

:: 1921 ::

A.J.S.

3-SPEED COUNTERSHAFT-GEARED,
CHAIN-DRIVEN,

Motor Cycles

ADVANCED LIST.

FOREWORD.

THOSE who have followed the fortunes of the A.J.S. Motor Cycles since their inception know that their supremacy has been attained by sheer merit alone, consequent upon the determination of its designers and builders to produce "something better." Each year has seen improvements, the 1921 A.J.S. making yet another step forward in advance, and we feel confident that the new Model will maintain our traditions for constructional excellence and design. The reputation of the A.J.S. was never higher than it is at the present time, and the pride and confidence placed by us in our products is shared by our riders. The records of satisfactory service and successful achievements of the past will, we know, be again excelled during the coming season.

ALTERATIONS FOR 1921.

The engine is now 7 h.p., and roller bearings to the big ends of the connecting rods are also incorporated. The cooling arrangements of the cylinders have received further attention, and deeper and more numerous radiating fins are embodied both on the cylinder barrel and the detachable heads. Another refinement is the new gear box adjustment by means of which the box can now be readily moved backwards or forwards for correct chain tension. This is done by the fitting of a draw bolt, the head of which is carried outside the rear end of the bottom bracket, and is easily manipulated, giving the most minute adjustment.

IMPROVED TYPE FRONT BRAKE.

The old stirrup rim type front brake is now superseded by a really effective pattern on the same lines as our noted rear brake, which is of the internal expanding type. This introduction will meet a long felt want. It is operated by pedal on the right hand side of the machine.

NEW SADDLE.

On the 1921 models we are standardising the new Brooks B 600 laminated leaf spring saddle, which we have proved under exhaustive tests to be the most comfortable saddle yet devised, and the nearest approach to the luxury of a spring frame.

A. J. STEVENS & CO. (1914) LTD

A.J.S. 7 h.p. Passenger Machine.

Three-Speed Countershaft Gear

MODEL D.

SPECIFICATION

MOTOR CYCLE.

ENGINE. Twin Cylinder (74 x 93 m/m, Bore and Stroke, 799.958 c.c. capacity). Cylinders set at 50°. Fitted with Detachable Heads. Roller Bearings to Big Ends of Connecting Rods. Large interchangeable mechanically operated Valves. Adjustable Valve Tappets. Large efficient Silencer.

CARBURETTER. A.M.A.C. Multiple Jet.

FRAME. Scientifically constructed of straight tubing throughout.

TANK. Saddle pattern. Supported from below on brazed-on brackets. The upper surface is not traversed by the top tube, so can easily be cleaned. The rear end is dropped to permit of a low saddle position. Fitted with Large Fillers for Petrol and Oil—and Petrol Injectors to Cylinders. Capacity—Petrol, 2½ gallons; oil, 1 quart.

LUBRICATION. Best & Lloyd, Semi-automatic to Main Bearings thence by Splash.

IGNITION. Thomson Bennett Magneto, Model A.C.V., enclosed type, Mounted in front of Engine. Driven by chain. Handlebar control. Vernier Timing Adjustment.

CHAIN CASES. Weatherproof, entirely enclosing chains. Inspection can be effected through lift up draws on front and rear portions of case. The Back Wheel, Clutch parts, Kick-Starter, and front and rear chain can be removed without dismantling the chain case.

STANDS. Fitted to both wheels. The Rear Stand is our patent design, which does away with the fatiguing process of lifting the dead weight of the machine on to the stand. This is done by a Lever which renders the jacking up of the motor cycle a matter of perfect ease.

CARRIER. Steel tube, oxy-acetylene welded. Fitted with Pannier Bag with steel outer cases.

TOOLS. A Tool Roll with full kit of best quality Tools is provided.

FORKS. "Brampton" Patent "Biflex," built to our special instructions. This Fork absorbs both vertical and horizontal shocks, and all links are adjustable for side-play.

WHEELS. A.J.S. Patent. Both wheels are interchangeable and can be detached instantly. To take out the rear wheel it is not necessary to disturb the chain case, chain sprocket or mudguard. Wheels are fitted with flat base rims.

SADDLE. The new Brooks B 600 laminated leaf spring, anti-vibratory. Large Pan Seat.

BRAKES. Back and Front internal expanding pattern. Extremely powerful and smooth acting. Back operated by Foot Pedal on left hand side of machine. Front by Pedal on right hand side.

FOOT BOARDS. Protected design, with deep Rubber Tread and Heel Rest, made entirely of rubber. They are placed so that the feet assume a natural and comfortable position.

GEAR BOX. Our renowned Three-speed Bottom Bracket Gear. Ball Bearings throughout. Operation by our Patent Gate Change-speed Lever. Gear Ratios, 5, 9, 16 to 1.

STARTING. Improved design "Kick-down" Starter, entirely enclosed mechanism. The Engine can be easily started without leaving the saddle and with back wheel on the ground.

CLUTCH. Patent Multiple Plate, with Cork inserts. Hand-controlled by Lever on left Handlebar. THE CORRECT POSITION.

MUDGUARDS. The Front Mudguard is of special design. Detachable Side Shields with an extra valance are fitted, giving perfect protection in the worst weather. Back guard is 7 in. wide.

TYRES. Back and Front fitted with 700 x 80 m/m. Heavy Non-Skid Dunlop Tyres.

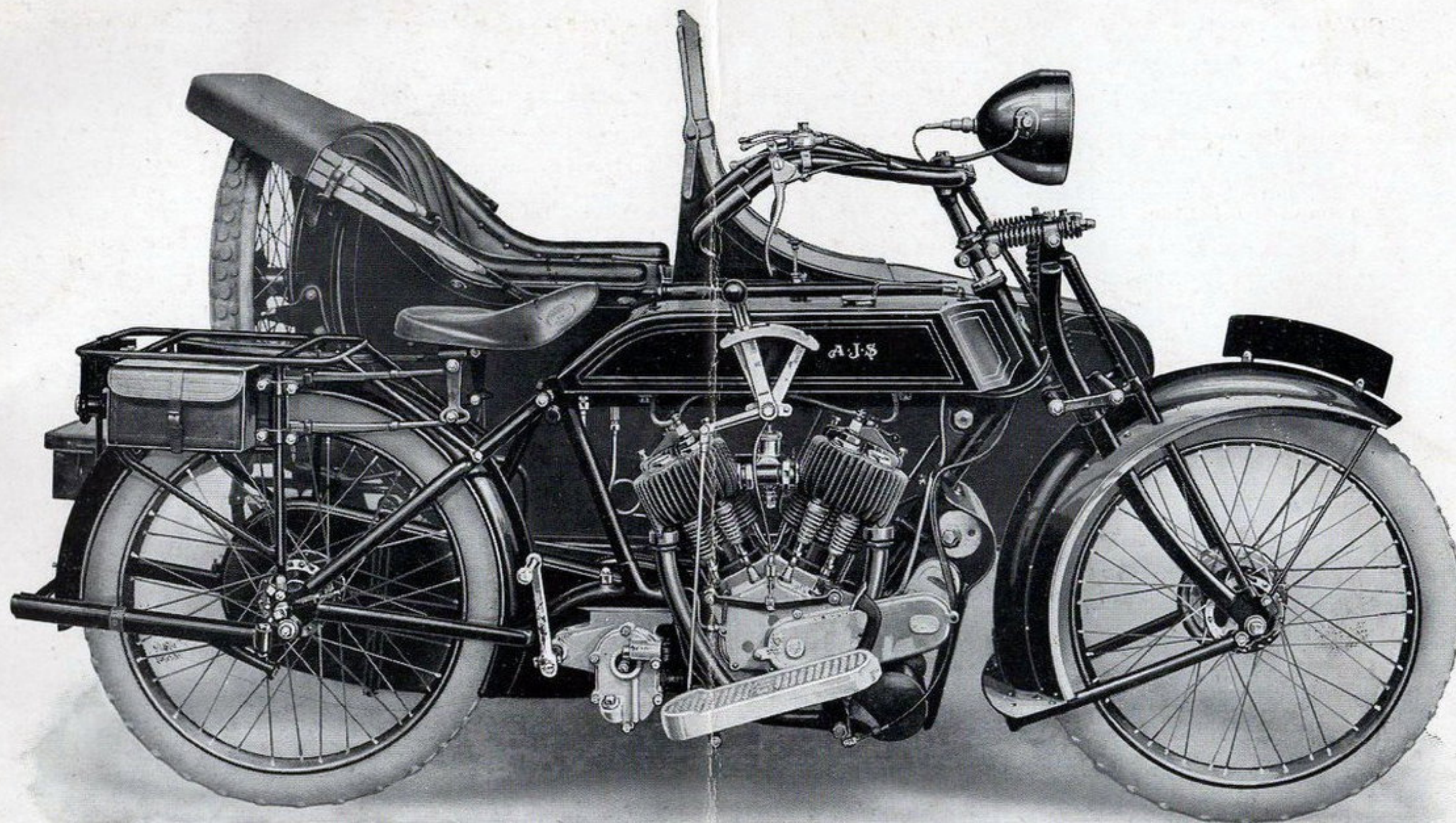
FINISH. Finest Black Enamel, four coats, on special Rust Preventative process, including the Handle-bars. Only a few special parts are heavily Nickel Plated, the greater part of machine being enamelled to save cleaning. Tank Black, artistically lined in gold.

MEASUREMENTS. WHEELBASE, 4 ft. 9 in. WEIGHT, approx. 310 lbs. GROUND CLEARANCE, 6 in.

REGISTRATION PLATES. Fitted ready for painting.

Continued -

A.J.S.



MODEL "D" A.J.S. 7 h.p. Passenger Combination

Fitted with "Lucas" Electric Lighting Set, and Hood.

A.J.S.

SPECIFICATION.— CONTINUED.

BODY. Constructed of steel panelling. Beautifully upholstered. Seat and back fitted with springs. The standard equipment includes Spare Wheel and Tyre, Storm-Proof Apron, Wind Screen, Sidecar Stand and Lamp Bracket. Ample room under seat for spare tin of petrol and oil.

CHASSIS. Special underslung type, the design of which enables a very spacious body to be fitted. Ground clearance, full 6 in.

WHEEL. Instantly detachable and interchangeable with wheels of Motor Cycle.

SIDECAR.

TYRE. 700 x 80 m/m. Heavy "Dunlop" Non-Skid.

MUDGUARD. 5 in. wide and fitted with Side-Shield, completely protecting the passenger against mud and dust.

LUGGAGE CARRIER. Strongly made of metal. Very spacious, and is integral with the body. The luggage carrier is insulated from road shocks exactly the same as passenger. A locker for tools, spares, &c., is fitted under Luggage Carrier, in addition to the locker placed at rear of body.

COLOUR. Our standard colour is Black, from which no deviation can be made.

Price.

7 h.p. Combination, Complete with Spare Wheel and Tyre, Wind Screen, Stormproof Apron and Tools	-	-	-	-	£215	0	0
Motor Cycle only	-	-	-	-	£159	10	0
Sidecar, Complete with Spare Wheel and Tyre, Wind Screen and Apron	-	-	-	-	£55	10	0
Sidecar, Fitted with Wind Screen and Apron only	-	-	-	-	£46	0	0

EXTRAS—

Hood	Hood Side Curtain	Hood Cover	Celluloid Side Screen
£4 10 0	£2 0 0	£1 5 0	£2 5 0
Lucas Electric Lighting Set, complete with Accumulator, Dynamo, Head, Side & Tail Lamps	Lucas Acetylene Head Lamp and Generator, No. 462	Lucas Acetylene Side Car Lamp and Generator, No. 354	Lucas Acetylene Rear Lamp and Generator, No. 344
£28 0 0	£4 17 6	£1 8 6	£0 14 0
Lucas Electric Horn	Lucas Bulb Horn, No. 60	Cowly Mechanical Horn	Cowly Speedometer with Trip
£2 15 0	£1 7 6	£3 0 0	Smith Speedometer with Trip
			less Trip
			£7 0 0
			£6 0 0
			£6 6 6

In the ease of proprietary articles, such as Lamps, Horns, Speedometers (excluding Electric Lighting Sets), a net charge of 3/6 is made for fitting each article or set.

The above prices for Extras apply only when fitted by us to new Machines prior to Delivery.

(We reserve the right to modify or deviate from the above Specification given without notice.)

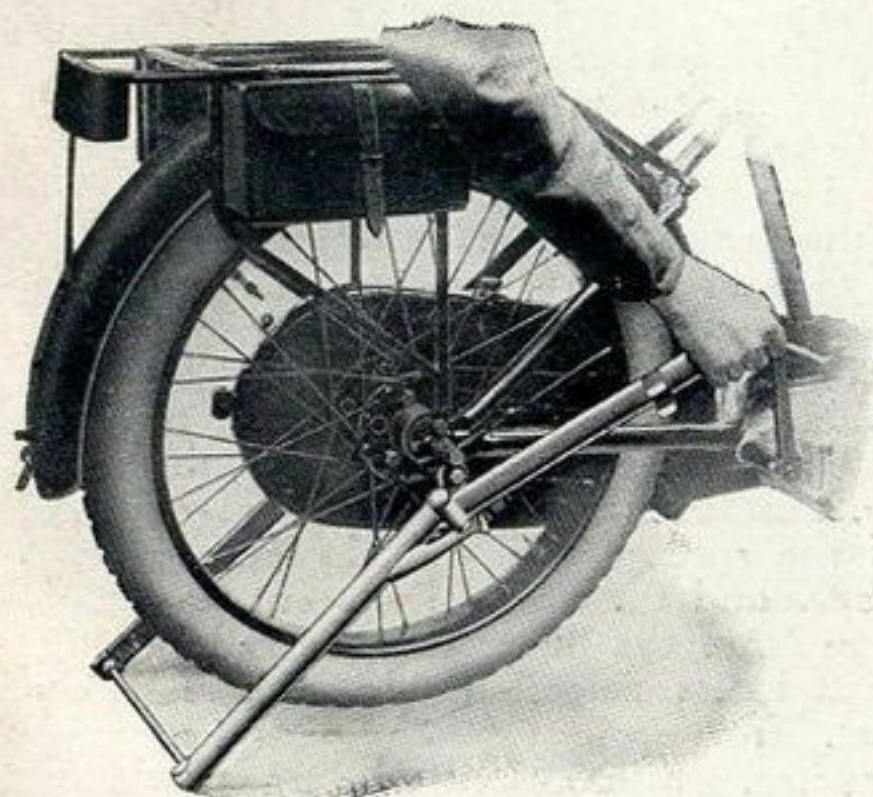
Owing to the present unsettled conditions it must be distinctly understood that the above Prices are subject to alteration without notice, and goods will be invoiced at Prices ruling at time of delivery.

Transmission.

Perfect Power Transmission has been associated with the A.J.S. for the past 14 years, and our ideal system still asserts its superiority and proved reliability. The drive from Engine to gear box and thence to back wheel is by chain, which runs under perfect conditions in entirely enclosed and protected weather-proof Cases. Hans Renold chains are employed throughout, and the transmission can be inspected without disturbing the chain cases, or any mechanism.

A.J.S. Mudguarding.

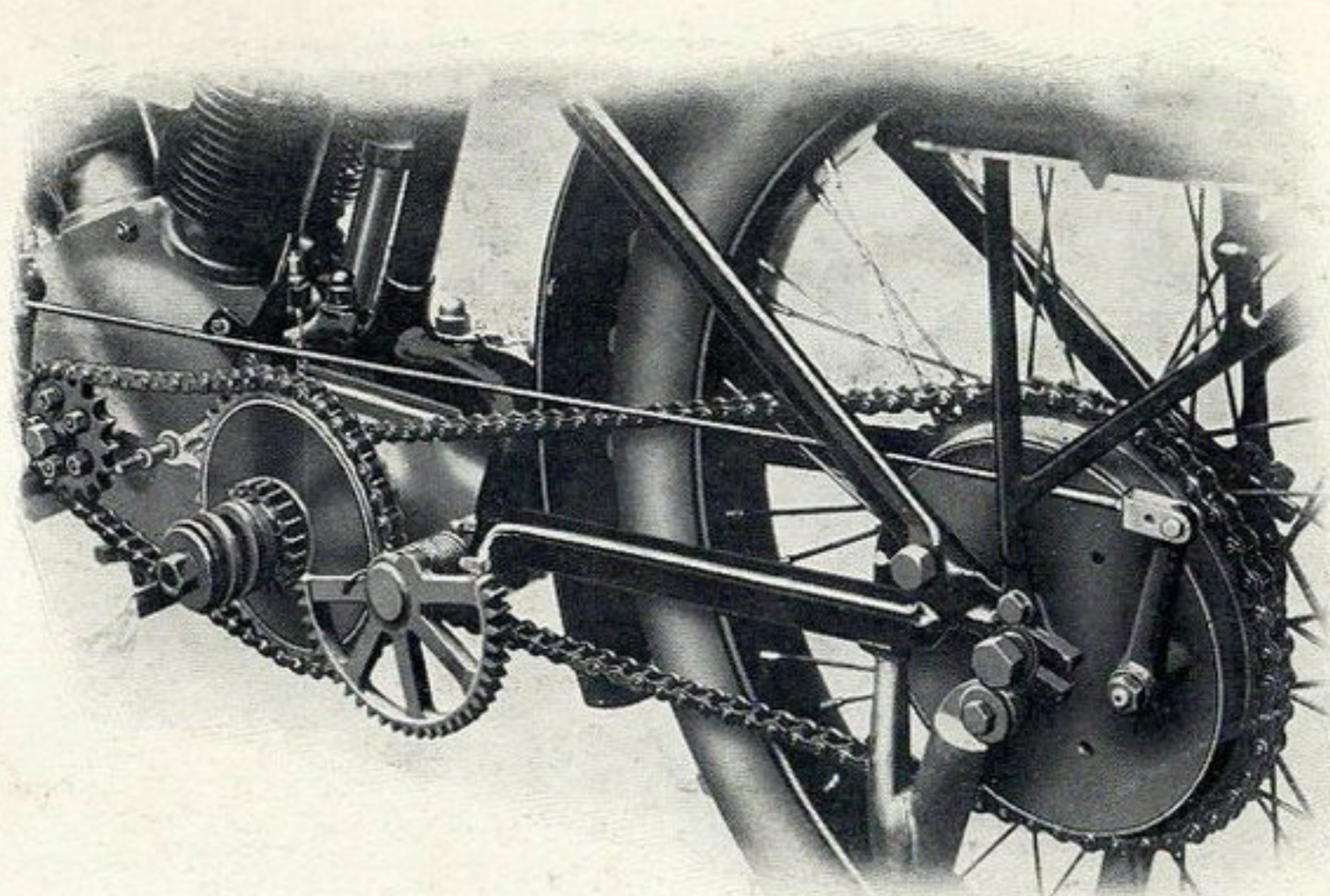
Particular attention has been directed to this important part of Motor Cycle equipment, and we have no hesitation in saying that for general efficiency and neatness no better will be found on the market. The front guards are of exceptional and generous dimensions. The guard is fitted with widely "flared" side valances, which increase in effective width right down to their base, where they meet the bottom valance and effectively combat splash from all directions. The guard is built round the fork blades and constitutes a well thought out and workmanlike job. The rear guard is on similar generous lines, being 7 in. wide, and carried well down over the rear wheel.



A.J.S. Patent Rear Stand, showing how Lever is brought into action.

Rear Stand.

An important feature, and one that will be appreciated by all riders, is our "**Protected**" Design of Rear Stand. This Stand entirely abolishes the old fatiguing procedure necessary to jack-up the machine. No herculean efforts are now required to haul up the dead weight of the motor cycle, the action being easily performed with the aid of a neat Lever, which is part of the Stand. The Lever is hinged, and when not in use is folded back parallel with the Stand.



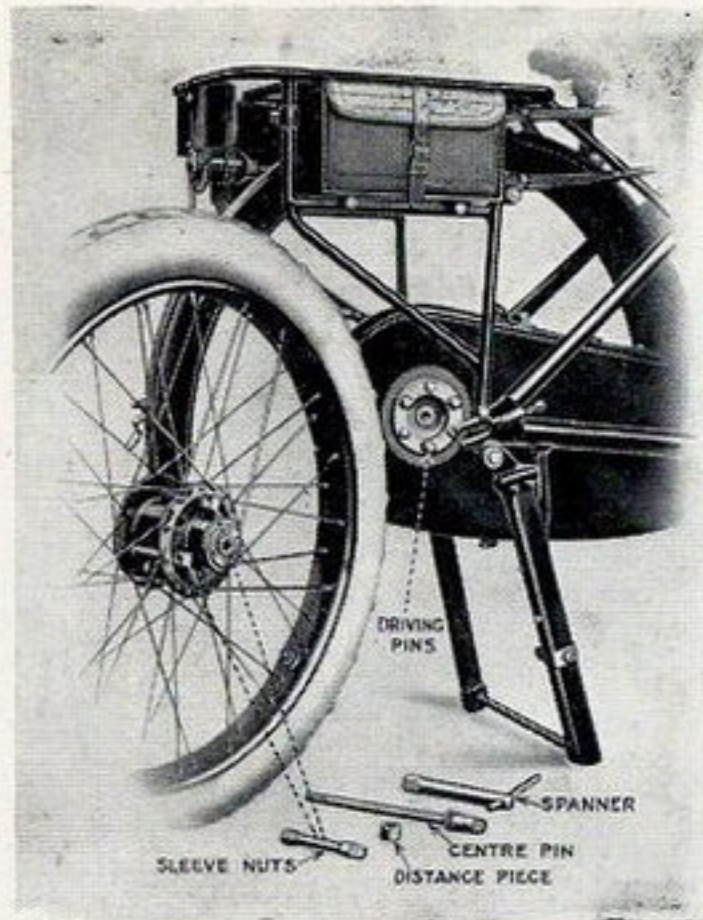
A.J.S. Transmission. Chaincases removed. This view also shows the large diameter Brake Drum.

Internal Expanding Front and Rear Brakes.

This Brake provides a means of control unsurpassed by any other make of machine. It gives absolute safety, and whilst it provides a most powerful instrument for emergency usage, it can be employed equally with the greatest delicacy owing to its remarkable sweetness of action. The Rear Brake is operated by Foot Pedal on the left hand side of the machine and the Front by Pedal on right hand side.

The Frame.

The A.J.S. Frame is not a frame in name only, it is a scientific construction which eradicates all the weaknesses of the usually accepted type of frame. It is built with entirely straight tubing throughout, NO bent tube entering into its construction. It is given a margin of strength which will allow for overloading, without departing from its correct alignment or suffering fractures.



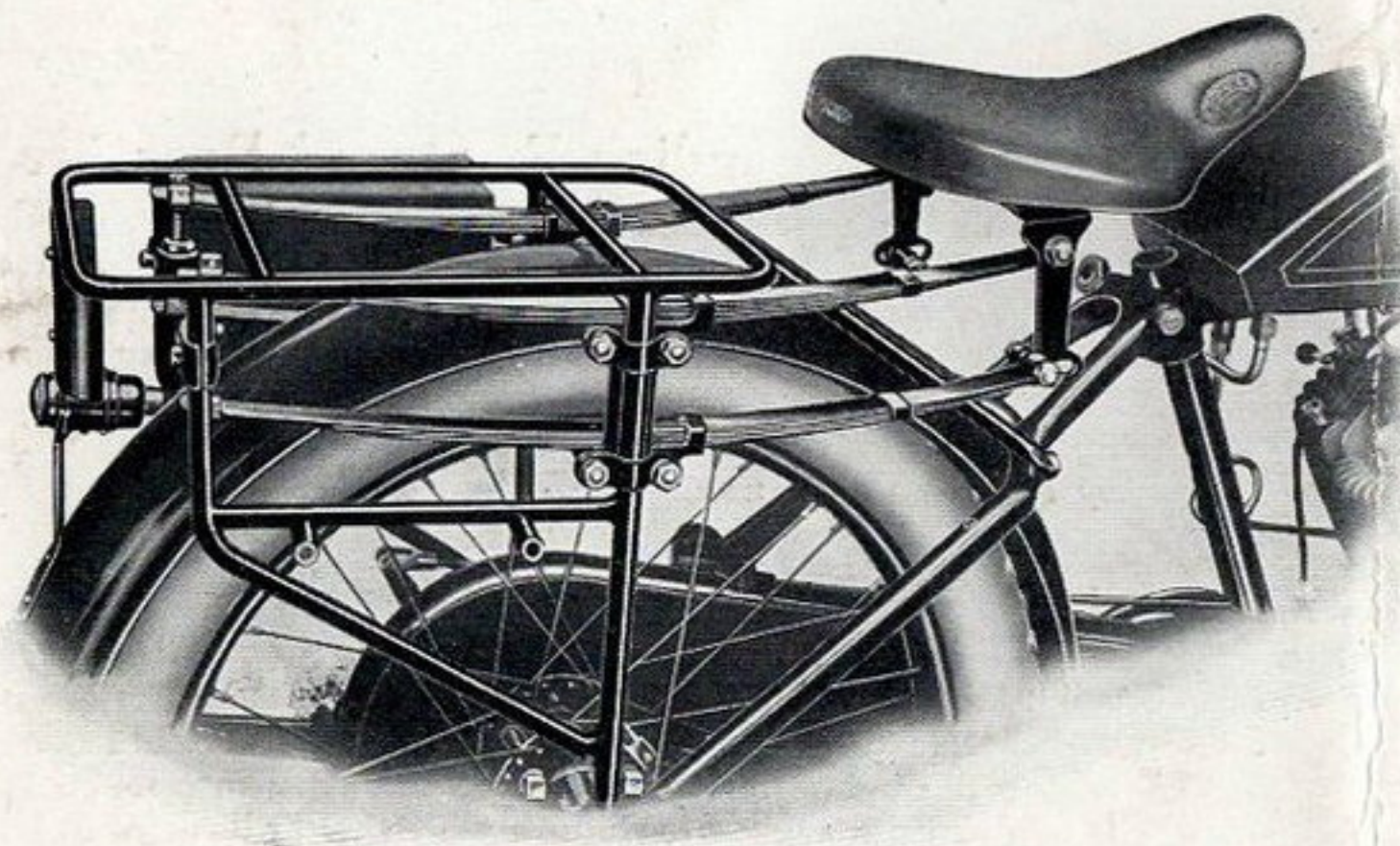
Back Detachable Wheel Removed.

The A.J.S. Quick Detachable and Interchangeable Wheels.

One of the greatest boons incorporated upon the A.J.S. is our Patent Quick Detachable and Interchangeable Wheel System. This provides for instant replacement and interchangeability with any wheel on the outfit, an advantage which will be fully appreciated by every rider. Our system is superior altogether to any other form of detachable wheel, inasmuch as there is no "Dog Drive," with ultimate "Back Lash" after wear; and NO friction or strain. The A.J.S. Detachable Wheel is held in place by three sleeve bolts and a centre pin, and when locked up is absolutely rigid and solid with the driving sprocket. The whole of the transmission, brake shoes, etc., is left in place when the wheel is withdrawn, and in the case of the front wheel, if fitted with our speedometer drive, this fitment is likewise left untouched when this wheel is removed.



Showing Front Wheel detached and its interchangeability with Rear Wheel.



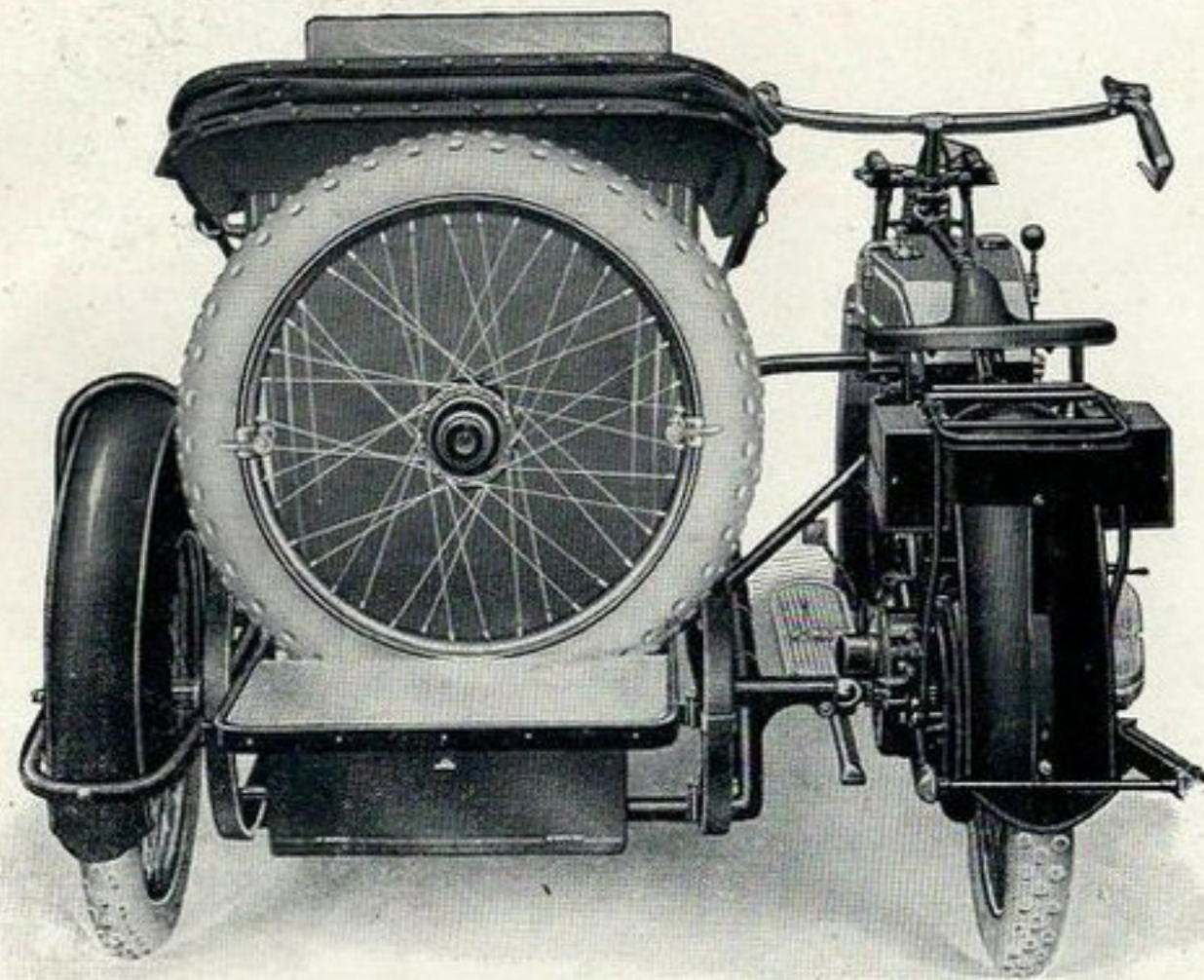
The Brooks Cantilever Saddle.

In this view the tool cases have been removed to show method of attaching springs to carrier.

The Brooks Cantilever Saddle.

This fitment, which is being standardised on the 1921 7 h.p. A.J.S., is undoubtedly the most luxurious saddle on the market, and we have adopted it after exhaustive tests, proving it to be absolutely unrivalled in point of comfort. Whilst it is a luxury, it is yet an absolute necessity with road surfaces in the condition they are to-day. Not only does it insulate the rider absolutely from shock, such as is to be found on the best of spring frame designs, but it has the merit of being without the imperfections attending spring frames, such as side sway, roll and similar objections, to say nothing of wear which sets up eventually in the working parts. In the Brooks Cantilever Saddle, a uniform movement takes place over the whole length of the springs which deals equally effectively with minor shocks and the worst of present day pot holes. As will be seen from the illustration the saddle springs consist of two sets of leaf springs, suitably anchored to the stays of the carrier. The springs are compensating and are pivoted in the centre. Micrometer adjustment is provided for regulating the spring tension to suit any rider's weight. The seat is beautifully shaped and padded, and the angle or tilt can be altered to suit individual rider's tastes. As a complete insulation against shock, this saddle cannot be excelled, as it is sensitive to the slightest road inequalities.

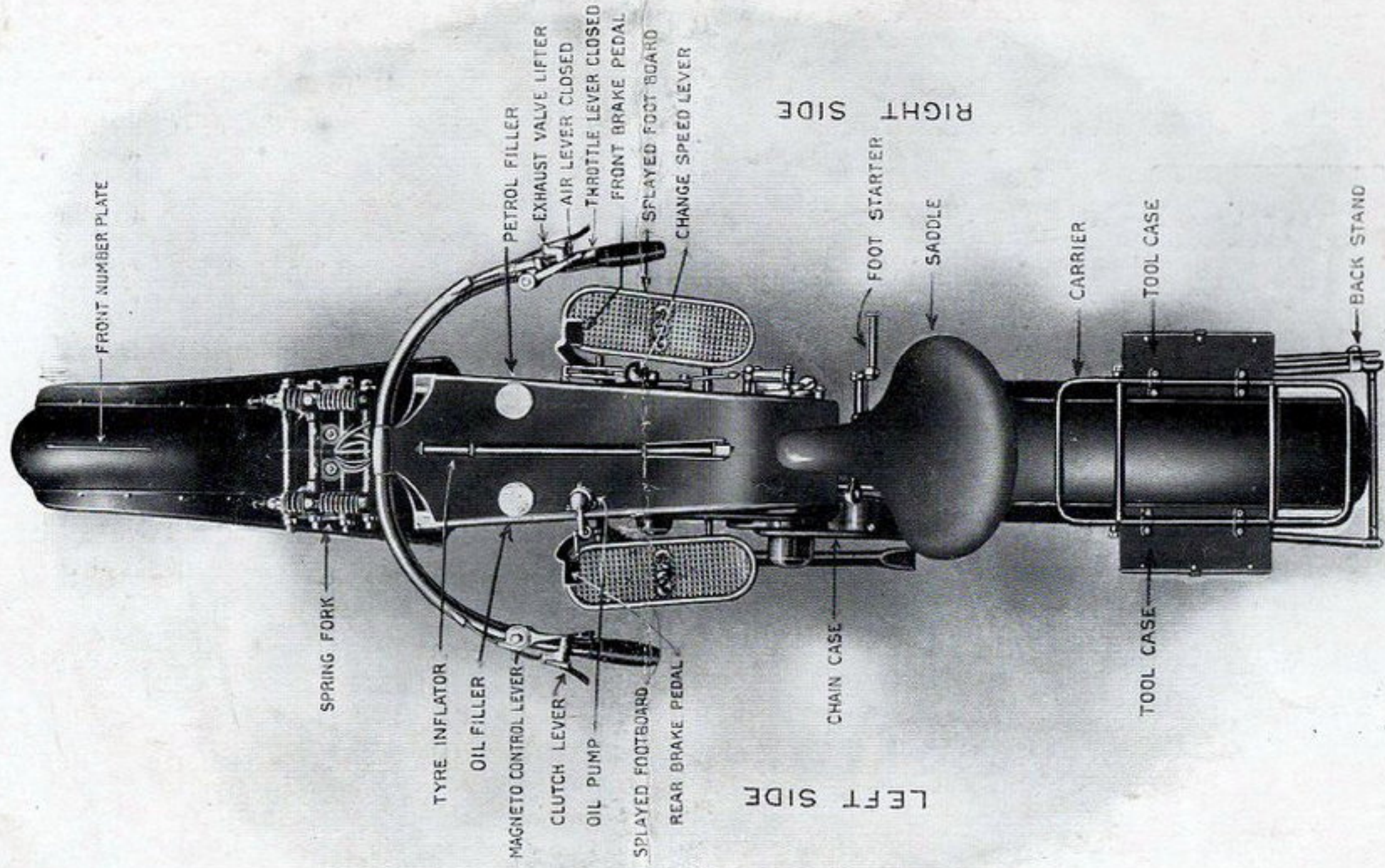
7 h.p. A.J.S.
Sidecar Combination.



Rear View

SHOWING HOW THE SPARE WHEEL IS CARRIED.

THIS Illustration shows how the Spare Wheel of the A.J.S. Interchangeable Detachable Wheel system is carried. The Wheel is supported upon two brackets fixed to the rear of the body of the Sidecar. The brackets incorporate a pair of quickly removable clips which grip the rim of the Wheel and support it clear of any portion of the body or chassis. In addition to this desirable feature the Wheel is entirely out of the way of both passenger and driver, is perfectly protected from deterioration whilst not in use, and readily accessible when required by simply unscrewing two fly nuts. This illustration also shows the spacious rubber-covered luggage grid, with tool locker underneath.



PLAN VIEW.

Meritorious Performances made by the A.J.S. during 1920.

Reliability.

A.C.U. English Six Days' Trials. 5 Gold Medals. Five 6 h.p. A.J.S. Sidecar Combinations started—Five finished.

London—Edinburgh Reliability Trial. 5 Gold Medals, 4 Silver Medals.

Liverpool M.C.C. Reliance Cup Trial. Highest Awards for Sidecars obtained.

West Midland Open Reliability Trial. Awarded B.S.A. Challenge Cup, Castle Challenge Cup, and 5 Gold Medals.

Scottish Six Days' Trial. Gold Medal and Silver Medal.

Dublin 24 Hours' Trial. Awarded Special Gold Medal.

Liverpool M.C.C. 24 Hours' Trial. Awarded Rudge-Whitworth Cup and 4 Gold Medals.

Birmingham M.C.C. Victory Cup Trial. 6 Silver Medals.

Essex M.C.C. 24 Hours' Reliability Trial. Gold Medal—One 6 h.p. Combination entered.

The above represent only a few of the successes achieved by the A.J.S. in Reliability and Speed Trials this season

The Awards gained by the A.J.S. during 1920 are as follow:

15 CHALLENGE CUPS. 20 RECORDS.
82 GOLD MEDALS. 36 SILVER MEDALS.
26 BRONZE MEDALS.
89 FIRSTS. 51 SECONDS. 21 THIRDS.



THE JUNIOR TOURIST TROPHY
Won by the A.J.S. twice
in succession

Speed.

FIRST $2\frac{3}{4}$ h.p. Motor Cycle in the world to officially attain 80 m.p.h. This was accomplished by H. R. DAVIES on Brooklands, Oct. 19, 1920, over the Flying Kilo, which he covered in 27.8 secs., equalling a speed of 80.47 m.p.h.

12 Class Records and 8 International Records also stand to the credit of the $2\frac{3}{4}$ h.p. A.J.S. this year, making 20 RECORDS IN ALL.

81.8 m.p.h. put up by H. R. DAVIES on a $2\frac{3}{4}$ h.p. A.J.S. at Clipstone Drive Open Speed Trials. Time, 22 secs. for the Flying $\frac{1}{2}$ -Mile.

Derby, Notts & Sheffield M.C.C. Open Speed Trials, Chatsworth Park. 19 Gold Medals.

York & District M.C.C. Hill Climb at Sutton Bank. 7 FIRSTS, 1 Second, 1 Third, 6 Gold Medals, 2 Silver Medals, 1 Bronze Medal.

Bristol M.C.C. Open Hill Climb. 2 FIRSTS, 3 Seconds, and Fastest Sidecar Time of the day (any capacity).

Sutton Coldfield and N. Birmingham M.C.C. Hill Climb, Style Cop. 4 FIRSTS, 2 Seconds, and Fastest Time of the day.

Luton & South Beds Speed Trials. 5 FIRSTS, 6 Seconds, & Fastest Solo Time up to 1100 c.c.

M.C.C. Brooklands Championship Race. 350 c.c. Class won by Kaye Don, $2\frac{3}{4}$ h.p. A.J.S.

M.C.C. Brooklands Race Meeting. 350 c.c. Scratch Race, won by Major Axford, $2\frac{3}{4}$ h.p. A.J.S.

Leicester & District M.C.C. Hill Climb, 5 FIRSTS.

To enumerate all the awards gained by the A.J.S. during the past eleven years would require a large volume

Terms of Business

PAYMENT

One-third Cash with order and balance against invoice when machine is ready for delivery. We accept orders only on the condition that the prices in this list are subject to alteration without notice, and goods will be invoiced at the prices ruling at time of delivery.

CARRIAGE

Free on Rail Wolverhampton. Crates for Motor Cycle, £1 9s. 6d.; for Side Car, £1 10s. 0d.; not returnable. (Owing to the fluctuation in the price of Timber we reserve the right to increase or decrease the price of Crates or Cases without notice.)

RAILWAY TRANSIT

All goods are sent per Goods Train except when otherwise ordered and are signed for by the Railway Company as being in good condition. All Machines should, on arrival, be carefully examined, and if damaged, signed for as such, and an immediate claim made on the carriers. *The sale of all A.J.S. Motor Cycles, Side Cars, parts thereof and accessories for same, is upon the terms that delivery is effected when the goods are handed to the Carriers, addressed as per consignee's instructions.*

The "A.J.S." Guarantee

Every care is taken in the manufacture of A.J.S. Motor Cycles: if, however, any part or parts shall be or become defective through faulty workmanship or material at any time within six months from the date of purchase, we hereby undertake to exchange or repair such part or parts subject to and in accordance with the following conditions:—

In the case of machines which have been used for "hiring out" purposes, or from which our trade mark or manufacturing number has been removed, no guarantee of any kind is given or is to be implied.

We guarantee, subject to the conditions mentioned, that all precautions that are usual and reasonable have been taken by us to secure excellence of materials and workmanship, and damages for which we make ourselves responsible under this guarantee are limited to the replacement of any part which may have proved defective, and any work involved in the replacement of such part or parts will be charged for.

We undertake, subject to the conditions mentioned, to make good at any time within six months any defects in these respects. As motor cycles 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:

- I. The attaching of a sidecar to the motor cycle in such a manner as to cause damage, or calculated to render the latter unsafe when ridden.
- II. The use of a motor cycle, or of a motor cycle and sidecar combined, when carrying more persons or a greater weight than that for which the machine was designed by the manufacturers.

Any motor cycle sent to us to be plated, enamelled, or repaired, whether the repairs are required for the purpose of making good the defect before referred to or otherwise, 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 material and workmanship, such guarantee to extend and be in force for six months only from the time such work shall have been executed, and this guarantee is in lieu and in exclusion of any common law or statute warranty, 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 motor cycles, or in any part replaced, it must be sent to us carriage paid, and accompanied by an intimation from the sender that he desires to have it repaired free of charge, under our guarantee, and he must also furnish us at the same time with the number of the signed Guarantee (see below), the number of the machine, the name of the agent from whom he purchased, and the date of the purchase, or the date when the alleged defective part was replaced, as the case may be.

Failing compliance with the above, no notice will be taken of anything which may arrive, but such articles will lie here at the risk of the senders, and this guarantee, and any implied guarantee shall not be enforceable.

WE GUARANTEE ONLY THOSE MACHINES WHICH ARE BOUGHT EITHER FROM US OR FROM ONE OF OUR DULY AUTHORISED AGENTS, AND UNDER NO OTHER CONDITIONS.

We do not guarantee the specialities of other firms, such as magnetos, carburettors, tyres, saddles, chains, lamps, tools, etc., or of any component part supplied to the order of the purchaser differing from our standard specification supplied with our motor cycles, or otherwise.

We give the above guarantee with our Motor Cycles instead of the guarantee implied by Statute, or otherwise, as to the quality and fitness of such machines for the purpose of motor cycling; any such implied guarantee being in all cases excluded.

A postcard is enclosed with each new A.J.S. Motor Cycle, which when duly filled in and returned to us, entitles the purchaser to a signed Guarantee for six months, and an Instruction Booklet. Unless the purchaser is in possession of a numbered and signed Guarantee we do not undertake repairs or supply replacements under our Guarantee

The Term "Agent"

is used in a complimentary sense only and those firms whom we style our agents are not authorised to advertise, incur any debts, or transact any business whatsoever on our account other than the sale of goods which they may purchase from us; nor are they authorised to give any warranty or make any representation on our behalf other than those contained in the above guarantee.

A. J. STEVENS & CO (1914) LTD.

MANUFACTURED THROUGHOUT

BY

A. J. STEVENS & CO. (1914) Ltd.,

Head Offices : GRAISELEY HOUSE.

Works : GRAISELEY HILL.

WOLVERHAMPTON,

ENGLAND.

TELEPHONE
1166 (3 lines).

TELEGRAMS :
"Hopit, Wolverhampton."

CODE :
A.B.C. 5th Edn. and
A.B.C. 6th Edn.
Bentley's.
Marconi International.