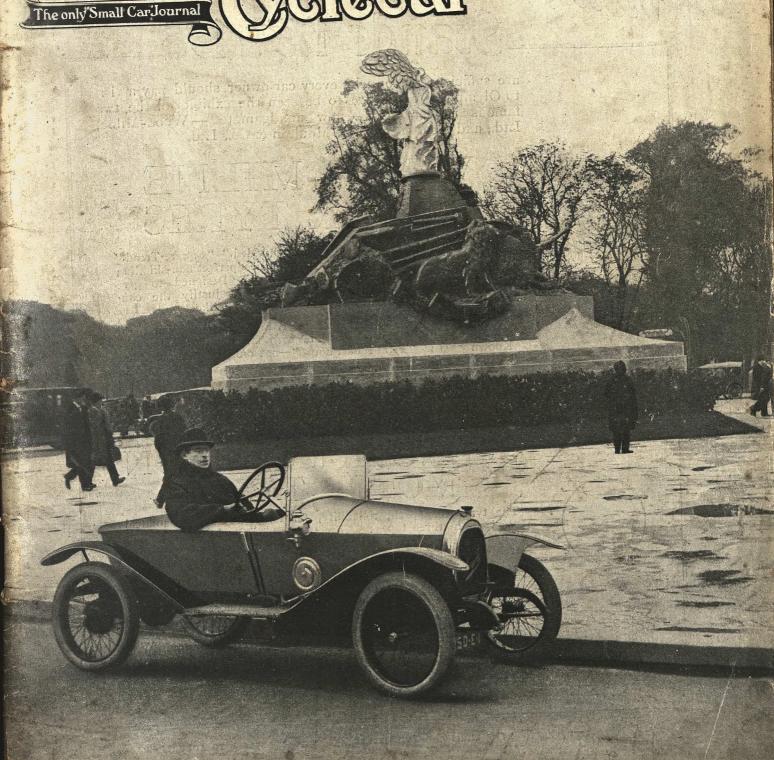
The 11 Carp Counded 1912 The only Small Car Journal The only Small Car Journal





Why you must Exhibition visit the Exhibition Stands 175 & 196.

are sufficient reason why every car owner should pay a visit to Olympia. There are to be seen the exhibits of the two famous rubber firms - now amalgamated - Wood-Milne.

Ltd., and George Spencer, Moulton & Co., Ltd.



WOOD-MILNE MOTOR TYRES

The three types, "Gruvrib," "Steel-Studded," "Square-Tread," are distinguished by sound wearing qualities, perfect non-skidding devices, and phenomenal mileage returns. Designed to give most reliable and efficient service, and fully justify the confidence placed in them by makers and users alike.

WOOD-MILNE FOOT PUMP. A first-class engineering job, made as simply as is compatible with strength and efficiency. Known as the "Prince of Pumps"—not only of extreme value to the motorist, but easily adaptable where a hand pump is not suitable, or a power pump too elaborate.

WOOD-MILNE TUBES. To fit Wood-Milne Pneumatic Tyres. With Patent "Embedded" valve pad, making leakage impossible. Made of the finest rubber obtainable and subjected to rigid tests.



SPENCER-MOULTON MOTOR TYRES

The tyres for speed, reliability, for long life and economical service. In three types: "Three-Ribbed," "Steel-Studded," and Plain-Square." Their strength and endurance not only give freedom from tyre trouble, but result in more mileage at less cost.

SPENCER-MOULTON TUBES. To fit Spencer-Moulton Pneumatic Tyres. Manufactured from rubber that has been tested and proved to be capable of giving the utmost satisfaction.

WOOD-MILNE, Ltd., and GEORGE SPENCER, MOULTON & Co., Ltd., 42, 44, 46, Wigmore Street, London, W.I. Telegrams—"Wudmiln, Wesdo, London." Also "Spenmoul, Wesdo, London." Telephone—Mayfair 6789 and 6790

Manchester-21, Albion St. Gaythorn Birmingham—204, Corporation Street.
Newcastle-on-Tyne-Haymarket Lane.
Dublin—69, Middle Abbey Street.
Bristol—141, Victoria Street.

Glasgow-10, Waterloo Street. Leeds-68, Albion Street. Liverpool-31 & 33, Leece St. Belfast-13, Donegal Square West.

Be sure to visit STAND 68 at OLYMPIA and inspect the

6-Cyl. MODEL

This is the first six-cylinder light car on the British market, and before you arrange to purchase any light car you will do well to inspect the polished chassis on exhibition. Of this model, "The Motor" of Oct. 15th wrote: "The credit of first offering the public a six-cylinder light car falls to Auto-Carriers (1911), Ltd. The outstanding feature of this six-cylinder engine is its extraordinarily clayer



engine is its extraordinarily clever design. The manufacturers intend in this model to produce a machine giving every luxury that the owner-driver can desire."

We repeat: Be sure to inspect this unique model at Stand 68.

AUTO-CARRIERS (1911), LTD. THAMES DITTON, SURREY.

Repair Works and Temporary Sales Department: 181-184, Hercules Road, Westminster Bridge Road, LONDON, S.E.1. Telephone; Hop 310 and 311.

THE THE PROPERTY OF THE PROPER

CONTRACTOR CONTRACTOR

It won't stand thinking about—
At least, not if you want an

L.M.

Our Order Book is filling up fast, Order NOW.

LONGEST MILEAGE

2-seater with dicky, 8 h.p., w.c., J.A.P. engine, seat starter, electric lighting, Michelin detachable disc wheels.

DDIOR

210 gns.

OUR STAND AT OLYMPIA

7th November to 15th November,
WILL 121 Call and
See us.

Send for Catalogue to-

Little Midland Light Car Co.

Lynwood Road BLACKBURN.

Telephone—5713.

For Agency Terms apply
Messrs. J. E. WHITE & Co. (Liverpool). Ltd.,
57, The Albany, LIVERPOOL.

PUNCTURE PROOF Preumatic Tyres for Light Cars Motorcycles

DA DA DA DA DA DA DA DA GAZA GAZA GAZA DA GA ADA DA GA DA DA DA GA DA GA DA GA GA

ले ते ते विकास के ते के ले ते के ले ते के त

are now fully under way, and early developments can be looked for.

WATCH THIS PUBLICATION

All interested in such a proposition are invited to enter into communication with the advertiser. This new device does not require a special cover, it is suitable for any make at present on the market, and is not too costly.

Address Inquiries to_

"Fountain Tyre

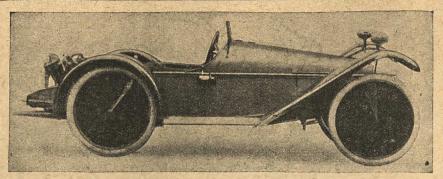
c/o—"The Light Car and Cyclecar"
7-15, Rosebery Avenue,
LONDON———E.C.1.



TO THE By mentioning "The Light Car and Cyclecar" when corresponding with advertisers, you will be working for the cause of the new motoring.

"1920 MODEL"

Now Available.



A.V." MONOCAR

WON ALL EVENTS ENTERED FOR at Essex M.C. Speed Trials.

Note the following:

Touring Cars of 1,100 c.c., "A.V." 1st. Touring Cars of 1,500 c.c., "A.V." 1st.

Open Handicap, Cars of 1,100 c.c., "A.V." 1st.

Open Handicap, Cars of 1,500 c.c., "A.V." 1st.

COMPARE THE C.C. of "A.V."—NAMELY, 654 C.C. 5-6 h.p. J.A.P. Engine, two-speed gear of epicyclic type, combined with multiplate clutch fitted to engine shaft, chain drive, Capac single lever carburetter with filter, cantilever springing, back and front, Thomson-Bennett magneto, screen, Klaxon horn, complete tool kit, disc wheels.

Price £130, plus 121%

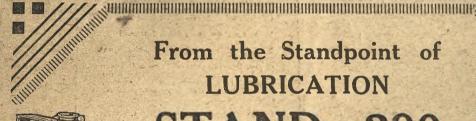
Immediate Delivery.

R Co., Ltd., 15, Woodstock St., w. 1.

(Next BOND STREET.)

Telephone-Mayfair 1981.

Sole Agents for London and Home Counties.



From the Standpoint of LUBRICATION

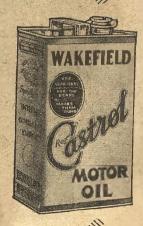
is the most interesting to visitors.



WAKEFIELD

Regd. MOTOR OIL

the world's best lubricant is exhibited.



Calthorpe Continuity of Service.

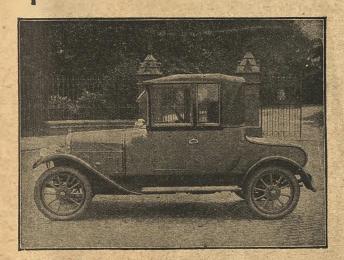
THE Calthorpe owner will enthusiastically tell you he gets round about 40 miles per gallon —

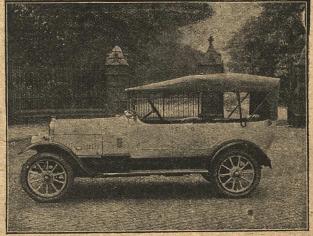
That his average speed on a long run equals that of any car on the road, irrespective of rating—

That his coachwork is by Mulliner, his tyres Palmer Cord, and that his equipment includes Brolt electric lighting and starting (starter is not standard on sporting models), Smith speedometer and clock, and Duco spring gaiters.

But his greatest source of satisfaction is that his Calthorpe keeps going week after week, month after month, with very rare need of attention or adjustment.

Write for circular and address of your District Agent.







CALTHORPE MOTOR Co. (1912), Ltd., Bordesley Green, BIRMINGHAM.

Works !

SHEFFIELD.

The WHITE CROSS



INSURANCE ASSOCIATION LTD.

5 Moorgate St, E.C. & Branches

The WHITE CROSS MOTOR POLICY gives complete cover for all risks, and provides most substantial benefits, including:

Unlimited Third Party Cover.

Immediate Repair Facilities.

Generous No-claim Bonus.

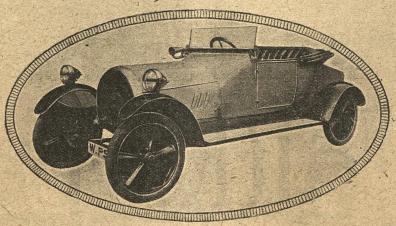
No Compulsory Arbitration Clause.

Exceptionally Low Premiums.

Apply to your Agent or direct for particulars.







10 H.P. H.F.G. LIGHT CAR.

MANUFACTURED BY

C. PORTASS & SON, Limited.

TELEGRAMS-"Portal, Sheffield."

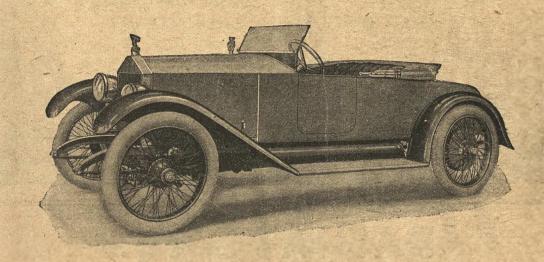
Head Office:
BROADFIELD RD.,
HEELEY,
SHEFFIELD.

HELP THE by letting advertisers know that their advertisements
in "The Light Car and Cyclecar" interest you.

Secqueville-Hoyau

(England) Ltd.,

REGENT HOUSE, REGENT STREET, W.



The Secqueville-Hoyau at the Paris Salon.

Extract from

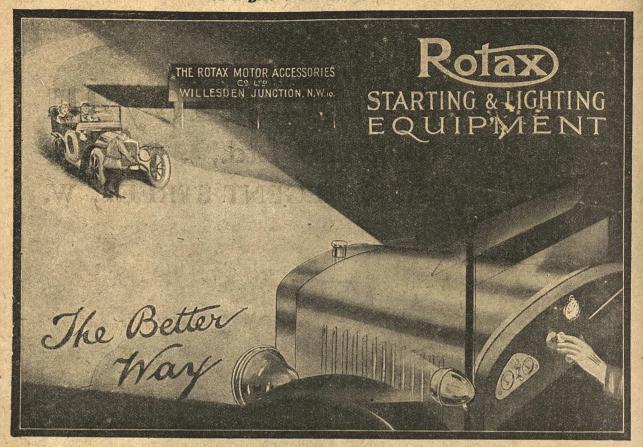
The Times

Dated October 15th, 1919.

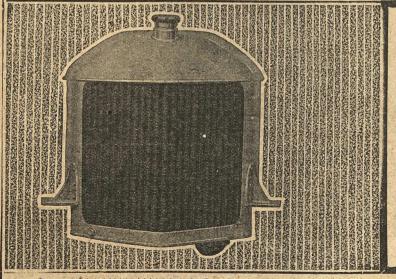
"A Light Car whose makers are more concerned with detailed finish and perfection than price is the Secqueville-Hoyau, which uses a four-cylindered motor, bore and stroke 60 by 110 mm. respectively, developing about 18 h.p. at its most effective speed, and which impresses one as being a junior Rolls-Royce. The car is well designed and the details have been worked out with obvious care. As with every other well-designed chassis, the coachbuilder is able to supply most pleasing and proportioned bodywork, the enclosed cars on view on this maker's stand being an example of effective lightness and the use of every available inch of space."







RADIATORS.



R.R.C.

productions are efficient—of the smartest designs and the finest workmanship.



Send your inquiries to-

Cheylesmore, Coventry.

'Phone: 675,

'Grams: "Coolers, Coventry.'



"MADE LIKE A GUN."

IMPORTANT ANNOUNCEMENT

We beg to give notice that it is not our intention to appoint at present any exclusive agents for the sale of the

10 H.P. RADIAL - ENGINE LIGHT CAR

Orders—subject to a strict "Fixed Price" basis agreement—will be accepted through any Motor Dealer on the Motor Trades Association List.

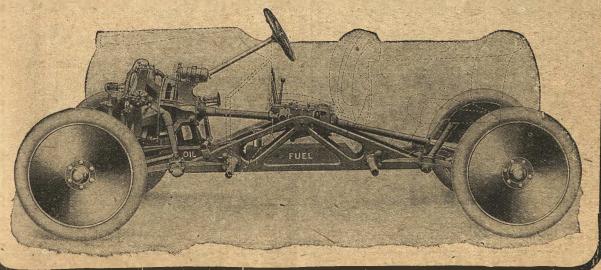
The price will be £350 nett at works, with either a fourseated body, complete with hood, screen, lighting set and spare wheel with tyre, or a two-seated body with dicky seat similarly equipped.

Owing to the wonderful results obtained in exhaustive road-tests, we have decided to devote our entire manufacturing facilities to the production of the 10 h.p. model, and to withdraw the 15 h.p. model for the present.

Enfield - Allday cars will be exhibited at the Olympia Show — Stand 77 — and demonstration cars of the 10 h.p. model will be available in London during the Exhibition.

COMPLETE SPECIFICATION ON APPLICATION.

ENFIELD-ALLDAY MOTORS, LTD. (Dept. H), SPARKBROOK, BIRMINGHAM.



Power

WINNER

of more Open Hill Climbing Competitions in 1914 than any other Light Car or Cyclecar. Reliability

BUCKINGHAM

LIGHT CAR (New Model).

Famous 90° Twin Engine, Shaft Drive.

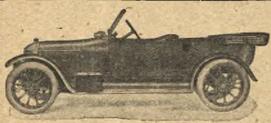
WRITE NOW FOR PARTICULARS, WHICH WILL BE FORWARDED AT EARLIEST POSSIBLE DATE.

J. F. BUCKINGHAM,

Engineer,

DOVER STREET, COVENTRY.

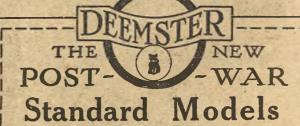
DEEMSTER Light Car



"DEEMSTER" Touring Light Car. 10 h.p., 4-cyl., four-seater, 440 Guineas complete.



"DEEMSTER" Standard Model.



The unparalleled opportunities for engineering research which have occurred whilst we have been engaged on Government contracts have resulted in the perfection of the new "Deemster" Models.

The "Deemster" Light Cars embody all the refinements of more expensive types for a much smaller initial outlay, and without the corresponding high cost of maintenance.

The "Deemster" is undoubtedly the light car de luxe.

Note.—See our Stand No. 93
at Olympia.

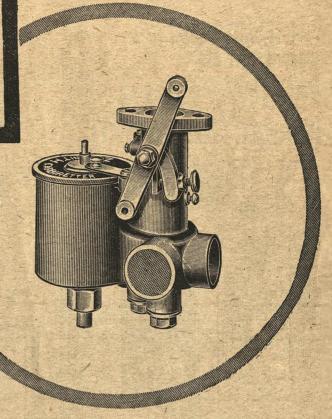
Telephone: Chiswick 1289,1290.

Telegrams: "Ogstonia, London."

THE OGSTON MOTOR CO. (1918), LIMITED, OGSTON WORKS, ACTON, LONDON, W.4.

Complete fitting and tuning of **Zenith** Carburetters

We beg to inform our many customers that we have opened a special department for the above.



It's so Simple

The All British

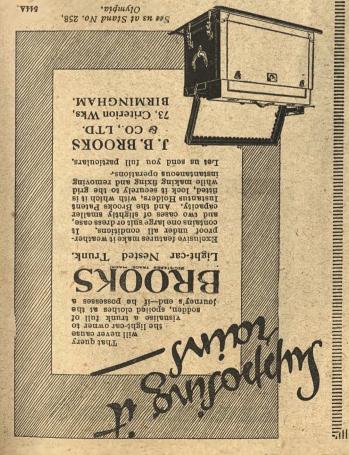
ZENITH

Carburetter

Send for Booklet.

ZENITH CARBURETTER CO., LTD., 40-42, Newman Street, W.1. Telephone: Museum 4812-4813.

VPF9



LIGHT CAR ELECTRIC LAMP SETS Constitutes of three excellently initiated torredo-stapped brists lamps—two side and one tail lamp. Wonderful value at 48/- including bulbs. (Carriage I/-)

mileage and power to a remarkable degree, also keep your engine clean. Small size, \$7[-; large nize, \$1[-; complete with cable and fittings. BOWDEN EXTRA AIR INLETS Increase

luggage carriers, etc., 4 it. by 5/- per pair. (Postage 6d.) HEAVY LEATHER STRAPS for use with

(Postage 3d.) SPARKING PLUCS by dependable, makers, K.L.G., Lodge, and Igna, 5/-.

JOHNSON'S DECABBONISER, cleans the divitest engine by merely pouring through the spark plus holes. Two sizes 6/- and 10/6. OIL SYRINGES, strong and useful, 3/6. (Post 4d.)

TAPP'S PETROL POURER, Fits eny can.
Price 2/5... (Fostage 3d.)

MORGAN CHAINS, Renold \$ x 7/16 in. at 5/9 per foot.

H. TAYLOR & CO., LTD.
Showrom—21a, 5708E 5T., Tottenham Ct., Rd. W C.1.
Wholesale 58, ALPRED PLACE, W.C.1.
Phone-Museum 1240. Telegrams— Dynametro.

work show The Spirit

Olympia—Stand 221





MOVEMENT THE by letting advertisers know that their advertisements

B1

MERCURY

The Car of Quality.

"The Soundest Small Car" Engineering job, both in design and workmanship.

We are exhibiting at the MOTOR SHOW, OLYMPIA, Nov. 7th.

Our Stand is No. 116

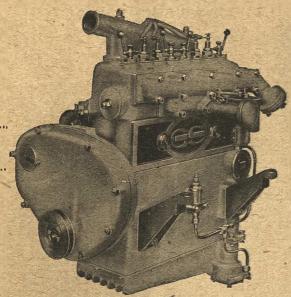
Come and see us.

Mercury Cars
May Road,
TWICKENHAM.



We asked you to watch results

The Winner of the Westall Challenge and Gold Medal - the Eric Campbell Light Car-was fitted with one of our Standard Engines.



The heart that beats.

Recent Successes:

SOUTH HARTING ... SUTTON COLDFIELD and MID WARWICKSHIRE ... SOUTHEND SPEED TRIALS

NAILSWORTH LADDER ...

MUTTON HILL

Racing Class ... 3rd, fastest time for day Cars up to 10 h.p. 2nd, Cars-unlimited Silver Medal Touring Cars up to 1 1st and 2nd-2 Gold 14 h.p. S Medals

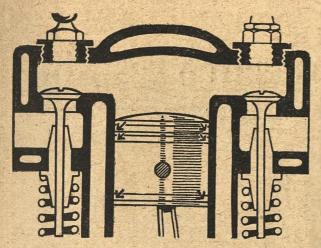
Any description up to 14 h.p. ... Silver Medal

Perfectly clean ascent on Standard Chassis First motor vehicle of any description to climb this hill, which is over one mile long, with an average gradient of I in 31

J.C.C.—GENERAL EFFICIENCY

Westall Challenge Cup 1st and Gold Medal (To be continued)

Coventry Simplex Engines, Ltd., Payne's Lane Works,



Sealing in the Power

Drip! Drip! If accident puts a leak in your petrol tank, you quickly notice it. The evidence is plain.

But there is another much more serious, and far more common form of leakage. That is leakage of the fuel charge past the piston rings.

No. You can't see it. Nor is there usually any tell-tale sound. Everything seems the same as usual. But gas is leaking—leaking steadily.

How? Between piston, piston rings and cylinder wall is a small clearance. When you use the correct oil in your engine this clearance is sealed. The oil closes it up, effectively retaining the fuel charge above the piston.

But suppose the body of the oil is incorrect. What happens? Only a partial oil seal results. On compression, part of the fuel charge escapes down past the piston rings. On the power stroke, part of the explosion escapes by the same path.

True, the leakage per stroke is small. But multiplied by over 20,000 piston strokes per mile in the four-cylinder engine, and the total leakage is clearly a factor to be reckoned with. It tells plainly in petrol consumption per mile. Gargoyle Mobiloils used as specified in the partial chart here published often cut previous fuel consumption figures from 10 per cent. to 20 per cent. Almost invariably the oil consumption also drops immediately.

VACUUM OIL COMPANY, LIMITED, CAXTON HOUSE, WESTMINSTER, S.W. 1.

egrams - "Vacuum, 'Phone, London."
ephone Victoria 6620 (6 lines)

Chart of Recommendations for

Light Cars and Cycle Cars

Explanation.—"A" means Gargoyle Mobiloil "A"; "Arc" means Gargoyle Mobiloil "Arctic"; "B" means Gargoyle Mobiloil "B"; "BB" means Gargoyle Mobiloil "BB"; "E" means Gargoyle Mobiloil "E."

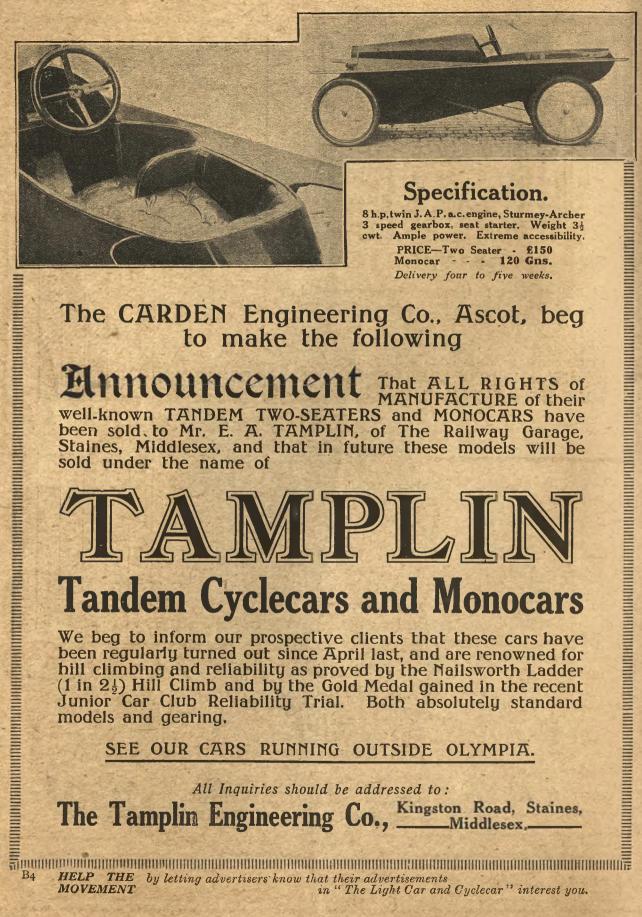
	19	19	191	7-18	1916		
NAME OF CAR.	SUMMER.	WINTER.	SUMMER.	WINTER.	SUMMER,	WINTER.	
A.C. (4-cyl.) A.C. Sociable Adamson Airedale Autocrat Avrolite A.V. Bean Bedella Briton Calcott Calthorpe Minor Clement-Bayard Clyde Crouch Dawson Day Leedg De Dion Deemster Douglas Duplex Enfield Allday G.N. G.W.K. Hillman Humber Hurtu Lagonda Milton Morgan (Water Cooled) Morgan (Water Cooled) Penry Peugeot La Ponette Premier Raleigh Richardson Singer Standard Stellite Swift 7-lh.p. Trumbull Vermorel Waverley Waverley Sindada Milden Singer Standard Stellite Swift 7-lh.p. Trumbull Vermorel Waverley Waverley	A A A A A A A BB BBB BB A A A BBB BBB A A A BBB BBB A A A BBB BBB BBB A A A A BBB BBB A A A BBB BBB BBB A A A A BBB BBB A A A A BBB BBB BBB A A A B BBB BBB A A A A B BBB BBB A A A A B B BBB BBB A A A A B B BBB BBB A A A B B BBB BBB A A A A B	A A A A A A A A A A A A A A A A A A A			BBBBE AAA BBBAAAAAAAEE	A A A A A A A A A A A A A A A A A A A	

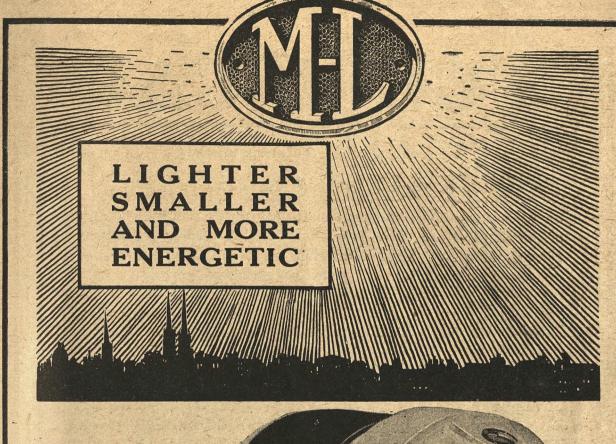
Gargoyle Mobilolls are sold by dealers everywhere



Mobiloils

A grade for each type of motor





THE M-L Magnetos—of which 50,000 have been supplied to H.M. Government—embody a number of special features, each of which makes a distinct advance on all previous practice and goes to establish the efficiency and superiority of the "M-L."

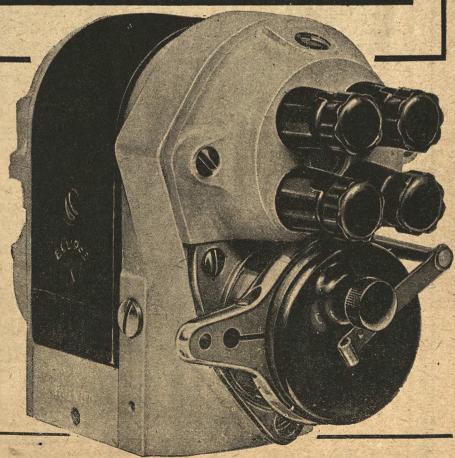
Among them may be mentioned the M-L patent condenser, easily accessible terminals, very light weight, watertightness, new patent distributor and high tension brushes which can be detached without disturbing the magnetos.

Quality Tells!

The type illustrated is G4 for 4-cyl. Light Engines up to 25 h.p. A similar type—G6—for 6-cylinder Engines up to 35 h.p. is also made.

"M-L" Motor Cycle types are Kx for Single-cylinder engines, K2 for Flat Twins, and KV for V Twins.

OLYMPIA STAND 346



All inquires and correspondence relating to everseas trade and to retail and trade business in this country to be addressed to S. Smith & Sons (M.A.), Ltd., 179.185, Gt. Portland Street, London, W.1.

Sole Makers:
The M.L Magneto Synd., Ltd., Coventry, to whom all inquiries from manufacturers should be sent.

A GOOD CAR

You have had the merits of the

DUPLEX LIGHT CARS put before you by the motoring Press on various occasions, and we can assure you that the advantages of the Duplex are such as every motorist welcomes—Silence, Speed, Lack of Vibration, but we want to do more than that, so have arranged that every car becomes part of

A Good Insurance

scheme. This comes into force at once, and, briefly, it is as follows:—Every DUPLEX LIGHT CARS purchaser of has presented to him a 12 MONTHS' COMPREHENSIVE TARIFF POLICY subscribed by the

Liverpool Marine & General Insurance Company, Limited.

EDMUND GORMLY, General Accident Manager.

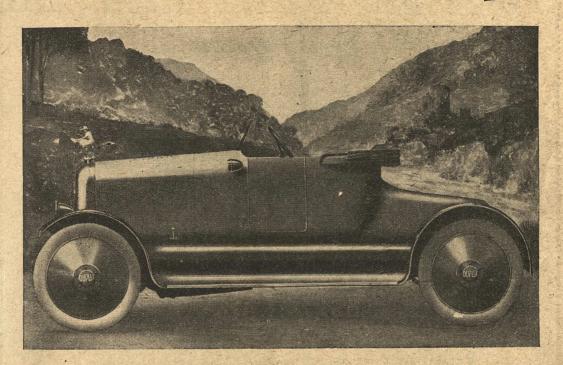
Our present arrangements are that a minimum of 3,000 Cars will be delivered during the coming year, so that this will probably prove to be the Largest Single Motor Insurance Contract placed with any Insurance Company, and will tend to show that we are fully satisfied with the future of our car.

THE BRITISH COMMERCIAL LORRY and ENGINEERING COMPANY, LIMITED (Sales Dept).

66-68, Bridge Street, MANCHESTER. Telephones—City 778, Central 3720
Works: TRAFFORD PARK,

UPLEX IGHT (ARS

Have you ever THIS?



THEN SEE IT Stand 15 AT OLYMPIA

The silent, speedy, vibrationless, sleeve-valve-engined car, with

8 Cylinders, yet having only four inlet valves, four exhaust valves, and four sparking plugs.

FULL INFORMATION FROM-

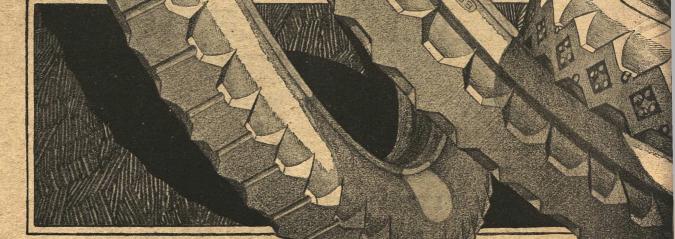
BRITISH COMMERCIAL LORRY THE AND ENGINEERING CO., LTD. (Sales Dept.)

66/68, Bridge Street, Telephones Gity 773; Contral 3720 Manchester.

The Light Car and Cyclecar

NOVEMBER 1, 1919.

ALL



HELP THE by letting advertisers know that their advertisements
MOVEMENT in "The Light Car and Cyclecar" interest you.

BRITISH TYRES

For Long Mileage and No Skids.

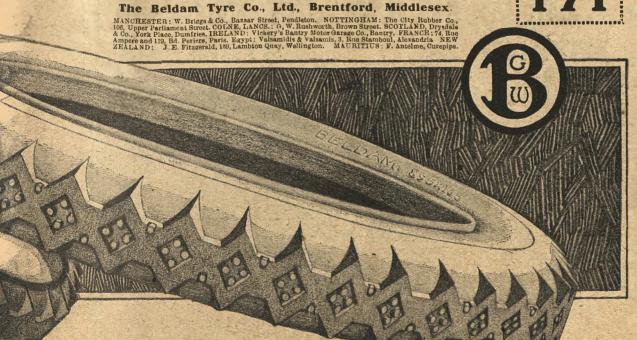
ATYRE is worth the mileage you get out of it. To get long mileage, your tyre must grip (a slipping cover gets worn through quickly—filed away by the road) and it must be well and truly made.

The finest materials and workmanship go to the making of BELDAM All-British Tyres. The design is based on sound theory which has been proved right. The tread is deep and narrow—(assuring speed and resiliency); rubber is thickest where wear is greatest. The "V" shaped projections prevent both punctures and skidding.

If you would know the mileage value of a tyre you must ask a user of that tyre.

Many users of Beldam All-British Tyres have recorded their experiences in a little booklet entitled "Testimony," which will be sent post free on request. It will help to make clear to you why "Once used, always used" applies to Beldam Tyres, and that Quality, which means Good Service, always counts.

Olympia Stand 171



Godbolds.

TO THE READER By mentioning "The Light Car and Cyclecar" when corresponding with advertisers, you will be working for the cause of the new motoring.

Bg

11.9 WILTON

High Grade Cars of PROVEN MERIT

1920 MODELS.

DELIVERIES COMMENCE DECEMBER IN ROTATION.

11.9 4-cylinder Engine. Mechanical lubrication
3 Speeds, Large Gear Box.
Gate Change, Nickel Chrome Gears.

Silent Worm Drive.

Extra large Steel Axles and Bearings.

Irreversible Steering.
Long Cantilever Springs.

9 ft. Wheelbase, 4 ft. Track.

Detachable Wheels.

5 Palmer Cord Tyres, 710 x 85.

4 large Brakes in rear axle, large double-friction clutch.

High-class New Type Coachwork. C.A.V. Electric Lighting, 5 lamps. Watford Speedometer, Clock, Horn, Tools.

Wide 2-Seater (dicky built) Hood, Screen.

Complete, £410. 4-Seater, £430.

Coupe, £450



PRINCIPAL AWARDS,

SPEED-

Albert Brown Trophy.

RELIABILITY-

New Hudson Challenge Cup.

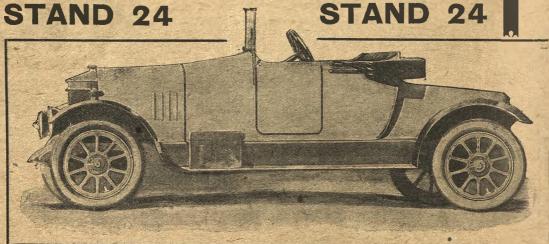
Won all four Quarterly Tests, Herts Auto Club London-Edinburgh, Medal.

London - Land's End, Medal.

A.C.U. Car Trial, First Class Certificate.

Climbed Porlock Hill.





WILTON CARS, Ltd., 120 - 4, High Street, Tooting, London, S.W.17
Agents in Principal Cities. Telephone—Streatham 533

B10 HELP THE by letting advertisers know that their advertisements in "The Light Car and Cyclecar" interest you.

Can Your Car Stand Another Million Bumps?

And Can You?

YOU know what discomfort the bad roads involve to you personally, but you may not know how they damage your car and tyres, although it is obvious that they cannot be doing either car or tyres any good.

All the discomfort can be eliminated by fitting J-M's, for they make rough roads feel smooth. They save the car from premature disintegration, and the saving in tyres alone in the first year will more than cover the cost of the J-M's.





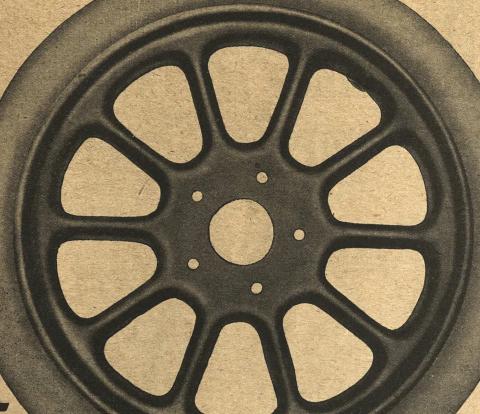


Write for booklet, and state make, year and horse-power of your car.

Streatham Engineering Co. Ld.

47, Streatham Hill, LONDON, S.W.2.

Telegrams—"Jayemshoka, London.' Telephone—Streatham 2010, 2011.



Stand 195

Olympia.

Stand 195

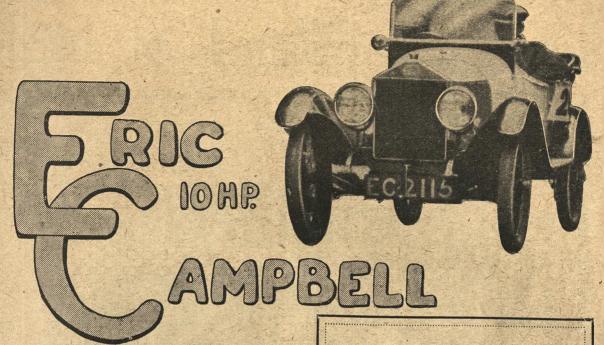
Olympia.

SANKEY WHEELS

WERE THE FIRST STEEL WHEELS FOR MOTOR CARS THEY ARE STILL THE FIRST

JOSEPH SANKEY & SONS, LTD.

Hadley Castle Works WELLINGTON: Shropshire:



SPECIFICATION:

Engine. 10 h.p. COVENTRY-SIMPLEX; Cylinders cast en bloc, bore 66, stroke 109'5; forced feed lubrication, enclosed valves, timing by means of silent chains; pistons cast iron, drilled; high speed camshaft; water cooling, thermosyphon; Zenith carburetter, M.L. magneto.

Clutch. Leather to metal cone clutch with unusually large bearing surface.

Tyres. Dunlop, 710 x 90.

Radiator. Honeycomb type, nickel finish.

Steering. Worm and Sector.

Gearbox. Three speeds and reverse.

Back Axle. Differential, crown and bevel,

Frame. Pressed Steel.

Springs. Semi-elliptic.

Wheels. Sankey detachable (or Rudge Whitworth extra)

Rotax Lighting Set, nickel fittings.

Body. All aluminium. Two-seafer touring body, painted silver-grey, lined black, beautifully upholstered in black leather, streamline wings and high-running boards, black leather hood, Triplex glass screen and nickel fittings

Pacia Board fitted with rev. counter, speedometer, clock, oil gauge, full kit tools, jack, pump, etc.

Weight of car complete. 81 cwts.

PRICE COMPLETE READY FOR THE ROAD

£395

SUCCESSES.

Southend Speed Trials 2 Gold, 2 Silver Medals and One Bronze.

Sutton Coldfield Hill Climb Second fastest and Silver Medal.

Mutton Hill (1 mile of 1 in 4) First Car to successfully climb this hill.

Nailsworth Ladder

A perfectly clean ascent, gradients of 1 in 21.

General Efficiency Trial Winner of Westall Challenge Cup, also First and Gold Medal for best performance, irrespective of class.

16 GLOUCESTER ROAD.

'PHONE: KENSINGTON 4032.

B14

The Standard of Light



Specially designed for the Owner Driver

HIS Standard of Comfort, Stability, Easy Control, Efficiency, Economy, and Ample Power.

Send your name and address for full particulars.

The Standard Motor Co., Ltd., Coventry. London Showrooms - - - 49, Pall Mall, S.W.1.

Car Motoring Comfort

Owners' Opinions.

16/10/19.

"On the first thousand miles the car has used (including that used in house, etc.) 26 gallons of petrol, working out to an average of 38.5 m.p.g. This I think is excellent, especially as she is absolutely new.

E.S.

23/5/19.

"Here's the history of my 'Standard'—maybe I shall never find its equal—except perhaps in a younger brother. It was a 1914 model, with the real 'Standard' hit on the engine. Being so compact and easy to drive I used it for shopping, theatres, etc., to say nothing of thousands of miles on the open road. The petrol shortage came and the car had the inevitable rest.

My husband's business was in connection with aircraft production, and he took the car for the business. Then came the great test for the 9.5 car. Small parts, large parts, lathes, milling machines, etc., were carried for hundreds of miles, sometimes of a weight greater than the little car itself—but it never failed. Of course, it was driven with care. For pleasure it was "comfy"—quite a lady's car—and for business it was reliable to the extreme."

17/4/17.

"I bought a car from you July 7th, 1913, and still believe I have one of the best small 'Standards' on the road. Have covered over 23,000 miles, and confess I would sooner have my present car than many other new cars. Can get over 50 miles out of it at any time. Fact!"

J.R.

28/1/19.

"I am pleased to inform you that I am again running my 9.5-1914 car, and after 30,000 miles it is going better than ever, and is one of the quickest cars in Leeds. I wouldn't change it for any light car on the market."

P.R.F.

3/12/18.

"It has been the most satisfactory car we have ever owned, and now, after having done at least 50,000 miles, the engine bearings are as sound as when she was first turned out, and also the rest of the transmission."

W.S.C.

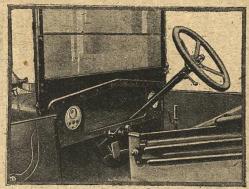
24/6/17.

"I have driven the car for 17,000 miles, winter and summer, since Λugust, 1914, and she has given me no trouble."
G.S.

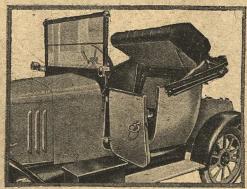
23/1/18.

"I consider the little 'Standard' one of the best-designed and sweetest-running light cars I have yet had—and I have owned most of the leading makes."

Special Features



The dash has a tray for the nanay carrying of gloves, maps, etc. Instruments, Speedometer and Switchboard, are fitted flush.



Note the method of packing away the patent side curtains (which open with the door) behind the back cushion.



Godbolds.



The

"WOLSELEY" TEN

(Formerly "Stellite")

The new "WOLSELEY" TEN is being introduced to supersede our well-known and popular "Stellite" Car. It marks a very decided advance in design, and incorporates many devices hitherto associated only with cars of much higher cost. It will be made in three forms—

The "WOLSELEY" TEN Two-seater
The "WOLSELEY" TEN Three-seater
The "WOLSELEY" TEN Coupe

Each model will be fitted with electric lighting and starting equipment, and equipped with every necessary requirement. You are cordially invited to call and inspect these new and attractive models on

STAND No. 84 OLYMPIA

WOLSELEY MOTORS, LD., BIRMINGHAM.

(Proprietors: VICKERS, LD.)



"Morganizing" back to health. Lt. Holyroyd, a well-known Midland motorist suffering from shell shock, is trying to regain his health by touring on a Morgan cyclecar.

WHAT OLYMPIA WILL REVEAL.

Will the Show Come Up to Expectations?—The Effect on British Industry— Opinions of Well-known People.

As the interest in Olympia is immense, we have asked several well-known people in the motoring world to give our readers their views as to what Olympia will reveal. We give extracts below from their replies, and it will be seen that the opinions expressed differ considerably. When well-informed people seem doubtful as to secrets that will shortly be "out," it is not surprising that the public at large have a very hazy idea on the same subject.

A FTER six years' interval it is only natural that the great body of motorists and all those who hope to become motorists in the future, anxiously await the opening day of the Show. Doubtless they are wondering if the light cars and cyclecars of 1920 will differ to a large extent from the older models.

Immense experience in motoring matters has been gained during the long and trying period of hostilities and many lessons will undoubtedly have been learned. In addition the aeroplane has advanced almost to a degree undreamed of and English engine manufacturers have produced some of the best examples of aeroplane motors extant. It is impossible

to imagine that this unique experience will be allowed to go to waste, but will be reflected in the design of engines as fitted to light cars and cyclecars, for in these machines weight as in an aeroplane must be kept down to a minimum.

It must be remembered, however, that manufacturers have been working under very great difficulties during the reconstruction period. Labour troubles have beset them almost ceaselessly, and even at the moment of writing a moulders' strike is still in progress. It is certain therefore that many interesting models will not make their appearance, and others will not be seen in the greatly modified forms in which they were intended to be displayed.

в17

WHAT OLYMPIA WILL REVEAL (contd.).

To help our readers in their conjecture as to what Olympia will reveal, we have asked some prominent people in the new motoring world to give their opinions of what will be seen at the Show, and also as to the future of the light car movement. The following are a few extracts from replies received:—



Major W. G. McMinnies, R.A.F., A.F.C., winner of the Cyclecar Grand Prix, 1913:—

"I imagine that we shall see very great improve-ments in the power weight ratio of light cars—I hope that we shall see much more attention paid to road stability and springing, so that it will be possible to drive a light car at 50 m.p.h. without feeling that one might be bumped off the road altogether. I hope to see more thought given to the driver, who has not much time for filling up grease cups, oil tanks, etc., and making numberless adjustments in inaccessible places. The point I look for is the turning out of a car complete as a carriage with such things as lamps, tyres, tool-boxes, etc., incorporated in the design. The ordinary car which at present one sees on the road always reminds me of the 'White Knight' in 'Alice in Wonderland,' or a gipsy van festooned with all kinds of articles stuck on the running board, back of the car and wings, etc.-makers should turn out standard cars, spare wheels, tool-boxes, petrol cans, etc., concealed and incorporated in the design. I have great hope in the future of the cyclecar as apart from the light car, and if only some big manufacturer with a reputation for first-class workmanship were to take up one or two makes of cyclecars that I know at present are on the market and make them at motorcycle and sidecar prices, I am convinced that they would be successful."

With Me minies



Sir W. Joynson-Hicks, Bart., M.P., Chairman of the A.A. and M.U.:-

"With regard to the future of the light car movement, I am convinced that these cars are only in their infancy and that before many years are over they will be almost as numerous as the bicycle was 10 years ago."

lo Joyason Michigan

Mr. L. Mantell.

"It is difficult to form any very confident anticipation as to what the Show will bring forth in the way of innovations. If war experience in engine design is any criterion, one would expect to find aluminium pistons with floating gudgeon pins throughout, roller-bearing big-ends fairly general and overhead valves an absolute Shibboleth; while, on high-grade B18

productions, one might also expect to find aluminium cylinder blocks with steel liners and separate combustion heads of aluminium with cast-iron valve seatings, etc. Knowing well the conservative methods of our dear, old, sleepy country, however, all I really expect to find are details of improvement in accessibility, manufacturing convenience, and accessory fitments. The monobloc engine, with its cast-in pipework, will probably be in greater evidence, as will the unit system of combined engine and gearbox. Lighting and starting sets will doubtless be much more general, and I should imagine that, in their absence, methods of starting from the seat will be incorporated in many cases. Finally, as regards the probable effect of the Show on British trade. No doubt the potentialities are great, but as to our being able to take full advantage of them in these troublous times of labour disputes, that, in my opinion, is quite another matter. My sentiments can be summed up in a short remark—which I would like to have made—only, Mr. Asquith unfortunately made it first."

L'mantel.



Lt.-Col. Chas. Jarrott, the well-known motoring celebrity.

"I think that few exhibits at the next Motor Show will show any material advance on what we have seen six years ago and during the war. The experience gained in the manufacture of engines and other war requisites will not help the manufacturer very materially in the direction of producing a better light car than he was able to produce in pre-war days. For instance, those manufacturers engaged on the manufacture of aeroplane engines were concerned in superfinished goods, which were entirely uncommercial, and such finish could not be employed in the manufacture of a light car to be sold commercially in large numbers. I had an opportunity of seeing some of the later productions at the Junior Car Club's Efficiency Trial, and, with one or two exceptions, I considered that the cars of pre-war type more than held their own with the 1919 productions which were appearing then for the first time. I consider that there is a vast future for the light car, but I think it should lie in novelty of design and not in the direction of producing a big car in miniature, which appears to be the policy adopted by most of the light car makers. With regard to the importance of the forthcoming exhibition in respect of British trade, I must frankly admit I do not attach much importance to it. The exhibition which will, presumably, be held in 1920 will, I think, give evident signs of the fierce competition which will have to be met in this country in connection with the sale of cars, and I think by that time most of the British manufacturers will have realized their methods of manufacture and sale will have to be changed if they are successfully to meet their foreign competitors, but while there may be some very interesting and novel productions at the Exhibition of 1919, I do not think that the holding of the Exhibition or otherwise will make very much difference to business. For the next 12 months production will require more effort than the selling of cars."

Charles Janvel

WHAT OLYMPIA WILL REVEAL (contd.).

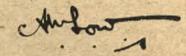


Dr. A. M. Low, the well-known scientist and inventor.

"Opinions are, as the Army instructions say of bombs, very dangerous things, and it is, I fear, only human to wrap them up like the forecasts in a certain almanac which make them 'Moore' than difficult to understand. What I expect to see at Olympia and what I shall see are, no doubt, very different. I am aware that there have been a couple of wars or so, but design is not a question of time. Surely we can hope for a few carburetters that carburet, surely we can hope for easily-worked pumps and automatic infla-tors? If we see nothing else, I shall look hard for a car which does not stain if not perpetually and expensively washed, and I shall search for cars that do

not expose springs, shackles, and brakes to grit and mud. Expensive light cars should all start electrically, and cheap cars mechanically from the seat.

"Dynamos will, I hope, not be so often added as an afterthought, and one-man hoods will (let us believe) open at once and still let passengers out easily. Surely one car at least will not have important greasers and universals that aspect he resulted. greasers and universals that cannot be reached, and many others will not need lubrication every 250 miles? As regards actual chassis requirements, I should dearly like to see a quantity production chassis and I should expect to see a small sleeve valve engine for silence on a luxury miniature coupe, and engine for shence on a fuxury ininfacture coupe, and truly multi-cylinder engines, both two and four stroke, for smoothness of torque. The cheap cycle-car has come to stay, and I shall long to see more than one which does not smell, knock, or require frequent turing because it is air-cooled."



TWO SPECIAL NUMBERS OF THE "LIGHT CAR AND CYCLECAR."

THE next issue of The Light Car and Cyclecar will be the first special Show number and will be greatly enlarged. It will be published on Friday, November 7th, and will thus appear on the opening day of the Show. Besides numerous interesting features of the show. day of the Show. Besides numerous interesting features contained in this issue there will be a complete illustrated Buyers' Guide giving details of the light car and cyclecar exhibits to be seen at Olympia. A number of pages will be devoted to accessories and equipment. This feature will also be well illustrated, and the subject dealt with in an attractive manner. Important advice will be given to the would be purchaser so as to help him to choose his machine. be purchaser so as to help him to choose his machine from amongst the numerous exhibits. This will prove of great benefit to a number of people who visit

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120

De P ...

Olympia with the object of making their selection for next year's machine.

The second Show number will appear the following week and will contain a complete and fully illustrated report of the light car and cyclecar exhibits. In addition there will be a critical review of light car and cyclecar design and equipment from the pen of a well known authority.

The exhibits will also be dealt with from the ladies' point of view, and a special article dealing with electrical equipment will be published. In addition to these special articles, most of our usual features will appear. In order to ensure obtaining a copy of these numbers orders should be given well in advance to a newsagent.

Average Prices of Second-hand Light Cars.

The figures given are merely the average for six weeks of the prices at which second-hand light cars and cyclecars are offered in our advertisement columns, and do not necessarily represent the actual value of the cars.

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Morgan de Luxe ...

*Coupé. †Four-seater. †Three-seater.

Notes, News and Gossip of the New Motoring.

A New Coinage.

According to the Manchester Dispatch, for driving a motorcar in a dangerous manner a defendant was fined 33.

Cheers in Court.

When a jury at Carnarvonshire Assizes brought in a verdict of not guilty" in connection with the trial of a young chauffeur, the charge being one of manslaughter, the decision was greeted with cheers.

Watching the Watches.

A motorist who was summoned at Harmondsworth for exceeding

the speed limit complained that the three watches of the officers all read different times. Despite this, however, he was fined £1.

More Benzole.

The Motor Legislation Committee is urging that amendments should be made to the Electricity Supply Bill now before Parliament, with the object of increasing the production of home motor spirit and other valuable by-products.

Our Front Cover Picture.

Every Frenchman has a strong artistic temperament, with the result that when he decides to erect a statue, whether of a permanent or temporary nature, it is usually a thing of beauty. As a symbol of the triumph of the automobile during the great war the French erected the imposing temporary structure seen in our front cover picture this week. It was placed outside the Salar where the Motor Shar placed outside the Salon where the Motor Show was being held and was made of plaster. It takes the form of a whippet tank, surmounted by the headless figure of Victory. In the foreground is seen one of the latest models of the Majola light car.

How a Fire Begins.

When a car catches fire it is not always due to the highly-inflammable liquid from which power is derived. The cause of a car fire which occurred at Longton, Staffordshire, was due, in the opinion of the owner of the car, to a lighted cigar or cigarette which had been thrown down, thus setting fire to the carpet or rug.

Where Caution

is Necessary.

Motorists should remember that the first and second convictions do not always appear on a licence. A defendant in a recent case at Uxbridge stated that he had a clean record, but a sergeant of police who was present minded him that he had been fined at Bow Street. The defendant admitted the conviction, but said that it was not on his licence.

LIGHTING-UP TIMES

for Saturday, November 1, 1919.

Edinburgh ... 5.8 London ... 5.3 Liverpool ... 5.10 Bristol ... 5.13 Newcastle... 5.0 Birmingham 5.9 Dublin ... 5.53

Lighting-up time in Ireland is one hour after sunset and in Scotland half-an-hour after sunset. Lighting-up time in England and Wales is half-an-hour after sunset.

Moon-First quarter on the 1st.

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A Heroic Action.

Although pinned under an overturned car, a chauffeur succeeded after considerable effort in reaching the switch and stopping the engine, thereby, probably, saving a fire.

New Cars.

Will readers and advertisers in The Light Car and Cyclecar kindly note that in future advertisements of new light cars and cyclecars will appear under a separate heading in the pages of this journal?

M.P.H. and £ s. d.

For offences against motorcar acts in Surrey, principally for travelling at excessive speeds, motorists paid in fines during the past quarter £2,991 6s. 3d. Epsom contributed £661 2s. 1d., whilst the total for Kingston was £628 7s. 3d.

Solving the Garage Problem.

The latest effort to solve the garage problem is in the form of a design by Mr. Eugene G. Higgins for a garage holding 700 cars. It is built in the form of a tower with spiral drive ways, and is specially suited to congested city areas. We think the old-fashioned garage, however, will die hard, even across the herring pond.

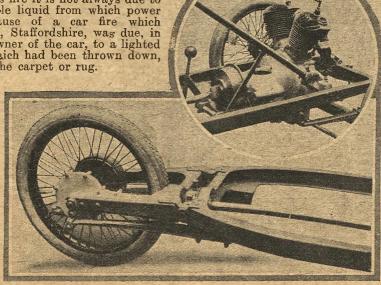
A Heated Discussion.

During the hearing of a case wherein a motorist was summoned for driving without displaying a red rear light, a police constable stated that the lamp was "cold" when he examined it. This remark led to a "heated" discus-

sion and the defendant was eventually fined 10s. and

A Woman Chauffeur.

The War Office recently recorded a vote of thanks to the women motor drivers who have worked so hard during the war and who have now been disbanded. Many hundreds of semi-skilled women drivers are there-fore "out of a job," and it seems more than probable that the near future will see the proper inauguration of the private lady chauffeur. She might not be able to do intricate repairs, but she has proved her worth as a driver over and over again.



The clean design of the Diable three-wheeler is very apparent from the above illustrations of the front and rear of the chassis.

NOTES, NEWS AND GOSSIP (contd.).

New Benzole Booklet.

A new booklet on benzole, written from the motorist's point of view by Capt. E. de Normanville, can be obtained on applying to the National Benzole Association, Horseferry Road, Westminster.

R.A.C. Facilities at the Show

Members of the R.A.C. will be accorded special facilities in connection with the Olympia Show. The Princes Rooms will be available, as on previous occasions. On application to the Secretary, the Royal Automobile Club, Pall Mall, S.W.1, members may obtain a special ticket admitting them to Olympia on Thursday, November 13th (10s. day) at half-price.

Doubtful Bargains.

"A bargain" in the shape of a magneto, carburetter, or other accessory offered by a comparative stranger who is not in the trade should be viewed with great suspicion and inquiries made before transacting any business. At Bristol police court recently an ex-soldier was brought up charged with dealing in war material, the proprietor of a motor company stating that the man came to him and offered to sell a magneto, which he eventually purchased for £10. The Clerk asked whether the witness saw a Government mark on the magneto. The witness said he did not trouble to look, adding that a mark of that description was of no significance, because so many Government cars were being sold. After the Bench had sentenced the prisoner to two months hard labour, the garage proprietor made an application with regard to the magnetos, saying that he could not give them up without an appeal. The Chairman, however, pointed out that they had come to their decision and advised the unfortunate dealer to consult his solicitor.

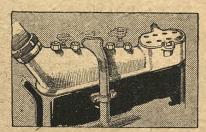


The Eric-Camptell light car starting off on an officially observed 25,000 miles trial. Miss Sprake is the driver.

The Truth.

One naturally expects truth from Truth, and British manufacturers might make a mental note of the following paragraph culled from the pages of the famous journal which emanates from Bolt Court, E.C.:—
"There is, I am convinced, something radically wrong with the mental make-up of the British motorcar manufacturer," says the motoring expert on Truth, "who does not realize even now that one of the greatest industries in America has been built up on the cheap utility car."

The novel oil filler of the Peugeot engine.



Technical Offences.

Many new motorists are not cognizant of the various rules and regulations which the owner of a motorcar has to follow. We hear of drivers regarding a police constable with blank amazement when he asks to see their driver's licence or expressing astonishment when they are told that they ignored the warning of some police constable on point duty! Motorists also should remember that when a motorcar changes hands certain formalities have to be gone through, the most important of which is to notify the authorities of the change. "At Rugby Petty Sessions recently a motorist who was summoned for failing to give notice of change of ownership stated that the offence was committed entirely in ignorance, and was fined 10s. 6d.

As a rule technical offences are not met with very heavy fines, but before taking up motoring the tyro would do well to study the legal section of any motoring manual which will give all the information he requires.

An Extensive Tour,

A wide-world tour on an Eric-Campbell light car started on October 27th from the London offices of the manufacturers. The driver of the car is a lady—Miss Kathleen Sprake—but she will be accompanied by a mechanic. The following programme is mapped out:—Two laps of England, London, Bristol, Glasgow, Edinburgh, London, one lap of France, two laps of England, one lap of Spain, two laps of England, one lap of Italy and two laps of England. Finally the car will explore Northern Africa and will finish up the 25,000 miles in England. This tour is bound to occupy some time, but should prove very useful to manufacturers.

The Next Olympia Show.

The next show, after the motor exhibition, to be held at Olympia will be the International Aero Exhibition. This promises to be the largest and most comprehensive display of aircraft, aircraft engines and their components that has ever been seen. Motorists are always interested in aircraft, and so should note the date of this exhibition.

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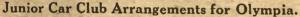
NOTES & QUERIES (contd.).

A Vacancy on "The Light Car and Cyclecar."

There is a vacancy for a gentleman who, possessing the necessary qualifications, would be capable of representing this journal on the business side. This is an excellent opportunity for one who has had the necessary experience, and who has knowledge of the light car trade.

Applications covering essential details such as age, previous experience, etc., should be addressed personally to Edmund Dangerfield, Esq., Managing Director Temple

Edmund Dangerfield, Esq., A side view of Managing Director, Temple Press Ltd., 7-15, Rosebery Avenue, E.C.1. These should be marked "Private and Confidential," and will be treated by him as such.



For the convenience of members of the Junior Car Club arrangements have been made for parking their machines in a cul de sac at the rear of Messrs. Wilkins Simpson's premises, 11, Hammersmith Road, London, W., which is just opposite the Addison Road entrance to Olympia. A commissionaire has been specially engaged to look after members' cars while they are in the Exhibition. He will wear an armlet displaying the Club badge. Members should also have their machines equipped with this badge so that the commissionaire will be able to single out members' cars.

Meeting of the I.A.E.

The second meeting of the session of the Institution of Automobile Engineers will be held at the Royal Society of Arts, John Street, Adelphi, W.C. 2, on November 5th, at 8 p.m. A paper on "Valve Failures, and Valve Steels in Internal-combustion Engines" will be read by Dr. L. Aitchison.

Carden Development.

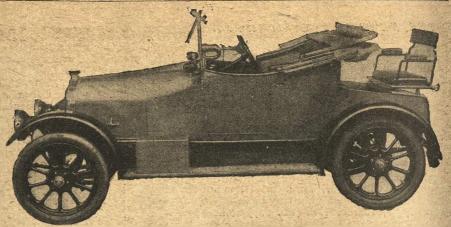
We are informed that the entire manufacturing rights of the Carden monocar and two-seater have been acquired from Captain Carden by Mr. E. A. Tamplin, Kailway Garage, Staines. Mr. Tamplin has always been an enthusiastic driver of this particular machine, and did exceedingly well in the recent Junior Car Club Efficiency Trial.

Outside the Limit.

Details of the new 1920 Calcott have just been issued, but as the engine dimensions have been greatly increased, thus bringing the cubic capacity over the 1,500 c.c. limit, the machine comes outside the scope of this journal. We would therefore refer our readers to the current issue of *The Motor*, in which a description of this machine appears.

Where are the American Cars?

The threatened invasion of American motorcars has received a serious check in the shape of the shipping strike and other labour troubles which the United States is suffering from at the present time. A British agent who expected to receive delivery of 4,000 cars by next January, in batches of 100 cars, has not yet received a single car via New York, although some 2,000 cars should have been delivered already by this route.



A side view of the 1920 Singer. Note the new design of windscreen.

Another Mystery Car.

A new and mysterious motorcar is described by an American correspondent to a daily paper, who was so impressed with its performance that he refers to it as "the magic carpet." The power unit and transmission consist of "one engine, to whose flywheel is attached one large magnet. Within the poles of this magnet is an armature which is attached to the propeller shaft. There is a second armature and small battery. There is neither clutch nor gearbox. The first armature does not touch the magnet. Nothing but air joins the engine to the back axle. The car follows the magnet like a tinned duck in a basin." All of which sounds very interesting, but what is it all about?

Change of Name

In future the well-known Stellite light car will be known as the Wolseley 10.

The Latest Bon Mot.

From the Motor World: "A Ford car will take you anywhere—excepting into society."

Those Prices.

British buyer to learn that in America the prices of cars have been steadily rising for the last six months

Discontinued

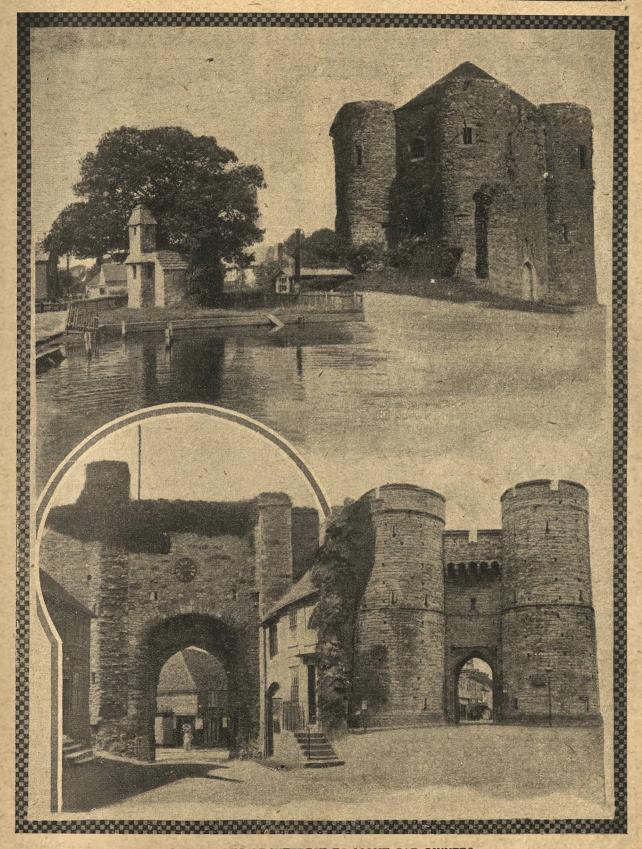
Our usual weekly "Guide to details of post-war models" will appear for the last time in this week's issue.

· The Growing Tramway.

During the latter period of the war it almost seemed that tramways were doomed, but now they are once again stealthily stretching out their tentacles, the latest development being an £8,000,000 scheme for linking up the north and south London tramways, which is being considered by the London County Council.

The New MacKenzie Light Car.

Referring to the description given in our issue of October 25th of the new MacKenzie light car, it should be noted that all the universal joints employed are of the Hardy patent type, composed of cotton fabric laminations. The Chester Motor Co., Ltd., whose address is now 32a, Chester Street, Grosvenor Place, S.W., have taken Messrs. MacKenzie's whole output, and so become the sole agents for this machine.



LANDMARKS OF INTEREST TO LIGHT CAR OWNERS.

Top, left: Quaintly placed beside a pond is one of the oldest rustic lock-ups in England at Lingfield. Top, right: Ypres Tower, Rye, Sussex, which was erected as a watch tower in the twelfth century. Bottom, left: Land Gate, Rye, built when the walls were constructed by Edward III. Bottom, right: West Gate, Canterbury.

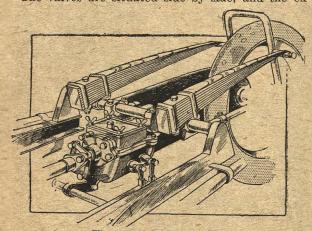
THE COVENTRY-PREMIER THREE - WHEELER.

Further Particulars of This Interesting Machine.

N our issue of October 25th we were able to give a more or less brief description of the new Coven-1 try-Premier three-wheeled cyclecar. We are now able to supplement the above with a more detailed description, together with some interesting illustrations. In constructing this machine, it has been the designer's object to produce a vehicle which shall be within reach of the motorist of moderate means, but which shall at the same time possess those refinements more usually confined to the higher priced four-wheeler. That this object has been attained is apparent from its construction.

The power unit comprises a 50-degrees twin, having a bore and stroke of 80 mm. by 105 mm. respectively, giving a cubic capacity of 1,055.5 c.c. and a R.A.C. rating of 7.9 h.p. Cooling is by water on the thermosphon principle through a radiator of very pleasing appearance situated in the orthodox position at the front of the car. The construction of the engine follows standard practice in the main so far as the chief components are concerned. The connecting rods function on a common crankpin, one rod having a forked big-end whilst the other works within the fork. Roller bearings are employed at the big-ends, whilst the main shaft revolves in plain bearings. The gudgeon pins are of the floating type and carry flat-topped aluminium pistons, each of which is fitted with three top rings; the aluminium used is to aero engine specification; in fact, this care in the choice of the best materials is displayed throughout the construction of the whole machine.

The valves are situated side by side, and the ex-



The rear wheel assembly.

haust valves are provided with lifting mechanism to facilitate starting. The control for this exhaust valve lifter is taken by means of a cable to the front of the car and is conveniently placed so as to be operated by the left hand, while the right grips the starting handle. Lubrication is ensured by use of a mechanandle. Lubrication is ensured by use of a mechanical pump of the simple plunger type, fitted with a non-return ball valve and actuated by a cam, or, strictly speaking, an eccentric on the starting reduction shaft. This plunger pump is entirely submerged in an oil sump of ample capacity. Oil is forced through an oil-way drilled up one side of the crank-



The power unit and clutch showing the central gear control.

case directly to the main bearing on that side, thence via the big-end bearings to the opposite side. An oil level indicator ensures that the correct amount of lubricant shall be introduced to the sump when filling up."

Starting Up.

Naturally, the swinging of a big twin-cylinder engine calls for a considerable expenditure of physical effort, and in order to minimize this the starting handle is geared down two to one. The use of roller bearings for the big-ends necessitates the adoption of a built-up crankshaft, where one observes the atten-tion that has been paid to the question of rapid pro-duction. These shafts, instead of having the more usual form of forged crank-web and balance weights in one piece, are built up from forged discs, machined all over, with phosphor-bronze balance weights riveted

An external flywheel of large diameter is fitted, in which is incorporated a large diameter leather inverted cone clutch, the control pedal of which has an over-riding clutch stop. A Thomson-Bennett magneto and Cox-Atmos carburetter complete the power unit. Transmission is by propeller shaft from the clutch to a gearbox of the selector type, in which accessibility has been studied in the fitting of a large inspection lid. There are three forward speeds, giving ratios of 11, 7 and 4 to 1, the control being by a centrally-placed lever operating through a gate. Even in vehicles of low weight such as this a reverse gear is undoubtedly an advantage, and, realizing this, the designer has incorporated one, the ratio being 14 to 1.

A Chain Case.

The final drive is by a single enclosed Coventry duplex chain, and the necessary bevels for changing the direction of the drive are situated immediately behind the gearbox. The chain case construction is a commendable feature, combining absolute rigidity with extreme simplicity and easy removal for chain inspection and adjustment. The frame construction is both strong and light. The side members are pressed channel steel and are suitably reinforced by tubular cross-bracing members. Springing is by quarter-elliptics front and rear, and although we have not yet had the pleasure of an extensive trial, we are assured that owing to the rigid frame construction the tendency towards rolling at speed or on corners peculiar to many three-wheelers is entirely absent on

The front axle is formed of heavy-gauge tubing and is so designed as to give a low centre of gravity. Steering is by rack and pinion, all components of which are of substantial dimensions and should have

COVENTRY-PREMIER (contd.).

a high factor of safety. Journal ball bearings constitute the hub mountings. A point which will undoubtedly appeal to every user of three-wheelers is the extreme simplicity and rapidity of removal of the back wheel for tyre repairs. We were afforded a practical demonstration and can affirm that nothing could be more simple. One nut, one split washer, and the spindle are the only parts which need disturbing, when the wheel may be slipped out, leaving the transmission and brakes in situ. The drive at the wheel is taken by plain dogs. Two independent internal expanding brakes, Ferodo lined, are situated side by side on the transmission side of the rear wheel, and are actuated by a pedal and lever respectively.

side on the transmission side of the rear wheel, and are actuated by a pedal and lever respectively.

Wire wheels are standard, shod with 700 mm. by 80 mm. tyres all round. A spare wheel is carried, which is interchangeable with the rear wheel only. The standard body fitted is of very pleasing design, and follows an easy sweep from the radiator right to the rearmost point, at the same time enabling two people to occupy the seats in comfort. The spare wheel is mounted on the top of the tail end, and a toolbox is provided. A petrol tank, with a capacity of five gallons, is built in the dash, and the consumption is stated to approximate 50 m.p.g. Standard equipment comprises hood, screen, lamps, horn, spare back wheel and tyre, jack, tool-kit, number-plates,

etc. The lamps provided as standard are acetylene, but electric lighting can be readily fitted at an extra cost, and in order that this extra cost may be as low as possible, provision is made on every standard car for fixing the dynamo and for the drive from a pulley machined on the front of the flywheel. Independent hand and foot control are provided for the throttle,



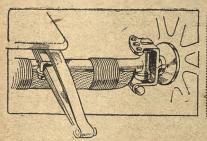
The twin chain drive is completely enclosed in a case that is easily detached.

as well as variable ignition control. Finished in elephant grey with black wings and brass fittings, this car presents a very taking appearance.

car presents a very taking appearance.
Equipped as above and ready for the road, the provisional price is £210.

A NEW CYCLECAR WITH A THREE-SPEED GEARBOX. A Coventry-Victor Engine—Design Incorporates Aeroplane Practice.

A FOUR-WHEELED cyclecar which is at present going through road tests in the Midlands embodies many novel features in its construction, The power unit is an 8 h.p. air-cooled 80 mm. by 80 mm. Coventry-Victor engine fitted with a Thomson-Bennett magneto and R.F.C. three-jet variable choke carburetter. The drive from the engine is by shaft and bevel to a countershaft mounted on ball bear-



The tubular front axle is strengthened in an original manner.

ings. From this countershaft the drive is by a chain to a three-speed Sturmey-Archer gearbox, the drive being then taken forward by a chain to another countershaft, on each end of which are mounted belt pulleys, the final drive being by two Whittle belts. The Sankey wheels, shod with 650 mm. by 65 mm. Dunlop tyres, are mounted on tubular axles, suspension being carried out by full elliptics both front and rear. A

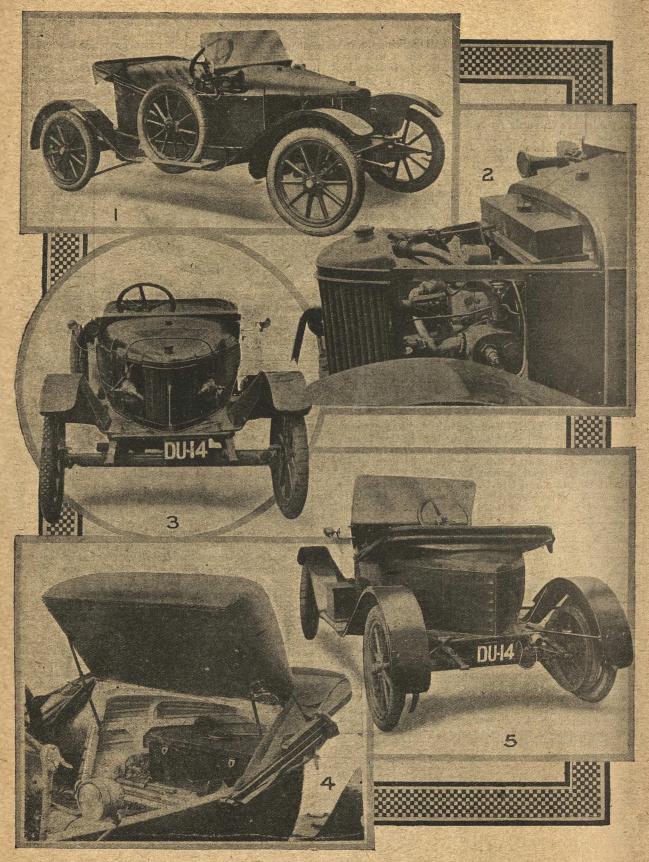
point of interest in respect to the axles is the employment of wooden stays bound beneath each for the purpose of relieving them of strain. An ash frame is employed, suitably strengthened where necessary. One brake operated by a pedal bears upon a drum on the countershaft, whilst two ordinary shoe brakes operated by a lever bear upon the belt pulleys. Specially interesting is the body, which has been designed by Mr. Budge, of the Standard Co. The object of the designer has been to produce a body combining exceptional strength with lightness and smart appearance. It is constructed of ash battens covered with canvas, the latter being doped, painted and varnished, the result being very pleasing. Some of the general dimensions of the cyclecar are: Wheelbase, 7 ft. 6 ins.; overall length, 10 ft. 6 ins.; track, 4 ft.; whilst the total weight is about 5½ cwt. On the present carburetter setting, which is experimental, 60 m.p.g. is claimed. At 40 m.p.h. the little car is said to hold the road remarkably well which can be attributed to the even weight distribution and the springing. It is intended to supply the machine the springing. It is intended to supply the machine complete with three electric lamps and a large capacity accumulator, hood, screen, tools, etc., for £150. Mr. Weaver, of the Coventry Victor Motor Co., who is the designer, is forming a syndicate to produce his cyclecar, the works being now in the course of erection.

TWO SHOWS FOR 1920.

W E understand that the question of the Olympia Show for 1920 is being considered by the Society of Motor Manufacturers and Traders, Ltd. It will be remembered that we previously announced that the intention was to hold a series of Shows so as to allow the ever increasing number of motor manufacturers to have ample space for their exhibits at Olympia.

It would appear that the Society have practically decided to hold two Motor Shows next year, but they

do not look with favour on the idea of balloting amongst the members as to which Show they should be allotted. The proposal at present in favour is to making a dividing line so that all cars in one Show will have engines under 15.9 R.A.C. rating. Those above that limit will appear in the second Show. The plan to be drawn up will also allow larger space to be allotted for the older exhibitors whilst providing a space for every member elected prior to the date of the 1919 ballot.



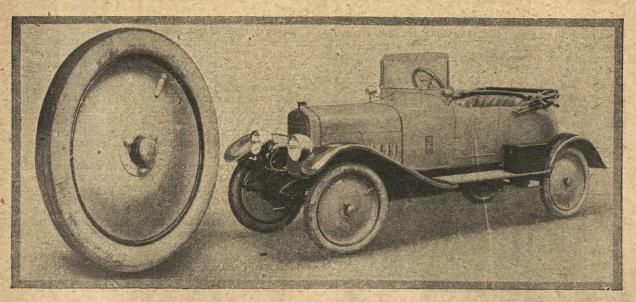
DETAILS OF A NEW CYCLECAR WITH A COVENTRY-VICTOR ENGINE.

(1) Three-quarter front view of the machine. (2) Under the bonnet showing the horizontally-opposed twin cylinder water-cooled engine. (3) Front view showing the cylinders protruding on each side of the radiator.

(4) The neat tool locker at the back of the seat. (5) A rear view of the machine showing the belt drive.

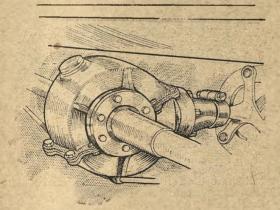
CALTHORPE IMPROVEMENTS FOR 1920.

Open Cardan Shaft-Oil Dipper-New Disc Wheels.



A near view of the new Sankey detachable disc wheel,"and a two-seater Sports Calthorpe fitted with them.

HE 1920 model Calthorpe light car will not differ materially from this year's machine. Although we do not wish to see stagnation in design, we are pleased to note that the Calthorpe Motor Co. (1912), Ltd., like the majority of well-known light car manufacturers, do not intend to make wholesale alterations to their well-tried chassis simply for the sake of having a change.



A universal joint is now fitted on the cardan shaft close up to the axle casing.

The chief innovation is the adoption of an open cardan shaft provided with a leather ring type of universal joint at each end. This construction minimizes the chance of undue noise in the transmission. With the long shaft, on which is mounted at one extremity a small driving bevel, there is bound to be a certain amount of whip which will throw the bevels slightly out of alignment, thereby producing a noise which is difficult to silence. By placing the universal joint close up to the back axle casing, the shaft on which the driving bevel is mounted can be made

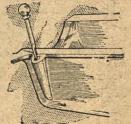
short, but of sturdy dimensions, which ensures the pinions being correctly in mesh.

A dipper rod is now fitted in the crankcase, so that the driver may ascertain the level of the oil in the sump. The oil pump itself has been slightly modified, but still operates on the same principle. The sporting models will be fitted with the new Sankey steel disc wheel, which obviates any necessity for removing the disc when pumping up the tyre or changing the wheel itself. This wheel is built up of two thin metal discs welded together, which dish out near the centre with distance pieces inserted to keep them at the correct distance apart. Fitting these wheels on this machine gives the latter a particularly smart appearance, and, as the discs do not protrude beyond the rim itself, the chances of them being scratched or becoming unduly dirty are considerably lessened.

Body Modifications.

Since the first few 1919 models were turned out, some slight modifications in the bodywork have been effected. The front seat of the "Sporting Four" has been set back slightly and the back support placed at a more pronounced slope. This considerably increases the comfort of the driver and front passenger without in any way encroaching on the rear passenger's space. A particularly fine specimen of Mulliner's, Ltd., workman-

of Mulliner's, Ltd., workmanship will be seen on the Calthorpe Stand at Olympia, one of the four-seater models being fitted with a cruiser-type body. A particularly smart coupe will also be exhibited. The standard colour adopted for all models is a neutral tint of grey that imparts to the machine a smart and clean appearance. The manufacturers are the Calthorpe Motor Co. (1912), Ltd., Birmingham.



The oil dipper rod now fitted.

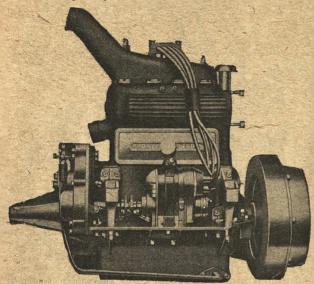
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THE 1920 DAY-LEEDS.

Four-cylinder Engine-Semi-elliptic Springs-Comfortable Bodywork.

T would appear from the general design and the well-finished bodywork of the new Day-Leeds 10 h.p. light car that the manufacturers have gone out to provide a car giving the maximum amount of comfort combined with their usual general soundness of construction.

The 10 h.p. Day-Leeds engine has a bore and stroke



The Day-Leeds 10 h.p. engine.

of 64 mm. by 100 mm. giving a capacity of 1,266 c.c. Automatic lubrication is provided by a pump driven off the camshaft. The radiator employed in the cooling system is set slightly higher than on previous models, and so a greater cooling surface is provided. The position of the M.L. magneto on the near side of the engine makes it very accessible. A departure from pre-war practice is the position occupied by the petrol tank. This is now secured between the rear dumb-irons, the S.U. carburetter being supplied on the Autovac system. The universal joint behind the gearbox is now enclosed and is supplied with lubricant from the gearbox. Three speeds forward and a reverse are provided by the latter, the gears ranging roughly from 12 to 1 on low to 4 to 1 on top; thus a useful range is provided. From the gearbox to the back axle the drive is by an enclosed propeller shaft, the final drive being by bevel. Both sets of brakes operate on the rear wheels.

As in previous Day-Leeds machines the suspension

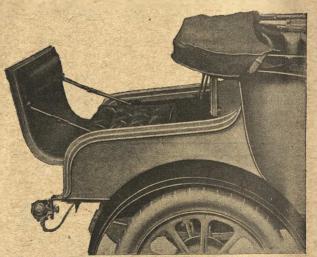
is carried out by semi-elliptic springs both front and rear. On the new model these have been considerably lengthened and have less camber, being almost flat when loaded. On a short road test we found the

suspension very efficient over some very bad stretches of road in the Leeds district. Another minor improvement is found in the steering arm, which now fits right-up to the front wheel, thus permitting of less play and giving greater and easier control. The stub axles are also bigger and the wheels are on roller bearings.

The drive for the Rotax lighting dynamo is taken from a pulley fixed immediately in front of the gearbox, a neat adjustment for the driving belt being provided in the casting which holds the dynamo. A self-starter is not fitted, although provision has been made for one, it being possible to install one quite

readily if required.

The Blackburn Aeroplane Co. have been responsible for the bodywork, specially seasoned timber being employed throughout. To provide plenty of room without the body appearing bulky is not always easy of accomplishment, but this has been attained on the Day-Leeds, and an exceptionally long-legged person will be able to accommodate himself comfortably. Other points which have received every consideration are the tilt of the seats, the steering rake and the position of the control pedals, all with a view to providing the maximum amount of comfort to the driver and passenger. The dickey seat, too, is designed on



Even in the dickey seat more than ordinary comfort is provided.

comfortable lines, besides which the occupant of the seat will share the full benefits of the windscreen.

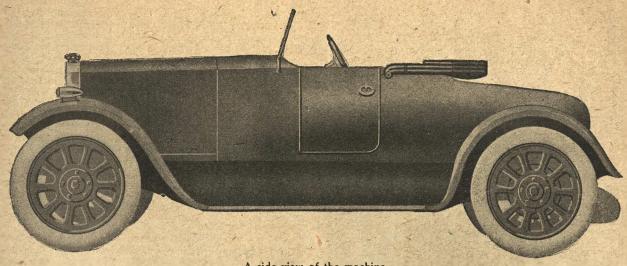
The machine is equipped with five detachable Sankey wheels and tyres, five electric lamps, horn, hood with cover, side curtains, screen, tool kit, etc., and the price is £400.

Enforcing the Lighting Order.

We believe that ignorance is responsible in a great many cases for non-compliance with the Lighting Order, which demands that, in addition to a front lamp or lamps, vehicles, such as bicycles, must carry a red rear lamp; and the warning issued by the Commissioner of Police that the Order in its present form is to be rigidly enforced, in the interests of the general public, should be made known to every road user.

The Duke Paid.

When the Duke of Toledo left the Hotel Maurice, Paris, he called out to the chauffeur in boulevard French, "Faster! Bother the policemen!" Later on the number of the duke's car was duly recorded for having exceeded the speed limit and a nominal fine imposed. The authorities refused to cancel the fine—even when they discovered that the Duke of Toledo was no less a person than the King of Spain travelling incognito!



A side view of the machine.

NEW CHARRON-LAYCOCK LIGHT CAR.

A Franco-British Production—Orthodox Design—Four-Cylinder Engine.

HE new Charron-Laycock 10 h.p. light car is a notable addition to the light car ranks. It is constructed throughout in a large works at Sheffield, and an inspection of the chassis shows that the best features of French and English designs have been incorporated, with the addition of well-tried novelties which do not find a place in any other

The aim of the manufacturers has been to produce a light car suitable in every way for the owner-driver. While every endeayour has been made to secure the maximum of reliability, economy and facile operation, considerable pains have been taken to secure that the upkeep of the car may be carried out as simply and

with as little trouble as possible.

The specification briefly is as follows:—The fourcylinder monobloc engine, 63 mm. by 110 mm., transmits power through a reversed cone clutch to a gear-hor providing three speeds and a reverse. The next step in the drive consists of an open propeller shaft with two universal joints, while the final step in the transmission is by a spiral bevel gear in the rear axle. Springing is by half-elliptics both at the front and rear, while both brakes operate on the rear wheels. Cooling is on the thermo-syphon system, while lubrication is forced throughout. The chassis which is given as 10 each of the cooling is on the second rich and the second rear the cooling is constant. weight is given as 10 cwt., and with a running load of 21 cwt., it is stated that Fitzjohn's Avenue, London, N.W., was easily climbed on top speed, thus indicating the power developed by the engine.

The Engine.

The engine is sturdily constructed—the cylinders being cast in one block, with detachable heads held by a number of bolts. The whole of the combustion chamber is machined in order to minimize so far as possible the formation of carbon deposit and to prevent any possibility of pre-ignition. All the valves are situated on the nearside, covered by two quickly-detachable plates. The point of interest is that the exhaust collector is a separate casting, and thus there is no chance for the cylinders to distort when heated up. The engine has a capacity of 1.371.5 c.c. and is rated at 9.9 h.p. Treasury rating. The pistons are light castings carrying two rings above the gudgeon pin. The crankshaft is a massive steel forging, car-

ried on three die-cast bearings, a notable example of detail attention being the provision of a ball thrust between No. 1 throw and the front crankshaft bearing, this ball race being provided to take the thrust on the crankshaft for the short time the clutch is dis-engaged. The camshaft, which operates all the valves, is driven by compressed paper helical gears which are lubricated under pressure from the main lubrication supply.

Forced Feed.

Lubrication is carried out in a praiseworthy thorough manner. A screw-driven gearwheel pump at the bottom of the sump forces oil under pressure to the main crankshaft bearings, whence the oil passes, still under pressure, through the drilled crankshaft to the big-end. The surplus oil is forced up tubes clipped to the connecting rods, and is then distributed through the gudgeon pins to the cylinder walls. It will thus be seen that every moving part of the engine is positively lubricated, and thus the owner's mind is relieved of much worry when he realizes that the powerful pump is forcing oil to every necessary

Cooling is on the thermosyphon principle through pipes of generous diameter, a distinctive pattern radiator being employed. The mixture is drawn from a horizontal Zenith carburetter, the induction pipe being cast in the cylinder block thus securing adequate heating of the mixture. The ignition is by a Watford magneto with fixed firing point, the magneto leads being coloured differently to avoid any confusion in their replacement. Carried in line with the magneto, on the nearside, is the C.A.V. starter, which engages positively with a toothed ring on the flywheel. The magneto, starter and wiring are to be enclosed under a neat aluminium cover. On the offside of the engine is situated the C.A.V. dyramo, driven by belt from the crankshaft, the fan at the rear of the radiator being similarly driven with a coning adjustment. being similarly driven with a spring adjustment.

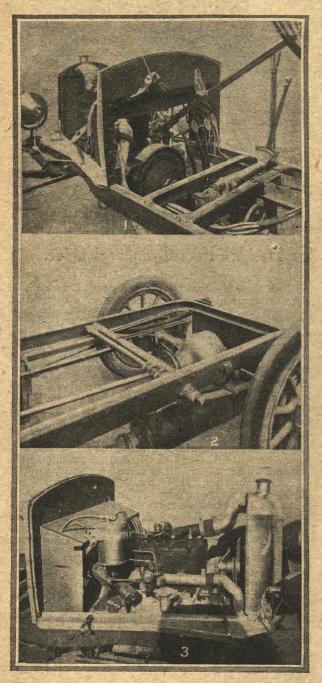
The petrol is drawn from a seven-gallon tank at the

rear of the chassis on the Autovac principle, twin pipes being employed for the following reason: When the petrol tap is in the main running position five gallons only can be withdrawn from the rear tank, and so soon as the engine fails from shortage of fuel, the driver knows that he has two gallons to spare in the

THE CHARRON-LAYCOCK CAR (contd.)

tank, which can be put into service by the mere turning of a tap within easy reach of the driver.

The large external flywheel carries a reversed cone clutch made of spring steel, and faced with Ferodo,



- (1) The housing over the flywheel enclosing the gearing of the starting device will be noted. The wiring and dashboard are of a temporary nature.
- (2) The substantial construction of the back axle of the Charron-Laycock.
- (3) A near-side view of the engine showing the steering column quadrant secured to the crankcase.

smooth initial engagement being secured by the tongued edges of the internal portion of the cone clutch, while the Ferodo-faced clutch withdrawal ring

also acts as a clutch stop. A large leather universal joint between the flywheel and the gearbox allows for any temporary lack of alignment between engine and gears. The gearbox itself is very compact, providing three speeds and a reverse. The rear shafts is situated below the main shaft with a ball thrust bearing at its front end to obviate any power less, due to end thrust. The constant mesh gears are helically cut in order to secure silence. The gearbox is remarkable for the number of ball bearings employed, even the spigot running in a ball bearing within one of the constant mesh wheels, any thrust being neutralized by a large steel ball between the clutch shaft and the tailshaft. The selector gear is carried in the gearbox lid, the gear lever being earried to the right of the driver by an arm integral with the gearbox lid, thus flexion of the frame can have no ill-effect on the gear change. The speedometer is driven off the front of the gearbox.

The Bevels.

The propeller shaft is open, and has a large leather universal joint at each end. The rear axle is driven by at Gleason spiral bevel, and in the later models of the axle the small pinion gear will be carried on a separate plate, so that it will be a simple matter to adjust the mesh of the bevels to secure maximum silence.

All weight is carried on the axle tubes, the live shaft only transmitting the drive. They can be detached on removing the hub caps, leaving the car still supported on the wheels. An accessible oil filler is placed to the front of the axle.

The frame is of pressed steel inswept at the front to allow of a larger steering lock. Steering is on the worm and sector system, the steering box being carried on the crank chamber, and stayed to the aluminium dashboard. By loosening the two caps on the crank chamber, and one bolt on the dashboard, the steering wheel can be adjusted upwards or downwards through a range of 9 ins.

The front axle is a forging of I section, the weight of the car being carried on ball thrust bearings in the steering heads. The latter are inclined so that the axis of the pivot meets the road at the same point as the tyre, which tends towards easy steering. All steering connections are straight, and, therefore, as strong as possible.

Superfine Finish.

Aluminium enters very largely into the construction of the Charron-Laycock. The dashboard, bonnet, bonnet sills and instrument board are all of aluminium. This provides a superfine finish, which at present is a mixed blessing, as the moulders' strike has, of course, held up recent deliveries of these important parts.

The Charron-Laycock can be obtained with three types of body fitted, the two-seater (with dickey seat), the clover leaf (three-seater), and a coupe with dickey seat, the prices being respectively 460, 490 and 540 guineas. With a wheelbase of 8 ft. 2 ins. and a track of 3 ft. $9\frac{1}{2}$ ins., a very well balanced appearance is obtained. The bodies are constructed throughout by the world-famous firm of Van den Plas.

Five detachable Sankey pressed steel wheels, 710 mm. by 90 mm., are provided, fitted with five Dunlop tyres, two non-skid and three with plain tread. Each complete car is delivered ready for the road with the exception of registration, the equipment even including four gallons of petrol in the tank!

The Charron-Laycock is manufactured throughout by W. S. Laycock, Ltd., Victoria Works, Millhouses, Sheffield, under the controlling interest of Charron, Ltd., and the sole concessionnaires are the London Motor Garage Co., Ltd., 65, Piccadilly, London, W.1. An output of 100 to 120 complete cars per month is aimed at.

THE GRAHAME-WHITE LIGHT CAR.

A Striking Form of Change Speed.

I has been the aim of many inventors to produce a friction gear which will provide a direct drive on top speed, the gear which is used on light cars for 75 per cent. of the normal running. The latest attempt, which appears to be eminently satisfactory in practice, is that fitted to the Grahame-White light car.

The Grahame-White light car is constructed at the vast works of the Grahame-White Co., Ltd., Hendon, N.W., which until recently were engaged on aircraft production. Thus, from a merely manufacturing point of view, the Grahame-White light car should have almost unequalled opportunities for success.

The general lay-out of the Grahame-White friction gear will be seen from the illustrations. The flywheel is a specially-shaped casting, which forms the first step in the friction drive. Bearing against the outer rim of the flywheel is a friction wheel parallel with the frame and carried on a special movable bracket, the disc running on ball bearings. The flywheel also carries the outer portion of the cone clutch.

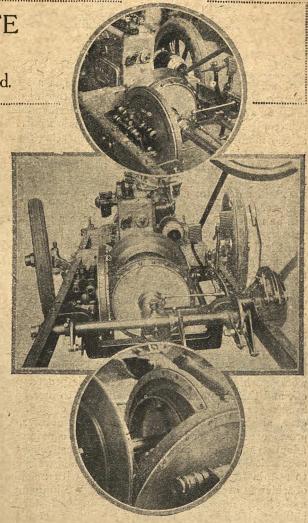
Friction Drive.

At right angles to the friction wheel is another friction wheel which can be slid along a continuation of the propeller shaft, which occupies the normal position in the chassis. The movement of the second disc allows of lower speeds being engaged.

The operation of this gear while actually simple, is difficult to describe. We will imagine that the gears are in neutral, and that the engine is running. The flywheel in its rotation is driving the disc at the side of the chassis, while the second disc on the propeller shaft is in a recess at the centre of the first disc, and is not driven in any way. If the gear lever is now moved into the first speed notch, the second disc is pushed forward along the shaft, and the drive then passes from the flywheel to the disc at the chassis side and back to the disc on the propeller shaft, the discs being held in engagement by a stout compound spring. Second and third speeds are obtained in exactly the same way, the driven disc leing moved further from the centre of the intermediary driving disc.

When top gear is required, the special features of this friction gear are brought to light. The final friction disc carries integral therewith the inner member of the cone clutch, and for top gear this is forced into engagement with the outer cone carried on the engine flywheel. At the same time, the intermediary disc is moved out of engagement with the flywheel and comes to rest.

In its other features, the G.-W. light car is constructed on standard lines. A four-cylinder Dorman engine, 64 mm. by 85 mm., is fitted, cooled on the thermo-syphon system through a radiator of distinctive shape. A sturdily-constructed rear axle encloses a bevel gear, the propeller shaft being totally enclosed and being provided with only one universal joint at its forward extremity. The frame is of pressed steel, supported on the front axle by a long inverted, transverse, half-elliptic, laminated spring, the axle being located by two radius rods, adjustable for length, and provided with ball joints. Rack and pinion steering is fitted. At the rear the springing is by quarter-elliptics.



Three illustrations showing the friction discs of the G.W. light car in different positions.

Examples of the G.-W light car will be exhibited on Stand 108 at Olympia, priced at 395 guineas, with two-seater body and lighting set.

The G.W. Buckboard.

A cyclecar to be successful should be constructed as simply as possible, weight being saved wherever feasible. The cyclecar in its very simplest form is epitomized in the new G.W. Buckboard, where weight is saved to a remarkable extent and simplicity is secured in the most striking way. The Buckboard is a four-wheeler, the frame being constructed of springy ash, bolted direct to the axles. Mounted at the rear is a 3 h.p. single-cylinder two-stroke air-cooled engine, which drives a two-speed gearbox by chain. The final drive from the gearbox is to a special shock absorber on the rear axle. A plate clutch is provided and the gearbox has a kick-starter. Steering is direct, and two brakes are provided on the rear wheels. The Buckboard will be sold for approximately 95 guineas complete, carrying a two-seated body of simple design, which is specially sprung on the chassis.

It is difficult to imagine a simpler form of construction than that adopted or a more enterprising method of securing motoring for two at the lowest possible

B31

Topies of the Day

The 1,500 c.c. Limit.

A T the present time, when the demand for metor vehicles of all descriptions is almost insatiable, there is a tendency for light car manufacturers to lose sight altogether of the ideal which they set out to attain at the beginning. It is quite understandable, as the only thing that matters now to the manufacturer is output. It is not therefore at the moment important to him whether his machine is economical to run or not, as the prospective owner has not time to worry about what is going to happen after he obtains delivery, his whole anxiety being to gain possession at the soonest possible moment of anything that will carry him about from place to place. The time will come, however, perhaps sooner than is expected, when the would-be purchaser will be more difficult to find and will have a much more discriminating nature. Manufacturers who may be tempted to go outside the engine limit laid down for light cars may do so now with a light heart, but as we have already stated, the public in the near future will fight shy of their large engines which simply consume excessive quantities of fuel without giving in return any easily-determined advantage. It is not difficult to design or manufacture an engine of large dimensions which will give out the same power as can be derived from a smaller one of 1,500 c.c. that is cleverly designed and of high-class workmanship. We have proved over and over again that the 1,500 c.c. engine gives more than ample power for a two or four-seater light car, and most of the wellknown light car manufacturers are of the same opinion. Of course, if workmanship deteriorates, or if design is proved poor, the power falls off, and the cheapest way for the maker to increase his horse-power is to increase either the bore or stroke of his engine. Unfortunately, however, although it is cheap for the manufacturer, this policy usually proves expensive for the owner. We are convinced therefore that the adoption of an over-size engine is quite contrary to the whole idea of economical motoring and is uncalled for, and we shall therefore continue to refrain from dealing in this journal with machines the engine size of which is over the 1,500 c.c. limit. We inaugurated the economical motoring movement, and shall continue to foster it to the best of our abilities. Our readers may therefore rest assured that machines which we consider should not really be included in the new motoring movement will still be rigidly excluded from both our editorial and advertisement pages.

Rear Lamps Must Be Permanent.

THE agitation by cycling bodies for the abolition of the rear lamp continues unabated, but, judging by the arguments which have been put forward, we think it is very doubtful whether the authorities will be convinced. A point which is made a good deal of is that by forcing cyclists to carry a rear lamp, the onus is placed upon them should an accident occur; but cyclists do not seem to realize that this argument also holds good from the point of view of the motorists or other road user, who, should he run down a cyclist having no rear lamp, is at once assumed to be entirely in the wrong. The only common sense view of the situation is that every vehicle using the highway should have a rear light. To argue that pedestrians, being entitled to use the road, should also be forced to carry rear lamps is infantile in the extreme, and reveals the wildness of an agitation which is being carried on from the solitary point of view of the cyclist, who seems to have no idea at all of what constitutes the proper safeguarding of our highways against possible accidents. Many cyclists, who do not carry rear lamps at present, have lulled themselves into a false sense of security by imagining that should they be summoned they have only to plead that they thought the re-introduction of the rear lamp was for the duration of the strike. The warning issued by the authorities comes none too soon.



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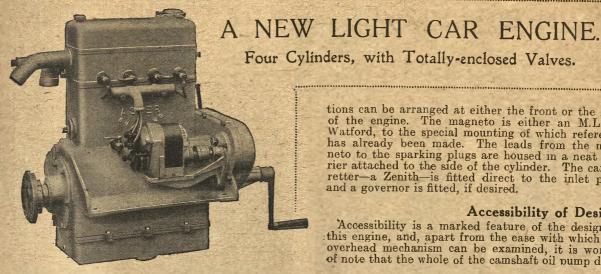
LIGHT CAR & CYCLECAR

was founded in 1912 to cater for the needs of users and potential purchasers of various new types of cyclecars and light cars, and it has consistently encouraged the development of this new motoring movement for more than six years.

The journal is published every Friday, dated Saturday. Should there be difficulty in obtaining its regular supply, the reader is advised to place a definite order either with a newsagent or direct with the publishers, as it is impossible to cater for "chance" sales.

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THE LIGHT CAR AND CYCLECAR is OBTAIN-ABLE only to ORDER.



One of the outstanding features of the engine is its neatness of design.

NEW light car engine of more than passing interest is being produced by the Aster Engineering Co. (1913), Ltd., of Wembley, Middlesex. It has four cylinders, 65 mm. bore by 100 mm. stroke, giving a cubic capacity of 1,327 c.c.

The cylinders are cast monobloc, the casting being the cylinders are cast monotice, the casting being integral with the crankcase. A novel feature is that the crankcase is not divided horizontally along the centre line of the crankshaft, but is fitted with a removable sump. The big-ends dip into troughs which are cast integral with this sump, whilst an oil filter is also situated in an enclosed rectangular passage, into which the oil number protrained. into which the oil pump protrudes. Provision is made for removing the filter by taking off a small cover plate. The circulation of the lubricating oil is effected through the medium of a plunger pump, the delivery stroke being due to the influence of a cam. The return or suction stroke being effected through the medium of a helical spring, any excessive oil returns to the sump.

Drilled Crankshaft.

The crankshaft itself is drilled, so that the oil which is fed to the big-end bearings also feeds the main bearing. The crankshaft is machined from a steel stamping, a self-contained supporting spindle and handle being fitted in the front cover. Should it be desired to remove the crankshaft at any time, this can be done very easily by taking off the circular plate on the back of the crankcase, i.e., the plate which carries the rear main bearing. Both camshaft and magneto are driven by means of silent chain, the magneto being mounted on a pivoted bed, so arranged that it can be swivelled about the supporting point to take up the chain slackness.

Turning to the valve-operating mechanism, we come to one of the most interesting points in the design, for the valves, etc., are fitted in a detachable head, which, when removed, brings with it the greater part of the valve mechanism. The valves are operated by means of rocker arms, which, in turn, are actuated by push rods. A refinement in regard to the rocker arms is the simple type of ball bearing which is introduced in order to reduce the wear and simplify lubrication. Another excellent point is the fact that the crank-case release discharges into this cylinder head, there-

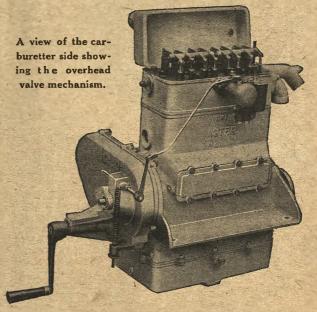
by effectively lubricating all the working parts.

The engine is cooled by means of thermo-syphon circulation, whilst both inlet and outlet water connec-

tions can be arranged at either the front or the rear of the engine. The magneto is either an M.L. or Watford, to the special mounting of which reference has already been made. The leads from the magneto to the sparking plugs are housed in a neat carrier attached to the side of the cylinder. The carburetter—a Zenith—is fitted direct to the inlet port, and a governor is fitted, if desired.

Accessibility of Design.

Accessibility is a marked feature of the design of this engine, and, apart from the ease with which the overhead mechanism can be examined, it is worthy of note that the whole of the camshaft oil pump drive



and the working of the push rods for the valves, where they come into contact with the cams, can be inspected readily by removing the small door fitted on the side

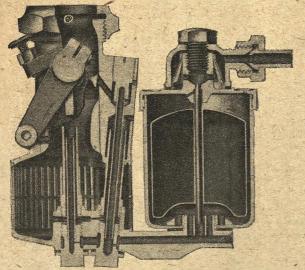
of the crankcase.

Instead of the usual supporting arms for the complete unit, a longitudinal flange is provided at each end by ribs of ample proportion. By referring to the illustrations of the Aster engine it will be noted that practically every working part of any conse-quence is totally enclosed, thus under working conditions it should be exceptionally clean, whilst at the same time being economical so far as the lubrication is concerned, as oil would not be wasted by being thrown out of the engine. Overhead valves undoubtedly will command a great deal of attention very soon owing to aeroplane experience during the war, and the Aster overhead valve mechanism has war, and the Aster overhead valve mechanism has been designed and arranged in an exceedingly neat and compact manner. Further, the efficient lubrication by means of the crankcase release and the additional refinement of ball bearings in the rocker arms go far towards eliminating not only the wear but also the rattle from this part of the mechanism. This engine will be shown on Stand 257 at the Olympia Exhibition.

B33

AN IMPROVED TYPE ZENITH CARBURETTER.

THE Motor Show held recently at the Paris Salon produced many interesting accessories, among which was the new type Zenith carburetter. This model differs in many features from other type Zeniths, as will be seen by reference to the illustrations. Instead of the usual flange fixing, the nut method is employed. The petrol enters from the top



Diagrammatic view of the improved Zenith carburetter.

The simplicity of the float chamber will be noted.

of the float chamber, the usual type petrol pipe union being employed. Before entering the float chamber the petrol passes through a filter, the latter being immediately detachable by removing one nut. From the float chamber the petrol passes along a channel which commenicates with the slow-running, main and compensating jets. With a slight throttle opening suction is created on the slow-running jet, the petrol exit and the air port being-proportioned to give a

suitable mixture for starting and slow running. As the throttle valve is gradually opened the suction on the slow-running jet is increased until a position is reached where depression is created on the main and compensating jets. These are placed one inside the other. As in previous Zenith practice, the principle of jet action in which the main and compensating jets balance one another according to the speed of the engine is employed. The main air intake surrounds each chamber and consists of a number of slots which can be varied in size in proportion to the amount of air required. This instrument is made in bronze, nickel-plated, which effectively protects it under varying weather conditions. The new Zenith carburetter can be taken to pieces when necessary with the minimum amount of trouble; the main and compensating jets are removed from below the in-



strument, the slow running jet being fixed in such a manner as to be removed after the locking screw which holds it in position has been slacked off. This carburetter can be obtained either as a vertical or horizontal type.

A NEW HEADLIGHT.

A NEW headlight which is being manufactured and handled by Norman Johnson and Co., Ltd., "Hop Poles" Engineering Works, Baker Street, Enfield, possesses several good features. In the first

General appearance of the lamp, showing the neat socket and screw at the side.

place it is airtight, enabling a polished aluminium reflector to be used without any fear of this becoming dulled. The front fits over a machined sleeve and is secured by means of a bayonet catch, the reflector

being designed so that a concentrated beam with a very small angle of deflection is obtained in conjunction with a fish-tail beam for illuminating the side of the road. The bulb can be focussed by means of an arrangement at the back of the lamp, and the whole is fitted with single or double brackets, to fit either side brackets or U forks. The price is 35s. per pair, and a tail lamp of the same pattern is made.

Focussing Headlights.

The only way in which to get the best results out of lamps is to take the car on to some dark country lane at night, preferably to the end of a straight stretch of road, and to focus one lamp at a time. This can easily be done by taking out the bulb of one lamp, while the other one is being adjusted. All modern lamps are fitted with adjustments which allow the bulb to be slid backwards and forwards in relation to the reflector. It is difficult to eliminate all glare and dazzle from lamps, but if the right-hand lamp is set to throw the longer beam and the left-hand lamp to give more side illumination, it is less unpleasant for pedestrians and other motorists who may be approaching.

BUGATTI.

Stand 62.

COSMOS.

Stand 20.



VEIL AT OLYMPIA.

The Outstanding Features of the Light Cars and Cyclecars that will be Exhibited-Stand Numbers of the Various Manufacturers.

THE great Olympia Show opens on Friday next, and the eyes of the whole motoring world will be focussed on the exhibits. Manufacturers are decidedly behindhand, and some do not wish to state definitely of what their exhibits consist. However, below we are able to give our readers an idea of the outstanding features of the various car exhibits and also of what they may expect to see in the shape of novelties amongst the accessories. Next week we will naturally deal with the exhibits more fully, and will include among other interesting features a com-plete illustrated buyers' guide. Unfortunately a few manufacturers have not yet supplied us'with details of their exhibits, and we are therefore unable to deal with them in this issue.

The following brief descriptions, however, as will be seen, cover the majority of the exhibits, which will be a scene of attraction in spite of larger cars.

EVERYONE will be anxious to see the A.B.C. light car, the most interesting feature of which is its air-cooled engine. The manufacturers have had very



extensive experience of aeroplane engines during the war, and it is only natural that the unit of their light car should follow in some way aircraft design. The gearbox is one of the few seen on light cars that provides four speeds forward. The ratios of these being 4 to 1, 6 to 1 8.6 to 1 and 12.5 to 1. The suspension is carried out both fore and aft by means of quarter-

elliptic springs. The drive is conveyed by an open type propeller shaft to a bevel-driven back axle, while the change-speed gear lever is placed centrally. The complete machine only weighs 1 cwt.

THE new six-cylinder A.-C. light car will probably be the only one of its kind at Olympia. Great interest will, therefore, be taken in this exhibit. Here again

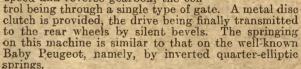


aircraft design has been followed in many ways, with the result that a power unit has been obtained which is clean and neat to an extreme. The mounting and drive of the overhead camshaft should be closely inspected as in this respect the clever design

of the engine is seen to advantage.
The position of the water pump should be noted as it is placed at the forward end of the camshaft. The four-cylinder light, car' will also be on view. The chassis of the six-cylinder and four-cylinder is practically identical except that the former is fitted with an H-section front axle and the latter with a tubular one. The whole transmission system has been considerably strengthened and visitors should note the new type of springing which is now carried out both front and rear by quarter-elliptics, which replace the old front transverse and the rear cantilevers. The body has also undergone slight alteration and is now of more pleasing appearance.

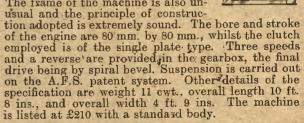
THE Bugatti, ever since its introduction to the British market, has been famed for its speed, and year by year as new models have been produced this fea-

ture has been retained. A chassis only will be shown on the stand. The engine is a four-cylinder monobloc, four overhead valves being fitted to each cylinder, the bore and stroke being 68 mm. by 100 mm. respectively. Like the A.B.C. light car, this machine is fitted with a four-speed and reverse gearbox, the con-



THE Cosmos is one of the few light cars that are constructed to a design which has been influenced to a large degree by experience in aircraft construction.

manufacturers were famed amongst other things during the war for their excellent aero engine. It is, therefore not unnatural to note that the engine of their light car is designed on aero lines. It is a threecylinder radial; engine, air cooled. The frame of the machine is also un-



SPEED and high-class finish of the chassis and body are the outstanding features of the Calthorpe' light car. Few alterations will be noticed in the cars on

view. Visitors should note. however, the new arrangement of the oil pump and dipper rod which is now fitted to the crankcase close up to the forward near-side engine hanger. Also in order'to eliminate to the greatest possible extent any chance of undue noise from the back axle, the manu-



facturers have discarded the en-closed propeller shaft, replacing it by an open one, which is provided with a leather ring universal joint close up to the back axle housing itself The sporting models of this make are now fitted with the new Sankey steel disc wheel which is a great improvement over the older type, as the tyres can be pumped up and the wheels removed without in any way interfering with the discs.



LIFTING THE VEIL (contd.).

THIS well-known light car will be shown with a four-cylinder engine of 64 mm. by 100 mm. bore and stroke respectively. The cooling is effected on the



thermo-syphon system, and a S.U. carburetter and M.L. magneto are are fitted as standard. The drive is taken from the engine through an internal cone leather face clutch to a three-speed and reverse gearbox; the ratios being 4.4 to 1, 6.75 to 1 and 12.2 to 1. The final drive is by bevel driven back axle. The sus-

pension is carried out both front and rear by semielliptic springs, and both sets of brakes are con-structed on the well-known internal-expanding principle.

IT is almost certain that the Duplex stand will be alive with interested spectators, as this machine is one of the few fitted with an eight-cylinder engine.

These eight cylinders do not work



independently, but are coupled up into four pairs, so that only four sparking plugs are necessary. The sparking plugs are necessary. ordinary poppet type of valve has been dispensed with, and in its place the sleeve valve has been adopted. Transmission is designed on orthodox lines and the final drive is by

The suspension is carried out by quarspiral bevels. ter-elliptic springs, and the weight of the complete machine is approximately 12 cwt. Two models will be shown—a two-seater and a four-seater, both being fitted with high-class bodywork.

THE Deemster light car can be seen at Stand 93. This machine is fitted with a particularly neat fourcylinder monobloc engine having a bore of 62 mm. and a stroke of 90 mm. Water is



circulated on the thermo-syphon principle and the lubricant is fed under pressure by a pump. Transunder pressure by a pump. Transmission is carried out on orthodox car lines, a gate-controlled gearbox giving three speeds forward and a reverse. The clutch is of the popular cone type, and the final drive of the back axle is by bevels. A point interesting to

note is that the machine is fitted with a mechanical seat-starter and also with a Rotax dynamo lighting

THE Enfield-Allday radial-engined light car will be one of the sensations of the Show. The manufacturers have succeeded in evolving a design almost



unique in light car practice which has been founded to a large extent on experiences with aircraft construction. The engine has five cylinders, the bore and stroke of which are 60 mm. by 80 mm. A forced draught of air is induced round the ylinders, so as to keep the temperature at the correct degree.

transmission system includes a dry multiple disc clutch and three speeds and a reverse gearbox. The final drive is by shaft through spiral bevels to the The springs are of a special cantilever back wheels. type. The complete machine turns the scale at 9\frac{3}{4} cwt. Two models will be shown, both two and four seater. The equipment includes a Brolt lighting set, and visitors should certainly not miss examining the unique construction of the frame. The body is also worthy of attention.

THE 10 h.p. F.I.A.T. was recently exhibited at the French Salon, where it aroused much interest. The bore and stroke of the four-cylinder engine are 65 mm.

by 110 mm. respectively, the engine being particularly neat in design. The water circulation is helped by a centrifugal circulator placed in the system. The design of the chassis follows orthodox design, the gearbox giving three speeds forward and a reverse. The clutch is of the usual maltiple disc F.I.A.T. pattern, while spiral bevels form the final drive to the read axle. The suspension throughout is by semi-elliptic



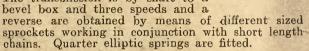
G.N.

Stand 6.

springs, and two pairs of internal expanding brakes are fitted on the rear wheel hubs.

THE G.N. is one of the best cyclecars at present on the English market. It chief point of interest is its remarkably efficient air-cooled engine which is

built entirely in the G.N. works. It is a two-cylinder 90-degree engine with an outside flywheel, the bore and stroke being 84 mm. by 98 mm. respectively. The carburetter fitted is a Capac and the ignition system depends upon a Fellows magneto. The transmission is by shaft to a



RIGHT from the very commencement of the new motoring movement the G.W.K. has been a prominent light car. Its well-known friction drive has

proved to all the world that this system of transmission, when properly designed, is reliable and efficient. In their new model the transmission is still carried out by friction discs, but these latter are placed and operated in a slightly different way. The engine is now a four-cylinder, and is placed in the ortho-



dox position under a bonnet in the front. Another interesting point in the transmission is the method of obtaining the desired reduction in gear between the engine and the road wneels by means of a sman-pinion in niesh with an internally-toothed hub on the back wheels. Quarter-elliptica springs are fitted throughout, and both pairs of brakes are of the in-ternal-expanding type. The weight of the complete machine is 12 cwt., and it will be shown both as a two and four seater. A 6-volt lighting set, complete with dynamo, is fitted as standard. The price of both engine and the road wheels by means of a small models is £275.

THE Hampton is famed for hill-climbing powers, and visitors to Olympia will naturally desire to examine this machine which makes light work of gra-

dients like the Nailsworth Ladder. This machine is fitted with a very neat overhead-valved Dorman engine; the chassis is constructed throughout on very sturdy lines. A point of note is that on the front axle a jack pad is incorporated; in fact, it is formed integrally with the axle itself. The rear axle is of the



full floating type, the wheels being-carried on tubular steel extensions. An electric starter is fitted and the price of the chassis is £360. A two-seater, complete with dickey seat, will be shown, and, fitted with electric lighting and starting equipment, the price is £425.

LIFTING THE VEIL (contd.).

THE transmission is one of the most interesting features of the L.M. light car. This is effected by a central chain, which conveys power from a gearbox giving three forward speeds and a



reverse to a solid back axle which can be completely detached from the car in a few minutes for inspection purposes. The engine is an 8 h.p., water-cooled twin (85 mm. by 85 mm.), fitted with a Claudel-Hobson carburetter and M.L. magneto. Suspension is carried out by quarter-

elliptic springs both front and rear. The two sets of brakes provided are designed on orthodox lines, one being internal expanding and the other external contracting. The two-seater body provides in addition a dickey seat, and the price complete is 210 guineas.

THE Lagonda is one of the most moderately-priced coupes at present made. Its four-cylinder engine, which has a bore and stroke of 67 mm. by 77.8 mm.



respectively, is fitted with overhead inlet valves. A new type of radiator has now been adopted, the old semi-circular one having been discarded. Transmission is designed on the usual lines, the gearbox giving three speeds and a reverse, the final drive being through a propeller shaft to a worm-driven back axle.

It should be noted that the gear control is centrally placed. The suspension in front is by means of a transverse spring, and quarter-elliptics are fitted at the rear. The weight of the machine is only 10 cwt.

THE manufacturers of the Mercury make a special point of the extreme accessibility to all parts of the engine, also to the comfort obtained on the road owing



to the special design of springing which is by semi-elliptics in front and long cantilevers at the back. The bore and stroke of the four-cylinder engine are 64 mm. by 102 mm. respectively. A Fellows magneto is standard, and the mixture is supplied by a Zenith carburetter. The gearbox provides three speeds

and a reverse, and the clutch is of the metal-to-metal internal expanding type, the final drive being by bevel. A special Colonial model of this machine is made, giving 101 ins. ground clearance. Steering is effected by means of a worm and nut, and both brakes are fitted on the back wheels. The equipment includes hood, screen, spare wheel and tyre, tool kit, and Smith dynamo.

THE outstanding feature of the Meteorite light car for 1920 is the sturdy construction of every part of the chassis. The engine fitted is a Coventry-Simplex, the



bore and stroke being 66 mm. by 109.5 mm. The mixture is supplied 109.5 mm. The mixture is supplied by a Zenith carburetter, and a M.L. magneto is part of the standard equipment. The general design follows more or less orthodox lines, the gearbox giving three forward speeds and reverse. The drive is speeds and reverse. The drive is transmitted from the engine, to the

latter through a leather cone clutch and thence to a bevel-driven rear axle by an open cardan shaft. The suspension at the front is by half-elliptics and at the rear three-quarter elliptics are provided. Both sets of brakes are of the internal-expanding type and the weight of the two-seater complete is 12 cwt. C.A.V. lighting set, horn, jack, pump and the usual set of tools form part of the equipment.

THE Palladium makes its first bow to the public at Olympia. It is almost certain to draw considerable attention, particularly as its design embodies many unusual features. The two-cylinder

engine is air-cooled and horizontallyopposed, and the bore and stroke is 89 mm. by 107 mm. A forced draught of air is conducted round the cylinders to keep them at the correct temperature, the transmission and gears are effected by means of fric-



tion discs, the final drive being con-veyed to the back axle by means of a chain. The suspension is carried out throughout by means of semielliptic springs. The weight of the two-seater, which is sold at 275 guineas, is 10 cwt., the four-seater 11 cwt., the catalogue price being 295 guineas, whist the coupe weighs 112 cwt. and is listed at 365 guineas.

THE new Rover light car is fitted with a horizontally opposed two-cylinder air-cooled engine. Readers will naturally be impatient to see with their own

eyes this latest comer into the ranks of the new motoring movement. A very neat dummy radiator is fitted which resembles in shape that usually associated with Rover products. The engine is built up with the clutch and gearbox so as to form a com-plete unit. The gear change lever



is fitted in the centre of the car and is cranked to bring it close to the driver's left hand. Final drive is conveyed by an open propeller shaft, with two universal joints to the worm-driven rear axle. Long quarter-elliptic front springs are fitted with full cantilevers at the rear. It should be noted that the combustion heads protrude through the sides of the bonnet so that a continuous rush of air is obtained. The car sells at £220, being, therefore, one of the cheapest at present on the market.

THE S.H. which recently made its appearance in England embodies in its chassis some of the soundest design at present to be seen in the light car world. The machine is of French manufac-

ture and was recently exhibited at the Paris Salon. The idea of the manufacturers is to make their machine to be looked upon as the Rolls-Royce of small cars. It is therefore constructed almost regardless of expense, the price of the two-seater model being £550. The low position gained by reason of the special design is an interest-



ing point and the all-aluminium dash should not be missed. A beautifully-finished coupé body will be mounted on one of the chassis and should attract universal attention.

AMONGST others, "the man over 40" will take a direct line for the Standard exhibits. This machine is famed for its reliability, and visitors to Olympia will therefore endeavour to discover

how this excellent feature is attained. They will note that every part is constructed in a sturdy fashion, and the impression they will receive is that the entire chassis is built to last. The wheelbase has been slightly lengthened, but in other respects the 1920 model differs



very little from this year's machine. The Autovac system of petrol feed is a point of interest, particu-The Autovac larly as it allows a roomy and convenient locker to be incorporated in the dashboard. The patent side curtains which are fitted to all models should not be missed, and by means of these it is possible to turn the open two-seater model into an enclosed coupe.

LIFTING THE VEIL (contd.).

THE well-known Singer "10" will not have any radical alteration in its design for 1920. The chief point of difference is to be seen in the attachment of the



hood and the provision of a new type of windscreen. The latter is now divided, the upper panel being capable of adjustment according to the driver's requirements. Its two uprights are constructed so as to form the fastening for the hood at their extremities. In this design the usual long straps which necessitate

the driver or his passenger dismounting in the rain in order to fix are dispensed with. The hood fits well down on to the top of the windscreen and is provided with a flap so as to prevent rain entering the interior of the body. The accumulator box which is placed on the running board is now finished in the same colour as the body itself. The engine of the Singer is one of the smallest four cylinders fitted to a light car.

THE 1919 Wilton which will be exhibited at Olympia is fitted with a four-cylinder Dorman engine with a bore and stroke of 69 mm. by 100 mm. A Watford

a bore and stroke of 69 mm. by 100 mm. magneto and Zenith carburetter have been adopted as standard. The gearbox gives three forward speeds and a reverse, the ratios being 4-1, 8-1 and 13-1. The transmission is orthodox in design, the final drive being by worm to the rear wheels. The suspension is carried out both front and rear by cantilever springs



front and rear by cantilever springs and all brakes act on the rear hubs and are of the internal-expanding variety. The seating accommodation is particularly generous, the two-seater model being sufficiently wide to accommodate three people. A dickey is provided and the equipment includes a Watford speedometer, C.A.V. lighting set, Watford clock, tools, inflator, horn and the highest grade coachwork. The price of the two-seater model is £410, of the four-seater model £430, and coupe £450.

HOW TO REACH OLYMPIA.

The Bus and Underground Routes.

M ANY readers who are not well acquainted with London experience a little difficulty in reaching Olympia. For the benefit of those who are in doubt we give on this page a map showing the position of the huge exhibition hall in relation to the various main line termini of the great trunk lines. Olympia is particularly easy of access by means of bus and by the great network of underground railways.

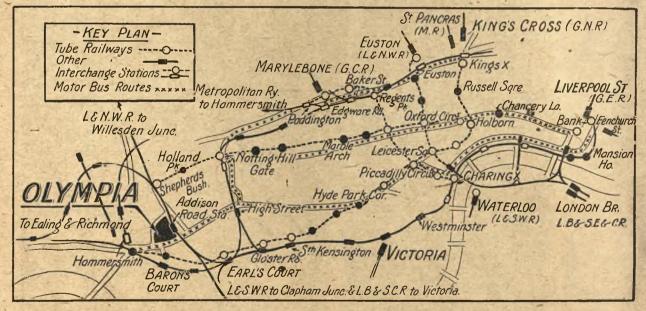
It is situated in Hammersmith, just opposite Addi-

sary to change at Earl's Court, where in all probability there will be a wait of from 10 to 15 minutes.

If the Underground is taken from 10 to 15 minutes.

If the Underground is taken from the West End it is necessary to join the District Railway which runs to Earl's Court. All the various tubes join up with this railway at one station or another. The great thing to remember is to change at Earl's Court.

Buses from all parts of London pass the doors of Olympia, but for any one not well acquainted with the L.G.O.C. service it is as well to make for Hyde-



Map showing position of Olympia in relation to the various large railway termini in London. Bus and Underground routes are shown.

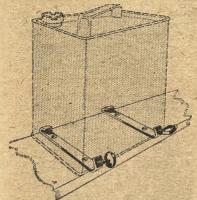
son Road Station. If the weather is fine we would advise all motoring pilgrims to take the open air route by bus, but as regards time taken on the journey there is not much difference whether one goes by railway or by road, as by the former method it is necess-

Park Corner. From this point the No. 9 service is exceedingly frequent, and buses pass practically every few minutes. No change is necessary and visitors should alight at Addison Road when the huge building will be seen.

ACCESSORIES AND EQUIPMENT.

A Preliminary Survey of the Olympia Exhibits.

NE of the greatest delights of the car owner is to and add accessovarious ries to his car after he has purchased it; and there is no doubt that a good deal of curiosity exists in the mind of the prospective buyer to-day, who is looking forward to taking up forward motoring again after a fairly long absence from the



A neat petrol can carrier for the running board.

driver's seat. In the old days it was possible to purchase almost any sort of "gadget," and from year to year the public looked forward expectantly to various types of new accessories which would improve the running, comfort, or appearance



A new Tangye jack.

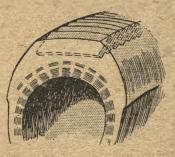
of the car.

The first post-war show at Olympia, therefore, will be of more than passing interest to the motoring public, which is returning to its former hobby with abundant enthusiasm, and anticipating a great improvement in accessories and equipment as a result of war experience. So far as we can judge at present the public will not be disappointed, for a very full and comprehensive range of goods will be on view during the Show.

Undoubtedly the small "gadget" makes a direct appeal to the average car owner, and the stands of such concerns as Brown Bros., Ltd., Smith's, of Great

Portland Street, and Markt and Co. will prove a certain attraction to many thousands of Olympia's visitors.

Now that the winter is coming, the comfort of the driver must needs receive attention, and Brown Bros., Ltd., are making a special feature of "Glowwarm" gloves, which are electrically connected and maintain the hands at a

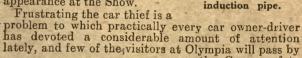


The Gofa tyre which is re. inforced with metal lattic

comfortable temperature for driving. In addition, Brown Bros., Ltd., will show such novelties as the Boyce valve connector, various Duco specialities, tyre pumps, lubricators, and hundreds of other accessories invaluable to every owner-driver.

It is doubtful whether at the last Olympia Show such a thing as a revolution indicator was at all popular, but as a result of war experience this and many other new accessories and fitments will be exhibited. S. Smith and Sons (M.A.), Ltd., will include revolution counters, as well as all types of dash fittings, amongst their exhibits. Markt and Co. will have a wide selection of speedometers, jacks, horns, and foot pumps, etc.

When the visitor has finished examining the vast array of accessories, he can turn his attention to other items in the main-tenance of the car. Tyres are always of vital interest, and although no great changes in the outward design will be noticed, workmanship and material are vastly improved as a result of war experience. Such wellknown makes as the Stepney, Beldam, Palmer, Clincher, Rom, Goodrich, Goodyear, Rom, Goodrich, Goodyear, Henley, Dunlop, Avon, Macintosh and Burnett will be well represented, whilst an ingenious type-known as the Gofa-in which metal lattice work is used, will make its appearance at the Show.





The Igna plug cleaner, specially made for effectively cleaning the Igna plug.

the Cowey safety lock, which is attaining a great degree of popularity. A new jack will be shown by the Imperial Motor Industries, Ltd., which is one of the many Tangye designs. There is no internal mechanism, and it can be litted to its work in a mo-ment. There are various models made, one which, the R.L., is specially suit-

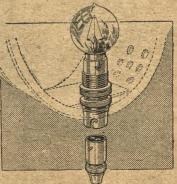
The Bowden extra

air inlet which is

fixed direct to the

able for light cars, being small and easily operated. There is no doubt that the private car owner will use his car at night time a great deal more to-day than

he did before the war, owing principally to the difficulties of transit which have arisen as a result of war Car economy. lighting, therefore, becomes a problem requiring very careful consideration on the part of the owner-driver, and will receive more than the usual amount of aiter tion this year.



A neat fitting for converting an acetylene lamp to electricity.

ACCESSORIES AND EQUIPMENT (contd.).

So far as electricity is concerned, the C.A.V., Lucas, Brolt, and Smith's equipment, although differing in many respects, are all equally reliable, an endeavour in each case being made to arrange the wiring so that for purposes of control the dashboard fittings are neat and compact, whilst at the same time being-accessible. A new departure of special interest to light car and

R-5077

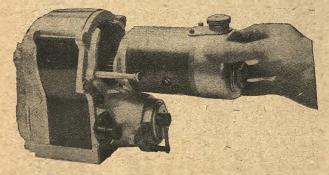
A neat aluminium number plate made by R. W. Coan. cyclecar owners is the Lucas "Magdyno," which consists of a Thomson-Bennett magneto with a Lucas dynamo introduced above the armature inside

the magnets. The dynamo is retained in position by a strap and knurled screw, whilst the magneto drives it at the opposite end by ordinary toothed wheels. Acetylene will be well represented, generators of the diving bell and riddling types appearing on most of the stands showing accessories. Compressed acety-

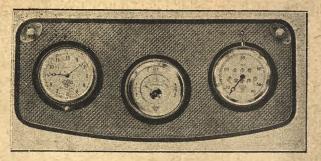
Acetylene will be well represented, generators of the diving bell and riddling types appearing on most of the stands showing accessories. Compressed acetylene, however, will command a great deal of attention, and one of the neatest forms is the "Meteorlite" made by Allen Liversidge and Co., of Victoria St., London.

An ingenious fitment recently introduced by Taylor's, of Store Street, is an electric lamp terminal enabling an ordinordinary acetylene or side lamp to be converted to electricity in a few mo-ments. It consists of a lamp holder with a bayonet fitting at each end and two screwed rings, which enable the whole to be introduced into an acetylene lamp and gripped into position. Another simple but very useful fitting introduced lately by the same concern is a petrol can carrier, which

consists of two substantial metal strips screwed on to the running board, and in which a petrol can is secured by means of winged nuts. Now that benzole is being used extensively extra air inlets which can be fitted to the induction pipe will command atten-



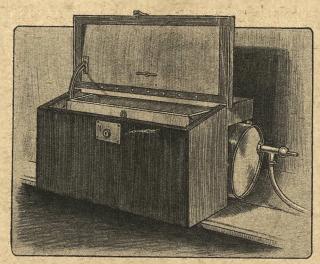
Lucas's "Magdyno" suitable for small cars. It combines a Thomson-Bennett magneto and a Lucas dynamo. The latter is housed inside the magneto itself, as can be seen in the photograph.



The Smith dashboard, combining bezel-wind clock, bezel-wind switch speedometer and ammeter.

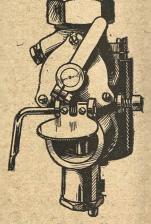
tion and, in this connection, the Bowden extra air inlet should not be overlooked. Number plates, if obscured by mud, etc., may give trouble, but Coan's aluminium plates, in which the figures themselves are raised and polished, should satisfy the sternest guardian of the law. Various types of Claudel-Hobson carburetter will be exhibited, the one of most noteworthy interest to the light carist being the type M.1.A. The general feautres of the Claudel-Hobson

carburetter are too wellknown to require recapitulation, but the easy me-thod of adjustment and the air flap which facilitates easy starting are features which should not be overlooked. Another carburetter known as the "Beemac" will be shown by the Birmingham Accessories Co. This is entirely automatic operating on a principle which regulates a proportionate suction of air and petrol for all positions of throttle opening. Should it be necessary, for reasons of climatic or fuel alteration, the jets can be changed without stopping the engine. In addition to this carburetter the Bir-



The combined tool locker and cylinder holder for accommodating "Meteorlite" compressed acetylene.

mingham Motor Accessories Co. will be showing, amongst other goods, motor jointings in any shape or size, plain or graphited with or without brass wire gauze insertion. Economy is a watchword nowadays, and in this connection the visitor will not overlook the "Enot" patent cork discseated petrol tap of which patterns are available for use on motorcars of all descriptions. It is claimed with this type of tap that it is positively petrol-tight under pressure, will never leak, seize or slacken, and should, therefore, be a



The Claudel-Hobson ype M.1.A. carburetter for light cars.

very economical fitting in the long run.
Radiators, bonnets, tanks, silencers, chains, hoods, motor coachwork, steels, disc wheels, tyre inflators, etc., will all be exhibited.

OVER THE WIRE

The Benzole Scarcity—Help Wanted—London-Edinburgh
Non-stop Engine Test—Warning Devices—
London's Fogs.

Inside News o Current Events

THE SPIRIT IS WILLING, BUT-

A WEEK or two ago I made reference in these columns to the difficulty in obtaining N.B.A. benzole, and I have had my attention drawn to the fact that the inability to procure this fuel is due to the difficulties of distribution. As I have not paid a visit myself to Horseferry Road, I have not yet been able

to sample this particular brand. A correspondent having read my previous remarks has written me to say that he finds no difficulty in obtaining supplies in Hyde, but it would appear that he obtains fuel from a local chemist. This may explain my difficulty, and instead of wasting time in garages in the future, I will betake myself to the nearest bootmaker's, who may be able to supply me with the precious fluid. Our correspondent, however, does not specify that the benzole he obtained is that known as N.B.A., and I should like, therefore, to hear further from him regarding the matter.



Mr. Rex Mundy.

this forthcoming test four certificates will be issued: first of all for the G.N. cyclecar itself, secondly for the fuel consumption of the Sthenos carburetter. and thirdly and fourthly for N.B.A. spirit and the Easting windscreen. Mr. Mundy, who is doing this "stunt" on his own, is perhaps not so well known in the motoring world as he is, in the ranks of motorcyclists, his successes in the latter sphere being very property. In the light car world be

successes in the latter sphere being very numerous. In the light car world he came into prominence in the Grand Prix, in which he drove a Greenengined Morgan. Unfortunately, however, the front wheel collapsed, which spoiled his chances of success. He has obtained highest awards driving G.W.K.s, Humberettes, A.C.s and Morgans in numerous events, and in addition to competing in the British Isles has been successful on many occasions in France and Holland.

IT is wonderful the variety of warn-

TOOT-TOOT.

ing devices which are fitted at the present day to people's machines. There are mild and strong hooters; there are musical and noisy ones. There is the one you cannot hear and one that makes a noise like 64 thunderstorms rolled together. I have recently heard of a warning device which plays a tune, but the report carefully omitted to say what melody the owner favoured. I hope it was nothing so sentimental as "Sing Me to Sleep" or "I Hear You Calling Me," either of which I am afraid would have the opposite effect to that desired, namely, to remove the obstruction from the motorist's path. Personally, I consider that every machine should have two hooters, one for town work and one for country highways where farm carts and chars-a-bancs are met with every now and again. For the former purpose I have fitted on my machine one of the long type Apollo electric horns, and for the latter a Klaxon horn of the coffee grinder type. The latter I only use for very sleepy individuals, and its efficiency I judge according to the intensity of the remarks it evokes.

MISTS WE WOULD GLADLY MISS.

WE have recently been favoured in London with a few of its "particulars." It is now about four years since I experienced one of these delights. In spite of all the changes that have happened to men and things during the war, London fogs appear to have remained "as you were." On Sunday night I was on my way from Southall to London, when I ran straight into the fog, first of all at Hanwell and later on at Acton. This is one of the few things that really frighten me when in a car. The utter helplessness that one experiences is most unnerving, but I was fortunate to have been on this particular road when the fog descended, for, being on a light car, it was a more or less simple matter to keep the front wheels on the tramlines and proceed slowly on low gear. Motorbus drivers, on account of the height of their seat from the ground, were unable to take advantage of this tip, for they were unable to see the tramlines

INADEQUATE PRODUCTION.

SO far as I can see one has only to obtain a draughtsman to make a plan and elevation of any weird-looking design of light car or cyclecar, obtain a certain amount of publicity, and orders, accompanied by deposits, roll in. This is certainly a very extraordinary state of affairs, and it appears to me that many people who are in possession of money are not in possession of brains. Taking these facts into consideration, it is not difficult to realize the extraordinary demand which must exist in concrete form for a machine which actually does exist and which has been manufactured, though in somewhat limited quantities. It does, therefore, not surprise me that one of the best-known London manufacturers of light cars, recently described in The Light Car and Cyclecar, is so inundated with orders that the works are absolutely inadequate to cope with the rush. I understand from their works manager that he is looking out for other manufacturers who have facilities to assist him in securing a large production of this well-known light car. He would be particularly attracted to a manufacturing concern in or near London with large premises and plant capacity, that would be suitable for the production of light cars either in part or in whole. If any manufacturer should feel disposed to go into the matter further, and would communicate with me, I shall forward his letter to the proper quarter.

NON-STOP ENGINE TEST.

IN conversation with Mr. Rex Mundy the other day the question naturally turned towards his forthcoming R.A.C. Observed Trial. As previously announced, this will be a non-stop engine test from London to Edinburgh on a standard G.N. This is not the first time that Mr. Mundy has set out on a test of this nature, for some time ago the A.-C.U. officially observed him in a similar trial from London to Edinburgh on a water-cooled Williamson sidecar combination. For

OVER THE WIRE (contd.).

at all; but about five bus drivers who were hopelessly lost in my vicinity had this great advantage of a light car brought? home to them in no uncertain way, for they followed on in convoy fashion behind me, keep-

ing a sharp look-out for my rear light. We are always so accustomed to saying everything horrible we can about tramlines and tramcars in general that it is quite a relief to know that in some circumstances they can really be of use.

AU COURANT.

THE WOMAN'S CAR FROM THE WOMAN'S POINT OF VIEW.

THE average light car, in the opinion of the writer, does not meet with the requirements of the woman driver. As most points raised concern details, it would not seem a difficult matter to turn any existing light car into the writer's ideal machine.

In the first place, mechanical perfection should be the first thought of the designer, it being most important that a woman's car should be as reliable as possible, for the writer is assured that engine trouble is far more annoying to a woman than a man. Adjustable seating and adjustable pedals are second in importance; at present the distance between the

one which fits so well on to the bonnet that, however hard the rain runs down the glass, none percolates through the cracks on to one's skirt. It should be high enough to fit on to the hood when in use, and should have hinged wings at the side as extra protection from wind, dust and the weather in general.

A concealed hood is worth mentioning, as it would gather less dust than the ones now generally used. As maximum safety is necessary in a woman's car, the manufacturers would do well to build her a chassist with four wheels, as a four-wheeled vehicle



Mr. Greaves competing in the Liverpool Motor Club's event last Saturday. The machine is photographed ascending Pen-y-Bal hill in South Wales.

seat and pedals is too great for the average woman. The pedals should also be adjustable to enable a woman to use them with comfort and safety.

An addition which would be welcomed by the married woman driver is a safety catch on the door; this would give her peace of mind when taking the young members of her family with her. A self-starter would also be an advantage, as it is annoying to start out with clean gloves and arrive at one's destination with soiled ones; the starting handle is so near the ground that even on the finest days it is bound to get dirty. The present type of windscreen leaves a lot to be desired. The ideal windscreen is

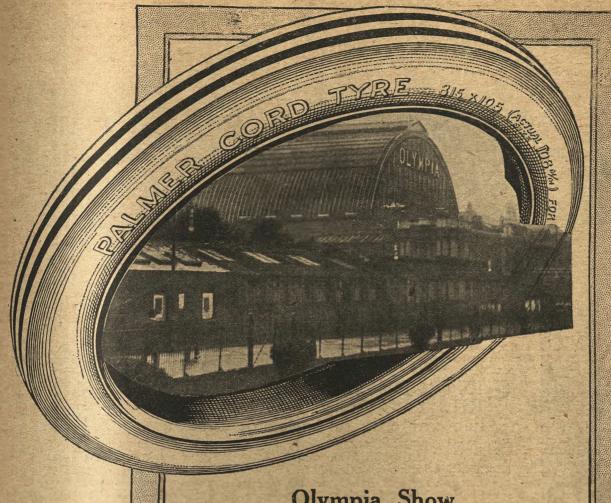
grips the road far better than one with only three. The colour of the car, of course, is a matter of taste, but it is generally felt that a light colour is the most useful, as it shows dust less than a dark one. The upholstery should be of a dark leather to contrast, and only just enough bright metal should be used to relieve and smarten up the car. Brass usually looks best, but nickel is so much easier to keep clean.

best, but nickel is so much easier to keep clean.

"O.M.S." mentions in her article that one's skirt hem gets draggled by coming in contact with dusty floorboards; that, of course, is a point the manufacturer would find it hard to alter. A travelling rug on the hoards prevents this however.

J.C.B.

B42



Olympia Show.

N our Stand, No. 186, at the Olympia Motor Show, will be found displayed a wide selection of Palmer Cord Light Car Tyres—tyres which have consistently upheld their reputation for speed during the past season's competitions, and which have also worthily upheld their reputation for endurance under the most trying circumstances on our pot-holed and war-scarred roads.

We shall be pleased to meet you there!

Send fer booklet, "Palmers, Petrol, and Power," post free.

PALMER TYRE LTD., 119-123, Shaftesbury Avenue, London, W.C. 2.







Unique and Efficient Cooling System - A Severe Test of the Friction Transmission.

HE policy which is being adopted by the Palladium Autocar Co. in respect to the delivery to the public of their friction-driven light car, the Palladium, is a very commendable one. For several months past the Palladium may have been seen on the road, and probably many prospective pur-chasers of this light car have wondered why delivery has not yet commenced. The reason is that several

The power unit of the Palladium showing how the cylinders are encased for cooling purposes.

experimental machines have been erected, with the sole idea of driving each to destruction by putting them through every possible test for soundness of construction and the reliability of every component. By this means the final production, when it comes into the hands of the exacting individual, should give the utmost satisfaction both to the manufacturers and the purchaser. Incidentally, this policy is being pursued by several other well-known light car concerns.

A Preliminary Run.

When taking over a new machine of this description, where individuality of design is prominent in every part, a double interest is attached to the run if a tour of the machine shops has been made and a visit paid to the experimental department before the start.

Before leaving the Palladium works we were afforded this opportunity, and as a result of this we felt that the cruellest treatment meted out to the machine could not strand us on the road. Before taking the little two-seater over, we enjoyed a run in

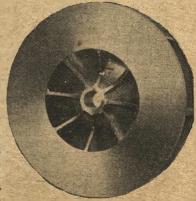
the immediate vicinity of the works. Actually this was quite unnecessary, as the driving position and the disposition of the pedals and levers is so comfortable and natural that we were at home in the car in a few minutes. Running out into Putney High Street, we were quick to appreciate the flexibility and control of the engine and the ease of the steering.

Speed on the Level.

On arriving at Wimbledon lunch was taken, and afterwards we were soon on the road, and, by way of worcester Park, Ewell, Epsom, Ashtead, and Leatherhead, ran into Dorking. During the course of this short trip, we were able to let the Pafladium out and although the part of the pafladium. out, and although no speedometer was titted, the maximum speed attained, probably, was between 45 m.p.h. and 50 m.p.h. So far we had not had a real opportunity to test the machine on anything approaching a hill, so, as a preliminary, we ran into Reigate. Reigate Hill revealed the surprising pulling power of the opening reverse the present th ing power of the engine on top gear, the ratio of the latter being about 4 to 1. By retarding the ignition the gradient could have been surmounted on top, although the engine revolutions were extremely low. Even in these circumstances there was absolutely no sign of slip between the friction discs; but should. this have developed, pressure on the disc-tensioning

pedal would have immediately rectified the trouble. It might be mentioned that during the time the ma chine was 'in our hands we had no need to call upon this tensioning pedal, which goes to demonstrate the efficiency of the arrangement adopted on the Palladium which provides correct tension on the different gears.

To revert back, if was mentioned



Air is drawn in by the vanes on the flywheel and expelled at the edges.

that a change down on Reigate Hill was not essential, but owing to the system of cooling adopted, the faster the engine revolves the more efficient is the cooling effect. Each cylinder is encased, and the air is drawn in over the heads of the cylinders by the flywheel, the latter having specially-shaped vanes to promote circulation.

B45

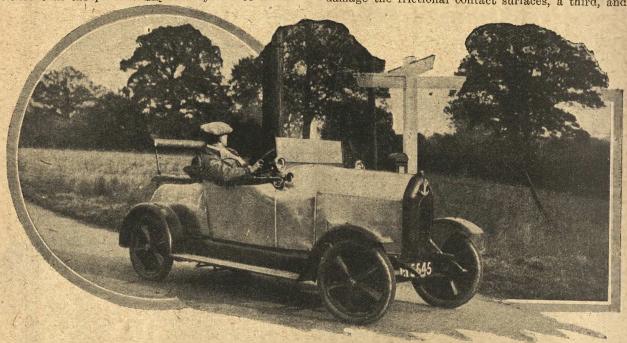
OUT_WITH A PALLADIUM (contd.).

The following morning we replenished the tauks and were soon on the Eastbourne Road, with an additional passenger in the dickey seat. Upon running into Purley, we found the drip feed had ceased to function, but after blowing through the oil pipes this trouble was soon put right. It should be mentioned that the present drip-feed system of lubrica-

was much cooler after a hard climb on third gear than a slower climb on top. We descended a steep hill with the object of testing the braking system. Each independent set of brakes we found particularly efficient, which is not surprising, as they are of ample dimensions operating inside drums on the rear wheels.

A Severe Test.

To show that it is almost impossible severely to damage the frictional contact surfaces, a third, and



Which way? Signposts are now being overhauled and repainted and a stop has therefore to be made to make enquiries before proceeding. The Palladium driver is perplexed on arrival at the four cross roads in New Chapel on the Eastbourne Road, as the lettering has been painted over.

tion has not been definitely settled, as provision has been made in every way for the installation of a mechanical oil pump, making the system forced fed.

Hill-Climbing.

Turning off to the left at Purley, we soon left Caterham and Godstone behind, and commenced to climb Tilburstow Hill. The average gradient of this hill is about 1 in 10, but it means a hard pull for perhaps half-a-mile, and with three up we considered that this would give the Palladium a chance of proving its worth. Unfortunately, on the worst portion a plug "packed up," with the result that one cylinder only was functioning. The trouble was traced to a short-circuit inside the body of the plug, and, having fitted a new plug, a clean ascent on third gear was made. It should be mentioned that the plugs are so situated in the cylinder that although the engine was pouring forth a blue cloud from the exhaust practically the whole time, on no occasion did we experience a dirty plug.

To improve the cooling still further, each valve cap is elongated and provided with fins which protrude through the casing. It was found that the engine

a most efficient, means of pulling up in an emergency was tried. Whilst proceeding on top gear at about 15 m.p.h., the gear lever was pulled back into reverse and the engine accelerated. The effect was instantaneous and forward progress of the car arrested in a very positive manner. After coming to a standstill, the car started away easily in reverse. This is not recommended as general practice, but serves to illustrate the efficiency of present-day friction drive. In an emergency, however, assuming that both brakes failed, it might be the means of averting a serious accident.

A stop was made at East Grinstead for lunch, and on embarking on the return journey we took the dickey seat passenger into the forward seat. Although perhaps a trifle cramped, the driving position was by no means uncomfortable.

The suspension and comfort of the Palladium generally were found to be excellent in every way, being far and above many cars which we have driven.

We should like to add in conclusion that the absence of a differential was hardly noticeable and that the final chain drive proved absolutely silent.

The A.A. and Spare Parts.

The A.A. is interesting itself in what is one of the biggest motoring problems of the day—that of obtaining spare parts. Motorists requiring spare parts are strongly advised, if they are members of the A.A., to communicate with the nearest of the 20 A.A. branch offices distributed over the country. Three-wheelers at Olympia.

In reply to numerous inquiries, we would like to point out that three-wheeled cyclecars will not be exhibited during the first week of the Show, but will appear in the Cycle and Motor Cycle Exhibition held from November 24th to 29th at Olympia—one week after the Motor Show.

Patron, H.M. The King.

Thirteenth



International

MOTOR EXHIBITION

organised by

The Society of Motor Manufacturers & Traders, Ltd.,

in connection with the Royal Automobile Club,

OLYMPIA, NOV. 7-15

CHARGES for ADMISSION

TUESDAY—11th, BEFORE 6, 5/-

THURSDAY—13th, BEFORE 6, 10/-ALL OTHER TIMES.

2/6

Book of 8 non-transferable tickets, giving one admission each day during the Exhibition, can be obtained at one guinea each (tax included) on application with remittance, to the Exhibition Manager, 83, Pall Mall, S.W.1.

OPEN DAILY 10 A.M. to 10 P.M. Universal in its comprehensiveness, revealing phenomenal advance in engine design.

Latest novelties in Accessories, Components, Tyres, Wheels and Rims.

Band of H.M. Welsh Guards thrice daily.

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THE APOLLO "Number One" is quite an exceptional plug both in design and construction-and, being so, it affords quite an exceptional service.

Experts agree that it is by far the best plug for high-speed, high-compression engines—as one remarked, "It is absolutely O.K. for 'hot-stuff' engines."

Heat never affects the "Number One" -race the engine to its limit and you'll still find the "Number One" faithfully and efficiently performing its function. You can obtain APOLLO "Number One" Plugs at any agents -there is no need to accept substitutes, as we guarantee delivery by return,

APOLLO PLUG MFG. Co., Ltd. Moseley Street, BIRMINGHAM.



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POUNDS.



" 1919 EN MOTOR POLICY

for Cars used for Private, Pleasure or Professional Purposes in the British Isles and for Egypt.

IN MOTOR CAR Insurance the best is the A cheapest, the best representing that which affords the most complete cover against the many serious risks the motorist, and his ear, is exposed to. Insurance that does not do this is of no practical use, for it is the unexpected and unprovided for that invariably occurs.

The "British Dominions" 1919 Empire Motor Policy has been carefully brought up to date to embrace the increasing risks of modern motoring so that the holder may view, with a degree of equanimity, the prospect of mishaps which, even with the greatest skill and care, are unavoidable.

The Policy, in addition to the covers given above. provides for:-

> Return of premium whilst the car is laid up. Cover whi st used on the Continent (exc'uding certain countries) for a period not exceeding

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Full insured va'ue in the event of total destruction. Defence in any Police Court proceedings in the United Kingdom in respect of an accident which may be the subject of an indemnity under the

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Write to-day for full particulars and prospectus and insure yourself and your car to the best possible advantage.

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NOTICE TO CORRESPONDENTS.

Preference is given to letters intended for publication which are to appear above the writer's name and address, but where this is not desired, initials or a nom de plume will be substituted if requested in view of the

The Suggestions of To-day may be the Realities of To-morrow

peculiarly wide publicity afforded to letters en light car and cyclecar subjects appearing in these columns, readers are asked to make that letters as brief as possible so that a greater number may be published. Letters received up to Monday morning first pest usually appear in the following Friday's issue.

Standard Machines and the General Efficiency Trial.

Your contributor in "Over the Wire" is rightly exercised over the question of standard models. He suggests that "no machine should be called a standard model unless a minimum, say, of 50 machines, similar to that entered have been manufactured." (Notice "have been, not "are likely to be.") Your contributor hardly realizes, perhaps, that such a definition would have cut out all but a few of the cars entered for the "general efficiency" trial, of which he is speaking. We admit that we ourselves have not manufactured 50 four-speed machines as yet, though there are a considerable number on machines as yet, though there are a considerable number on the road already, and we hope that before long the number will very much exceed 50. Are there, for instance, 50 Eric-Campbells or Biforts on the road yet? Have the G.N. concern made 50 of their new model, which differs materially from the well-known pre-war type? Most of the machines entered would have been barred by your contributor's definition.

Moreover, he does not foresee the result. No new model, nor any warlation from former received and be tested in any

nor any variation from former practice, could be tested in any

public trial. Yet this testing is really one of the most important advantages of trials. It is only in this way that the manufacturer, or the public, can obtain reliable information as to the advantage, or otherwise, of any new production. Fifty cars is not a large output, but we should be sorry to make even that number before we had proved them in a public test, nor do we think that the public is well advised to venture on the unknown.

No doubt it is possible to fake a "standard" car for competitions in a manner which the manufacturer has no intention of repeating. It should not be difficult to detect these cases. On the other hand, any model which has been advertised and catalogued, or which has been described in one or other of the important motor journals should certainly be considered "standard." We need not add that all the cars entered in the "efficiency" trial would have come under this category.

MORGAN MOTOR CO., LTD.

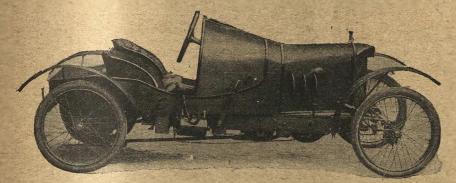
Malvern Link, Worcester.

Glycerine as an "Anti-freezer."

With reference to your paragraph in "Over the Wire," headed "Now the Winter is Here," by your correspondent "Au Courant," in your issue of October 18th, I am wondering what glycerine he must have been using to get over heating and ill-effects on the rubber connections. Personally I have used glycerine as an "Anti-freezer" for many winters, and find no trouble of any kind with it. While it gives one I pointed this out to him he said, to my astonishment, that no blame could be put on him as it was not lighting-up time, and produced a daily paper, dated October 6th, showing sunset as 5.12 p.m. and lighting-up time as 6.12 p.m. (one hour after sunset) instead of 5.42 p.m. (half-hour after sunset) according to law. One does not expect cyclists to read motoring papers to learn the correct, lighting-up times, but it is a pity that newspapers mislead their readers.

LR4540.

Brentwood.



The Challenge cyclecar, which was described in our issue of July 5th, under the heading "an interesting cyclecar with epicyclic gears." It is being handled by Mr. L. Marcus, 9, Golders Green Crescent, N.W. 4, and has a single-cylinder engine, single chain drive to countershaft, then through epicyclic gears direct to the back axle by means of a single belt. It is hoped to produce the machine at about £75.

a comfortable feeling in frosty weather, it saves that awful business of continually filling and emptying one's radiator.

Whitehall, S.W. 1.*

W. McClure.

Incorrect Lighting-up Times.

May I trouble you with another aspect of the rear light controversy, and invoke your assistance in persuading newspapers to print the correct lighting-up times? On October 13th at 6.8 p.m. I narrowly missed running down a cyclist on the Great North Road. He was riding without lights, and when

The Unlucky "13th."

Pity the poor English manufacturer! On October 13th my garage people dispatched an order for spare parts to the manufac-turers of a "well-known cyclecar." Up to the time of writing the order has not even been acknow-ledged. Pity the poor English manufacturers, and others! Maybe he is superstitious!

AN OWNER! London, N. 7.

In Support of the Rear Light.

May I, as a cyclist, endorse "F.J.W.'s" remarks in your-issue of October 25th on rear lamps. They take up but little time to look after, are a great safe-guard to the cyclist, and a help to other faster traffic. Mr. Cook's ideas really are the limit in selfish-ness. Why should a motorist with a measure of mechanical power at

his command be compelled to travel at a much slower pace than necessary because of the obstinate refusal of such cyclists as Mr. Cook to provide a simple thing like a rear lamp? With regard to these lamps going out, etc., if these people would utilize a portion of the time spentian trying to effect the disappearance of the rear light, in a little occasional attention to the wicks and reservoirs of their lamps, their troubles would disappear. Incidentally, Mr. Cook's remarks on motorists and their "vicious principles," etc., appear to be a bad case of the pan calling the kettle black.

Withington.

O.H.

THOUGHTS AND OPINIONS (contd.).

The 90 Degree Twin Engine.

I have read with considerable interest Mr. Buckingham's letter in The Light Car and Cyclecar of October 25th. Being one of those unfortunates who is obliged either to have a motorcycle combination or walk, I have been expectantly awaiting the great day when the crudities of the former method of locomotion would have penetrated the perception of a reputable manufacturer. I think Mr. Mantell's article was well timed, and Mr. Buckingham's com-

timed, and Mr. Buckingham's comments thereon have filled me with hope for the future. There are, however, one or two little points upon which I would like enlightenment in respect to the 90 degree twin engine we are promised. Why, if this type of engine is functionally so excellent, has it not been more generally adopted? I am aware that theoretically the 90 degree twin engine and the horizontally-opposed can be almost per-fectly balanced, and yet in actual fectly balanced, and yet in actual practice, so far as my experience goes, they do not feel materially different from any other twin, and certainly seem to develop "periods" quite as badly. Also Mr. Buckingham speaks of incorporating up-to-date practice in every respect. Now this is quite a cut and dried 1919 pattern phrase which I think would stand a little detailing. It appears to me that such "up-to-date" motorcycles and cars as we have been graciously supplied with are, in point of engines,

cars as we have been graciously supplied with are, in point of engines, not one whit better than pre-war models. In fact, where motorcycle engines are concerned, I am inclined to think that if anything they are a little worse; that is, in the power for c.c. and consumption sense: In conclusion, I would remark that I do not put these queries in a carping spirit, but am honestly out for enlightenment. I have noticed in the various motor papers many queries of a similar nature, and feel sure that a little information on these points would be greatly appreciated by others as well as myself.

Shepherd's Bush, W.

Simplicity and Not Elaboration Required.

Mr. Buckingham is certainly to be congratulated on his expressed determination to market a small twin-cylinder-engined car of simple design; many small cars have all the complications of the conventional large cars, so adding to their

cost of upkeep, and also advancing their original purchase figures alarmingly. We have the G.N. and the Morgan, and although the former has not yet materialized to the production stage, it would appear—notwithstanding disappointments— to be approaching it. These are cars which seem to me to satisfy a desire shared by a large number of motorists,



Five up to the top of Beachy Head! The Singer bore its load valiantly and without showing any signs of distress.

who do not care for motorcycle combinations, excellent as they are in their way, to possess a small car, giving a certain degree of comfort. Furthermore, although they may not be gifted with any mechanical ability, they can feel confident of carrying out their own repairs, and at any rate have a thorough knowledge of the working parts.

The Buckingham no doubt will be such another, but there is a big field for enterprise, and the few we know of cannot, I feel sure, cope with the great demand existing, and open to cultivation, for a really simple, well-designed small car at a very moderate figure. Prospective purchasers have neither aesthetic ears nor a desire to delve too deeply into their small capital.

JOSEPH O'NEILL.

Manchester.



The Morgan team in the Reliance Cup Open Trial, held by the Liverpool Motor Club, in North Wales last Saturday.



Our prices of October 15, 1918, are still in force.

	C					
SIZE	SQUARE TREAD	UNIVERSAL	NON-SKID	TUBES		
$30\times3^{\frac{1}{2}}$	5. 1. 9	5.17. 0	£ s. d. 7. 0. 6	£ s. d. 1. 1. 6		
810 × 90	4.15.6	5. 9.9	6.16.3	1. 0. 9		
815×105	6.14.0	7.14.0	9. 4. 0	1. 9. 0		
880 × 120	8.14.3	10. 0. 6	11. 3. 6	1.16.6		

Ask your Dealer regarding their quality and the price of other sizes.



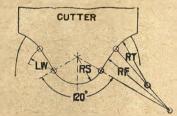
STANDARDISATION of CHAINS

Cutter Forms for Roller Type up to \(\frac{3}{4} \)-in. Pitch.

THE Association of BRITISH DRIVING CHAIN MANUFACTURERS is dealing with the Standardisation of Roller Chains, and the new standards up to \(\frac{3}{2}\)-in. pitch have already been announced. For the convenience of chain users and to ensure complete interchangeability, tooth forms have also been standardised. The ASSOCIATION FORM, while not being identical with any of the existing forms, incorporates the essential features of the constant and the constant is shown in the diagram.

standardised. The ASSOCIATION FORM, while not being identical with any of the existing forms, incorporates the essential features of each. The general construction is shown in the diagram. It consists of a ROLLER SEATING, WORKING FACES, and TOPPING CURVES, all of which are arcs of circles. The angle of 1200 subtending the roller seating has its origin at the centre of the diameter of the roller seating. The working faces are comparatively flat curves tangential to the roller seating, and the topping-curves are tangential to the working faces and of such a radius as to permit a suitable height of tooth.

The dimensions of tooth forms for chains up to \(\frac{3}{4}\)-in. pitch are given in the following table:—



Roller Dia.	Cutter No.	No. of Teeth to Cut.	Length of Working Face. L.W.	Radius of Roller Seating. R.S.	Radius of Working Face. R.F.	Radius at Top of Tooth R.T.
'250"	1 2 3	9-12 13-19 20 and over.	12" '12" (min.)	126″	'45" 1 125" 3 825" (min.)	'45" '18" '052" (max.)
'305"	1 2 3	9-12 13-19 20 and over.	-16" -205" (min.)	`154"	1.5" 5.1" (min.)	.5" .24" .07" (max.)
'335"'	1 2 3	9·12 13·19 20 and over.	·16" ·205" (min.)	.169″	1'5" 5'1" (min.)	·6" . ·24" ·07" (max.)
'4"	1 2 3	9-12 13-19 20 and over.	·20" ·256" (min.)	202"	75" 1.875" 6.375" (min.)	.75" .3" .087" (max.)
·475"	1 2 3	9-12 13-19 20 and over.	·24" ·307" (min.)	'240"	2.25" 7.65" (min.)	'9" '36" * '105" (max.)

Particulars of Association standards for the larger roller chains and their tooth forms will be detailed in subsequent announcements. Eventually, when complete standardisation has been effected, full details will be published in pamphlet form; applications for which should be made to the Secretary.

Members of A.B.D.C.M.

BRAMPTON BROS., LTD., BIRMINGHAM
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Bassishaw House, Basinghall Street, LONDON, E.C.2.

GUIDE TO DETAILS OF POST-WAR MODELS.

A Summary of Light Cars and Cyclecars of which Details are Available.

ENGINE: B									
Make.	Bore and	Cubic capac.	A C	Nom.	No	Sealing.	GENERAL FEATURES.	Price.	Described in issue
	m.m	C.C.	-		-	02			dated
A.B.C		. 1200	a.c.	10	2	2	Horizontal twin engine. Bevel-drive, Wheelbase, 8 ft. 6 ins. Track, 47 ins. A.B.C. Motors, Walton-on-Thames.	about £20(April 26, 1919
A.=C,	69 by 100	1496	w.c	10	4	2 and	Three speeds and reverse, final worm drive. Dynamo lighting set. Wheelbase, 8 ft. 5½ ins. Track, 3 ft. 10 ins. Auto-Carriers	Not settled	Oct. 28, 1918
	56 by 100	1477.8	w.c.	10	6	2 and	(1911), Ltd., 181-182 Hercules Road, London, S.E. Three speeds and reverse final worm drive. Dynamo lighting set. Wheelbase, 9 ft. Track, 3 ft. 10 ins. Auto-Carriers (1911) Ltd., 181-182, Hercules Road, London, S.E.	£550 approx.	Oct. 11, 1919
AC. BANTAM		-	-	10	2	2	Horizontally-opposed twin-cylinder engine with shaft drive, Auto-Carriers (1911), Ltd., as above.	Not settled	Dec. 9, 1918
AIREDALE	63 by 120	1496	w.c	10	4	2 and	Four speeds and reverse. Final drive by bevel. Dynamo lighting. Nanson, Barker and Co., Esholt, Yorks.	Not settled	Sept. 27, 1919
ASHTON	64 by 85	1094	w.c.	10	4	3	Three speeds and reverse. Final drive by bevel. Wheelbase, 8 ft. Track, 3 ft. 10 ins. Ashton Evans Motors, Ltd., Liverpool Street, Birmingham,	about 290 Gns.	May 17, 1919
ASTON- MARTIN	_		w.c.	-	4	2	Four speeds and reverse. Final bevel drive. Bamford and Martin, 16, Henniker Place, Callow Street, London, S.W.8.	Not settled	June 7, 1919
AUTOCRAT	69 by 100	1496	w.c.	11	4	2 and 3	Three speeds and reverse, final drive by bevel. Lighting and starting set. Wheelbase, 8 ft. 6 ins. Track, 4 ft. Autocrat Light Car' Co., Edward Road, Balsall Heath, Birmingham. Coupé	2-seater £395 4-seater £425 £450	Nov. 4, 1918
A.V	85 by 85 85 by 85 70 by 85	961 961 654	w.c. a.c. a.c.	8 8 5	2 2 2	2 2 1	Two speeds and reverse, single chain drive. "Standard" "Runabout" Two speeds, single chain drive (monocar, arranged for second seat as an extra if desired). (1920 model). Ward and Avey, Ltd., Somerset Road, Teddington, Middlesex.	£130+122%	Jan. 11, 1919
BIFORT	65 by 100	1327	w.c.	10	4	2	Three speeds and reverse, final drive by bevel. The Bifort Motor Co., Farebam, Hants,	Not settled	June 28, 1919
BLERIOT- WHIPPET	85 by 88	988	a.c	8	2	2		about £175	June 7, 1919
BUCKING- HAM	89 by 88	1096	a.c.	-	2	2	Engine 90 degree twin. Two speeds and reverse. Dynamo lighting. J. F. Buckingham, Dover Street, Coventry.		July 26, 1919
CALTHORPE	65 by 95	1261	w,c.	10	4	2 and 4	Three speeds and reverse, final drive by spiral bevel Lighting and starting set. Calthorpe Motor Co. (1912), Ltd., Cherrywood Road, Bordesley Green, Birmingham.	2-seater 350 Gns. 4-seater 375 Gns.	July 19, 1919
	9.00						Coupé Sporting 2-seater .	375 Gns. 425 Gns. 350 Gns. 375 Gns.	THE PARTY
CARDEN	85 by 85	961	a.c.	8	2	1	Monocar. Three forward speeds. Kick statter; transmission chain and belt. Wheelbase, 6 ft, 6 ins. Track, 2 ft, 10 ins. Carden Engineering Co., Kennel Ride, Ascot, Berks.	120 Gns. 2-seater £150	April 5, . 1919
CITROEN (French)	65 by 100	1327	w.c.	10	4	3 and 4	Three speeds and reverse, final drive by live rear axle, employing Citroen type gear. Wheelbase (three-seater), 8 ft. 2 ins.; !fourseater), 9 ft. 2 ins. Track, 3 ft. 4 ins. André Citroen, II5-142 Quai de Javel, Paris, 4-seater	In France 8-seater about £300 about £318	March 1, 1919
COSMOS	75 by 75	1000	a.c.	10	3	3	Three-cylinder radial engine. Three-speeds and reverse, final drive by spiral bevel, no differential. Weight, 6 cwt. The Cosmos Engineering Co., Ltd., Lodge Causeway, Fishponds, Bristol.	about £210	
CROUCH	85 by 90	1018	w.c.	10	2	2 and 8	V-type engine, three speeds and reverse, final drive by chain. Wheelbase, 7 ft. 9 ins. Track, 4 ft. Weight, cwt. Crouch Motors (1915) Ltd., Tower Gate Works, Cook Street, Coventry.	8-seater £260	Aug. 9, 1919
DEEMSTER	62 by 90	1086	w.c.	10	4	2 and 4	Ogston Works, Southfield Road, Acton, W. 4.	2-seater 345 Gns.	March I. 1919
DOUGLAS	92 by 92	1225	w.c.	10	2	2	Sporting 2-seater	380 Gns. 440 Gns. 440 Gns.	April 29, 1918
DUPLEX	56 by 75	1479	w.c.	10	8	2 and 4	Three speeds and reverse. Final drive by helical crown wheel and pinion. Wheelbase, 8 ft. 10 ins. Track, 4 ft. British Company of the Property of Street, 10 ft. 66-68. Bridge Street.	2-seater 375 Gns. 4-seater 115 Gns.	June 14, 1919.
ENFIELD- ALLDAY	68 by 80	1452-6	a.c.	10.25	5	2 and 4	Aeroplane type static radial five-cylinder engine. Three speeds and reverse, spiral beveldrive. Track, 4 ft. Enfield-Allday Motors, Ltd., Fallows Road, Sparkbrook, Birmingham.	2 and 4 seater £350	July 12, 1919
ERIC- CAMPBELL	66 by 109 [.] 5	1498	w.c.	10	4	2	Three-speeds and reverse, final bevel-drive. Wheelbase 9 ft.	£395	June 28, 1919
F.I.A.T (Italian)	65 by 110	1460	w.c.	10.5		4 and coupé	Four speeds and reverse, final drive by spiral bevel. 4 ft. 2 ins. 2-seater 4-seater Coupe	£510 £530 £650	March 15, 1919.

GUIDE TO DETAILS OF POST-WAR MODELS (Continued).

TO DETINE OF TOO I WAN MODELO (COMMODIL)									
Make	Bore and stroke.	Cubic capac.	A.C		No.		GENERAL FEATURES.	Price.	Described in issue dated
G.N	m.m. 84 by 98	c.c. 1098	a.c.	10	2	2	90 degree balanced twin engine, three speeds and reverse. Transmission shaft and chain. Wheelbase, 8ft. Track, 3ft. 6ins. G.N., Ltd., Etna Works, Albert Road, Hendon, N.W. 4.	Standard £184 "Vitesse"	Jan. 25, 1919
G.W.K	66 by 100	1368	w.o.	10	4	4	Friction drive. Wheelbase, 8 ft. 9 ins. Track, 4 ft. Weight, 12 cwt. G.W.K., Ltd., Maidenhead.	£214 £275	Jan. 11, 1919
намртом	63 by 120	1496	w'c	10	4	2	Three speeds and reverse, final bevel drive. Wheelbase, 9 ft. The Hampton Engineering Co., Dudbridge, Stroud, Gloucester.	Two seater £425 Four seater £465	Ang Q
H F.G	85 by 110	1244	a.c.	10	2	2	Coupé Friction drive final drive by bevel, wheelbase, 9 ft. Track, 4 ft. C. Portass and Son, Ltd., Broadfield Road, Sheffield.	£500 about £195	0 (41,1 20)
LAGONDA (1920 Model)	67 by 77·8	1099	w.c.	11.9	4	4 and coupe	Three-speeds and reverse. Final worm drive. Dynamo lighting set. Electric self-starter. Wheelbase (two seater) 7 ft. 9 ins.; (four seater) 9 ft. Track 3 ft. 10 ins. Lagonda Ltd., Staines.	Coupé about 335 Gns. Four seater 355 Gns.	1919
LM	85 by 85	961	w.c.	8 -	2	2	Three speeds forward and reverse, chain transmission, disc wheels. Little Midland Light Car Co., Ltd., Blackburn,	210 Gns.	April 19, 1919
L.S.D	85 by 85	- 961	a.c.	10	2	2		about £ 140	March 15 1919
MAJOLA (French)	59 by 90 65 by 105	1000 1393	w.c.	8 10	4 4	2 4	Three speeds and reverse. Four speeds and reverse. 4, Rue Ney, St. Denis, France.	£340 £480	March 22, 1919
м.в	85 by 85	961	۱۷.C.	1	2	2	Three-wheeler. Two speeds and reverse. Final drive by chain. The Premier Motor Engineering Co., Premier Motor Works, St. George's Road, Bolton.	about £200	Aug. 30, 1919
MENDIP	67 by 89	1255	w.c.	11	4	2	Three speeds and reverse, final worm drive. Wheelbase, 8 ft. 3 ins. Track, 3 ft. 10 ins. The Mendip Motor and Engineering Works, Chewton Mendip, Somerset.	£255	March 8, 1919
MERCURY	64 by 102	1312	w.c	10	4	2 and 3	Three speeds and feverse, final drive by bevel. Wheelbase, 9ft. Track, 4 ft. Mercury Cars, Ltd., May Road, Twickenham.	£375 Coupe£465	March 1, 1919
METEORITE	66 by 109·5	1498	w.c	10	4	2	Three speeds and reverse. Final bevel drive. Dynamo lighting. Meteor Motors, Ltd., 142, Uxbridge Road, Shepherd's Bush, W.	£450	July 19, 1919
MILTON		-	w.c.	9	2	2	Friction drive and final chain. Two-stroke engine, The Lanark Motor Co., 108, North Vennel, Lanark.	£150	Jan. 18, 1919
MORGAN	85.5 by 85 85.5 by 85	976 976	w.c. a.c.		2 2	2 2	J.A.P. engine. Transmission, shaft and chain, 2 forward speeds. Wheelbase, 6 ft. Morgan Motor Co., Ltd., Worcester Road, Malvern Link, Grand Prix De Luxe (A.C.) De Luxe (W.C.)	Sporting £145 £150 £150 £160	Nov. 25, 1918
PALLADIUM	£9 by 107	1330	a.c.	10	2	2 and 4		2-seater 275 Gns. 295 Gns. 365 Gns.	Oct. 4, 1919
PEUGEOT (French)	66 by 105	1437	w.c.	10	4		Four speeds and reverse, final drive by worm. London Agent, 10, Brompton Road, London, W.	Not settled	March 15 1919
PREMIER	80 by 105	1055	w.c.	10	2	2	Three-wheeled runabout with twin V engine: Three speeds and reverse, Final drive by single, enclosed chain. Coventry Premier, Ltd., Coventry.	about £210	Oct. 25, 1919
RICHARD- SON	85 by 85	961	a.c.	8	2	2 and 3	Friction drive. Four speeds and reverse, final chain drive. Wheelbase, 6 ft. 9 ins. Track, 3 ft. 10 ins. C. E. Richardson and Co., Ltd., Finbat Works, Aizlewood Road, Sheffield.	£200	June 7, 1919
S.H.	60 by 110	1244	w.c.	10	4	2 and	Four speeds and reverse: Dynamo lighting and starting set. Collett Macdonald, 199, Piccadilly, London, W. 1.	-	Aug. 2,
SINGER	63 by 88	1096	w.c.	10	4	2	Three speeds and reverse; transmission.shaft; dynamo lighting. Wheelbase, 7ft, 6 ins. Track, 3ft. Weight, 10½ cwt. Singer and Co., Ltd., Coventry.	Phaeton £400 coupe	July 12, 1919
SPEEDY			a.c.	8	2	2	Two speeds and reverse. Electric lighting. Final drive by belt. The Pullinger Engineering Co., Latona Road, New Cross,	£500 110 gns.	Sept. 20, 1919
STANDARD	62 by 110	1328	w.c.	9.5	4	2 and 4	London, S.E. Two-seater and four seater. Three-speeds and reverse. Standard Motor Co., Ltd., Coventry.	2-seater Not settled 4-seater	June 7, 1919
STELLITE	62 by 89	1074	w.c.	9.5	4	2	Three speeds and reverse. Final worm drive. Electric and Ordnance Accessories Co., Ltd., Ward End Works, Birmingham.	Not settled £285	June 7, 1919
SWIFT	63 by 90	2200	w.c.	10	2	2 1, 2 or	Three speeds and reverse, final drive by bevel. Dynamo lighting set. Swift of Coventry, Ltd.	2-seater £375	_
TRIDENT	60 by 90	509	₩.C.	o l	-	3	Three-wheeler, two-seater, tandem, front wheel drive, three speeds, cantilever springs. Federated Exporters, Ltd., 11, Haymarket, C. W.	£160 2-seater	June 29, 1919
WILTON (1920 Model)	69 by 100	1496	w.c.	11.9	4	2 and 8	Three speeds and reverse, final worm drive, dynamo lighting. Wheelbase, 9 ft. Track, 4 ft. Weight, 11½ cwt. Wilton Cars, Ltd., 120-4, High Street, Tooting, S.W., 17.	£410 4-seater £430 coupe£450	Oct. 4, 1919
WOOLER MULE	85 by 90	1018	a.c.	10	2	2	Three-wheeler. Horizontally-opposed air-cooled engine, triple belt drive, final drive by shaft and worm. Wheelbase, 6 ft. 6 ins. Track, 4 ft. Wooler Engineering Co., Ltd., Alperton, London.	£130	Feb. 8, 1919





TRADE MARK.

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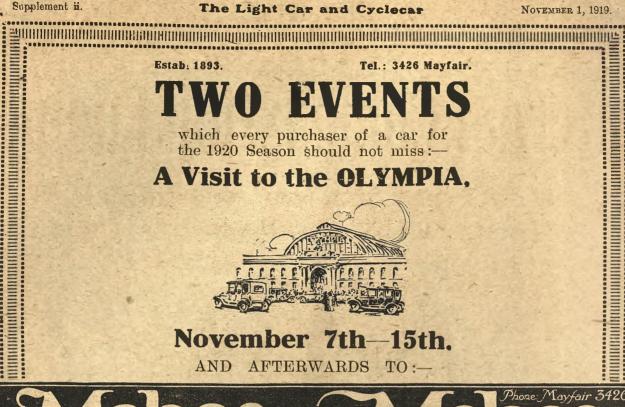
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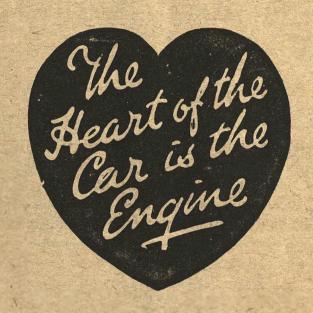
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FIRST OLYMPIA SHOW NUMBER Friday Next-Nov. 7

This issue (which will bear the date November 8th) will appear on the opening day of the Show, and will contain an Illustrated Buyers' Guide giving details of all the light car and cyclecar exhibits to be seen at Olympia. Accessories and equipment will also be dealt with in an attractive manner.

ORDER NOW.

Second Show Number FRIDAY—Nov. 14.

This issue (which will be dated November 15th) will contain a complete and fully illustrated Report of all the light car and cyclecar exhibits. In addition there will be a critical review of light car and cyclecar design and equipment.

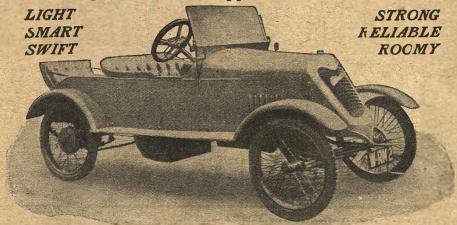
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- - The - -

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LIGHT CAR

Greatly improved both in Appearance and Construction



2-3-Seater, 1920 Sporting Model. Provisional Price, \$200, Hood, Lamps, etc., fitted extra.

DEMONSTRATION CARS are NOW in the HANDS of most of our AGENTS.

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100 Cars per week

ABRIDGED SPECIFICATION.

ENGINE.—J.A.P. or Precision, air-cooled. TRANSMISSION.—Embodying friction drive and roller chain to live back axle. GEARS.—Four forward and reverse. WHEELS.—Wire, 650 x 65. TYRES.—Dunlop-WHEBLBASE.—6'9"; track, 3' 10". BODY.—Special construction; light, strong and roomy with upholstered dicky seat. BRAKES.—Internal expanding—operated by foot pedal and hand lever. BACK AXLE.—Live axle; no differential. SPRINGS.—Semi-elliptic front and back. WEIGHT.—Very light; approx. 6 cwt.

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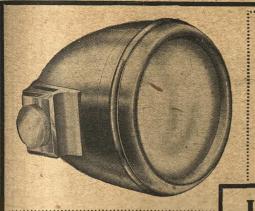
TEMPLE PRESS LIMITED, 7-15, RoseberyAvenue, E.C.1. Wholesale: E. J. LARBY, Ltd., 30, Paternoster Row, London, E.C. 4. SECOND EDITION (REVISED) NOW ON S A L E,

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A Powerful Light from a Little Lamp.

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Headlights fitted with Single Bracket (as illustrated) or Double Bracket for support.

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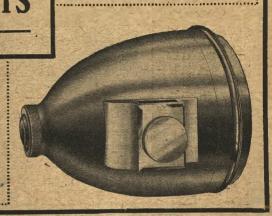
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Not Merely Unique!

To be unique in just one thing is not enough. It is the combination of unique features—the air-cooled radial engine—the special springing—the body design—that makes the "C.A.R." a better Light Car than has yet been built.

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By mentioning "The Light Car and Cyclecar" when corresponding with advertisers, B61 you will be working for the cause of the new motoring. TO THE READER

ORDER

LYNTON Pressed Steel Disc Wheels NOT COVER DISCS)

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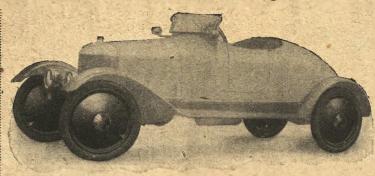


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TEMPORARY SHOW OFFICE:

MESSRS. WILKINS, SIMPSON & CO., 11, Hammersmith Road——LONDON, W.14.

(Opposite Road leading to Main Entrance of Olympia),



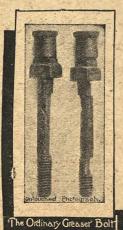


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For Perfect Carburation

"SHELL" MARKETING CO., LTD., 39-41, Parker Street, Kingsway, London, W.C.2,





escape between the threads of the cap, and the bolt goes dry, with the result shown. J.M. Greaser Cupsareon the same principle as the J.M. Bolt.

Stocked in all sizes.'
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The New Non-Wire FERODO LINING

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Call at our Stand at the Motor Show and see the Ferodo Products. Many standard features will be exhibited and there are one or two new lines of particular interest to car owners.

There is the new non-metallic lining for brakes and clutches, made from pure asbestos without wire reinforcement—non-porous, insoluble, and absolutely incompressible. Certainly the latest thing in fabric friction linings.

And then there are motorcycle brake blocks, moulded to any desired shape, which will give longer wear than any other type of block.

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Tyre mileage increased

Like everything else, tyres have increased in price, so what you want to do is to take care of those you have. Keep them in repair, heal cuts as soon as they appear, and both covers and tubes will last longer. It is quite easy to repair any cut, or even a bad burst, with

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When you visit Olympia Motor Show, eall at our Stand No. 294, and we will show you how simple it is to make permanent repairs with Simms Vulcaniser.

Price for covers or tubes of all sizes ... 24/-Motorcycle size, tubes only 15/-

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M.P.G.

Fuels and Lubricants constitute the greater part of present-day expenditure, and it is in these items that economy can be effected.

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of which over 40,000 copies have been applied for, and distributed in the past 21 years, deal in a thoroughly practical manner with the problems of carburation and lubrication, particularly with a view to reducing consumption by simple methods.

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N comparison with other motor spirits National Benzole (N.B.A. Standard Specification) yields 20% more mileage and 15% more power per gallon. It costs less per gallon-gives you

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These advantages mean in one word-Reliability.

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SEAMLESS STEEL TUBES YOU want the lightest and strongest steel tubes for Motor construction—WE produce them. ng experience combined with modern plant and the sof best materials enable us to produce tubing of the highest quality. Consult us NOW. The ORIENTAL TUBE CO , LTD., est Bromwich, Birmingham Telegrams: "Tubes, West Bromwich." Telephone: West



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Whatever your motoring need, look to Harrods for it! Harrods can offer a very complete range of Accessories of reliable quality, including large stocks of Tyres and Tubes, Repair Outfits, Lamp Sets, Rear Lamps and Generators, Mechanical Horns, Bulb Horns Tyre Inflators, Tool Kits, Repair Outfits, Sparking Plugs, Plug Testers, Clocks, Mascots, Oils, Greases, Polishes and Enamels

Harrods invite all motorists to pay an early visit to the finely-equipped showrooms, or to write for prices, etc., if they cannot call

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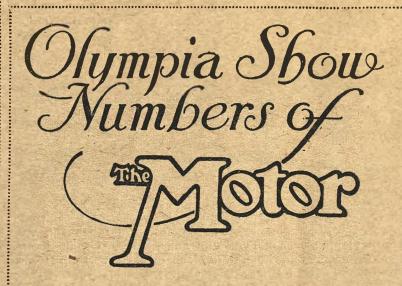
Wonderful in development, but impossible without Insurance. But how many people have realised the Insurance Factor in calculating progress? Insurance is more necessary to-day than ever before—but to be useful, Insurance must progress.

Discard the Old, Cumbersome, and Costly.

Register your Approval of Efficiency.

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The Licenses & General Insurance Company, Ltd., 24, MOORGATE STREET, E.C.2.



SECOND SHOW NUMBER Wednesday Next (Nov. 5). Price 3d.

FORECAST OF THE EXHIBITS

In this issue the advance descriptions and illustrations of new cars and detail improvements will be continued, and as the opening day of the Show will be drawing nearer, interest will be all the keener. A feature of this issue will be a specially instructive article, entitled:—

What to look for at the Show

Improvements which visitors to Olympia should make a particular point of seeing.

Order Your Copy NOW.

Offices of "THE MOTOR," TEMPLE PRESS LTD., 7-15, Rosebery Avenue, E.C.1.

Third Show Number, Complete Show Report, Wednesday, 12th Nov. q

SECOND-HAND

.....

LIGHT CARS, CYCLECARS, and ACCESSORIES FOR SALE

"The Light Car and Cyclecar" deals with its own types of machines exclusively. Old cars produced before 1912 as distinct from modern light cars, and cars with an engine of a cubic capacity exceeding 1,500 c.c., cannot be accepted for its advertisement columns.

RATES.

For Private Advertisements in this section: eighteen words, 1/6 (minimum), 6d. per six words after. The Rates for Trade Advertisements are 18 words 2/-, and 6d. per four words after. These are designated "TRADE," for the guidance of the reader. Subject to a discount of 5 per cent. for 13 consecutive insertions, 10 per cent for 26, 15 per cent. for 52. Terms: Cash with order, and otherwise net. Cheques, Postal Orders, etc., should be crossed and made payable to Temple Press Ltd. N.B.— In the interests of our readers we shall not hesitate to take proceedings against any persons in the trade who succeed in obtaining the insertion of their advertisements as "Private" and shall insist to the utmost upon the payment of all law costs incurred.

BOX NUMBERS.—Advertisers desiring to have replies sent care of "The Light Car and Cyclecar" may do so on payment of a nominal fee of 6d. to cover booking and cost of forwarding such replies. The words Box clo" The Light Car and Cyclecar," count part of the advertisement.

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DEPOSIT SYSTEM.

For the convenience and security of our readers we have an approval deposit system. The intending buyer forwards to our office the amount of the purchase money, which will be acknowledged to both parties. Notes or money order saye time, Cheques must be made payable Temple Press Ltd., and are acknowledged to selfer when "cleared." If a sale is concluded, we forward to the saler the amount agreed upon. If no sale is made, we return the amount deposited in either case we deduct a commission of 11 per cent. 3d. in the £ 25 minimum), on amounts deposited up to £51, if per cent, on amounts from £ 0.1 £100 and per cent on amounts exceeding £100, to cover our expenses of book ng, postages, etc. Carriels to be paid by the buyer. If the article is returned, each party—as 3 one way. The risk ofdamage in transitis the seller's. Articles on approval are not to be retained by the arbitration of the Editor of "ITEE LIGHT CAR AND CYCLECAR, whose decision shall be final and binding on both parties.

WARNING.—Acknowledgments of deposits or instructions to forward goods advertised are only written on our special headed paper, which bears a facsimile of the title of this journal. To prevent fraud, the advertiser should Acknowledgments of the title of this journal. To prevent fraud, the advertiser should Acknowledgments of the title of this journal. To prevent fraud, the advertiser should Acknowledgments of the title of this journal. To prevent fraud, the advertiser should Acknowledgments of the title of this journal and the proposed provided the provided provided the provided provided the provided provided the part with the goods advertised.

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DISPLAY ADVERTISEMENTS. Scale of charges, with reduction for series, sent on application.

REGULATIONS WITH REGARD TO ADVERTISEMENTS.
All advertisement orders are subject to confirmation in writing from the Head Offices.
All advertisements and contracts are accepted and made upon the express condition that "Copy" is subject to the approval of the Publishers generally, who also reserve the right to reject any advertisement, in whole or in part, referring to Carsor accessories which in the opinion of the Publishers are outside the scope of the journal, and such refusal of copy shall not be a good ground for advertisers to stop a current contract or to refuse to pay for the same or for taking action for breach of contract.

Advertisements received too late for insertion in the issue then closing for press will—unless accompanied by express instructions to the contrary—be inserted in the following issue.

Whilst every precaution is taken to ensure accurate printing, the Publishers will not be responsible for printer's errors, nor will they be responsible for advt. blocks that are left in their possession for more than one year.

Copy for, and all matter relating to, advertisements must reach the offices first post Tuesday, and should be addressed to THE MANAGER, "THE LIGHT CAR AND CYCLECAR," 7-15, Rosebery Penuer, London, E.C.I. to whoma all communications concerning advertisements should be sent. If proof of displayed advertisements is required, copy should be forwarded in sufficient time to allow of it being submitted and returned.

Head Offices:-7-15, Rosebery Avenue, London, E.C.1. Telephone No. 5292 Holborn (four lines). Telegrams: "Pressimus. Phone, London," [Addresses of Branch Offices and other Business and Editorial Notices will be found on the last page of this section.]

NOTICE.

Owing to postal delays and irregularities, it is advisable to post advertisements EARLY ON MONDAY so as to ensure, as far as possible, that they reach us by the FIRST POST on Tuesday. Lately several advertisements have been received too late for inclusion, although despatched on Monday.

SECOND-HAND LIGHT CARS AND CYCLECARS FOR SALE.

A.C. Sociable, splendid little 2-seater, 5-6hp, Bosch magneto, nearly new tyres, hood, soceea, electric lighting, any inspection, any trial, great bargain, 69 guineas; exchange motorcycle or combination; also easy terms. Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station).

Trade 302-203

A.C. Sociable, good condition, 2 new tyres, hood, screen, 5 lamps, spares, £68. Ashford, 328 Albany Rd., Camberwell.

A.-C., 19hp, 1914, purchased January, 1915, stored 3 years, electric side and rear lamps, acetylene headlamps, hood, screen, double dickey, special luggage grid, 5 detachable disc wheels, tyres good, thoroughly overhauled recently, any reasonable trial given, very pretty car, yellow, black wings and dining, £325. Saxty, Borderdale, Sunningdale.

A.C. Sociable, excellent condition throughout, hood, screen, lamps, new back tyre and chain, £80; trial. Box No. 2919. c.o. "The Light Car and Cyclecar," or 'Phone, North 129.

A.C., 1915, 10hp, 4-cylinder, spare wheel, lamps, hood, screen, etc., painted blue, lovely condition, any trial, take combination part exchange. £235 Tolchard, Butcher, Leytonstone. 362-c665

A.-C. Sociable, dickey seat, hood, screen, 3 lamps, horn, etc., excellent condition, engine recently overhauled by makers, £30. J. Howard, Norton-in-the-Moors, Stoke-on-Trent., 362-691

A.-C. Sociable, splendid condition, wheel steering, electric lights, numerous spares, hood and screen, lowest £85. 24 Manley Rd., New Town, Stratford. 362-c617

A.-C. Sociable for sale, excellent condition, modern type, hood. screen, lamps, £75; trial given. 29 Allsop St., Upper Baker St., London, N.W. I.

Trade 363-b816

Trade 363-1816

A.C., 1914, 10hp, 2-seater, with detachable wheels, dynamo lighting, hood, screen, horn, etc., perfect condition, £335. 32a Chester St., Grosvenor Pl., S.W. Vic. 5837.

A.-C., 1916, 10hp, 2-seater and dickey, C.A.V. lighting set, £425. Below. A.C., 1915, 10hp, 2-seater, C.A.V. lighting set, £365. Alfred Wastnage, 65 Gt. Portland St., W. 1. Tel., May. 3005. Trade 362-179

A.-C. Sociable, with spare seat, perfect condition, hood, side screens, lamps, speedometer, 2 brakes, tools, etc., £80. Seen by appointment. Anderson, 45 Chalsey Rd., Brockley, S.E. - 682-c528

A.C., 1914, 2-seater, dickey, electric side lamps, acetylene head, detachable wheels, first-class condition, £275. 12 Cornwall Terrace M. va. Mdme. Tussands. Trade 363-6632

A.C., 1915, 2-seater, dickey, 5 lamps, detachable wheels, very smart and coxcellent condition, £300. 12 Ccrnwall Terrace Mews, Mdme. Tussauds.

Trade 362-6532

ALLDAYS, 1914, 10hp, 2-seater with dickey, dynamo lighting, detachable wheels, horn, speedcracter, etc., excellent order, £325. 32a Chester St., Grosvenor Pl., S.W. Vic. 5837.

A.V. Allen Bennett Motor Co. offer a practically brand new 1919 monocar, £115. 9, 10, 11 Royal Parade, London Rd., Croydon. Trade 362-148

A.V. monocar, 1919, as new, red, fast, first offer over £130 secures. Apply, Castle, Henley House, Frant, Sussex.

A.V. monocar, 1919, painted red, 2 electric side lamps with accumulator, Klazon horn, hood, mat, run under 250 miles, accept £110. Major Oakes, 133 Devonshire St., Sheffield.

BABY PEUGEOT, 1916, 3-speed, re-upholstered and repainted, excellent condition, ±250. Edwards, 7 Exhibition Rd., South Kennington.

Trade 362-246

BABY PEUGEOT, 1916, 3-speed, 4 cylinders, hood, screen, speedometer, good condition, £220, or offer, must sell. Hulbert, Hopewell, Gt. Kimble, Bucks.

BEBE PEUGEOT, 1914, in fine running order, Stepney, 5 new tyres, electric light, spare tube, tools, speedometer, economical and fast, £236. Nicholis, 61 Station Rd., Harlesden, N.W. 10.

BUGATTI, 10hp, latest model, sporting 2-seater with bulbous back. C.A.V. lighting set, Warland rims, an exceptionally fine car, property of a private owner, and can be seen and tried at any time at Alfred Wastan et G. Portland St., W. I. Tel., May. 3005.

CALCOTT 1919, 2-seater, dynamo lighting, very fine condition throughton small mileage, £495. Stretton and Smith, 23 Woodstock St. 10ff. New Bond St.), W. I. Maylair 3129.

CALCOTT, 1919, for sale, only done 30 miles and delivery, C.A.V. lighting, standard dickey, Zenith, brand new, £470 or nearest offer. Box No. 2926, c.o. "The Light Car and Cyclecar."

CALCOTT, 1919, new August, run 200 miles only, dynamo, dickey, £5:0. Smith and Hunter, 77 Gt. Portland St.

CALCOTT, 1919, 2-seater and dickey, dynamo lighting set, only run 600 mile, practically new. Below.

CALCOTT, 1919, 2-seater, dynamo lighting set, clock and speedometer, mileage 2,000, in perfect condition. Alfred Wastnage, 65 Gt. Portland St., W. 1. Tel., Maylair 3005.

CALCOTT coupe, 10hp, 1919 model, royal blue, Bedford cord upholstery, Brolt dynamo, lighting set, detachable wheels, handsome car, done small mileage, as new. Below.

CALCOTT, 10hp, 1919 model, 2-seater, grey, black wings, Brolt dynamo lighting, leather upholstery, fully equipped, as new, only done 200 miles. Mebes and Mebes, The Original Light Car Specialists, 144, 154-6 Gt. Portland St., W. 1. Tel., 3425 Mayfair.

CALCOTT, 1915, 2-seater, dickey, dynamo, detachable wheels, very smart and in first-class order, £350. 12 Cornwall Torraco Mows, Mdmc. Tu-Saudso. Trade 362-c614

Readers are referred also to "THE MOTOR," which contains each week many hundreds of advertisements of new and second-hand cars. "THE MOTOR" is published on Wednesdays, price 3d.

NEW CARS.

Advertisements of NEW Light Cars and Cyclecars now appear under a separate heading.

SECOND-HAND LIGHT CARS AND CYCLECARS FOR SALE (continued).

calthorpe. F.O.C.H. have a late model 2-seater, with dickey, fully equipped, repainted and perfect throughout, price £325, smartest little car in town, inspection invited; a large selection of cars always in stock. F.O.C.H. (Pair Offer Car House), 5 Heath St., Hampstead (near Hampstead Tube). Phone, Hampstead 3752.

CALTHORPE, 16hp, 1919, sports type 4-seater, enamelled white, black wings, Brolt dynamo lighting, Palmer cord tyres, disc wheels as new, culy done small mileage. Mebes and Mebes, The Original Light Car Specialists, 144, 1546 Gt. Fortland St., W. 1. Tel., 3426 Maylair. Tde 362-269

CALTHORPE coupe, 1915, dickey, dynamo, all accessories, £400, 12 Cornwali Terrace Mews, Mdme. Tussaud's.

CAI.THORPE, 1918, sporting 2-seater, 5 disc wheels, detachable, dynamo lighting, potrol gauge, heat register, tool box, electric horn, extra air, all above special fitted this year, new Falmer cords, just re-enamelled cream and black, perfect condition, £475; owner buying larger car. Seen on application by letter to Capt. Shipwright, Claridge's Hotel, Brook St..

CALTHORPE, sporting 2-seater, delivered this month, best offer over list. Rice-Oxley, Shrewsbury. 362-c629

CALTHORPE MINOR, 1916, 2-seater, dynamo lighting, new condition, very smart little car, £340. Ward, 6 Church Rd., Forest Hill, S.E. 362-6655

CALTHORPE MINOR, 1919, standard 2-seater, 3 months from works, perfect running condition, £475. Shailer, The Terrace, Spilsby, 362-669 CARDEN 1919 monocar, second-hand; another, 1919, with second seat; offers? Railway Garage, Staines. Trade 362-6875

CROUGH 2-seater, 10hp, complete with hood, screen, lamps, spare wheel, etc., 2260; demonstrator in stock. Order now for speedy delivery. Solo agent Manchester district, Hugh Dobson, 39 Dean Rd., Blackfriars, Salford. Phone, 7284 City.

CROUCH, 1914, 2-seater, hood, screen, Stepney, speedometer, horn, 4 lamps, generator, full insurance, tools, jack, pump, etc., all in excellent condition, £175. Box No. 2925, c.o. "The Light Car and Cyclecar." 362-c529

CUMBRIA 10hp cyclecar, live axle, 3 speeds and reverse, new and repainted sporting 2-seater body, very fast, electric side and tail and sectylene head, only done 200 miles. 27a Ashchurch Grove, Sheyherd's Bush.

ENFIELD Autolette, 5 wire wheels, interchangeable, 1914, £180. South-gate Garage, Gloucester. Trade 362-e564

GLOBE, 2-seater and dickey, new tyres, reliable, strong, comfortable car, #100. 276 Willesden Lane. 363-603

G.W.K., 1914, 2-seater, special fitting all round rims, like brand new model, £185. J. Smith and Co., 16 Hampstead Rd., London, N.W. Trade 362-169

G.W.K., 1913, chassis and body, complete new engine, cardan shaft and main bearings, kood, screen, speedometer, Stepney, lamps, etc., in spiendid condition, £140. B. Richards, 6 Church St., Wellington, Salop, 362-613

G.W.K., 1914, 2-seater and dickey, private owner, thoroughly overhauled and parts renewed, good running order, hood, speedometer, clock, £160. Rectory, Portsmouth Rd., Esher. 362-665

G.W.K., late 1913-14, fitted cork disc, 700 by 80 tyres, all lamps, hood new, overhauled and painted, full insurance, 1725 Blake, 216 Westbourne Grove, W.II. 'Phone, Park 3232. Trade 384-689

G.W.K., 1913, 2-seater, excellent condition, complete with hood, screen, Stepney, lamps, speedometer, jack, pump, clock, etc., £220. Irving, 52 Dinorwic Rd., Birkdale, Southport.

HILLMAN, 1919, new July, 2-seater, dynamo, starter, mileage only 1,300, ready for the road, £560. Below.

HILLMAN, 1916, 2-seater, dynamo, starter, dickey, £385. Smith and Hunter, 77 Gt. Portland St.

HUMBERETTE, 1914, air cooled, hood, screen, lamps, excellent condition throughout, trial given, bargain, £135. 29 Allsop St., Upper Baker St., London, N.W. 1.

Trade 362-b817

HUMBERETTE, 1914, a.c., splendid condition, can be seen by appointment and trial given, only reason for selling larger car necessary, £150. V. C. Badois, 68 Hign St., Egham.

HUMBERETTE, 1914, a.c., hood, screen, Stepney, set acetylene lamps, horn, tools, engine just rebushed and overhauled, in beautiful order, £140 or near offer. Seen at Wilkins and Simpson, 11 Hammersmith Rd., W.

HUMBERETTE, 1915, water-cooled, hood, screen, lamps, speedometer, from, watch, newly painted, good running order, £150. Sandwith, Lowood, Ascot. Telephone, Ascot 237.

HUMBERETTE, water-cooled, 1913, 2 acetylene headlamps, 2 oil, side and tail, Stepney with tyre, £120; can be seen and tried by appointment. Wilson, Woolley Farm, Wantage, Berks. 362-6664

HUMBERETTE, 1914, a.c., 2-seater, hood, screen, lamps, Stepney, clock, spredometer, jack, tools, pump, etc., tyres in excellent condition, smart little car, painted black and yellow, owner receiving new car, trial. £134 146 High St., Chatham.

HUMBERETTE, 1914 (late), 2-3-seater, 3-speed and reverse, lamps, horn, hord, screen, Stepney, 4 new tyres, recently thoroughly overhauled, any trial arranged, £140. Cecil Audrey, Plymouth House, Loughton, Essex. 362-611.

SECOND-HAND LIGHT CARS AND CYCLECARS FOR SALE (continued).

HUMBERETTE, a.-c., in good order, £120; offers cash or exchange considered. Baines Bros., Gainsborough. Trade 362-665

HUMBERETTE, late model, a.c., very smart little car, electric lighting, hood, screen, speedometer, mirror, spare tyre, economical to run, in first-class condition, trial run, £150. 18 Wherstead Rd., Ipswich. 362-c640

HUMBERETTE chassis, water-cooled, in capital condition throughout, complete with tyres, will accept £70. The Lodge, Plympton. 362-643

HUMBERETTE, 1914, w.-c., 3 speeds and reverse, hood, screen, clock, speedome.cer, "Miller's lamps and generator, Stepney, jack, pump, horn, Dunlop tyres, jacked up 3 years, smart little car, perfect condition, £175; seen by appointment. Write, Smith, 23 Station Rd., Doncaster. 362-c648

KENNEDY, 11.9hp, light car, splendid mechanical condition, just over-hauled, 5 detachable wheels, tyres perfect, hood, screen, lamps, dickey seat, smart appearance, £230. Wood, 5 Hartington St., Derby. 362-c528 LAGONDA 1915 coupe, dynamo lighting, many extras, £246. Also simi-lar car, without dynamo lighting, £225. Smith and Hunter, 77 Great Portland St.

LAGONDA, 1919 model, 4-seater, green, black wings, green leather upholstery. C.A.V. dynamo lighting, speedometer, electric horn, detachable wheels, Dunlop tyres, fully equipped, done 100 miles. Mebes and Mebes, The Original Light Car Specialists, 144, 154-6 Gt. Portland St., W. 1. Tel., 3426 Maylair.

LAGONDA compe, 1916, acetylene head, oil side and tail, detachables, in good order, nearest £250. Oddie, Culshaw, Yellowhouse Lane, Southport.

Trade 362.6674

LAGONDA 2-seater, 11hp car, 1915 model, with 5 Sankey detachable wheels, ace, ylene lighting, completely overhauled by makers, re-coach painted, an excellent car both in appearance and mechanical condition, £220. Walris, The Cottage, Bayley's Hill, Sevenoaks.

McKENZIE, 1914, 10hp, 4-cylinder, 2-seater with hood, screen, detachable wheels, 5 lamps, clock, speedometer, etc., privately owned, good order throughout, £245, 32a Chester St., Grosvenor Pl., S.W. Vic. 5837, Trade 362-174

MENDIP, 10hp, 1919 model, 2-seater, grey, black wings, double dickey seates, speedometer, clock, 5 lamps, detachable wheels, fully equipped, as new, done 200 miles. Mebes and Mebes, The Original Light Car Specialists, 144, 154-5 Gt. Portland St., W. I. Tel., 3426 Mayfair. Trade 362-211

MORGANS. Hall's Garages, Ld., Stevenage, Morgan specialists. Repairs

MORGAN, 1914, G.P., J.A.P. Shp, side valves, water cooled, 700 by 80 tyres, new all round, large headlight and generator, new hood and screen, perfect condition throughout, offers wanted. M. McNish, Ferndale, St. Neots, Hunts.

MORGAN, J.A.P., 1919, sporting model, splendid running order, tyres unpunctured, painted dark green, acetylene headlamps and rear light, hood, screen, etc., cach price £200. Box No. 2626, c.o. "The Light Car and Cyolecar."

MORGAN, 1919, air-cooled M.A.G., sporting, absolutely complete, hood, screen, horn, speedometer, all Hamps and generator, spare chain and tube, complete tool-kit, splendid condition, #220; inspection and trial by appointment. Kingerlee, Nag's Head, Lechlade, Glos. 363-666

MORGAN, 1914, sporting, a.-c. J.A.P., thood, screen, etc., recently over-hauled, £125. Morrell, 23 Finchley Way, Brent Garden Village, Church End, Finchley, N. 3.

MORGAN, 1916, G.P., w.-c., fitted speedometer, 3 lamps, tools, £175. Grant, 16 Manson Mews, S. Kensington.

MORGAN, 1919, de luxe, painted violet, discs, hood with cover, screen, head and tail lights, usual spares, perfect running order, any trial, very fast sporty car, #240 or near. Box No. 2918, c.o. "The Light Car and Cyclecar." 362-c85

MORGAN, G.P., 10hp, o.h.v., w.-c. J.A.P., screen, horn, disce, speedometer, electric lights, oversize tyres, painted blue, in splendid condition best offer over £175. Shelley, Manor House, Tittensor, Staffs, or can be seen by appointment in Longton. 362-668

seen by appointment in Longton.

MORGAN, de lune, Shp a.-c. J.A.P., 1919, with 1920 improvements, hinged back, long shaft, ratchet side brake, acetylene head and tail kamps, discs, spare chain, tube, etc., perfect condition throughout, very amart turmout, \$220. Ireland, 19 Bowness Rd., Barrow-in-Furness.

362-665

MORGAN, 1918-17, Grand Prix model, disc wheels, oversize tyres (unscratched) large lighting act, special easy-starting carburetter, giving 65 m.p.g., dank purple finish, absolutely untarmished, a super-Morgan, candidly indistinguishable from new, all accessories, 189 guineas. Cotton, Holles House, Ledbury.

MORGAN, G.P., 1917, M.A.C. engine, Binks carburetter, new gears, 3 oil and 1 acetylene lamps, hood, spares, speedometer, ready to drive away, £180. Rev. H. Larken, Theddlethorpe, All Saints, Louth, Lincs. 362-c612

MORGAN, J.A.P., a.-c., 1919 (June), hood, lamps and Klaxon, as new, 200 guineas, deliver 100 miles. P. M. Head, 36 Church St., Altrincham, 362-c626

MORGAN, Shp w.-c. J.A.P., late 1914, thoroughly overhauled, recently painted dark green, new leather upholskery, new bood, windscreen, 3 new tyres, spare chain, ideal winter runabout, genuine bargain, £160, no offers. Allen, 4 Pembury Rd., Tonbridge. 362-6639

MORGAN, J.A.P., a.-c., new July, 1919, hardly run in, hood, screen, disc wheels, electric lamps side and rear, acetylene headlamaps, foot pump, spare tube and other extras owner gone to college, £215. Letters, Wood-ing, 9 Vernon St., Northampton, 362-c642

MORGAN, 8hp a.-c. J.A.P., 1914½, sporting, unused 3½ years, just overhauled, hood, screen, clock, spares, headhilights and generator, tyres good, new Palmer on rear, full instrance to June, 1990, pneumatic and electric horns, net cash £125. 7 Albert Avenue, Flixton.

MORGAN, 1919, sporting model, long chassis, 8hp J.A.P. engine, hood, screen, finished red, black guards, practically new, £235. Below.

MORGAN, 1919, epecial Grand Prix model, 8hp water-cooled J.A.P. engine, aero streamline body, staggered seating, speedometer, disc wheels, an exceptionally fine car, £245. Elce and Co., 15-16 Bishonsgate Ave. Camomile St., E.O. 5.

SECOND. HAND LIGHT CARS AND CYCLECARS FOR SALE (continued).

MORGAN, 1916, excellent condition, spares, lamps, screen, hood, little used, property of officer serving overseas, £185. Williamson, 127 High St. Oxford.

MORGAN, 1919, sporting, acetylene lighting, new July, run 500 miles only, £210. Below.

MORGAN, sporting, 1917, 3 lamps, nearly new tyres, usual accessories, £185. Smith and Hunter, 77 Gt., Portland St. Trade 362-189

MORGAN, 8hp, a.-c., sporting model, new May, 1919, splendid order and condition like new, best offer over £200. R. Kirby, Kempsey, Worcester.

MORGAN G.P., 1918 8hp w.-c. J.A.P., special Royal blue finish, Stewart trip speedometer, new 6-volt electric head, tail lamp set, petrol carrier, Stewart horn, hood, screen, discs, tools, spares, stored 15 months, condition perfect, trial by appointment, £215. S. Stratton, 88 Myddleton Rd, Bowes Park, London.

MORRIS-OXFORD, 1914, 2-seater, hood, screen, horn, lamps, etc., in Al running order, £230. 12 Cornwall Terrace Mews, Mdme. Tussaud's.

Trade 36: 636

MORRIS-OXFORD, 1915, 2-seater, 2 spare wheels, Lucas dynamo lighting. This car is an exception in condition, only wants seeing, £385. J. Smith and Co., 16 Hampstead Rd., London, N.W.

Trade 362-167

PERRY, 1914, 3bp, repainted grey with black wings, aluminium number plates, spare wheel, etc., good mechanical condition, very smart little car, \$225. Lloyd-Owen, 13 Grantchester, Cambridge \$352-658.

PERRY, 8hp, 1314, Lucas dynamo, speedometer, electric horn, very smart appearance, thoroughly reliable, £210. Bradfield, Astolat Cottage, West Hill Rd., Bournemouth.

PERRY, 1915. 2-seater, in perfect condition, coachwork as new, lamps and all accessories, 5 new tyres, £250 or near offer. Hoxler, 21 Beaconsfield Rd., Knowle, Bristol.

Rd., Knowie, Eristo.

PERRY, 1914, 8hp, 5 detachable wheels, speedometer, dynamo lighting set, tyres nearly new, paintwork good, does 50 miles per gallon, most redable little car. £225. MacDonald, 17 Shaftesbury Rd., Earlsdon, Covenery.

863-6518

PREMIER Sociable, 2-seater, 6-2hp, water-cooled, excellent condition, trial, £87. 29 Allsop St., Upper Baker St., London, N.W. 1. Trade 364-6622

RILEY 1914 cyclecar, 2-seater, 10-libr, 2 cylinders, d.-c., wheel steering, radiator: 3 speeds, reverse, screen, horn, lamps (electric lighting, etc., oversize tyres (Dunlop), real car springs, room for dickey, takes any hill, re-cnamelied, first cheque £95 secures, real bargain; private owner, selling on account of serions illness and has to give up motoring. Apply, 14 Castle St., Berkhameted, Herts.

RITZ, 19hp, 4 cylinders, w.-c., new November, 1916, mileage 4,000, hood, screen, side ourtains, speedometer, Stepney, electric lighting, 2 new tyres, perfect order, spares, £220, 159 High St., Stourbridge. 362-631

SABELLA cyclecar, tandem 2-seater, 8hp J.A.P. engine, 2 speeds, etc., £75, bargain. Railway Garage, Staines. 'Phone, 139. Trade 362-c610 SINGER light cars. Phaeton, £400; coupe, £500. Particulars of delivery on application, from Singer and Co., Ld., 17 Holborn Viaduct, E.C. 1. Tel., Central 13173.

SINGER, late 1916, 10hp, 2-seater, dickey, dynamo lighting, complete out-fit, appearance as new, good condition, £380. 44 Holly Park, Finchley, N. 3.

SINGER. Mr. G. N. Higgs now offers for sale his well-known Singer coupe, which is without doubt the smartest and best-equipped light car on the road, being at the same time roomy and exceptionally comfortable. It is in perfect mechanical condition, and has proved itself an extraordinary hill-climber. It is fitted with a petrol tank at the rear of the chassis, and the petrol feed is Antovac. Dynamo lighting and special large size Thomson-Bennett magneto, etc., etc. A thoroughly reliable all-weather car with every convenience of a larger vehicle, but does 35 miles per gallon. Price £600. 31 Vauxhall Bridge Rd., Victoria, S.W. 1.

SINGER, 1916, dynamo lighting, splendid running order, just overhauled, owner bought new car, £380. Pannett, 55 Ashworth Mansions, Elgin Ave., W. 9. 'Phone, Hampstead 6759.

SINGER, 1917, 10hp, 2-seater, Rotax dynamo lighting disc wheels, very small mileage, £380. J. Smith and Co., 16 Hampstead Rd., London, N.W.

SINGER, 1914, complete. 5 wheels, dickey, Rotax lighting set, auxiliary tank, extra air, excel ent condition, owner driven, £300. 18 Northwood Rd., Stanstead Rd., Forest Hill, S.E. 23.

SINGER, 1914, limensine-coupe, dynamo lighting and starter, in sound running order, £375. 12 Cornwall Terrace Mews, Mdme. Tussaud's.

Trade 362-638

SINGER, 1914, 10hp, 2-seater, good order and condition, dynamo lighting, electric horn. all accessories and some spares, 4 good tyres and 2 unused ra treads, private owner, £285. Apply, Salter's Garage, Albany Crescont, Claygate, Surrey.

SINGER, 10hp, late 1915, 2-seater, with dickey, 5 Sankey wheels, excellent condition, all accessories, any trial, £360. H. R. 48 Wandsworth Bridge Rd., Fulham, S.W.

SINGER, 1919, 10hp. 2-seater, electric lighting and starter, dickey, speedometer, electric and special bulb horns, 2 steel-studded and 3 grooved tyres, delivered September, had fortnight's use only, any trial, £455, or near offer. Luff, Holmleigh, The Mount, Shrewsbury.

362-c662

SINGER, 1918, 2-seater, dynamo lighting, detachable wheels, perfect condition. Seen and tried St. Martin's Motor Works, 11 and 12 Upper St. Martin's Lane, London, W.C. 'Phone, 5070-1.

Trade 362-199

SINGER, October, 1919, 2-seater, dynamo lighting self-starter, etc., mileage under 300, absolutely perfect, unscratched, £470, or best offer; taking delivery larger car. Nevill, Coal Merchant. Gnosall. Staffs. 362-667

SINGER. 2-seater, 10hp, 1913, just overhauled and repainted French grey, lined black, 5 detachable wheels, 5 electric and acetylene lamps, £276, or best offer, genuine. Foxacre, Branksomewood Rd., Fleet. 362-c674

SINGER, in first-rate mechanical condition, 2-seater, adjustable wheels, Rotax lighting set, painted grey, black wings,, owner purchasing car, price #350. R. F. Fuggle, Ld., Edgware.

Trade 362-201

SECOND-HAND LIGHT CARS AND CYCLECARS FOR SALE (continued).

SINGER, 1915, 10hp, 2-seater, dynamo lighting, splendid condition, can be seen in London, #340. S.yles, Post Office Staff, Ryde. 362-c618

SINGER, 1919, 10hp, makers' No. C4633, complete as new, colf-stanter, etc., only done few hundred miles, owner ordered abroad, any inspection, £475. Write or telegraph, O. Reynolds, Flat 3, 68 New Cavendish St., W. 1.

SINGER, 1918, 10hp, 2-seater, detachable wheels, dynamo lighting, horn, 3 lamps, etc., splendid order, £365. 32a Chester St., Grosvenor Place, S.W. Vic. 5837. Trade 352-172

SINGER, 10hp, 1919 model, 2-seater, Rotax dynamo lighting and self-starter, buff, black wings, detachable wheels, fully equipped, as new, done small mileage. Below.

SINCER, 10hp, 1919 model, conpe, latest type body, battleship grey, green line, black wings, Bedford cord upholstery, Rotax dynomo lighting set, detachable wheels, seat covers, as new, done small mileage. Mebes and Mebes, The Original Light Car Specialists, 144, 154-6 Gt. Portland St., W. 1. Tel., 3426 Mayfair.

SINGER, 1919, 10hp, 2-seater, dickey, dynamo lighting, any trial, £400. Box No. 2,928, care of "The Light Car and Cyclecar." 362-c702

SINGER, 1919, 2-seater, dynamo, starter, dickey, faultless condition, run only 200 miles, £495. Below. SINGER, 1917, compe, dynamo, usual extras, painted blue, upholstered cord, £485. Below.

SINGER, 10hp, 2 seater, just repainted and overhauled, £290. Smith and Hunter, 77 Gt. Portland St. Trade 362-188

STANDARD spare parts: everything for the 9.5hp model. Pytchley Autocar Co., Ld., 42a Walmer Rd., North Kensington, W. 10. Park 1293. Trade 370-812

STANDARD. F.O.C.H. have a 9.5hp, 2-seater, and dickey, in exceptionally fine condition and appearance as new, mechanically perfect, fully equipped, including speedometer and mirror, detachable wheels and spare, tyres good, a bargain at £350, only wants seeing; inspection invited; a large selection of cars always in stock. F.O.C.H. (Fair Offer Car House), 5 Heath St., Hampstead (near Hampstead Tube). Phone, Hampstead 362-144

STANDARD, 1919, all-weather body, 11.9hp, dynamo lighting, self-starter, not done 200 miles, £530. Below.

STANDARD, 1919, 9.5, open 2-seater, dynamo lighting set, dickey seat, spare wheel, etc., car not done 500 miles, £450. Stretton and Smith, 23 Woodstock St. (off New Bond St.), W.1. Mayfair 3129. Trade 362-156

STANDARD, 1919, 9.5, open 2-seater, dynamo lighting, electric horn, dickey seat, perfect condition, £400. Box No. 2871, c.o. The Light Car and Cyclecar." \$32-c507

STANDARD, 11166, 1914 or 1915, 2-seater, in thorough good order, £285, 12 Cornwall Terrace Mews, Mdme. Tussaud's. Trade 362-c637 STANDARD, 1914, 2-seater, acetylene lighting, dickey, first-class order, choice of 2, £350. Smith and Hunter, 77 Gt. Portland St. Trade 362-191

STANDARD, 9.5hp, 1949 model, 2-seater, Standard grey, black wings, Brolt dynamo lighting, detachable wheels, fully equipped, as new, done small mileage. Mebes and Mebes, The Original, Light Car Specialists, 144, 156-66t. Portland St., W. 1. Tel., 3426 Mayfair.

STANDARD, 9.5hp, 2-ceater and dickey, hood, with sides, spare wheel, speedometer. horns, lamps. Can be seen at Middlesex Auto-Car Co., 382-658.

STELLITE, 1919, 2-seater dynamo lighting, dickey seat, run 200 miles. G. L. Francis and Co., 169 Shaftesbury Ave. 'Phone, Gerrard 3288. Trade 362-161

8TELLITE, 1915 model, 3-speed, special 3-seater clover-leaf body, buff, Lucas dynamo lighting, speedometer, mirror, large tool box, spare petrol can carrier, detachable wheels, oversize tyres, fully equipped gvery neat and compact. Mebes and Mebes, The Original Light Car Specialists, Mal 154-6 Gt. Portland St., W. I. Tel., 3426 Mayfair.

Trade 382-213

STELLITE, 1919 2-seater, 3 speeds, dickey seat, electric lighting, delivered September, mileage under 208, what offers over £385? Owner going abroad. Box No. 2,922, care of "The Light Car and Cyclecar." 363-6699

SWIFT, 191t, 10hp, dynamo lighting, self-starter, only done 200 miles, absolutely as new, unscretched, £495. Stretton and Smith, 23 Woodstock St. toff New Bond St.), W. 1. Maylair 3129. Trade 362-157

SWIFT. Allen Bennett Motor Co. offer delivery from stock a particularly nice 7-9hp Swift, 1914 model, practically indistinguishable from new, thoroughly overhanled, etaggered seating, dickey seat, lamps and horn, a real beauty, £220, or quarter down, balance payable in 12 monthly in-falments; motorcycle taken in exchange. 9, 10, 11 Royal Parade, London Rd., Croydon, 'Phone, Croydon 2450.

SWIFT, 2-seater, 7-9hp, late 1914 or 1915, privately owned and driven. Stepney, good condition perfect running order, price £190. Williams, 16 Upper Cuff Rd., Gorleston-on-Sea. 364-627

SWIFT, 10hp, 2-scater, 1915, dynamo lighting, perfect condition. Seen and tried St. Martin's Motor Works, 11 and 12 Upper St. Martin's Lane, London, W.O. 'Phone, Regent 5070-1.

SWIFT, 8hp. 2-seater, double dickey, hood, screen, side curtains, 3 lamps, oil, acetylene headlight, Stepney, pump, jack, tools excellent running order and condition, trial, appointment, owner disabled. 15 Greenhill Rd., Moseley, Birmingham. 362-c673

SWIFT, 7-9. July, 1914, fully equipped, condition excellent, £185. Grant, 16 Manson Mews, Queen's Gate, S. Kensington. Trade 362-c681

SWIFT 10-12, 1913, 2-3-seater, dickey, 3 speeds and reverse, hood, screen, speedometer, etc., detachable wheels, 1 spare, Zenith carburetter body dark green, in very good condition, £145, stored 3 years. B. Richards, Tobacconist. Wellington, Salop.

SWIFT, 7-9 purchased new from makers March, 1915, splendid condition, most reliable and chrefully used car, complete with original acetylene side lamps. Stepney, spare, best offer over £195; seen any time by appointment, South London Box No. 2,914, care of "The Light Car and Cyclecar."

SECOND. HAND LIGHT CARS AND CYCLECARS FOR SALE (continued).

SWIFT, 1919, new July, 10hp, 2-seater, dynamo, dickey, mileage 800, £480.

SWIFT, 1916, 10hp, dynamo, starter, dickey, faultless order, exceptionally

SWIFT, 1913-14, 7-9, 2-seater, Stepney, speedometer, lamps, £185. Smith and Hunter, 77 Gt. Portlaind St. Trade 362-187

WILKINSON light car, 2-seater, 4 cylinders, water-cooled, R.A.C. rating 8.9, good condition throughout, nearly new tyres, 2 self-contained Powell and Hanmer acetylene headkamps, speedometer, clock, £225. Brown, 55 Empress Avenue, Woodford Green.

NEW LIGHT CARS AND CYCLECARS.

A.B.C. light car. Main agents for Lincolnshire. Best and Son, 182 Cleethorpe Rd., Grimsby. Tel., Grimsby 2126. Trade zzz-164

A.C., post-war models, Brighton, Worthing, Lewes, etc., book up for early delivery. District agent, Turpin, 22 and 29 Preston Rd., Brighton. Trade zzz-1

A.C. 6-cylinder car de luxe. The Chester Motor Co., Ld., offer earliest delivery of this de luxe model.

A.C. 4-cylinder light car. The Chester Motor Co. are now accepting orders in strict rotation for early delivery in 1820. Good second-hand A.C. dight cars can always be obtained from The Chester Motor Co., Ld., 32a Chester St., Grosvenor Pl., S.W. 1. Vic. 5837.

Trade 222-1

A.C. post-war models. Alfred Wastnage, authorized agent, is now booking for the wonderful 12hp 6-cylinder model and the 12hp 4-cylinder model. Early deliveries assured. 65 Gt. Portland St., London, W. I. Tel., May. 3005.

A.V. A.V. Sole agents for Birmingham, Worcestershire and South Statis. West Hagley Garage, near Stourbridge, Worcestershire. Trade zz-810 A.V. For Gloucestershire and Waltshire. Why get covered in mud this winter on a motorbike? Get an A.V. and keep yourself dry. Immediate delivery. Flower, 1 Brunswick Sq., Gloster.

CALCOTT, brand new 2-seater, saloon, navy blue, Bedford cord, ready to drive away, offers wanted. 221 Drake St., Rochdale. 'Phone 98. 362-77 CALTHORPE 1919 coupe, waiting collection from works, owners unable to take delivery. Offers to Box No. 2155, Willing's, Moorgate Arcade, E.C. 2.
362-207

CALTHORPE new standard 4-seater, ready for delivery, what offers? Stowell, 15 Porchester Gdns., Bayswater, London, W. 2. 382-6521 CALTHORPE, 1919, 10hp, standard 2-seater, as specification, with dickey, delivered last Saturday and unused, best offer over £460. Luff, Holmleigh, The Mount, Shrewsbury. 362-061

CARDEN monocars, awarded gold medal in J.C.C. reliability trial, 1919 models-on view, ideal for winter riding, great protection, extreme economy, unequalled for business or pleasure, 120 guineas, inside controls, 8hp J.A.P. engine in front, Sturmey-Archer 3-epeed gearbox, eest kick-starter, weight 3 cwt., consumption 85 m.p.g., call and take trial run. Sode concessionnaires, The Railway Garage, Staines. 'Phone 139. Order your cabefore the Show for quick delivery.

CROUCH cars. Post-war models, 16hp, the super-cycleoar, completely fitted with hood, screen, lamps, etc., £260. Deliveries now commenced. Sole concessionnaires for London, Middlesex, Essex, Surrey, Kent, and Berkshire, Mebes and Mebes, The Original Light Car Specialists, 144, 154-6 Gt. Portland St., W. 1. Tel., 3428 Mayfair. Trade 362-215

DOUGLAS, latest 10hp post-war model, several exceptionally smart 2. seators and coupes for early delivery, no premium. Apply to the authorized London agents for Douglas cars and motorcycles, Vivian Hardie and Lane, Ld., 24 Woodstock St. (off Oxford St.), Bond St., London, W. 1, 'Phone, Maylair 6559.

DOUGLAS 1919 brand new light car, offers over list price, £400. Box 1000, 6 South Parade, Southsea.

ERIC CAMPBELL, winner of 1919 general efficiency trial; demonstration by appointment; book now for early delivery, price £3%. Sole Hampshire Agents, J. Campbell (Christchurch), Ld. Tel., 49 Christchurch. Trade 372-33

G.N. cars. F.O.C.H are now booking orders for early 1920 deliveries of this wonderful cyclecar, Standard and Vitesse models. Book your orders now for delivery next May and onwards. Our motto, "Strict rotation and no premiums." F.O.C.H. (Fair Offer Car House), 5 Heath St., Hampstead (near Hampstead Tube). 'Phone, Hampstead 3752. Tde 364-930

G.N. cars. Mebes and Mebes, the Original Light Car Specialists, being the largest contractors and chief distributing agents for this famous cyclecar, can offer the most favourable deliveries of both the Vitesse and Standard models. Deliveries taken in strict rotation at makers list price only; no premiums entertained. Book now and avoid disappointment. 144, 514-6 Gt. Portland St., W. 1. Tel., 3426 Mayfair.

Trade 362-216

G.W.K. For particulars of new models please write main agents for West Surrey, Ariel Motors and General Repairs, Ld., 78 North St., Guildford, Head Office, 320-2 Camberwell New Rd., S.E. 5.

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change motorcycle and cash. E. Furkies, taleyout boy, 2.SEATER cyclecar, 10hp V-twin Precision engine, waterproof Bosch, chatt drive, bovel differential, wheel steering, screen, hood, luggage grid, accessories, etc., trial by appointment, offers. 2 Blakemore Rd., Streatham. 362-676

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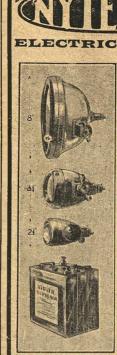
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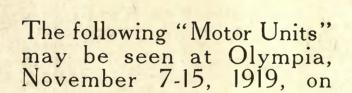


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