jawa Senior

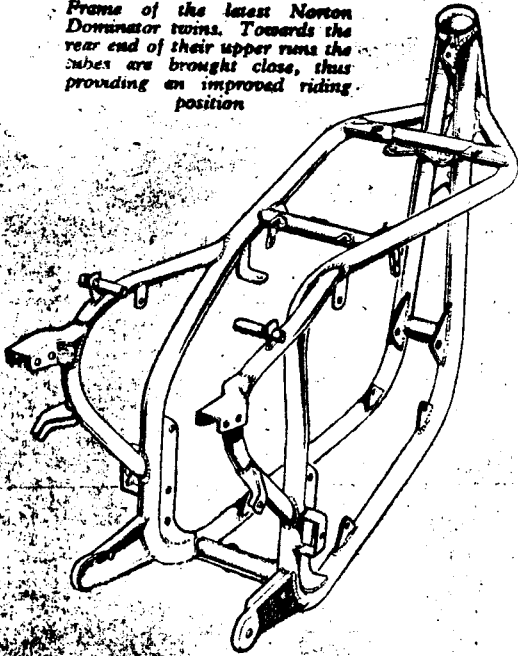


Power unit of the 646 c.c. Matchless Sportstwin

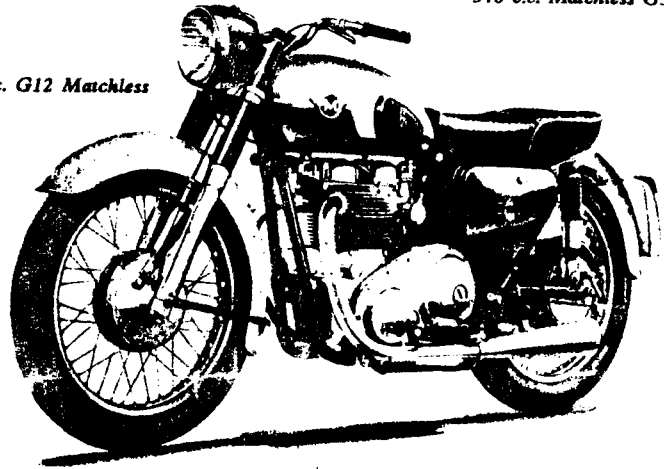


348 c.c. Matchless G5

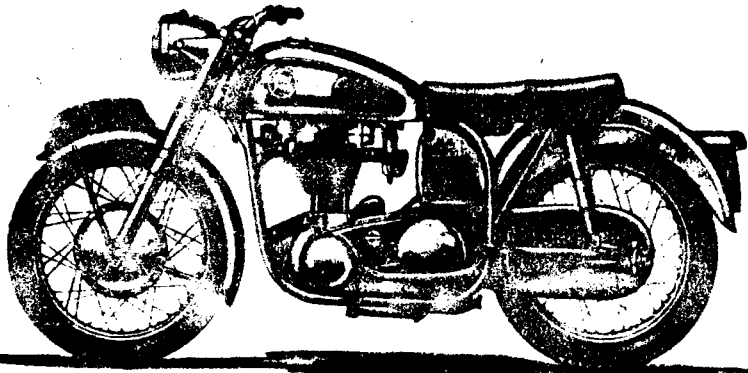
Frame of the latest Norton Dominator twins. Towards the rear end of their upper runs the tubes are brought close, thus providing an improved riding position



646 c.c. G12 Matchless



348 c.c. Norton Model 50



597 c.c. Model 99 Norton Dominator de Luxe

