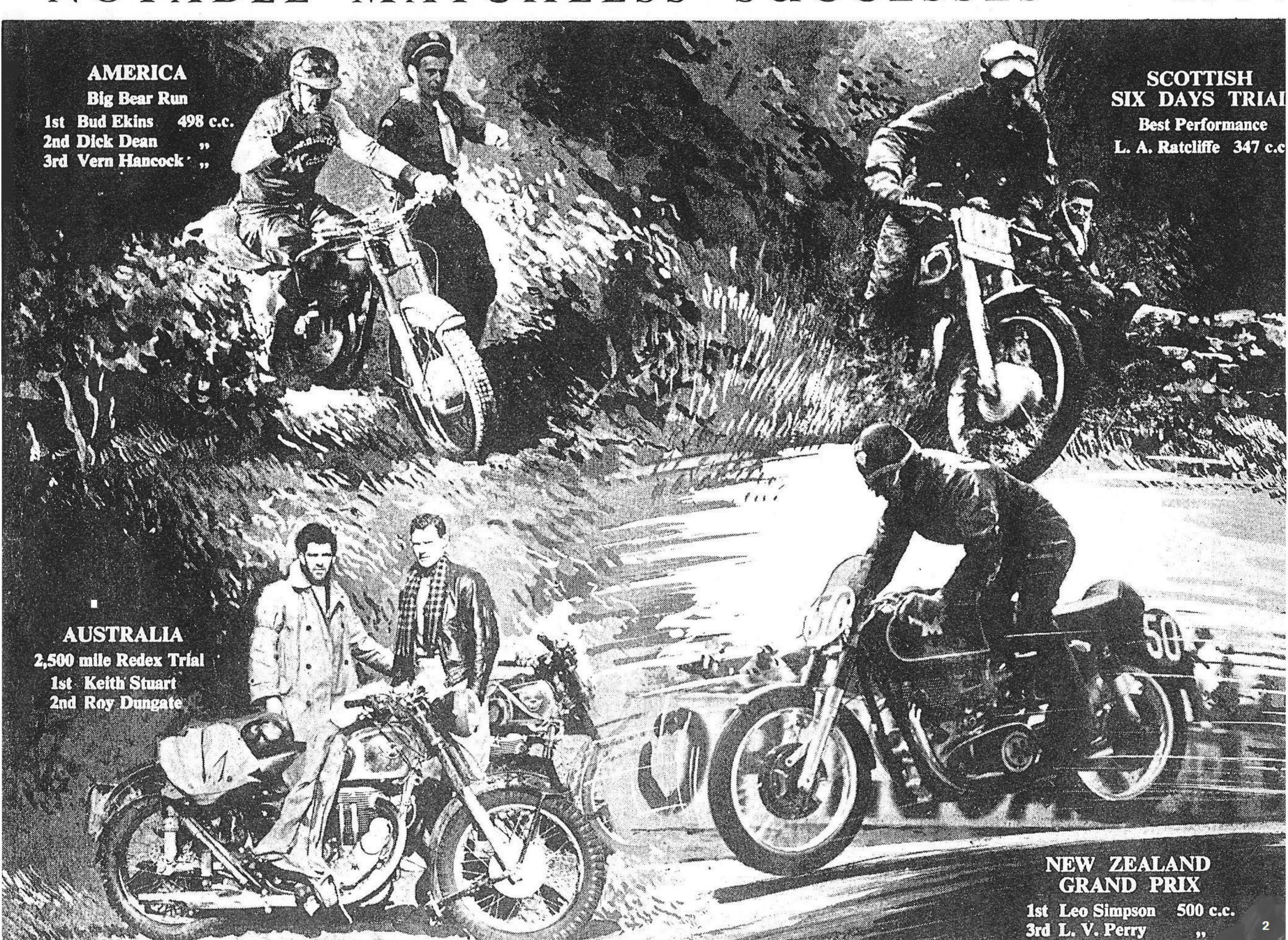


NOTABLE MATCHLESS SUCCESSES · 1954



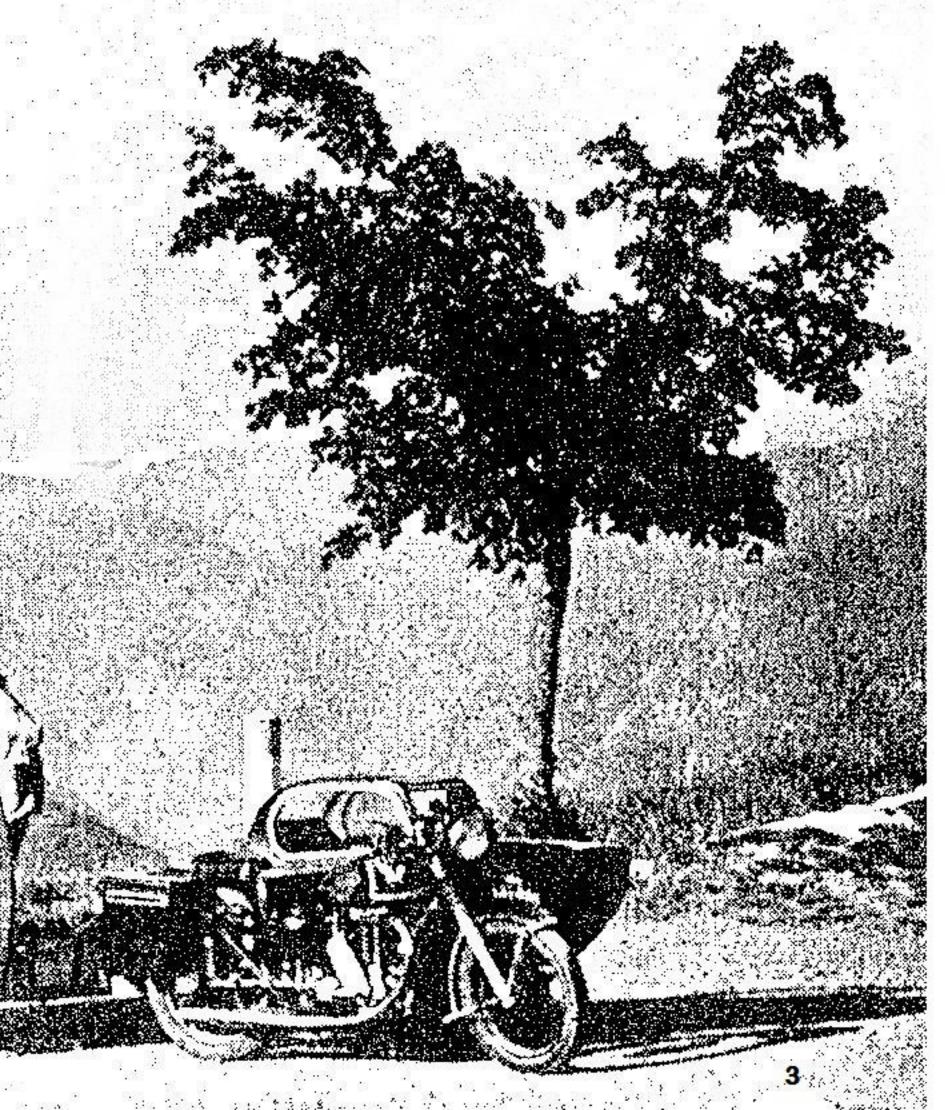
Houre IHERE with a Matchless

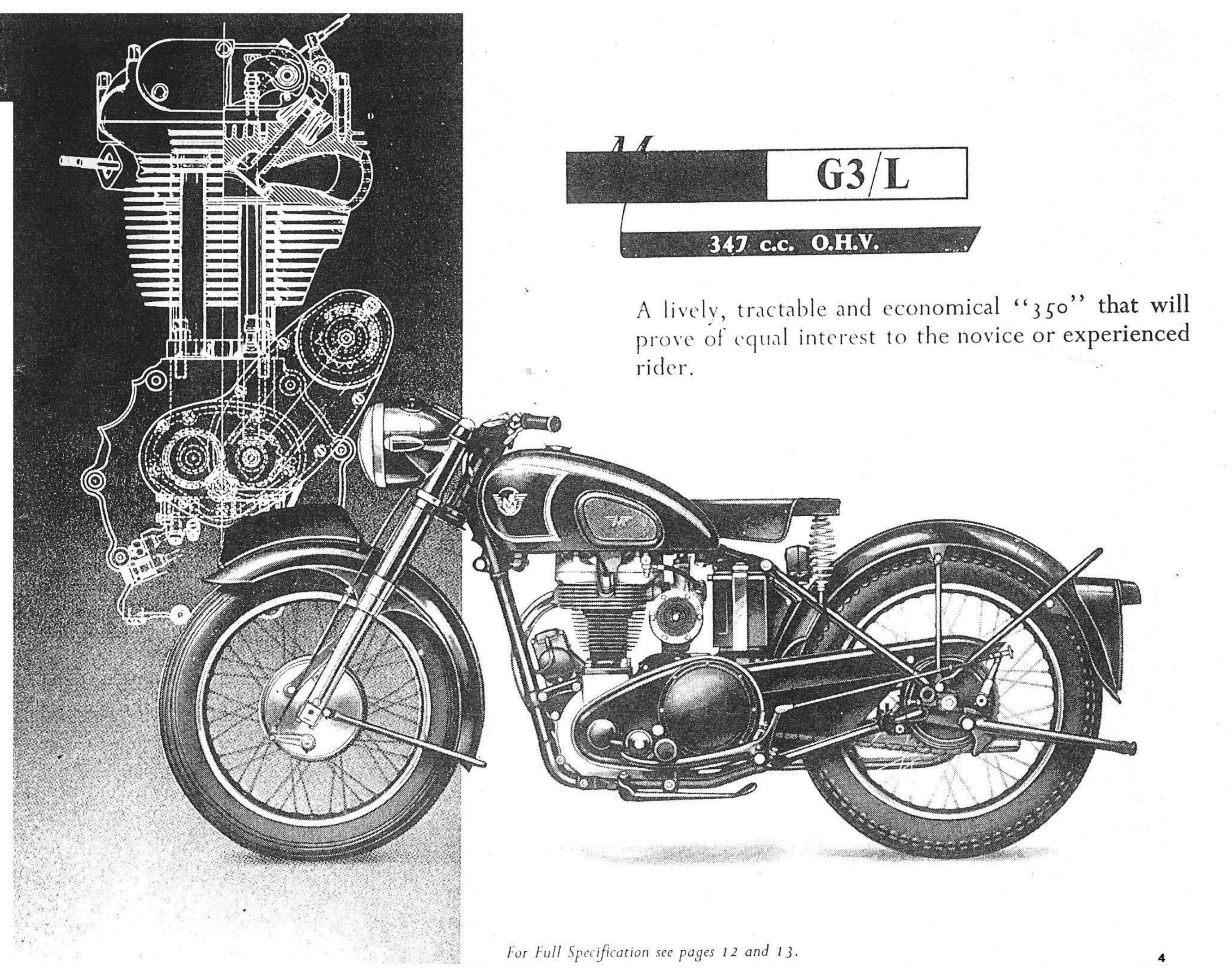
Introducing MATCHLESS MODELS FOR 1955

Although the five basic models that have comprised the MATCHLESS range for the past few years are continued for the 1955 season, each model incorporates new and interesting features that have been evolved and subsequently tested for many thousands of miles to ensure that they efficiently fulfil the purpose for which they have been designed.

The painstaking care with which the current Models have been developed has automatically eliminated the disappointments that result from the premature introduction of spectacular designs, and progress has been considerably influenced by the invaluable store of technical knowledge which has been accumulated during the fifty-five years that Matchless Motorcycles have been in continuous production.

The 1955 range, comprising 350 c.c. and 500 c.c. O.H.V. Single-cylinder Models the sing and Rigid Frames for either normal or Competition purposes; the later than "Super Clubman" of advanced but proved design, and the later than the single state of the most second as a later contribute anticipated that the many new features will be second as a supersyll of existing and potential Matchless owners.

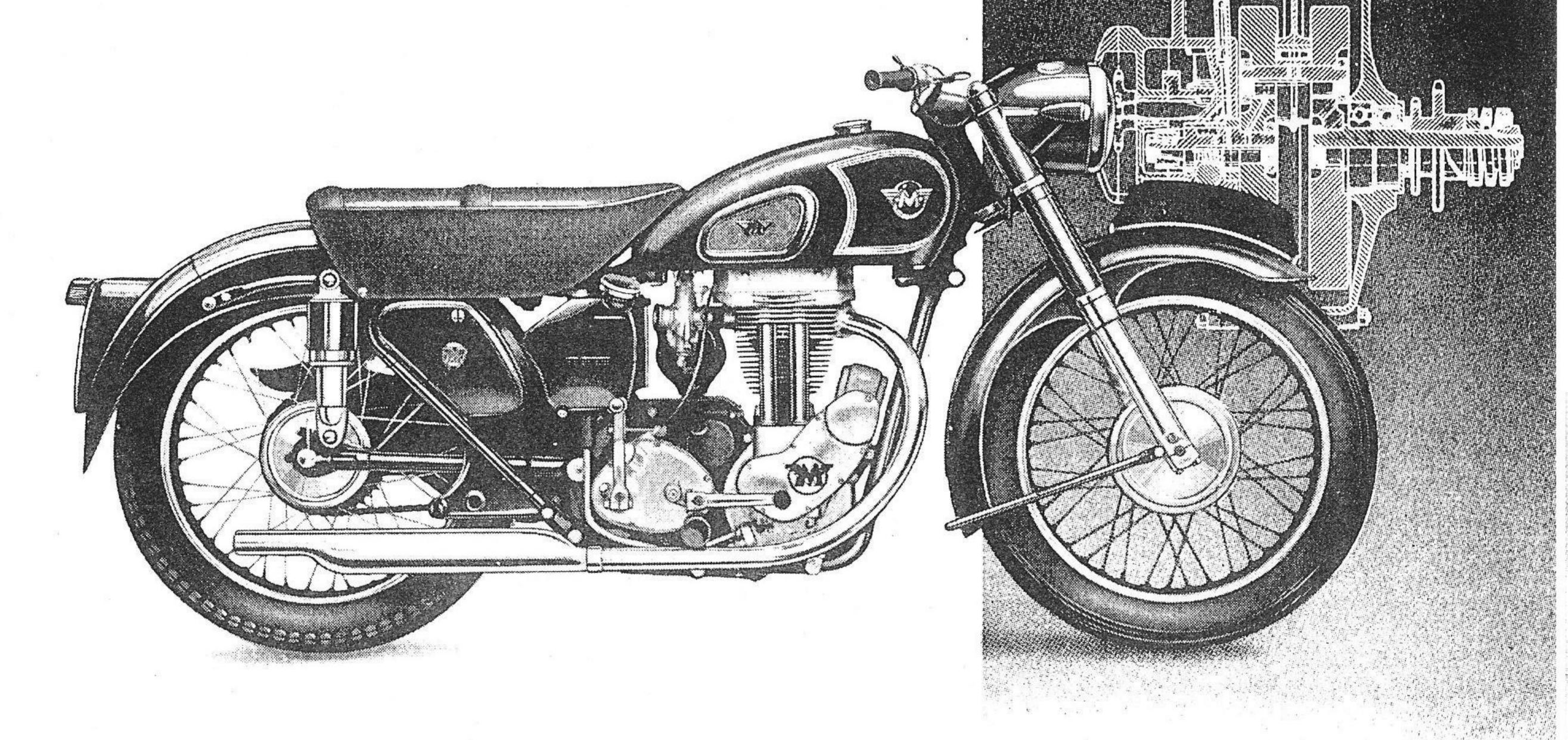


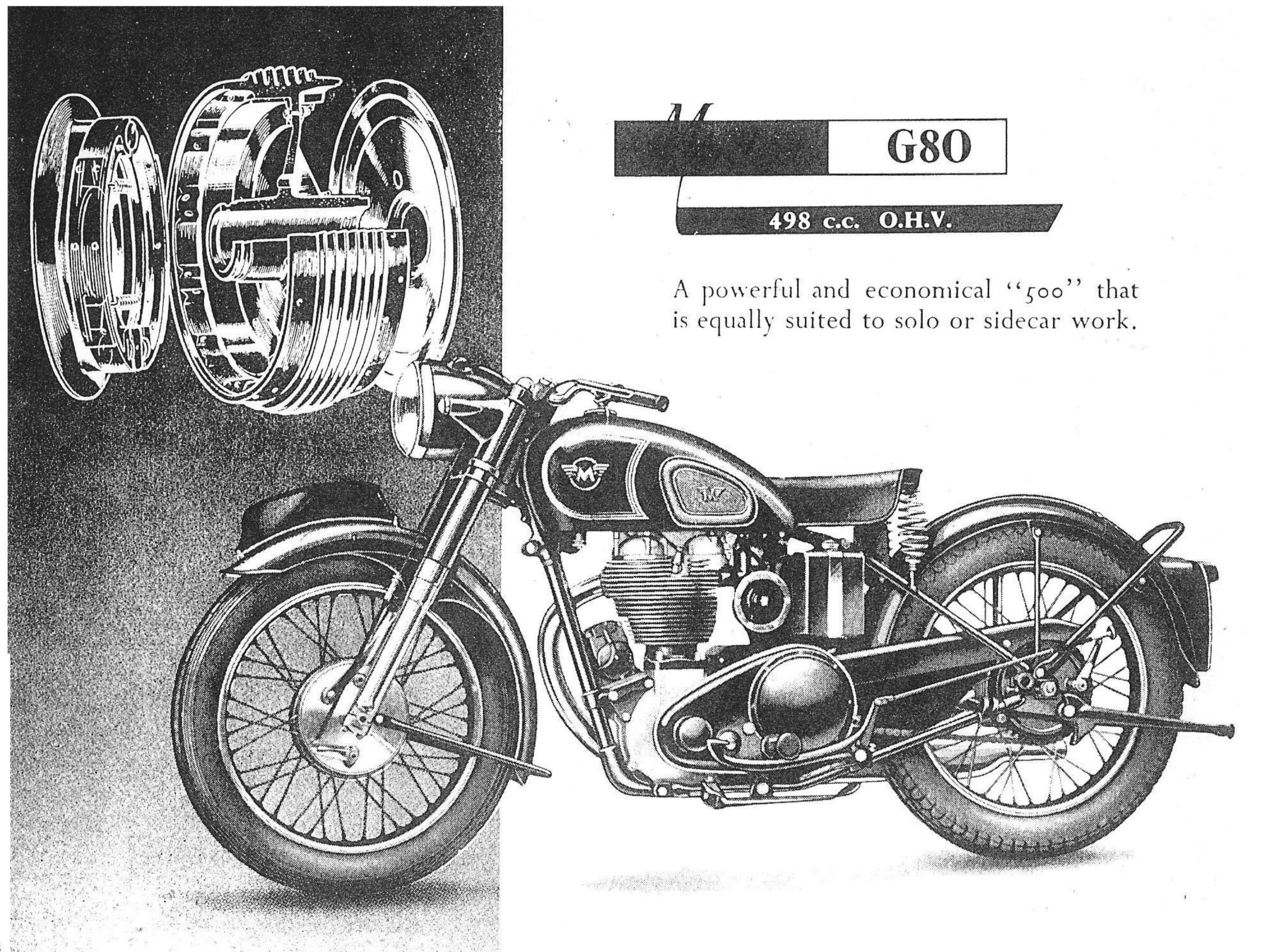


G3/LS

347 c.c. O.H.V. WITH FULL TELEDRAULIC SUSPENSION

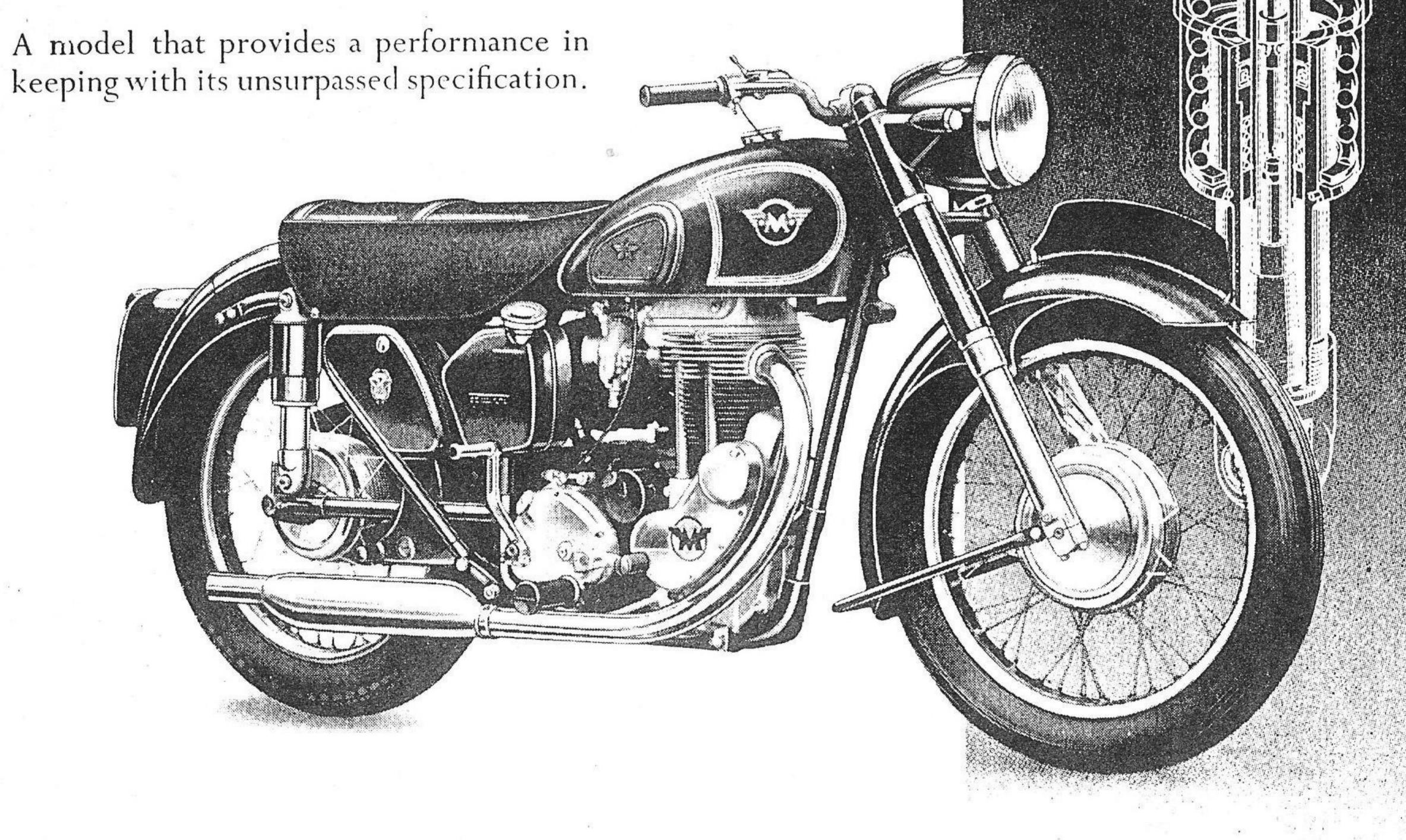
It is doubtful whether there has ever been a more popular motorcycle than this fully sprung all purpose "350".

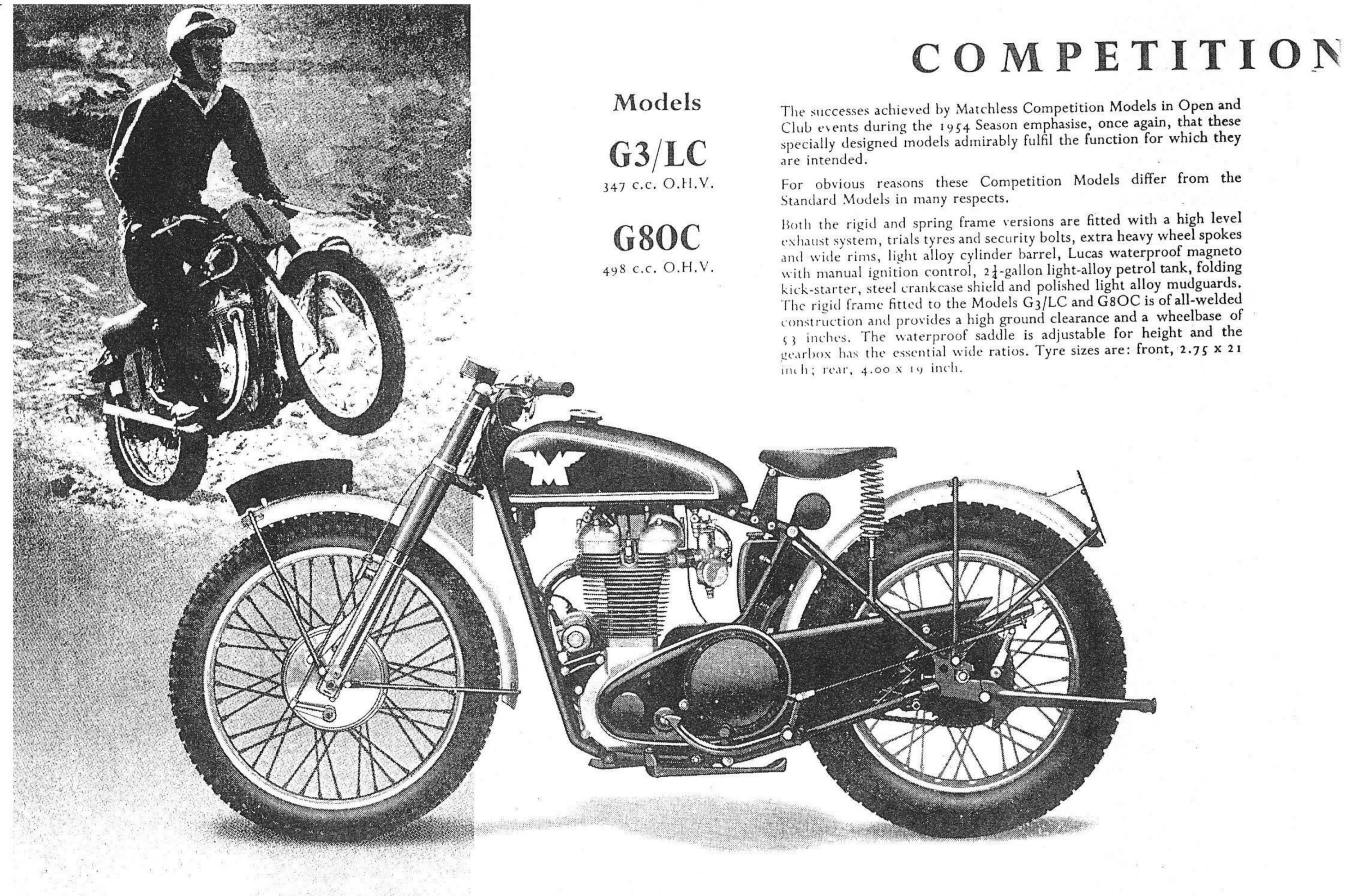




G80S

498 c.c. O.H.V. WITH FULL TELEDRAULIC SUSPENSION





Identical in every essential respect to the model that won the 1954 'Scottish Six Days Trial'—the most severe event in the British Competition calendar.

MODELS

A Matchless spring frame, with special Teledraulic rear suspension units and stronger fork springs, is fitted to the Models G3/LCS and G8OCS. The frame is of normal construction and provides a standard wheel base but is strengthened at several points and permits a high ground clearance to be obtained. In addition, the Specification includes a Twinseat of new design, robust footrests, racing cams, a high, compression piston, and an Amal T.T. 10 Carburettor. Tyre sizes are: front, 3.00 x 21 inch; rear, 4.00 x 21 inch.

OPTIONAL EQUIPMENT

33 gallon steel petrol tank, standard or wide ratio gears, wheels as fitted to standard Models.

OPTIONAL EXTRAS

Electric lighting equipment with quickly detachable headlamp, exhaust pipe extension, Dunlop 'knobbly' tyres.

MODEL G45

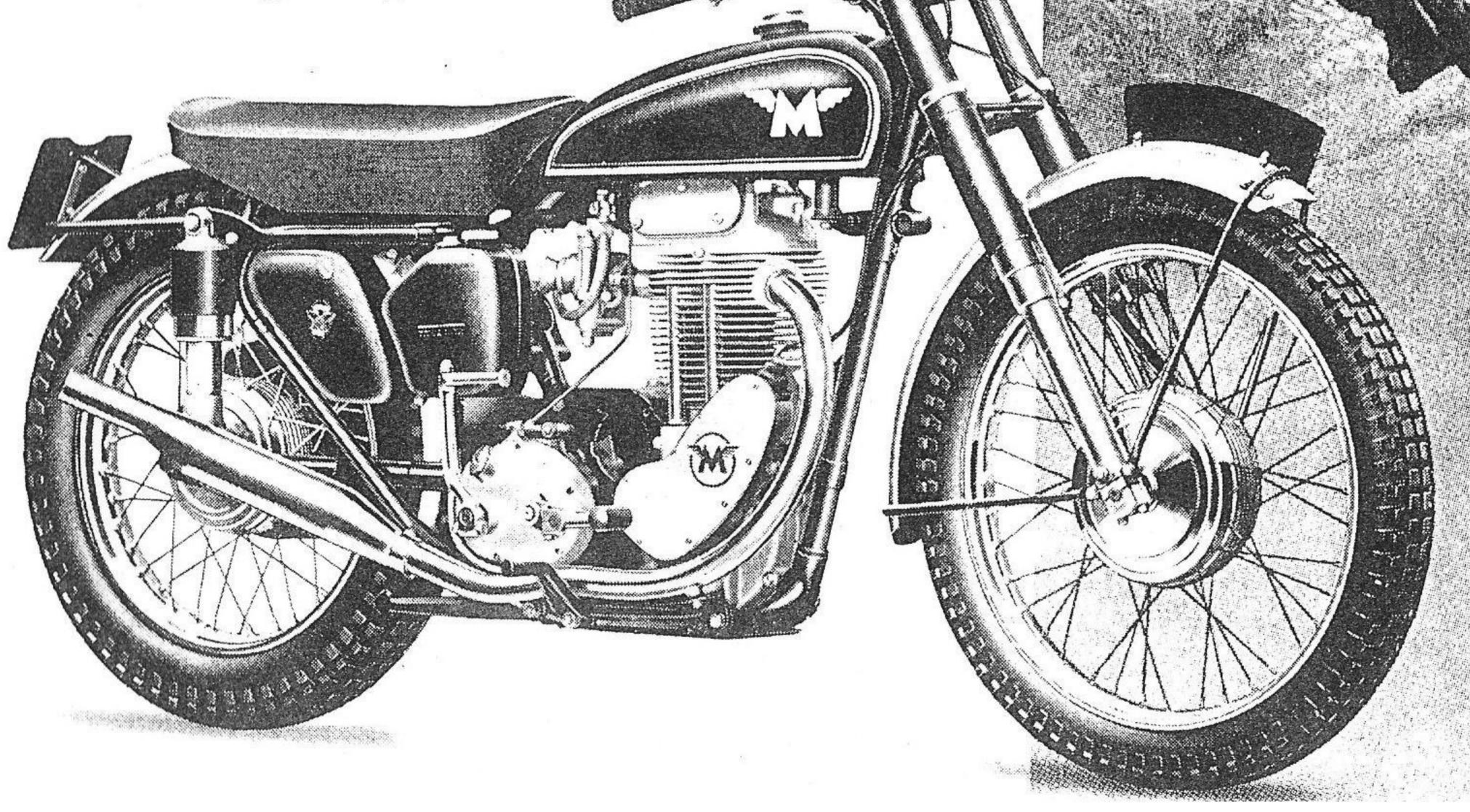
A 500 c.c. o.h.v. racing vertical twin specifically designed for International road races. Full details will be supplied on application.

Models

G3/LCS
347 c.c. O.H.V.

G80CS

498 c.c. O.H.V.



Fully sprung Competition Models that predominate in the majority of International cross country speed events.

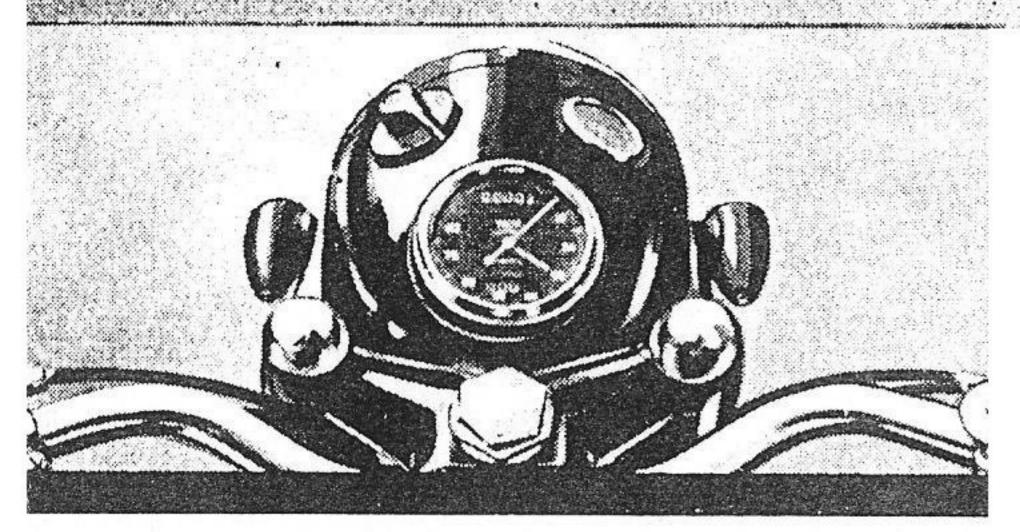
NEW AND IMPROVED FEATURES

Common to all

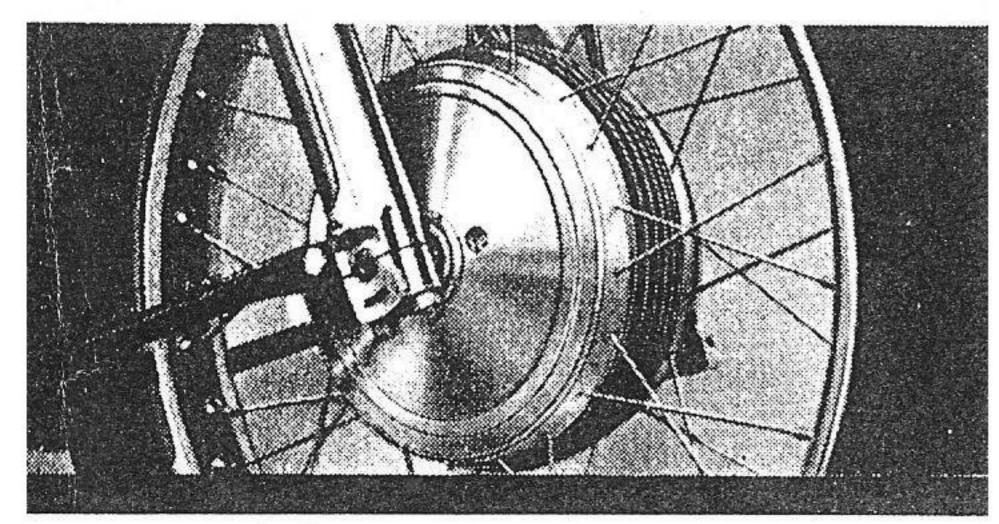
models, the

'Teledraulic'

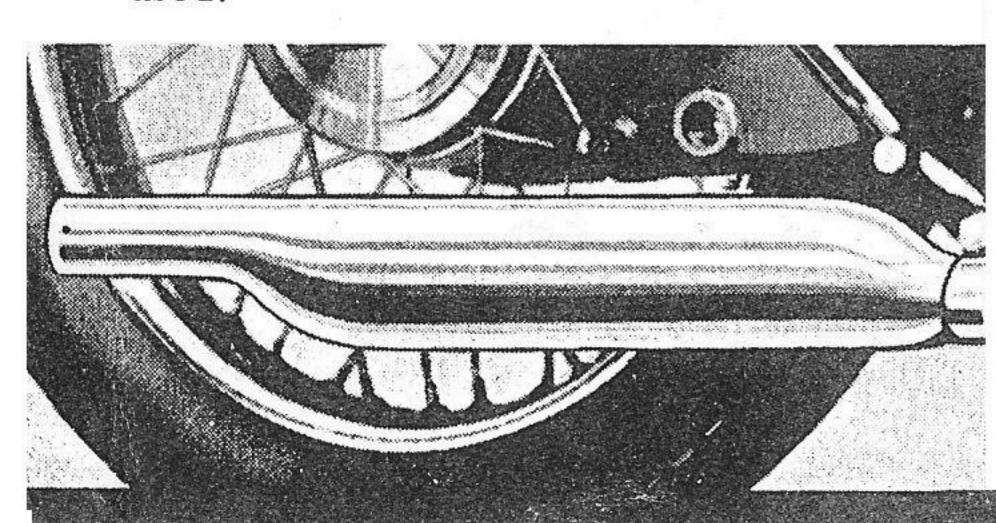
front forks.



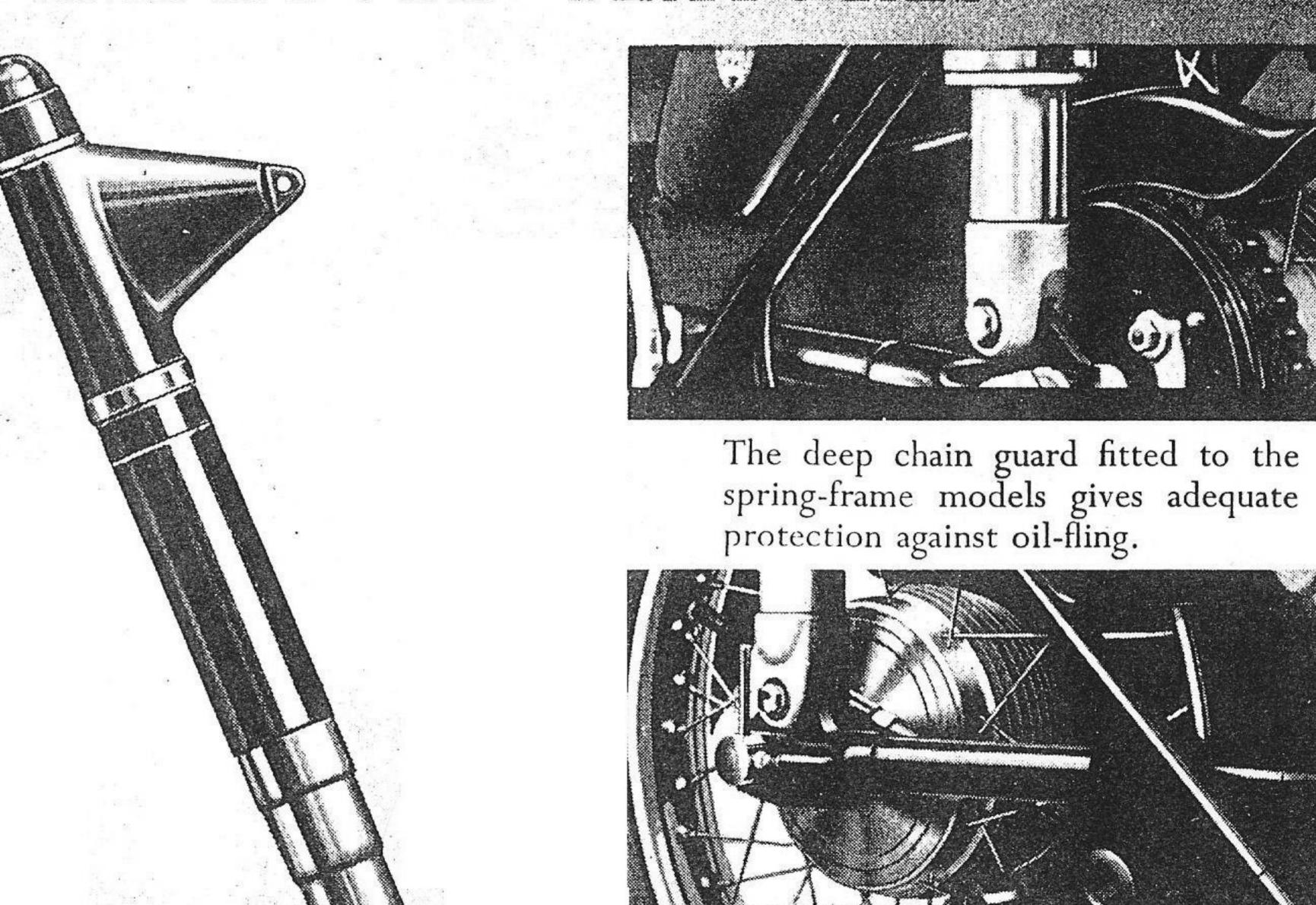
Rider's view of the new headlamp.

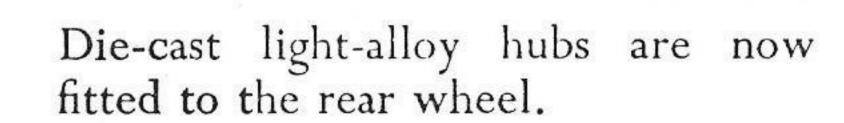


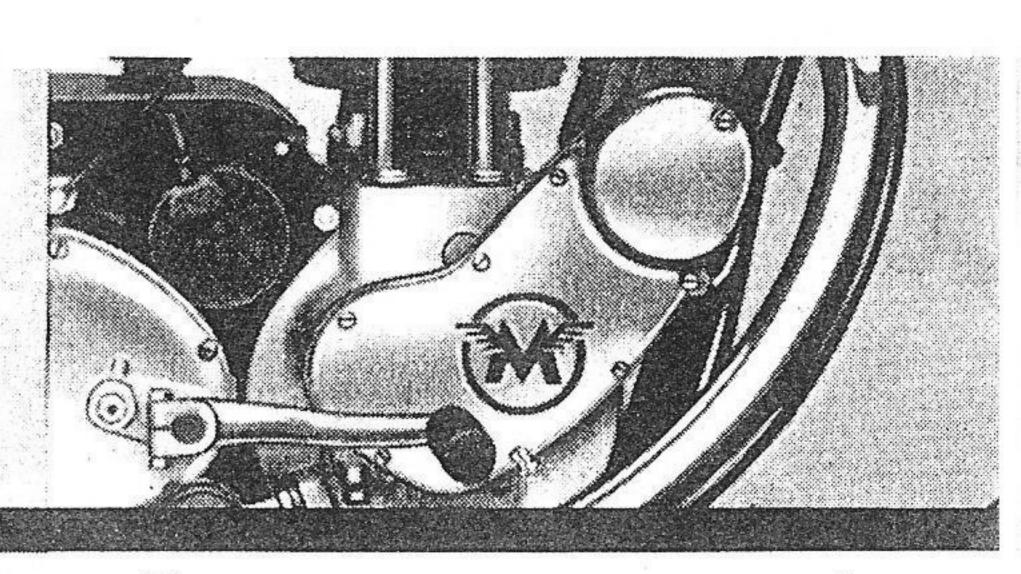
Front hubs are light-alloy die-castings which allow straight spokes to be used.



The single cylinder models have a new silencer.



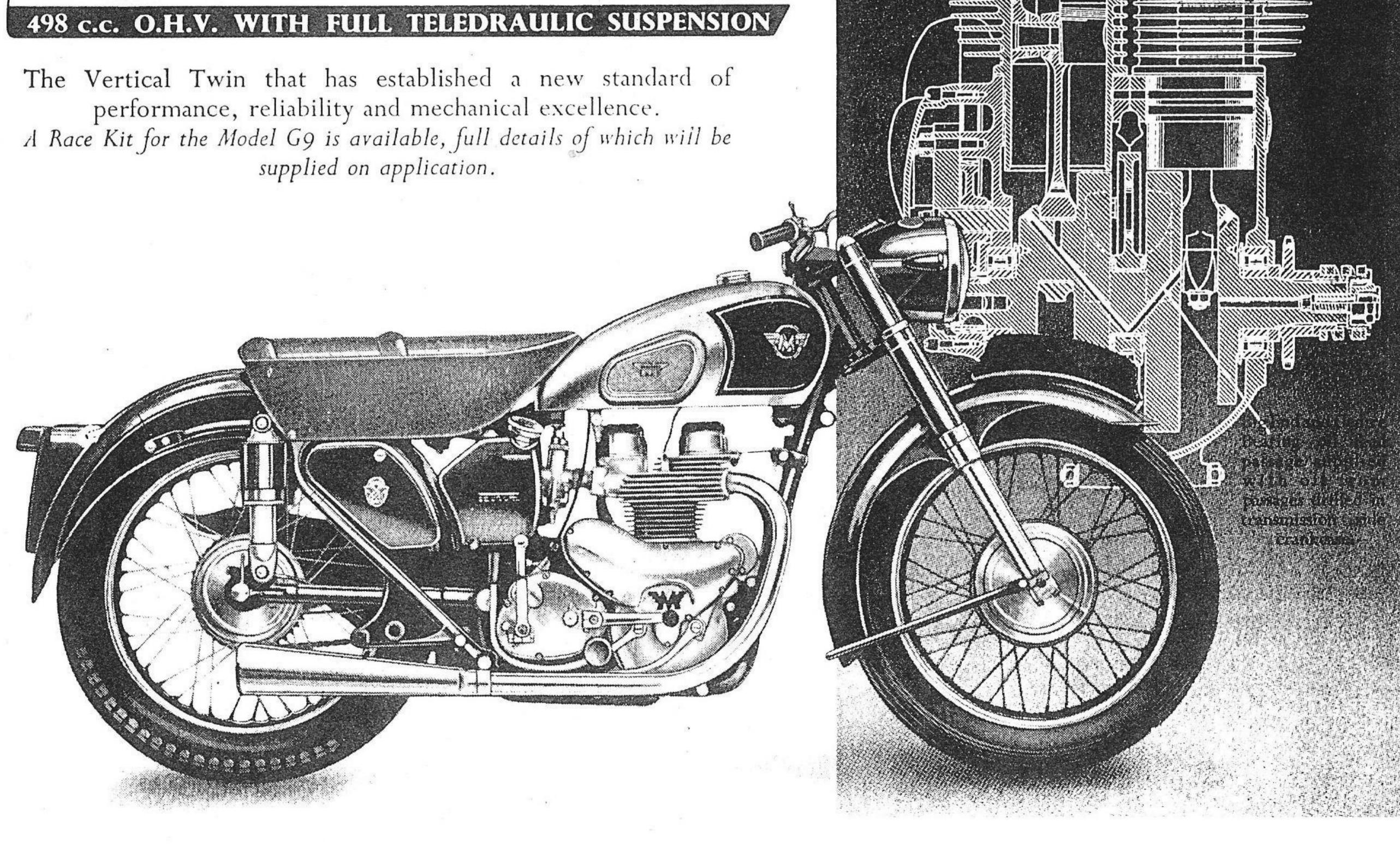




The rotating magnet magneto has automatic ignition control.

G9

THE "SUPER CLUBMAN" VERTICAL TWIN 3 c.c. O.H.V. WITH FUILL TELEDRAULIC SUSPENSION



THE TWIN CYLINDER ENGINE

THE CRANKSHAFT ASSEMBLY

The Matchless twin cylinder engine is built around a one-piece crankshaft. This component has integral flywheels and is manufactured from a high-grade alloy iron, a material which provides an excellent bearing surface. It is carried on three bearings, caged rollers on the driving and timing sides, and a plain Vandervell shell bearing at the centre.

The connecting rods are forged in a high-duty light alloy, and the big-ends are fitted with Vandervell split shell bearings. Thus, when wear eventually takes place; a new rod is not required, only the replacement of an inexpensive plain bearing. The aluminium alloy pistons are the now well-known Matchless 'wire-wound' type. Three rings are fitted to each piston, and the top one is chromium plated to reduce wear.

THE CRANKCASE

Die cast in aluminium alloy. The side faces are of spherical section, and the case is split vertically along its centre line. Thus, the orifice in each crankcase half completely surrounds its particular barrel, and a deep and wide bridge between the two orifices guarantees rigidity.

THE CYLINDER BARRELS

Manufactured from a high-grade cast iron. Separate barrels are used, and cooling is, therefore, improved and distortion eliminated at the cylinder head joint and in the bores. The barrels are deeply spigotted into the crankcase, and long holding-down bolts pass right through head and barrel into the crankcase and form a very rigid assembly.

THE CYLINDER HEADS

The cylinder heads are individual to each barrel. To reduce weight, provide better dissipation of heat and an increase in performance, they are deeply finned and cast in light alloy. The casting incorporates the standards for the valve rockers and cavities for the valve springs. Neat light alloy caps cover the valve operating gear and permit it to be flooded with oil. Combustion chambers are hemispherical in shape and have cast-in valve seats,

THE VALVE GEAR

Inlet valves are manufactured from Silchrome steel and

of semi-tulip shape, and the ends of the stems hardened to resist wear. The rockers are one-piece forgings and mounted on eccentric spindles to facilitate valve clearance adjustments.

THE TIMING GEAR

Spur gears are employed to drive the two camshafts. Cams and camshafts are forged in one piece, and the cams operate single-arm followers. The push rods bear direct on to the followers.

LUBRICATION

The engine is lubricated by a dry-sump system. Two separate gear pumps are employed, one to circulate oil around the engine, and one to return the oil to the storage tank. Each pump is independently driven at half engine speed from the ends of the two camshafts.

Oil is gravity-fed to the delivery-pump, and forced to the crankshaft centre bearing and then via oilways to each big-end bearing. A metered oil supply is taken via oilways in the cylinder barrels and heads to the rocker boxes. After circulating under pressure, the oil drains to the sump and from there is pumped back to the storage tank by the scavenge pump.

THE SINGLE CYLINDER ENGINE

Except for the differences caused by the bore dimensions, the single-cylinder engines are of identical design.

The crankshaft assembly is built-up. The flywheel discs are of a high grade iron and the connecting rod is forged from high-tensile steel. The whole assembly is supported in an aluminium alloy crankcase on two ball bearings on the drive side and a bronze bush on the timing side. The piston is the Matchless wire-wound type with two compression rings and one oil control ring. The top ring is chromium plated.

Cylinder barrels are iron castings with deep fins to assist cooling. Cylinder heads are die-cast in aluminium alloy and have a single exhaust port and cast-in valve seats.

The valves (chromium plated stems and Stellite tipped) are operated by Duralumin push rods from separate cams. Hairpin valve springs retain the valves on their seats, and the operating gear is fully enclosed.

LUBRICATION. A dry-sump system is employed. Oil is gravity-fed from the tank to the oil-pump in the crankdrains to the bottom of the crankcase and is returned from there to the tank. Filters are fitted in the supply and return route.

The pump is of the reciprocating plunger type and has only one moving part, the plunger. It is driven by a worm gear mounted on the timing-side mainshaft. Oil is fed under pressure direct to the big end bearing and the cylinder walls, and there is also a direct feed to the valve gear.

WHEELS

Chromium plated rims with enamelled centres, straight spokes and large diameter, adjustable taper roller bearings are fitted to front and rear wheels. The bearings are housed in light alloy hubs of a new design, die-cast and occupying the whole width of the wheel. The front brake is enclosed within the hub shell. Externally the hubs are barrel shaped across the width and ribbed. QUICKLY DETACHABLE REAR WHEEL. This is a new Matchless refinement. When removed, the brake, sprocket and chain are left in situ, and the wheel alignment is not affected. Removal takes approximately one minute.

BRAKES

Front and rear brakes are of 7 inch diameter. They are of conventional internal expanding design; cam operated, the front by a Bowden cable, and a hand operated lever mounted on the right handlebar; and the rear by a pedal and rod.

TYRES

Dunlop tyres are fitted. The front is ribbed and the rear a studded pattern.

MUDGUARDS

Steel blades, Bonderized and enamelled black. The rear guard has a deep valance and the rear portion is detachable to assist wheel removal. The front mudguard is of a new design and improved appearance. The front stay has been eliminated and the guard is held in position by curved side valances bolted to the front forks.

TANKS

Both petrol and oil tanks are of pressed steel, have 12 welded seams and unions and are fitted with quickThe petrol tank is rubber mounted and held in position by four bolts. Two petrol taps are fitted, one for a reserve supply, and both have fine-mesh, metal gauze filters. On the single-cylinder models the tanks are Bonderized, enamelled black and hand lined in silver. The nose of the tank carries on each side the Matchless motif, the winged 'M' in red and silver. On the twincylinder Model G9, the tank is chromium plated and has a red and silver panel. The tank capacity on all models is 3½ Imperial gallons (4 American gallons).

The oil tank is mounted beneath the saddle and fitted with a detachable filter. It is secured to the frame by two bolts and a steady clip. The capacity is 4 pints.

EXHAUST SYSTEM

Chromium plated exhaust pipes and silencers are fitted; to all Models.

HANDLEBARS

Adjustable for height and angle and securely clamped in a substantial lug.

CARBURETTOR

The new AMAL 'monobloc' carburettor is fitted to all roadster machines. It is designed to give improved economy in the middle portion of the range without sacrificing performance on the other side. It is heatinsulated from the engine by a special distance piece. On the twin-cylinder model, the carburettor is mounted on a manifold which bridges both inlet ports.

The controls are fitted on the right handlebar; a twist grip operates the throttle and a lever the air slide. On the body of the carburettor there is a throttle stop and the screw adjustment for slow running.

Flexible petrol pipes are a standard fitting.

IGNITION

MAGNETOS. All single-cylinder standard models have an automatically controlled advance and retard mechanism and chain-driven Lucas magnetos. The advance and retard unit is enclosed within the chaincase. The Lucas magneto fitted to the twin-cylinder model G9 is gear driven, and the advance and retard is manually controlled. Sparking Plug. A 14 mm. K.L.G. 'Corundite' FE.80 plug is fitted to all models.

TRANSMISSION

By chain through a four-speed gear box, The primary

chain is enclosed within an oil-bath casing to exclude dirt and grit and prolong the chain's working life. Inspection covers are provided so that the chain tension may be checked and the clutch examined. Incorporated with the engine sprocket is a cam-type shock absorber. The rear chain is protected by a deep and efficient guard which extends along the whole top run.

THE GEAR BOX

The four-speed heavy weight gearbox, with kickstarter and multi-plate dry clutch is common to all models. The gear change lever is foot-operated and actuates an enclosed positive stop mechanism.

FRAME

Duplex cradle type with malleable lugs; all joints are brazed. Lugs are provided for the attachment of pillion footrests and a sidecar, and to support the tanks and carry the stands. The spring frame has a very robust swinging fork mounted on self-lubricating bearings. The suspension units are 'Teledraulic' and of a similar basic design to the front forks.

FRONT FORKS

The telescopic action coupled with the use of hydraulic dampers gives rise to the registered name Teledraulic. An important feature of the design is that bottoming is prevented no matter how violent is the shock.

SADDLE

On the rigid frame models a saddle of conventional design is fitted. It has a three point fixing and is supported at the rear by barrel shaped springs. Provision is made for adjustment to suit the rider.

Spring-frame models have a Matchless 'Twinseat' of Vynide covered Dunlopillo.

FOOTRESTS

Rubber covered and adjustable to suit individual riders. Lugs are provided for the attachment of folding pillion footrests.

STANDS

A prop stand and front wheel stand are fitted to all models. The rigid-frame machines have a rear stand and the spring-frame machines a central stand. With the exception of the front stand, all stands are of the spring-up type. The front stand also does duty as a mudguard stay.

TOOL BOXES

Two are fitted to the spring-frame models, one on

either side of the machine, and one large capacity box to rigid-frame models. The boxes are steel pressings of pleasing design and have hinged lids, fastened by a large diameter thumb screw.

ELECTRICAL EQUIPMENT

All models are fitted with an automatic voltage contro unit, an electric horn, a 6-volt battery, and a dipperswitch and horn button mounted on the handlebars. LAMPS. The 7-inch diameter headlamp has been designed to give an improved appearance. The deep rim is chromium plated and the lamp shell extended rearwards to shroud the body of the speedometer, the rim of which lies flush with the lamp shell. On either side of the speedometer are the ammeter and the control switch, and pilot lights of streamlined appearance are mounted one on each side of the headlamp. The rear lamp is a plastic moulding and is mounted on the rear number plate. In addition, an efficient red reflector is fitted.

DYNAMO. Single-cylinder models have a dynamo with an output of 32-watts. The drive is by chain enclosed within the primary chain case from the engine shaft. A gear driven dynamo with an output of 45-watts is fitted to the twin-cylinder Model G9.

BATTERY. A 6-volt battery of 12-amp hour capacity is mounted beneath the saddle. The electrolyte is liquid. The battery carrier is of steel, enamelled black, and the retaining strap chromium plated.

EQUIPMENT

Illuminated trip speedometer, ammeter, electric horn, tool kit, including grease gun, tyre pump and instruction book.

Certain equipment can be supplied at extra cost. This includes pillion seat, folding pillion footrests, luggage carrier, pannier bags, air cleaner and stop light.

FINISH

All enamelled parts are Bonderized and finished with three coats of high-quality stoved black enamel. Bright parts are chromium or cadmium plated, or polished aluminium. Hubs, fork sliders and timing case covers are polished. Petrol tanks are hand lined.

Chromium plated tanks are only fitted to the twincylinder model.

COMPETITION MODELS. For items differing from standard, please read pages 8 and 9.

For further details please see page 14.

TECHNICAL DATA

	G3/L G3/LS	G3/LC	G3/LC5	G80	G80S	G80C	G80CS	G9
Engine	347 c.c. (69×93 mm) o.h.v. single				498 c.c. (82·5×93 mm.) o.h.v. single			
Compression Ratio	6·5 or 7·5		7.5	6·3 or 7·3			7.3	7.0 or 8.0
Power-b.h.p. and r.p.m	18 at 5750		24 at 6000	24·4 at 5500			30 at 5600	29 at 6800
Carburettor. Choke size	1 16"		1 15"	1 32 "			1 3 "	1"
Main jet size	210		300	260			340	240
Throttle slide No	3		5		3		7	4
Sparking plug type-K.L.G	FE80			FE80 *				FE80
Gear ratios 1st—2nd	15.4-9.9	21-1-16-	1 17.4—11.2	13-	-38-5	18-614-1	15.4-9.9	13.9-8.9
3rd—top	7.65.8	10-4-6-6	8.6—6.6	6.	5-5.0	9-15-8	7-65-8	6.95.25
Tyre size. Front	3·25× 19"	2·75×21	3.00×21"	3.2	25×19"	2·75×21"	3.00×21"	3·25×19"
Rear	3·25×19"	4.0	00 × 19"	3·50×19" 4·0		0×19"	3·50×19"	
Brake diameter and width	7×7″			7 × ₹"			7 × 7/8	
Ignition timing b.t.d.c	39° or ½"			39° or ½"			39° or §"	
Valve timing: Inlet opens b.t.d.c	36°		59°	18°			59°	35°
Inlet closes a.b.d.c	51°		69°	69°			69°	65°
Exhaust opens b.b.d.c.	50°		74°	50°			74°	65°
Exhaust closes a.t.d.c.	30°		48°	30°			48°	35°
Primary chain	$\frac{1}{2} \times 0.305$ "			½×0·305″				½×0·305"
Rear chain	§ × ¾ "			5/8 × 3/″			\$ × 3 "	
Dynamo and Magneto chain	§×0·225″			₹×0·225″				
Petrol consumption. m.p.g. at 40 m.p.h.	85	- 1			80	I — I		75
Weight—pounds	344 375	293	321	354	387	296	324	394
Wheelbase-inches	54 55}	53	551	54	55∤	53	55 1	55}
Seat heightinches	30 31½	32 <u>1</u>	. 32½	30	31 <u>1</u>	32	32½	311
Ground clearance inches	5½ 5½	61	6 <u>1</u>	5 1	5 <u>1</u>	61/2	6 <u>1</u>	5 <u>1</u>
O	85 86 ₄	82	85 ₄	85	86 ₁	82	85 ₄	861
				41		43	43	41½
height—inches	41 41½ 43 43			41 41½ 43 43 28			28	
width—inches	. 28	5				20		20

e narantee

NOTICE. We do not appoint agents for the sale on our behalf of our motorcycles or other goods, but we assign to Motorcycle Dealers areas in which we supply to such Dealers exclusively for re-sale in such areas. No such Dealer is authorised to transact any business, give any warranty, make any representation, or incur any liability on our behalf.

GUARANTEE. We give the following guarantee with our motorcycles, motorcycle combinations and sidecars, which is given in place of any implied conditions, warranties or liabilities whatsoever, statutory or otherwise, all such implied conditions, warranties and liabilities being in all cases excluded. Any statement, description, conditions or representation contained in any catalogue, advertisement, leaflet or other publication shall not be construed as enlarging, varying or overriding this guarantee. In the case of machines (a) which have been used for "hiringout" purposes or (b) any motorcycle and/or sidecar used for any dirt track, cinder track or grass track racing or competitions (or any competition of any kind within an enclosure for which a charge is made for admission to take part in or view the competition), or (c) machines from which the trade mark, name or manufacturing number has been removed, no guarantee, condition or warranty of any kind is given or is to be implied. We guarantee, subject to the conditions mentioned below, that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship, but this guarantee is to extend and be in force for six months only from date of purchase, and damages for which we make ourselves responsible under this guarantee are limited to the free supply of a new part in exchange for the part of the motorcycle combination or sidecar which may have proved defective. We do not undertake to replace or refix, or bear the cost of replacing or refixing such new parts in the motorcycle, motorcycle combination or sidecar. We undertake, subject to the conditions mentioned below, to make good at any time within six months any defects in these respects. As motorcycles, motorcycle combinations and sidecars are easily liable to derangement by neglect or misuse, this guarantee does not apply to defects caused by wear and tear, misuse or neglect. The term "misuse" shall include amongst others the following acts:-

- 1. The attaching of a sidecar to a motorcycle in such a manner as to cause damage or calculated to render the latter unsafe when ridden.
- 2. The use of a motorcycle or of a motorcycle and sidecar combined, when carrying more persons or a greater weight than that for which the machine was designed by the manufacturers.
- The attaching of a sidecar to a motorcycle by any form of attachment not provided, supplied or approved by us, or to a motorcycle which is not designed for such use.

PLUMSTEAD ROAD

Telephone: WOOlwich 1223

Any motorcycle, motorcycle combination or sidecar sent to us to be plated, enamelled or repaired will be repaired upon the following conditions, i.e., we guarantee that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship, such guarantee to extend and be in force for three months only from the time such work shall have been executed or until the expiration of the six months above referred to, and this guarantee is in lieu and in exclusion of any common law or statute, warranty or condition, and the damages recoverable are limited to the cost of any further work which may be necessary to amend and make good the work found to be defective.

CONDITIONS OF GUARANTEE. If a defective part should be found in our motocycles, motorcycle combinations or sidecars, or in any part supplied by way of exchange before referred to, it must be sent to us CARRIAGE PAID, and accompanied by an intimation from the owner that he desires to have it repaired or exchanged free of charge under our guarantee, and he must also furnish us at the same time with the number of the machine, the date of the purchase, or the date when the alleged defective part was exchanged as the case may be.

Failing compliance with the above, such articles will lie here AT THE RISK OF THE OWNER, and this guarantee and any implied guarantee, warranty or condition shall not be enforceable.

We do not guarantee specialities such as tyres, saddles, chains, electrical equipment, lamps, etc., or any component parts supplied to the order of the Purchaser differing from standard specifications, supplied with our motorcycles, motorcycle combinations, sidecars, or otherwise.

THE MATCHLESS FREE SERVICE SCHEME. It is strongly recommended that owners of new Matchless Motorcycles should avail themselves of the free Service Scheme operated by all home Dealers, full details of which are given on the

Card supplied with each machine.

NOTICE

All prices and specifications are subject to alteration without notice and all motorcycles and equipment are sold subject to the limited guarantee printed herein.

MATCHLESS MOTOR CYCLES

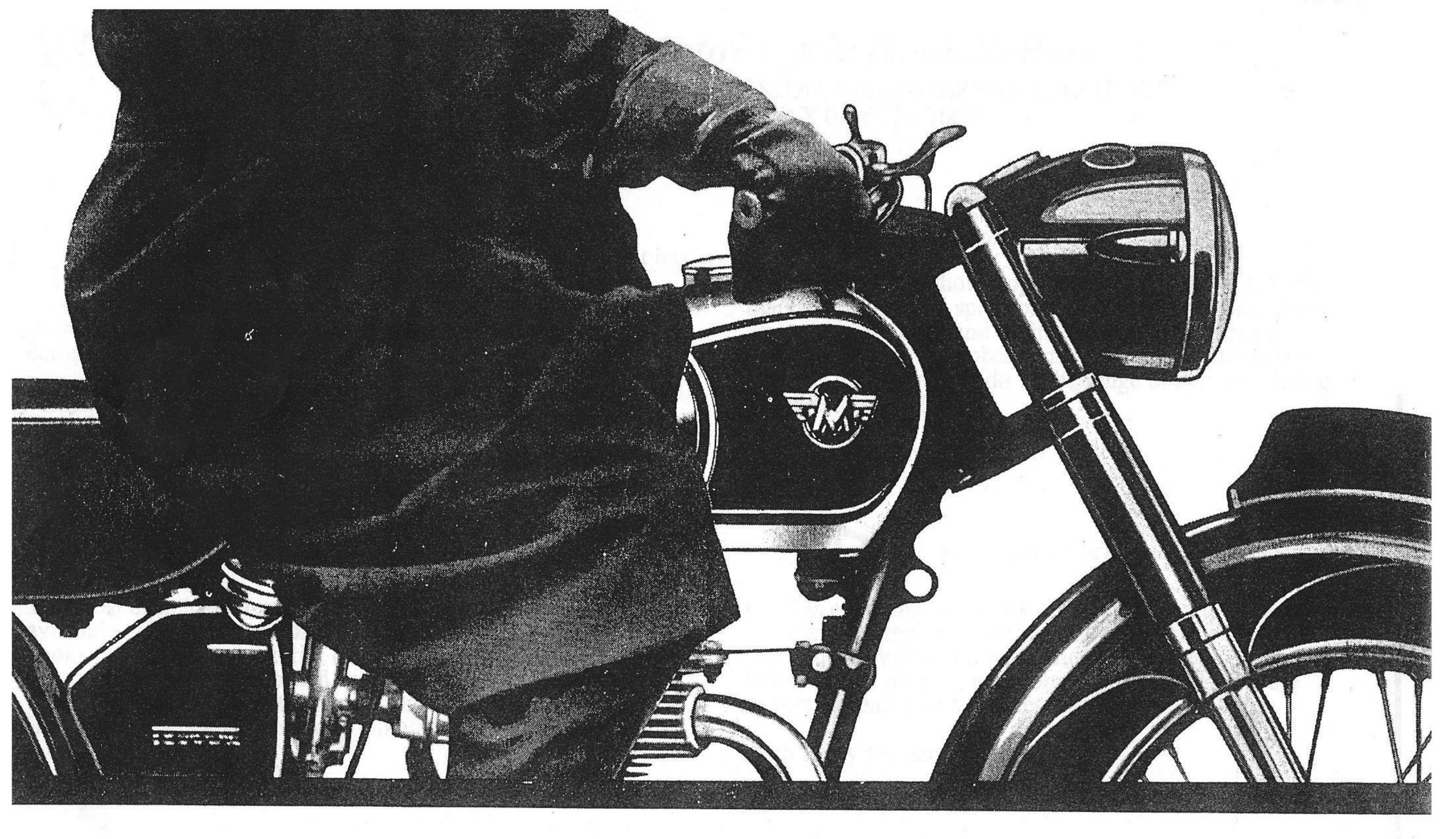
Proprietors-Associated Motor Cycles Ltd.

LONDON, S.E.18

ENGLAND

Telegrams: Matchless Wol, London





Make it a Matchless and Ride Farther-Faster