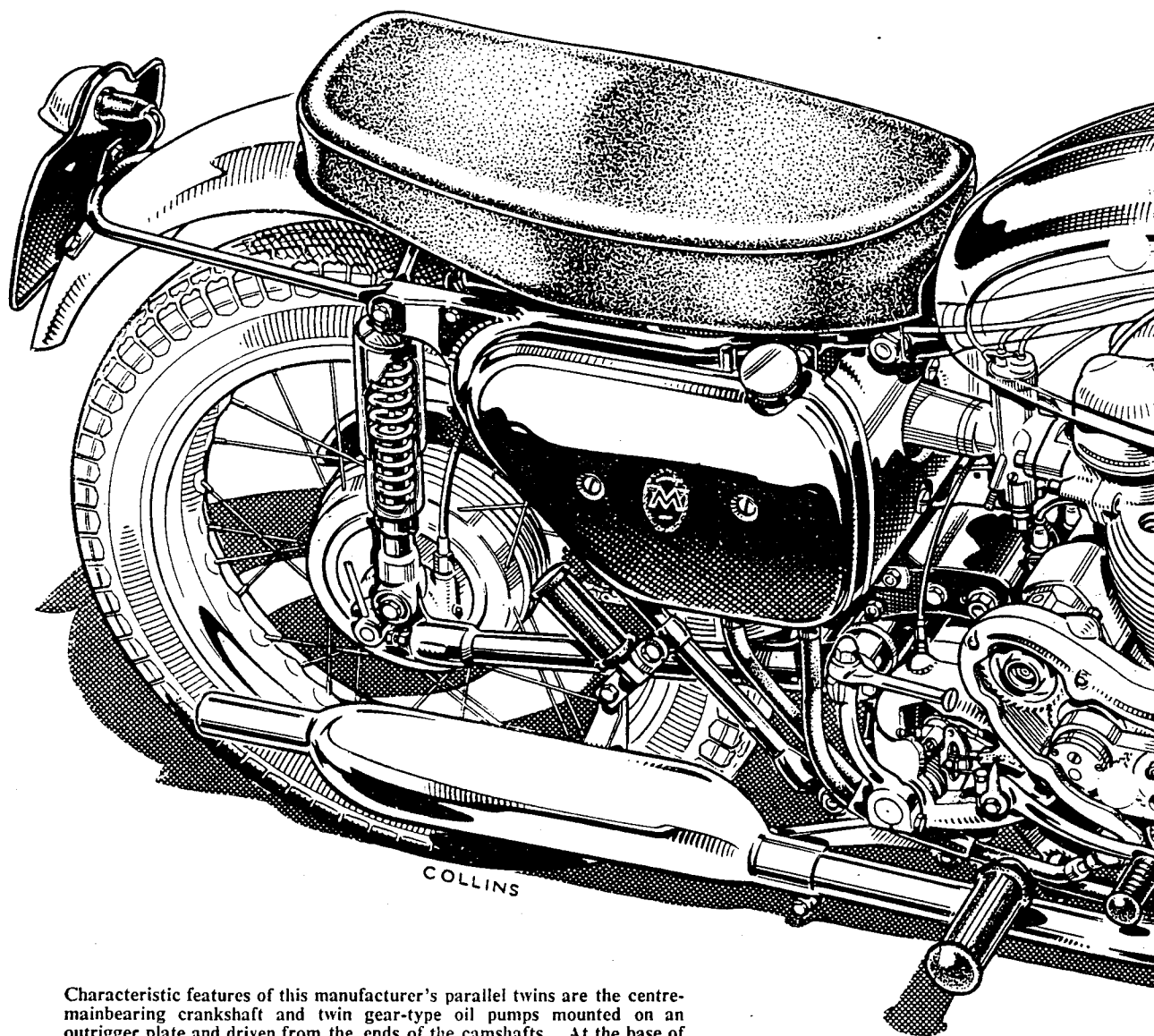


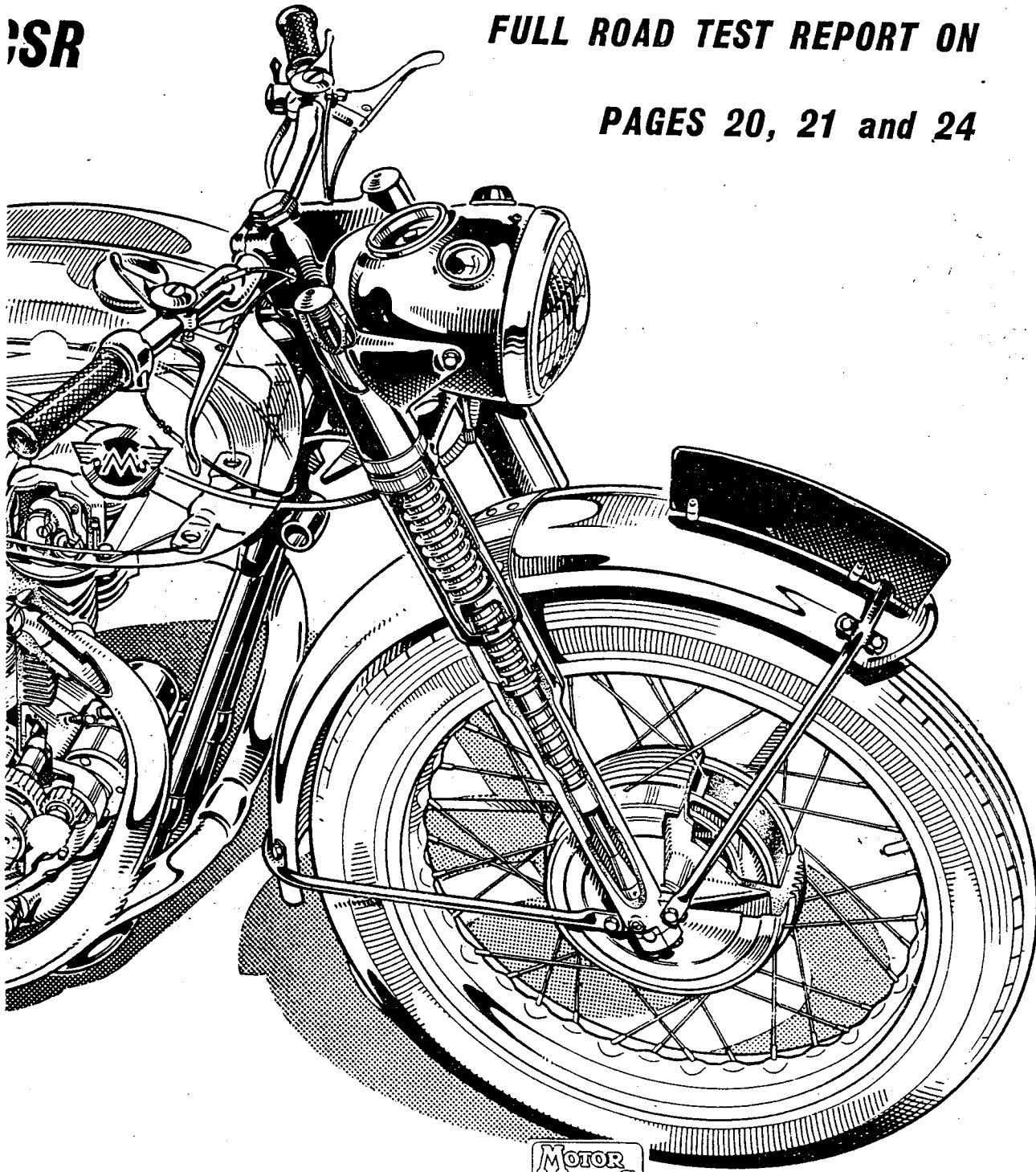
The 646 c.c. MATCHLESS Model G1



Characteristic features of this manufacturer's parallel twins are the centre-mainbearing crankshaft and twin gear-type oil pumps mounted on an outrigger plate and driven from the ends of the camshafts. At the base of the "Teledraulic" forks, shown part-sectioned, can be seen the tapered ram which gives progressive hydraulic damping on heavy compression. The four-speed gearbox is of the same basic design as that fitted to the factory's racers.

SR

**FULL ROAD TEST REPORT ON
PAGES 20, 21 and 24**



MOTOR
CYCLING
WEEKLY

LARGEST, fastest and most powerful machine in the current Matchless range, the 650 c.c. G12CSR is essentially designed for sport. This its specification—tuned motor, siamesed pipes, good ground clearance and semi-competition equipment—shows at a glance.

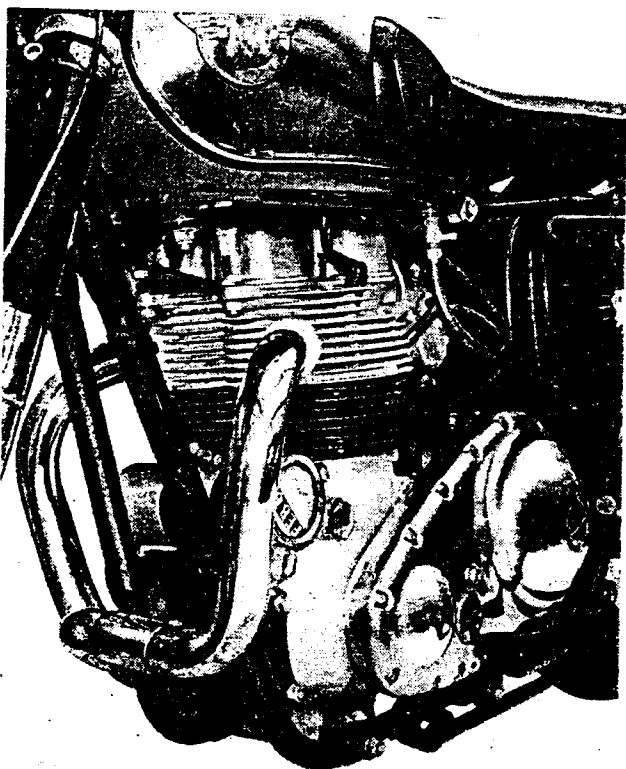
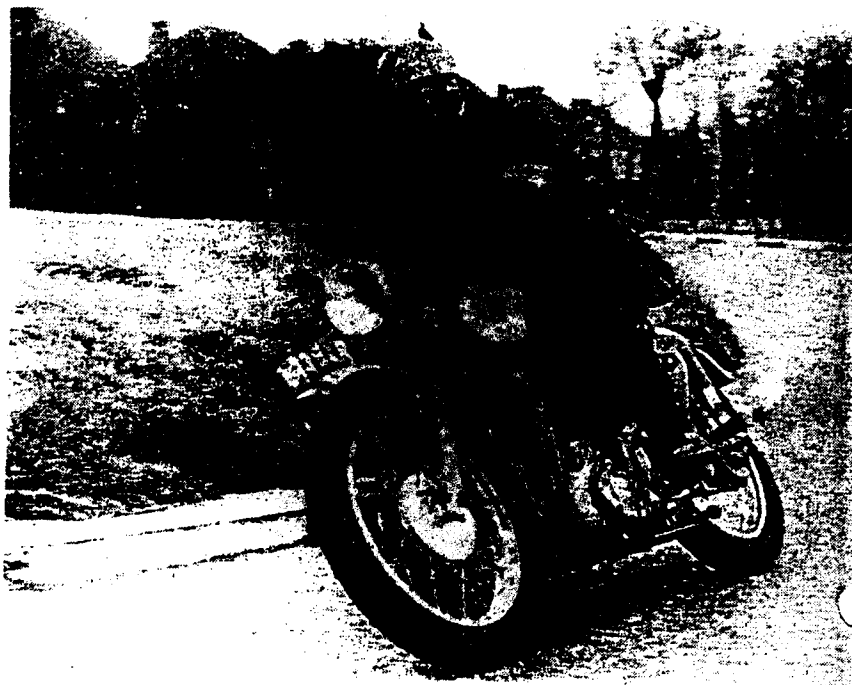
But it is also at home under normal road conditions. Here, in fact, is a dual-purpose mount.

For fast riding over rough terrain—the kind of country one would cover in following this week's "Scottish," for example—there could be few machines more suitable. And the CSR is equally happy back on the metalled highway, when the rider can thrill to its bend-swinging properties, its road-holding, its slick gearbox and ample power.

The centre-stand tucks up in a manner few roadster components can equal (nobody would ever ground a CSR stand!) whilst the dual-seat is intended primarily as a saddle of generous length for one only. *Vive le sport!*

That's the spirit in which the machine as a whole has to be judged.

First, the engine. Here is the classic design of vertical twin (plus the refinement of centre main-bearing crankshaft), developed to a high degree—and tuned also. Just



"The CSR really excelled when being thrown from side to side through fast bends..."

(Left) The siamesed exhaust pipes are jointed, with a pinch-bolt fitting, on the centre-line of the machine. The dynamo is mounted on the front of the crankcase.

ing up at 30 m.p.h. in top was easy and useful. Consequently, the traffic manners of the CSR were rated as good. But for overtaking at main-road speeds it was usual to use the box freely.

Generally, the control lever for the ignition was left fully advanced. It was retarded mainly for starting and when slogging along, clutch right home, in bottom gear under adverse conditions. This drill applied when 100-octane fuel was in the tank. If premium (95 to 96 octane) was used, then so was the control lever, frequently.

Fuel consumption averaged 51 m.p.g. overall, a normal return for the kind of riding which this sportster invited. Oil consumption ran at some 500 miles per pint and no leaks of any kind, anywhere, were evident after our 2,200 miles.

The engine was beautifully quiet mechanically. Exhaust noise was—well noisy. To the enthusiast it had a distinctly thrilling quality like a giant tearing calico. Use of the throttle in built-up areas had to be adjusted accordingly.

Maximum speed recorded at M.I.R.A. was 108½ m.p.h. There is little doubt that this could be exceeded by the man obsessed with the desire to do the "ton-ten," or some such fascinating figure. The simple expedient would be to cog up. At 108 the Matchless had "run on" past its peak, and could therefore manage a higher fourth ratio. But this would be to its detriment in other respects—acceleration, for instance. Bottom gear is already highish (and fit for clocking 40 in short time as a regular practice).

Actually, in relation to each other, the existing ratios are well chosen. Second was particularly useful for brisk overtaking and for scorching up awkward hills with twisting,

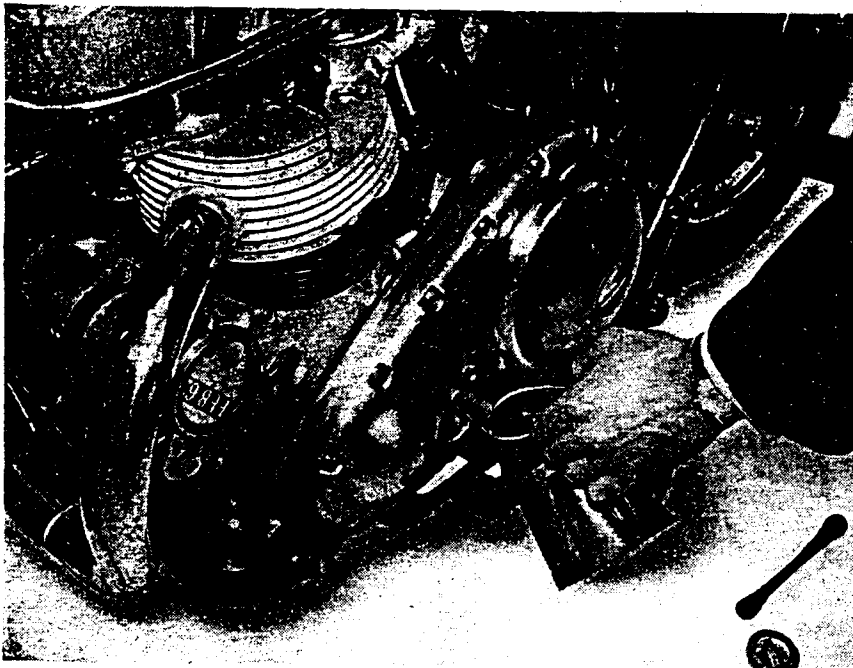
(Continued on page 24)

when many mounts are beginning to "tail off" in top gear, the power of the CSR continues progressively. This happens at about 80 m.p.h. At 75 things are quiet; 5 m.p.h. later everything gets into step, and the Matchless is scorching off to the horizon.

Here is the type of performance for which the customer has bought *this* mount—top-end go. But we found no objection to using

the gearbox and revving the CSR very freely indeed, for there was no serious vibration. Some could be felt, but not enough to dictate the choice of cruising speed or to produce any signs of stress in sheet-metal components. A carburetter bellmouth shook loose; that was all.

At the bottom of the scale, the engine was docile, responsive and thrustful. Open-



(Above) Topping-up the oil in the primary chaincase. (Top right) Adjusting the contact-breaker points of the separate magneto. (Right) A built-in tommy bar assists withdrawal of the q.d. rear wheel spindle. Unusual is the near-vertical speedometer drive pick-up.

MATCHLESS G12CSR ROAD TEST — Continued

"nagery" bits. The gearchange action was beyond criticism. This box—Matchless' own—is undoubtedly one of the best on the road.

Clutch behaviour, most of the time, was as pleasant. Initially, there was a bout of slipping but matters were rectified when the level of the oil in the chaincase was lowered to a point at which the single-row chain just caressed the surface.

A motor as quick as this one demands good roadholding. A 1961 Matchless, with its duplex frame, has it. The CSR really excelled when being thrown from side to side through fast bends, when traffic conditions permitted, and one consequently well understood its selection by T.T. travelling marshals for Island use.

Both front and rear suspension systems were on the firm side, as befits a motorcycle designed for this usage. If the machine was flung at high speed over long-pitch undulations, the ride remained completely steady and there was absolute freedom from prancing. At low speeds the machine exhibited all the delightful feet-up stability for which this factory's products are renowned in the trials sphere. Handlebar lock is generous.

On the rough, the navigation was up to scrambles standards. At the M.I.R.A. track (which was once a Bomber Command aerodrome) the tester hit a 10-in.-high conical runway-light cover of cast concrete. At the time he was riding one-handed, looking over his shoulder. It is to the credit of the steering qualities of this Matchless—and to nothing else—that not only did he remain aboard, but the machine could be kept on course, although the steering had been

deflected on to almost full lock. Convincing. . . .

The resilient dual seat was comfortable, but offered too high a riding position for the tester's particular stature.

The Matchless recorded a perfectly satisfactory braking figure from 30 m.p.h. It was also capable of pulling up from really high speeds in complete safety, provided the rider made maximum use of both units.

It was thought that the 7-in. diameter front unit (lining width, $\frac{1}{2}$ in.) was rated fairly close to its limit but the conveniently placed adjuster permitted easy setting while on the move.

The rear brake always did everything that was asked of it, and every time the limiting factor was tyre adhesion. Neither brake squealed. The front unit was not entirely proof against water.

The CSR is fitted with Lucas magneto ignition and 6-v. D.C. dynamo lighting. There was never any difficulty with starting. The dynamo kept the battery well up and its output was automatically regulated.

Lighting intensity was adequate, but the horn's usefulness was somewhat limited.

No machinery is ever perfect—motorcycle or otherwise—and the fact that only a few minor criticisms could be made of the CSR serves to emphasize the sterling qualities of this Matchless as a particularly fine sports model—a connoisseur's mount which will appeal most strongly to the enthusiast seeking a motorcycle of decidedly individual personality.

Folding kickstarter, gearchange lever and gear indicator.

