

Road Tests of 1939 Models



There was no question of the engine-torque being "felt" on corners, whether they were taken fast or slow and the handling was really "super" under all conditions. (Right) The unusual arrangement of the cylinder heads can be seen from this view of the near-side "pot." The engine was absolutely oil-tight throughout the test.

WHEN road-testing an expensive machine, with a reputation for being one of the best examples of motorcycle design, one is apt to approach the job in a hypercritical frame of mind. All the possible snags are given more than their fair share of thought, and the tendency is to try to damp a very natural enthusiasm so as not to appear biased when sending in the report.

Such was the attitude of our tester when he took over one of the latest 750 c.c. side-valve B.M.W. machines. In spite of all this, however, he now states that the road-holding, handling and general performance were at least equal to any other machine which it has been his good fortune to ride. By general performance we do not mean all-out maximum speed, but the ease with which exceedingly high average speeds could be maintained without any trace of effort on the part of the engine.

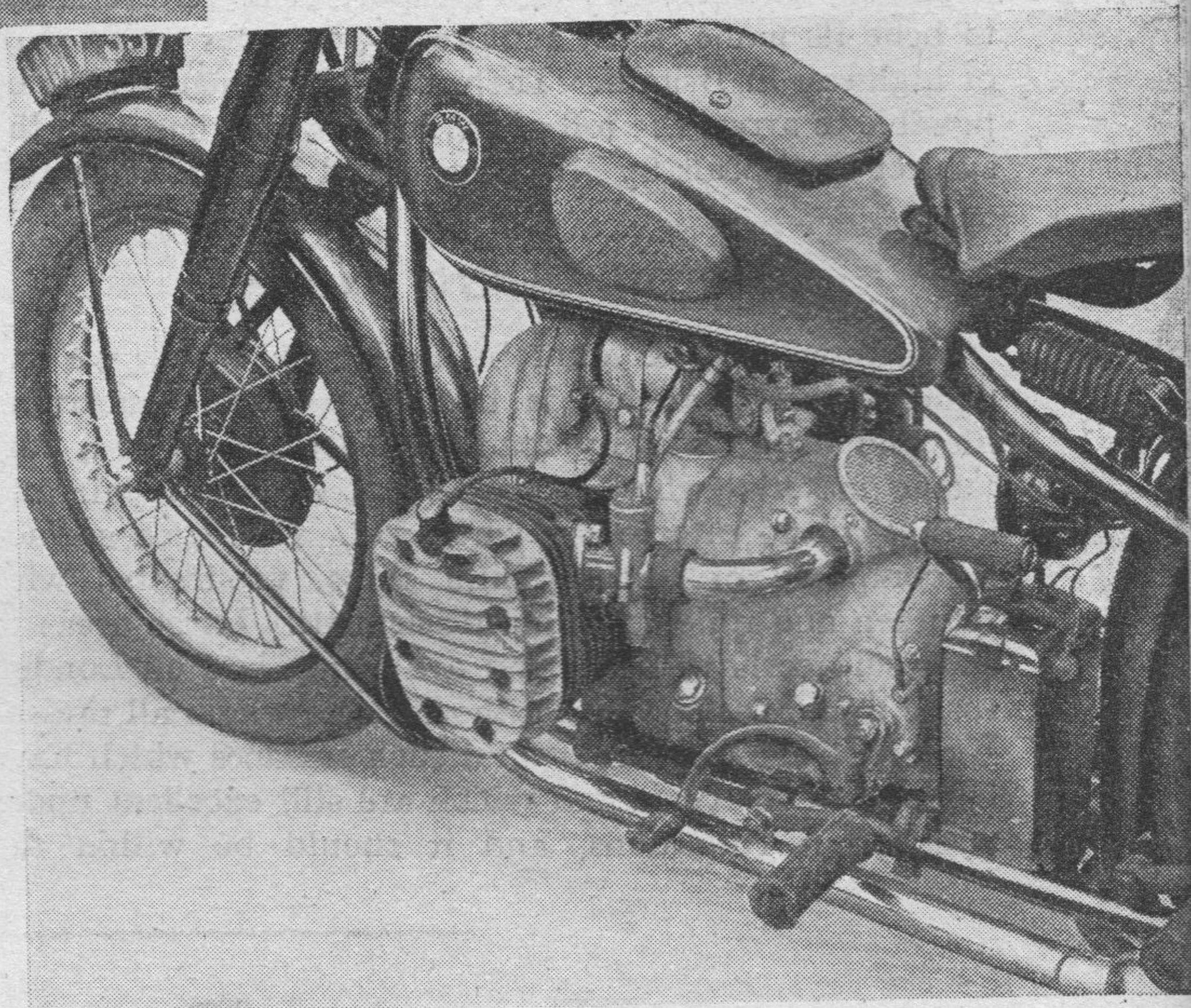
The Neat Layout

One of the first things to impress the rider was the feeling of being absolutely at home before even five miles had been covered. A slight alteration to the foot-rests made the riding position perfect, bringing the knees directly on to the resilient grips. A point in this connection which appealed to our tester was the shape of the tank, which, whilst being narrow for comfort, was deep enough to have a most reasonable capacity (three gallons).

In design the B.M.W. bristled with interesting points, some of the more notable being the telescopic front forks, which incorporated hydraulic dampers, the rear-wheel springing carried out by plungers and coil springs, the unit construction of the engine and gearbox, and the neat shaft drive. There is hardly any need to mention that the cylinders were horizontally

THE MODEL B.M.W.

*A Machine Possessing
Exceptional Steering and
Road-holding, Coupled
with a Fine Performance*



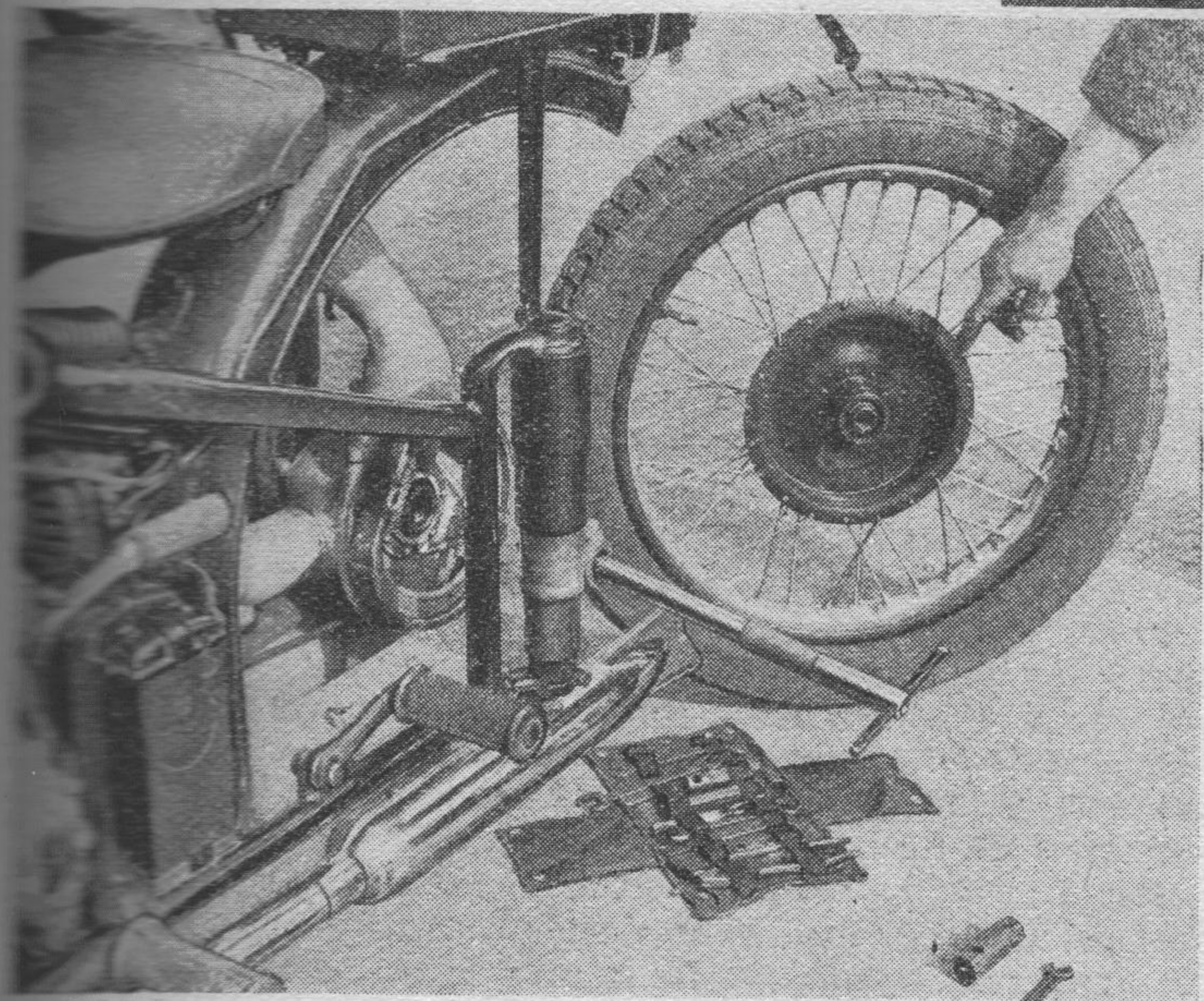
opposed, the dynamo being carried on top of the crank-case, with the coil and distributor housed at the front of the engine, totally enclosed behind a die-cast aluminium cover and held in place by a single central stud and nut. For neatness it would be difficult to beat the general layout, which is notable for the absence of any "odds and bobs" or unnecessary gadgets.

We have already mentioned the comfortable riding position, but the matter of comfort on the road must also receive the fullest praise. It is no exaggeration to say that to ride the B.M.W. over really bumpy roads was almost as comfortable as taking a normal rigid-frame machine over ordinary roads. To give an example: during the course of the test the B.M.W. was taken along the Fosse Way between Cirencester and Morton-in-Marsh, where, on the straights, it was comfortable to motor along at speeds up to 80 m.p.h., whereas on a rigid-frame job 70 m.p.h. causes the rider to hang on tightly.

A number of miles were covered carrying a pillion rider, who expressed the opinion that she did not know it was possible for a motorcycle to be so comfortable and feel so safe. An interesting detail point is the

R71 S.V. TWIN

Touring, pottering or high average cruising came alike to the B.M.W. (Below) Removing the quickly detachable rear wheel was a simple operation and the front and rear wheels could be interchanged in a few moments.



saddle, which is adjustable for height in addition to having a simple device for varying the tension of the saddle spring itself. Thus riders of varying weights and stature can alter the settings to suit their individual tastes.

In keeping with the comfort, the road-holding and cornering had to be tried to be appreciated. The model could be laid over on really bumpy corners with no trace of wavering from its set course, the impression being that it was on rails. Fast and slow corners produced the same result, and at no time was the steering damper found either desirable or necessary. In towns and on the open road the steering was light yet absolutely positive, and it was found that this B.M.W. gave the lie to the theory that the transverse engine affects the steering at low speeds. If one had not seen the layout it would be impossible to tell which way the crankshaft was set in the frame.

First-class Starting

Starting was excellent, provided the carburettors had not at any time become overflooded. Under these circumstances a few smart kicks with the throttle wide open put matters right. From cold, the best results were obtained by slightly flooding the carburettors, setting the ignition at about half retard and using a very small throttle opening. No air controls are fitted. When hot the engine was not sensitive to the throttle opening and in nine cases out of ten the twist-grip could be left closed right back, when the motor would start at a docile tick-over.



Dealing with the matter of starting, mention must be made of the kick-starter, which operated across the machine. It was found best to start the job up from cold with the model still on its stand and the rider standing beside the machine. When hot it was easy to give the lever a prod whilst still astride the saddle.

Touching on the matter of performance, the figures obtained in the timed tests were excellent and such as might be expected from a sports machine. But, however the figures published may affect the reading public, the real beauty of the machine lay in the absolutely effortless manner in which one could glide along between 65 m.p.h. and 70 m.p.h. Using such speeds where possible, it needed very little effort to put more than 50 miles into 60 minutes on a cross-country journey.

To quote a specific example: Tenbury Wells to Kenilworth, a distance of 58 miles, was covered in one hour and ten minutes without ever trying very seriously or exceeding 70 m.p.h. No doubt the excellent acceleration and the normal 'useful changing-up speeds of 50 m.p.h. and 60 m.p.h. from second to third and third to top played a big part in obtaining this result.

Exceptional Performance

Whilst on the subject of gears it would be as well to mention the left foot change, which was at all times positive, but unless the engine revolutions were correctly judged there was a tendency for the dogs to engage with a "clonk." The only disadvantage this had was the noise, for, during the whole test, there was not a single occasion when the change lever required a second prod to engage a predetermined ratio.

Considering the roads were wet when the brakes were tested, they worked commendably well to bring the machine to rest from 30 m.p.h. in 38 ft. This figure could doubtless be improved on were the weather conditions more suitable.

After a distance of over 400 miles had been covered the measured $\frac{1}{4}$ -mile was visited and some exceptional results obtained. The maximum speed in top was a shade over 86 m.p.h., whilst the excellent figures of 62 m.p.h. and 75 m.p.h. were recorded in second and third gears respectively. The general smoothness of the unit was unusually good, except for a certain amount of roughness up to 45 m.p.h., when the engine was pulling hard. Under a light load it ran so smoothly and quietly that at times it was difficult to tell if the engine

BRIEF SPECIFICATION OF THE R71 B.M.W.

Engine: B.M.W. transverse twin, horizontally opposed cylinders; bore 78 mm., stroke 78 mm.=745 c.c. Light alloy cylinder heads and fully enclosed valve gear. Steel connecting rods with roller bearing big-ends. Camshaft, gear-driven from the crankshaft. Two Graetz carburettors with common air cleaner.

Transmission: Unit-construction gearbox and engine, four-speed with sliding dog operation. Positive-stop left-foot change with emergency hand lever. Dry one-plate clutch. Ratios: 4.68, 6.12, 8.21

and 12.96 to 1. Final drive by shaft with rubber coupling at the front and mechanical joint at rear. Helical gears.

Frame: Duplex cradle frame. Telescopic front and rear wheel springing. Front hydraulic damping. Interchangeable wheels fitted with 19 x 3.50 Dunlop studded tyres.

Tanks: Three-gallon saddle tank finished black. Built-in toolbox. Two-way petrol tap and large filter. Oil carried in engine sump. Capacity 3½ pints.

Electrical Equipment: Bosch coil ignition. Twin-filament head light bulb. Speedo-

meter in back of lamp. High-frequency horn.

Dimensions: Saddle height 28¼ ins. Overall length 83¾ ins. Overall width 32 ins. Ground clearance 5¼ ins.

Price: £123 fully equipped with lighting and head lamp mounted speedometer. Extras: pillion footrests 12s., and pillion seat 12s. 6d.

Makers: Bayerische Motoren Werke A.G. Munich, Germany.

Marketed by: A.F.N., Ltd., Falcon Works, London Road, Isleworth, Middx.

Tax: £2 5s. per annum.

B.M.W. ROAD TEST (Continued)

was running. Down at the bottom end of the scale the non-snatch speeds in top and third were 12 m.p.h. and 9 m.p.h. respectively; in both cases, with the ignition fully retarded, it was possible to accelerate away in a silky manner.

Slight criticism might be raised at the twist-grip, which needed a full half turn to move it from the closed to open position. Under ordinary touring conditions this did not matter, but when using the throttle and gearbox to the full it was necessary to take two "handfuls" to move the throttle from one extreme position to the other.

Fuel-consumption tests were taken, the figure obtained in town being 52 m.p.g. and on ordinary country roads 56 m.p.g.; this latter figure was lowered to 53 m.p.g. when cruising speeds of about 65 m.p.h. were used. This must be considered a very reasonable result when the size of the engine is taken into account. Oil was used at the rate of 2,240 m.p.g. The sump filler was rather awkwardly placed, unless a long-necked bottle was used for filling purposes, also a spanner was necessary to undo the filler cap-cum-dipstick. The power unit remained without a trace of oil at any joint; in fact, apart from the road dirt it was almost impossible to tell at the end of the test that the machine had been run.

Many people consider that noise has more to do with the unpopularity of motorcycles than any other point. In countering this the B.M.W. scores full marks. Both from the mechanical and exhaust viewpoint it was quieter than many modern cars; in crowded and built-up areas it was a treat and on the open road at speeds of

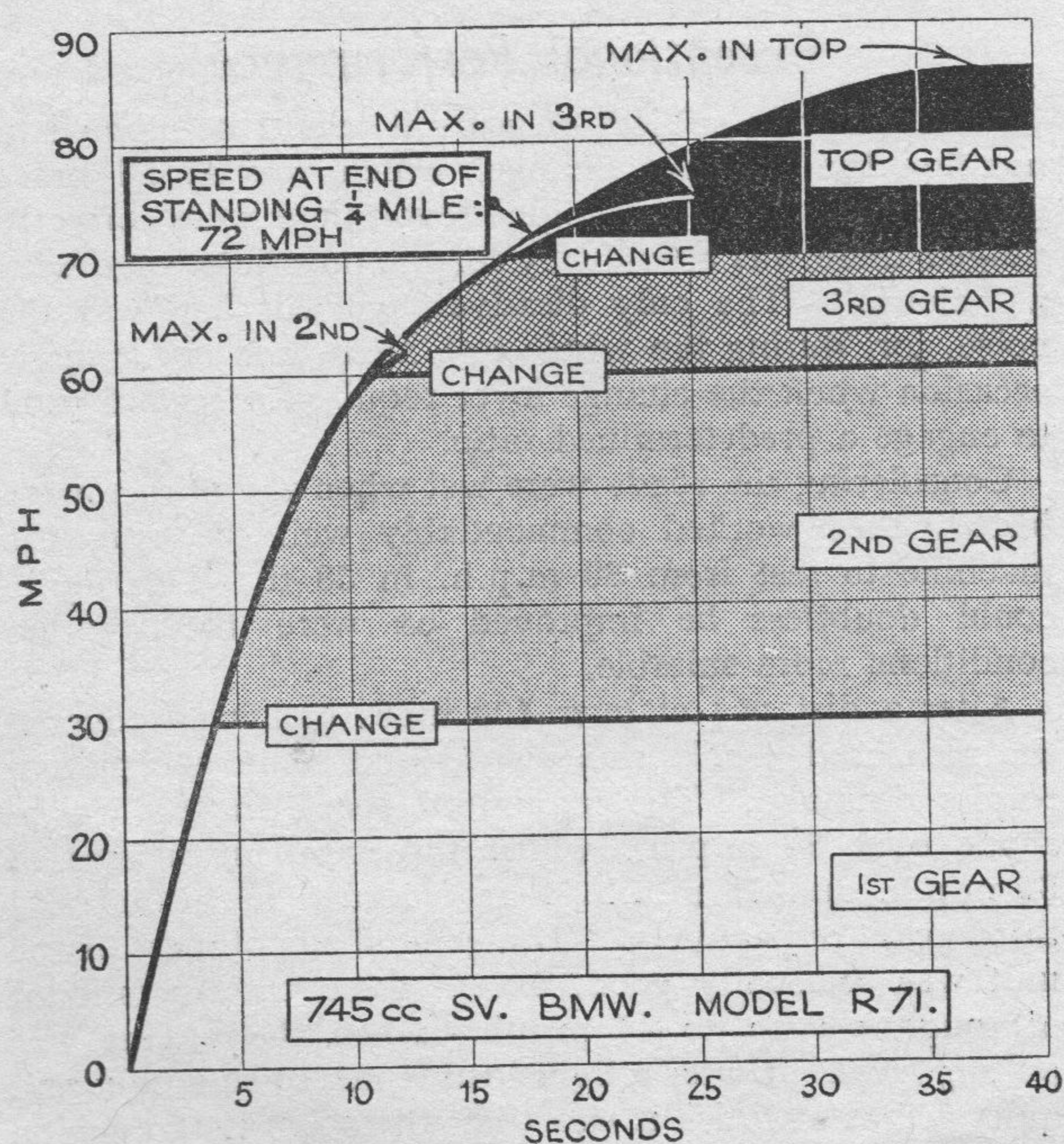
over 40 m.p.h. it was impossible to hear any mechanical or exhaust noise whatsoever.

Of maintenance there was very little needed; however, all the points were checked over and the general accessibility was found extremely good, with no chains and no front-fork links to adjust. The only points which might require attention were the tappets. These are totally enclosed by an aluminium cover secured by one screw; after removing this the adjusters are very accessibly placed on the top side of each cylinder barrel. Both front and rear wheels are quickly detachable and interchangeable and after a bit of practice our tester found it possible to change the wheels round in under five minutes, a point worthy of note if any prospective owner should wish to even up tyre wear in this manner.

A considerable distance was covered in the dark and the shapely head lamp, which had the speedometer mounted in the top, was found to give a light so good that really high speeds could be enjoyed in safety. The manner in which the beam spread and illuminated the whole width of the road was an excellent feature; no ammeter is fitted, the only indicator being the red warning light for the ignition.

Fitted in the top of the tank was a reasonably large toolbox; this contained a most comprehensive tool kit, all the actual instruments being of a high grade and sufficient in quantity to undertake any adjustment.

To sum up: The R71 is a delightful machine to handle, possessing as it does superb road holding and steering and a most delightful dual-purpose performance. In this country it costs £123, not an unduly high figure when the generous specification and superb finish are taken into consideration.



MOTOR CYCLING

TESTER'S ROAD REPORT
MODEL 750 cc SV B.M.W. R71.

Maximum Speeds in:—

Top Gear (Ratio 4.68 to 1) 86 m.p.h. = 4874 r.p.m. 37.6 secs.
Third Gear (Ratio 6.12 to 1) 75 m.p.h. = 5976 r.p.m. 25.2 secs.
Second Gear (Ratio 8.21 to 1) 62 m.p.h. = 6627 r.p.m. 12.8 secs.

Speeds over measured Quarter Mile:—

Flying Start 85.71 m.p.h. Standing Start 50.85 m.p.h.

Braking Figures On Wet Tamed Road Surface, from 30 m.p.h.:—

Both Brakes 38 ft. Front Brake 56 ft. Rear Brake 54 ft.

Fuel Consumption:— Town 52 m.p.g. Country 56 m.p.g.

Oil Consumption:— 2240 m.p.g.

WEIGHT WITH OIL BUT NO FUEL:— 413 LBS.