

118.011.1 1926

# Arrol-Johnston



## "DOMINION" MOTOR CARRIAGES

(Government Tax - £16)

With Overhead Valve Engine

## "EMPIRE" MOTOR CARRIAGES

(Government Tax - £20)

ARROL-JOHNSTON Motor Carriages can now be purchased, if desired, on the "Deferred Payment" System. A unique and easy scheme is in operation. Full particulars can be had from accredited Arrol-Johnston Dealers, or direct from the Company.

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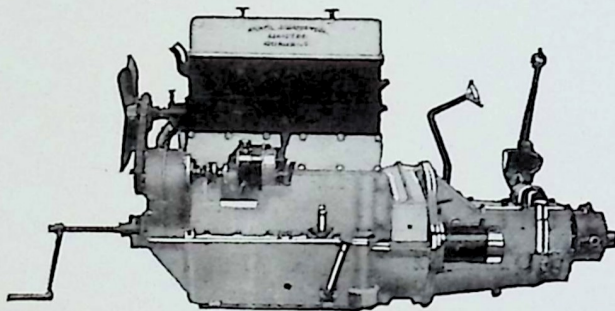
ARROL-JOHNSTON LTD., DUMFRIES, SCOTLAND

Telegrams: MOCAR Dumfries. Telephone: 280 Dumfries (3 lines)

# Announcing a Wonderful NEW OVERHEAD VALVE ENGINE

OUR range of models for the 1926 season is confined to two types only—the Arrol-Johnston “Dominion” Motor Carriage, Government Tax £16; and the Arrol-Johnston “Empire” Motor Carriage, Government Tax £20. In the “Dominion” Motor Carriage we are introducing an overhead valve engine of an entirely new and improved type, which, by reason of its clever design, gives extraordinary advantages over the best overhead valve engines hitherto produced. We had always been ready to admit the theoretical efficacy of the O.H.V. system, but this

has always been more than offset in our opinion by the hitherto incurable tendency of this type of engine to become noisy after very little use. Not until we had devised means of overcoming this great drawback, were we content to adopt overhead valves. At last we have succeeded in our efforts, and we are confidently satisfied that the engine now fitted to the “Dominion” Motor Carriage will provide complete and lasting satisfaction, and will operate as economically and silently after an indefinite period of wear as it does when it first leaves the works.



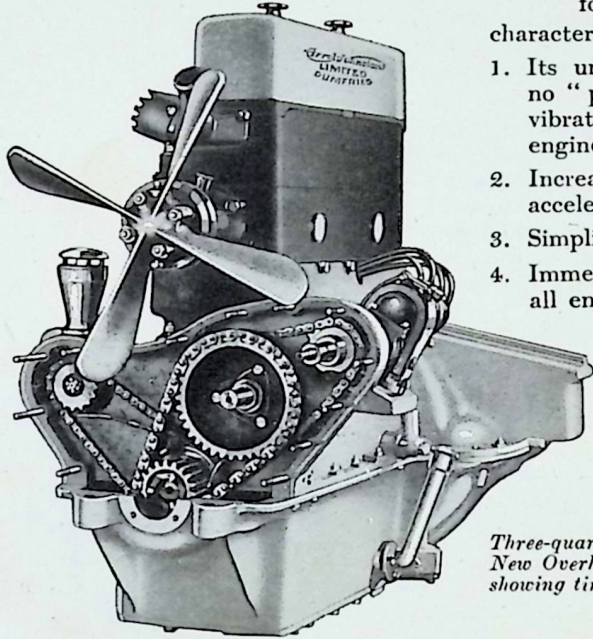
*The New  
“Dominion” Engine*

In the “EMPIRE” Motor Carriages there are few changes, as the existing Saloon and 7-seater Tourer models have proved so entirely successful during the past few seasons. They continue to be fitted with the ever-popular Arrol-Johnston side-valve engine, and the various slight modifications in both chassis and body work are fully described in the pages of this catalogue.

# ITS PRINCIPAL ADVANTAGES

**T**HE details of the many important innovations in the design of the new engine are dealt with fully in the following pages, but its outstanding characteristics may be mentioned at once.

1. Its uncanny silence. There is positively no "period" at any engine speed and no vibration, however slowly or quickly the engine is running.
2. Increased power and greatly increased acceleration.
3. Simplicity of adjustment.
4. Immediate and complete accessibility to all engine bearings and pistons.
5. Through positive lubrication to all bearings of engine and accessory mechanism.



*Three-quarter view of  
New Overhead Valve Engine  
showing timing gear, etc.*

The "DOMINION" Motor Carriage is being produced as a 5-seater Tourer, as a roomy Saloon, and also in an entirely new type of body, as a 3-seater with dickey seat.

To-day the name of "Arrol-Johnston" stands almost like a tradition for long life, reliability, ease of control and comfort, and all these qualities are, of course, fully maintained in our latest productions. In the matter of service after purchase, of which we were pioneers, our reputation for attention to Arrol-Johnston owners is well established.

In conclusion, although we feel strongly that you will do best by selecting your new carriage from the Arrol-Johnston range, whatever make you finally decide upon, we unequivocally urge you to "Buy British," for reasons which are too well known to you to need labouring.

# SPECIFICATION of the "DOMINION" Motor Carriage CHASSIS

## Chassis

Wheel-bases 9' 9"	Overall length (hood up) 13' 6"
Track .. 4' 8"	Overall width .. 5' 8"
Minimum ground clearance .. 10"	

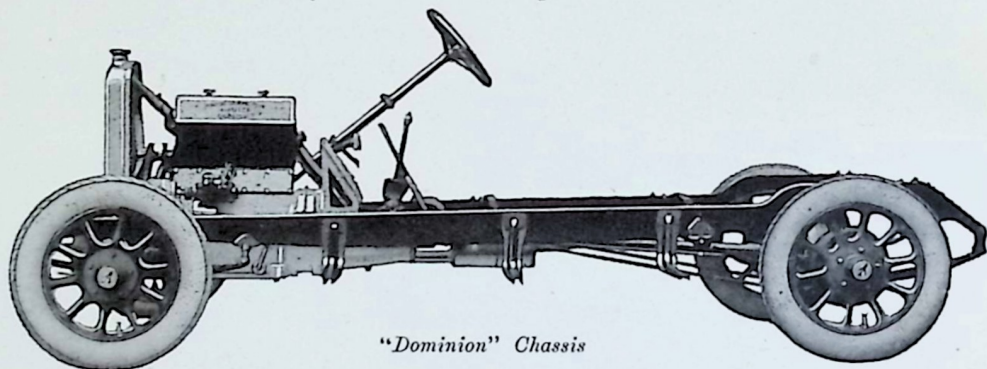
Road wheels : DUNLOP detachable steel, spoke type.  
Tyres : 30 by 5.25 ins. DUNLOP low pressure Cord.

## Engine

Four cylinders, cast *en bloc*. Bore 80 mm.  $\times$  120 mm. stroke, 2412.7 cc. The complete power unit is mounted in chassis frame by three point suspension. The upper and lower halves of the crankcase are made of aluminium; the sump is easily removable to give access to the main bearings, connecting rods and pistons without disturbing the cylinder bloc. The pistons and connecting rods can be removed without disturbing the crankshaft. The water

jackets are of large capacity, special attention having been devoted to the cooling of the valves and cylinder head. The cylinder head is detachable, and the valve chambers are arranged to introduce turbulence—light tulip shaped valves are employed and the guides are water-cooled throughout their length.

Push rods are used for the operating gear, the camshaft being carried in the normal place in crankcase by side of crankshaft and driven by silent chain. An important point is that, to avoid the use of very stiff valve springs, which would normally have to return not only the valve but the push rod,



"Dominion" Chassis

rocker and tappet as well, and which would further introduce stresses in valve itself, the mechanism is separated, the valves themselves having normal springs, whilst additional springs at foot of push rods are employed to return tappet to camshaft. Obviously careful thought has been given to the push rod gear, which is comprised of overhead rockers mounted on two hardened shafts and carried in substantial brackets bolted to the top of cylinder head. The mechanism is well supplied with oil, being fed from the main engine pump to an overhead oil pipe, having small valves for control of supply and pressure, and thence by independent feeds to each rocker. This oil is led to end of rocker operating on hardened pad on top of valve, thus providing a cushion of oil at this point; in like manner the oil is led to other end of rocker on to ball joint of latter, which rests downwards in a cup at top of push rod, so that there is always an oil cushion at this point. The lower end of push rod terminates in a ball

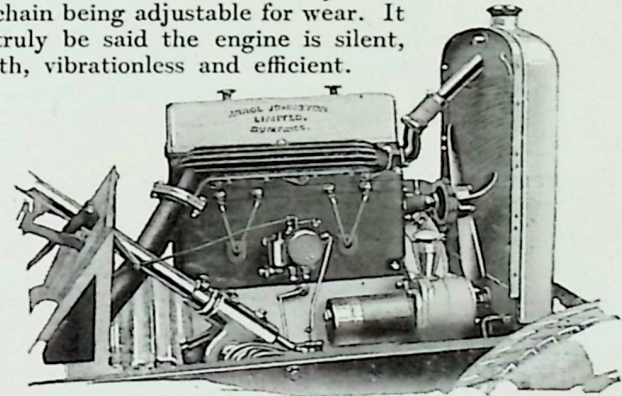
which sockets into the hollow tappet—this latter also forming a cup retaining sufficient oil for cushioning effect.

The upper face of jacket of detachable head is sloped slightly so that excess oil drains off back into the crankcase via the casing enclosing the push rods and tappet gear.

The rocker and valve gear is totally enclosed by an oil tight aluminium cover, which is easily removable when tappet adjustments are required; in like manner also the tappet mechanism is enclosed by detachable cover. The whole mechanism is exceptionally quiet in operation at all speeds and remains so. The auxiliary chain drives are such that one roller chain drives the accessory shaft and thence to magneto, water pump and fan, whilst a second roller chain drives the dynamo, this chain being adjustable for wear. It can truly be said the engine is silent, smooth, vibrationless and efficient.

### Repair Bill—5/-

"I may say that after eighteen months my car looks just as good as new—in fact I am often asked if it is a new car. She has not been decarbonised, but runs as well as ever. Most of my journeys are done at very high speeds, yet my repair bill (tyres excepted) is about 5/- so far."—H. B.



*The New Engine  
(off side)*

## Crankshaft

Made of special heat-treated steel with large bearing surfaces and carefully balanced. The crankshaft is attached to the upper half of the crankcase by three bearings lined with high-quality white metal.

## Lubrication

By gear wheel pump bolted to the bottom half of the crankcase, self-contained, with a large filter on the suction side, placed so as to be always flooded with oil. From this pump are fed crankshaft, camshaft, and connecting rod bearings. This system, as applied by us, ensures a perfect and uniform lubrication of the whole engine and a smokeless exhaust. All the superfluous oil is drained back to the sump, obviating waste. The oil is poured into the crankcase through a combined filler and breather in the crankcase, and must pass through the filter before being pumped through the bearings, the correct level being indicated by oil dipper fitted in crankcase.

## Appreciation from Lord Wrenbury

" Lord Wrenbury went into Bexhill this morning to see Mr. Russell as to two little matters connected with the car which you recently supplied to him. He took the opportunity to offer him his personal thanks for the trouble he has taken to supply him with a thoroughly efficient car. He asks you also to accept a similar expression of gratitude. The car is found to be in every respect satisfactory. Lady Wrenbury much appreciates the springing of the car and the stuffing of the seats, and all parties appreciate the running of the engine."

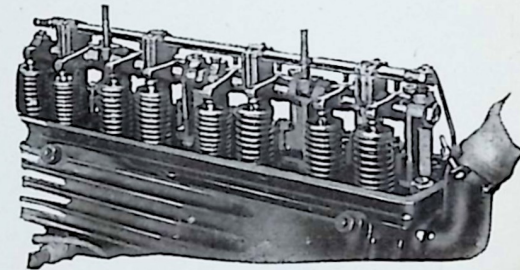
Pallington (Sussex).

## 4-speed Gearbox

The four-speed gear-box with right-hand change, is built up in a casing bolted up to the rear end of the engine crankcase and which also contains the clutch. It is of the selective gate-change type operated by a single lever. All the main shafts are mounted on ball-bearings. The layshaft is immediately beneath the main shaft and is wholly immersed in oil. An oil filler is fitted on the side of the box and also shows the correct level of the oil. The cover is easily removable to afford inspection of gears.

## Clutch

An improved design of single plate type, consisting of a steel driving plate working between two Ferrodo-faced plates kept in engagement by six helical springs. The adjustment has been simplified to such an extent that a slipping or fierce clutch can be immediately rectified.



*With Valve Gear  
Cover removed to  
show Valve Gear*

## Universal Joint

Is of ring and stud type, completely enclosed in dust-tight cover.

## Drive

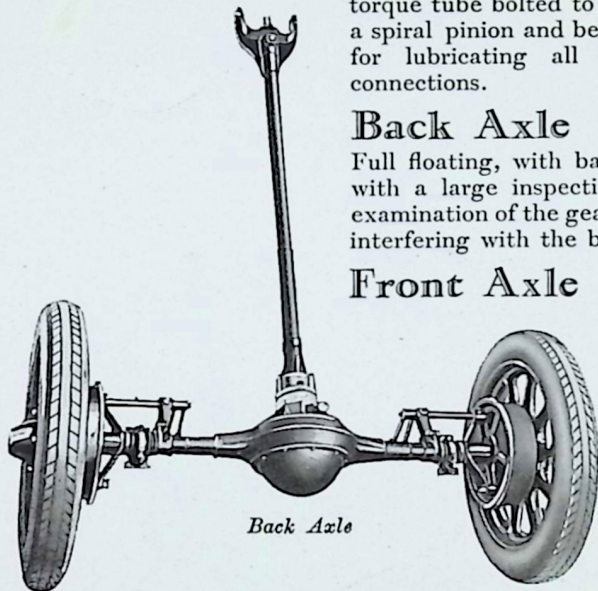
The drive is transmitted from the gear-box to the back-axle by a drive shaft (enclosed in a mild steel torque tube bolted to the back axle casing) through a spiral pinion and bevel. There is ample provision for lubricating all parts, including the brake connections.

## Back Axle

Full floating, with banjo-type centre casing, fitted with a large inspection cover at rear, allowing for examination of the gears or their withdrawal without interfering with the back axle as a unit

## Front Axle

This is formed from a single steel H-section stamping



*Back Axle*

with jaws at ends for taking the stub axles. The road wheels are carried on two tapered roller bearings adjusted by the spindle nut secured in position by a locking ring.

## Springs, Front and Rear

Front springs are semi-elliptic, of extra length and width. Rear springs are under slung, semi-elliptic, long and very elastic. Secured directly to the frame at the forward end and with shackles to the rear end. The springs are wholly enclosed in special gaiters impervious to wet and dirt. Both front and rear springs are splayed to give easy riding and prevent rolling.

## Steering

Is of the worm-and-wheel type. The steering connections are of a special ball-and-socket type arranged in conjunction with steering tubes to be self-lubricating.

## Testimony from Ceylon

"I have had an Arrol-Johnston Car since May, 1920. I bought it at home and used it constantly all 1920, touring all through England and Wales. Early in 1921, I had it shipped to Karachi, India, where I was for two years, and used the car constantly there. I recently had it shipped here, and she is still going strong. During this time (just over three years) I have had no trouble with the engine, axles or anything, and I've not even had her painted, and she looks bright yet." F. A. G. (Colombo).

## Brakes

Both foot and hand brakes are compensated and are of the internal expanding type, operating in drums carried on the rear wheels. Dust-proof pressed steel disc covers are fitted to the drums. The drums are rigid steel pressings, affording ample braking surface. The brake shoes are faced with die-pressed Ferodo. Adjustments are made by hand nuts. The cross-shafts are fitted with greasers.

## Clutch and Brake Pedals

These are situated on the foot-plate, left and right respectively.

## Control

Is by hand and foot accelerator. The pedal for the foot control is placed between the clutch and brake pedals. A hand-control is provided mounted on top of steering column on the same quadrant as the variable ignition control.

## On Hill Climbing

"I probably should not have written, only we have just got back from an 800 miles tour (in a week) in Devonshire and Cornwall, and my friends say I ought to let you know how well the car ran. It went up every hill splendidly, including the famous Porlock Hill, Lynton, Lynmouth and Countisbury Hills. On Porlock Hill we passed a very large car stuck up, and we had four passengers, including the driver, five week-end bags heavily loaded, a large box on the luggage carrier, two spare wheels and tyres, heavy coats, and the usual paraphernalia carried by four persons touring."—A. G. W.

**Two Unit Lighting and Starting Equipment; so arranged as to give silent starting**

## Road Wheels

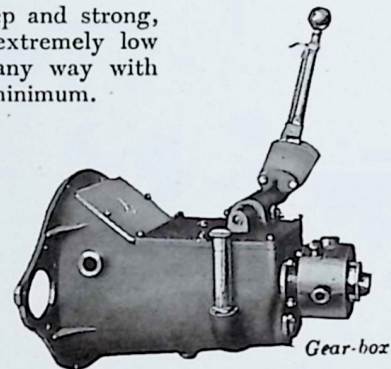
DUNLOP Steel detachable, spoke type. Spare wheel complete with tyre included.

## Tyres

30" x 5.25" DUNLOP low pressure Cord tyres are fitted as standard.

## Frame

Of high-grade pressed steel, very deep and strong, upswept at rear, giving the car an extremely low appearance without interfering in any way with the ground clearance, which is 10" minimum.



Gear-box

## Radiator

Of special ARROL-JOHNSTON design, with white metal casing, is placed in front of engine, giving the car a distinctive appearance.

## Cooling

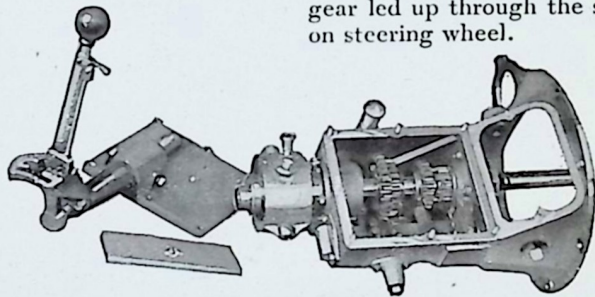
Pump circulation on the latest approved principle through waterways of large area, with fan-cooled radiator. The fan belt is easily adjusted.

## Ignition

High-tension magneto. Fitted with variable ignition operated from the steering wheel.

## Carburettor

Fitted in accessible position, with variable throttle gear led up through the steering column to bracket on steering wheel.



*Gear-box,  
opened out*

## Fuel Tank

At rear of chassis with "AUTOVAC" Fuel-Feed Tank fitted on the front of the dash immediately under bonnet; readily accessible.

## Fittings

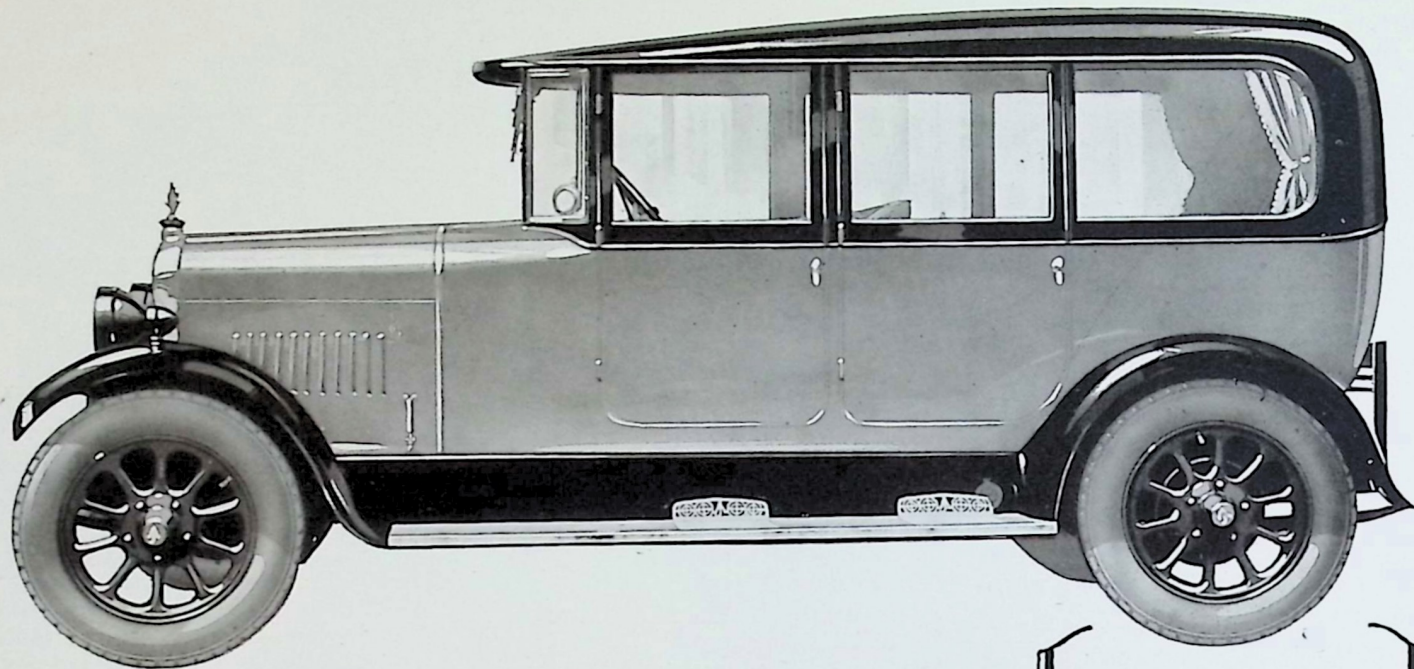
The few bright parts about the car are polished aluminium or nickel-plated.

## Accessories

(Included in the price). Speedometer; clock; two unit lighting and starting set; electric horn; wind screens to front and rear seats; automatic spring rebound control; luggage grid; petrol gauge, oil gauge, automatic screen wiper; DUNLOP steel spoke wheels; DUNLOP Cord tyres; spare wheel with tyre, and very complete kit of tools.

## Praise from a New Zealand Owner

"I may say, to our mutual satisfaction, that the car has now covered 500 miles over very hilly country in the sweetest possible manner. I have no doubt whatever that this car (my eleventh) will prove to be the best for all practical purposes I have yet bought. It eminently fits my requirements in that it is beautifully finished, easy to travel distances in, sufficiently powerful, light on petrol (25 miles per gallon), and the price is just what I was prepared to give. Lastly, but not least, it is British, and that to me—a Scotsman by birth with New Zealand as the home of my adoption—carries with it a sentiment much stronger and a greater pleasure than you could well understand." J. S. F. (Wellington, N.Z.)



## The "DOMINION" SALOON Motor Carriage

(Government Tax - £16)

You can carry on a conversation in this Saloon while the engine is "revving" at full speed. The interior is luxuriously comfortable and very roomy.

## THE "DOMINION" SALOON MOTOR CARRIAGE

**H**OW important a silent engine is to the closed carriage can best be discovered by riding in an ordinary not-too-silent car and then in the "Dominion" Arrol-Johnston Saloon with the New O.H.V. Engine. And to this extraordinarily silent and vibrationless engine is added a beautiful saloon body of superb construction in which there is

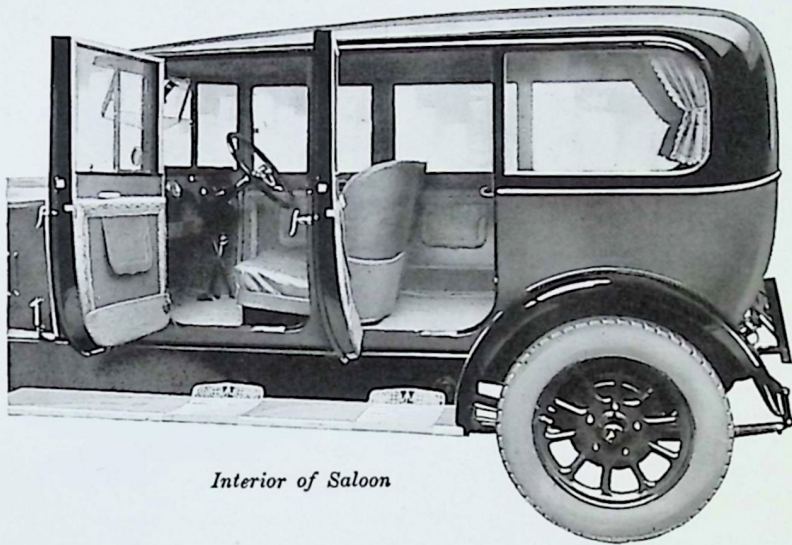
not the slightest suspicion of drumming or chattering. Four wide doors give easy access without disturbing the driver, whilst the deep, real leather upholstery affords comfort unsur-

passed. The beauty of the interior fittings, the handsome array of instruments on the dashboard, all go to make this carriage the perfect medium powered saloon. A further measure of comfort is provided by the fitting of automatic spring rebound control, and Dunlop low pressure cord tyres.

**EQUIPMENT:** Roomy coachbuilt Saloon body to seat 5, and having four doors; painted brown or crimson lake to choice, and upholstered in hand-buffed antique real leather; oil gauge; petrol gauge; luggage grid; electric horn; automatic screen wiper; speedometer; clock; step-mats; automatic spring rebound control; spare wheel with tyre, 30 in. by 5-25 in.; Dunlop low pressure cord tyres.

Without front wheel brakes **£475** With front wheel brakes **£485**

*Triplex Glass £32 extra*



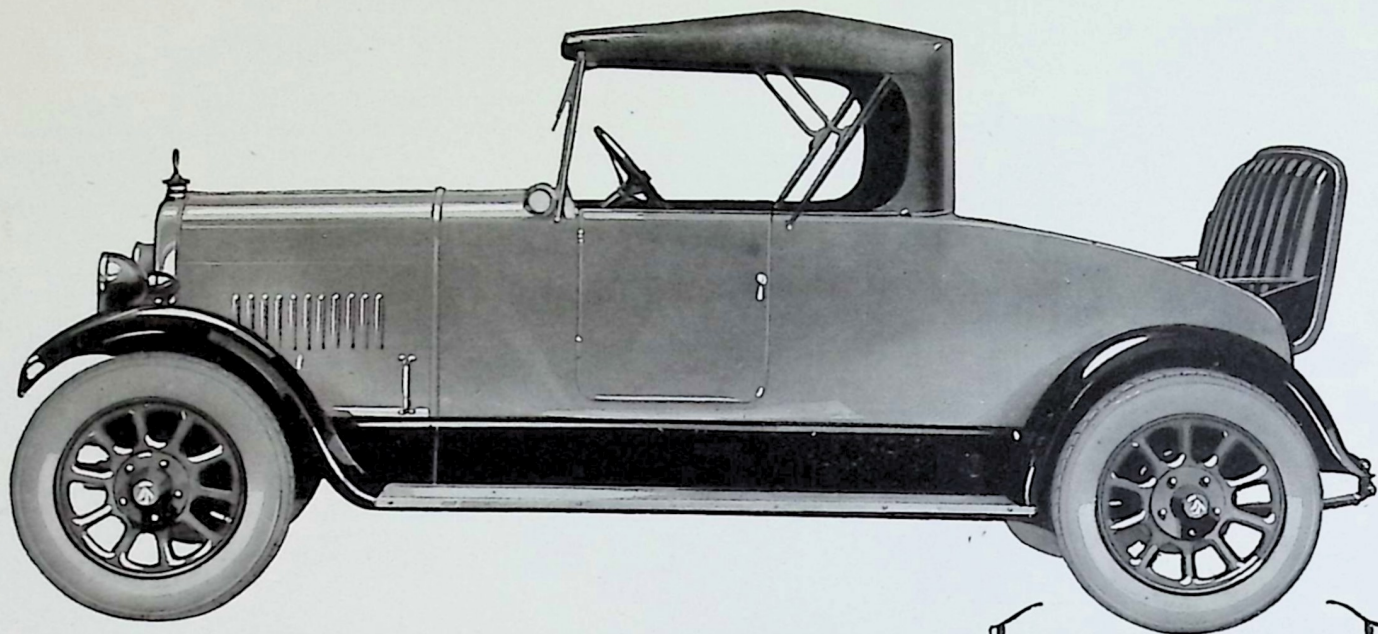
*Interior of Saloon*

### Jimmy Wilde on his Arrol-Johnston Saloon

"The car has given me complete satisfaction and never caused me a moment's trouble or anxiety. It is certainly a remarkable car, and I have no hesitation whatever in recommending same to my friends.

"I have covered over 8,000 miles and have no difficulty in attaining a speed of 58 miles per hour if desired."

JIMMY WILDE (Cardiff)



## The "DOMINION" 3-SEATER Motor Carriage

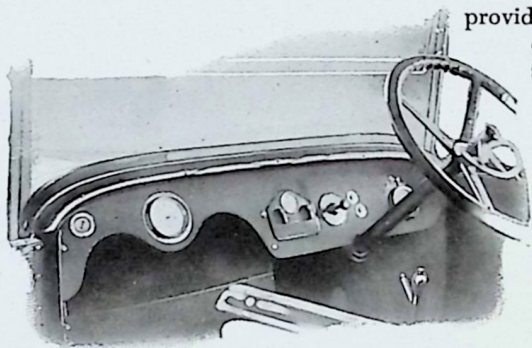
(Government Tax - £16)

Note the smart, almost sporty lines, the jaunty rake of the windshield. It is features like these that help to make this car so attractive.

# THE "DOMINION" 3-SEATER MOTOR CARRIAGE

(Government Tax - £16)

IT has often been felt that the very popular 3-seater with dickey has been somewhat neglected by designers of anything but the very light cars, and it is in response to demand for this body with the powerful unit of the new Overhead Valve Engine that we are introducing it. Unlike many 2-seaters, the "Dominion" Model is extraordinarily roomy. There is nothing cramped about it. Three passengers can ride in front with comfort and without interference to the driver. This is rendered easier by the gear change and hand brake being on the extreme right. The double dickey, too, is nicely upholstered and provides comfortable riding for two people. In designing this carriage no effort has been spared to make it perfect in every way.



View of  
Instrument Board

**EQUIPMENT** : Open 3-seater Touring body, having deep double dickey seat and two wide doors; well cut draught-proof all-weather equipment with side panels opening with doors; folding glass wind-screen to front seats; painted crimson lake, and upholstered in hand-buffed antique real leather; spoke wheels; 9 ft. 9 in. wheelbase; 4 ft. 8 in. track; electric horn; speedometer; clock; automatic screen wiper; luggage grid; automatic spring rebound control; petrol gauge; oil gauge; spare wheel with tyre, 30 in. by 5-25 in.; Dunlop low pressure cord tyres.

Without front wheel brakes **£375** With front wheel brakes **£385**  
*Triplex Glass £7 extra*

## About a 1912 2-Seater

"You may be interested to hear I am having the back axle of my 11-9 little car taken down on account of 'slogger' in the back wheels. This is the first time it has been down in the *nine* years I have been running the car. This is surely an excellent testimonial for the quality of the material you put into your cars."

Dr. R. W. H. (Middlesbrough).

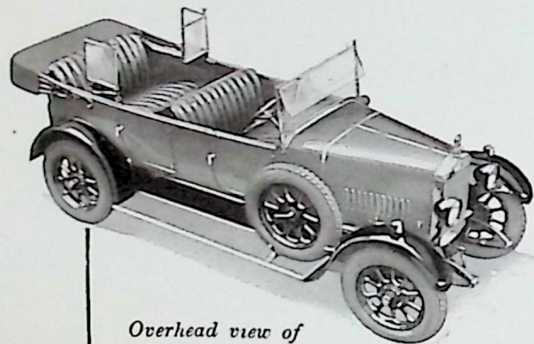
# THE "DOMINION" OPEN TOURING MOTOR CARRIAGE--with

(Government Tax - £16)

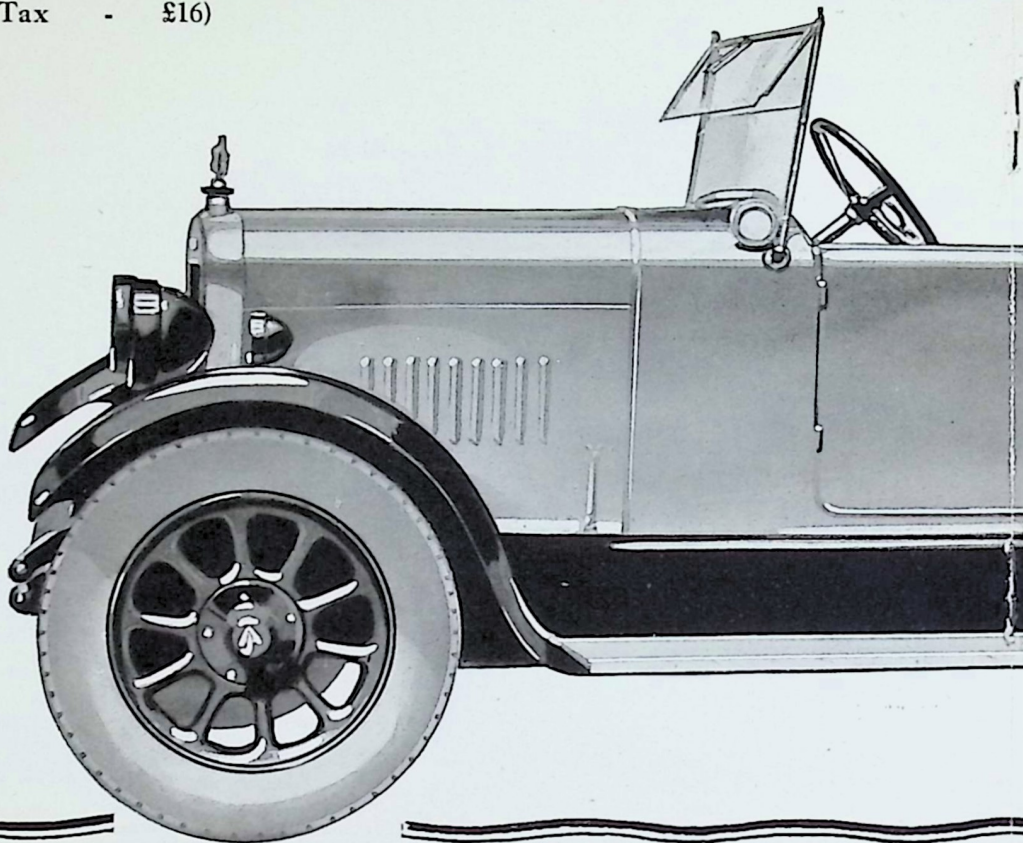
**T**HIS is in every way a favourite among Arrol-Johnston models. It really does seat five adults in ample comfort, and the very pleasing design of the body, which has four wide doors, gives the carriage a thoroughly distinguished appearance.

Well-cut draught proof all-weather equipment, with side panels opening with doors is provided, also wind screens to front and rear seats.

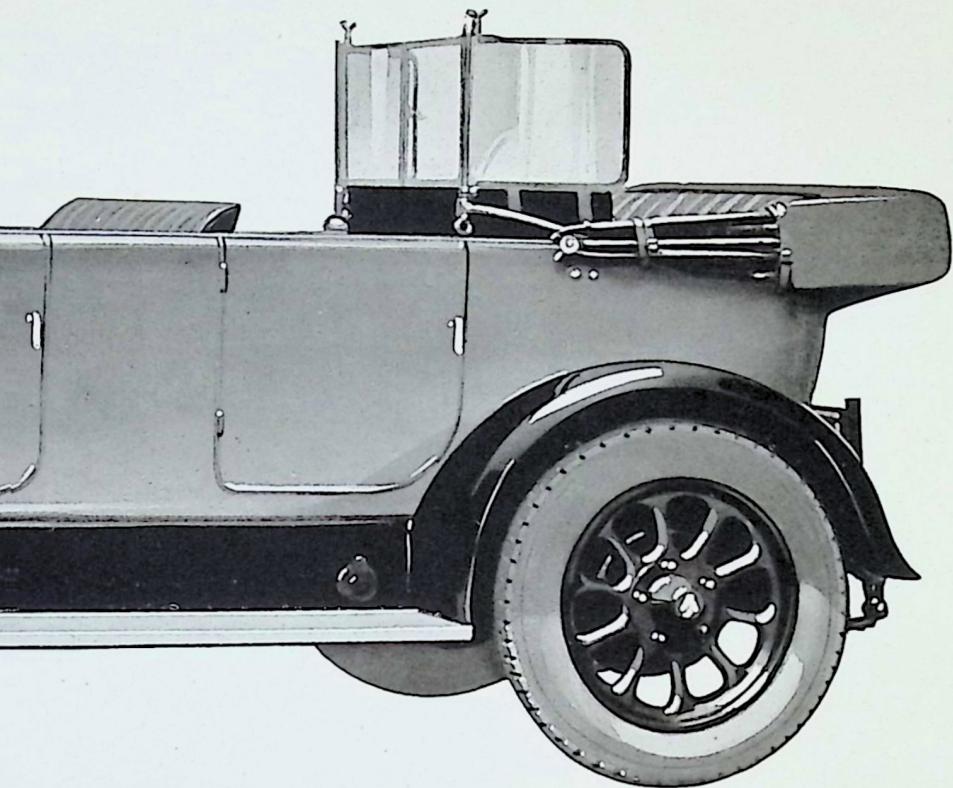
The upholstery is in hand-buffed antique real leather, and there are no projecting buttons, beading or banding—a small matter, but one which greatly simplifies cleaning and is typical of the many instances of thoughtful planning of details, so greatly appreciated in every Arrol-Johnston carriage. Another case in point is the clever arrangement of the instrument board, so that everything is easily visible from the driver's seat.



*Overhead view of  
"Dominion" Tourer.  
Note roomy interior.*

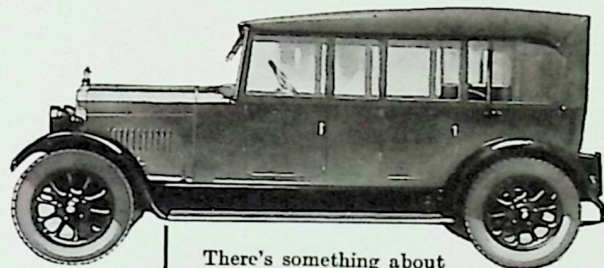


## The Wonderful OVERHEAD VALVE ENGINE—SEATS 5 IN COMFORT



*EQUIPMENT:* Roomy 5-seater Open Touring body, having four large doors; well cut draught-proof all-weather equipment with side panels opening with doors; folding glass windscreen to front and rear seats; painted crimson lake, and upholstered in hand-buffed antique real leather; spoke wheels; 9 ft. 9 in. wheelbase; 4 ft. 8 in. track; electric horn; speedometer; clock; automatic screen wiper; luggage grid; automatic spring rebound control; petrol gauge; oil gauge; spare wheel with tyre; 30 in. by 5-25 in. Dunlop low pressure cord tyres.

Without front wheel brakes **£375** With front wheel brakes **£385**  
*Triplex Glass £12 extra*



There's something about this carriage that suggests real power. You have only to take the wheel for a few minutes to find out that it's more than a suggestion.

# SPECIFICATION of the "EMPIRE" Motor Carriage CHASSIS

## Chassis

Wheelbase .. .. .	10' 6"
Track .. .. .	4' 8"
Overall length (hood up) .. .. .	13' 6"
Overall width .. .. .	5' 8"
Road wheels : DUNLOP detachable steel spoke type.	
Tyres : DUNLOP Cord, 820 by 120 mm.	
Minimum ground clearance .. .. .	9½"

## Engine

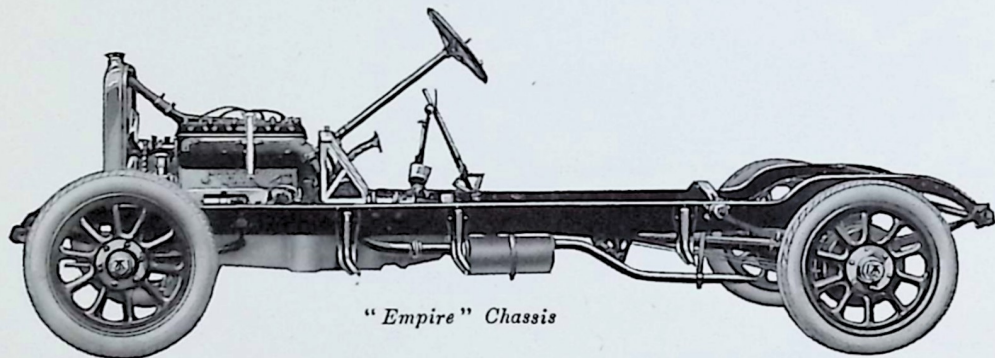
Four cylinders cast *en bloc*, with detachable head. The water jackets are of large dimensions, special attention having been devoted to the cooling of the valve pockets and cylinder heads. Bore 89.75 mm. by 130 mm. stroke. All valves are interchangeable and are mechanically operated by a single chain-driven camshaft on the near side of engine; a second silent chain provides tandem drive for the

## About a 1925 Model

"She has now run nearly 4,000 miles, which includes a trip to Land's End and back. As you are aware the roads in Devon and Cornwall are very hilly and difficult, and grades of 1 in 3 and 1 in 4 are often encountered. The Arrol went up everything splendidly, also most important, the car went down hill as well as it went up, the brakes being splendid.

"These few points may also interest you. Petrol consumption was just over 25 miles to the gallon. Oil used on the run of 1052 miles ½ gallon.

"To conclude: I am very satisfied indeed with the car which is easy to drive and comfortable to travel in. Rapid acceleration is a great asset, and on a trip such as we undertook we could not wish for a better car to tour in."



"Empire" Chassis

dynamo and magneto. All valve tappets are adjustable and the operating mechanism is completely enclosed, ensuring silence and a particularly clean engine. The plates covering the valve tappets are readily removed, giving immediate access for adjustment. Government tax £20.

## Crankshaft

Made of special heat-treated steel with large bearing surfaces and carefully balanced. The crankshaft is attached to the upper half of the crankcase by three bearings, lined with high quality white metal.

## Lubrication

By gear wheel pump enclosed in a large filter fitted in a sump formed in the lower half of the crank chamber, the whole being easily removable for

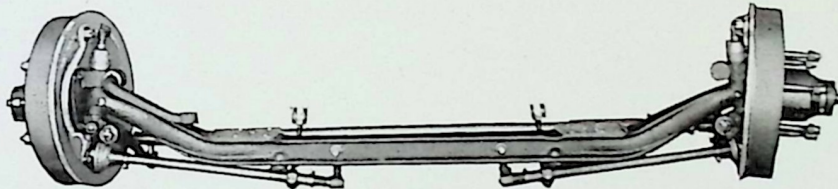
inspection and cleaning. This system, as applied by us, ensures a perfect and uniform lubrication of the whole engine and a smokeless exhaust. All superfluous oil is drained back to the sump, obviating waste. The oil is poured into the crankcase through a combined filler and breather, and must pass through the filter before being pumped through the bearings, the correct level being indicated by an oil dipper fitted into crankcase.

## Clutch

An improved design with increased wearing surfaces consisting of three substantial metal plates (two of which are faced with Ferodo) held in frictional contact with each other by spring pressure. The whole can be removed in the simplest manner without dismantling any part of the engine or gearbox. The adjustment has been simplified to such

## From "Car and Golf"

"Perhaps the most striking characteristic of this Arrol-Johnston is its beauty of line. It is really a capacious vehicle with ample leg-room everywhere and a general sturdiness in construction, yet it is so nicely balanced and proportioned, and is so easily handled, that one is hard put to it, without opening the bonnet, to make a guess at the power."



*Front Wheel Braking System*

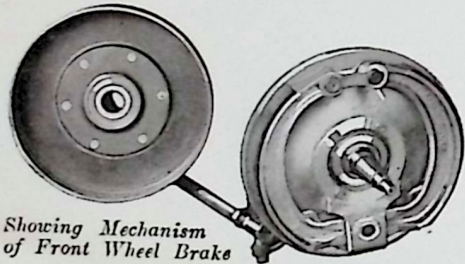
an extent that a slipping or fierce clutch can be immediately rectified.

## Transmission

The sleeve coupling between the clutch and gear-box is rigid yet detachable. This coupling is rendered possible by carrying the engine and gear-box upon a rigid machined-faced aluminium bed, WHICH ENSURES CORRECT ALIGNMENT UNDER ALL CONDITIONS.

## Change Speed Gear

The gear-box provides four speeds forward and reverse. It is on the gate-change principle and is operated by a single lever on the right-hand side. All shafts are mounted on ball bearings. The lay-shaft is situated directly beneath the mainshaft and well below the oil level, so that it runs wholly immersed in the oil bath. Lubrication is effected through the inspection door.



*Showing Mechanism  
of Front Wheel Brake*

## Universal Joint

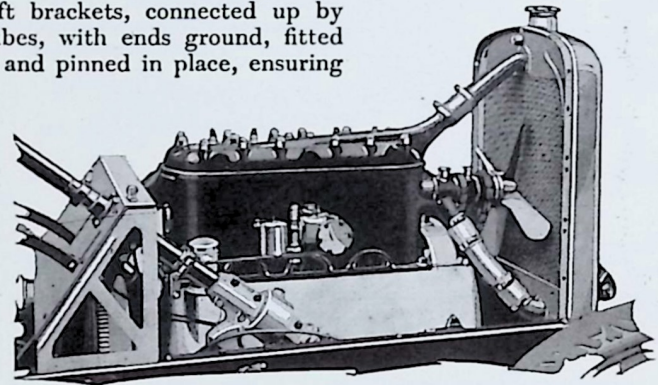
Is of the ring and stud type, completely enclosed in dust-tight cover, and of increased dimensions.

## Drive

The drive is transmitted from the gear-box to the back axle by a drive shaft (enclosed in a mild steel torque tube bolted to the back axle casing) through a spiral pinion and bevel. Radius rods are fitted. There is ample provision for lubricating all parts, including the brake connections.

## Back Axle

$\frac{3}{4}$  floating with malleable cast axle case and combined brake camshaft brackets, connected up by conical mild steel tubes, with ends ground, fitted into position, brazed and pinned in place, ensuring



*Engine—  
offside*

the axle case being absolutely oil-tight. Fitted with an inspection door, easily removable

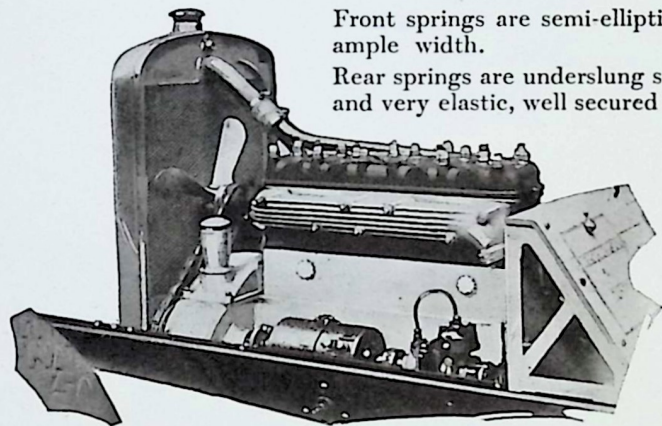
## Front Axle

This is formed from a single steel "H" section stamping, very strong, and provided with ample surfaces at the ends for supporting the stub axles carrying the wheels. The steering pivots have ball thrusts, and the road wheels are carried on ball bearings, making the steering exceptionally light.

## Springs, Front and Rear

Front springs are semi-elliptic, of extra length and ample width.

Rear springs are underslung semi-elliptic, long, wide and very elastic, well secured to the frame by swivel



*Engine—  
nearside*

attachments. Shackles fitted with bronze bushes efficiently lubricated by oil cups. Springs are wholly enclosed in special gaiters, impervious to wet and dirt.

## Steering

Is of the worm and sector type arranged with external provision for adjustment of lock. The steering connections are of a special ball and socket type arranged in conjunction with steering tubes (acting as oil reservoirs) to be self-lubricating.

## Tyres and Wheels

820 by 120 mm. DUNLOP Cord Tyres are fitted as standard. DUNLOP steel detachable wheels, spoke type.

## Editorial comment on an Economy Trial

"In the Vesey Cup Trial, a contest held by Birmingham motoring men, a 15.9 Arrol-Johnston Touring Car driven by Mr. Chilton gained two awards, a first-grade medal for the live-load formula, and a gold medal. The trial, which took place over 217 miles of Welsh hills and dales, was most strenuous for all the cars concerned, and included acceleration tests and timed climbs. The Arrol-Johnston acquitted itself with great credit, using only 5.8 gallons of petrol—an average mileage of over 35 miles to the gallon of petrol. The 15.9 Arrol-Johnston thus proved itself to be a real economy car—indeed it had six weeks previously gained a gold medal in the Economy Car Trial."

## Frame

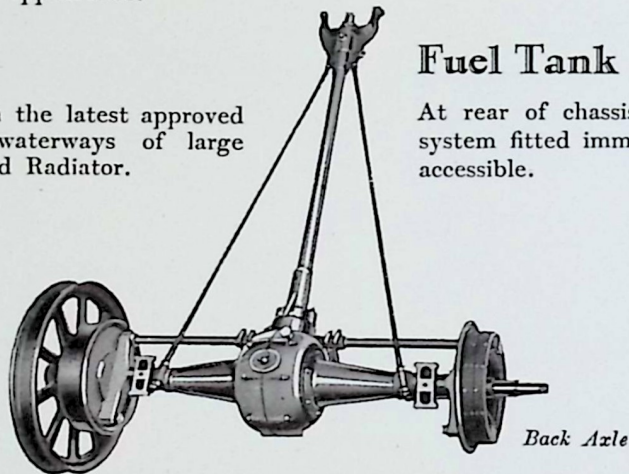
Of high-grade pressed steel, very deep and strong, upswept at rear, giving the car an extremely low appearance without interfering in any way with the ground clearance which is  $9\frac{1}{2}$ " minimum.

## Radiator

Of special ARROL-JOHNSTON design, white metal casing, fitted and placed in front of engine, giving the car a distinctive appearance.

## Cooling

Pump circulation on the latest approved principle through waterways of large area, with fan-cooled Radiator.



## Ignition

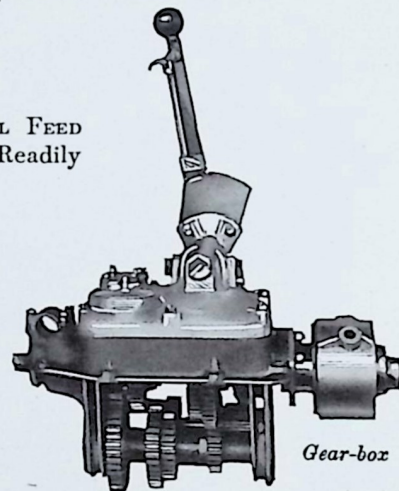
British high-tension magneto. Fitted with variable ignition, operated from the steering wheel.

## Carburettor

British with ARROL-JOHNSTON details fitted in accessible position, with variable throttle gear led up through the steering column to steering wheel.

## Fuel Tank

At rear of chassis, with "AUTOVAC" FUEL FEED system fitted immediately under bonnet. Readily accessible.

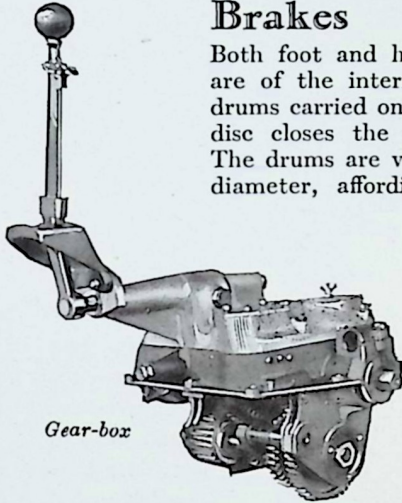


## Fittings and Accessories

The few bright parts about the carriage are polished aluminium or nickel-plated. Accessories (included in the price) comprise: speedometer; clock; two unit lighting and starting equipment; wind screen to front and rear seats; oil gauge; petrol gauge; luggage grid; automatic screen wiper; automatic spring rebound control; electric horn; spare wheel with tyre; and very complete kit of tools.

## Brakes

Both foot and hand brakes are compensated and are of the internal expanding type, operating in drums carried on the rear wheels. A pressed steel disc closes the drums, making them dust-proof. The drums are very rigid malleable castings of 15" diameter, affording ample braking surface. The



Gear-box

brake shoes are faced with die-pressed Ferodo. Adjustments are made by accessible links fitted with winged nuts. The cross-shafts are fitted in self-lubricating bearing bushes, requiring no attention.

## Clutch and Brake Pedals

These are placed on the left and right respectively of the accelerator pedal. The clutch pedal is freed from vibration by adjustable split bearings.

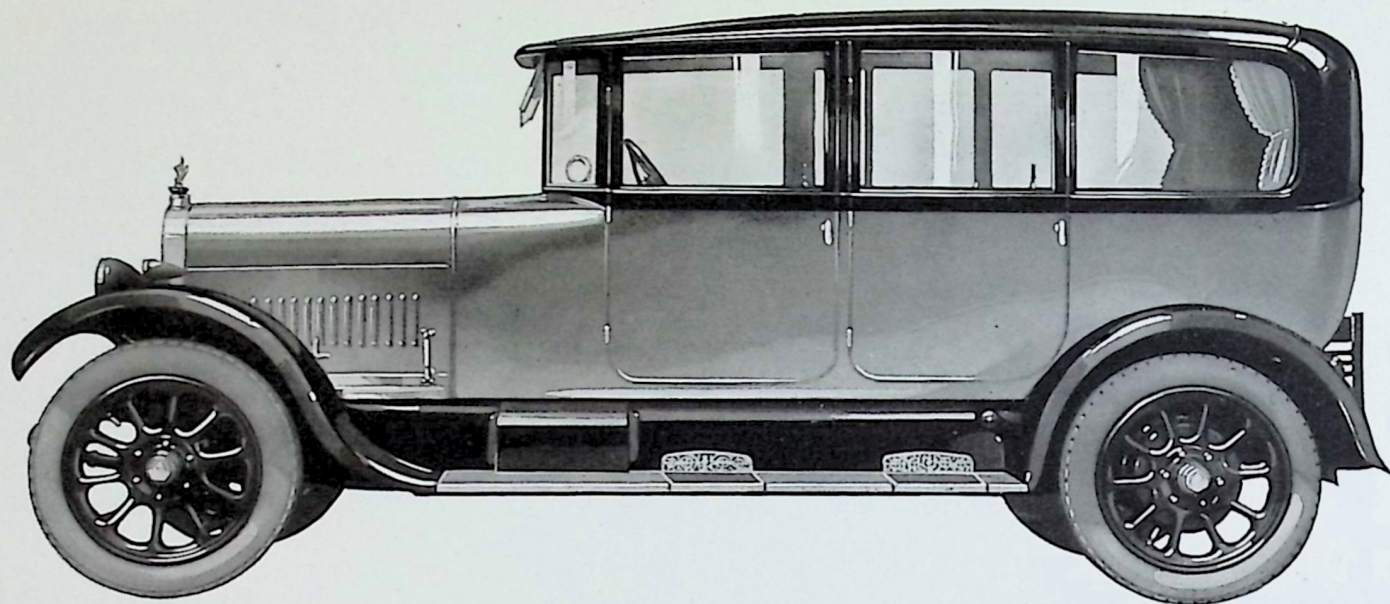
## Control

Is by foot accelerator. A hand control is provided mounted on top of steering column on same fitting as magneto variable ignition control.

## Two Unit Lighting and Starting Equipment

### An Australian Tribute

"I have been running my Arrol-Johnston Car for over twelve months. It has given me the greatest satisfaction during the whole time I have used it. I have taken the opportunity to go for some difficult runs into the country, and I have great pleasure in saying that not on one occasion has it even temporarily stuck us up. My numerous friends who have had the opportunity of testing it are agreed as to its riding qualities, reliability and general behaviour. The unanimous opinion is that it is so beautifully sprung that it is one of the most comfortable cars to ride in. My experience of the Arrol-Johnston justifies all that Mr. Pullinger, your managing director, said of it."



## The "EMPIRE" SALOON MOTOR CARRIAGE

(Government Tax - £20)

Without doubt the most handsome carriage we have ever produced, and withal fast and flexible. It is a pleasure to drive, and a car you will always be proud to keep.

# THE "EMPIRE" SALOON MOTOR CARRIAGE

(Government Tax - £20)

**T**HE ample power and silky running of the "Empire" engine accounts for the popularity of the Saloon body on this model.

As a town carriage it is impossible to beat at any price approaching its low cost, and its beautiful springing and solid yet light construction eliminate every suspicion of drumming and chattering.

It has impressive lines and is extremely roomy for four passengers, and the driver. It is painted Arrol-Johnston dark blue, has four wide doors, and is luxuriously upholstered in hand-buffed antique real leather, with silk curtains, companions, carpeting and miscellaneous fittings which harmonise perfectly with the general scheme of furnishing.

**EQUIPMENT:** Roomy coachbuilt Saloon body on 10 ft. 6 in. wheelbase chassis. This has a division behind the driver's seat, and there is ample room for two occasional seats facing forward; painted brown, crimson lake or dark blue to choice, and upholstered in hand-buffed antique real leather; electric horn; speedometer; clock; oil gauge; petrol gauge; automatic wind screen wiper; luggage grid; step-mats; companions; electric roof lamp; automatic spring rebound control; spare wheel with tyre; 820 by 120 mm. Dunlop normal pressure cord tyres.

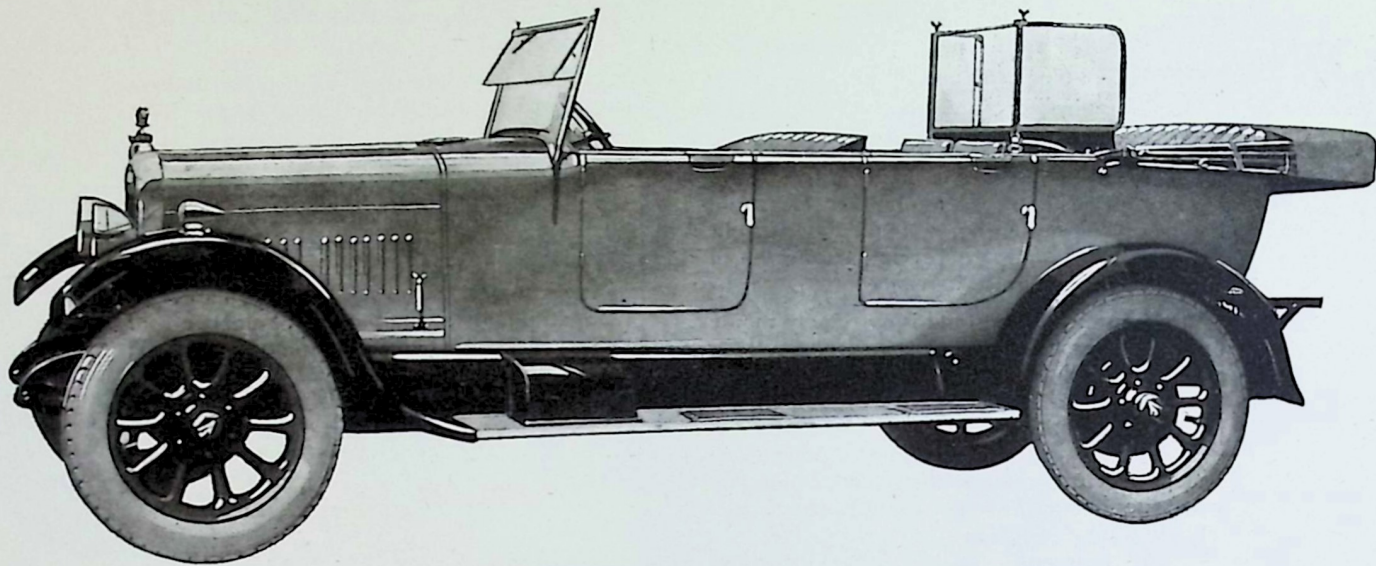
*Without front wheel brakes* £610    *With front wheel brakes* £625

*Triplex Glass £39 10s. extra*

## Yet another Testimony from Australia

" You will be pleased to hear that I have just completed a strenuous trip from Sydney to Melbourne via Princes Highway. The distance as laid down by the Commonwealth Road Board is 680 miles, but owing to survey detours as a result of bad road conditions the actual distance covered was 720 miles. Of this, fully 40 miles was accomplished with the car axle deep in mud, ploughing through slush and suffering road shocks and undue stress and strain to which no reasonable individual would put a car, unless the circumstances forced him. My petrol consumption worked out at 24½ miles to the gallon."

Capt. R. (Melbourne).



THE "EMPIRE" 7-SEATER TOURER  
(Government Tax - £20)

This is the carriage that caused an Australian farmer to say, "Hats off to the Arrol-Johnston," when it beat all records by racing through loose sand at 32 m.p.h. on top gear.

## THE "EMPIRE" 7-SEATER TOURER

(Government Tax - £20)

**T**HIS Arrol-Johnston model owes its world-wide reputation to many special points in its design, apart from its peculiar reliability and long life under conditions of hard usage.

Its long, well-designed springing gives comfort at any speed over the roughest roads, the flexibility of its engine enables the driver to maintain low speeds on top gear, and its steering, gear-change and clutch pedal give extreme ease of control, leaving the driver fresh after an arduous all-day run. Its faculty for slow pulling on top gear makes hill-climbing a pleasure.

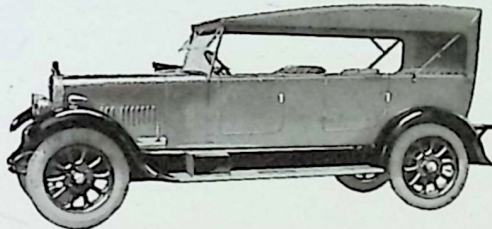
The open flush-sided body accommodates five persons with complete comfort, and two neatly collapsible occasional seats are provided in the

rear. The upholstery is in hand-buffed antique real leather.

**EQUIPMENT:** Roomy 5-seater Open Touring body, and in addition two occasional seats facing forward; well cut draught-proof all-weather equipment with side panels opening with doors; folding glass windscreen to front and rear seats; painted brown or crimson lake to choice, and upholstered in hand-buffed antique real leather; electric horn; speedometer; clock; oil gauge; petrol gauge; luggage grid; automatic screen wiper; automatic spring rebound control; spare wheel complete with tyre; 820 by 120 mm. Dunlop normal pressure cord tyres.

Without front wheel brakes **£480** With front wheel brakes **£495**

*Triplex Glass £12 extra*



## ABOUT A REAL "OLD-TIMER"

We print below a letter from the owner of an "old-time" Arrol-Johnston. This was published, with the illustration, in *The Autocar* of September 4th, 1925.

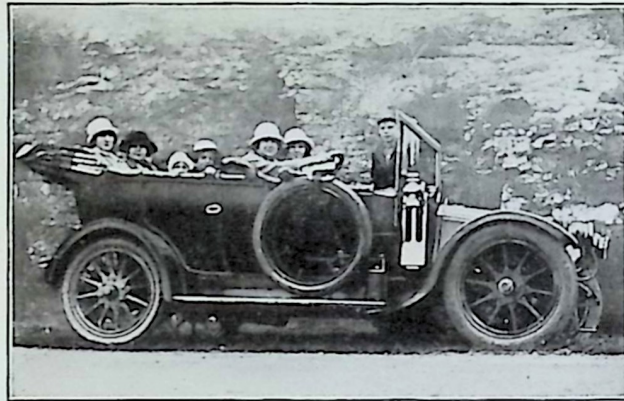
There is no doubt that the 1910 Arrol-Johnston, judged by our modern ideas, looks somewhat quaint. Yet

**I** HAVE an old 1910 15·9 h.p. Arrol-Johnston tourer which is still going strong, and in continual use. I have owned and run the car for over five years. Naturally, one would expect that it would be nearly all renewed by this time with spare parts, but this is not so, as the only spare I have had, other than piston rings and brake linings, is a new clutch plate, and that was worn out sooner than it should have been owing to my engaging the low gears going down steep hills and allowing the clutch to slip when not requiring the full braking power of the engine.

The engine is still running well, and is the easiest to start from cold that I have ever seen. Swinging is not necessary; it is fitted with a Simms magneto and Zenith carburettor. The gear handle and gate change are fitted on the outside of the car, an arrangement which has the advantage of making plenty of room for two passengers with driver in front; the disadvantage is that the driver's arm is exposed to the weather.

I often hear remarks from youths when driving in a strange place as to the old-fashioned character of the car, and last week I caused amusement by using the

body is certainly streamlined and it had a feature which is regarded as of peculiarly recent introduction, namely, front wheel brakes! We congratulate Mr. J. D. on possessing such a fine example of an early Arrol-Johnston. As we have said many times, the Arrol-Johnston is built to last—and last a very long time



From "The Autocar"

Stepney wheel on the ordinary front wheel. Few had seen such a contrivance before.

A short time ago, I was complimented by a motorist, who remarked that the car was rather ancient; but I was quite modern with the front wheel brakes. It may seem strange, but the body is streamlined and front wheel brakes are fitted, although built nearly sixteen years ago. In my opinion, it is a great compliment to the makers.

The body and upholstery are still in good condition, the car being capable of doing about 40 m.p.h. on a level road, but is easily passed on hills by the modern car doing in top gear what I have to change down for. The consumption of petrol and oil is rather high, about 18-20 m.p.g. petrol on good roads. Taking into consideration the age of the car and what it is still capable of doing, my vote is certainly in favour of the British product. Although the initial cost may be higher, it is well compensated for by not having to buy spares. Very few American cars can claim such a record with practically no renewals.

PONTYCIMMER.

J. D.

# TERMS OF BUSINESS

(1). Motor Goods (including Cars and Chassis) are only supplied by the Company on condition—and it is a condition of all Sales by the Company—that they shall not be exhibited at any Motor Exhibition in the United Kingdom other than such as are held by the Society of Motor Manufacturers and Traders Limited or are approved by the Committee of said Society. Purchasers of said motor goods from the Company will be held to acknowledge that they have received notice that the Company, as Members of the said Society have signed, and will continue to sign, Bonds issued by the said Society whereby *inter alia* they agree to pay to the said Society as liquidated damages in respect of each breach such sum not exceeding £250 as the Committee of Council of the said Society may, in accordance with the terms of such bonds, determine, should any of the said motor goods be exhibited at a Motor Exhibition not held by the said Society or approved of by the said Committee. Every such purchaser shall be held to have agreed—and it is a condition of all Sales of said Motor Goods—that such purchaser shall not exhibit said goods at any Exhibition or Show in the said United Kingdom

without the written consent of the Company, and that such purchaser shall obtain a like undertaking from all buyers of such goods from him, and that if the Company shall pay or be called upon to pay to the said Society any sum by reason of the exhibition at an Exhibition or Show not held or approved as aforesaid of any motor goods supplied by the Company to such purchaser such purchaser will pay to the Company, on demand, all sums paid, or which may be payable, by the Company to the said Society in respect of such exhibition of said goods.

(2). Prices quoted for Motor Cars, including Chassis, are for delivery at the Company's works, and strictly nett and on the following terms, viz.

- (a) 10 per cent. of purchase money to accompany Order, and balance to be paid on advice that the car is ready for delivery.
- (b) Packing for shipment is not included in the price list, and, if required, will be charged extra.
- (c) The Company will use their best endeavours to adhere, as far as possible, to the dates of delivery promised from time to time, but they do not undertake any liability in respect of any delay arising from any circumstances whatsoever (including strikes, lockouts, trade disputes, accidents, fire, *force majeure*, war, civil riot, commandeering, or requirements of Government,

difficulties in obtaining workmen or material, delay or failure of sub-contractors to complete their Contracts, or circumstances for which the Company are not responsible).

- (d) In the event of delay occurring in delivery, otherwise than in consequence of strikes, lockouts, trade disputes, accidents, fire, *force majeure*, war, civil riot, commandeering, or requirements of Government, difficulties in obtaining workmen or material, delay or failure of sub-contractors to complete their Contracts, or circumstances for which the Company are not responsible, purchasers from the Company have right by notice in writing given subsequent to the promised date of delivery (including any altered date of delivery), to cancel the Contract of Purchase at the expiry of one month from the said date of delivery, if the Company do not deliver within that month. In the event of such cancellation taking place, the Company will return the deposit, if any, paid to them, but such cancellation shall not entitle the purchaser to payment of any other sum, whether in respect of damages, compensation or otherwise.
  - (e) Delivery is at the Company's works, and all Orders, whether by letter, Order Form or otherwise, are only accepted subject to this condition.
- (3). The Company reserve the right to make such increases in their prices, and also such alterations on their Specifications as they may deem desirable without notification, and notwithstanding the terms of orders to apply these increases and/or alterations to any orders in respect of cars or chassis not delivered when such

## TERMS OF BUSINESS (cont.)

increases or alterations are made, and to charge these increased prices ruling at the time of delivery for any cars or chassis not then delivered and/or to deliver cars or chassis made in terms of these altered specifications ruling at the time of delivery in fulfilment of orders for cars or chassis of similar type not then delivered. Should the price be increased, the buyers have the option of cancelling the order within seven days after being notified of such increase. Illustrations and specifications in the Company's Catalogues are intended only as a general guide and are not to be taken as binding in detail.

### Guarantee

The Company endeavour to supply the best material and workmanship, and the sole liability undertaken by the Company is to the following effect, viz.:—In the event of any defects being disclosed in any motor goods (including cars and chassis) made and sold by them, or in work done by them (including repairs and parts and accessories made by them, but not tyres, detachable wheels, self-starting equipment, electric fittings and accessories and articles

not made by the Company), the Company undertake on the return of the alleged defective parts carriage paid to their works (having attached to the same, in cases referring to cars or chassis, the name and address of the owner, the number of the chassis, and the name of the dealer from whom it was purchased), within twelve months from the date of delivery by the Company, and within seven days from the date when the alleged defect is observed, to carefully examine and if found faulty through bad material or workmanship, to repair, or if necessary replace, the same free of charge. It is to be distinctly understood that the above applies in respect of material only, and labour and other expenditure are to be charged. The Company accept no responsibility for any loss or damage direct or consequential or for any accident or in any way for the effect of any accident, whether due to defective material, workmanship or otherwise, and this Guarantee does not apply to defects caused by wear and tear, misuse, or neglect, or overloading, nor to any chassis from which the Company's nameplate has been removed or obliterated. The Company do not accept any responsibility

whatever for tyres, detachable wheels, self-starting equipment, electric fittings, accessories, or articles not made by them. This Guarantee is in lieu of all guarantees or warranties, whether expressed or implied by Statute or otherwise, and is limited in cases relating to cars and chassis to new cars and chassis bearing the Company's nameplate, bought either direct from the Company or one of their authorised dealers.

### The Terms "Agent" and "Dealer"

The terms "Agent" and "Dealer" used by the Company or any party in connection with the sale of the Company's Manufactures are used in a complimentary sense only. The relationship of principal and agent does not, in fact, exist between the Company and the Agent or Dealer and the Agent or Dealer is not authorised to advertise, incur debts, or transact any business whatsoever on the Company's account, or to give any warranty or make any representation on the Company's behalf other than the foregoing Guarantee.

ARROL & JOHNSTON LTD.  
DUMFRIES, SCOTLAND

*All previous lists cancelled*

*July, 1926.*