



A batch of Matchless machines ready for delivery to the British Army. The illustration on the right shows Matchless Army machines on the assembly line.

THE 1940 MATCHLESS RANGE

A QUICK glance, first at the heading to this article and then at the illustrations, will probably convince some of our readers that somebody on *Motor Cycling's* staff has committed a terrible faux pas. We refer, of course, to the inclusion of the two general views of Matchless Army machines "in the making" in this description of the range of Matchless models which will be available to the public during the present year. It is, perhaps, a little unusual, but it is not the outcome of anyone's mistake, for these two scenes sum-up far more effectively than words the "story" behind the recently announced 1940 Matchless programme.

The Army First

Matchless Motor Cycles, Ltd., are naturally anxious to fulfil all the demands that will be made upon them by the home and overseas markets, but there is one customer who takes precedence over everyone else. That customer is His Majesty's Army.

Army Matchlesses are being built in large numbers; in fact, it would be no exaggeration to say that this famous Plumstead (London) factory is working extremely hard coping with the requirements of the military authorities. Consequently, the standard machines for the general public have to

A Number of Modifications Introduced In Spite of Heavy Pressure of War Work

take second place for the time being, and, instead of heralding a number of most interesting new features which it was intended to introduce for 1940, we can only talk about a few detail modifications, although one of them is quite an important change for all that.

The high standard of Matchless quality will be fully maintained, but the exigencies of war work have made it necessary to cut the civilian range down to the absolute minimum, at the same time bearing in mind the variety of tastes that have to be catered for in the motorcycling world. Thus, for the next 12 months, it is intended to market only eight different models as compared to the 12 which were available last year. It is a comprehensive range, however, the smallest machines being a brace of two-fifties, whilst the largest is a very fine line in big twins, having a 990 c.c. side-valve

power unit. In between are two three-fifties and three five-hundreds.

Before discussing the various models in detail, however, it would, perhaps, be more fitting to describe the alterations and modifications that have been decided upon for 1940, because in nearly every case the changes affect more than one model.

The most important departure is undoubtedly the new type of frame which is being used on all the single-cylinder machines. This frame has a large-diameter single front-down tube instead of the small-diameter duplex tubes which have been used on Matchless machines for a number of years. Besides improving the steering and road-holding, so it is claimed, it certainly greatly improves the appearance of the machines by reason of the more compact outline which is provided.

Standardization

Another general 1940 "plot" is the standardization on the o.h.v. singles and the big twin of the popular, red-panelled fuel tanks which were used on certain 1939 models. The only machines without this colour scheme are the two side-valve "Tourist" jobs, the tanks of which are given an all-black utility finish, with gold lining.

Now that all the competition jobs are "off the list," downswept exhaust

pipes are the rule and not the exception. Anyone insisting upon an up-swept pipe will have to pay a small extra charge (see list of extras in the price panel). Such standardization is most essential and is a typical example of many similar decisions that have to be made when drawing up a programme that has to be simplified to the Nth degree in order to ensure adequate deliveries being available under war-time conditions.

Large Fuel Tanks

The primary chains on all models are enclosed in oil-bath cases and the rear chains have deep-section guards. A quickly detachable rear wheel is also a common feature except on the two 250 machines, whilst all the magneto ignition models have separate dynamos. The fuel tanks on the single-cylinder jobs carry three gallons of petrol and that on the twin holds 4½ gallons—a

very useful amount. Separate oil tanks, holding four pints, are fitted on the seat-pillar tubes.

Turning now to the individual models, let us begin with the two smallest—the 40/G2M and the 40/G7, the former being the two-port o.h.v. 250 c.c. "Clubman" and the latter the 250 c.c. s.v. "Tourist" equipped with coil ignition. Both these machines are now using improved front forks, giving a longer and slower movement, together with a larger shock absorber. Other common improvements concern the fitting of hubs with taper-roller bearings and more efficient brakes of a design similar to those on the larger models. The bore and stroke of the engines are identical, namely, 62.5 mm. by 80 mm., giving a capacity of 246 c.c.

A Snappy 250

The 250 c.c. "Clubman" engine is a very high-efficiency unit. The overhead valve gear is, of course, fully enclosed and automatically lubricated and the medium-weight gearbox has four speeds operated by a foot-controlled positive-stop lever—a feature that will be found on all the machines in the range. Its equipment is naturally rather more luxurious than the 40/G7, which is a cheaper, but none the less sturdy, utility machine, which can be relied upon to provide 100 per cent. dependable transport, although it obviously will not be of the sports variety provided by the 40/G2M. The gear ratios of these two jobs are: 6.25, 8.74, 11.2 and 18.6 to 1.

The two three-fifties are both "Clubman" models, the difference being that the 40/G3 is just a plain "Clubman," whilst the 40/G4 is a "Super Clubman." The general characteristics of the two machines so far as looks and

equipment are concerned are very much the same. The finish is similar; both have single-port engines of 347 c.c. (bore and stroke 69 mm. by 93 mm. respectively) and both have heavy-weight gearboxes with ratios of 5.55, 7.1, 9.76 and 14.8 to 1.

What difference there is is explained by the prefix "Super" to the 40/G4, for this model has a highly tuned and polished engine capable of a very fine performance indeed. A high-compression piston is, of course, fitted and the machine is designed to fulfil the exacting requirements of the out-and-out sporting enthusiast, who wants something which is definitely above the average.

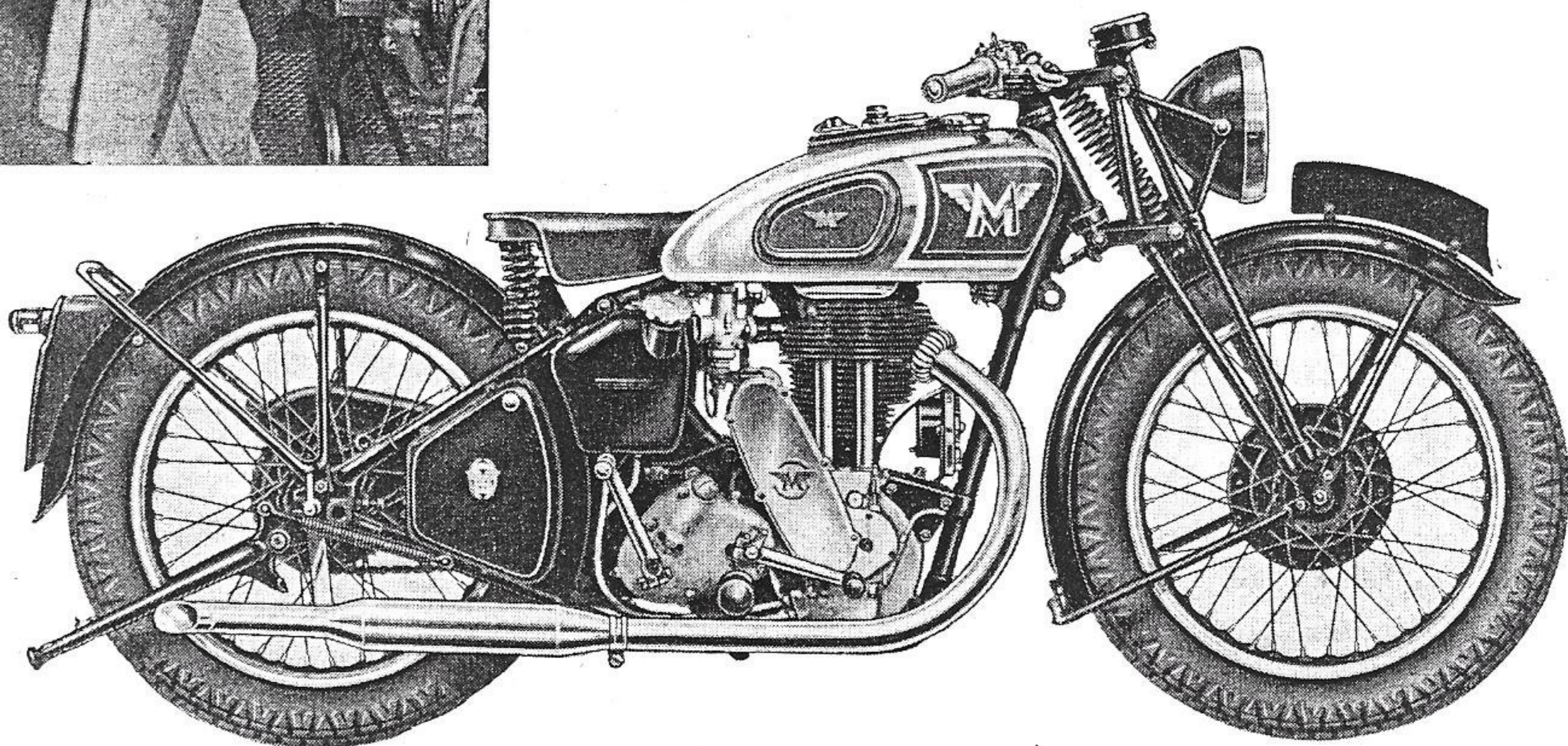
If a sportsman desires something better still, well, there is the Model 40/G90, the 500 c.c. "Super Clubman," which is the star turn of the trio of 500s in the range, the other two being the 40/G80 "Clubman" and the 40/G5 s.v. "Tourist."

The 500s

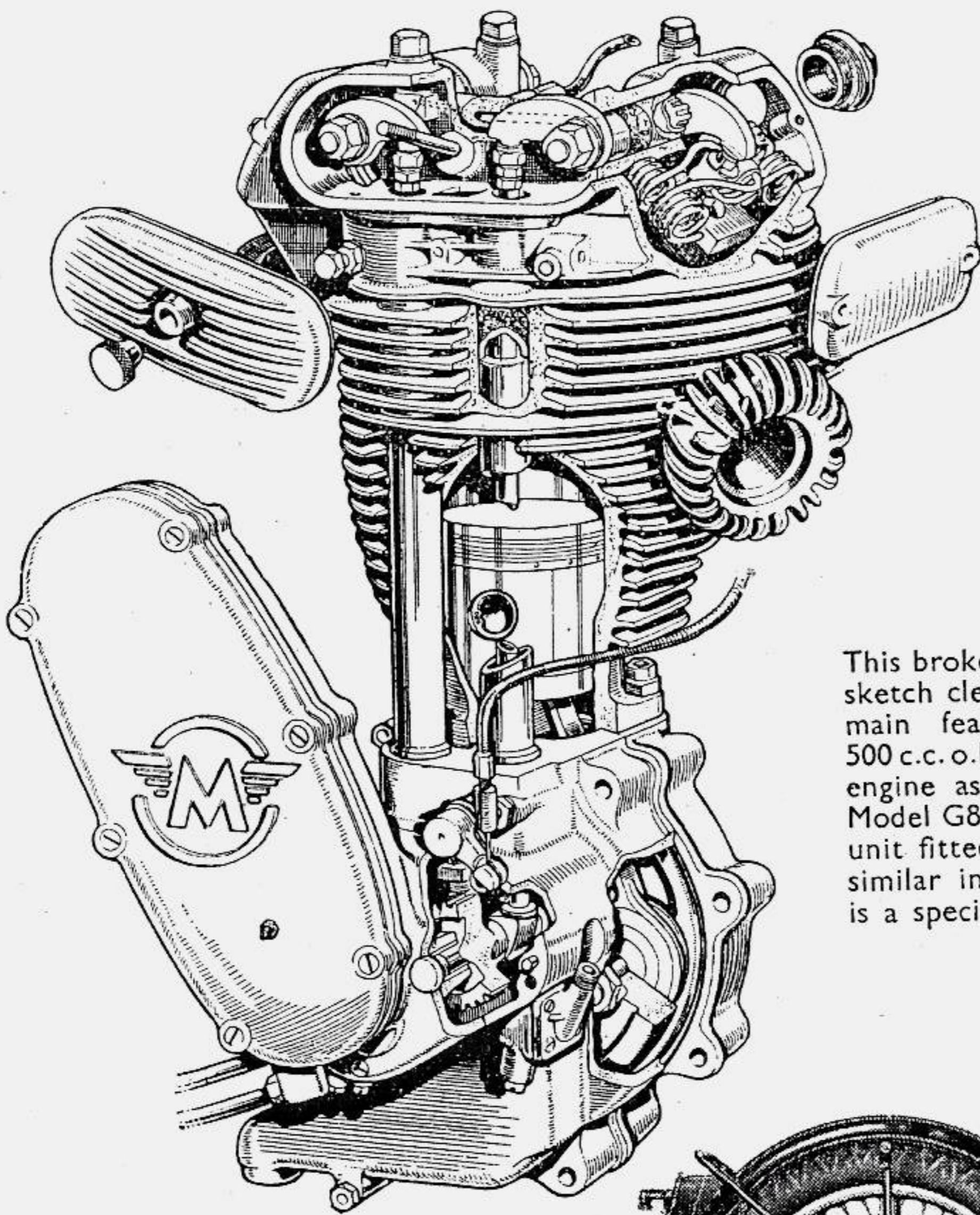
The differences between the two 500 c.c. "Clubman" machines are similar to those mentioned concerning their 350 c.c. counterparts. The similarities are on a parallel, too. Both engines are single-port jobs, having a bore and stroke of 82.5 mm. by 93 mm., giving a capacity of 498 c.c. This also applies to the "Tourist," whilst the standard gear ratios of the three jobs are also identical—5, 6.4, 8.8 and 13.3 to 1.

The coil-ignition side-valve model is built to withstand strenuous service, at the same time being an economical and reliable machine to run. It forms an admirable dual-purpose mount.

Thus we come to the largest machine of the range and, incidentally, the only multi—the 990 c.c. s.v. big twin 40/X.



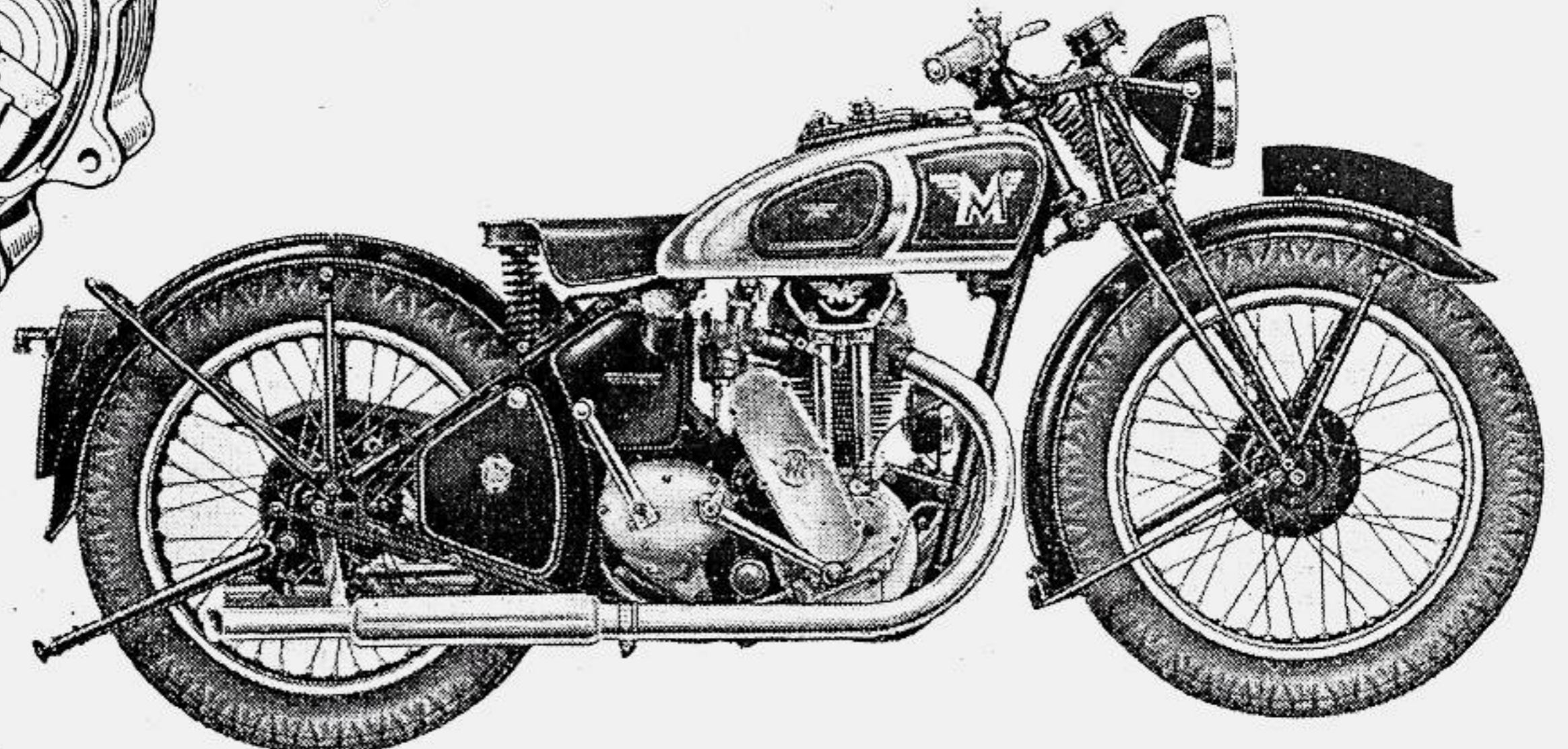
One of the most popular machines in the Matchless range is the model G80, which has a single-port engine for 1940. Note, also, the latest frame, having a single front down tube instead of the duplex tubes which were used last year. The fuel tank is panelled in red and a downswept exhaust pipe is standard.



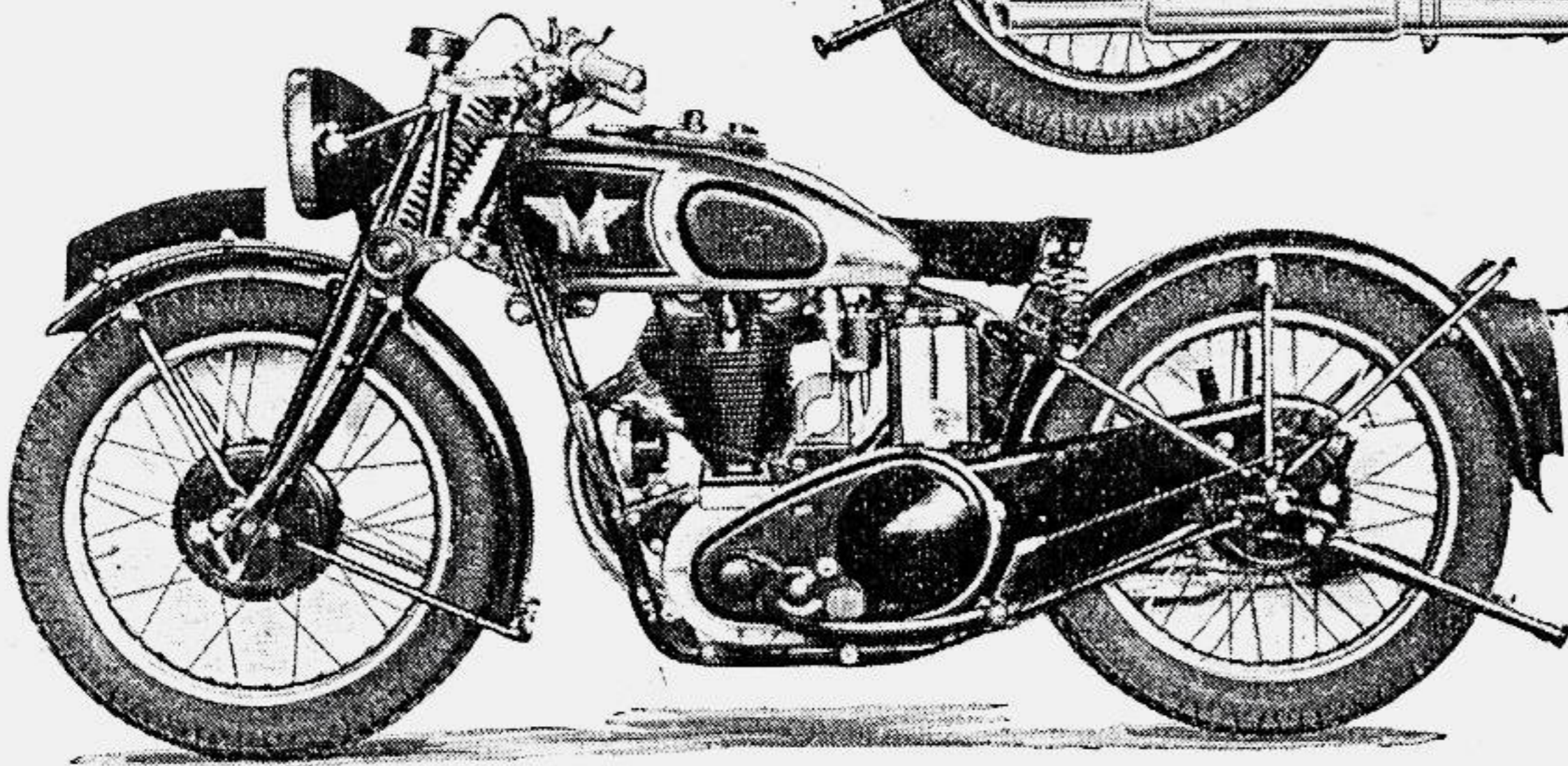
This broken open engine sketch clearly shows the main features of the 500 c.c. o.h.v. single-port engine as fitted to the Model G80. The power unit fitted to the G90 is similar in character but is a specially tuned job.

This handsome model is primarily a solo mount. Weight has been cut down to the minimum: it has a short wheel-base and special forks with rebound check springs are employed (these rebound springs are also used on the "Super Clubman" machines). Incidentally, this Sports twin has not got a single front down tube—the duplex members are employed instead. The engine possesses a tremendous reserve of power and is what is known as a "square" unit. That is to say, the bore and stroke are identical—85.5 mm. The gearbox is a heavyweight job, specially designed to stand up to the power output and the ratios are 4.72, 5.95, 7.4 and 12.6 to 1 for solo work. A slightly lower set of ratios are available for sidecar work.

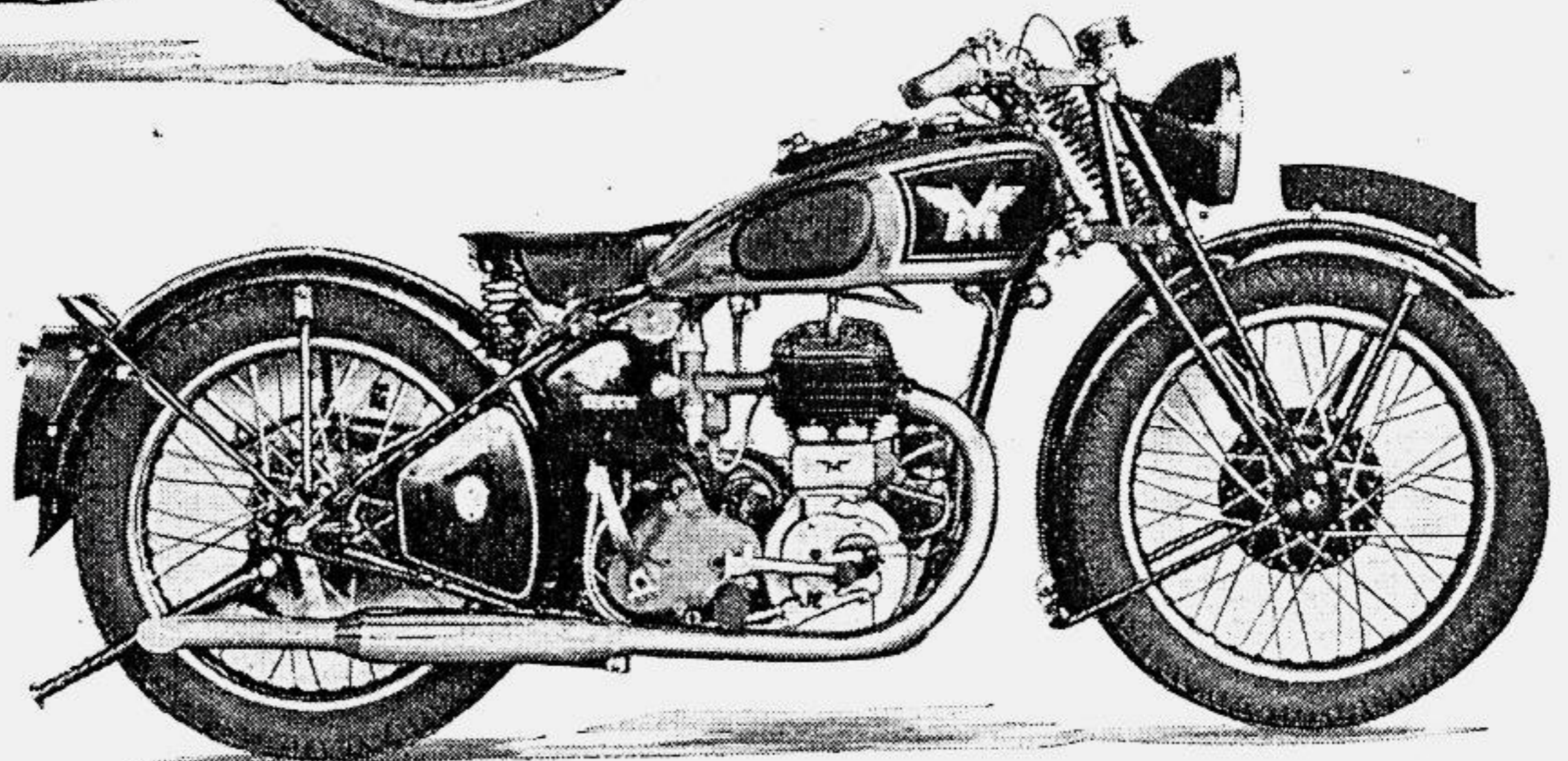
It will be seen, therefore, that the 1940 Matchless range is most certainly comprehensive and one setting a high standard for appearance, performance and reliability. The makers are to be congratulated on producing such an attractive programme despite the demands of vital war work.



(Above) An exceptionally snappy 250, the o.h.v. two-port "Clubman" which has the new frame and improved forks for 1940.



(Left) The 350 c.c. "Clubman" which is designed to cater for the sporting enthusiast who revels in plenty of power and speed.



The 500 c.c. side-valve "Tourist" machine which possesses a fine reserve of power and which can be relied upon to provide economical running combined with outstanding reliability. It is equipped with coil ignition and has a four-speed gearbox.

1940 MATCHLESS PRICES

Model.	Price.
40/G2M 250 o.h.v. "Clubman"	£52 10s.
40/G3 350 o.h.v. "Clubman"	£59 0s.
40/G4 350 o.h.v. "Super Clubman"	£64 0s.
40/G80 500 o.h.v. "Clubman"	£64 0s.
40/G90 500 o.h.v. "Super Clubman"	£68 0s.
40/G7 250 s.v. "Tourist"	£46 5s.
40/G5 500 s.v. "Tourist"	£56 0s.
40/X 990 s.v. Sports Twin	£80 0s.

Extras
 Detachable luggage carrier, 12s. 6d.; eight-day clock mounted on the instrument panel, £1 10s.; 80 m.p.h. speedometer (non-trip), £2 10s., (trip), £2 15s.; 120 m.p.h. speedometer (trip), £3; pillion footrests (folding type), 12s. 6d.; mudguard-type pillion seat, 12s. 6d.; de luxe pillion seat to fit luggage carrier, 13s. 6d.; oversize tyres, 26 ins. by 3.50 ins. (any model except 40/G4, 40/G90 and 40/X), 10s.; steering damper on the Model 40/G7, 12s. 6d.; propstand, 12s. 6d.; upswept exhaust pipe, 10s.; on Model 40/G3, £1.