

Shinnings
THE MOTOR-CYCLIST'S LIBRARY

Belton
5/16/26

THE BOOK OF THE TRIUMPH

A COMPLETE GUIDE FOR OWNERS AND
PROSPECTIVE PURCHASERS OF TRIUMPH
MOTOR-CYCLES AND COMBINATIONS

BY

E. T. BROWN

MOTOR-CYCLING EDITOR OF THE "WESTMINSTER GAZETTE"
AUTHOR OF "THE OWNER DRIVER'S HANDBOOK"

DEALING WITH EVERY PHASE OF THE SUBJECT
INCLUDING CHAPTERS ON DRIVING, TOURING,
LEGAL MATTERS, INSURANCE, TRACING FAULTS,
AND OVERHAULING

LONDON

SIR ISAAC PITMAN & SONS, LTD.
PARKER STREET, KINGSWAY, W.C.2
BATH, MELBOURNE, TORONTO, NEW YORK

1925

BARNSTORMERS.CO.UK

CHAPTER XIV

TRIUMPH MODELS

THE Triumph was the pioneer single-cylinder motor-cycle, and for many years the great majority of motor-cycle engines followed this type very closely. Even in those seemingly far-off days the Triumph motor-cycle was wonderfully reliable and simple to manage; it is to-day one of the best examples of the motor-cycle engineer's art. The number of Triumphs on the road to-day which have done yeoman service for upwards of a dozen years is considerable, indicating in no uncertain manner the quality of the material employed and the length of life which these machines enjoy. There are five different models on the road at the present time, these individually embodying the latest tested ideas in motor-cycle construction. The models are the 2.49 h.p., two-stroke (manufacture temporarily suspended); the 3.46 h.p. side-by-side valve four-stroke; the 4.94 h.p. side-by-side valve four-stroke; the 4.99 h.p. overhead valve four-stroke, and the 5.50 h.p. side-by-side valve four-stroke.

The 2.49 h.p. Two-stroke Model. This is the only Triumph model made with a two-stroke engine, shown in Fig. 45, this type having been selected as the most suitable form of power unit for the lightweight. There is a marked absence of vibration and the machine is very steady on greasy roads. The riding position is extremely low—the saddle is only $28\frac{1}{2}$ in. from the ground—so the novice always has a sense of security even when riding in congested traffic.

The Engine. The 2.49 h.p. engine follows the two-stroke type, having a bore of 67.25 mm. and a stroke of 70 mm., giving a capacity of 249 c.c. It is of Triumph manufacture throughout, and in it is incorporated a patent compression release valve which proves very useful for starting-up, while the silencer is highly effective.

The two-speed countershaft gear which is fitted allows the speed of the machine to be slowed down to a crawl, and the introduction of a clutch facilitates the "get-away" and removes the last obstacle to traffic riding. The gear control is placed on the top tube; and the clutch is on the handlebar. The kick-starter is light in operation, no difficulty being experienced in starting the engine. The standard gears are 5 to 1, and 8.4 to 1.

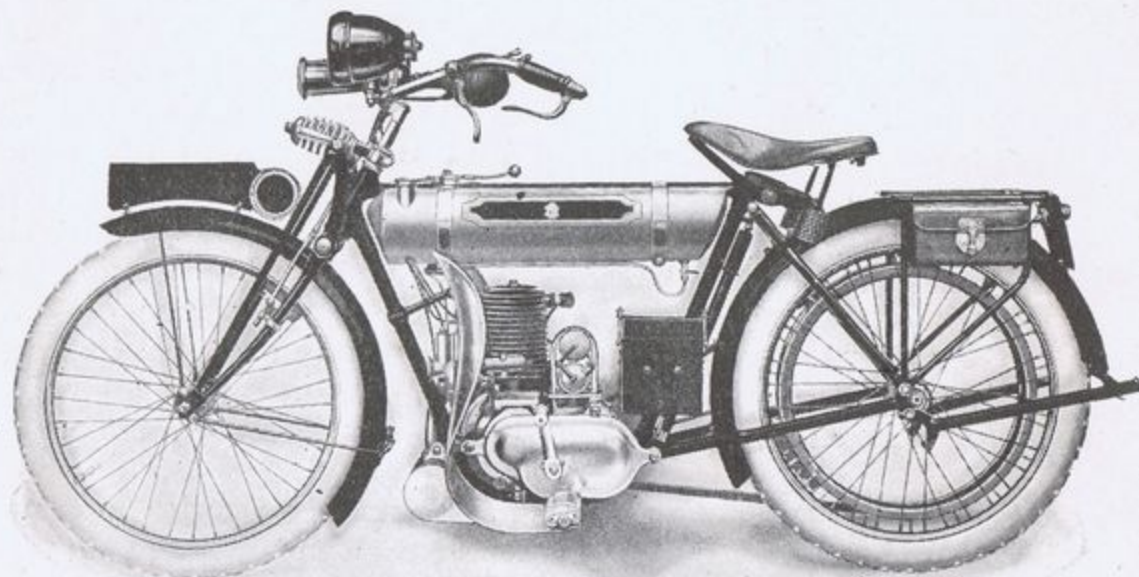
The carburettor is handlebar controlled, as is the ignition.

The frame is built on graceful lines, the tubular member

THE BOOK OF THE TRIUMPH

from the base of the steering head to the saddle is a single tube, forming at the lowest point a strong cradle for housing the engine, clutch and gear-box. The cylindrical petrol tank, into which the top tube of the frame is recessed, adds considerably to the appearance of the mount, while the plan of taking all controls through the top tube dispenses with unsightly clips. The tank capacity is 9 pints.

The wheels are 24 in. by $2\frac{1}{4}$ in., fitted with Dunlop tyres.



THE JUNIOR
TRIUMPH
 $2\frac{1}{2}$ H.P. CLUTCH
AND KICK-STARTER

FIG. 45

The transmission is by chain from the engine to the gear-box and is enclosed, thence by belt.

Lubrication is automatic, being on the petroil system, in which case the oil is mixed with the petrol, the correct proportion being one part of oil to twelve parts of petrol. A measure is supplied in the cap, so that the exact amount of oil may be used.

Both rear and front stands are fitted; the mudguarding is efficient; leg-shields are fitted as an extra to order; footrests are standard; a carrier with panniers is supplied; the saddle is well padded; and there is a complete set of tools. The finish of the machine is pleasing, being black enamel on Coslettized frame; all bright parts are heavily plated. Weight, 145 lb.

BARNSTORMERS-CO. NZ

TRIUMPH MODELS

This model is equipped with or without Lucas acetylene or electric "Magdynette" lighting set; lamps and bulb horn to order.

The 3.46 h.p. Four-stroke Model. This model shown in Fig. 46, which rates for insurance purposes at $2\frac{3}{4}$ h.p., is fitted with a single-cylinder engine with a 72 mm. bore and an 85 mm. stroke, giving a capacity of 346 c.c. The engine is specially designed for a light, economical and speedy solo mount. The latest practice of motor-cycle construction is adopted in that the power

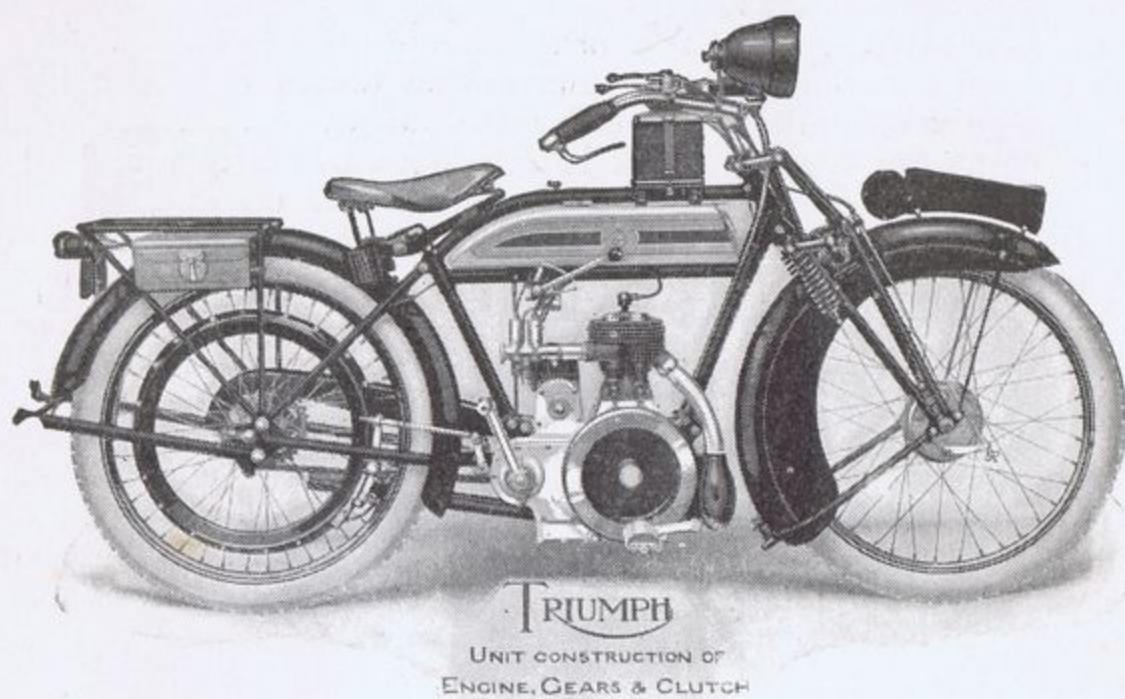


FIG. 46

unit is compact, the engine, clutch and gears being in one unit. Each part is readily accessible and the entire engine can be dismantled without removing the crankcase from the frame.

The solid crankshaft is supported on plain bearings with an auxiliary ball-bearing to support the outside flywheel. The valves are side-by-side and of large proportions; the cylinder head is specially designed to promote "turbulence"; the piston is of aluminium alloy, and the hollow gudgeon pin is a push fit in the piston bosses. The timing gear is remarkably simple, as both the inlet and exhaust cams are formed integral with the gear wheel and rotate upon a fixed shaft, to which oil is fed under pressure.

A hand-controlled patent three-speed gear is fitted, while the form of clutch employed is that known as the multiple plate

BARNSTORMERS-CO. INC.

THE BOOK OF THE TRIUMPH

type, this being controlled from the handlebar. The kick-starter is light in operation; the shock absorber fitted to the chain sprocket on the gearshaft eliminates all jars when the speed is changed. The standard gears are $5\frac{1}{2}$ to 1; $8\frac{1}{2}$ to 1; and $12\frac{1}{2}$ to 1.

The carburettor is the well-known Amac.

The mechanical force feed system of lubrication is adopted on this model. The crankcase sump contains one quart of oil, which is circulated by a pump through the main bearings, camshaft and layshaft. All oil is filtered before being used. The oil consumption is low.

The frame is very similar to other models, but to accommodate the closely knit engine, gear and clutch unit, and to provide a low riding position, it is made lighter and more compact. The effective Triumph spring fork is fitted. A powerful foot brake, operating on the rear wheel, and an internal expanding brake on the front wheel ensure safety, both being smooth and progressive in action. The wheels are 26 in. by $2\frac{1}{2}$ in., being extra strong and fitted with Dunlop tyres.

The transmission from the engine to the speed gears is by gearing, the whole being enclosed; the final drive is by means of a $\frac{5}{8}$ in. by $\frac{1}{4}$ in. chain.

The tank is extra strong and has a capacity of 2 gallons; the mudguarding is as shown in Fig. 46; the footrests are adjustable; front and rear stands are standard; the saddle is Brooks' padded top model; the kit of tools is complete. The finish is best black enamel on Coslettized frame, and the bright parts are heavily plated. The approximate weight for registration is 225 lb.

This model is equipped with or without Lucas acetylene or electric "Magdynette" lighting set; lamps and bulb horn to order.

The 4.94 h.p. Four-stroke Model. This model, Fig. 47, is specially designed on extremely simple lines and chiefly with a view to retaining a high degree of efficiency and tune over long periods of heavy travelling. To cope with sidecar work the bearings are exceptionally robust, the big end bearing being a heavy roller bearing, while ball-bearings are employed to support the mainshaft.

This entirely new model is sold at a low price, but it is made with the same care and precision as the more expensive ones, although on the latter more elaborate care is bestowed upon the externals and detail finish.

The engine is single cylinder with a bore of 84 mm. and stroke of 89 mm. The cylinder walls are unusually thick to obviate

TRIUMPH MODELS

distortion and dissipate the heat, the latter being assisted by deep radiating fins. The extra large valve area ensures an easy flow of both inlet and exhaust gases. Side-by-side valves are used, a rocker arm being interposed between the cam and tappets to ensure quiet lift. The cams are formed integral with the one gear wheel.

The three-speed gear is fitted behind the engine; the drive throughout is by chain. The shock absorber takes the form of a helical cam mounted on the engine shaft. The clutch is of the friction plate type with handlebar control. The kick-starter is efficient. The standard gears for solo work are 5.06 to 1; 8.2 to 1,

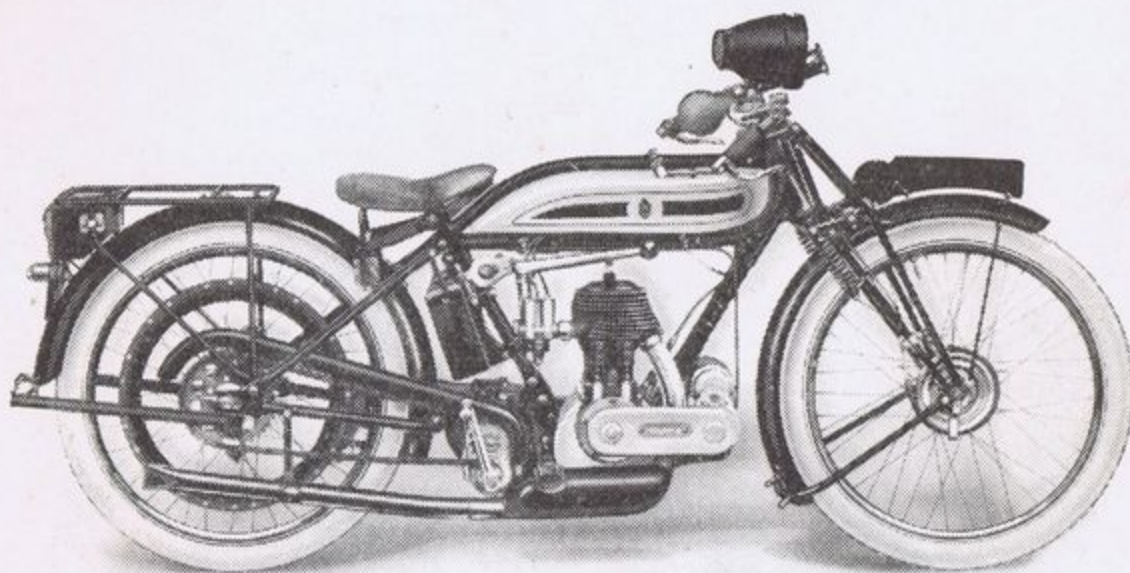


FIG. 47

and 14.12 to 1. For sidecar work, 5.46 to 1; 8.85 to 1; and 15.2 to 1.

The carburettor is the "Triumph" semi-automatic.

The frame is exceptionally strong and sidecar lugs are incorporated, so that the attachment is less unsightly than usual. The spring forks are of special design. The wheels are 26 in., fitted with 26 in. by 2½ in. Dunlop cord tyres.

The tank is dual in form containing 1¾ gallons of petrol and 2 pints of oil.

The handlebars are of the sports type when sold as a solo mount; raised handlebars are fitted when supplied as a combination.

The front brake is hand-controlled and is of the internal expanding type; the rear compensating brake is foot controlled, operating on a V-pattern rim.

The standard machine is complete with footrests, carrier, front and rear stands, large sized saddle, tool bag and kit of tools.

THE BOOK OF THE TRIUMPH

The finish is best black on Coslettized frame; the rims are enamelled black with plated edges and the spokes are black. Weight 239 lb.

This model is equipped with or without Lucas acetylene or electric "Magdyno" lighting set; lamps and bulb horn to order.

This model is supplied as a "Popular" combination, Fig. 48, the chassis being of special design; the rear springs three leaf Cee in form, with coil front springs; the mudguarding is efficient, the guard being easily detached; there is also an inside wing to

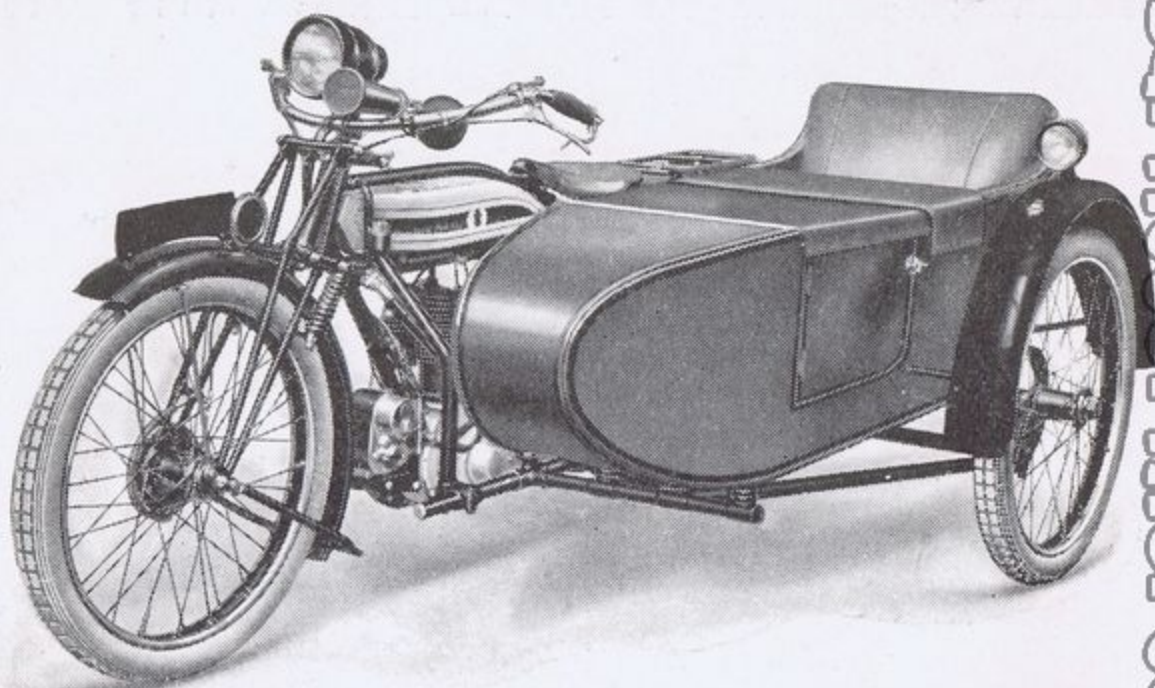


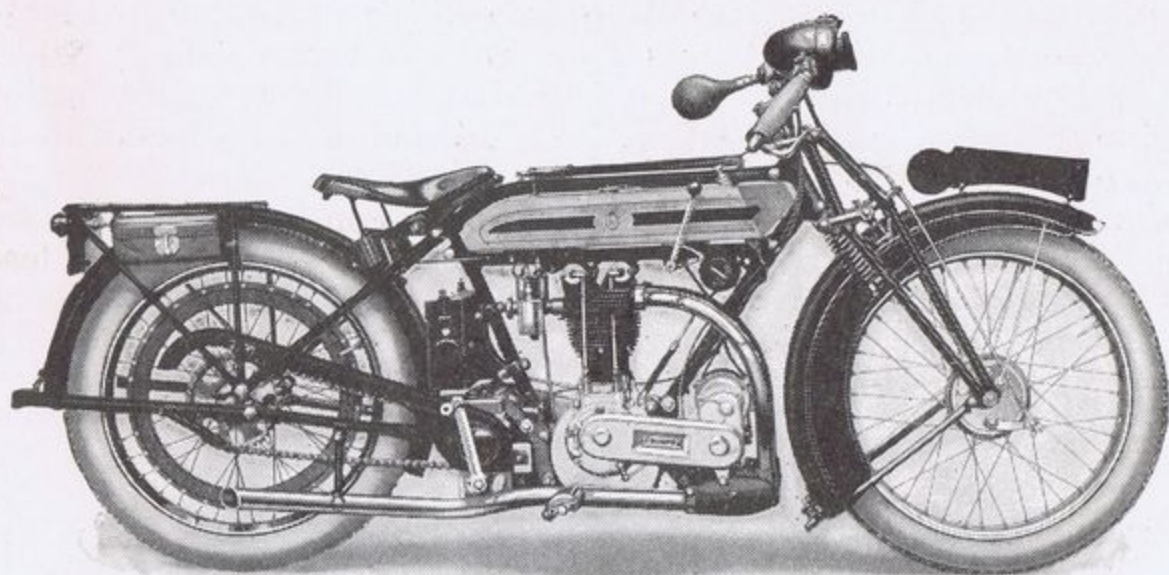
FIG 48

protect the body from mud; the body is coach-built and well upholstered; the yokes are strong and made from high quality steel tubing. The weight of the sidecar alone is 120 lb.

The 4.99 h.p. Overhead Valve Model. This model, Fig. 49, is designed as a fast roadster and rates for insurance purposes at $3\frac{1}{2}$ h.p.

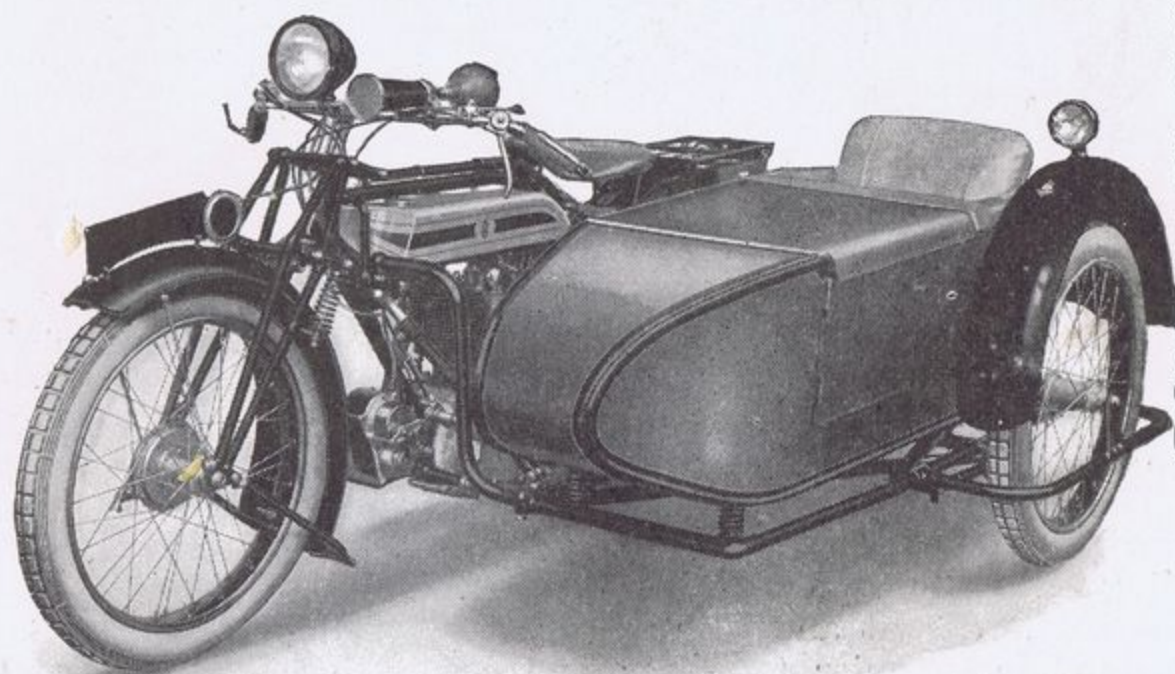
The engine has a bore of 80.94 mm. and stroke of 97 mm., capacity 499 c.c. A special feature of this machine is that it is fitted with two inlet and two exhaust overhead valves, the rockers which actuate them being mounted in roller bearings. The cylinder head is detachable; the pistons are of the aluminium slipper pattern; the big-end is fitted with roller-bearings and a decompressor is incorporated. Solo gears: $4\frac{3}{4}$ to 1; 8 to 1; $13\frac{1}{2}$ to 1. Combination gears: $5\frac{3}{8}$ to 1; 9 to 1; $14\frac{7}{8}$ to 1.

TRIUMPH MODELS



TRIUMPH
3½ H.P. O.H.V. FAST ROADSTER.

FIG. 49



TRIUMPH
SPORTS COMBINATION

FIG. 50

BARNSTORMERS.CO.NZ

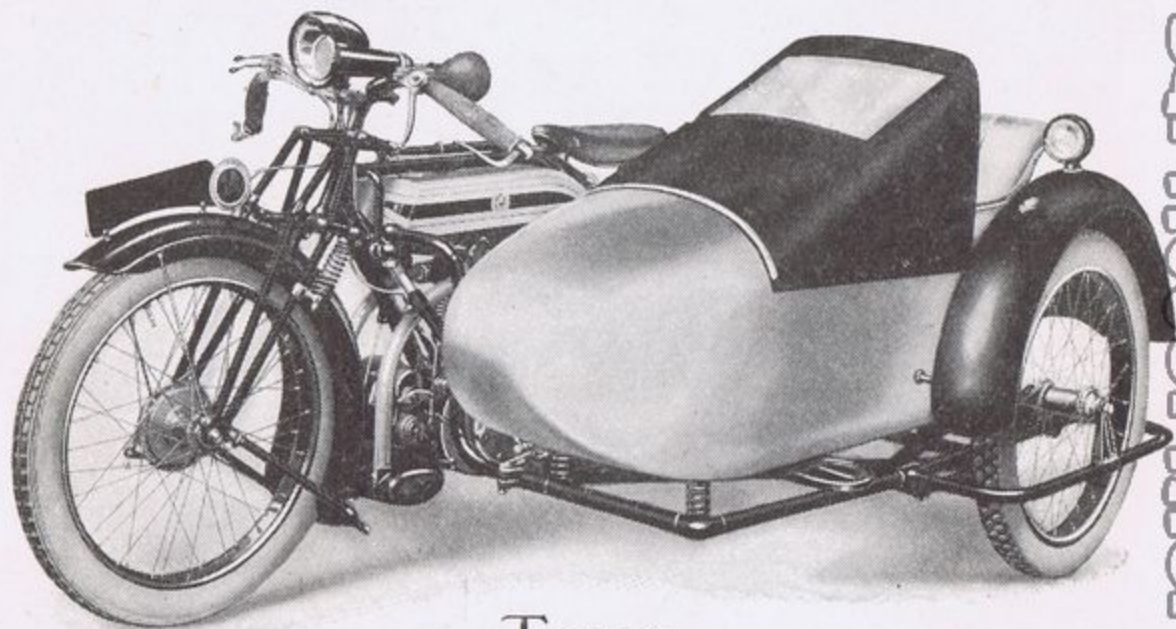
THE BOOK OF THE TRIUMPH

The Triumph three-speed countershaft gear is hand controlled ; the clutch is of the multiple plate type and is controlled from the handlebar ; a kick-starter is standard, and the spring drive is highly efficient.

The carburettor is the Triumph semi-automatic.

The frame is strong and fitted with sidecar lugs ; the spring forks are of an improved design ; the wheels are 26 in. by 3 in., and fitted with 26 in. by 3 in. Dunlop cord tyres.

The transmission is by chains, the front one being enclosed in an oil-bath gear-case.



TRIUMPH

SUPER SPORTS COMBINATION

FIG. 51

The tank has a petrol capacity of over 2 gallons, with 2 pints of oil. The mudguards are of special design, as illustrated. The handlebar is the well-known T.T. pattern. The footrests are adjustable.

The brakes consist of a foot operated brake acting on the rear wheel and an internal expanding brake on the front wheel, both being smooth and progressive in action.

A carrier, front and rear stands, Brooks' large sized padded top saddle, pannier tool-bags and complete kit of tools are standard. The finish is best black on Coslettized frame ; bright parts heavily plated. Weight (approx.) 240 lb.

This model is equipped with or without Lucas acetylene or electric "Magdyno" lighting set ; lamps and bulb horn to order.

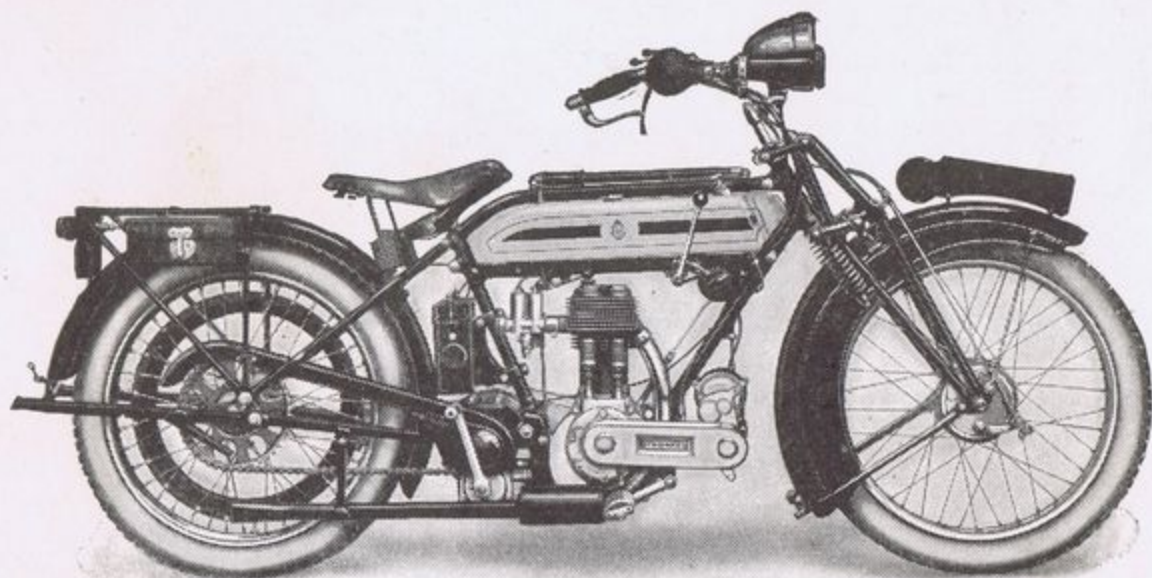
The 4.99 h.p. overhead valve model is supplied as a "Sports" combination, Fig. 50, and a "Super" combination, Fig. 51.

BARNSTORMERS.CO.UK

TRIUMPH MODELS

These models are excellently constructed, the highest class material being employed throughout. The form of attachment is neat; the springs efficient, being half elliptic at the rear and coil in front; the mudguard is easily detached and an inside wing is fitted to protect the body from the mud; the body is coach built and luxuriously upholstered; the yokes are strong and safe; and the weight of each type of sidecar is 137 lb.

The 5.50 h.p. Four-stroke Model. This model, Fig. 52, is wonderfully reliable, powerful, and of great endurance. It was



TRIUMPH

3 SPEED COUNTERSHAFT GEAR
SPRING DRIVE

FIG. 52

used extensively during the War for dispatch riding and gave excellent service.

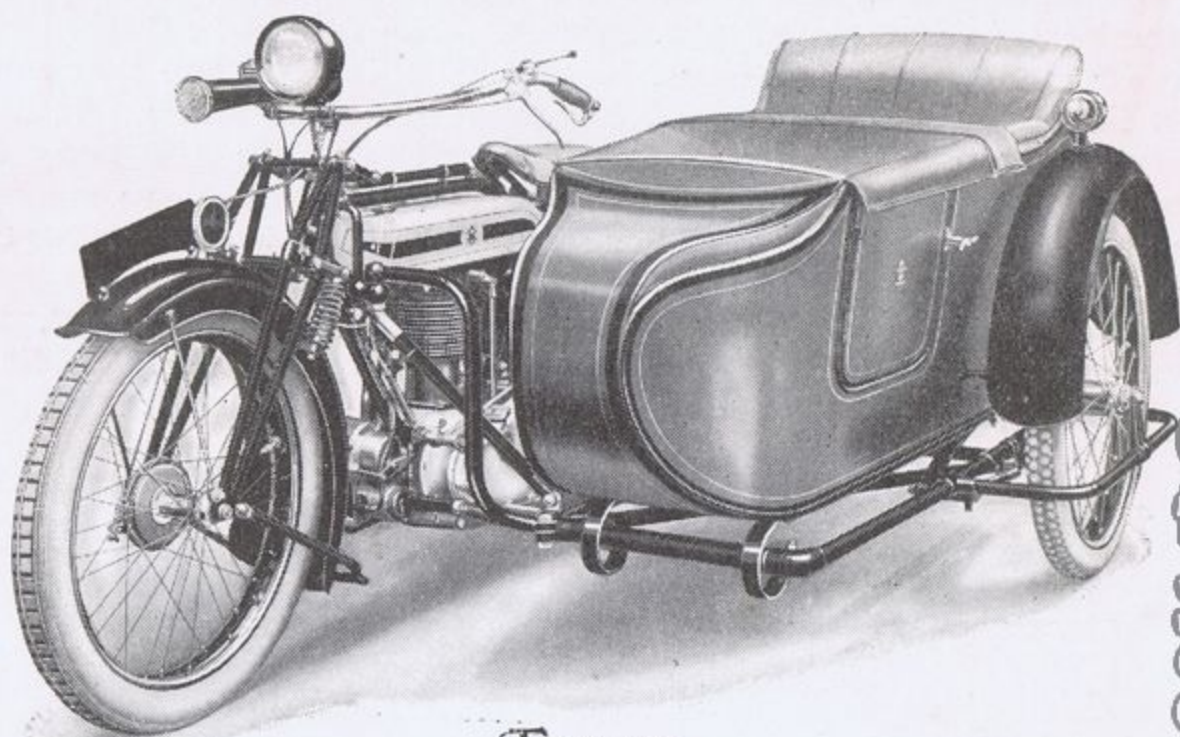
The engine has a bore of 85 mm. and a stroke of 97 mm., capacity 550 c.c.; the side-by-side valves are of large area; the timing gear is simple, as only one gear wheel is used; rocker arms are interposed between the cams and the tappets; the big end is very robust and fitted with a roller bearing; and a decompressor is fitted to facilitate starting.

The Triumph three-speed hand-controlled countershaft gear is employed on this model; the clutch is of the multiple plate type and is controlled from the handlebar; the kick-starter and spring drive are similar to those on the 4.99 h.p. model. The gear ratios for solo work are $4\frac{3}{4}$ to 1; 8 to 1; and $13\frac{1}{2}$ to 1. For sidecar work $5\frac{3}{8}$ to 1; 9 to 1; and $14\frac{7}{8}$ to 1.

The carburettor is the Triumph semi-automatic.

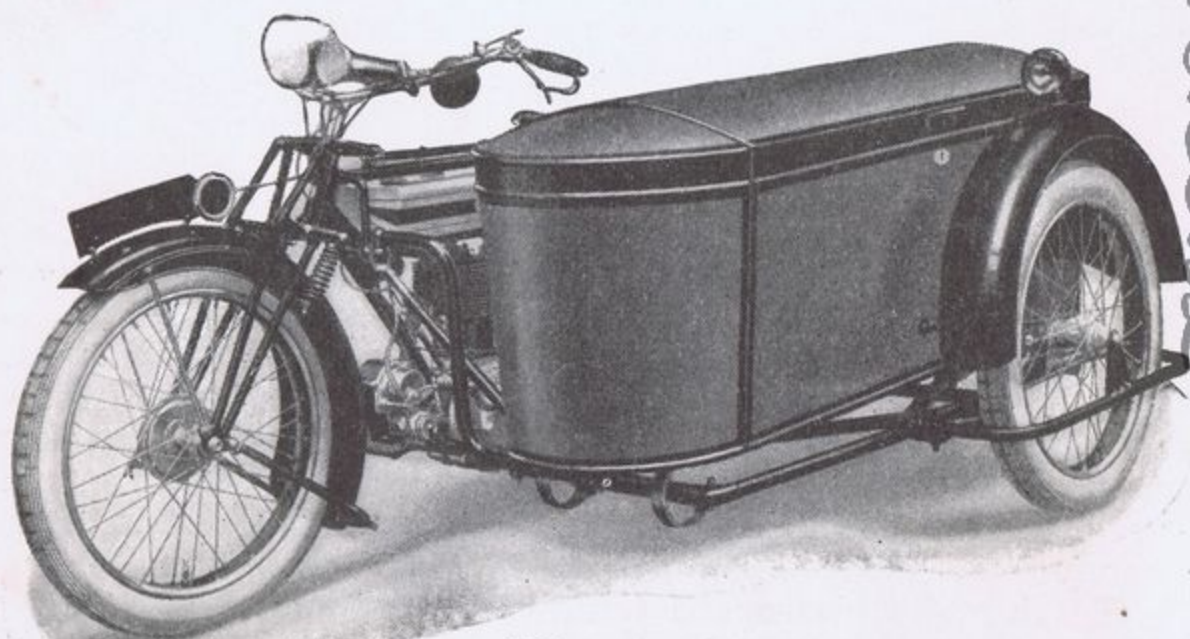
BARNSTORMERS-CO. LTD.

THE BOOK OF THE TRIUMPH



TRIUMPH
COMBINATION

FIG. 53



TRIUMPH
COMMERCIAL

FIG. 54

BARNSTORMERS.CO.UK