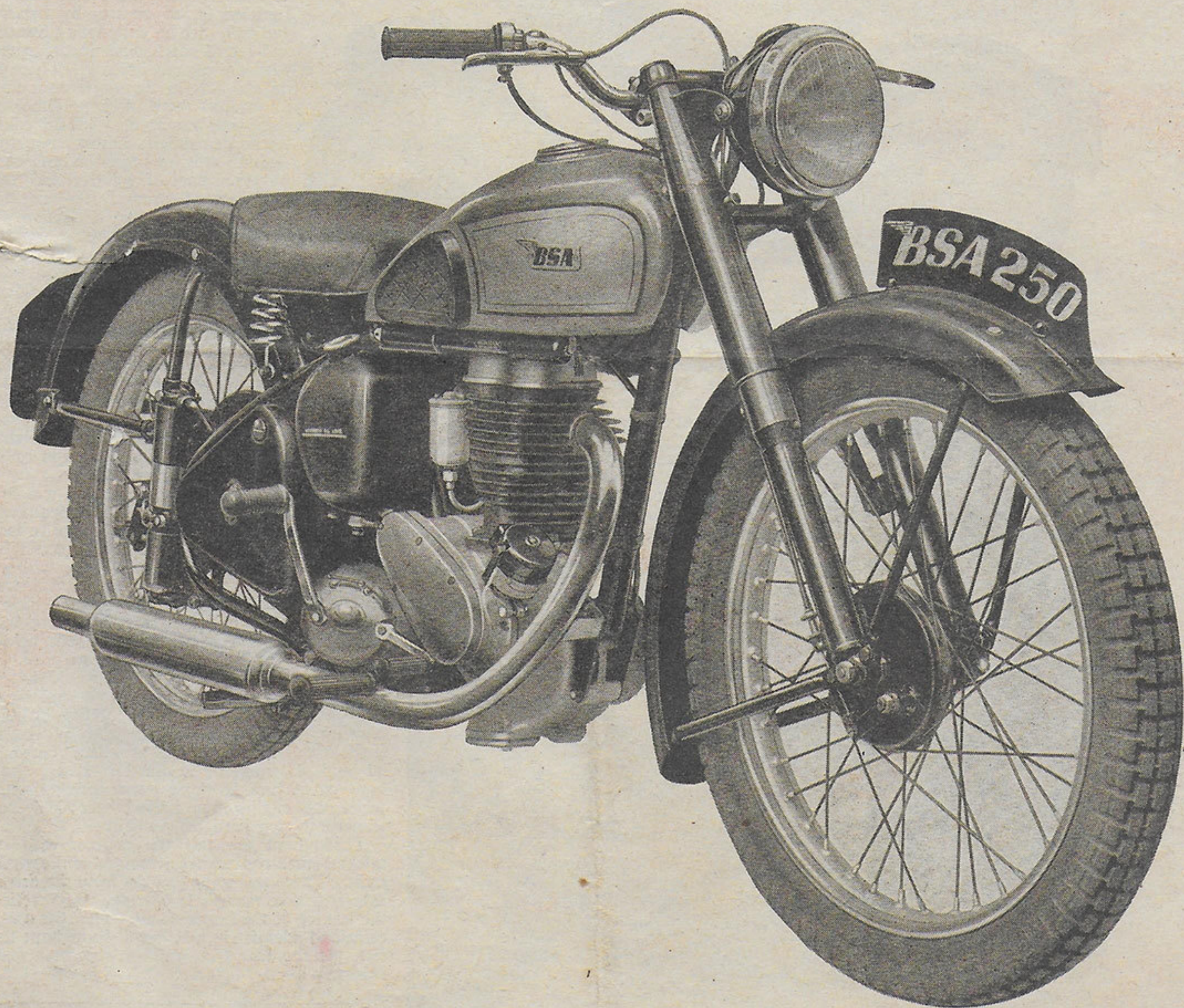


THE MOTOR CYCLE

ROAD TEST REPORT



BSA C11 250 O.H.V.

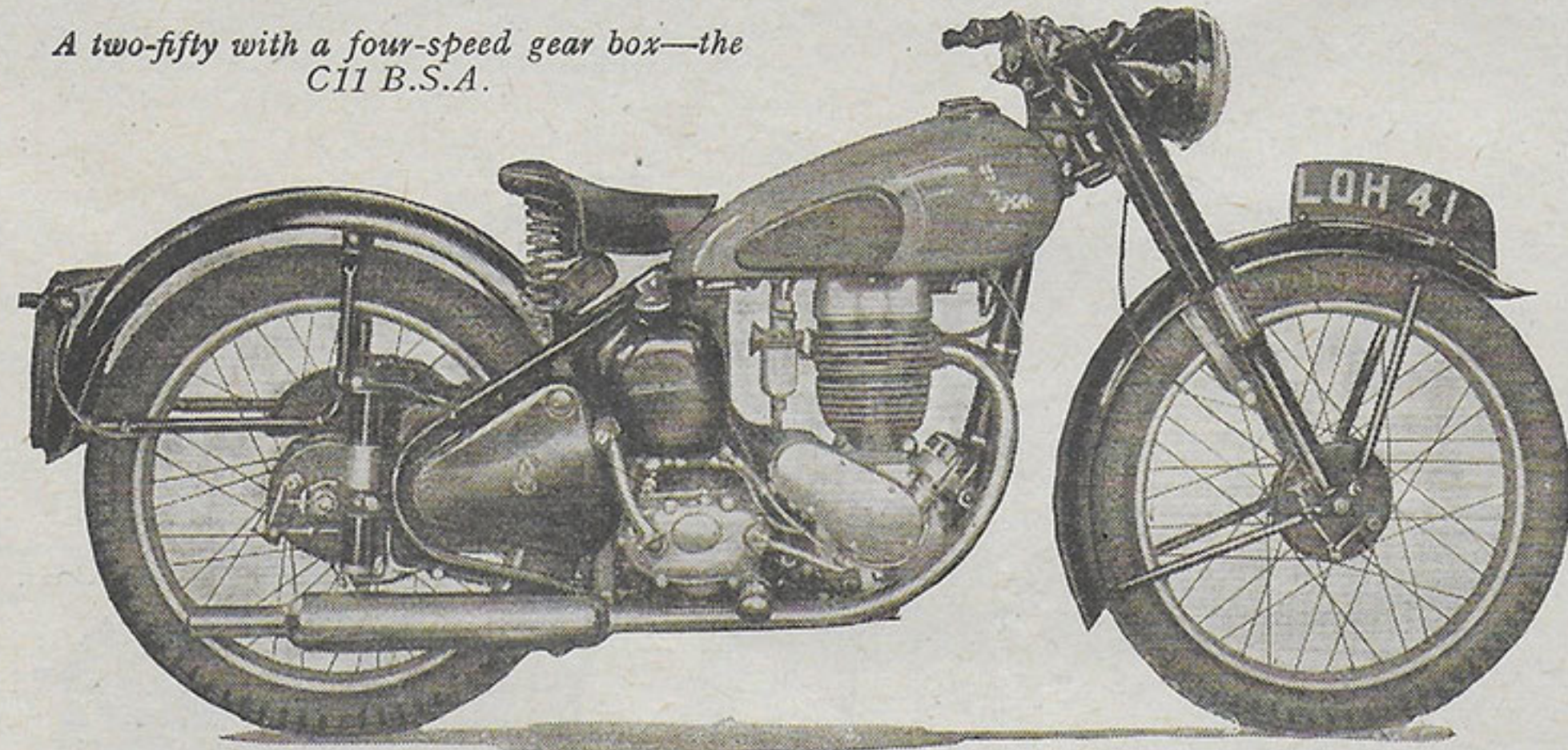
ROAD TESTS OF NEW MODELS

The 249 c.c. Model C11 B.S.A.

A De Luxe Two-fifty with Four-speed Gear Box and Rear Springing

THE smaller the engine, say the pundits, the larger should be the number of gears. The wisdom behind this is apparent to anyone who has had experience with small-capacity mounts fitted with three- and four-speed gear boxes. With four well-selected gear ratios, as opposed to a lesser number, it is easier to maintain the engine's "happiest" speed range under widely varying road conditions. The de luxe model 249 c.c. C11 B.S.A., which is fitted with a four-speed gear box, provides a most satisfactory all-round performance.

A two-fifty with a four-speed gear box—the C11 B.S.A.



It was on hills especially that the value of the extra gear was most appreciated. Indeed, the gear box as a whole gained many marks; the gear change was so good as to be classed as near perfect. Effortless gear changes could be made between any pair of gears. Between top and third, the operation could be likened to a hot wire passing through butter.

The gear pedal is short, it travels in a small arc about its pivot, and was relatively light in operation. Either upward or downward gear changes were accomplished by hinging the right foot about the footrest. Certain, clean gear engagement was assured no matter how quickly or how negligently the controls

were manipulated. There was at all times a satisfying "tautness" in the gear-selector mechanism. A certain amount of gear whine was audible when the machine was running in any of the indirect gears or on top. The clutch freed perfectly, allowing bottom gear or neutral to be selected quietly and with ease when the machine was at a standstill with the engine idling.

Average-light in operation, the clutch gave no indication of being overworked by the standing-start tests; it continued to free perfectly, and to take up the drive smoothly.

Engine starting was at all times commendably easy so far as muscular effort was concerned, and always achieved with a single depression of the kick-starter. Ignition is, of course, by battery and coil, with an automatic advance-and-retard mechanism incorporated with the contact-breaker. There is no air slide in the carburettor and no exhaust-valve lifter. Neither of these was required. Certain cold-starts demanded merely that the ignition was switched on, the carburettor flooded lightly, and the kick-starter depressed, this with the twistgrip turned just a fraction off its closed stop. With the exception of the fact that the carburettor did not require flooding, the drill was similar for starting the engine when it was warm.

As soon as it had started, the engine would settle down to an absolutely certain, perfectly even, and very slow tickover. The valve-gear, when the engine was idling, was audible as a faint rustling and piston slap could just be detected. Mechanical noises from the engine and transmission noise were apparent to the rider when the machine was being ridden on the road. The exhaust was commendably subdued and not considered to be sufficiently obtrusive to cause one to limit the C11's acceleration in towns and cities.

As a result of the additional gear ratio, acceleration was improved; and, what is probably even more important, adequately rapid acceleration could be achieved with an almost entire lack of fuss. In city traffic the machine could be started away from a standstill, and, without resort to obtrusive driving methods, was capable of more than matching other vehicle's acceleration. A criticism was that there was some transmission harshness at speeds below 30 m.p.h. Pinking was never experienced.

On the open road the B.S.A. would cruise with praiseworthy effortlessness at speeds a little in excess of 50 m.p.h. Vibration at high cruising speeds was slight and of high-frequency. It was most prevalent between 40 and 43 m.p.h. It all but disappeared between 50 and 55 m.p.h., and recurred only when the engine was revved excessively, or allowed to slog hard on gradients.

Throughout the test the engine, with its integral push-rod tunnel, remained entirely oil-tight. There was some seepage from the drive-side gear box mainshaft bearing, which soiled the left leg of the centre stand. The rear chain remained adequately lubricated throughout the test, yet the rear tyre and rim remained surprisingly clean.

The B.S.A. telescopic front fork and plunger-type rear-springing effectively damped out road shocks; handling on all types of road surface was excellent

Both front- and rear-brake controls were well placed for ease of operation. Like that for the clutch, the front-brake lever is carried on a fixed pivot block welded to the handlebar. That the levers were not mounted on adjustable clamps was not found to have any apparent disadvantage. The handlebar was tried with the grips in two different (but each reasonably comfortable) positions, and the levers remained within reasonable reach.

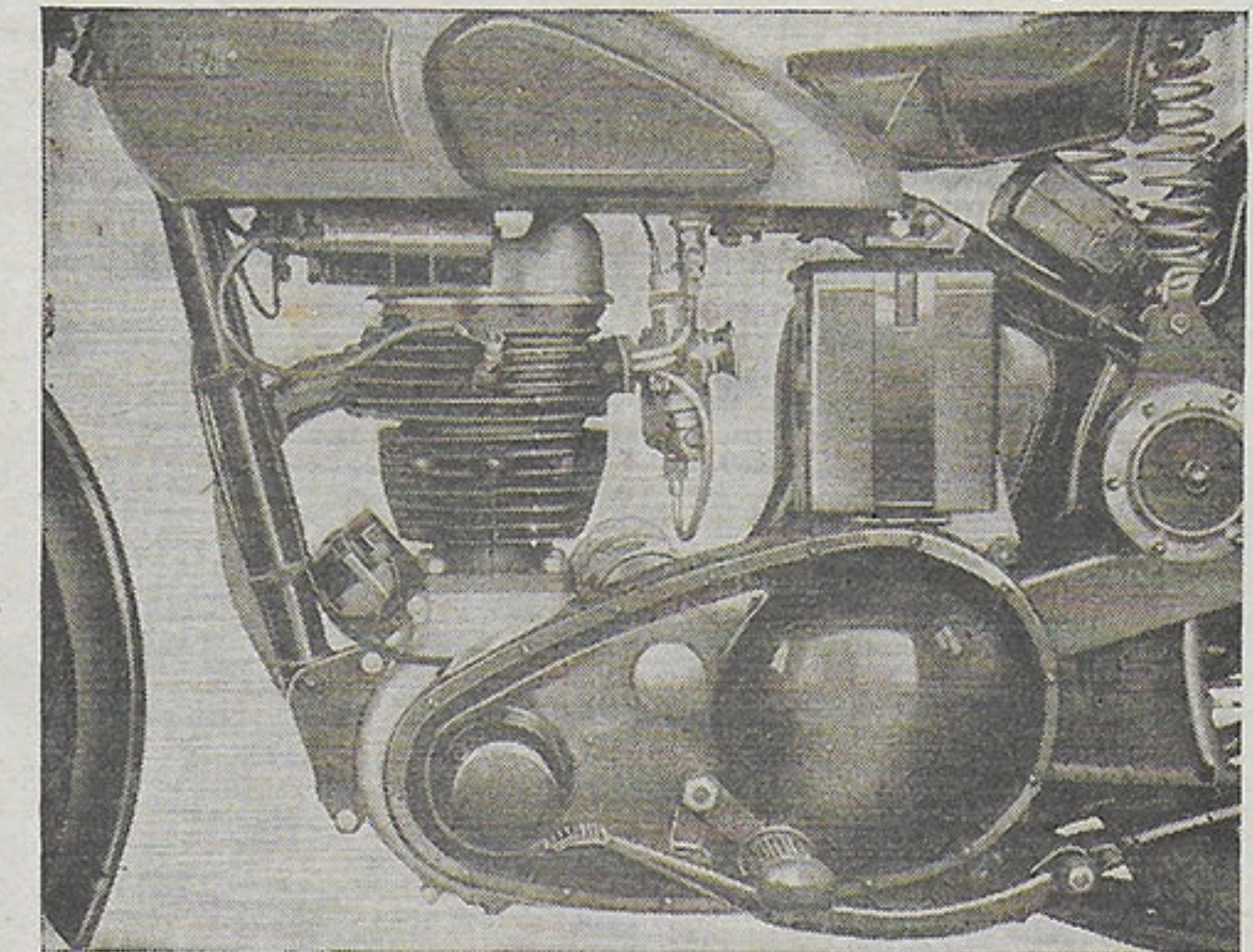
Both brakes were smooth in operation, but construed to be rather too spongy in operation. The braking figure of 34 feet is a mean of six crash stops, each of which returned a figure within one foot of the mean figure—a consistency seldom achieved, and proving that brake fade would never be experienced under normal riding conditions.

Riding Comfort

More than adequate comfort was provided by the combination of the really excellent B.S.A. telescopic front fork and the plunger-type rear-springing. Stone sets and other antiquated road surfaces could be traversed with serenity, road shocks being effectively damped and apparent to the rider only by the gentle rise and fall of the machine. On all the many different types of road surface encountered, the handling was exemplary. The B.S.A. could be heeled over on corners and bends stylishly and with equanimity. There was no drifting, no pitching, and no chopping or snaking—none of the faults which are evident in machines with indifferent handling properties.

The riding position was very compact; too compact, indeed, for maximum comfort. It was felt that there would have been an improvement had the saddle been slightly farther to the rear.

A centre stand is provided for parking purposes, or to hold either wheel clear of the ground during wheel removal. The stand is sturdy; it proved foolproof under most conditions, and



Coil ignition is employed, with automatic advance-and-retard mechanism incorporated with the contact-breaker

easy to operate without excessive physical effort or knock.

The tank-mounted speedometer was for all practical purposes accurate throughout the machine's speed range. The ammeter, in the rear of the headlamp, was easy to read; it indicated that the full lamp and coil load was more than balanced by the dynamo output at 30 m.p.h. in top gear. The ignition switch is incorporated in the headlamp switch; thus it is in an excellently visible position and there is little likelihood of the rider parking the machine with the switch "on."

The test model was fitted with one of the new all-enamel tanks finished in blue and beige. The wheel rims were finished in matt-silver synthetic stoving enamel and had a blue medial strip. Exhaust pipe and handlebar were, of course, chromium-plated.

Information Panel

SPECIFICATION

ENGINE: 249 c.c. (63×80 mm) single-cylinder o.h.v. with fully enclosed valve-gear. Push-rods operated from single camshaft. Double-row, roller-bearing big-end. Ball bearing supporting drive side of crankshaft; plain bearing on timing side. Light-alloy piston. Dry-sump pressure lubrication—tank capacity, 4 pints. Gear type oil-pump. Compression ratio, 6.5 to 1.

CARBURETTOR: Amal; twistgrip throttle control. No air slide.

IGNITION and LIGHTING: By battery and coil, with auto-advance mechanism integral with contact-breaker. Lucas long-3in dynamo; 7in headlamp with 30/30w main bulb controlled by handlebar switch.

TRANSMISSION: B.S.A. four-speed gear box. Top, 6.65 to 1. Third, 8.06 to 1. Second, 11.7 to 1. Bottom, 17.15 to 1. Single-plate clutch with cork inserts. Primary chain, $\frac{1}{2}$ × 0.305in in pressed-steel oil-bath case. Rear, $\frac{1}{2}$ × 0.305in with guard over top run. R.p.m. at 30 m.p.h. in top gear, 2,593 approx.

FUEL CAPACITY: 2½ gallons.

TYRES: Dunlop 3.00 × 20in front and rear.

BRAKES: 5½in diameter × 1in wide front and rear.

SUSPENSION: B.S.A. hydraulically damped telescopic front fork. Plunger-type rear-springing with coil springs for compression and rebound.

WHEELBASE: 52in. Ground clearance, 5in unladen.

SADDLE: Terry. Unladen height, 28½in.

WEIGHT: 309lb with fuel tank dry and fully equipped.

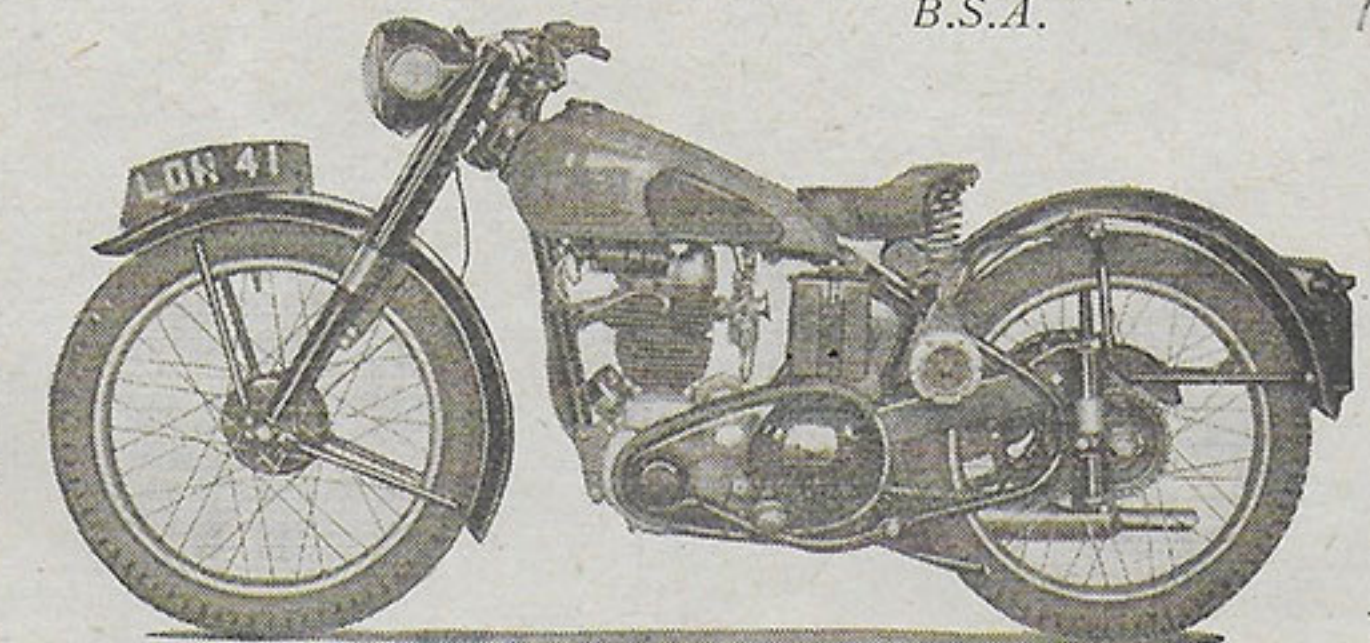
PRICE: £112; with Purchase Tax (in Great Britain only), £142 4s 10d.

ROAD TAX: £1 17s 6d a year; 10s 4d a quarter.

MAKERS: B.S.A. Cycles, Ltd., Birmingham, 11.

DESCRIPTION: The Motor Cycle, 19 October, 1950.

The 249 c.c. Model C11 B.S.A.



PERFORMANCE DATA

MEAN MAXIMUM SPEED: Bottom: *27 m.p.h.
Second: *38 m.p.h.
Third: 55 m.p.h.
Top: 64 m.p.h.

*Valve float starting.

MEAN ACCELERATION:

	10-30 m.p.h.	20-40 m.p.h.	30-50 m.p.h.
Bottom ...	—	—	—
Second ...	6.2 secs	—	—
Third ...	—	9.2 secs	10.2 secs
Top ...	—	11.8 secs	13 secs

Mean speed at end of quarter mile from rest: 59 m.p.h.
Mean time to cover standing quarter-mile: 21.8 secs.

PETROL CONSUMPTION: At 30 m.p.h. 118 m.p.g. At 40 m.p.h. 94 m.p.g. At 50 m.p.h. 82 m.p.g. At 55-60 m.p.h. 70 m.p.g.

BRAKING: From 30 m.p.h. to rest, 34 feet (surface, dry tar-macadam).

TURNING CIRCLE: 12ft 6in.

MINIMUM NON-SNATCH SPEED: 20 m.p.h. in top gear.

WEIGHT PER C.C.: 1.26 lb.

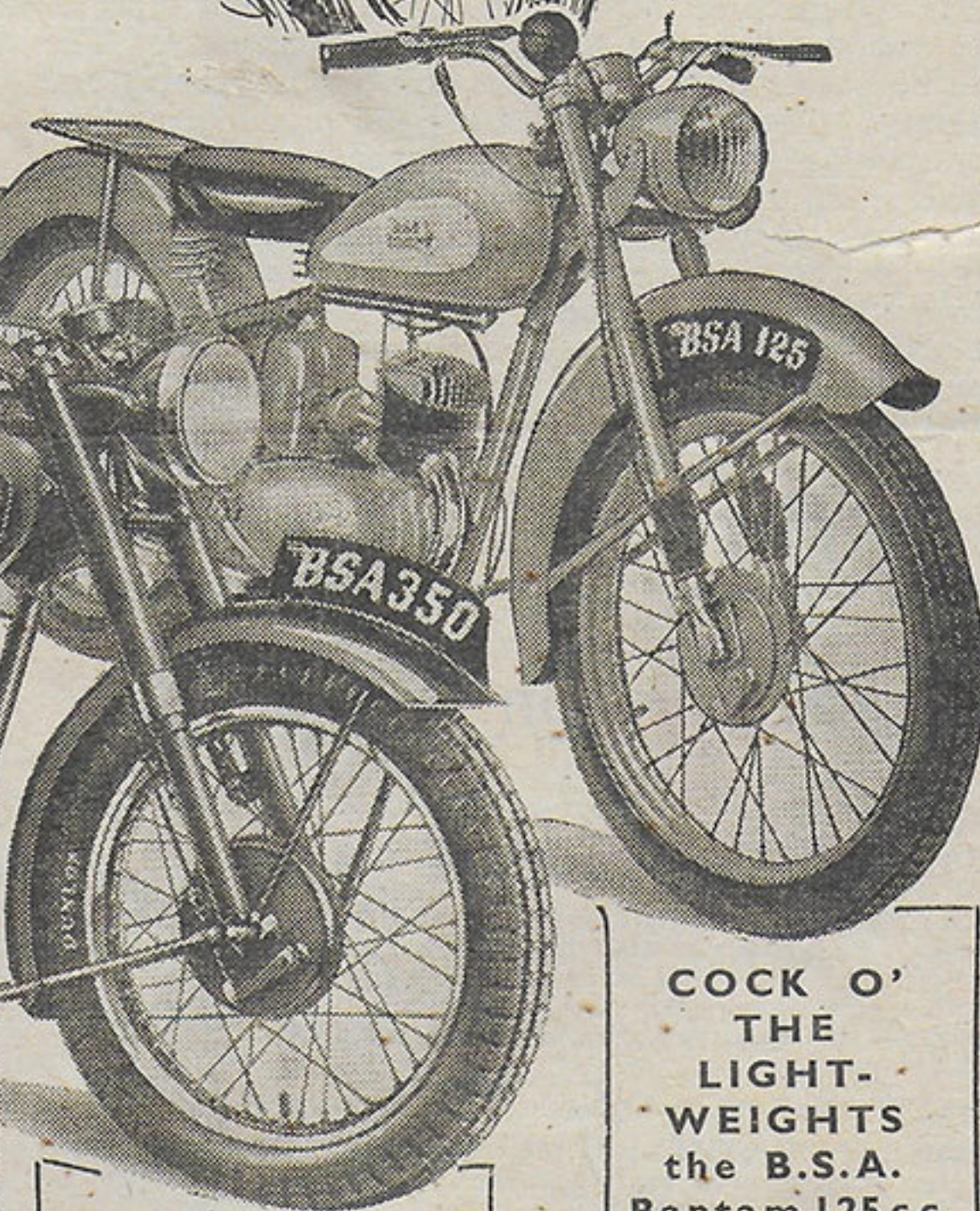
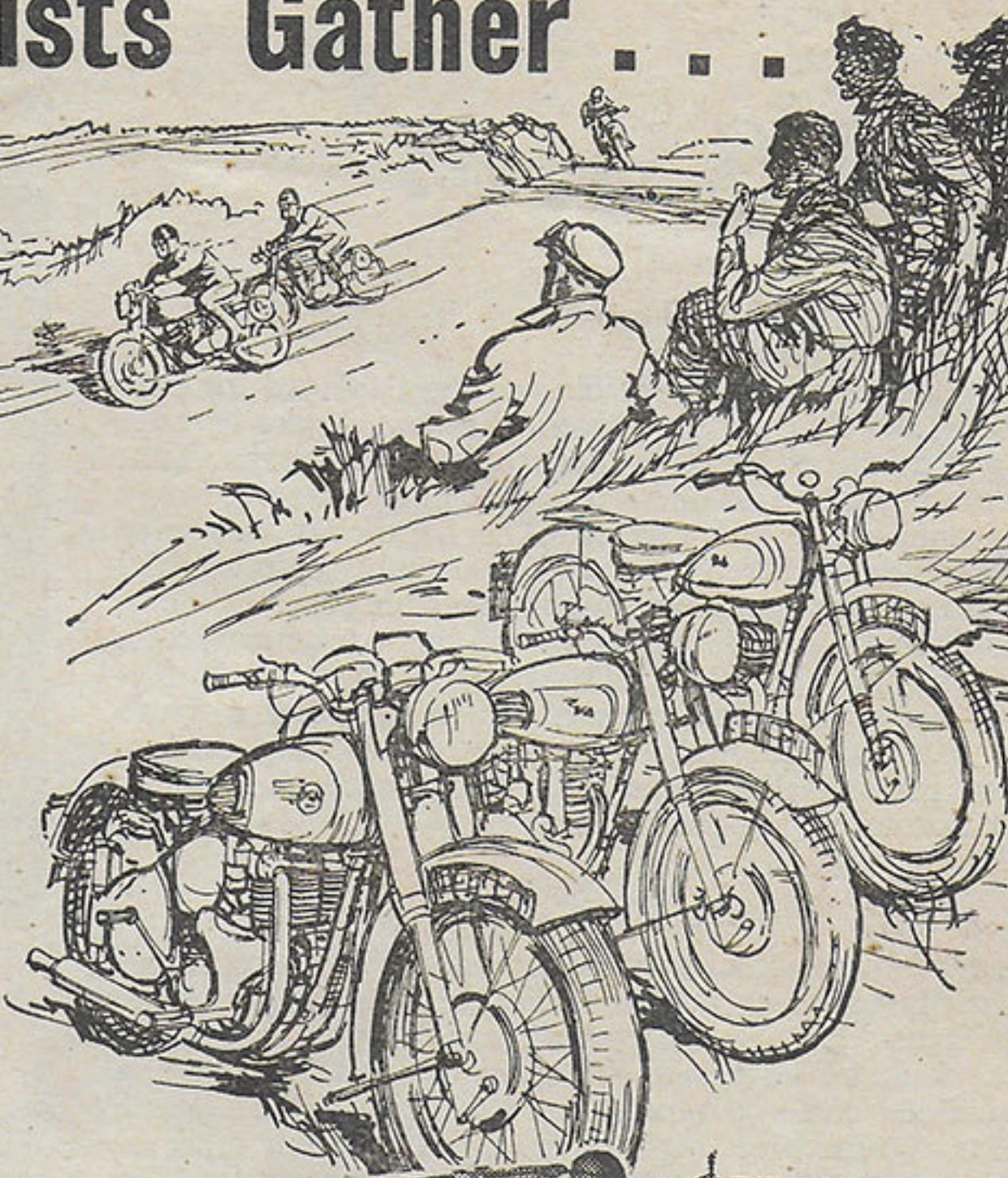
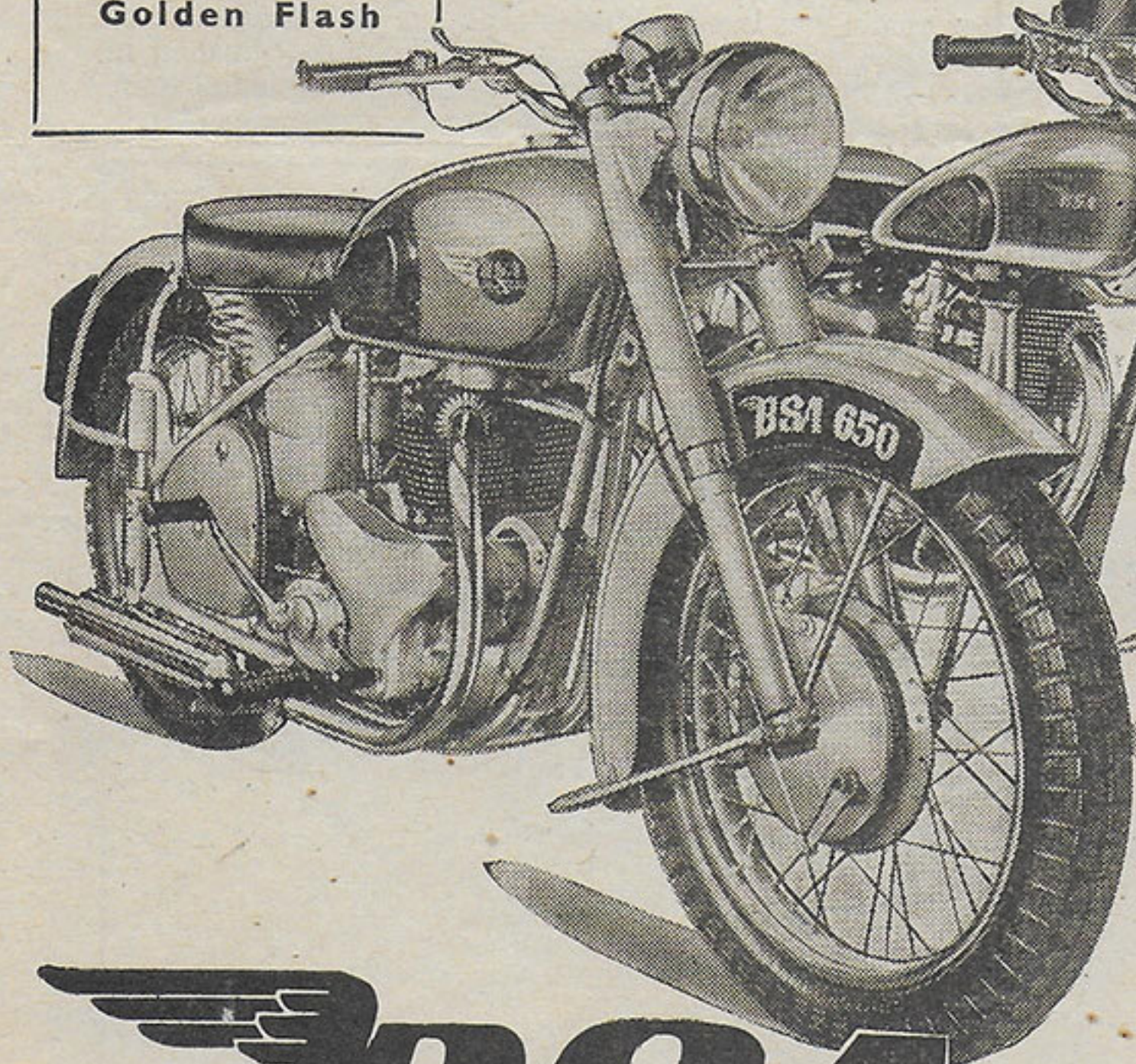
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