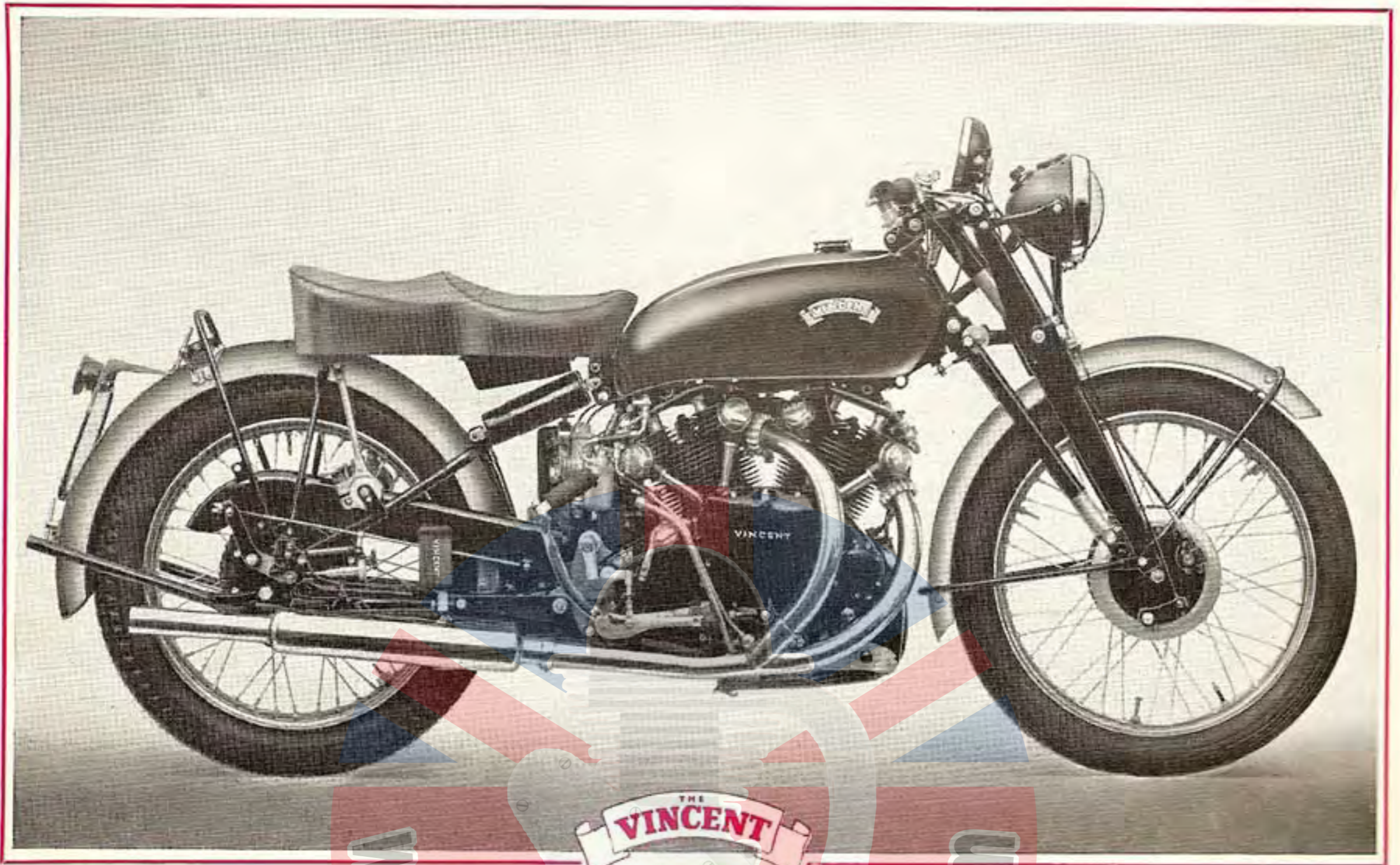
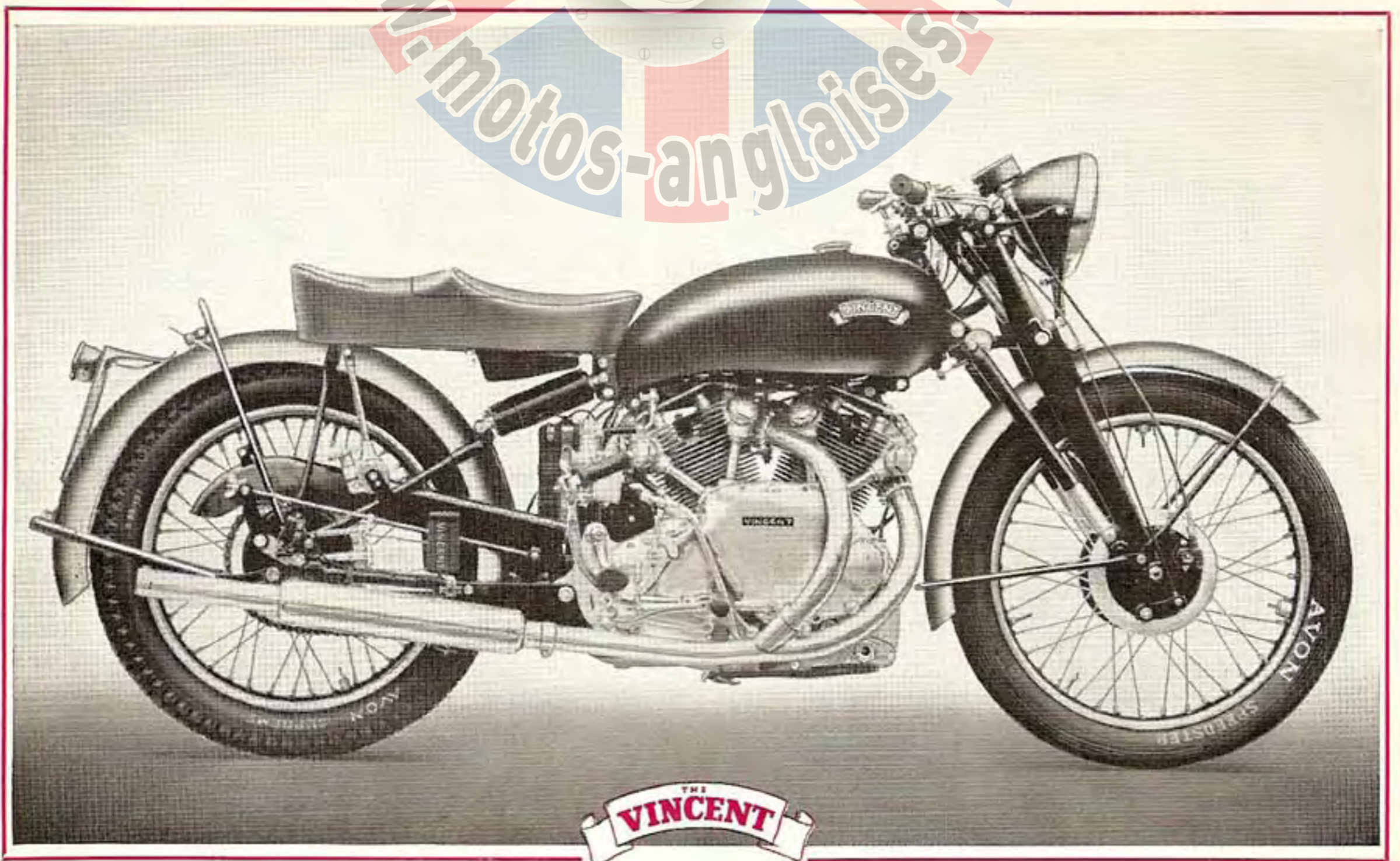




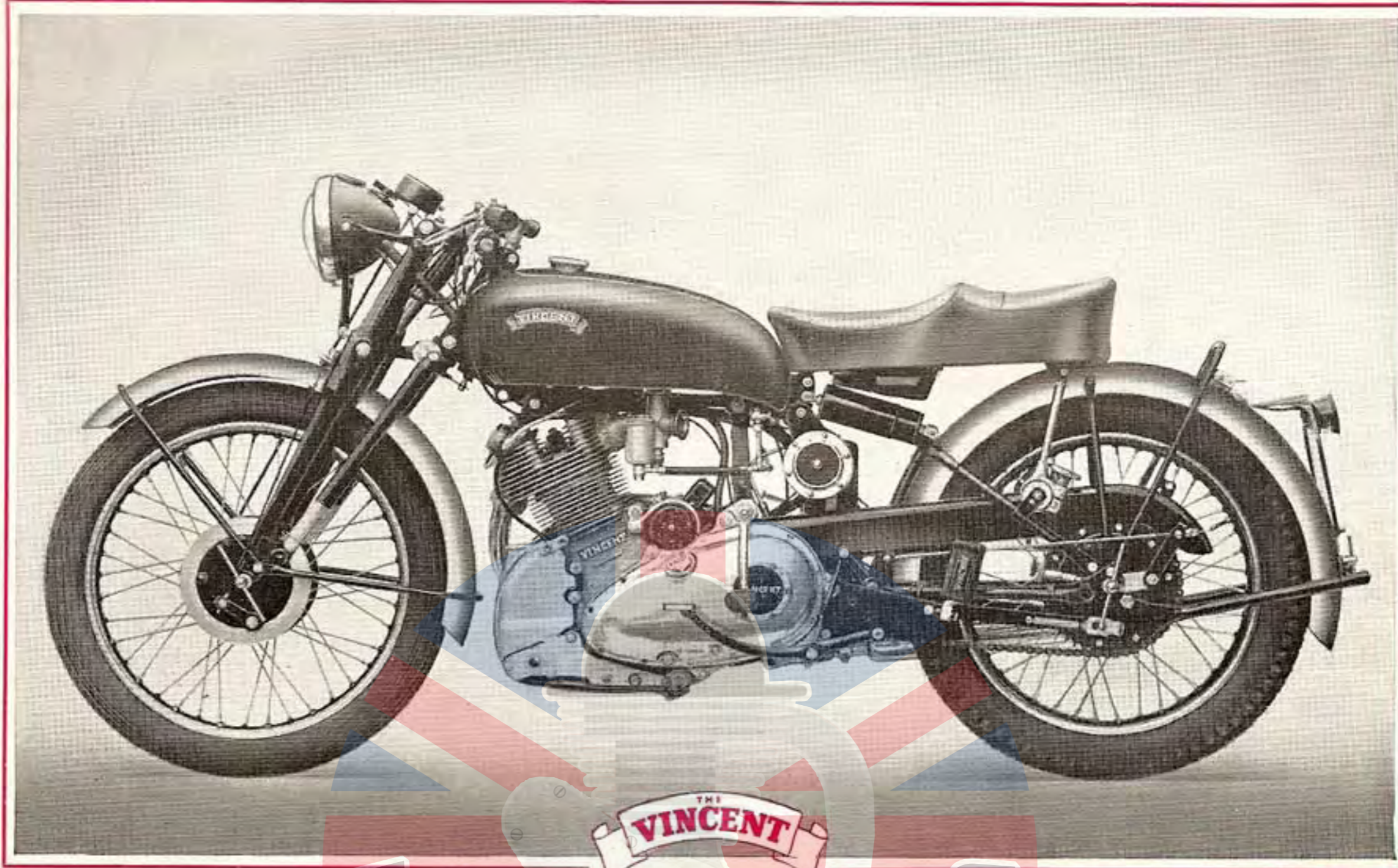
THE
VINCENT



THE VINCENT
SERIES 'C' BLACK SHADOW MODEL



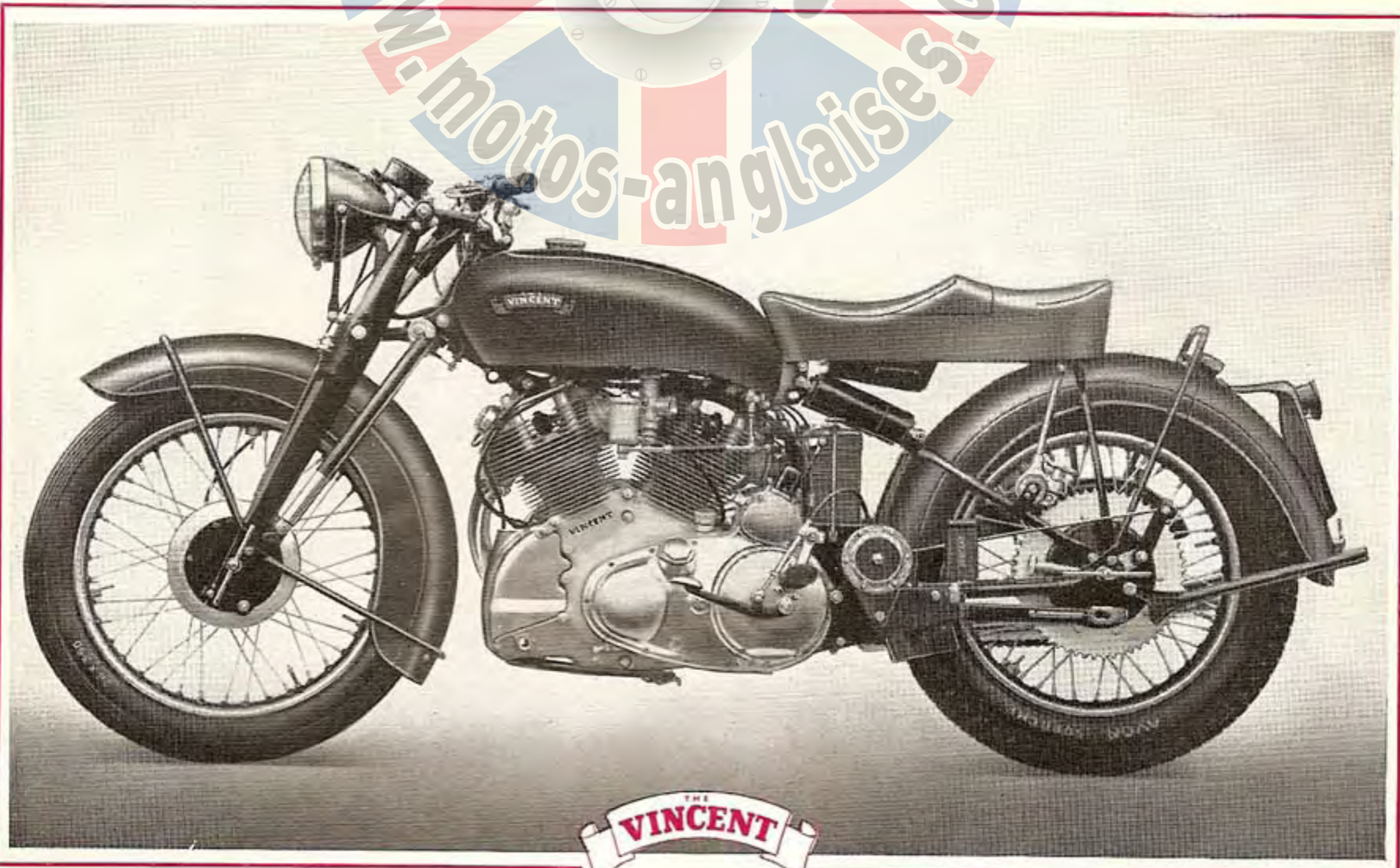
THE VINCENT
SERIES 'C' RAPIDE MODEL



THE
VINCENT

SERIES 'C' COMET MODEL

www.motos-anglaises.com



THE
VINCENT

SERIES 'C' RAPIDE TOURING MODEL

Introduction

With the announcement of our 1952 programme, we enter our twenty-fourth year as motor cycle manufacturers. During these years we have always concentrated exclusively upon the highest quality enthusiast type machines, built always to the highest "Specialist" standards.

The range of performance we offer is so brilliantly outstanding above all others that it is still difficult to comprehend and to believe. Yet this performance has been fully proved in many countries against the cold, unrelenting logic of the timekeepers' electric timing, notably in the establishment of a new U.S. National Maximum Speed Record at Bonneville Salt Flats at the remarkable speed of 156.58 m.p.h., with a privately-owned production model Black Lightning just as delivered from the Works, on September 11th, 1950, and the further establishment of two World Sidecar Records for the Standing Start Mile and Kilometre, at 94 and 83.5 m.p.h. respectively, on a similar machine, in Belgium. The world's best acceleration. These figures prove that our new Black Lightning Racing Rapide is far and away the fastest production model ever offered to the public.

For the really hard, fast rider, especially those who revel in covering great distances at consistently high cruising speeds, we provide the wonderful Black Shadow Sports Model, a machine whose extreme silence and tractability completely belie its tempestuous performance. A maximum speed in the neighbourhood of 125 m.p.h. in touring trim gives it a performance above all but a select few of the most specialised racing machines.

Taking another big step down the performance scale we reach the extremely silent and docile standard Rapide, which is deliberately tamed to a mere 110 m.p.h. maximum in order to endow it fully with the many charming attributes that the tourist demands of his favourite mount. Nevertheless even this amazing tractable fussless and reliable machine is still faster than any other standard motor cycle in the world (except the Black Lightning and Black Shadow), as proved very convincingly at scores of events in nearly every country, but most notably at Rosamond Dry Lakes, California, on several occasions.

Greatly increased production facilities have enabled us to reintroduce the ever popular Comet model, in response to persistent demands from the thousands of enthusiasts who regard this trim and efficient 500 c.c. single as the apple of their eye. Naturally we have taken the opportunity completely to modernize this machine and to adopt, where possible, the features which have proved so astoundingly successful on the Series C Rapides, so riders with experience of the pre-war models will find that the latest versions retain all their endearing qualities with the addition of many others. The great majority of the parts of these new singles are identical and interchangeable with those of the astounding Rapides, so we leave it to you the reader to estimate the safety factor, which ensures reliability and long life.

FRONT FORKS. The Girdraulic Fork provides a new high level in rigidity-weight ratio by using forged light alloy blades of tapered oval section and preserves the maximum of this rigidity by using one-piece forged links. The new fork is at least twice as rigid as the earlier tubular design.

The long soft action so popular in these days has been provided by mounting very long springs in telescopic cases between the bottom of the crown lug and the fork ends, but we have kept this action within the limits demanded by safety at high speeds. An ingenious eccentric action provides a variation of spring loading and fork trail to suit solo or sidecar use; this adjustment can be made in a few minutes without using any extra or different parts.

The other great improvement of modern fork design is also provided in the form of a two-way hydraulic shock-absorber, with hydraulic limit stops in both directions to eliminate metallic "bottoming."

To ensure long life and freedom from attention, large diameter ground high tensile steel spindles are used in conjunction with oil retaining bronze bushes. No oiling is required. We have no hesitation in saying that the Girdraulic is the finest motor cycle fork ever made.

THE CYLINDER HEAD AND VALVE GEAR. Aluminium "Y" Alloy aircraft specification heat treated casting, inclined o.h. valves with twin valve guides, valve seats shrunk in,

inlet seat austenetic cast iron, exhaust seat aluminium bronze. Entirely enclosed and lubricated o.h. rockers of straight rigid design, forged from E.N.23 steel and running in duralumin bearings. Very accessible tappet adjustment. Totally enclosed and lubricated duplex helical valve springs. All exhaust ports face forwards, are liberally finned and are positioned so as to receive the best cooling airstream.

PISTON AND CYLINDER. Aluminium alloy piston with two Wellworthy pressure rings and one scraper, $\frac{3}{8}$ in. dia. (22 m.m.) rigid taper-bored gudgeon pin fully floating retained by circlips. Standard Rapide models are sent out with 6.8 to 1 compression, Comet and Black Shadow engines are normally supplied 7.3 to 1, but in countries where the standard fuel is of low octane rating these ratios are normally reduced by fitting lower compression pistons and/or compression plates.

Ratios on the Black Lightning are supplied to the customer's requirements. The cylinder bore is 84 m.m. and the piston stroke 90 m.m., giving the single a capacity of 499 c.c. and the twin 998 c.c.

The Cylinder barrel consists of a detachable high grade cast iron liner shrunk into a finned aluminium cylinder jacket.

CONNECTING ROD AND BIG END ASSEMBLY. Forged connecting rods of 65 ton nickel chrome steel (75-80 tons on Black Lightning), polished finish on Black Shadow and Black Lightning models. Big End liners of EN31 carbon chrome steel, hardened, ground and honed for super finish. Three rows of 3 m.m. dia. by 5 m.m. long rollers in each connecting rod's big end, separated and guided by hardened, ground and lapped rings between each row of rollers.

TIMING GEAR. A separate camshaft is provided for each cylinder mounted very high in the timing case with push rods only 6 in. (152 m.m.) long, which operate within stainless steel push rod tubes. On all models the Lucas magneto is gear driven from the timing gear through a Lucas automatic advance and retard unit (except the Black Lightning which has manual control).

LUBRICATION. Dry sump system, circulation by large double acting rotary plunger pump, worm driven from the timing side mainshaft.

CRANKCASE MAIN BEARINGS. Four large diameter main bearings are provided, two to each mainshaft, well separated to provide a rigid support, ensuring vibrationless running and long life. Three of these are roller bearings and the fourth is a ball bearing for endwise location of the crankshaft.

CRANKCASE, GENERAL. Cast in DTD424 aircraft specification aluminium alloy. Massively ribbed and of substantial section to provide a rigid base on which to build the engine, thus eliminating vibration and loss of power and wear through deformation. For additional rigidity the cylinder liner extension below the jacket is spigotted in to the massive upper throat of the crankcase.

1,000 c.c. MODEL. The upper faces of the paired cases are machined to accept two cylinders at 50° in Vee formation, the rear cylinder being offset $1\frac{1}{2}$ in. towards the timing gear for improved cooling. This model having a unit construction gearbox, the gearbox housing and the inner half of the oilbath for the primary chain, are cast integral with the crankcase.

500 c.c. MODEL. This differs in having provision for only one cylinder inclined forward at 25°, and for one set of timing gear.

FLYWHEEL ASSEMBLY, GENERAL. Forged in 40 ton carbon steel, machined all over and jig drilled for consistent balance (Polished on Black Lightning). Nickel chrome steel mainshafts, drive side splined to accept 3-lobe engine shock absorber sprocket carried on a separate hardened splined sleeve. Timing side carries oil pump drive worm and half time pinion.

TRANSMISSION, 1,000 c.c. MODELS. Gearbox. Unit construction with the engine, four speeds, constant mesh, of our own design and made throughout in our factory. The shafts are very rigid and supported by large diameter ball bearings. All gears are of EN36

Specifications

case hardened nickel chrome steel.

The whole primary transmission is contained in an oilbath case cast integral with the crankcase and gearbox, with a detachable aluminium cover.

The gearbox is driven by a Triplex $\frac{3}{8}$ in. pitch Renold chain the tension of which is controlled by our special design stiff leaf spring tensioner.

The clutch is of our own special patented design, and manufacture, and is contained in a separate oiltight housing in the chaincase cover. A normal single plate clutch provides the expanding pressure to work a pair of shoes in a nickel chrome alloy cast iron ribbed drum. Although incredibly light in operation, this clutch will transmit tremendous torque. Great care has been taken, by the provision of special oil seals, to prevent the entry of any lubricant into the clutch. A separate cover permits ready access to the clutch.

Final drive is changed by altering the rear wheel sprocket, which has 46 teeth as standard for solo use. Where desired a second sprocket can be fitted to the other brake drum and ratios quickly changed by reversing the wheel. Adjustment of the chain tension may be effected in less than one minute without tools by using the unique finger adjustment provided. Standard Rapide and Black Shadow gearbox reduction ratios are 1.1-19, 1-61 and 2-6 to 1, giving with the standard sprockets overall ratios of 3-5, 4-2, 5-6 and 9-1 to 1.

Black Lightning ratios are the same except that bottom gear is raised to 2-07 (7-2 to 1), and the dogs have much more backlash to ease gear changing.

500 c.c. MODEL. A separate 4-speed Burman gearbox and clutch are fitted, driven by a $\frac{1}{2}$ in. by $\frac{5}{8}$ in. Renold chain in an oilbath. The shock absorber is of the same design, and all details of the final drive (except that the chain is on the opposite side of the machine) are the same as for the Rapides. Standard gear ratios are 4-64, 5-94, 8-17 and 12-4 to 1.

IGNITION. Gear driven Lucas flange-mounted magneto with automatic advance; protected by polished aluminium cowl.

LIGHTING SET. Special Miller 6-volt 50 watt voltage controlled, separate dynamo. On Standard Rapides and Black Shadow this is driven from the primary chain and the sprocket is very easily detachable. On 500 c.c. model it is gear driven from the timing case. No lighting on Black Lightning.

CARBURETTORS. Standard Rapides and Black Shadows are fitted with two vertical Amal touring carburettors of $1\frac{1}{8}$ in. (27 m.m.) and $1\frac{1}{2}$ in. (29 m.m.) diameter chokes respectively. Air filters can be supplied as extras. Black Lightning models are fitted with racing Amal carburettors of the type most suitable for the customer's requirements. Comet models are fitted with a single Amal standard type carburettor of $1\frac{1}{8}$ in. (29 m.m.) choke.

FRAME. Consists of an exceptionally strong head lug which bolts to a forged steel bracket on the front cylinder head. A strong triangulated oil tank of six pints capacity stays it against a similar lug on the rear cylinder head (or in the case of the single, against the cast aluminium rear seat stay).

The only other important frame members are the rigid triangulated rear forks of our usual design and the plates which secure this fork to the rear end of the engine unit.

The rear springing provides a long soft action of about 6 in. Travel, controlled by our new hydraulic damper as used on the Girdraulic fork.

There is only one bearing in our springing system and that runs on large taper roller bearings; hence its 100 per cent. reliability. Our patented system of seat support by swinging links enables a pillion passenger to be carried without alteration to the rear spring strength.

All necessary sidcar attachment points are provided.

BRAKES. All Vincent models are fitted with FOUR powerful internal expanding brakes. The spreading of the braking stresses over four brakes, and the resulting perfect balance of forces provides our machines with controllability and safety far beyond the standards that are normally considered first class. A recent Motor Cycling test of a "Comet" gave a stopping distance of 21 ft. from 30 m.p.h.; 30 ft. is the usually accepted figure for 100 per cent. braking efficiency!

WHEELS. The wheels run on very large diameter taper roller bearings which usually outlast the machine. These bearings are mounted on a ground hollow spindle of $\frac{3}{4}$ in. diameter and in a diecast aluminium alloy hub.

The wheels are detachable in less than a minute without using any tools, and the rear wheel may be mounted either way round in the machine if two sprockets of different sizes are fitted for speedy changing of gear ratios. The brake drums may be removed without disturbing the spokes.

TYRES. Our usual standard tyres on all models except the Black Lightning are Avon Supreme studded 19 in. by 3-50 in. rear and Avon Speedster ribbed 20 in. by 3-00 in. front. In cases where extra heavy duty is anticipated, or the roads are very rough, we can supply Avon Supreme studded 18 in. by 4-00 in. rear and Avon Speedster ribbed 19 in. by 3-50 in. front. Special Avon racing tyres are supplied with Black Lightning models.

SEAT. Specially designed by co-operation between our engineers and Messrs. Feridax Ltd. Rear end sprung by our patented method, British Patent No. 424644. The very neat tool tray slides out of sight under this seat.

PETROL TANK. Very handsome pressed steel design, bonderized, enamelled black, and hand lined with real gold leaf. Capacity $3\frac{3}{4}$ Imperial gallons, 4 American gallons (17 litres).

PETROL AND OIL PIPES. Brazed joints with flexible hose insertions to prevent fracture.

OIL TANK. Forms part of frame. Very strong design. Capacity six pints (3-4 litres).

MUDGUARDS. Special light alloy, highly polished. Enamelled tubular steel stays. Rear guard hinged for easy wheel removal. Alternative heavy steel valanced type (as shown in illustration of Series C Rapide Touring Model) with black enamelled finish can be supplied.

STANDS. Rear tubular stand. Twin prop stands, one either side, can also be swung down together to form a front stand. Prop stands are not fitted to the Black Lightning.

EXHAUST SYSTEM. On standard Rapides and Black Shadows two $1\frac{1}{8}$ in. (41-5 m.m.) diameter steel exhaust pipes join and run direct into silencer. On the Black Lightning special separate straight through pipes are supplied. Comets have the usual single exhaust pipe. All pipes are secured to the heads by finned nuts, and the systems as a whole are heavily chromium plated on a copper and nickel base.

FOOTRESTS. Provide a very wide range of adjustment and folding pillion footrests, which are fully sprung and can be used for a racing riding position, are fitted as standard equipment to all models except Black Lightning.

HANDLEBARS. The famous narrow straight Vincent bars which have been praised so highly by the technical experts. They give a remarkable comfortable riding position. Can be adjusted for wrist angle. Control levers of racing pattern are also adjustable. Upswept "cowhorn" bars optional without extra charge. Sprint bars are available on Black Lightning model.

FINISH. All enamelled parts are bonderized and finished in Pinchin Johnson's best cycle stoving enamel. Bright parts are mostly polished stainless steel or aluminium; others are chromium or cadmium plated.

On Black Shadow and Black Lightning models the power units are Pyluminised and most distinctively enamelled glossy black.

SPEEDOMETER. Smith's "Chronometric" with total and trip recorder and internal illuminator is fitted as standard to all models. The Black Lightning has a very special 180 m.p.h., or 280 k.p.h., 3 in. (76 m.m.) dial instrument which matches the 8,000 r.p.m. tachometer which is also standard on this model. The Black Shadow has a magnificent 5 in. dial, 150 m.p.h., or 250 k.p.h., instrument mounted in a clearly visible position on the top of the fork girder. The remaining models have 3 in. dial, 120 m.p.h., or 180 k.p.h., speedometers. All speedometers are driven from inside the front brake drum for great accuracy.

EQUIPMENT. Includes tyre inflator, a complete set of high quality tools, grease-gun and tyre levers.

Performance Characteristics

Characteristic.	Black Lightning.	Black Shadow.	Standard Rapide.	Comet.	Units of measurement.	Characteristic.	Black Lightning.	Black Shadow.	Standard Rapide.	Comet.	Units of measurement.
Power to Weight Ratio.	480	280	222	150	Brake-horse power per ton.	Minimum speed in top gear.	—	18 29	18 29	19 31	Miles per hour. Kilos " "
Dry weight.	380 172	458 207	455 206	390 176	Pounds. Kilogrammes.	Maximum Safe Speeds in Indirect Gears.	According to Gearing.	110 85 65	96 80 50	77 55 38	3rd 2nd 1st } miles per hour.
Petrol Consumption.	—	55 to 65 50 to 60 5 to 6	55 to 65 50 to 60 5 to 6	75 to 80 70 to 75 4 to 5	Miles per Imp. Gall. " " Amer. " Litres per 100 Kilos.			175 136 104	154 127 80	123 88 60	3rd 2nd 1st } kilos per hour.
Oil Consumption.	—	1,500 500	1,500 500	2,000 650	Miles per gallon. Kilos per litre.	Acceleration through gears as recorded in "Motor Cycling" Road Tests.	Not yet tested.	3½ secs.	1½ secs.	3 secs.	0-30 miles per hour. 0-48 kilos " "
Cruising Speed.	—	100 160	85 136	65 104	Miles per hour. Kilos " "			6½ "	6 "	9½ "	0-60 miles " " 0-96 kilos " "
Maximum Speed.	150+ 240+	125 200	110 175	90 to 95 144 to 152	Miles per hour. Kilos " "			10 "	12 "	21 "	0-80 miles " " 0-128 kilos " "
								31 "	35 "	—	0-100 miles " " 0-160 kilos " "
								44 "	—	—	0-110 miles " " 0-175 kilos " " 0-120 miles " " 0-192 kilos " "

DIMENSIONS.

Ground Clearance 6 inches (150 m.m.).

Width over Handlebars 25½ inches (650 m.m.).

Wheelbase 56 inches (1,420 m.m.).

Length Overall 85½ inches (2,175 m.m.).

Manufacturers reserve the right to effect alterations to the specifications without prior notice.

VINCENT "H.R.D." CO. LTD.,
STEVENAGE, HERTS, ENGLAND.

Code: ABC 7th Edition.

Telephones: Sales: Fishers Green Factory. Stevenage 690 & 693.

Spares & Service: Bowling Green Factory. Stevenage 375 & 376.