

The
Light Car

and

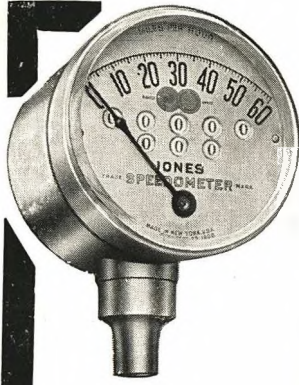
Cyclecar

1^p

Vol. VII, No. 174
20th March, 1916
*Registered at the GPO
as a Newspaper*



Kensilworth Castle



The Virtue of Reliability.

Reliability in a Speedometer is more a matter of principle than construction. The centrifugal gyroscopic principle on which the "Jones" is constructed makes its accuracy infallible—Because of this it cannot be anything but reliability itself, and that is all that really matters.

Experts test every single instrument.—The "Jones" is impervious to weather or magnetic influences.



Won the Highest Award and Gold Medal R.A.C. only official speed trials and Gold Medal Turin Exhibition.

At Prices ranging from £3 - 5 - 0

Full Lists of—

Markt & Co. (London), Ltd.,
98-100, Clerkenwell Road, E.C.

SPARE THE PUMP— SPOIL THE TYRE

Keep your tyres inflated to the required pressure, and you will obtain the maximum of service and mileage.

THE "INLAND"

Hand Air Pump

will inflate any size tyre to the required pressure with rapidity and ease—the long lever action ensures great leverage and power.

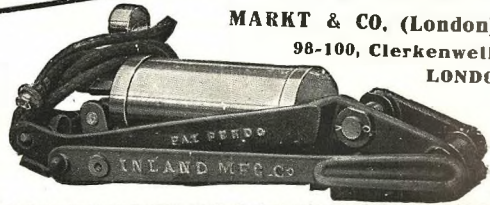
The "Inland" is the most compact, collapsible pump on the market—the handle folds neatly by the side of the cylinder. Length overall (when folded) 15½ ins.—THE pump for car or garage.

PRICE Complete with Rubber Hose & Pressure Gauge **40/-**

May we send you our Catalogue ?

MARKT & CO. (London), Ltd.,
98-100, Clerkenwell Road,
LONDON, E.C.

Extract from "The Light Car and Cyclecar."
"A remarkably powerful inflator one of the most powerful we have ever tested, and yet requires no exertion... Clamped to one of the running boards by a thumbscrew, from which position it is sufficient tubing to connect with all four wheels... Handle can be used in short position or immense leverage obtained by extending to long position."
In testing we found that a light car tyre could be pumped up to 70 lbs. pressure in about two minutes without hardly any exertion.



An Invitation.

If you have any clutch or brake troubles, write us. We have a staff of experts who are daily engaged in the solving of such problems, and we have just installed a new testing plant—the only one of its kind in the world. We are only too pleased to place these at your disposal free of charge. This is part of the service that has helped to make "Ferodo" fabrics the most efficient and the proved best.



CLUTCH AND BRAKE LININGS

Contractors to the War Office and Admiralty, London General Omnibus Company, and Underground Electric Railways of London and Paris. List M13 from

THE HERBERT FROOD COMPANY, LIMITED,

'Phones : 19 and 20 Chapel.

Works—CHAPEL-EN-LE-FRITH.

Wires : "Friction, Chapel."

LONDON : 39, Upper Rathbone Place, W.

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LONDON: 143-5, GREAT PORTLAND STREET.
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SECOND-HAND BARGAINS.

- 1915 **ALLDAYS** "Light Four," dynamo lighting. Almost new **£185**
 1914 **STANDARD**, 9.5 h.p., complete and in tip-top condition **£185**
 1915 **BABY PEUGEOT**, de luxe model, standard, with acetylene head lamps and side lamps, perfect condition ... **£140**
 1914 **MORRIS-OXFORD**, de luxe, locker behind body, good condition ... **£190**
 1913 **SINGER**, detachable wheels, spare, electric side lamps, good condition **£150**
 1913 **HUMBERETTE** **£70**
 1913 **HUMBERETTE** **£75**
 7.9 h.p. **SWIFT**, single cylinder ... **£50**

NEW CARS.

- G.W.K.**, latest Standard model **170 Gns.**
WHITING-GRANT, 11.9 h.p., self-starter and electric light **£160**
ARGO (shop-soiled) **£100**
MORRIS-COWLEY, done 100 miles ... **£216**
MORGAN de luxe runabout **£119**
BABY PEUGEOT, French body, hood, screen, and boot **£165**
HORSTMANN (nominally second-hand), electric light and seat starter ... **£180**
 1916 **G.D.M. CALTHORPE**, 6-volt dynamo lighting set, speedometer, side curtains, large tyres **£233**
 Delivery charges must be added to the prices of New Cars.

Hire Purchase and Exchange Specialists.

STEWART & ARDERN LTD.

MORRIS-OXFORD LIGHT CARS.

THE BEST LIGHT CARS SUPPLIED
 two or four seaters, with dynamo lighting.

FROM **£140** TO **£200**

Full particulars upon application:

Telephone—5462 Mayfair.
 Telegrams—
 "Essandaymo, London."

**18, Woodstock Street (off Oxford Street),
 Bond Street, . . . London, W.**

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

A1

Special Tyre Bargains

THE ABINGDON RUBBER CO., LTD

Weekly Clearance List.

Size.	Make.	Type.	List Price.	Clearance Price.	Size.	Make.	Type.	List Price.	Clearance Price.		
			£ s. d.	£ s. d.				£ s. d.	£ s. d.		
mm. 650 x 65	Avon	3-ribbed (heavy)	1 17 6	1 7 5	700 x 65	Clincher	Rubber stud	1 18 0	1 0 0		
	Avon	3-ribbed (ex. h'vy)	2 0 0	1 9 0		Henley	Grooved	2 0 6	1 10 0		
	Avon	Sunstone grooved	1 17 9	1 12 6		Michelin	Square	2 9 9	2 6 0		
	Avon	Round grooved	1 17 3	1 7 0		Michelin	Steel studded	3 10 3	3 5 0		
	Avon	Steel studded	2 9 6	2 3 0		Avon	Sunstone grooved	3 2 0	2 14 6		
	Avon	Heavy square	1 9 9	1 6 0		Avon	Square tread	2 9 9	2 3 6		
	Abingdon	Square tread	1 10 6	1 3 0		Abingdon	Square tread	2 11 0	1 17 6		
	Abingdon	Grooved	1 17 6	1 5 0		Abingdon	Grooved	3 2 6	2 4 0		
	Macintosh	Steel studded fibre	2 10 10	2 4 3		Continental	Steel studded	3 12 3	3 0 0		
	Continental	Basket patt. n'skid	1 19 6	1 4 0		Spencer Moulton	Square tread	2 9 9	2 3 0		
	Henley	Round tread	1 10 6	1 3 0		Goodrich	Safety tread	3 2 6	2 12 6		
	Henley	Grooved	1 17 6	1 7 0		Goodyear	Dia. rub. non-skid	3 5 9	2 11 6		
	700 x 80 O'size 650 x 65	Goodyear	Dia. rubber n'skid	2 10 0		2 2 6	750 x 85	Macintosh	Steel studded	3 12 0	3 3 0
		Stepney	Road grip	2 2 0		2 6 6		Goodrich	Round Tread	1 18 0	1 5 0
Avon		3-ribbed	2 8 6	1 16 6	Abingdon	Steel studded		3 7 0	2 5 0		
Avon		Sunstone grooved	2 2 6	1 12 6	Avon	Square tread		1 17 0	1 11 0		
Avon		Round and square	1 18 6	1 6 6	Avon	Sunstone grooved		2 6 6	1 19 6		
Avon		Steel studded	3 0 0	2 11 0	Avon	Steel studded		3 7 0	2 11 0		
Goodrich		Round tread	1 14 0	1 7 0	Continental	Steel studded		3 12 0	2 19 6		
Goodrich		Safety tread n'skid	2 1 9	1 16 3	Henley	Steel studded		3 4 9	2 6 0		
Avon		Combination n'skid	3 0 0	2 12 6	Henley	Round tread		1 18 0	1 7 6		
Palmer		3-ribbed	2 10 0	2 4 0	Avon	Square tread		1 16 6	1 11 6		
750 x 85		Abingdon	Square tread	1 15 0	1 2 6	Avon		Sunstone grooved	2 5 6	1 19 6	
		Goodyear	Round tread	2 0 0	1 14 0	Abingdon		Steel studded	3 4 9	2 2 6	
		Goodyear	Dia. rubber n'skid	2 10 3	2 2 9	Avon		Steel studded	3 3 6	2 15 6	
		Avon	Sunstone grooved	2 3 0	1 17 6	Henley		Grooved	2 2 6	1 5 0	
	Avon	Square and round	1 14 0	1 10 0	Henley	Round tread	1 14 9	1 2 6			
	Avon	Steel stud	3 3 0	2 12 0	Avon	Square tread	1 13 9	1 8 6			
	Goodrich	Round tread	1 15 0	1 7 6	Avon	Round grooved	2 2 6	1 12 6			
	Henley	Round tread	1 15 0	1 7 6	Michelin	Square tread	1 17 0	1 8 0			
	750 x 75 x 80					28 x 3	Michelin	Steel studded	3 1 9	2 6 6	

Cover and Tube Repairs, also Retreading, best quality only. Prices on application.

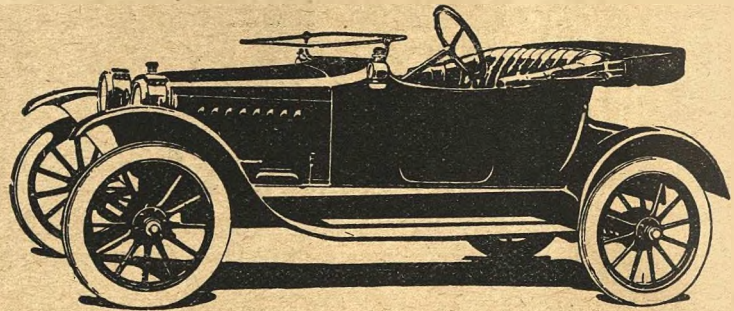
BEST QUALITY AIR TUBES IN ALL ABOVE SIZES AT CLEARANCE PRICES.

ALL GOODS SENT ON APPROVAL—Cash to accompany order—immediately refunded if goods returned within 7 days. Orders by wire with remittance despatched by first passenger train.

ABINGDON RUBBER CO., LTD.
100, CHARING CROSS ROAD - - - LONDON, W.C.
Telephone: GERRARD 1630.

The New 11-8

£150
Tax £3-3-0



A Most Economical Car.

WHEN you buy a "Saxon" Two-Seater you practise true economy. You ensure that your motoring is done at the lowest possible cost. A "Saxon" costs you less to run than any other car. It consumes less petrol. Its tyre bill is smaller. It runs 38 miles to one gallon, and 5,000 miles on one set of tyres. You do not need a chauffeur. It starts easily. A girl can drive it.

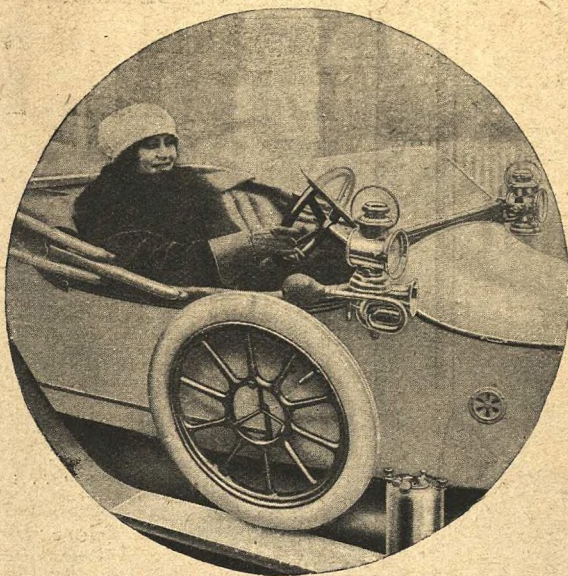
Ask your agent to-day to arrange a Trial Run.

Sole District Agencies are now being arranged. Recognised Traders — should apply immediately for territory to the Distributors.

DISTRIBUTORS—London & South of England—L. C. RAWLENCE & CO., 40, Sackville Street, London, W. North-Western District—W. WATSON & CO., Renshaw Street, Liverpool. North-Eastern Counties—HILL, CITY GARAGE LTD., Beverley Road, Hull. Midlands Counties—LOWE & WOOD, LTD., 280, Broad Street, Birmingham. Ireland—DUBLIN MOTOR CO., 25, Stephen's Green, Dublin; THE NORTH OF IRELAND MOTOR CO., Chichester and Arthur Street, Belfast. Scotland—P. DRUMMOND KINCHIN, Royal Exchange Buildings, Glasgow.

Strong Saxon Points:
Four-cylinder engine (119 R.A.C. rating), 69 mm. x 102 mm. Bosch Magneto Ignition. Lubrication by pump circulation. Cooling by Thermo-siphon and fan. Streamline body, finished in Richelieu blue, with seats 16 inches deep by 40 inches wide. Sliding gear transmission, with two speeds forward and one reverse. 8 ft. wheelbase; 4 ft. 6 in. track; 23 in. wood wheels; cantilever type springs. Hood, adjustable wind-screen, domed mudguards, Two acetylene head lights and oil rear light, horn, etc. Electric lighting and starting (£25 extra). Petrol consumption, 35 to 40 miles per gallon. Tax only £3-3-0.

A2 **HELP THE MOVEMENT** by letting advertisers know that their advertisements in "The Light Car and Cyclecar" interest you.



"COMFY?"
"R-A-T-H-E-R!"

Features of interest in A.C. Light Cars.

THE importance of comfort—essential at any time—cannot be too strongly emphasized in view of the present road conditions. Comfort is a feature in which the A.C. admittedly excels.

COMFORT.

Briefly, the high standard of comfort which distinguishes A.C. Light Cars is due to (1) a unique chassis design, (2) a very efficient springing system, (3) an unusually roomy body, and (4) extremely restful seating. It is possible to drive an A.C. on the vilest roads and never experience the "bounce" and vibration so noticeable with other light cars. It is easily handled, too. Two other points which count for comfort in the A.C. are the way in which it "holds" the road at all speeds, and the fine protection afforded by the all-weather properties of the hood and screen.

Comfort is as essential as power. The 'A.C.' is famous for both

AUTO-CARRIERS (1911), LIMITED,
181-182, Hercules Road, Westminster Bridge Road, London, S.E.

Telephone: 2150 Hop.

(Opposite Bakerloo Tube Station).

Works: Thames Ditton, Surrey.



**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.

A3

Stewart Warning Signal

*"Makes them
pay attention."*



25/-

THE BEST, Irrespective of Price.

This is proved by the orders received since we placed it on the market a few months ago. It is true that other makers have brought down their prices to compete with ours, but they have not succeeded in producing an instrument of equal quality. One make indeed, which bid for popularity on account of price, has had to be withdrawn on account of inferior and ineffective construction. Intending purchasers should be on their guard against inferior quality horns.

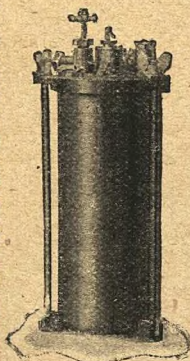
The Stewart Warning Signal is hand-operated—the slightest pressure on the plunger producing a loud, clear, and penetrating warning.

Beautifully made in Brass and Nickel, and also with "All-Black" finish; weighs only three pounds; mechanism too simple and too well made to get out of order.

From all Traders, or from

COOPER-STEWART ENGINEERING Co., Ltd.
11, Broad Street, Bloomsbury, London, W.C.

THE NEW LIGHTING REGULATIONS



cause much less inconvenience and worry to the motorist who uses the Low Acetylene Gas Generator. Lights can be turned up or down to any degree—just like coal gas—there is no need to be concerned about your discs, and you can obtain the maximum of light permitted under the new Order. The Low Generator provides light at any moment, and stores gas under pressure until required. Read the following extracts from letters, the originals of which can be seen at our office:

27th Feb.—"I am tremendously pleased with your generator. It is the best thing I have struck yet, and I've tried a lot."
Capt. . . . R.A.M.C.

2nd Feb.—" . . . it is working well and giving every satisfaction."
Capt. . . . R.E.

*Of all Dealers, or
The Low Generator & Engineering Co., Ltd.,
Craven House, Kingsway, London, W.C.
Telephone—Gerrard 4467.*

LIGHT CAR
SIZE.

55/-

Capacity—1lb.
of Carbide.
Motorcycle size,
35/-
Car size, 75/-

May we send you
full details?



ACETYLENE GAS GENERATOR

ORDER FORM.

..... 1916.

To..... (Newsagent).

Please reserve for me each week a copy of "THE LIGHT CAR AND CYCLECAR," for which I will call.

(Alternatively)

Please deliver a copy of "THE LIGHT CAR AND CYCLECAR" to me each week, until further notice.

Name.....

Address.....

There is



in

HENLEY TYRES

W. T. Henley's Telegraph Works Co., Ltd.

Write for a supply of our Artistic Advertising Desk Blotters.

Tyre Department:
18, New Union St., Moorfields, E.C.

Telephone No.: 3886 London Wall.
Telegrams: "Hetewocol, Ave, London."

"DIXIE" MAGNETOS

High Tension

"SUMMER" MAGNETOS

Low Tension

"COMMON SENSE" SPARK PLUGS

"APELCO" STARTING

LIGHTING OUTFITS

AND LIGHTING OUTFITS

WITH NECESSARY FITMENTS

AMERICAN SUPPLIES CO. LTD
162, Gt. Portland St., London. W.



TO THE READER

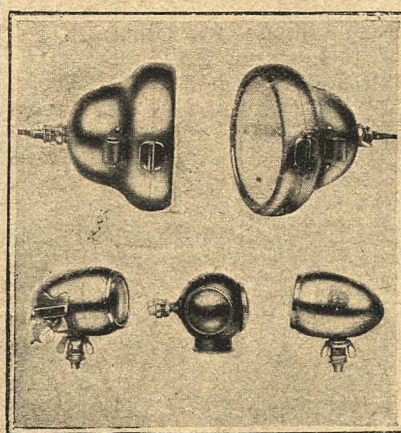
By mentioning "The Light Car and Cyclecar" when corresponding with advertisers, you will be working for the cause of the new motoring.

2 7-in. LAMPS

2 Sides, 1 Tail,

complete with bulbs, £6 - 0 - 0 Exquisite finish.

1 pr. Sides, 1 Tail, with switch and wire, 59/6 Set.



OIL Side Lamps

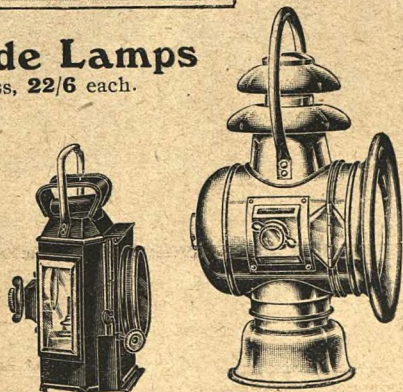
All Brass, 22/6 each.

TAILS,

15/6 each. All Brass.

F.R.S. LAMPS

Pershore St., Birmingham



DREADNOUGHT

LIGHT CAR INSURANCE

Comprehensive Policy, covering—

THIRD PARTY RISKS, Unlimited.
ACCIDENTAL DAMAGE, FIRE,
THEFT, and TRANSIT, including
lamps, tyres and accessories.

10% BONUS for no claim.

Premiums, 6 h.p., £4; 8 h.p., £4:5

THIRD PARTY RISK, FIRE and
THEFT only,

Premiums, 6 h.p., £2:10; 8 h.p., £2:15

Write for Prospectus, giving full particulars of car, etc. :

Head Office: 14, Cornhill,
London, E.C.

Telephone—Avenue 8024 & 8025.

Birmingham	...	36, International Exchange.
Rugby	..	3, Albert Street.
Manchester	...	25, Cooper Street.
Newcastle	...	26, Northumberland Street.
Edinburgh	...	15, Stafford Street.
Glasgow	...	144, St. Vincent Street.



MOTOR POLICIES
- At Lloyd's.

TRACING TROUBLE ON THE ROAD. (SEE PAGE 401.)

The Light Car & Cyclecar



NOTES, NEWS AND GOSSIP OF THE NEW MOTORING.

Drivers of horsed vehicles are already being summoned for incorrect lighting of their vehicles.

In South Africa, motorcar drivers have to pass a test in efficiency before being granted a driving licence.

The new lighting order which came into force on 10th March does not appear to apply to tramcars as regards the necessity for showing two lights forward.

It is interesting to note that Miss Damer Dawson, chief officer of the Women Police Service, who were inspected by the Lord Mayor last Tuesday, is one of the members of the Cyclecar Club.

In the "Manchester Evening News" an advertisement recently appeared of a 1913 Humberette, which apparently did 248 miles a gallon. The owner required £65 for this wondrously economical vehicle.

In order to prevent congestion of the railways due to race traffic, the various race meeting committees have decreed that no one will be admitted to the course who comes down by railway. They must come by road. In order to avoid the sinful waste of petrol, the R.A.C. recommends that motorists should travel by train whenever possible.

A portion of the Mitcham-Epsom road is now in process of reconstruction.

A maximum and minimum thermometer is a most useful instrument to attach to the outside of the garage door.

It has been suggested that "petrol-cards" should be issued to private motorists. This is already done in Berlin for petroleum used in lamps.

From a recent case at Darlington it appears that refusal to give one's name and address is equally as heinous an offence as being drunk in charge of a car, the fine being £2 in each case.

It is rumoured that the French Government intend to make denaturated alcohol a Government monopoly in 1917. This may presage an extension of the use of alcohol for motor purposes.

We quote the following from "The Evening News":—"The pedestrian is admittedly thoughtless; he is often reckless. After 10 years of motor traffic, which is growing in volume every day, the Londoner cannot gauge speed. He can calculate the speed of the horse to a second, but no man can tell the speed of an oncoming motor vehicle."

TAXATION PROPOSALS—LIGHT CARS, £6 6s.

WE understand that the Chancellor of the Exchequer is considering a new scale of taxation for motorcars. The proposition is to double the existing tax, making it four or six guineas, according to bore. There are, however, very few light cars or cyclecars coming in the present two guinea tax, and if the proposal is adopted the light car tax in future will be six guineas. Quite a number of cars, however, have adopted, comparatively recently, four-cylinder engines of slightly larger bore than 68 mm., and on these the proposed tax is eight guineas. After the present six guinea tax limit has been passed the taxes will be trebled, so that a car paying an eight guinea tax now will have to pay 24 guineas in future.

This forecast is given with all reserve, as it is never safe to predict a Budget secret. Inquiries in well-informed circles, however, satisfy us that this is a definite Treasury proposal. It may be pointed out now that increased taxation will greatly emphasize the inequalities of the present system of taxing upon "bore" alone. Under the present scheme a sidecar outfit, which can cost as much as £132, will be taxed £2, while a G.N. cyclecar of a value of about £110 will be taxed six guineas, or as much as a £300 light car de luxe. The Carden monocar would be taxed £4 4s.; a Morgan or A.-C. Sociable £2. There is good ground here for our associations to get to work in the interests of light car and cyclecar users.

THE R.A.C. AND PLEASURE MOTORING.

A letter dated 10th March from the Royal Automobile Club, which arrived too late for publication in our last issue, deals with the problem of petrol supply, and contains important information as to the attitude of the R.A.C. at the present juncture. The committee of the R.A.C. states that it considers that the following are cases in which the use of private cars is justified:—

1.—The conveyance of persons who are actually engaged on Government work or supplies, or in connection with the industries of the country.

2.—The conveyance of professional men, such as doctors and veterinary surgeons, on their regular business.

3.—The conveyance of wounded and for taking convalescent soldiers for drives; even in the latter case economy may be effected, so long as excursions are unnecessary and by travelling at a moderate pace the requisite amount of airing can be given and any great mileage avoided.

4.—The conveyance of persons and goods to and from railway stations and marketing towns when public-service conveyances are not available.

The letter also goes on to state that the committee recommends the practice should be discontinued of using private cars as a daily means of transport from the country to places of business where railways or public-service vehicles are available. In tracing out the reasons for the shortage of petrol it was found that private owners had large quantities of petrol in stock. The R.A.C. points out that this is selfish and quite unnecessary, and they are making representations so that those persons who have transgressed in this direction shall be compelled to disgorge their surplus stocks for the public benefit. The committee of the R.A.C. calls upon its members, associates and all motorists throughout the kingdom to institute at once the most rigorous economy in the consumption of petrol.

Increased Accidents, 18,560!

The highest figures yet recorded have been reached in the number of street traffic accidents that have occurred in the United Kingdom during 1915. The total is no less than 63,203, an increase of no less than 18,560 over 1913, and attributable in the main undoubtedly to the restricted lights regulations. Well may we ask, as we have done frequently in the past, if these doubtful measures for protection against Zeppelin raids are worth adopting? These figures represent the total number of people injured or killed by vehicles. Of the total 3014 people were killed (an increase of nearly 1000 over the figures for 1913, or a third as much again.) The increased number of accidents is by no means attributable solely to motor vehicles.

The Cyclecar Club Run.

The second run of the Cyclecar Club, which was fixed for last Sunday, was not held, as the members of the club decided that it was scarcely judicious at the present juncture for them to take their runs in company. In spite of the fact that the majority of the available club members are engaged upon work of national importance, it was deemed possible that the congregation of a number of cars in one place might give rise to comments respecting pleasure motoring, which, however unjustified they might be, would, nevertheless, be unpleasant.

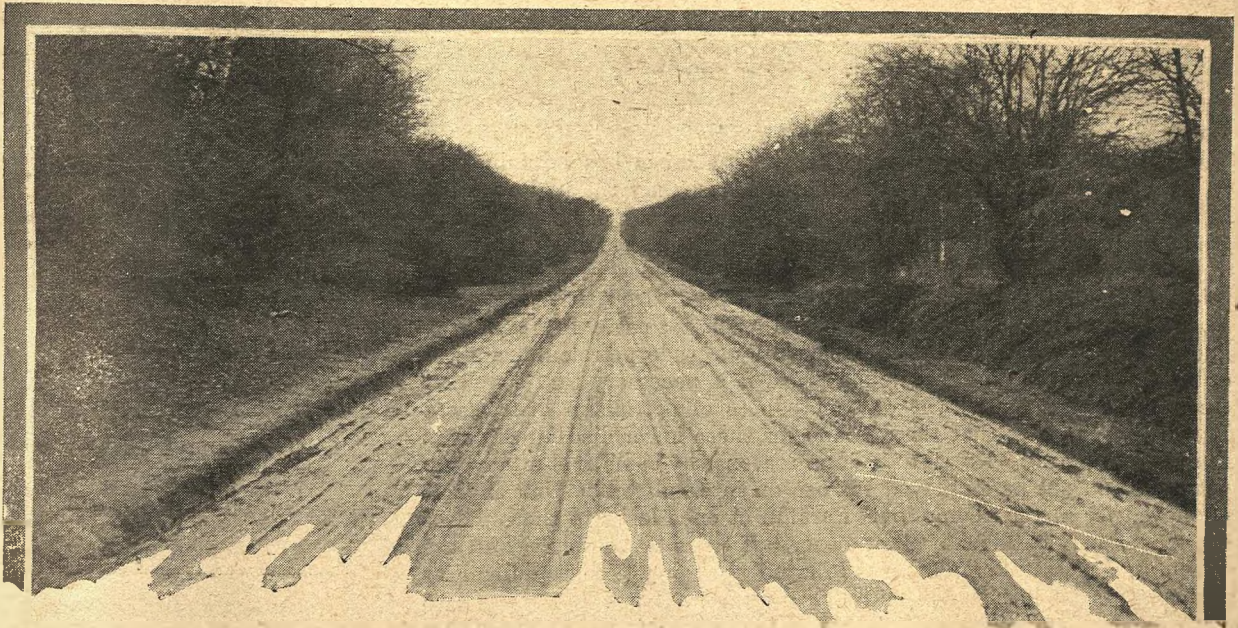
A8

An Instructive Booklet.

It is obvious that to obtain the best results from any mechanism or production, it is essential that the user should be in possession of as much information as possible concerning the particular thing in use. In order that users of Palmer tyres shall know as much about them as possible, the Palmer Tyre, Ltd., of 119, Shaftesbury Avenue, London, W.C., has recently issued an attractive booklet entitled "Palmer Cycle and Motorcycle Tyres." In spite of its title, it contains full details of the Palmer tyres suitable for light car and cyclecar use, and interposed with what we may term the ordinary catalogue features are valuable hints and tips on the treatment of tyres. The notable feature of the publication is the small-scale maps of some of the more popular districts of England which are incorporated. A copy of this booklet may be obtained on application at the address mentioned.

Our Front Cover.

On our front cover this week is depicted one of the best-known ruins in the Midlands. It is Kenilworth Castle, one of the most striking historical features of the county of Warwickshire. Other points of interest in the same town are St. Nicholas Church, the 14th century building, and East Stoneleigh Abbey. The car in the foreground is one of the latest models of the A.-C. light car, fitted with the four-cylinder M.A.G. engine.



PLEASURE MOTORING IN WAR TIME !

The above photograph was taken on the Epping road one recent week-end. It represents the pleasure traffic to be seen in one hour.

The L.M. Cyclecar.

We are asked to state that the L.M. cyclecar was manufactured in the past by Mr. W. M. Cunningham, of Clitheroe, Lincs. The L.M. Light Car Co., of Duke Street, Blackburn, have purchased the L.M. cyclecar business, and Mr. Cunningham now occupies the position of works manager to this concern.

More War Work.

The Bromley Police authorities are at present appealing for special constables to do patrol work. Meanwhile the professional policemen in that district are busily engaged in trapping on the main roads. This appears to be a most remunerative form of war work.

The Weather.

At the time of writing the continuous snowy weather which we have had recently appears to have ceased, and a general improvement in the temperature is noticeable. Some sanguine motorists have even given vent to the opinion that spring is coming.

A Strange Case.

A motorist was recently summoned at the New Forest Petty Sessions for insufficiently obscuring the side lights of his car. It was proved conclusively that the bulbs were only of 8 c.p., that the lamp diameter did not exceed 6 ins., and that a sheet of tissue paper was interposed between the bulb and the glass. As these lamps strictly conformed with the Lights (Vehicles) Order, the case was dismissed. Surely the police could have satisfied themselves on the points in question without the necessity of bringing the case into court.

A Lighting Matter.

One of the best known of the light car dynamo lighting sets is the Rotax, and owners of light cars will therefore be interested to know that the Rotax Motor Accessories Co. is about to remove their warehouses and offices to new premises at Willesden. Until the removal is complete, however, all correct orders should be addressed to their present address at 43-45, Great Eastern Street, London, E.C.

ECONOMICAL AND USEFUL MOTORING.

With reference to the agitation against wasteful motoring, which is finding favour in certain quarters, motorists who are desirous of using their cars only for serious purposes are reminded that the Automobile Association has formed what is known as the A.A. Voluntary Service Corps.

The corps is made up of A.A. members resident in all parts of the British Isles, and their work is to a considerable extent guided by the numerous A.A. branch offices situated in 16 important towns and cities in England, Scotland, Ireland and Wales. Recognition of the fact that such motorists are not using petrol, wearing tyres, and utilizing the services of the staffs at garages for personal pleasure is ensured by their carrying on their windscreens a distinguishing disc, also by the wearing of a uniform carrying cap and sleeve badges (which is optional). Although

a tremendous amount of useful work is now being done all over the country by members of the corps, there are additional tasks which could be undertaken if motorists at present unattached would join up. By joining the A.A., therefore, and becoming members of the A.A. Voluntary Service Corps, such motorists will avoid the necessity of placing their cars in dock, as an alternative to using them and laying themselves open to the charge of wasteful motoring.

Motorists who have not joined the A.A., and who are desirous of confining their motoring to useful objects, may be interested to know that the Executive Committee, to further encourage this desire, are admitting motorists to A.A. membership at once upon payment of the usual annual subscriptions, so that by joining at once membership is obtained from now up to 30th April, 1917.

Topics of the Day

The Question of Alternative Fuels.

IF there is one question which the present crisis has brought into greater prominence than any other it is certainly the fuel question as regards motor vehicles. Even before the outbreak of hostilities the gradually increasing price of petrol caused a certain amount of attention to be directed to the subject, but the recent enormous augmentation of price has made the question of vital importance. Now there is no real reason why petrol should be the sole fuel for motor use. It is generally known that petrol is the lightest distillate of crude petroleum, and, in order to sell petrol at a reasonable price, it is necessary that a market should be found for all the other products of petroleum distillation. It will thus be seen that the demand for these lower distillates affects the price of petrol. Now, there is no reason why some fuel other than petrol should not be employed for use on internal-combustion engines employed for motor locomotion. Paraffin at once leaps to the mind as the most easily obtainable alternative, but there are difficulties in the way of its successful employment in a motor engine. These difficulties and suggested solutions will be touched on in next week's issue of this journal. With special modifications, it is quite possible to use paraffin with satisfaction, and, as paraffin is one of the lower distillates of petroleum, the factors which tend towards the high price of petrol do not obtain in this case. The possibilities of petrol-paraffin mixture have been indicated in a previous issue of *THE LIGHT CAR AND CYCLECAR*, and several of our readers have tried the mixture with a fair amount of success. It appears to give the best results on a high-temperature engine, such as the air-cooled power plant used on a simple cyclecar. At the same time, it can be used with a fair amount of success on a water-cooled four-cylinder engine, if very special provision is made for heating the fuel. We look to the experimental department of the leading light car and cyclecar manufacturers to devote as much attention as possible during this time to the consideration of alternative fuels. Whatever the conditions after the war, it is difficult to see how petrol can ever reach its original price of approximately 9d. per gallon, and in the national pursuit of economy it therefore appears incumbent upon the experimenter to consider the claims of other fuels than petrol.

Economy in Motoring and the Light Car.

SO striking has been the gradual superseding of large cars by the small and economical light car upon the roads of this country that even the lay Press has been forced to comment upon it. It is undoubtedly a fact that the national demand for economy has resulted in many motorists dispensing with their large and comparatively expensive cars and purchasing a simple two-seater, the running costs of which are at minimum. This gradual, but nevertheless striking, change has resulted in motorists being regarded in a far more tolerant light. The general public, in spite of its usual abysmal ignorance concerning all things appertaining to the motor, is at last beginning to realize that the owner of a light car or cyclecar is expending a minimum upon the running of his vehicle, and he is, therefore, not deserving of the strictures which are in general poured upon the heads of reckless and extravagant motorists. There are even signs that the Government itself is realizing the claims of the light car for war service. Every now and then we hear of large and powerful cars being sold off by the Government and reports as to the increase of Government orders for light cars also reach us at about the same time. While the appeal which has recently been issued asking that cars should not be used for purely pleasure purposes is deserving of careful observance by the light-car owner, the vast utilitarian field which the light car can so efficiently fill cannot but result in an inappreciable reduction in the number upon the road.

The Light Car and Cyclecar

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In order that the minimum of paper shall be wasted, readers can co-operate by always purchasing their copy of "The Light Car and Cyclecar" at the same place, or, better still, by placing a definite order for the journal to be sent to them. In this way waste of paper will be prevented, as the publishers will be in a better position to calculate the exact demand.

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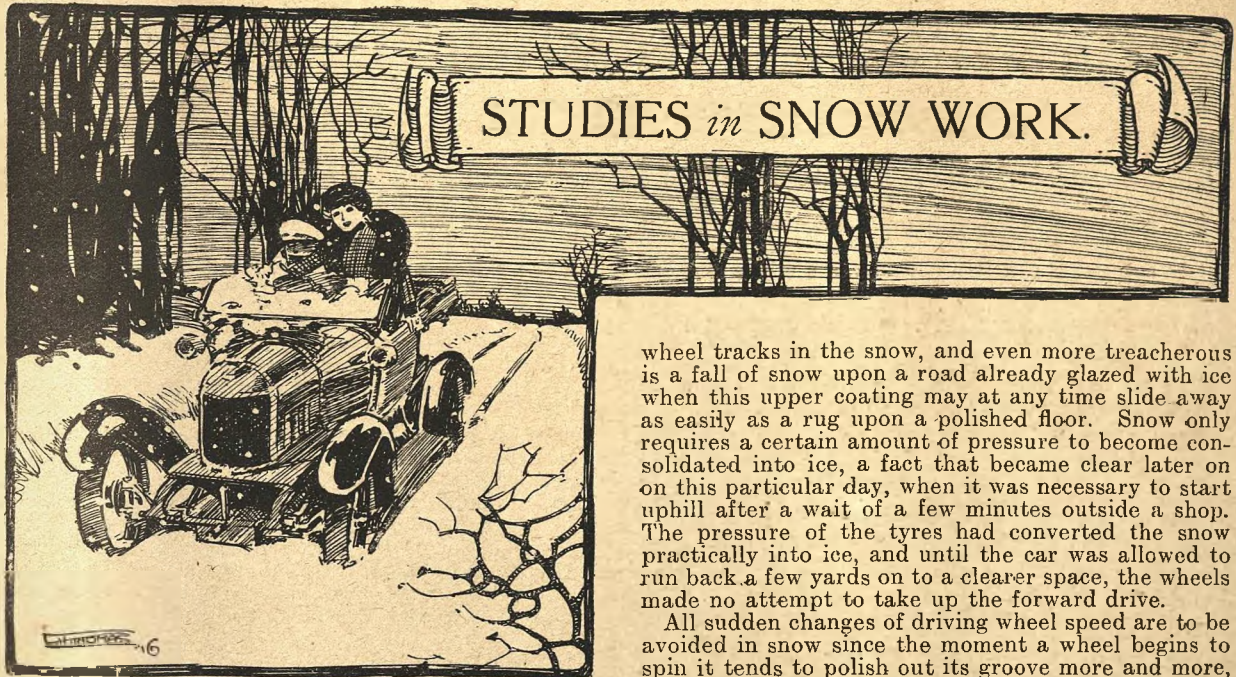
LIGHT UP Next Saturday,

London, 6.48; Edinburgh, 7.3; Newcastle, 6.55; Liverpool, 7.3; Birmingham, 6.55; Bristol, 6.58; Dublin, 7.19.

For Dublin the local mean time (one hour after sunset) is given. If Greenwich time is required 25 minutes must be added.

The lighting-up times are given as half an hour after sunset (with the exception of Dublin).

MOON. — No moonlight until early morning.



THE light car has at any time several road characteristics which distinguish its driving from that of its larger relatives, and the varied, quickly-changing conditions of snow during the last few weeks have given some interesting experiences to drivers in the behaviour of modern light cars under these more unusual weather restrictions.

The first introduction in the writer's case was a thorough one, when the shed doors had to be dug clear of snow and the car's nose, picturesquely draped in a check rug to protect it from frost, peeped out upon a good 10 in. snowfall. There was no point in taking chances, so some old rope was put on board and the radiator refilled with hot water. Even so there was plenty of sputtering from cold inlets as the car crawled out into the narrow drive.

Deep enough it was, for the low front number-plate and even the engine sump scraped along the surface, and the tyres squeezed deep channels in the soft, freshly-fallen snow. For a moment the engine seemed to hesitate, and the car was stopped to coax a little more warmth into the carburetter. Then the clutch was let in, but the only result was the whirl of spinning wheels. Now the tyres comprised a plain steel-studded and Gofa on the back, the latter with a narrow square tread and small X grooves, the rubber being reinforced with fine steel wire. On the front were two rather worn grooved Dunlops. Here was lesson No. 1—that even on the level steel studs might not grip when the tyres had sunk into icy grooves on the frozen ground.

Cleared Main Roads.

It was not necessary to have recourse to the invaluable rope, for after a slight reversing the tyres gripped easily and the car continued on to the thinner snow of the road. In heavy snow, if a car can once get out of the lanes and by-roads, it will be found, as a rule, that the main roads have either been cleared or that the traffic has battened out and reduced the depth of fall. Yet the actual effect of snow upon the tyres of a car, especially of a light car, will vary considerably, according to whether it is freshly fallen and easily compressible or whether it is thawing and therefore wet and muddy underneath.

Occasionally a sharp frost will create ruts of real danger to the lighter traffic by freezing solid the

wheel tracks in the snow, and even more treacherous is a fall of snow upon a road already glazed with ice when this upper coating may at any time slide away as easily as a rug upon a polished floor. Snow only requires a certain amount of pressure to become consolidated into ice, a fact that became clear later on on this particular day, when it was necessary to start uphill after a wait of a few minutes outside a shop. The pressure of the tyres had converted the snow practically into ice, and until the car was allowed to run back a few yards on to a clearer space, the wheels made no attempt to take up the forward drive.

All sudden changes of driving wheel speed are to be avoided in snow since the moment a wheel begins to spin it tends to polish out its groove more and more, making a grip impossible. Hills are best taken at a steady pace on a low gear, and, if really steep and slippery, the bottom gear should be engaged at the start and a uniform speed maintained.

To stop the car on such a hill is distinctly dangerous, as there is both the chance of a disastrous backward slide, and also it will be difficult to restart owing to wheel spin.

In Driving Snow.

A week or two later it became necessary to drive some 60 miles across Surrey, and, naturally, another snowfall had coincided with the pre-arranged day. Matters did not look cheerful, for although the depth was only 4 ins. or 5 ins., the snow was damp and powdery, and, at the time of an early start, was driving down steadily, with a brisk N.E. wind. In a few minutes the screen was plastered over and snow was fluttering in at the sides and lodging everywhere. In this, certainly, was the one disadvantage of a high screen meeting its hood; draughts and rain were excluded, but the snow clung insistently, and for the first hour of driving a glove or rag had to be drawn along the top of the screen every minute or so to get a steering view through the glass.

To slant the screen so as to look over, or to have had a lower one would have meant that the inside of the car would be smothered in snow, and neither alternative can be called pleasant. The country roads were still unused, and the real track none too easily traceable in the white expanse where the near distance dissolved into whirling snow, and soon after the start a tilt and heavy bump of the off-side wheel showed that the car had touched the hidden grass edging and jumped a shallow water channel! A twist of the wheel brought it back on to the road, and further deposit was hastily wiped off the screen.

Further on, the traffic began, and horses' hoofs had flung the snow about in great adhesive lumps, but on the Woking road the treated surface, frozen perhaps under the snow, and the rather excessive camber produced a tendency to slipping not confined to motors, for a large wagon appeared to have been abandoned at the foot of a slope, where its horses had fallen or failed to get a grip.

Again the snowfall thickened as the car turned south on by-roads. The screen, completely cleared once or twice, now became plastered over again except for the strip kept clear opposite the driver.

STUDIES IN SNOW WORK (contd.).

Round the corner came a farm cart, and through the narrowed glass what seemed a couple of feet clear was really five or six. On the near side the screen hid the road only too well, and as the car drew level there was a lurch and splutter of mud, and the car dropped to an angle that would have overturned a limousine. For a moment the driver held to the wheel, to prevent himself being thrown over into the empty seat, and then swung it to the right. But there was a kind of front-wheel skid, and the steering wheel still ploughed through a foot of mud and snow, refusing to climb on to the edge of the road. Just as the whole car seemed to be sinking in the morass, the front wheel gripped, and the car swung instantly back upon the road, where the carter-driver grinned sympathetically over his shoulder.

With characteristic abruptness, the snow ceased falling about mid-day, and a warm thaw set in, which soon began to cover the roads with slush, though snow ploughs had been at work in places and skimmed the greater part of the snow away. Near Dorking, on the return journey, a gentle side-slip at a right-angled corner was a reminder that the roads were still slippery; but after this the surface seemed so much better and the windscreen clear that speed was increased. Therein lay the cause of no small thrill! The road curved away slightly to the left, round which suddenly appeared a snow plough. It was not working, but men were round it, and the horses stood on the far side blocking the road. Nothing very unusual, so the brake went on. With a peculiar hiss the car continued to rush forward! Harder braking and the clutch out! This latter was a mistake, for the car, gliding straight on, now swung vaguely to the left; again, as the steering corrected the skid, away towards a ditch on the right! Just in time the steering dodged the car back, but would those tyres ever grip? That stealthy glide was all in an instant of time, but now slower and slower it went until, like a toboggan at the end of the run, the car stopped fair and square behind the plough and only a foot or two away. "Bit giddy kind o' sport, ain't it?" said one of the men, stepping down from the safety of a bank and admiring the serpentine tracks. "Stick to the old 'orses I will!"

Sliding on Slush.

It was not easy to account for the slide, considering that the road was flat and the plough had just cleared it, superficially at least. Perhaps a thin layer of slush had been left, just sufficient to be dangerous. No doubt the declutching should not have been done, and a series of quick dabs at the brake pedal might perhaps have provided a better check than a prolonged pressure and cause the tyres to bite; but one could not help wondering what might have happened had the plough or other traffic been nearer or had there been a slope in front.

Speed was somewhat reduced after this, but even so, at the awkward cross-roads in the centre of Leatherhead there was a moment of lively uncertainty as the car turned down the hill, only to be faced by two steam wagons snorting up the street. Here, thank heaven, the tyres gripped at once in response to gentle braking, and the car drew aside to let the giants move by. Without further incident, the journey ended, and for the last dozen miles the quick thaw had flooded the roads with half-liquid slush; the tyres held steadily, and the now coffee-coloured mess spurting out fanwise on either side.

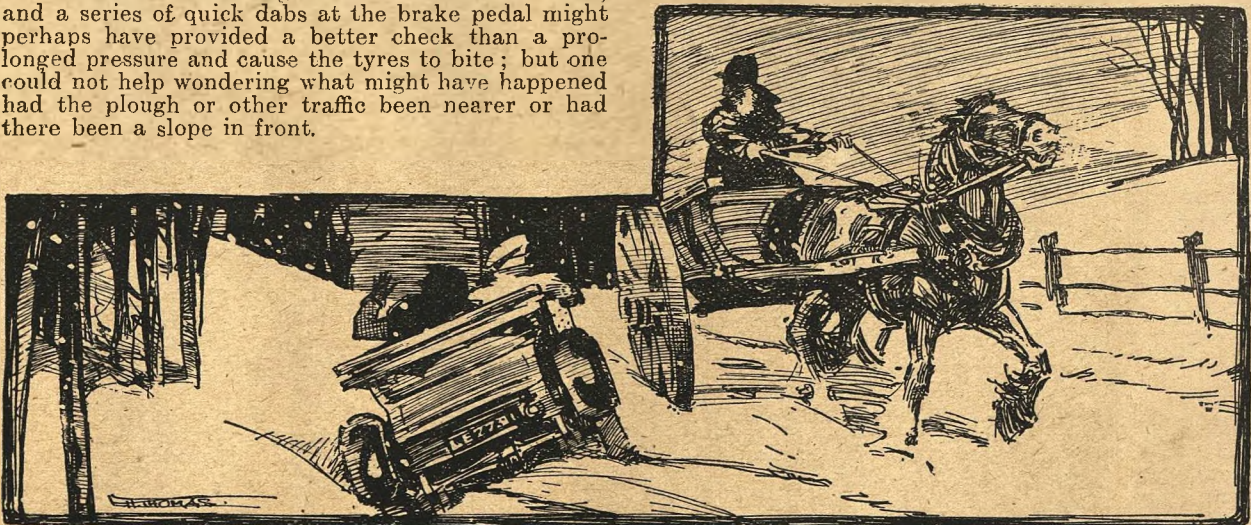
Snow and Darkness.

Two days later a short evening run in falling snow showed that the clogging of the screen was even a worse nuisance in the dark, but the distinctly limited glow from two side lamps was more effective than might be expected, and though the traffic-trampled road seemed dark, the light showed well upon the edges of unbroken white.

What means then are best for securing the safety of the light car in snow? A slotted windscreen is, of course, a solution of the clear-view problem, and extended side curtains to keep out driving snow. The tyre problem is more important, and is connected with the question of springing, which on most light cars is still open to improvement. When travelling light, there is often considerable bounce and jumping, especially at the back, and even when carrying two people the weight on the back axle sometimes fails to give really good road adhesion. In conditions of snow and frost both of these may mean loss of power and slipping.

On icy roads the steel-studded tyre is as irresponsible as a novice on skates, but in softer snow it is useful, provided the weight is sufficient to press it home. Rubber non-skids which rely on hollows sunk in the tread prove more or less useless, and the ordinary three-rib and cross-grooved are little better. If much snow work is to be done on a light car, some tyre with a pronounced form of raised tread is more likely to be effective; such, for example, as the alternate bars and studs of the R.O.M. or the caterpillar-like feet on the Stepney Road-grip.

Two lengths of rope should always be carried, as they may make all the difference in helping the tyres to grip and getting the car out of difficulties; but even if of the best quality, rope will not last long in continued road use. Parsons' chains, which are more used in America than here, act rather in the same way as a rope, and seem to be effective, especially in the softer conditions of snow. S.F.B.L.



THE RUDIMENTS OF ELECTRICITY.—IV.

Starting Motors and Their Principles of Working.

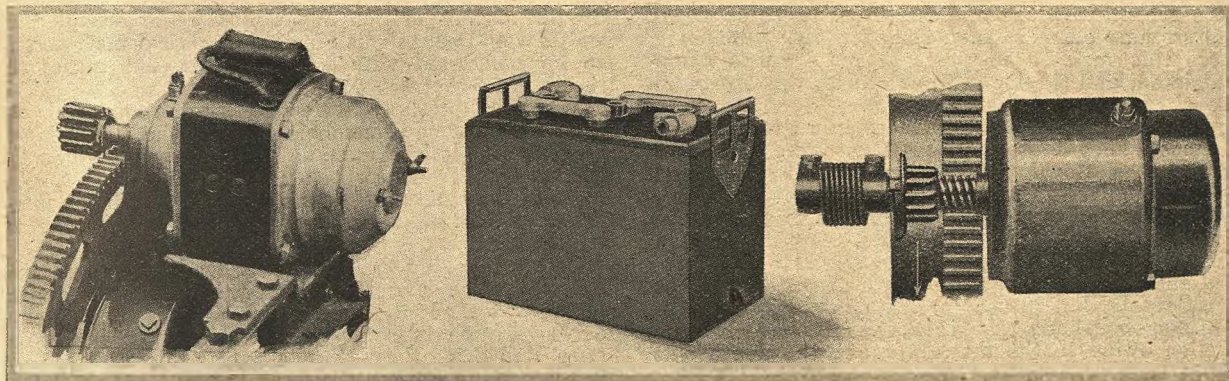
IN previous articles in this series we have explained how the rotation of a conductor in a magnetic field will cause a current to be produced in that conductor. This is the basic principle of the dynamo. Now this process is capable of reversal; in other words, if a rotatable coil of wire is placed in a magnetic field the excitation of that field will cause rotation of the conductor. This is the principle of the electric motor.

It will be seen that it is possible, in the circumstances, for a machine of the same construction to be used either as a dynamo or as a motor; in other words, for the generation of current or for the production of motion.

Of late years considerable attention has been devoted to the production of self-starters for motor vehicles. The most popular system at present is that by means of an electrical starting motor which can be put into engagement with the engine when it is desired to start the latter.

The current for the operation of this motor is obtained from ordinary storage batteries, but for starting purposes they have to be exceptionally strongly constructed in that an enormous current is taken for the fraction of a minute until the engine is actually put into action. It will be realized that if a motor is positively connected to an engine which it is desired to put in motion the supplying of current to the motor will practically produce a dead short circuit across the accumulator until the motor moves. This is due to the fact that the current passes direct through the field, the armature, and back to the battery. With big engines it is not at all unusual for a current of 150 to 200 amperes to be taken momentarily when the starting pedal is depressed.

The ordinary accumulator used for lighting purposes would therefore be entirely unsuitable, as the sudden rush of current would cause disintegration of the paste, buckling of the plates, and other troubles. Starting batteries have therefore to be constructed



In the centre is shown the sturdy type of battery used in starting sets. On either side will be seen alternative arrangements of the sliding drive which can be put into engagement with the flywheel when it is desired to start the engine.

It will be realized that the problem of the starting motor is an extremely complex one in that there are so many variables connected with the engine for which allowances have to be made. Any driver who has endeavoured to start an engine from cold when it is gummy and there is a considerable amount of moisture in the atmosphere will realize the efforts which have to be exerted by the starting motor. At the same time, the latter has to be made as small and compact as possible, as the space available for its mounting is usually limited, and the question of weight reduction is an important one.

As we have already pointed out, in a motor we utilize the tendency of a conductor lying in a magnetic field to move at right angles to its length when it is traversed by an electric current, which force is proportionate to the strength of the magnetic flux and to the value of the current which is flowing in the conductor.

There are several types of electric motors which are classified according to the method in which the winding is arranged in relation to the armature, but that most popularly employed for starting motors is of the "series" pattern, in which the entire current passes round and magnetizes the field before finally entering the armature.

with very heavy and solid plates. All leads have to be as generous as possible, so that the rush of current cannot damage them in any way.

It is obvious that as the starting motor is only required for a very small proportion of the time the car is in use, it is unnecessary that it should always be in gear. In the same way that the ordinary starting handle is only put into engagement when it is required to start the engine, so is the average starting motor only put into gear for a similar purpose. The arrangement of the drive so that the motor may be put in and out of gear automatically has caused considerable ingenuity to be exercised by designers.

The most popular form of engagement at present is by means of a small pinion which is slid into engagement with a toothed ring on the flywheel as soon as the starting pedal is depressed, and then immediately the engine overruns the motor this pinion is automatically thrown out of engagement.

The method of doing this is extremely simple and reliable. The armature shaft carries a small pinion on a sleeve along which a quick thread is cut. The pinion itself is so made that one side is heavier than the other. With this form of construction, when the motor is switched on, the first rotation of the armature shaft will cause the small pinion to be fed along the

RUDIMENTS OF ELECTRICITY (contd.).

quick thread, and, owing to the fact that one side is heavier than the other, it will not tend to rotate with the armature shaft. As it is fed along this quick thread the teeth of the pinion are slid into engagement with the toothed ring on the engine flywheel, and the armature shaft and pinion rotate solidly, thus driving the engine.

As soon as the engine fires and there is no further need for the self-starter, the switching off of the current in the motor will cause this unequally weighted pinion to be slid out of engagement along the quick thread on the armature shaft. The starting motor is thus only in engagement when it is actually being employed and much wear and tear of the mechanism is thereby saved.

For light car use there appear distinct possibilities that the single unit machine will come into general use. This is a combined dynamo and motor, and the principles we have previously referred to are employed, so that the one instrument can be used for either of the two purposes. This instrument would be permanently in gear with some rotating part of the

engine, and below a certain speed it would drive the engine, and above that speed it would generate current and thus replenish the batteries. This form of instrument has several attractions for light car use in that it is more compact than the two unit system where a separate dynamo and motor are employed. It is therefore more easily fitted, and requires less attention to keep in order.

With this type of combined instrument it is practically impossible to stop the car engine. As it is always in gear and always switched on while the car is in use, it will be seen that the automatic changing from a dynamo to a motor will prevent any possibility of stopping the engine. Even if the car is driven to a standstill with the gear engaged and the clutch fully in, as soon as the latter is withdrawn the starter will automatically rotate the engine. Driving in traffic is thus considerably simplified, as there is no danger of stopping the engine.

It is obvious that the subject of self-starters on light cars has not as yet received the attention which it deserves, but the general demand is for a light, inexpensive, and efficient instrument which will look after both the starting and lighting of the light car.

FLOODS AS ROAD OBSTRUCTIONS.

THE sudden thaw which set in after one of the recent snowfalls was the direct cause of rivers and streams being swollen considerably. In many cases this resulted in parts of main roads being inundated, and the lot of the motorist was therefore one of considerable uncertainty.

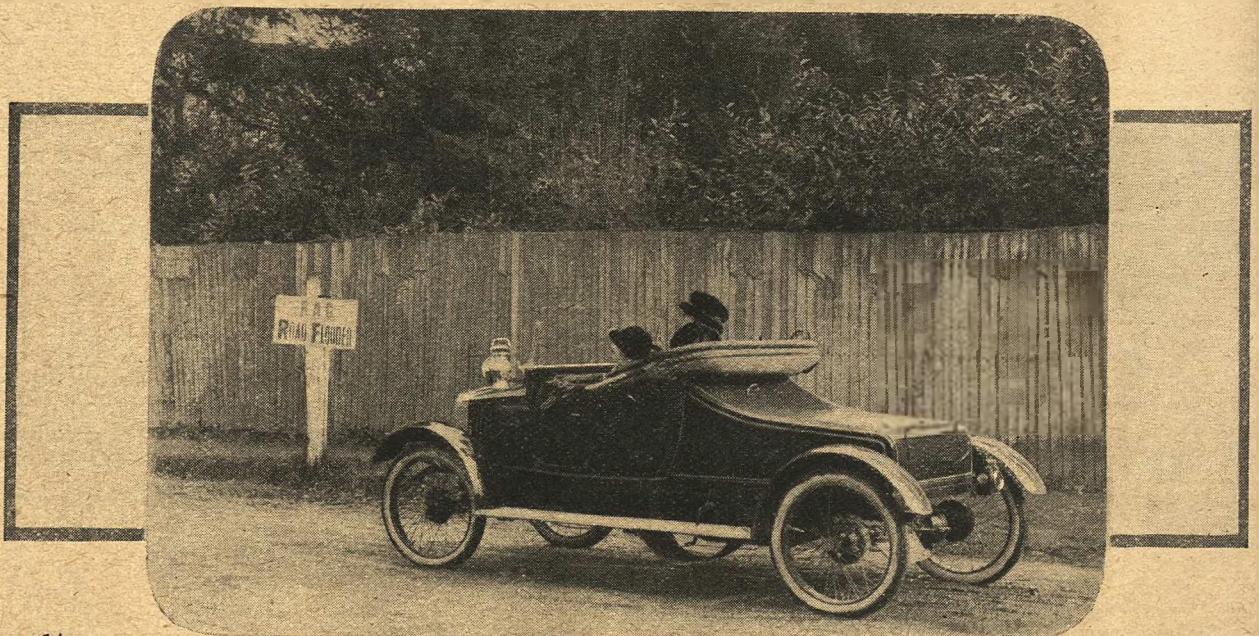
We were pleased to note in certain areas in the Thames Valley that in places where the road was flooded the Royal Automobile Club had erected notices, similar to that seen at the foot of this page, which indicated to the approaching motorist that the road was under water. In many cases the flooded portion of the road could be traversed if due precautions were taken, as the depth of water was not considerable, but in the case of one watersplash in the neighbourhood of Hook, which had become swollen owing to the thawing snow, the depth was over 2 ft. in the centre.

While there are certain light cars so absolutely weatherproof that this depth of water can be nego-

tiated with ease, the majority have the magneto situated in such a position that a swift rush through the water would cause this delicate electrical instrument to be inundated with water, and would therefore result in a stoppage of the engine.

When negotiating a flooded stretch of road, it should always be remembered that if the clutch is at all exposed, it is a mistake to withdraw it when in the water. The latter will get upon the friction surfaces of the clutch and cause slipping, which is sometimes so bad that forward progress of the car is impossible.

On approaching the brink of a flood, investigations should first be carried out to see the maximum depth of the water. If the driver then decides that he can drive through in safety, he should engage bottom gear, and drive through as slowly as possible, so as to disturb the water as little as possible. If this plan is followed, considerable depths of water can be successfully negotiated.



TRAVEL
IN
WAR=TIME.



BY OUR
TOURING
EDITOR.

In London's Front Garden.

LONDON'S front garden, to which Kent may fairly be likened, though near at hand, is not a bit the less eligible as a holiday resort on that account, and some extremely interesting two or three days' rounds can easily be mapped out that would hold their own in attractiveness with rival itineraries in country farther afield.

Here, for example, is one, planned with an eye for the needs of the man who has done Kent before and wants a different view of it from the usual main road route round the coast.

The Start of the Round.

The first point to make for is Tunbridge Wells, and, to my thinking, there is no way there from town so attractive as that route which, leaving Croydon via Sanderstead, breaks off at once into the wilds, and, continuing through Titsey and Edenbridge, winds so charmingly past Hever, Chiddingstone, Penshurst, and Speldhurst, running into the Wells across Rusthall Common.

A few miles out of Tunbridge Wells is Bayham Abbey, whose picturesque ruins should be seen if it chances to be a visiting day. From here the nearest way to Goudhurst, our next objective, would be through Lamberhurst, but it is well to reach it by the circuitous plan of running on down the Hastings road nearly as far as the hamlet of Flimwell, and there turning into the secluded sylvan by-way alongside Bedgebury Park.

Goudhurst is one of the high places of this world, at any rate as height goes in Kent, and to gain its commanding altitude some stiff climbing is inevitable, especially on the south or west. But even should the water boil on the long ascent it will boil in a good cause, for to reach Goudhurst is to reach something specially choice in the way of villages; it is indeed one of the quaintest places imaginable, and will infallibly captivate the visitor who sees it for the first time. A curious feature worth notice is that one of the inns has a private entrance direct into the churchyard, while the inn itself is in possession of a disused communion table, much, I was told, to the scandalization of the local clergy.

Leaving Goudhurst by the Ashford road, it is well to make the detour necessary to work in Cranbrook, which, also, is a quaint little place, its old houses speaking of the days—those before the introduction of machinery and the rise of the North as England's workshop—when it was continuing, with much profit to itself, the lucrative cloth industry planted there, with the aid of Flemings, by Edward III.

At the next village, Biddenden, noted for its Easter Day custom of distributing little flat cakes stamped with the figures of two charitable sisters of the parish, who appear to have been joined together like the Siamese twins, we turn off and make for Charing, where there are one or two quaint old

houses to be seen, as well as the picturesque fragments of a former palace of the Archbishops of Canterbury. From here we continue along a very pretty road to Canterbury, passing en route the ruined keep of Chilham Castle.

Of Canterbury it were best to say nothing, for once get going on the sights of this fascinating old city and it is difficult to stop. So I will hurry you on to Sandwich, bidding you, before you explore its quaint streets or seek out the picturesque old church, turn aside to the time-defying walls of Richborough, otherwise Portus Rutupiae, the chief port for communication between Britain and the Continent 1800 years ago, centuries before the sea silted up both it and its mediæval successor, Sandwich.

I propose now that, instead of going round by Deal and Dover, where, most probably, the military authorities are not particularly anxious to be bothered with you, you should make across country through Barfreston, where there is a splendid little Norman church, and along the pretty Elham Valley, which cuts through the heart of the Ingoldsby country. This will bring you out near the coast to west of Hythe, at Lympne, where, in the broken walls that go by the name of Stufall Castle, you behold another evidence of the remorselessness of the sea when it sets itself out to undo human plans, for here was another important Roman harbour, now a good mile and a half inland.

In the Marshland.

Rye, which marks the end of Romney Marsh, is a byword for picturesqueness, and so, as in the case of Canterbury, I may be excused from pressing claims which everyone will feel. It is one of the most entrancing of England's dead towns, and no lover of the past will go by without paying it homage. At the present moment the attention is irresistibly caught by the name of the Ypres Tower, which conjures up thoughts of a place of which, henceforth, Britons will, to the end of time, be proud, and this evidence of an earlier connection between our country and the beautiful old Flemish city, now in ruins, cannot fail to be noted with interest.

If you came this way before, you doubtless did the orthodox thing and went on through Winchelsea to Hastings, so this time we will, instead, make the acquaintance of the very picturesque ridgeway road through Udimore, having on either side of us valleys that, in days when Romney Marsh was salt water, were arms of the sea. This will bring us to the moated shell of Bodiam, the noblest ruined castle, it may be confidently affirmed, in the whole south of England. It is a curious fact that Bodiam, for all its romantic appearance and mediæval atmosphere, was, at the period at which it was built, just a little bit of an anachronism. Castles of that severely military type were becoming somewhat unnecessary, but as it

LONDON'S FRONT GARDEN (contd.).

was the proper thing for a noble to possess a stronghold of this description, the lord of Bodiam, finding himself able to afford the luxury, determined not to be without such mark of lordliness. This sort of thing has quite a familiar ring about it in the present

cottage beside it, which was once the lodging place of pilgrims to the famous shrine. By favour of the cottager one should go inside and inspect the ancient fireplace, at which, though not, of course, in the modern grate, were cooked the meals of hordes of those picturesque wanderers of the Middle Ages.

From Battle you may take the pretty road which



THE LAND OF KENT.

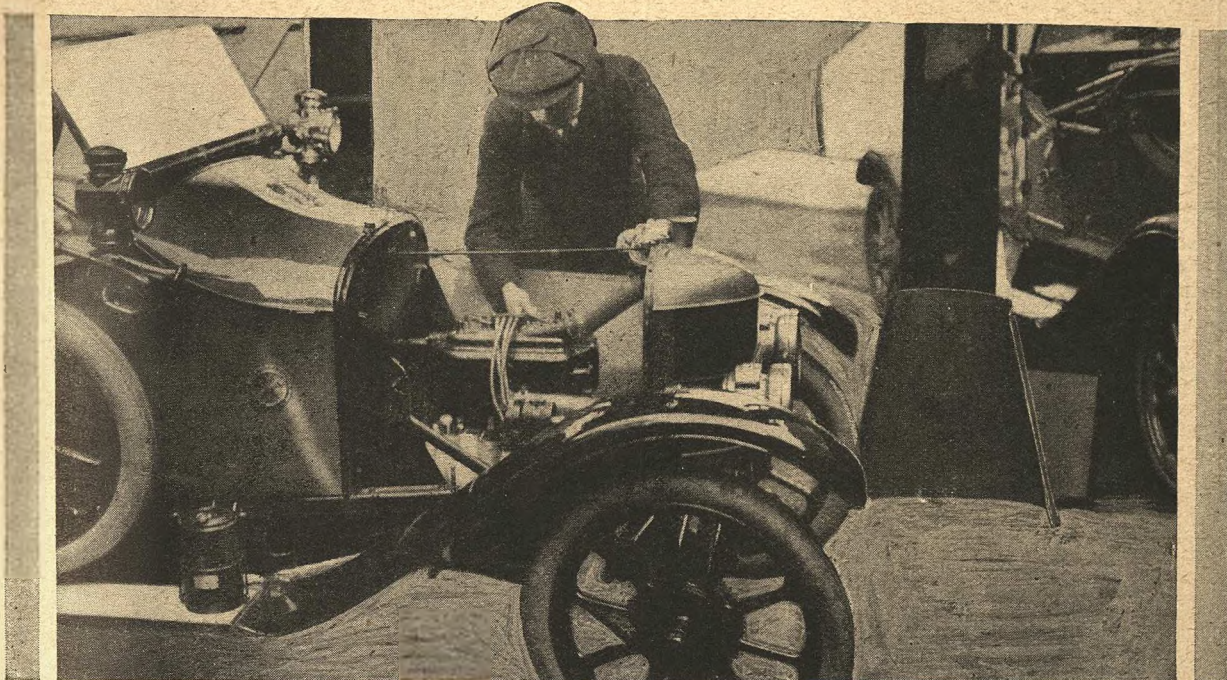
- (1) The village of Goudhurst. (2) A typical scene on Romney Marsh. (3) Sandwich Church. (4) Battle, the Abbey Gatehouse and Pilgrims' Lodging. (5) The Ypres Tower at Rye.

get-rich-quick age, and thus does history anticipate itself.

From Bodiam we have a lovely run, across country, to Battle, of famous memory, and if we cannot visit the remains of the historic abbey—a privilege which I think is confined to Tuesdays—we can at least look on the fine gatehouse, a worthy specimen of Perpendicular architecture, and on the quaint old

runs to Maresfield by way of Dallington, Heathfield, and Buxted, or, if preferred, you may go round by Hailsham and East Hoathly, and so net Hurstmonceux and Michelham Priory into the trip. Then you may get back to town by the always charming road across Ashdown Forest and through East Grinstead and Godstone, full, I will warrant, of renewed energies for the many tasks that will be awaiting.

TRACING TROUBLE ON THE ROAD.



Ordinary Stoppages which May Possibly be Met With, and their Cure.

MANY handbooks have been written on tracing trouble, both when it occurs on the road and in the garage, and if one happens to have one of these books in the car at the time of the trouble, it will be found extremely useful to the novice.

However, to commit to memory the contents of a moderately-sized text-book is not the manner in which the average motorist would care to utilize his spare time, but a few of the more common troubles that beset the motorist, and their cures, can be gathered at a glance, and can be easily remembered.

Those motorists who have been on the road from the early days of the motoring movement say of the novice that he, like themselves, can only learn by sad experience; but if he can learn by the experience of others it would be so much the better for him.

Usually, before any involuntary stoppage on the road, there are certain signs familiar to the expert, but entirely lost upon the novice, and it is from these signs that the expert usually has a good idea of the cause of the trouble before he has examined any part of the mechanism, and also an expert's eye can detect any simple derangement of the engine when the novice would, in all probability, find no difference.

One of the weakest features of a motorcar, excluding the tyres, is the carburetter. Not that the carburetter is itself a faulty piece of mechanism, but it is impossible, or very nearly so, to prevent dirt from entering it, either with the petrol from the tank, or through small cracks in the lid of the float chamber, or even in the main air intake orifices. Dirt in any part of a petrol engine is the first indication of immediate or future trouble.

One of the most common types of carburetter which is fitted to light cars is of the two-jet pattern. Under each jet is a well, from which the petrol is drawn. After a long drive on a car fitted with this type of carburetter, over the sandy roads of the south of England, the power of the engine sadly diminished, and similar hills to those which were climbed easily

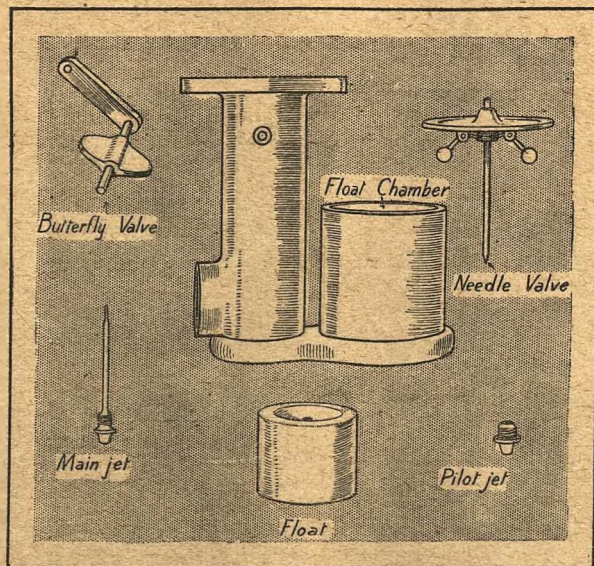
on top gear called for second, and even first, gear. The engine became very hot, and the water boiled furiously every time the lowest gear was engaged.

When the carburetter was dismantled, a large quantity of sand was found in the well under the main jet. Further investigation showed that, although the orifice in the main jet was not totally stopped by the sand, the diameter was reduced by at least one-third its original size owing to a piece of sand having lodged in the side of the jet, although the jet would have appeared quite clear at a casual glance.

After this and the greater part of the sand in the other parts of the carburetter were removed, by washing them out with petrol, the car regained its former "tune." All that would have been necessary, instead of the complete removal of the carburetter, would be to remove the two nuts which form the outside of the petrol wells, situated at the foot of the main barrel of the carburetter, and with the special jet spanner remove the jets, a saving of more than half the time otherwise occupied.

Another trouble, although it was more an annoyance, which this same car developed, was that, whenever the engine was running slowly in neutral, and the clutch pedal was depressed while the first or reverse gear was engaged, the engine momentarily accelerated and then stopped. Several remedies were tried to cure this, but the only thing which was found to be entirely satisfactory was the combination of a small spring fixed to the operating arm of the carburetter pulling the throttle shut while slow running of the engine was assured by the adjustment screw, and the placing of a small felt collar round the base of the main jet held in position by a piece of wire to absorb the surplus petrol, which dripped back down the inlet pipe (unless the engine was running fast), and feed it off again in the form of gas.

To return to the question of overheating and general bad running, it can be the outcome of several minor derangements. A weak spark will cause



The parts of a standard carburettor which may possibly give trouble on the road.

overheating, and a good spark firing late will have the same effect. The most common cause of a weak spark is badly-worn platinum points or points which do not register properly with one another. This can be cured by disconnecting the points and tapping them gently with a small hammer until they are flat.

Dirt, oil, or powdered fibre on the distributor would probably cause a weak spark on one cylinder unless it caused that cylinder to be entirely cut out, and, as the distributor on the modern magneto is only held in position by two clips, the oil or other foreign matter can be cleaned out in a few seconds with a rag dipped in petrol.

An uncommon cause of a weak spark, which finally brought a car to a standstill, was witnessed a short time ago, when it was found that a lady driver had oiled the magneto in the same generous manner as she had oiled the engine, the result being that the platinum points were practically working under oil and both brushes had on their surface a coating of burnt oil, through which the current had to pass.

A Baffling Trouble.

A cause of occasional misfiring and the entire cutting out of the engine at high speed was traced to the bell crank arm of the contact breaker of the magneto becoming so stiff in its fibre bearing, owing to the latter having swollen with the damp, that the spring was not sufficiently strong to close the points together excepting at very moderate revolutions. This was quickly cured by filing the fibre bush out with a piece of fine emery cloth on a match stick.

In case the novice is too timid to experiment with the magneto of his car, the make-and-break and one carbon brush can be withdrawn if the centre bolt is undone and removed; then, probably, slight leverage with a screwdriver will be required, as the brass plate is on a tapered and keyed boss. The crank arm is held in position by a small spring clip. This can be turned out of the way, and, if the screw which holds the spring is taken out, the arm can be removed from its bush with a minimum of trouble.

An easy test to find out if one or more of the cylinders are misfiring is to hold a screwdriver, first making sure that the instrument has a wooden handle with no metal exposed, on the plug terminal and the cylinder casting. If, when this is done to each cylin-

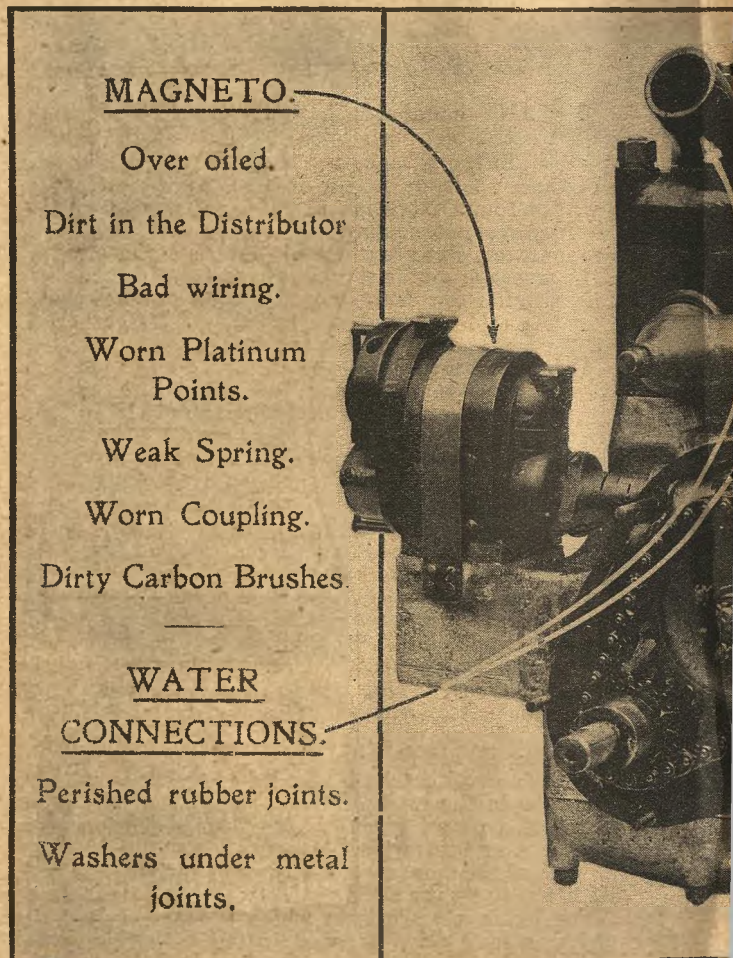
der in turn, the speed of the engine slackens perceptibly on three out of four cylinders, the three are in order and the fourth is misfiring.

To test further if it is the sparking plug or magneto which is the cause of the trouble, the end of the screwdriver is held about $\frac{1}{8}$ in. from the cylinder casting and the distance gradually diminished. If a spark appears at the point of the screwdriver it is a faulty plug, and if no spark appears the magneto or the wiring is at fault.

The principal trouble with sparking plugs is that the gap between the electrodes may become filled with carbon deposit, causing a continuous circuit. In such cases as this, the cure is to scrape the carbon from the plug points and all the carbon inside the plug with a knife and then clean the plug with petrol. The insulation of the plug may, however, be cracked, and, in that case, the only cure is to replace the plug by another.

In the case of two cylinders out of four regularly misfiring, the carburettor can hardly be to blame. An air leak in the induction pipe or valve caps may cause misfiring due to too weak a mixture. After these causes have been eliminated with no result, the cause must be traced further. A faulty sparking plug will cause misfiring in one cylinder, but it is hardly likely that two sparking plugs would develop the same symptoms simultaneously, unless the engine had been very much over-oiled.

If the misfiring takes place in two cylinders which are on the same side of a "T" induction pipe, the trouble may be a bent, stuck, or badly-seating valve in



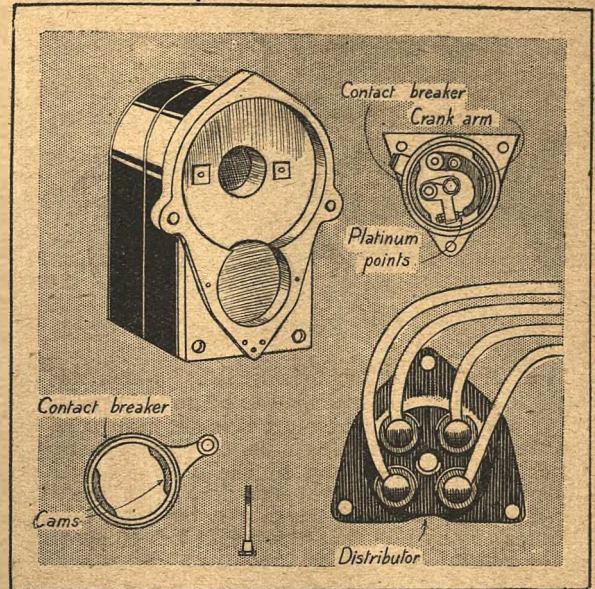
The power plant of a light car, and the con

one cylinder, causing the gas in the inlet pipe to be blown back towards the carburetter on each up stroke of the piston and preventing any mixture reaching the other cylinder, which might be in perfect working order. A broken valve spring would have very much the same effect if it were too weak to hold the valve firmly on its seating.

Another cause of misfiring in two cylinders which is peculiarly mystifying is the shifting of the cams with the make-and-break cover. The contact-breaker ring, to which the cams are fixed, is movable to a small extent when it is given a sharp tap, which might easily happen unnoticed in a garage, so that, if the platinum points are adjusted somewhat finely in the first instance, it is quite possible for the striker to miss one cam entirely, while the gap on the platinum points caused by the other cam is doubled. This causes misfiring on cylinders, depending on the order of firing, but not next to one another, which adds to the mystification of the novice.

When the engine spits back into the carburetter it may be caused either by a weak mixture or by a valve sticking in its guide. If the car comes to rest, emitting a series of spittings and splutterings, it may almost certainly be taken as some form of petrol stoppage. The first test is to see if it is possible to flood the carburetter; if this can not be done it may be that either the petrol has run short or that the pipe is stopped.

A form of petrol stoppage, which is not often found on the modern light car, is due to an air lock in the petrol tank. If this is the cause, it is, of course, auto-



A high-tension magneto and its principal components, the purpose of which the motorist should clearly understand.

matically cured by the taking off of the petrol cap. On one occasion when the petrol cap was of bright metal, it was found that the metal polish had become solid in the pin-hole in the cap, and caused a repeated air lock in the tank, which worried the owner of the car for some weeks. Water in the carburetter often gives the driver the impression that the car has run out of petrol. The water can easily be detected in globules in the float chamber.

Want of oil is very often the cause of the overheating of the engine, besides causing it to run badly with want of power generally.

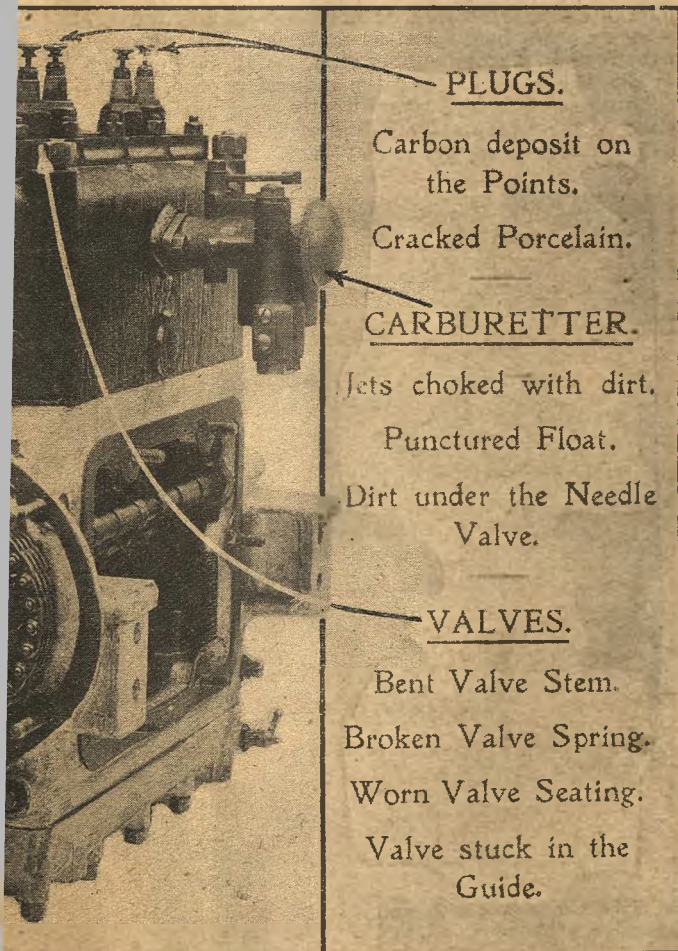
A slipping clutch may very often confuse the novice, as it gives the car the appearance of very sluggish running. The engine will not accelerate in the proper manner, the driver, therefore, not being able to "rush" hills. The cure for the slipping clutch trouble varies with the design of the clutch. A disc-type clutch can, nearly always, be made to grip if it is properly lubricated as described by the makers; a leather-cone type can be temporarily cured with fuller's earth until the clutch can be dismantled.

Brakes Binding.

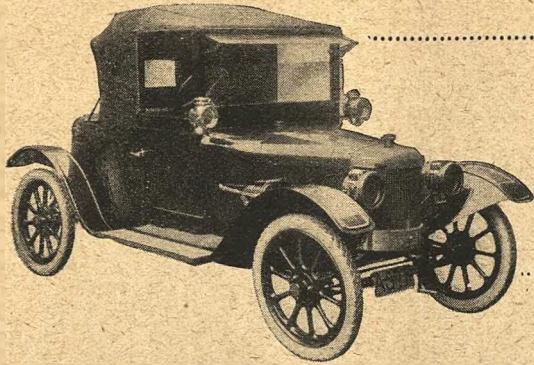
It is necessary to see that no ridge has been worn on the leather, and that the spigot is worn, so that the clutch does not engage evenly. A flat-faced clutch, if it slips, will in most cases require a new spring, although occasionally scraping the burnt oil off the gripping surfaces will cure it.

If the brakes bind slightly, they will give the car the appearance of sluggish running, and to test this the car should be jacked up and the back wheel spun round. The wheel should turn quite easily, almost coming to rest by the weight of the valve. If a car is run a considerable distance with the brakes binding, the friction will generate a considerable amount of heat, and the driver may easily assure himself if his brakes are binding or not by placing his hand on the brake drums.

If the novice pays these little attentions to his car he may perhaps be saved many weary stops by the side of the road, probably in the most wretched weather, vainly waiting for another member of the motorist community to come along and restore his car to its pristine excellence of working.



s with which trouble may be experienced.



LIGHT CARS AND THEIR UPKEEP.

V.—The Lagonda.

FROM the first Lagonda light car which was produced, it was intended to be an all-weather, no-trouble car. Therefore it is not surprising that the most important features of the adjustments, which can be carried out by the private owner, are little things which might interfere with the "last ounce of power" and which can be done in a few minutes at any odd time the driver has to spare.

The official agents for these cars, Messrs. Tolle-mache and Griffin, Ltd., showed our representative these few things at their works at 208, Hammersmith Road, London, W.

Proper Lubrication Essential.

They consisted for the most part of the replacement of worn washers and the proper lubrication of the car. Special washers are made and supplied by the makers of the car, and if a leak of water should occur between the water dome and the cylinder casting after an overhaul of the car, or at any time on the road, all that is required is the replacement of the rubber joint, which will at once end the trouble. If an attempt is made to stop the leak by tightening

down the studs on the water dome it will only result in a catastrophe, such as the cracking of the water jacket of the first and fourth cylinders.

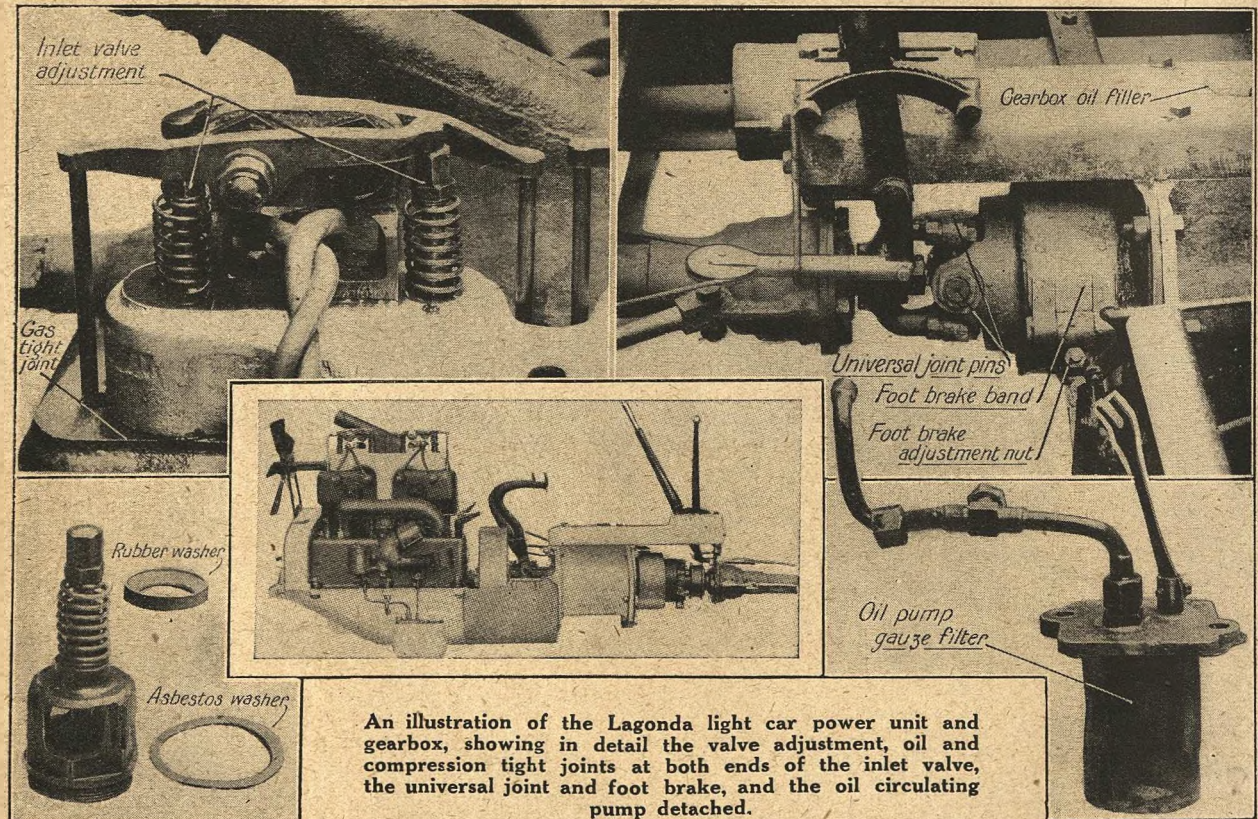
The valves are set one above the other, the inlet being in the top of the valve pocket. The adjustment for the gap between the valve stem and the rocker arm is given by a thread cut on the valve stem and the ordinary nut and lock-nut.

When the lock-nut on the valve stem is slightly unscrewed, the nut which forms the head of the valve is free to turn on the thread and so adjust the gap between the valve and the rocker.

Washers Must be Tight.

Each inlet valve has a separate pocket which screws into the cylinder, and each of these pockets has two joints, which must be kept tight. (One for the cylinder compression and the other for oil and oil leaks.) The first, like that on any car between the valve cap and the cylinder casting, is made of copper and asbestos or other heat-resisting material. The other is in the form of a small rubber ring, which fits between the top of the pocket and the induction pipe.

The exhaust valves are directly under the inlet valves of their respective cylinders and are adjusted in the same way as the inlet valves.



An illustration of the Lagonda light car power unit and gearbox, showing in detail the valve adjustment, oil and compression tight joints at both ends of the inlet valve, the universal joint and foot brake, and the oil circulating pump detached.

LAGONDA UPKEEP (contd.).

The pump which provides for the circulation of the oil through the engine is situated on the same side of the engine as the valves in a small reservoir on the side of the engine oil sump.

The whole pump can be easily removed by disconnecting the flexible operating rod at either end by undoing the screw, then the oil pipes are disconnected at the points where they enter the crankcase, and the two nuts which hold the pump are removed.

The pump can then be lifted out of its reservoir and will be found to be enclosed in a fine gauze. This gauze should be carefully cleaned and the pump washed out with paraffin, as dirt may block some of the oil ways. The correct oil to use in the engine is a pure mineral oil of medium weight.

Other parts of the engine which should be lubricated are the magneto, which requires oil about every thousand miles, the fan bearing, which is lubricated through a hole provided for that purpose in the boss of the fan, and the pump lubricator; both the latter should be lubricated before each run.

The clutch, which is of the leather-to-metal cone type, should be dressed with castor or collan oil whenever it tends to engage fiercely. On no account should engine oil be used, as it will cause clutch slip.

The withdrawal mechanism for the clutch is provided by rollers. The latter, with the clutch spigot bearing, will require lubrication before every run; the spigot bearing is provided with a hole in an accessible position for this purpose.

A Mixture of Grease and Oil.

The lubricant which is found to give the most satisfactory results in the gearbox is a mixture of grease and oil in equal parts, and the quantity of this which should be placed in the gearbox must be just sufficient to cover the teeth of the layshaft pinions.

The universal joint, which is situated behind the gearbox, requires lubrication at frequent intervals, and this is accomplished by removing the grub screw from the end of the universal joint pin and inserting oil in the hole.

The foot brake is of the contracting-barrel type and can be adjusted by tightening the nut at the junction of the band. The hand brakes, which are of the internal-expanding type, operate in the rear hubs and are controlled by cables. As the cable works round a pulley at the foot of the brake lever the action is compensating, and so the cables can be adjusted from either end with impunity.

Back Axle Removal.

The whole back axle can be removed from the universal joint for the inspection of the worm drive. First jack up the body of the car, then undo the brake cables, either at the back or by removing the compensating pulley, and undo the shackles of the back springs. When the pin of the universal joint is removed the back axle is free to slide out.

There are three plugs in the differential casing, the one at the top is for filling it with gear oil, the one in the centre marks the correct level for the oil, and the one at the foot is a drain plug. It is suggested by the makers that after a new car has run its first hundred miles the oil should be drained out of the back axle and the differential and worm gears washed out with paraffin. In any case this proceeding should be done every three thousand miles the car runs, and at the same time the same thing should be done to the engine and gearbox.

The driver should not forget to oil the slides of the rear springs if he wishes the car to travel smoothly over rough roads and this should be done every two hundred miles. There are lubricators on the front spring shackles which should also be attended to at the same time.

All the joints of the steering arms of the car are adjustable, and should any play be found in the steering wheel it can at once be traced to one or other of the joints and immediately eliminated.

The driver of a Lagonda should easily find all the joints on his car which require most frequent lubrication, and would therefore counteract any wear, so making adjustments practically unnecessary.

A most complete book of instructions is issued for the use of Lagonda owners

WHAT AMERICA THINKS OF BRITISH TRADE PROSPECTS.

ONE of the most striking features of the present war and the consequent cessation of motorcar production in this country has been the enormous increase in the number of American cars imported. America has therefore very considerable interest in any future restrictions which may be imposed on the importation of cars, and for that reason the details recently given in one of the American trade papers is of particular interest to British manufacturers.

In "Automobile Topics" of 26th February, 1916, there appears an article under the heading "England May Bar Motor Car Imports." The article states that several British importers recently approached the British Government with the proposal to abolish the present duty of 33½ per cent. on cars and their parts. They have been much disturbed by the announcement that far from removing the duty those in authority are thinking seriously of entirely prohibiting the imports of motorcars. If this is not done the duty may be increased largely. "This announcement," our American contemporary states, "has come from those in such high places, and with such emphasis, as to leave no doubt as to its authenticity." It is also stated that the present import duty is causing friction with the French car makers who are still able to produce cars and to ship them to this country.

The article goes on to state that besides the evident

doubt as to the immediate future, the British importers are also faced with uncertainty as to what will be offered by the future that lies after peace is secured. Some sort of protection of British industries seems assured, its form and extent being the main things that are in doubt. Possibilities of a common tariff wall that will surround the Allied countries to protect them against trade onslaughts on the part of the present neutrals are also being considered, while the prospect of subsidy or other trade protection is mentioned as being one of the most likely developments. "In fact there is already an indication that the British Government has decided to maintain by subsidy or other unusual measures numbers of British industries, particularly those that previously were largely in German hands. The magneto producers of England and manufacturers of car electrical apparatus generally are stated to have received almost definite assurances that when peace comes conditions will be so arranged and support so given that English business will practically be in their control without possibility of dangerous foreign competition."

We give these statements on their face value. The fact that this information appeared in an American trade journal should be taken into consideration before a too hasty judgment is made on the condition of British trade after the war.

THE CALL OF THE ROAD.



THE JOTTINGS OF JOHN GILPIN, JNR.

*"'The time has come,' the Walrus said, 'to talk of
many things;
'Of shoes—and ships—and sealing wax—of cabbages—
and kings.'"*

IT is a coincidence that, a couple of months ago, I was discussing the question of the State control of petrol, and that now everyone is talking of it as a possibility. I said then that I did not think the Government would take this step, and that I did not think it would work in the best interests of the country if they did; and I see no reason, as yet, to change my views, although, in the meantime, there has been a rise of 4d. in the price per gallon. But there is one direction in which we should all be glad to see the Government take a very firm attitude, and that is in regulating the price, so that the increases may take the form of a tax which will help, even in a small way, in paying for the cost of the war, instead of going into the pockets of the petrol companies. The Government might also consider in what way supplies of petrol from neutral and enemy countries can be prevented after the war, for there is quite enough petrol for the use of this country and her Allies that can be obtained from the oil-fields in British possessions and from Russia. A few years ago a Russian spirit, known as P.G.R., was obtainable in this country, and subsidized by the Russian Government and protected by the Allies, supplies of petrol from Russia could become a very important factor in the commercial war to be waged against all enemy and neutral countries after the war, as "An Economist" suggested in these pages recently.

* * *

Many theories are being advanced as to what is likely to happen after the war. Before we reach that stage, we shall be taxed to the limit, or compelled to save, which is very nearly the same thing, while the prices of commodities will advance so that, willy nilly, we shall have to economize. Many people now are not spending more than they can help, because it is a bad time to buy, and their number will be increased. After the war, it is extremely probable that the pressure of taxation will be released to some extent, and people will buy freely when the economic need to save is not so acute. Consequently, there will be a good deal of money in circulation and business will boom. The situation will be governed to a large extent by our international positions, but prompt measures, that ought to be prepared now, for reciprocal relations between the Allies and their Colonies against the rest of the world, in which the old fetishes both of "free trade" and "tariff reform" can be quietly dropped, will affect very greatly the economic situation when peace is restored. We shall probably hold up many millions of imports until after the war. When they are released they will have to be paid for, and unless our own export trade is vastly developed there will not be much prospect of doing that for some time, and hence it may be difficult to obtain raw material for many industries. There is another problem to be faced, viz., that of labour, which, encouraged by a temporary boom, will demand the re-

tention of the absurdly high wages which have prevailed in war time, and which ought never to have been permitted. Consequently, there will be many strikes for higher wages, but the workpeople will almost certainly lose. The places of those who strike—the men who have been earning wages on a staggering scale—will be taken by those who have played the nobler part and fought—for a mere one-and-a-penny per day—and the whole country will combine to see that such a fair adjustment is made.

* * *

It is rather interesting to learn that Mr. McKenna has given up his car. Whether he should have done so or not is nothing whatever to do with the fact that he is leading the campaign of economy, but whether it is cheaper for him—or the country—to resort to other modes of conveyance. If it is not, then this is not a step in the direction of economy at all. His proper course was to have given up a big car and use instead such an economical vehicle as a modern light car, with, possibly, a cabriolet body. It is curious how people will persist in looking at "economy" from the wrong end of the telescope. The R.A.C. circular errs in the same way, and is far too sweeping. The point that matters is the necessity for reducing expenses. Obviously, this is not always to be found by giving up a car and taking to other modes of locomotion, such as the railway. It is no economy to take twice as long over an important journey as if a car were employed. Where the R.A.C. might usefully have directed the attention of motorists, is to the practicability of saving a great deal of the expense of motoring by employing smaller and more economical vehicles.

* * *

The R.A.C. circular also implies that motorists are either hoarding petrol or cans. When war was declared, the first thing that happened was a shortage of cans, and as supplies of petrol were refused unless the cans were delivered up, it is rather difficult to see why the present shortage should be attributed to this cause. Probably, if the matter were inquired into, it would be found that the Government were the greatest hoarders, and that thousands of empty cans are probably never returned at all. Again, a little common sense is required. Let us put our petrol into five, ten, and fifty-gallon drums, and give up the can habit. Let the Government modify some of the restrictions with regard to the storage of petrol. Let us do these things, and the difficulty with regard to cans would soon be removed.

However, I doubt whether the ordinary private user is hoarding the cans, as the R.A.C. circular certainly suggests, but I am afraid that the public will receive the impression that they are. "Selfish motorists again," of course!

JOHN GILPIN, JNR.

LITTLE THINGS THAT MATTER.

Simple Devices, Contributed by Readers, which Render Motoring Easier.

Handling Tyres in Winter.

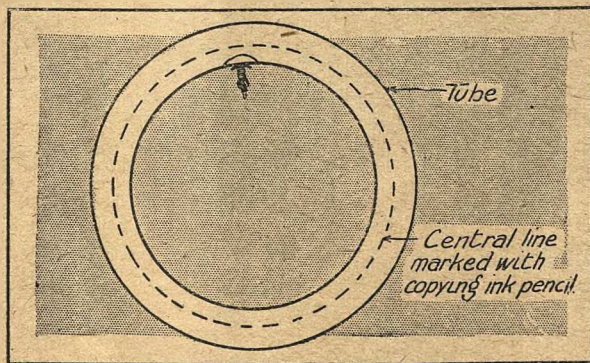
A NYONE compelled to manipulate tyres in cold weather must have been struck by the increased difficulty of the work, on account of the hardness of the rubber and canvas of the outer covers. This is not natural, and is due solely to the low temperature. If the cover be allowed to stand before a fire for an hour, it will become thoroughly warmed through, and no more trouble will be found in putting it on the rim than occurs in summer time. For this reason, when weather conditions permit, I always prefer to take a badly-damaged cover off the rim, while on the road, for the warmth produced by running makes the work very much easier and also reduces the time taken.

Recently, when dismantling a tyre under such conditions, I was appalled by the amount of damp which had found its way into the inside of the cover. Very little seemed to have entered by the bead, but every cut in the tread showed a damp spot on the canvas, and the amount of water which had entered by the security bolt holes was enormous. As I was replacing the security bolts with the handier bolt valve, I made certain that there should be no further leakage in this direction, by liberally plastering with thick rubber solution both sides of the dummy bolts which filled the old holes in the rim. By-the-by, there is no need to pay sixpence a time for dummy bolts for this purpose, for the small carriage bolts, obtainable at any ironmongers at two a penny make quite satisfactory substitutes if they are fitted with a good, thick, rubber washer.

W.F.

The Blue Pencil.

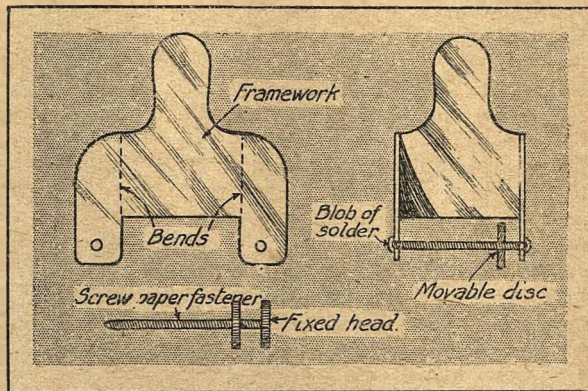
No, it is not the terrible editorial blue pencil, the praises of which I wish to sing, but a stub end of a common indelible copying-ink pencil. Its main use is for the purpose of marking rubber articles. Thus, when you suffer a puncture, mark the spot at once, but do not be bashful in its use; draw a circle the size of a half-crown or larger, so that you can perform the repair, be it a patch or a vulcanized job, comfortably within the area, and always have an index mark for



By marking a tube with an indelible pencil repairs may be considerably facilitated.

your work. Again, the next time that you take out a tube, start about $1\frac{1}{2}$ in. above the valve and draw a clearly-defined line the whole length of the tube. This will help you considerably whenever you need to replace the tube, for, with such an obvious line in

front of you, all the time while you are refitting the tube it is practically impossible to twist it. Another use for the pencil comes in when engaged in picking out flints and stones from the tread. Many makes of tyres have treads made of compressed rubber, and with these, as soon as the flint has been removed, the hole closes up and it is very difficult to locate the spot for repair later on. If, however, the blue pencil be used to indicate the approximate position on the walls of the cover by means of a cross there need be no trouble in future searching for the spot. C.F.



A simple map-measurer, which may be made at home, and which is of great assistance when calculating runs.

An Easily Made Map Measurer.

When mapping out a tour there is often a deal of time lost in estimating distances on the map, and it is very easy indeed to make mistakes. To save time and trouble on such work and to be certain of accurate results, I made myself a quick-acting measurer. The framework is of stout brass or zinc, cut to the shape indicated. The dotted portions are bent back to form a support for the recording arrangement. This latter is merely one of those brass screw paper fasteners, measuring about $1\frac{1}{2}$ in. long, which can be bought for a penny. The fixed head "A" is cut off, and the screwed portion is sprung into the two holes punched in the legs of the framework. To prevent the screw from revolving a spot of solder is dropped on each end.

To use the instrument the wheel is turned by hand until it is in contact with the right leg. It is then placed on the map at the starting point and the apparatus is pushed along the roads, carefully following every curve and turn, until the destination is reached. The instrument is then raised and placed on the scale which is found on every map, and it is pulled backwards until it reaches zero, i.e., its starting place, when the distance recorded can be read off on the scale. Unlike many measuring instruments this apparatus can be used on any scale map. C.W.

An Air Leak Trouble.

After my Morgan had recently been cleaned at a local garage, it suddenly developed "non-starteritis," which took nearly 10 minutes struggle each time of starting up. The trouble was eventually traced to a very unsuspecting cause—a new plug had been put in, and the mechanic had failed to put a copper and asbestos washer on the plug before screwing it in. Replacing the washer cured the trouble.

F.D.

A19

THOUGHTS AND OPINIONS.



"The suggestions of to-day may be the realities of to-morrow."

NOTICE TO CORRESPONDENTS.

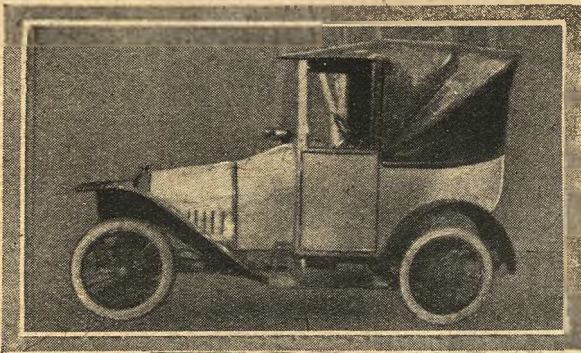
Preference is given to letters intended for publication which are to appear above the writer's name and address, but where this is not desired, initials or a nom de plume will be substituted if requested. In view of the peculiarly wide publicity afforded to letters on light car and cyclecar subjects appearing in these columns, readers are asked to make their letters as brief as possible so that a greater number may be published. Letters received up to Wednesday morning first post usually appear in the following Monday's issue.

A Lady's Light Car

I bought a Baby Peugeot light car in March, 1915, and since that time I have averaged 500 miles a month on it without a single breakdown, excepting annoyance from tyre trouble. Last autumn I had a cabriolet body fitted, and this has been a great success. I cannot speak too highly of the performances of this marvellous little car. I thought that the photograph might be of interest to the readers of your most useful paper, of which I am a constant reader.

The Lodge, Ascot Heath.

(Mrs.) V. FELLOWS.



The Baby Peugeot to which a cabriolet body has been fitted. (See the letter from Mrs. V. Fellows.)

Writ Sarcastic!

I think I ought to inform you that, following the example of others, I have fitted an extra air inlet to my light car, with the inevitable but incredible result that the trouble I was going to write to you about has entirely vanished. Does this not illustrate the simplicity of the light car? You will be glad to hear that I recently drove from London to Guildford in very threatening weather, and met several light cars, all of well-known makes, en route. This speaks volumes for the utility and universality of the new motoring.

I will send you a photograph shortly of myself in my car, as well as one of my wife standing near a 10 h.p. car that has recently been used for taking home tired munition workers. This proves conclusively that light car owners are not using their machines for joy-riding. I may add that my wife is thinking of learning to drive, which is most eloquent testimony to the handiness and ease of control of the modern "small bus."

Judging from recent correspondence in your paper, I think I am doing the right thing in letting you know that I often have some difficulty in starting my engine. It has occurred to me that it might be well to inject some petrol into the cylinders; but before trying this I should like to hear the opinions of all your readers who drive cars of well-known makes. If anybody has tried it successfully the tip might be valuable.

I cannot close without wishing your valuable organ long-continued prosperity. I have read it for over 20 years, and so has my wife; in fact, we both get quite excited on Monday mornings.

R.W.

Hampton Wick.

A20.

Difficulty in Starting on an A.-C. Sociable

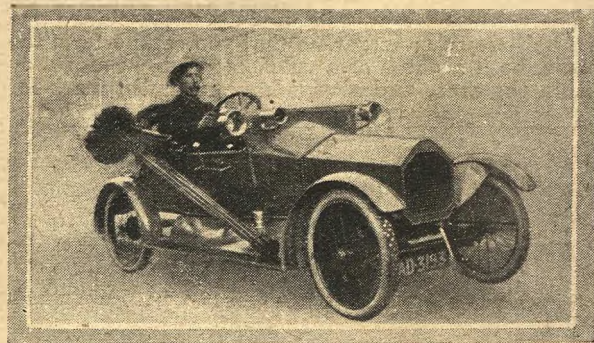
Having owned and driven an A.-C. Sociable for over four years, my experience in regard to the above may be useful. Assuming that (a) the carburetter is in proper adjustment; (b) the plug is clean, and the points the correct distance apart; and (c) there are no improper air leaks, the procedure is as follows—(1) turn on petrol; (2) set levers; (3) cut out magneto; (4) swing starting handle, slowly, once or twice, and leave it just over compression; (5) inject petrol in compression tap, close tap; (6) put magneto into circuit; (7) the machine should start at the first good swing. If, rarely, I have had to swing twice, it has been because the first one was not determined enough. To start an A.-C. requires a certain amount of knack; I have known the men at the works swing away gaily without result, whereas my method is practically infallible. When the engine is warm, swing slowly, as before, until over compression, and then swing vigorously. I should be interested to hear whether your correspondents are satisfied with my methods.

Horley, Surrey.

LA6225.

A Hand-controlled Car for the Disabled.

In the issue of your paper for 13th March on page 390 you have a letter from "M.J.W." who has lost a leg and requires a suitable model light car. If you would put him in communication with me, I have one which might have been specially built for this purpose, it being one with an epicyclic gear not using a clutch pedal. **SANTLEY W. BEARDSHAW.**
Gloucester House, Myddleton Road, Bowes Park, N.



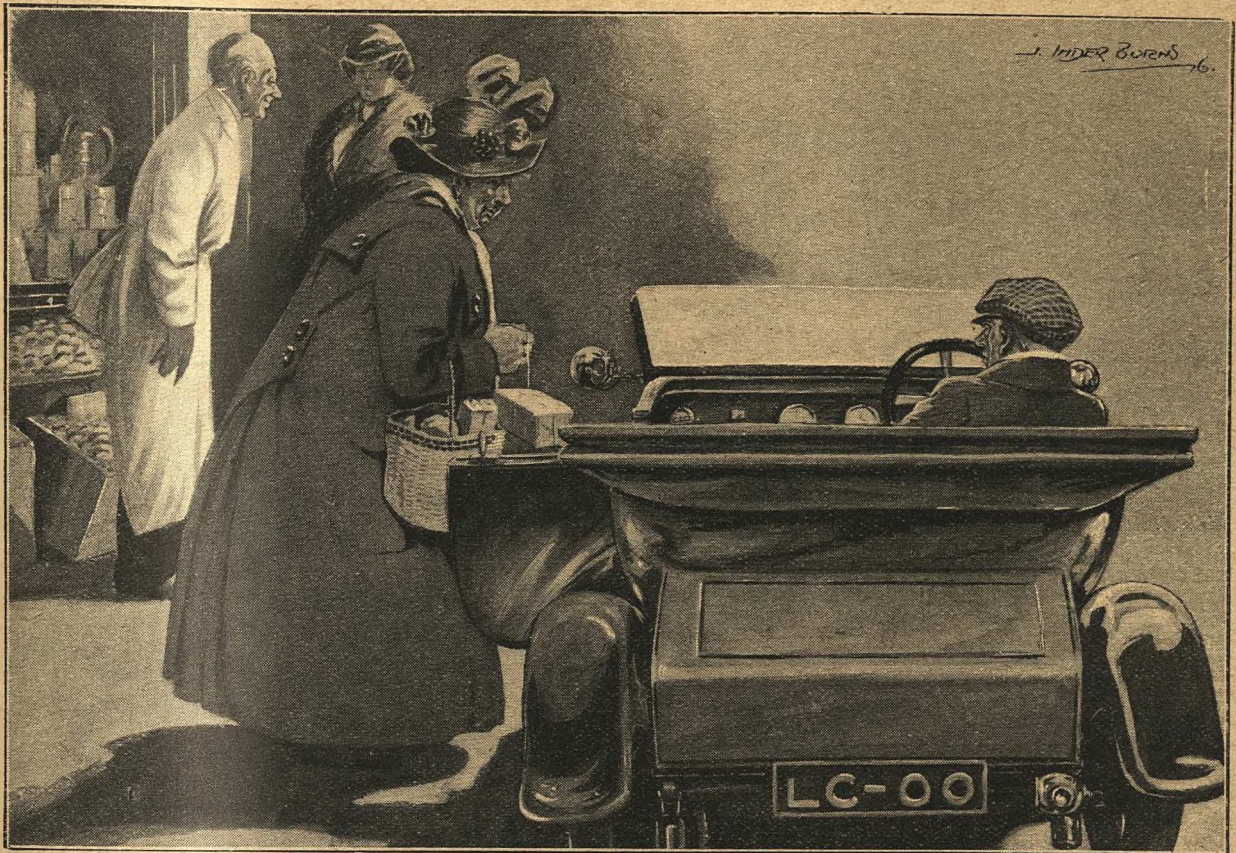
The Humberette shown in the illustration costs 30s. per week less than horse traction. (See the letter from Mr. John King.)

The Light Car and Business.

I forward a photo. of our sweep, Mr. Smith, in his 1913 Humberette. The car is always in excellent order, and quite the smartest Humberette in Sparkhill, although it is used regularly for his business. Mr. Smith, until 12 months ago, used to keep two horses, but since purchasing his Humberette has disposed of them. He says that on no account would he go back to horses and he is 30s. per week in pocket, thanks to the Humberette.

JOHN KING.

99, Oakwood Road, Sparkhill, Birmingham.



UTILITY MOTORING.

Cook (on a shopping expedition, to the light car owner, her employer):—"Ome, Sir."

Starting a "Knack."

Replying to your correspondents "Auto" and "Captain" respecting "Difficulty in starting an A.-C.," I would inform them that I have been running one of these handy little cyclecars now for eight months, and, while I had some difficulty at first in starting, I never have any trouble now, even in the coldest weather. Easy starting is really a knack, to be obtained only by practice. If your correspondents will find the best positions for the throttle levers, "tickle" the carburetter till they see the petrol flow, then turn the starting handle round slowly for about four turns, following this by one brisk turn over the firing stroke, they should have no difficulty. I never inject petrol into the combustion chamber. Finally, "patience is a virtue" of far more value in "starting up" than hard work.

277, Willows Lane, Bolton.

A.C.B.

Plugs and Overheating.

I notice in your issue of the 6th inst. a complaint from "R.K." that he is troubled with overheating on his G.W.K. I had the same trouble with my G.W.K. till I absolutely cured it by fitting two single-point Bosch plugs. It is unfortunate that these are of German manufacture, because they seem to be the only plugs that will make my engine run without overheating. I have not tried the latest air-cooled Lodge plug, but think that it might prove satisfactory. Hoping that this suggestion will help "R.K." and other G.W.K. users.

C. STACEY.

51, Wimbledon Road, Southfields.

Fixing a Switch.

Could any of your readers kindly tell me how I can fix a switch on my Morgan? The magneto is a U.H., but it has no terminal for the earth wire. I would find a switch very useful in stopping the engine quickly, and at the same time starting would be easier, as the cylinder would be charged with mixture from the carburetter. Wishing your paper every success.

ED. STANNARD.

13, Hockley Street, Birmingham.

The Care of the G.W.K.

As an owner-driver of a G.W.K. I am always interested in everything concerning them. Like "R.K." I found that mine, a 1913 model, had practically only one fault—a tendency to "boil" easily, but I have entirely overcome this by having a larger radiator fitted. This Messrs. G.W.K. did for me in a couple of hours, a record of quick work I think. To help with the slight slip on hills I have buckled a strap to the top of clutch pedal from steering column, and pull on this instead of hurting my toe and boot. I find an extra air inlet a great success when running "all out." Another tip to G.W.K. drivers is keep your disc and flywheel clean. This is my fourth motor, and I would not change back to ordinary gears for anything.

CHARLOTTE E. MONRO.

Hagden Lodge, Watford.

"A Simple Differential Gear."

Referring to the differential gear illustrated in your issue of the 6th inst., and described by Mr. E. P. Proud in his letter on page 365, the principle involved appears to be the same as in the differential gear patented by Mr. Wm. Hillman in April, 1881, commonly known as the Sparkbrook balance gear, which we have fitted to Sparkbrook tricycles for over 30 years. In this gear the driving was effected through two pinions only, mounted on universal joints. Trusting this may be of interest to your correspondents.

THE SPARKBROOK MANUFACTURING CO. LTD.,
CECIL WM. WHEELER, Managing Director.

Coventry.

Morgan Adjustments.

I shall be greatly obliged if your correspondent "C0925" in THE LIGHT CAR AND CYCLECAR of 28th February would kindly tell me the best way to remove the propeller shaft and small pinion from the gearbox of a Morgan, which he states he has done; also to remove front sliding axles if he has done this, too.

E. A. ROBERTS.

Gt. Washbourne, Beckford, Tewkesbury.

*Metal
Clutch.*

NOTES AND QUERIES.

Selected Replies to Readers.

*Friction
Drive.*

Treatment of a Metal Clutch.

A CORRESPONDENT, "R.C.," of Stroud Green, writes that he has been running a 1914 light car and has been greatly troubled with a slipping clutch. The latter is composed of 32 plates. As he has not been able to cure it by ordinary means he suggests that each plate should be dented with a punch so that the dents correspond.

Since the make of clutch is not mentioned it is hard to say what the correct procedure would be. A disc clutch should be treated in the following manner. First, carefully wash out the clutch with paraffin until all the lubricant has been removed, pressing the clutch pedal out and in and also turning the engine over quickly while the paraffin is in, so that all the oil is washed out from between the plates, then the exact amount of the correct lubricant should be poured in. In the case of the Hele-Shaw clutch a special clutch lubricant is supplied by the makers of the clutch.

Repayment of Licence.

As he is about to be called up for the Army very shortly "F.M.N.," of Manchester, wishes to know whether he can claim any repayment of the Revenue motor licence, which he has just paid, if he leaves the car in such a state that it cannot possibly be used. He further wishes to know what is the best way to store the tyres on the car.

It is unfortunate, but there is very little possibility of the Revenue licence being repaid. If the machine is to be left for any time, the best way is to jack it up clear of the ground, removing the tyres and tubes from the wheels. These should be stored in a cool, dark place with the tubes slightly inflated. All the metal parts of the car should be smeared with vaseline. The oil, petrol, and water should be drained out of their respective tanks.

Type of Final Drive.

A correspondent, "R.B.P.," of Glasgow, states with reference to a certain form of drive, namely, friction and belt, which we criticised, that he had intended to build a cyclecar on the same lines. He wishes to know whether he could have the driven disc on the countershaft twice as large as the driving disc connected to the engine shaft. If this could not be done could a form of final chain drive from the countershaft with free wheel sprockets be designed?

It is doubtful whether satisfactory results could be obtained by having the driven disc twice the size of the driving disc, because only a small range of gear ratios would be obtained. So far as the final chain drive is concerned, no form of free wheel would be necessary. A single chain should pass from the friction shaft to a solid back axle, no differential being necessary.

Binding Springs.

A correspondent, "R.N.," of Grantham, is troubled with unsteadiness at speed on his light car. If the road is at all uneven he finds that the car "wobbles" from side to side of the road.

The best method to overcome this unsteadiness is to lubricate the springs freely and then bind them with whipcord. If no improvement is noticeable the only alternative is to fit shock absorbers.

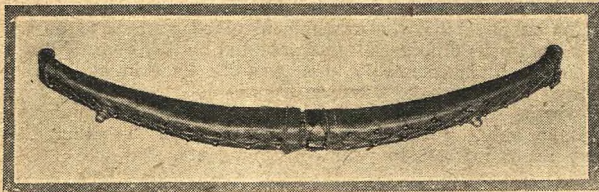
A Switch Fitting.

A reader, "E.S.S.," of Birmingham, wishes to know if it is possible to fit a switch to the magneto of his car when there is no switch terminal fitted to the contact breaker.

The only way in which a switch could be fitted is to have a special insulated terminal attached to the contact-breaker ring, from which a spring blade passes to the centre of the rotating armature shaft. The terminal must be insulated from the contact breaker except for the spring blade.

A NEW GAITER FOR COMPLETE SPRING LUBRICATION.

THE ordinary methods of periodic spring lubrication leave much to be desired, and even the more modern method of attaching a small oil reservoir to the side of the spring in order to keep the leaves supplied with lubricant is by no means so complete in its effect as could be desired.



The "Duco" gaiter for preserving and lubricating the leaf springs of a car.

for the springs, protecting them from dust, mud and water, and at the same time permitting them to work in a perpetual bath of grease. The gaiter, therefore, is not a mere bandage, but a flexible weatherproof grease-retaining sheath made of black leather and reinforced with felt inside, leaving a channel for the grease, which, as the springs alternately compress and rebound, finds its way between the leaves, thus constantly lubricating them.

When the springs are sufficiently lubricated it is obvious that the car is much more comfortable to ride in. It will be seen that when the springs are fully encased, as with the Duco spring gaiter, it is very difficult for rust to form, and there is therefore less tendency for the springs to break. They can be supplied for any make of car, and there is no difficulty whatever in fitting them. When once fitted they need not be removed, but are simply filled up with grease through the lubricator every few months. The usual number required for a car is eight. As the gaiters are made to measure for each car it is essential to order on a special form, which gives the necessary measurements. Full details can be obtained from Messrs. Brown Bros., Ltd.

A recent introduction by Messrs. Brown Bros., Ltd., 22-34, Great Eastern Street, London, E.C., called the "Duco" spring gaiter, appears to attack this problem in the proper manner. As will be seen from the illustration, the gaiter is a sheath or cover-



Forms its own insurance—

EVEN a casual examination will convince you that Simms "Lion" Hand Horn possesses unusual advantages, and that its note is quite as loud as that of any other horn with which you are acquainted.

Simms "Lion" Hand Horn

is of the finest construction. It never gets out of order. You can turn a hose on it without injuring it in the least, for the diaphragm and other essential members are enclosed in a dust and waterproof casing. Ask your dealer to show you a "Lion."

Price, Black and Nickel Finish ... **30/-**

Write for "Motor in Comfort."

SIMMS MOTOR UNITS, LTD.,
191, WARDOUR STREET,
LONDON, W.

And all Dealers.



3/6
EACH.
EVERYWHERE.

The Wise Motorist

chooses his accessories with shrewd discrimination. He knows that the smallest items often give the most trouble and prove to be most expensive in the end.



The sparking plug is no exception to this rule.



Comparing quality with quality, and price with price, the "Sphinx" plug is so immeasurably superior to all others, that it ranks as the only true British type of sterling merit in sparking plugs. The "Sphinx" plug is made throughout (including the steatite insulator) in an entirely British factory under one direction and control.



The makers (the Sphinx Manufacturing Company, Birmingham), knowing what the plug is, and what it will do, guarantee it *without time limit*.



The wise motorist bears these points in mind, and knows he is safe when he always

Uses Sphinx Plugs

READY SHORTLY.

A Manual of Motor
Mechanics and High
Efficiency Tuning.
By L. Mantell. . . .

C Many motorists make adjustments to their engines, but few know exactly why these tuning operations are carried out. The object of this book is to describe the basic principles of the car engine. All the functions of the engine are dealt with in turn, and the principles of design underlying them are made plain. A special section is devoted to the important subject of carburation, in which all the principal makes of carburettors at present on the market are described, and hints on their correct tuning given. The subject of tuning for high efficiency is then reviewed and some interesting particulars given of the preparation of cars for racing.

While of the greatest interest to experts, the book is written in such easy language as to be easily understood by novices.

ORDER YOUR COPY NOW.

PRICE

1/6 net, bound in boards; 1/9 post free.

TEMPLE PRESS LTD.,
7-15, Rosebery Avenue, London, E.C
Wholesale:—E. J. LARBY, Ltd., 30, Paternoster
Row, LONDON, E.C

NEW
OR
SECOND-HAND
LIGHT CARS, CYCLECARS,
ACCESSORIES FOR SALE AND
Sundry Advertisements

RATE FOR ADVERTISEMENTS IN THIS SECTION
SIXTEEN WORDS, 1/- (MINIMUM).
6d. per eight words after.

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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 ,/c/o "The Light Car and Cyclecar," count part of the advertisement.

DISPLAY ADVERTISEMENTS, ordinary issues, £14-0-0 per page. Scale of charges with reduction for series, sent on application.

Copy for, and all matter relating to, advertisements must reach the offices first post Wednesday, and should be addressed to THE MANAGER, "THE LIGHT CAR AND CYCLECAR," 7-15, ROSEBERY AVENUE, LONDON, E.C., to whom 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. Telephone No. 5292 Holborn (four lines). Telegrams: "Pressimus, Holb., London."

Midland Offices:—9 & 10, Burlington Chambers, New St., Birmingham. Telephone No. 2498 Midland. Telegrams: "Presswork, Birmingham." 6, Warwick Row, Coventry. Telephone No. 983, Coventry. Telegrams: "Presswork, Coventry."

Northern Offices:—196, Deansgate, Manchester. Telephone: Central 2467. Telegrams: "Presswork, Manchester."

These advertisements are now set in smaller type to meet the Government demand for economy in paper. At the same time the distinctive style of the setting makes it as easy as before to find the advertisement of any particular make of car.

LIGHT CARS AND CYCLECARS FOR SALE.

A.-C. Sociable, 1911-12 model, hood, screen, lamps, etc., £37 10s. Taylor's, Ltd., 21a Store Street, W.C. Trade zzz-515

A.-C. Sociable, 1912, recently overhauled and repainted deep mahogany red, side doors fitted, speedometer, riddling grid generator, hood, screen, good kit tools, tyres sound, perfect inside and out, £40 or best offer. Adams 22 Royal Arcade, Norwich. 174-b813

A.-C. Sociable, de luxe model, B type engine, new tyres, tubes, spares, thoroughly overhauled at makers, good as new, olive-green colour, hood, screen, lamps, fully insured, £90 or near offer, seen by appointment. 12 Nightingale Square, Balham. 1008 Battersea. 174-b853

A.-C., 1915 model, 10 h.p., in first-class condition, four plain and one non-sid tyre, painted grey, C.A.V. lighting set, Stewart speedometer. Motorist, 2 Ravenslea Road, Wandsworth Common, S.W. 174-b805

A.-C. light car, 1914, 10 h.p. model, two-seater, wide enough for three adults, hood, screen, four lamps, horn, five detachable wheels and tyres, just repainted and in very nice condition, £165. F. G. Cox and Co., Ltd., Colston Garage, Bristol. Trade 174-b842

A.-C., 10 h.p., late 1913, two-seated torpedo, large size headlamp, speedometer, mirror, petrol gauge, extra air, Stepany wheel, wire wheels, painted grey, black wings, good tyres, mechanically perfect, fully equipped, bargain, £135. Mebes, Light Car Specialists, 156 Gt. Portland Street, W. Telephone, 3426 Mayfair. Trade 174-153

A.-C. If language had been made to conceal ideas a great many more people would be dumb. The best idea is to view my stock. "A.-C., 1915, newly painted, dickey seat, petrol gauge, speedometer, in fine condition, £175. Cash, deferred terms arranged. Cars on view at my garage, two minutes from office. 'Phone, wire, write, or call, Marian G. Paige, the only lady motor dealer (12 years practical experience), 199 Piccadilly (office opposite the Piccadilly Hotel). "Womanish, London." 'Phone, Gerrard 4417. Trade 174-69

LIGHT CARS AND CYCLECARS FOR SALE
(continued).

ADAMSON, 9 h.p., chassis, new, two-cylinder engine, wire wheels, 50 m.p.g., immediate delivery, £110. Adamson, Ltd., Sandringham Engineering Works, Enfield Highway. Trade 174-b798

ALLDAYS (one, 1915) light cars, dynamo lighting, £185. R. E. Jones (Garages), Ltd., Swansea. Cash or easy terms. Trade zzz-102

ALLDAYS 1914 light car, in very good condition, five lamps, horn, speedometer, spare detachable wheel and tyre, £125. Main, 36 Parade, Leamington. Trade 175-8811

ALLDAYS, 1915, 10 h.p., four-cylinder, dynamo lighting, speedometer, complete equipment, mileage 3090 only, condition as new throughout, 40 miles per gallon, £170, trial run, owner-driven. Dicks, Greenhill, Evesham, 174-b851

ALLDAYS Midget, late 1914, two-seated torpedo, painted green, domed wings, five Riley detachable wheels, speedometer, four lamps, eight-day clock, flower vase, mechanical and ordinary horns, car done under 2000 miles since new, bargain, £95. Mebes, Light Car Specialists, 156 Gt. Portland Street, W. Telephone, 3426 Mayfair. Trade 174-155

AUTOCRAT, 8-10 h.p., 1914 model, two-cylinder, magneto, two-seated torpedo body, complete with hood and screen, Stepany wheel and tyre, five lamps, horn and tools, in excellent condition throughout, been privately owned and driven for week-ends only, £90. The Light Car Co., 331 Euston Road, London. 'Phone, Museum 3143. Trade 174-141

BABY PEUGEOTS in stock, cash or easy terms. R. E. Jones (Garages), Ltd., Swansea, London, Cardiff. Trade zzz-917

BABY PEUGEOT 1915 de luxe model, standard, with acetylene headlamps and side lamps, perfect condition, £140. R. E. Jones (Garages), Ltd., Swansea. Trade zzz-637

BABY PEUGEOT, four-cylinder, new acetylene headlamp, luggage carrier, etc., little used, first-class condition, what offers! Officer-owner leaving for foreign service. Apply The Triplex Motor Co., Wrexham. Trade 175-b803

BABY PEUGEOT, 1915, de luxe body, complete with hood and screen, in perfect order, £130.

BABY PEUGEOT, 1915, standard model, with hood and screen, nearly new, £125. The Light Car Co., 331 Euston Road, London. 'Phone, Museum 3143. Trade 174-143

BABY PEUGEOT, 1915, two-seater sporting model, hood, screen, five lamps, spare wheel, speedometer, eight-day clock, disc wheels, Klaxon and bulb horns, splendid order, very fast and reliable, 45 miles per gallon, £125. Elce and Co., 15-16 Bishopsgate Avenue, Camomile Street, E.C. 'Phone, Avenue 5548. Trade 174-126

BABY PEUGEOT, 1915, tyres all good, had very little use, £120. Latham, 104 Victoria Street, S.W. 174-133

BABY-PEUGEOT, 1916, English body, footboards, valances, screen, hood, full equipment, speedometer, clock, inner tube, insurance, five gallons oil, only done 100 miles, £190. Box No. 7859, care of "The Light Car and Cyclecar." 174-b876

BABY PEUGEOT, actually in stock, for immediate delivery, latest 1916 models, painted pearl grey, white, khaki, and Royal blue. For earliest delivery and lowest prices get in touch with the sole Midland agents, The Premier Motor Co., Aston Road, Birmingham. Trade 174-64

BABY PEUGEOT. If language had been made to conceal ideas a great many more people would be dumb. The best idea is to view my stock. Baby Peugeot 1915 model, demonstration car, listed £185, will sell £160. Cash, deferred terms arranged. Cars on view at my garage, two minutes from office. 'Phone, wire, write, or call, Marian G. Paige, the only lady motor dealer (12 years practical experience), 199 Piccadilly (office opposite Piccadilly Hotel). "Womanish, London." 'Phone, Gerrard 4417. Trade 174-70

BABY PEUGEOTS, immediate delivery of standard models from stock, £131; exchanges entertained. R. Bamber and Co., Ltd., 33 Liverpool Road, Southport. Trade 175-968

BABY VOITURETTE, new June, 1914, two-seater, grey torpedo, 6-8 h.p., water cooled, Binks carburetter, two-guinea tax, four speeds, reverse, hood, screen, tyres, coachwork, upholstery, good condition, 45 m.p.g., quiet running, £63, bargain. Write, 65 Idle Road, Bradford, Yorkshire. 174-83

BAYARD, 1915, 8 h.p. model, two-seater, hood, screen, five lamps, horn, spare wheel and tyre, demonstration car, £225. F. G. Cox and Co., Ltd., Colston Garage, Bristol. Trade 174-b843

CALCOTT cars. Watkins and Doncaster, Ltd., The Hall, 95 Great Portland Street, authorized retail and sole wholesale agents for London and the Home Counties. Telephone, 6565-6 Mayfair. Trade zzz-346

CALCOTT, 1916, dynamo lighting and dickey, delivered last week, seen any time before 6 o'clock p.m., offers wanted. 2 McDowall Road, Camberwell Green, S.E. 174-b799

CALCOTT, late 1915, dickey, speedometer, hood cover, fully equipped, mileage 2509, £210. Kemp, Shenstone, Penylan, Cardiff. 175-b819

CALCOTT, 1916, brand new, just delivered, dynamo lighting, speedometer and Spartan horn, £245, unused, owner going away. Hodsoll, Waverley, St. George's Hill, Weybridge. 174-b870

CALCOTT, 1914, excellent condition, Rowden air inlet, J.M. shock absorbers, Low generator, special Lucas horn, Smith's speedometer, extra accumulator and case, engine just overhauled, electric side and tail lamps, price £175. Box 7851, care of "The Light Car and Cyclecar." 174-b877

CALCOTT, 1916 model, not done 400 miles, dynamo lighting, special dickey, Saunders petrol sayer, Stewart horn, extras, Dunlop grooved tyres, price £230. Falconer, 145 Cheapside. 174-b885

CALCOTT cars. Appointed agents, special list, with particulars. English Light Car Specialists. Robinson's Garage, Green Street, Cambridge. 174-84 phone, 388. Telegrams, "Cars."

CALCOTT. Calcott. Calcott. 1915 Calcott, hardly used; 1914 Calcott coupe, dickey seat, fully equipped. Calcotts always in stock. All Motors, 38 Gt. Portland Street, W. Telephone, 2343 Museum. Trade 174-89

CALCOTT, new 1916, open two-seater, dynamo lighting, for immediate delivery. Alfred Wastnag, 65 Gt. Portland Street. Tel., Mayfair 3005. Trade 175-966

One of many similar letters:—

Manchester, 13th Oct., 1915.
Dear Sirs.—Re my advertisement in this week's issue, I had a telegram the moment I arrived at my surgery, and am still receiving replies. May your journal prosper.
J. A. S.

Later.

15th October.
..... I had still replies this morning, although I sold G.W.K. 9.0 a.m. Wednesday, the buyer coming from London.
J. A. S.

LIGHT CARS AND CYCLECARS FOR SALE (continued).

CALCOTT, 1914, two-seater, electric side lamps, speedometer, hood envelope, painted Royal blue, £185, including insurance policy. Below.

CALCOTT, 1915, two-seater, dynamo lighting, usual accessories, painted grey, £225. Smith and Hunter, 15 Little Portland Street, Oxford Circus. Trade 174-106

CALTHORPE. If language had been made to conceal ideas a great many more people would be dumb. The best idea is to view my stock. Calthorpe, 1915 model, four-seater, tip-top condition, silver-plated, specially upholstered, leather one-man hood, full of extras, £210. Cash deferred terms arranged. Cars on view at my garage, two minutes from office. Phone, wire, write or call. Marian G. Paige, the only Lady Motor Dealer (12 years practical experience), 199 Piccadilly (office opposite the Piccadilly Hotel). Tel., "Womanish, London." Phone, Gerrard 4417. Trade 174-71

CALTHORPE Minor cars. Specially appointed agents, comprehensive list with particulars, early deliveries. Robinson's Garage, Green Street, Cambridge. Telephone, 388. Telegrams, "Cars." Trade 174-88

CALTHORPE, latest, 1916, four-seater, in stock for immediate delivery, complete with lighting set, £230. P. J. Evans, John Bright Street, Birmingham. Trade 174-82

CALTHORPE, 10 h.p., late 1914, two-seater torpedo, painted mauve, hood screen, electric side and tail lamps, headlamp, five Sankey detachable wheels, horn, fully equipped, in perfect condition throughout, bargain, £165. Mebes, Light Car Specialists, 156 Great Portland Street, W. Telephone, 3426 Mayfair. Trade 174-150

CALTHORPES, three good modern second-hands for sale, £145-£165. Colmore Depot, 49 John Bright Street, Birmingham. Trade 174-97

CALTHORPE, 10 h.p., G.D.M., with special body and dynamo lighting set, in stock. Colmore Depot, 49 John Bright Street, Birmingham. Trade 174-96

CALTHORPE, 1914, coupe, 10 h.p., two-seater, detachable wheels, clock, speedometer, in exceptionally fine condition, £175. G. L. Francis and Co., 22 Pantons Street, Leicester Square. Trade 174-110

CALTHORPE, 1914, two-seater, very smart condition, fully equipped. All Motors, Ltd., 38 Gt. Portland Street, W. Telephone, 2543 Museum. Trade 174-91

CALTHORPE Minor, 1914, fully equipped, three electric, two acetylene, speedometer, curtains, toolbox, first-rate going, £150, by appointment. Rowe, Blanquettes Avenue, Worcester. Trade 174-9495

CARDEN monocar, 1915, two-speed, 5-6, hood, Klaxon, speedometer, watch, electric, acetylene lamps, done 350, 75 m.p.g., Saturday afternoon and Sundays, £75. McGregor, 60 London Road, Twickenham. Trade 175-492

CHARRONETTE, two-seater charronette, sports two-seater, £250 and £270 respectively, with C.A.V. lighting set. 65 Piccadilly, W. Trade 187-708

CHATER LEA, two-cylinder, three-speed and reverse, torpedo body, disappearing dickey seat, fitted with dynamo lighting set, £100. Hayes, 344 Euston Road. Trade 174-115

DARRACO, 15 h.p., Coronation model, excellent condition, for Humbrette, w.-c., or modern combination, sell £70. Pinewood, Maidenhead. Trade 174-9098

DAY-LEEDS light cars. Sole agent for West Lancs. and Chester; also N. Wales. C. Croft Griffith, 14 Tempest Hey, Liverpool. Trade zzz-959

DEEMSTER, two-seater, new July, 1914, four-cylinder, w.-c., splendid condition, tyres ditto, only run 2300 miles, three speeds and reverse, speedometer, five Sankey wheels, sight drip feed, lamps and all tools, complete, any trial by appointment, £110 or near offer. Blake, House Agent, Gt. Northern Road, Dunstable. Trade 174-513

D.U.O. 1915 cyclecar, almost new, a bargain, £95. Percy and Co., 337 Euston Road, London. Trade 174-102

DUO, 1914, 8 h.p., J.A.P. cyclecar, hood, screen, lamps, spares, little used, £58, motorcycle part exchange. Youngs, 2 and 3 The Parade, Kilburn. Phone, Hampstead 4807. Trade zzz-967

ENFIELD coupe, immediate delivery, 10 h.p., 1916, dynamo lighting, Royal blue and plated finish, £258 fs.; exchange and credit terms considered. Service Co., 292 High Holborn, London. Trade 174-855

ENFIELD, 10 h.p., three-seater body, dynamo lighting, five Sankey wheels, speedometer, etc., hardly used, guaranteed, £210 cash, deferred payments or exchange. Service Co., 292 High Holborn, London. Trade 174-854

ENFIELD 1916 light cars, 10 h.p., four cylinders, spare wheel and tyre, dynamo lighting set, two-seater £215, three-seater £230, coupe £255; cash, exchange and extended payments; two-seater, £43 deposit and 12 monthly payments of £14 13s. 10d.; similar terms for other models, or other figures considered; quick delivery. Sole London Agents, Service Co., 292 High Holborn, W.C. Trade zzz-282

ENFIELD Autolette, 8 h.p., perfect order, five interchangeable wheels, lamps, horn, etc., tyres good, a bargain, £75, any inspection invited. Smith, 3 Greenfield Road, Scarborough. Trade 174-806

ENFIELD Autolette, 1914, 8 h.p., three speeds, complete, hood, screen, lamps, horn, etc., £85. P. J. Evans, John Bright Street, Birmingham. Trade 174-80

ENFIELD, 1916, two-seater, lighting set, hood, side-curtains, screen, spare wheel, etc., biscuit colour, in stock, £215. Robinson's Garage, Green Street, Cambridge. Telephone, 288. Telegrams, "Cars." Trade 174-87

ENFIELD, 1915, 10 h.p., two-three-seater, double dickey, hood, screen, painted green, dynamo outfit, five lamps, clock, speedometer, two horns, bargain, £175, guaranteed, insurance and tuition free, exchanges, deferred terms 5 per cent. Cass's Motor Mart, only address 5 Warren Street, Euston Road, W. Museum 623. Trade 174-121

ENFIELD 1915 light car, dynamo set and full equipment, finished biscuit, £165 cash, or exchange. The Service Co., 292 High Holborn, W.C. Trade zzz-672

GLOBE, 8 h.p., with coupe body, recently repainted, upholstered and thoroughly overhauled, first-class running order, owner bought large car, will accept first reasonable offer. Write Elston, 51 Charnwood Road, South Norwood, for trial run, or telephone Regent 5955. Trade 174-8816

GLOBE two-seater, 8-10 h.p., two speeds and reverse, 1914 machine, only run 1800 miles, very smart and in excellent condition, £80. Tuke and Bell, Ltd., Motor Dept., Carlton Engineering Works, High Road, Tottenham, N. Trade 174-129

G.N. cyclecar, 1914, two-seater, fully equipped, five wheels, and nearly new tyres, painted pale blue, £55, very last car. Dean, Arcade, Walsall. Trade 174-8888

LIGHT CARS AND CYCLECARS FOR SALE (continued).

G.N. If language had been made to conceal ideas a great many more people would be dumb. The best idea is to view my stock. G.N., 1914, Grand Vitese racing model, in tip-top running order, built for the T.T. races, a bargain at £27 10s. Cash or deferred terms arranged. Cars on view at my garage (two minutes from office). Phone, wire, write or call, Marian G. Paige, the only Lady Motor Dealer (12 years practical experience), 199 Piccadilly (office opposite Piccadilly Hotel). Tel., "Womanish, London." Phone, 4417 Gerrard. Trade 174-68

G.W.K., 1916 models, buff or blue finish, in stock. Palmer, 202 Great Portland Street, London, W. Mayfair 4942. Trade 183-297

G.W.K., a car without a gearbox and all British. Sole Manchester agent, Gourlay, Fallowfield. Trade 175-b200

G.W.K., oversize tyres, two brand new, speedometer, Stewart Warner, nearly new engine, car overhauled and repainted, 45 m.p.g., £115. Roberts, Lot Farm, Knowl Hill, Twyford, Berks. Trade 174-8838

G.W.K., 1916, done 4200 miles, detachable wheels, speedometer, fully equipped, excellent condition, £150 or offer. 51 Wimbledon Park Road, Southfields, S.W. Trade 174-b791

G.W.K., late 1912, hood, screen, two-seater, four speeds and reverse, three lamps, speedometer, four new tyres, touring body, blue, just overhauled and repainted, £90 or offer. Page's Garage, Acre Lane, Brixton. Phone, Brixton 1037. Trade 174-8806

G.W.K. What offers for G.W.K., in good condition, complete with spare wheel, five lamps, hood and screen, speedometer, tools, owner no room to store. Burnett, Jeweller, Fleet, Hants. Trade 174-b879

G.W.K. If language had been made to conceal ideas a great many more people would be dumb. The best idea is to view my stock. G.W.K., first-class condition, engine and body, Zenith carburetor, Stepany wheels, a bargain, £92 10s.; also one at £89. Cash or deferred terms arranged. Cars on view at my garage (two minutes from office). Phone, wire, write or call. Marian G. Paige, the only Lady Motor Dealer (12 years practical experience), 199 Piccadilly (office opposite Piccadilly Hotel). Tel., "Womanish, London." Phone, 4417 Gerrard. Trade 174-74

G.W.K., 1916, all accessories, run 1100 miles, owner ordered abroad, £175. Captain Cornish, Glenwood, Embrook, Wokingham, Berks. Trade 174-b887

G.W.K., 1913 model, two-seater, with hood and screen, four lamps, speedometer, horn and tools, Stepany wheel, etc., a great bargain, £87 10s., no offers. The Light Car Co., 331 Euston Road, London. Trade 174-146

G.W.K., 1913 model, with hood, screen and complete equipment, a bargain, £98. The Light Car Co., 331 Euston Road, London. Trade 174-142

G.W.K., 1915, two-three-seater, finished navy, five detachable wheels, P. and H. lamps, aluminium number-plates, mechanical horn, toolbox, etc., in perfect condition, insurance policy to August, £145 or close offer. Calvert, 288 High Road, Chiswick, W. Trade 174-b859

G.W.K. light car, 1916, latest model, new, one at the old price, £178 10s., first cheque secures. Wilkins, Simpson and Co., 11 Hammersmith Road, London. Trade 174-b864

HILLMAN, 9 h.p., late 1914, two-seater torpedo, dynamo lighting set, speedometer, clock, dickey seat, five Sankey detachable wheels, painted buff, black wings, all good tyres perfect mechanical condition indistinguishable from new, bargain, £137 10s. Mebes, Light Car Specialists, 156 Great Portland Street, W. Telephone, 3426 Mayfair. Trade 174-149

HILLMAN, 1915, 9 h.p., two-three-seater, with several 1916 improvements, under 1500 miles, all grooved tyres, Lucas lighting set, hood, screen, spare wheel and tyre, etc., Hillman blue, perfect condition, £210. Robinson's Garage, Green Street, Cambridge. Trade 174-85

HILLMAN, 1914, fully equipped with lamps, spare wheel, in excellent condition, £165. Hayes, 344 Euston Road. Phone, 3541 Museum. Trade 174-116

HILLMAN, 1914, 9.5 h.p., two-seater, comfortable dickey, good leg room, fully equipped. All Motors, Ltd., 38 Great Portland Street, W. Telephone, 2543 Museum. Trade 174-92

HORSTMANN. The best light car irrespective of price, luxurious economy combined with efficiency. Edwards and Parry, the special London agents, can give delivery from stock; every car specially tuned and tested by our Brooklands racing expert, increased power and more miles per gallon for no extra cost; trial runs by appointment. Write for illustrated catalogues, or call at 69 Great Queen Street, Kingsway. Regent 5088. Trade zzz-339

HORSTMANN, Colonial model, late 1915, two-seater, self-starter, four-cylinder, four detachable wheels and spare wheel, all accessories, had little use, immediate cheque £125 secures. Robson, 53a Stanley Gardens, Hampstead, N.W. Trade 174-b824

HORSTMANN, 1916, Colonial model, in stock, £175. Jones, Garage, Droitwich. Trade 181-3348

HORSTMANN, 1916, 10, done 150 miles, electric light and seat starter, £180, cash or easy terms. R. E. Jones (Garages), Ltd., Swansea. Trade zzz-940

HORSTMANN, 1916, 10 h.p., electric light and seat starter, run 150 miles, £180, cash or easy terms. R. E. Jones (Garages), Ltd., Swansea. Trade zzz-938

HUMBERETTE, 1913, air cooled, good condition, £70 cash, or easy terms. R. E. Jones (Garages), Ltd., Swansea. Trade zzz-886

HUMBERETTES. The largest stock in London of these popular cyclecars, 1913-14 and 15 models, prices from £55, one brand new, exchanges and deferred payments arranged. Percy and Co., 337 Euston Road, London. Trade 174-103

HUMBERETTE, 1913, late, a.-c., two-seater, hood, screen, just repainted grey and black, two large P. and H. headlamps and generators, three, oil lamps, Stepany, speedometer and clock, guaranteed, insurance and tuition free, exchanges, no motorcycle combinations, deferred terms 5 per cent., £65. Cass's Motor Mart, only address 5 Warren Street, Euston Road, W. Museum 623. Trade 174-122

HUMBERETTE, 1913^{1/2}, a.-c., recently overhauled and in perfect order, trial and inspection invited, Stepany wheel, special windscreen, electric and bulb horns, speedometer with trip, specially-made new floor mat, reversing mirror, D.A. lighting outfit, and one unused Dunlop cover, £65 or very near offer. Adams, 22 Royal Arcade, Norwich. Trade 174-b812

HUMBERETTE, 1913-14 model, two-seater, 8-10, Bosch, three speeds, reverse, hood, screen, lamps, any trial, 55 guineas. 1 Ebner Street, Wands-worth. Trade 174-h164

HUMBERETTE, 1915, water-cooled model, hood, screen, three lamps, just repainted and varnished, new condition, £105. F. G. Cox and Co., Ltd., Colston Garage, Bristol. Trade 174-b840

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AND TRADER

alike recognise the value of these pages for the disposal of their goods.

LIGHT CARS AND CYCLECARS FOR SALE (continued).

HUMBERETTE, 1913, D.A. cylinder and headlight, whistle, horn and mats, everything complete, including Stepany, owner-driven since purchased new, tyres good, excellent running order, buying larger car, £60. J. S. Blyth, Ardleigh, Essex. 174-b884

HUMBERETTE, 1914 model, water-cooled, very fully equipped and in excellent order, £100; another one at £95. The Light Car Co., 331 Euston Road, London. Trade 174-140

HUMBERETTES, several for disposal from £52. 'Phone, 3541 Museum, and get particulars, or write Hayes, 34 Euston Road. Trade 174-114

HUMBERETTE, smart two-seater, newly painted and overhauled by makers, colour grey, three spare tyres, bargain quick sale. 179 Brixton Road, S.W. 174-b458

HUMBERETTE, 1913, air-cooled engine, just overhauled, £75 cash or easy terms. R. E. Jones (Garages), Ltd., Swansea. Trade zzz-939

LAGONDA coupe, 1916 improvements, only run 3000 miles, spare wheel, usual accessories, tools, etc., very carefully kept and owner-driven. small petrol consumption, £135. Greene, Rhonda, Flower Lane, Mill Hill, N.W. 174-b869

LAGONDA coupe. If language had been made to conceal ideas a great many more people would be dumb. The best idea is to view my stock. Lagonda coupe, 1915, tip-top order, £140 cash, deferred terms arranged. Cars at my garage, two minutes from office. 'Phone, wire, write, or call, Marian G. Paige, the only lady motor dealer (12 years practical experience), 199 Piccadilly (office opposite the Piccadilly Hotel). Tel. "Womanish, London." 'Phone, Gerrard 4417. Trade 174-72

LUCAR, 1915, 10 h.p. coupe, dynamo lighting, detachable wheels and spare, double dickey, £210. Maudes', 100 Great Portland Street, London, W. Trade 174-62

MORGAN 1916 model de luxe in stock, Grand Prix, delivery end of February. Turpin's, 22 and 29 Preston Road, Brighton. Trade zzz-613

MORGAN, 1916, sporting type, just delivered, £96 12s. Taylor's, Ltd., 21a Store Street, W.C. Trade zzz-516

MORGAN for comfort, safety and economy. Early delivery all models. Free trials and driving lessons. Spare parts stocked. Repairs and overhauls; satisfaction guaranteed. Boddington, Morgan Specialist, Worcester. Telegrams, Compression, Worcester." Code A.B.C. 5th. 'Phone, 370. Trade 182-a683

MORGAN, 1914, Sporting, overhauled and repainted, £82 10s.; another, £77 10s.; 1916 new De Luxe, in stock; exchanges quoted. Motories, 68 Horton Street, Halifax. Trade 174-871

MORGAN, Grand Prix No. 2, 1915, fitted with special 1916 10-12 h.p. J.A.P. engine, water-cooled, 90 by 85 overhead valves, four-speed gearbox, screen, large tyres, many special fittings and refinements, wide two-seater body, speedometer, hand Klaxon, lamps, spares, etc., £125. Below.

MORGAN 1916 models. We are official contracting agents and can supply your requirements promptly. Spare parts in stock. New and second-hand Morgans always on sale. Elce and Co., 15-16 Bishopsgate Avenue, Camomile Street, E.C. Trade 174-125

MORGANS, three in stock, 1914, 1915 and 1916 models, £80 to £120. Percy and Co., 337 Euston Road, London. Trade 174-104

MORGAN, 1915, sporting, fitted with M.A.G. engine, supplied last September, only done 2000 miles, tyres as new, £90. Cox, 10 Fulbrook Road, Newnham, Cambridge. 174-b760

MORGAN, late 1913, sporting, very smart, mauve and black, disc wheels, improved body, leather upholstery, windscreen, hood, four lamps, and accessories, recently overhauled, many improvements fitted, bargain, £65 lowest. Fox, Springfields, Wotterhampton. 174-b794

MORGAN, 10 h.p., M.A.G., sporting, July, 1915, little used, disc wheels, lamps, hood, screen, tools, two spare tyres, one tube, seat-operated cut-out, 60 m.p.h., any expert examination, 50 miles trial, £90 or near offer. Browning's Garage, Great Percy Street, Pentonville Road, W.C. 174-b300

MORGAN, G.P., 1915½, grey, Low generator, side and tail lamps, tools, horn, etc., very little used, like new, £108. R. Somerset, Victoria Barracks, Windsor. 'Phone, Windsor 21. 174-b804

MORGAN, July, 1914, sporting, screen and many extras, cost £105, accept £65. Stanton, Avondale Road, Chesterfield. 174-b831

MORGANS, M.A.G., Grand Prix (grey), air-cooled, latest new model for 1916, fully equipped, and 700 by 80 tyres all round, in stock for immediate delivery. Potter, Leeds. Trade 174-b845

MORGAN, 1915 Model de Luxe, M.A.G. engine, coach-built body, with side door, spring cushion, 700 by 80 tyres, Stepany rear, hood, screen, lamps, Stewart horn, carefully used and in specially good condition, £100. Potter, Leicester Grove, Leeds. Trade 174-b846

MORGANS. For new and second-hand models of this most excellent run-about try Potter, Morgan specialist, Leicester Grove, Leeds. T'de 174-b847

MORGAN, 1914, de luxe, hood, screen, lamps, horn, tools, in good condition, guaranteed perfect, new 700 by 80 Dunlop combination back tyre, best offer over £75. Heath and Wiltshire, Farnham. Trade 174-b848

MORGAN, 1913, 8 h.p., special torpedo body, three lamps, new 700 by 80 back tyre, new chain, £5. Chatwin's, King Street, Richmond. T'de 174-b854

MORGAN, 1915, Grand Prix, hood, screen, speedometer, 4-guinea gas lamp, three oil, Stewart horn, mileage 2000, £105, would consider motorcycle part payment. Wallis, Old Station Road, Newark. 174-b882

MORGAN. If language had been made to conceal ideas a great many more people would be dumb. The best idea is to view my stock. Morgan De Luxe model, perfect condition throughout, a bargain at £85, cash; deferred terms arranged. Cars at my garage, two minutes from office. 'Phone, wire, write, or call, Marian G. Paige, the only lady motor dealer (12 years practical experience), 199 Piccadilly (office opposite the Piccadilly Hotel). Tel., "Womanish, London." 'Phone, Gerrard 4417. T'de 174-73

MORGAN, latest 1916 Sporting model, absolutely guaranteed in stock, complete with hood, screen, lamps, Stewart horn, etc., £109; motorcycle or light car taken in part payment. Julian's, Broad Street, Reading, biggest motorcycle and light car dealers in the South, 45 years reputation. 'Phone 1024. Trade zzz-2

MORGAN, 1915, No. 2 Grand Prix, with hood, screen, lamps, tools, etc., disc wheels, Stepany road-grip back tyre, Dunlop grooved on front, just been newly done up, equal to new, first cheque for 100 guineas secures this bargain; model de luxe Morgan, M.A.G. engine, complete as per catalogue, cost £120 when new; this machine has not done above 1000 miles and is practically new, first cheque for £100 secures it. James, The Morgan Agents, Ecclesall Road, Sheffield. Trade 174-978

LIGHT CARS AND CYCLECARS FOR SALE (continued).

MORGANS, the runabouts, eight new and second-hand, now in stock, £75-£120. Colmore Depot, 49 John Bright Street, Birmingham. Trade 174-96

MORGAN, G.P., 1915, m.o.o.v. screen, painted red and black, five lamps, speedometer, disc wheels, 700 by 80 tyres, £125. Below.

MORGAN, G.P., 1915, m.o.o.v. hood, screen, painted grey, three lamps, horn, disc wheels, £125. Below.

MORGAN, G.P., 1914-15, screen, painted white, dynamo outfit, five lamps, horn, 700 by 80 tyres all round, £117-10s. Below.

MORGAN, G.P., 1915, screen, painted blue, two electric headlamps, three oil, two horns, speedometer, 700 by 80 tyres all round, £115. Above cars guaranteed, insurance and tuition free, exchanges, no combinations, deferred terms 5 per cent. Cass's Motor Mart, only address 5 Warren Street, Euston Road, W. Museum 623. Trade 174-120

MORRIS-COWLEY, latest four-seater model, for immediate delivery, 35 miles to gallon, actually in stock. Parker's Garage, Derby. Trade 174-b459

MORRIS-OXFORD, quick deliveries, free tuition, etc., wholesale and retail agents for Surrey and parts of Sussex and Hants. The Haslemere Motor Co., Ltd., Haslemere. 'Phone, 43. Trade zzz-261

MORRIS-OXFORD, 1914, De Luxe, very good condition, £160; cash or easy terms. R. E. Jones (Garages), Ltd., Swansea. Trade zzz-829

MORRIS-OXFORD, 1914, de luxe, two-seater, dynamo lighting, speedometer, three new tyres, mileage 6000, £185. Smith and Hunter, 15 Little Portland Street, Oxford Circus. Trade 174-107

MORRIS-OXFORD de luxe, August, 1914, perfect, and as new, very little use, exact mileage £200 since new, dickey seat, five lamps, spare wheel. Two spare tyres, painting, etc., almost new, £145, no offers. 55 Cuxley Road, Oxford. 174-b650

MORRIS-OXFORD, 1914, de luxe, exceptional car, specially tuned, in perfect condition, hood with curtains, screen, five lamps, speedometer, clock, extra air, five detachable wheels and tyres, two non-skids, mats, tools, etc., £175. 94 Gloucester Road, S.W. Trade 174-156

MORRIS-OXFORD, 10 h.p., special speed model, three speeds and reverse, two-seater, bucket seat, detachable wheels, 700 by 80 tyres, two spare wheels, one complete with new Avon tyre, Watford speedometer, acetylene head lamps and rear lamp, finished Royal blue with black wings, particularly fast, £220. Maudes', 100 Great Portland Street, London, W. Trade 174-63

MORRIS-OXFORD, 10 h.p., late 1913, fitted special de luxe body, hood, screen, five Sankey detachable wheels, five lamps, fully equipped and ready for immediate use, splendid condition, bargain, £155. Mebes, Light Car Specialists, 156 Great Portland Street, W. Telephone, 3425 Mayfair. Trade 174-151

O.T.A.V. two-seater, 5-6 h.p., two-speed, chain and belt, a capital run-about, £18. Tuke and Bell, Ltd., Motor Department, Carlton Engineering Works, High Road, Tottenham, N. Trade 174-131

PERRY cars. Sole London and District Agents, Cars and Motor Sundries, Ltd., 175-177 Shaftesbury Avenue, London, W.C. 'Phone, 1432 Regent. Trade zzz-745

PERRY, 8 h.p., 1915, fawn, five lamps, Low generator, spare wheel, very little used, condition as new, seven months insurance, £140, no offers. Lorian, 70 Lyttelton Road, Stechford, Birmingham. 174-b821

PERRY, late 1914, with dickey, six complete tyres, £88. Seen at 61 St. Paul's Square, Birmingham. 174-b825

PERRY, 1914, two-seater, five Sankey detachable wheels, five lamps, hood and windscreen, fully equipped, condition as new, £112, owner has to enlist, no dealers. 43a St. Agnes Place, Kennington Park, London, S.E. 174-b844

PERRY, 1914, two-cylinder, splendid condition, spare wheel, five lamps, speedometer, etc., £115. Fielder, 10 Foxley Lane, Purley, Surrey. 174-b858

PERRY light car, 1914, 8 h.p. model, two-seater, hood, screen, dickey seat, lamps, speedometer, five detachable wheels and tyres, just repainted, splendid condition, £115. F. G. Cox and Co., Ltd., Colston Garage, Bristol. Trade 174-b841

PERRY coupe in stock for immediate delivery, 8 h.p. twin, three speeds and reverse, grooved and non-skid tyres, £165. P. J. Evans, John Bright Street, Birmingham. Trade 174-78

PERRYS, 1916 8 h.p. models, for immediate delivery, standard and coupes, complete with lamps, horn, detachable wheels with spare and tyre, prices from 140 guineas. P. J. Evans, John Bright Street, Birmingham. Trade 174-81

PEUGEOT, Baby, four-cylinder, light cars. We have actually in stock for immediate delivery the latest 1916 models. No extra for body painted special colours. The most economical light car. Special terms for cash buyers. The Premier Motor Co., Aston Road, Birmingham. T'de 174-65

PREMIER cyclecar, 7-9, twin, Harcourt radiators, Binks three-jet carburettor, two electric headlights, three oil lamps, hood, screen, four Avon tyres, run 200 miles only, in perfect condition, £55. Barlow, 18 Rawson Avenue, Farnworth, S.O., Lancs. 174-b839

PREMIER, 7-9, two-seater light car, hood, screen, lamps, good and reliable, £67 10s.; exchanges quoted. Motories, 68 Horton Street, Halifax. Trade 174-872

PRINCESS car, four-cylinder, 12 h.p. engine, three speeds and reverse, gate change, two-seater body, hood, screen, side curtains, speedometer, magnetico, electric starter, electric dynamo lighting, electric horn, run only 1400 miles, condition as new, £135. Batchelor, Clarence Street, Kingston. Trade 174-b179

RALEIGH 1916 light car, new, 11 h.p., dynamo lighting and all complete, just arrived from works, immediate delivery, £249 9s. Wilkins, Simpson and Co., 11 Hammersmith Road, London. Trade 174-b660

RITZ, 10 h.p., four-cylinder, two-seater, £145, new model in stock; exchanges entertained. Motories, 68 Horton Street, Halifax. Trade 174-873

SAXON, prompt delivery, 1916 models. Obtainable from the Pioneer Agents, Western Motors Works, Chislehurst, Kent. 'Phone, Sidcup 160. Trade 192-e89

SAXON, with fawn colour English body and look, useful little car, absolutely new and unused, only £160. Colmore Depot, 49 John Bright Street, Birmingham. Trade 174-95

SAXON, 1916, new English type body, painted cream and black, four-cylinder, 11.1, magnetico ignition, fully equipped, £150. Tuke and Bell, Ltd., Motor Dept., Carlton Engineering Works, High Road, Tottenham, N. Trade 174-128

LIGHT CARS AND CYCLECARS FOR SALE

(continued).

- SAXON**, 11.1 h.p., electric starter and lighting set, absolutely new, list £175, accept £150, slightly shop-soiled. P. J. Evans, John Bright Street, Birmingham. Trade 174-79
- SAXON** two-seater, late 1915, in excellent second-hand condition, latest type body, hood, screen, lamps, etc., magneto ignition, £285. Lowe and Wood, Ltd., 280 Broad Street, Birmingham. Trade 176-b871
- SAXON**, two-seater, latest type, Bosch magneto, and all improvements, completely equipped, brand new, £122 10s. Box No. 7812, care of "The Light Car and Cyclecar." 175-5589
- SAXON**, new, 11 h.p., magneto, hood, horn, lamps, and outfit, complete, slightly soiled, £125 or offer. Fountain Garage, Ltd., Cowes, I.W. Trade 175-5527
- SINGER**, 1916, 10 h.p., two-seater, dynamo lighting, in stock. Palmer, 202 Great Portland Street, W. Phone, Mayfair 4942. Trade 182-296
- SINGER**, phaeton or coupe, 1916 models, dynamo lighting, prompt delivery. London Depot, 17 Holborn Viaduct, London, E.C. Trade zzz-39
- SINGER**, 1916, 10 h.p., very latest model, received this week from works, delivery from stock. This magnificent little car includes dynamo electric lighting set, dickey seat, and every modern improvement. Julian, Singer Specialist, Broad Street, Reading. Biggest motorcycle and light car dealer in the South. Phone, 1024. Trade zzz-99
- SINGER**, 10 h.p., late 1913, a bargain, four-cylinder, two-seater, just painted, hood, screen, five wheels, tyres nearly new, engine splendid, five electric lamps, clock, and speedometer, owner joining up, must sell, price £130. Box No. 7688, care of "The Light Car and Cyclecar." zzz-687
- SINGER**, 1915, dynamo lighting set, in new condition, £240. R. E. Jones (Garages), Ltd., Swansea. Trade zzz-634
- SINGER**, 1914, 10 h.p., painted buff, only nine months on road, carefully driven, splendid condition, five wheels, five lamps, two horns, speedometer, clock, £185, no offers, any trial. Elliott, Great Shelford, Cambridge. Trade 174-b862
- SINGER**, 10 h.p., 1914, just repainted and thoroughly overhauled, exceptionally fast and showy, dynamo lighting, speedometer, disc wheels, electric horn, £179. Crow Bros., 190 High Street, Guildford. Trade 175-b810
- SINGER**, 1916, 10 h.p., dynamo model, just delivered from works, first cheque £250 secures, also 1914 ditto, thoroughly overhauled by us, the official repairers of the Singer Co., painted grey, any trial, £180. Bamford and Martin, Ltd., Callow Street, Fulham Road, S.W. Kensington 3920. Trade 174-b838
- SINGER**, 10 h.p., repainted, and as new throughout, all accessories, £110. A., 81 Wilberforce Road, Finsbury Park, N. Trade 174-b832
- SINGER**, 1914, 10 h.p., two-seater, dynamo lighting set, fully equipped. All Motors, Ltd., 38 Great Portland Street, W. Telephone, 2543 Museum. Trade 174-94
- SINGER**, 10 h.p., 1914, sporting, fast, two-seater, £175, dynamo lighting.
- SINGER**, 1914, overhauled and re-enamelled, looks and is as new, £185, dynamo lighting.
- SINGER**, 1913, two-seater, in nice order, £120. Percy and Co., 337 Euston Road, London. Trade 174-105
- SINGER**, 1916, two-seater, dynamo lighting, spare wheel, special luggage carrier, only run few hundred miles, £240. Below.
- SINGER**, 1914, two-seater, dynamo, speedometer, clock, £180. Smith and Hunter, 15 Little Portland Street, Oxford Circus. Trade 174-108
- SINGER**, 1913, light car, three electric lamps, five wheels, complete, tools, etc., £125. Cross, Jeweller, Rotherham. Trade 174-77
- SINGER**, 1914, dynamo lighting, dickey seat, five lamps, spare wheel and tyre, curtains for hood, clock, horn, jack, pump, etc., absolutely perfect condition, done very little mileage, just revarnished, £173. 94 Gloucester Road, S.W. Trade 174-57
- SINGER**, 1916, dynamo lighting, brand new, in stock, No. 4485. Rey, 378 Euston Road. Trade 176-58
- SINGER** light car, coupe, in stock, for immediate delivery, just arrived from works. Alfred Wastnag, Portland Court Garage, Great Portland Street, W. Trade 176-67
- SINGER**, 1916, coupe, brand new, lighting set, finished blue, picked out in red, actually in stock. Prices and particulars, English light car specialists, Robinson's Garage, Green Street, Cambridge. Telephone, 388, Telegrams, "Cars." Trade 174-86
- SINGER**, 1915, 10 h.p., dynamo lighting, dickey seat, Klaxon and bulb horns, speedometer, £220. G. L. Francis and Co., 22 Pantons Street, Leicester Square. Trade 174-112
- SINGER**, 1915½, dynamo lighting, fully equipped, insurance, excellent condition, £215. Stent, Midhurst, Sussex. 175-5554
- SINGER**, 1914, 10 h.p., dynamo lighting, hood, screen, speedometer, watch, etc., in faultless condition throughout, what offers? Julian's, Broad Street, Reading, biggest motorcycle and light car dealers in the South, 45 years reputation. Phone, 1024. Trade zzz-4
- STANDARD**, 9.5 h.p., 1915, two-seater, hood, screen, five lamps, spare wheel, speedometer, double dickey seat, £200, owner called up. George, Smith's Library, Dorchester. Trade 174-b833
- STANDARD**, 9.5 h.p., 1915, two-seater, condor grey, dickey seat, speedometer, five Sankey detachable wheels, five lamps, full equipment, perfect condition throughout, good tyres, sacrifice £180, for quick sale. 10 Kenbourne Road, Sheffield. Trade 174-b857
- STANDARD**, 9.5 h.p., 1915 model, two-seater, hood and screen, five lamps, spare wheel and tyre, in new condition throughout, £195. The Light Car Co., 331 Euston Road, London. Trade 174-144
- STANDARD**, 1914, 9.5 h.p., two-seater, good condition, fully equipped. All Motors, Ltd., 38 Great Portland Street, W. Telephone, 2543 Museum. Trade 174-93
- STANDARD**, 1914, late, light car, £175, new condition, perfect order, dickey seat, five lamps, speedometer, five new tyres. Fountain Garage, Ltd., Cowes, I.W. Trade 175-b528
- STANDARD**, 1914, 8.5 h.p., two-seater and double dickey, five lamps, speedometer, hood and screen, just been repainted and overhauled, very fine order and to be specially recommended, £175. Maude's, 100 Great Portland Street, London, W. Trade 174-61
- STANDARD**, 9.5 late 1914, two-seater, in beautiful condition, £180. G. L. Francis and Co., 22 Pantons Street, Leicester Square. Trade 174-111

LIGHT CARS AND CYCLECARS FOR SALE

(continued).

- STANDARD**, 1914, 9.5 h.p., dickey seat, speedometer, detachable wheels and spare wheel, fully equipped, splendid condition, what offers? Julian's, Broad Street, Reading, biggest motorcycle and light car dealers in the South, 45 years reputation. Phone, 1024. Trade zzz-3
- STANDARD** 1914 light car, £185. R. E. Jones (Garages), Ltd., Swansea. Cash or easy terms. Trade zzz-103
- STELLITE**, late 1914, painted buff, black wings, new hood, screen, tyres like new, mechanical horn, speedometer, five lamps, dickey seat available, fully equipped, perfect condition, bargain £165. Mebes, Light Car Specialists, 156 Great Portland Street, W. Telephone, 3426 Mayfair. Trade 174-148
- STELLITE**, late 1914, with new three-seater de luxe body, expensively equipped, electric light, many spares, perfect condition, expert examination invited, war bargain, £185, no offers; further particulars, photo, on application. Horton, Chemist, Aston, Birmingham. Trade 174-b154
- SWIFT** cyclecar, 7.9 h.p., two-cylinder, Stepney, speedometer, clock, and full equipment, £90. Alfred Wastnag, Portland Court Garage, Great Portland Street, W. Trade 174-904
- SWIFT**, 7.9, latest model, colour grey, only done 2000 miles, excellent condition, speedometer, spare tube, unused, £120. Hollis, Westholme, King's Avenue, Ashford, Kent. Trade 174-b817
- SWIFT** cyclecar, two-seater, 1913, 7.9 h.p., in good condition, tyres as good as new, spare wheel, complete, repainted, etc., new hood, owner going overseas again, price £65. To be seen at Creville and White, Devonshire Garage, Child's Hill. Trade 174-b822
- SWIFT** 10 h.p., 1916, light car, new, dynamo lighting set and dickey seat, all complete, just arrived from works, immediate delivery. Wilkins, Sampson and Co., 11 Hammersmith Road, London. Trade 174-b863
- SWIFT**, 1915, 10 h.p., two-seater, dynamo lighting set, fully equipped. All Motors, Ltd., 38 Gt. Portland Street, W. Telephone, 2543 Museum. Trade 174-90
- SWIFT**, 1916, 7.9, cyclecar, Stepney, speedometer, clock, done 1500 miles, excellent condition, £125. 168 Roman Road, Bow. Trade 174-136
- SWIFT**, 7.9 h.p., 1914, two-seater, complete, mechanism and coachwork as n.w. £120. Peall, 14 Leicester Street, Leicester Square. Tel. No. Gerrard 1901. Trade 174-54
- SWIFT**, exceptionally fine, 10 h.p., 1915, Broit lighting set, speedometer, dickey seat, etc., magnificent condition, £220. Peall, 14 Leicester Street, Leicester Square. Tel. No., Gerrard 1901. Trade 174-55
- SWIFT**, 1915, 10 h.p., two-seater, dynamo lighting, detachable wheels, as new, £210. G. L. Francis and Co., 22 Pantons Street, Leicester Square. Trade 174-109
- SWIFT**, 8 h.p., 1913, wide, two-seater torpedo body, hood, adjustable screen, painted grey, black wings, speedometer, lamps, shock absorbers, Stepney wheel, good tyres, mechanically perfect, fully equipped, tools, etc., bargain, £110. Mebes, light car specialists, 156 Great Portland Street, W. Telephone, 3426 Mayfair. Trade 174-154
- TINY**, late 1915, two-seater and dickey, 10 h.p., four-cylinder Dorman engine, complete with hood, screen, horn, side and tail lamps, five Sankey detachable wheels, not run 800 miles, perfect condition throughout, equal to new, £150. Dove, 154 Cheltenham Road, Bristol. Trade 174-b538
- VIOLETTE**, 6 h.p., two-speed gear, belt drive, in excellent condition, £35. Tuke and Bell, Ltd., Motor Dept., Carlton Engineering Works, High Road, Tottenham, N. Trade 174-130
- WARNE**, 9 h.p., 1913, late, a new car, only been used for demonstration purposes, hood and screen, three speeds and reverse, Stepney, five lamps, dashboard clock, speedometer, £85, a bargain. Maude's, 100 Great Portland Street, London, W. Trade 174-60
- WHITING-GRANTS** in stock, cash or easy terms. R. E. Jones (Garages), Ltd., Swansea, London, Cardiff. Trade zzz-919
- WHITING-GRANT** coupe, 1915, self-starter, electric lighting, speedometer, mirror, two horns, excellent condition, run only 2500 miles, £150. Robertson, 6 Glebe Place, Chelsea. Trade 174-880
- WILLIAMSON** Cy-cl-ca, latest three-wheeler, new model in stock, £126, or exchange. Motories, 68 Horton Street, Halifax. Trade 174-874
- ZEBRA**, 6.2 h.p., four-cylinder, 1914 model, two-seater torpedo body, with hood and screen, electric lighting set with five lamps, horn and tools, in excellent order, £130. The Light Car Co., 331 Euston Road, London. Trade 174-145

PARCELCARS.

- KEEP** expenses down by running a Morgan; delivery from stock; tubes and tyres. Burrell's, 2 Albany Road, Cardiff. Trade 180-e163
- KEEP** expenses down by running a cyclecar; delivery from stock; roomy body. Burrell's, 2 Albany Road, Cardiff. Trade 179-e164
- WALL** parcelcar for delivery, light loads, box behind driver, used three demonstrations, accept £65, bargain. Melen, 314 Gray's Inn Road, London. Trade 175-b536

These advertisements are now set in smaller type to meet the Government demand for economy in paper. At the same time the distinctive style of the setting makes it as easy as before to find the advertisement of any particular make of car.

MISCELLANEOUS LIGHT CARS AND CYCLECARS.

- BRIGHTON**, Perry, Humberette, Morgan, Marlborough. Trial runs given. Easy terms arranged. Turpin, 22 and 29 Preston Road. Trade 204-m843
- CYCLECAR**, 8-10 h.p., two-seater, three-speed and reverse, Chater Lea club, belt drive, body not quite finished, sacrifice £25; or exchange for motorcycle. 353 King Street, Hammersmith. Trade 174-b792
- FOR** sale, 8 h.p. Cardan type monocar, nearly finished, £16, a great bargain, no time to complete. Barker, New Sewage Works, Frittlevell, Essex. Trade 174-b815

THE BEST BARGAINS

in second-hand light cars and cyclecars are offered in these pages.

MISCELLANEOUS LIGHT CARS AND CYCLECARS (continued).

CASS'S MOTOR MART, at the time of going to press, have the following light cars actually in stock—Enfield 1915, 10 h.p., dynamo, £175; Morgan, G.P., 1915, m.o.o.v., £125; Morgan, G.P., 1915, m.o.o.v., £125; Morgan, 1914-1915, dynamo, £117 10s.; Morgan, G.P., 1915, £115; Humberette, 1913½, £65. All the above cars overhauled, repainted, guaranteed three months, 12 months insurance free, tuition free, exchange, no combinations, deferred terms 5 per cent., trials free. For full particulars of above cars see small ads. If you do not see what you require, call, phone, wire or write; same may have arrived after going to press, as you observe our stock is always changing. If you are in want of a light car, it will pay you to inspect our stock of guaranteed light cars before going elsewhere. You will not regret doing so. Remember, we are always willing to purchase or exchange first-class light cars as per our "Wanted" advertisement, for cash. We will personally call and inspect your car within 150 miles. Above cars can be seen and tried at our only address, 5 Warren Street, Euston Road, W. Museum 623. Trade 174-124

SPORTING cyclecar, 10 h.p., 90-degree air-cooled engine, four speeds, very fast, only done 300 miles, bargain, £45. Earl, 5 Heath Street, Hampshire. Trade 174-b867

It will always pay you to consult a specialist. We specialize in light cars and cyclecars exclusively, and if we should not have in stock just what you are looking for we can obtain it for you promptly. We charge you for this, of course, but only a nominal amount of 5 per cent. on the price paid, and you are sure of getting what you require at the lowest trade price plus our commission. This is far cheaper than paying what you may be asked to pay elsewhere. Give us a trial. We please ourselves by pleasing you, and your recommendation is worth something to us. The Light Car Co., 331 Euston Road, London. Phone, Museum 3143. Trade 174-137

MISCELLANEOUS.

ACCUMULATORS. Over 100 sizes always in stock. The cheapest and best house in the trade for reliable accumulators for car lighting, ignition, etc.; stock of slightly shop-soiled accumulators at greatly-reduced prices. The Essex Accumulator Co., 497-499 Grove Green Road, Leytonstone, London, N.E. Trade zzz-505

ALUMINIUM number plates, best quality, any number, raised letters, very handsome. 9s. 6d. per pair. Freeman, Oakes, Devonshire Street, Sheffield. Trade zzz-805

LIGHT-CAR manufacturers and dealers requiring cheap but well-made and reliable sets of torpedo electric lamps of British manufacture should communicate with the Essex Accumulator Co., 497, 499 Grove Green Road, Leytonstone, London. Trade zzz-183

CYCLECAR components: Channel steel reinforced wood frames, with quarter-elliptic springs, £4 3s. 3d.; countershafts, friction sets, axles, wheels. Denby and Co., Ltd., Ilkley. Trade zzz-936

CHASSIS. Manufacturers and agents requiring continuous supply of 1916 chassis, 10 h.p., four-cylinder, bevel drive, are invited to inspect our components. Hurlin Co., below.

COMPONENTS. We have in stock a large quantity of light car and cyclecar components for immediate delivery, frames, axles, wheels, engines and complete chassis; prices unapproachable, write to-day. Hurlin Co., Ltd., 13a Ellingford Road, Mare Street, Hackney. Tel., 2589 Dalston. Trade zzz-69

SPARE parts in stock for Auto-Carrier, Goodchild, Warwick and Omnium carriers in stock. The Premier Motor Co., Birmingham. Trade 174-877

CRANKSHAFTS, gearwheels, clutch plates in stock for Auto-Carrier, Goodchild, Warwick and Omnium carriers. The Premier Motor Co., Birmingham. Trade 174-876

TYPEWRITERS. Remingtons, Nos. 5 and 7, 45s. and 65s.; approval. 22 Rock Street, Finsbury Park, N. 174-8849

B. and B. carburetter, 12s. 6d.; high-tension magneto, 50s.; 2½ h.p. engines, 30s.; many others, cheap. Bull, The Garage, 169a Queen's Road, Finsbury Park, N. Trade 174-b788

SOLID brass generator for light car, cost 60s., accept 20s.; 650 by 65 Dunlop tread, like new, 15s., bargain. Bland, Walker Lane, Sowerby Bridge, Yorks. 174-b793

LONDON'S light car and cyclecar experts. If you are considering purchase of a car, we can advise you to your advantage. We guarantee satisfaction, exchanges and deferred payments arranged. Percy and Co., 337 Euston Road. Trade 174-101

THREE speeds and reverse Humberette gearbox, cardan drive, £5; three and reverse gearbox for chain drive, only sold, £5; pair light car axles, central chain drive, fitted 700 by 80 wheels, £3 15s.; 10 h.p. bevel-drive back axle, geared 4¼-1, fitted hubs and brake drums, also front axle, £5 pair. Elephant. Below.

RADIATORS. Bankrupt stock light car pointed-front radiators, in polished brass and copper tubes, 18 ins. high, 18 ins. wide, guaranteed quite new, listed £5 15s., to clear £3 17s. 6d. Elephant Motor Mart, 10 to 18 Elephant Road, London, S.E. (two minutes from Elephant and Castle). Trade 174-134

PAIR light car axles, complete with wheels and brakes, £5 or offer, bargain. Reed, 65 Ludlow Road, Itchen, Southampton. 174-b866

ACCESSORIES.

PAIR of brass C.A.V. electric side and tail lamps, as new, off G.W.K., £2. Wright, Lester Works, Cross Street, Islington. 174-b835

STEWART speedometer, complete, with trip, nearly new, perfect, 37s. 6d., off Morgan, 320 Manor View, Cudworth, Barnsley. 174-b837

ALL kinds of second-hand accessories in stock. Write your requirements. We are bound to have the article wanted. Mebes, 156 Great Portland Street, W. Telephone, 3426 Mayfair. Trade 174-152

PARAFFIN carburetters, the latest, neatest, and most easily fitted, no complications, saving two-thirds fuel bill, all makes of cars, new and second-hand supplied with the Beckett-Hayes carburetter at an inclusive charge. Hayes, 344 Euston Road. Phone 3541 Museum. Trade 174-119

28 by 3 **STEPNEY** wheel and tyre, complete, brand new, 70s. Lowe and Wood, Ltd., 280 Broad Street, Birmingham. Trade 176-b872

BINKS carburetter, No. 68, filter, Bowden cable control, practically new, £3 15s. Aitken, White House, Lexden, Colchester. 174-b833

BINKS carburetter, for 10 h.p., brand new, hot-air mult and pipe, complete jets, etc., cost £4 5s., what offers? Burn, "Aandyke," Janson Road, Southampton. 174-b881

ACCESSORIES (continued).

ELECTRIC-LIGHTING set, new, E.B.C. dynamo, accumulator, switch-board, two 7½-in. brass headlights (focussing), two torpedo side lamps, one tail lamp, driving pulley, belt, etc. complete, £15. Box No. 7862, care of "The Light Car and Cyclecar." 174-b874

STEWART cyclecar speedometer, done 256 miles, 6 ft. flexible shaft, driving gearwheel missing, £2 or offers. Bayliss, St. Cuthbert's, West Heath Road, London, N.W. 174-b873

BODIES.

FOUR-SEATER body, upholstered green leather, off Star car, with nearly new hood costing £7, accept £4 the lot. Waller, Hillside, Eynsford Road, Farningham. 174-b809

BODIES for any class of light car, surplus to be disposed of cheap. Harper and Co., Dudley Road, Wolverhampton. Trade 177-b838

CLEANING MATERIALS.

MOTOR cleaning cloth, 24 yds. fine wide cloth, 2s. 6d.; 36 yds., 3s. 9d.; 48 yds., 5s.; assorted, grey and bleached; trade supplied. J. Hindle, 22-28 Bolton Street, Chorley. Trade 176-g813

CONSULTING ENGINEERS.

INDEPENDENT advice and assistance in purchase of new and second-hand pleasure and commercial cars by car owner. A. H. Smart, 9 North Claremont Street, Glasgow. 174-b626

EXCHANGES.

EXCHANGE. Motor-bicycles and light cars taken in part exchange for light cars, balance in cash or extended payments as preferred. Service Co., 292 High Holborn, London. Trade zzz-689

EXCHANGE for Humberette or other two-seater car, 6-8 h.p. Rex coach-built combination, adjustable seat for child, hood, screen, lamps, hardly used, new March, 1915, excellent order and condition, or sell £60, send full details, Box 7845, care of "The Light Car and Cyclecar." 174-b797

LIGHT car, value £150, offered in exchange for your motorcycle and sidcar, balance £100 payable in cash or deferred payments. Colmore Depot, 49 John Bright Street, Birmingham. Trade 174-939

If you wish to effect an exchange of any description, consult the specialists. We please ourselves by pleasing you. The Light Car Co., 331 Euston Road, London. Phone, Museum 3143. Trade 174-138

EXCHANGES on new and second-hand cars, best possible allowances made. Phone, 3541 Museum. Hayes, 344 Euston Road. Trade 174-118

EXTENDED PAYMENTS.

EXTENDED payments; all makes supplied; lowest terms. Service Co., 292 High Holborn, London. Trade zzz-688

DEFERRED payments. If language had been made to conceal ideas a great many more people would be dumb; the best idea is to view my sock. Deferred payments is a speciality of mine, and I am prepared to sell you a car or find the money to buy a car from someone else, and let you pay me by instalments. From one-fifth down and balance by 12 monthly payments. My terms are exceptionally favourable, and worthy of everybody's consideration. These terms apply to touring or light cars, hire cars, or commercial vehicles. Before considering anyone else, get into communication with me at once. Note: cars on view in new garage, two minutes from office. Write, wire, phone or call, Marian G. Page, the only extensively advertising Lady Motor Dealer, 12 years practical experience, 199 Piccadilly, London (an office opposite Piccadilly Hotel). Tel., "Womanish, London." Phone, Gerrard 4417. Trade 174-76

FOR HIRE.

PRIVATELY-OWNED G.W.K., latest model, moderate terms. Rosslyn, Church Avenue, Ruislip. 174-b855

HOODS AND SCREENS

HOODS for light cars, 55s.; hoods re-covered in black waterproof leatherette, 45s.; in khaki, 25s. Stockport Garage Co., 37 Wellington Road N., Stockport. Trade zzz-189

HOODS, 50s., windscreens, 30s.; hoods re-covered, high-class goods. Lang and Webb, Jackson Road, Holloway, London. Trade 174-h114

INSURANCE.

WHY pay your insurance premiums a year in advance when you can pay them monthly without extra cost? Monthly insurance policies for light cars and cyclecars at special reduced rates. For prospectus of Lloyd's Motor Policies, write The Manager, General Insurance Co., 159 Piccadilly, London, W. zzz-970

PATENT AGENTS.

FLETCHER WILSON, of Coventry, Chartered Patent Agent, and registered United States Patent Attorney. Telegrams, "Wilpat, Coventry." Telephone, 36x. 176-d165

PATENTS. Inventors advised free. Write for booklet. King's Patent Agency, Ltd., 165 Queen Victoria Street, London, E.C. 174-132

REPAIRERS.

THE Pytchley Autocar Co., Ltd., Sole Agents for Standard cars, are in a position to undertake repairs and overhauls of all descriptions, repainting of coachwork, etc., at lowest possible charges; detailed estimates free. Repair Dept., 42 Walmer Road, North Kensington. Park 1299. 174-1307

THE AZ-NU Works, 21 Rivinghall Street, Pentonville, N., radiator, lamp and welding specialists, American radiators a speciality. Trade zzz-817

REPAIRS. All kinds of repairs to light cars and cyclecars, any make. Wilkins, Simpson and Co., 11 Hammersmith Road, London. 174-b861

REPAIRS. We are G.W.K. experts and special authorized agents. We specialize in all kinds of repairs to G.W.K. cars and supply any spares. Now is the time to have your G.W.K. overhauled. Wilkins, Simpson and Co., 11 Hammersmith Road, opposite Olympia, London. 174-b862

OVERHAULS to any make of light car. Morgan expert, official repairer to the Morgan Co., all parts in stock; fully-equipped workshop; experienced mechanics; best work only, moderate charges. S. Hall, Stevenage, Herts., 30 miles from London on the Great North Road. 186-127

SITUATIONS VACANT.

Defence of the Realm Act

REGULATION 8 (b).

Under the above regulation, advertisements offering situations with firms whose works are situated within 30 miles of London and whose business consists wholly or mainly in engineering, ship-building, or the production of munitions of war, or of substances required for the production thereof, must contain the words:—
"NO PERSON ENGAGED ON GOVERNMENT WORK OR RESIDENT MORE THAN 10 MILES DISTANT NEED APPLY."

When the advertiser's works are situated more than 30 miles from London all applications must be made through a Labour Exchange, by means of a box number allocated by the Board of Trade. Forms of application may be obtained from any Labour Exchange, or from the offices of this paper. Each advertisement must clearly state that no person already engaged on Government work need apply.

TRANSMISSION.

THE Zilla overcomes all belt troubles. Particulars from the Zilla Patent Belt Co., 101 Great Western Street, Manchester. Trade 174-8907

TUITION.

THE Motor Training Institute, Ltd., appointed by the Royal Automobile Club since 1907. Write for free illustrated prospectus, or call and inspect our institute, 10 Heddon Street, Regent Street, W., or the works: 21a London Road, St. John's Wood, N.W. zzz-221

UNLIMITED practical motor tuition until satisfied for one inclusive fee at the largest motor instruction works in the world and situate in the heart of London. Apply, the British School of Motoring, Ltd., 5 Coventry Street, Piccadilly Circus, W. The leading practical training institute for the motor industry; fully-qualified staff of instructors; open day and night; special car owner's economy course, saves endless expense (individual tuition at hours convenient to yourself); training also for every position in the motor industry; written guarantee for unlimited tuition until Royal Automobile Club certificate obtained (special course). Call or send postcard for free illustrated prospectus (C.C.). Note address, British School of Motoring, Coventry House, 5 Coventry Street, Piccadilly Circus, W. zzz-241

BRIGHTON. Turberville Motor School for ladies and gentlemen and their servants. Driving instruction cars, new 1915 model. Technical rooms filled with complete working chassis. Lady instructor for ladies. Prospectus free. Bath Street, Seven Dials. Phone, 371 Brighton. 220-512

BRIGHTON. Learn to drive in comfort and safety at the Turberville Motor School, Bath Street, on an up-to-date new 1915 model car. Prospectus free. Phone, 371 Brighton. 220-513

TYRES AND TUBES.

ECONOMIC. Free. We present with all orders value 40s. a fully-guaranteed 3s. 6d. Simms plug.—

ECONOMIC. Special offer to American cyclecar owners. Kempshall clearance, 28 by 3 heavy anti-skids, 30s., listed 5s. 6d.; order now; cannot repeat.

ECONOMIC. Kempshall 700 by 85 oversize square tread non-skids, the Dreadnought of the tyre world, 65s. Special for driving wheel of Morgans, etc., latest pattern, fully guaranteed.

ECONOMIC. Continental, 650 by 75 or 700 by 80, heavy rubber-studded covers, 31s. 6d.; tubes (cycle valves), 8s. 6d., car 9s. 6d., complete tyres 38s. and 39s.

ECONOMIC. Palmer cord, special heavy three-ribbed oversize for 650 by 65 and 700 by 80, latest pattern, fully guaranteed, 710 by 85 5s. 6d., 700 by 80 50s.

ECONOMIC. Goodyear famous all-weather tread covers, 700 by 80 50s., Pillion 650 by 85 lozenge pattern 18s., cannot advertise maker.

ECONOMIC. Repairs of every description: retreads, 650 by 65 plain 10s., 650 by 65 grooved 12s. 6d., 700 by 80 plain 11s. 6d., 700 by 80 grooved 14s.

ECONOMIC. Avon 700 by 80 steel studs, 57s. 6d.; 700 by 80 square treads, 30s. Economic Tyre Co., 137 Lewisham High Road, New Cross. Phone, New Cross 1393. Trade 174-967

ELITE Rubber Co., Ltd. We have the following special clearance lines in light car covers, and are offering same at great reductions. These covers are quite new, and we are willing to send on seven days approval against remittance. Given away, 3s. outfit to all purchasers of goods to the value of £1 and over. Special quotations to the trade:—

ELITE. 650 by 65 Continental, extra heavy fluted pattern, 23s. 6d., list price 30s. 6d.; Reinforced fluted pattern, 21s., list price 23s. 3d.; Autobi basket pattern, 25s., list price 39s. 6d.; pillion covers, rubber-studded, 21s., list price 50s.; Kempshall heavy non-skid 45s., list price 62s. 6d.

ELITE. 650 by 75 Continental Autobi rubber-studded, 31s. 6d., list price 44s. 3d.; oversize for 650 by 65 rims, will fit 700 by 80 rims.

ELITE. 650 by 65 Continental tubes, 6s. 6d., list price 11s. 6d.; 650 by 75 8s. 6d., list price 14s.; butted 1s. 6d. extra.

ELITE. Retreading and repairs a speciality. 650 by 65 plain retreads, 11s. 6d.; grooved, 14s. 6d.; 700 by 80 grooved, 15s.; plain, 12s. 6d.

ELITE. 700 by 80 Wood-Milne, heavy square tread, 37s. 6d.; Avon, fluted, 30s.; Clincher, fluted, 30s.; 700 by 85 Burnett, heavy three-ribbed, 32s. 6d.

ELITE tubes, 700 by 80, fully guaranteed. 9s. 6d.; 650 by 75, 8s.; 650 by 65, 7s.

ELITE Rubber Co., Ltd., 266 Vauxhall Bridge Road, Victoria, S.W. Phone, Victoria 6553 (one minute from Victoria Station). Trade 174-135

WANTED.

Cars.

WANTED, several good second-hand light cars, cash waiting, or would take in exchange for any new make of car. Seemann and Sons, Ltd., 39 St. James's Street, W. Phone, Regent 212. Trade zzz-836

WANTED, for cash, immediately, any makes, second-hand light cars. Rey, 378 Euston Road. Tel., Regent 4219. Trade 121-c420

"THE LIGHT CAR AND CYCLECAR" is the best medium and has the largest circulation.

WANTED—Cars (continued).

WANTED. Good second-hand or new light cars purchased for cash or taken in exchange for new cars or motorcycles. Service Co., 292 High Holborn, London. Trade zzz-253

IF you want to dispose of your light car, we will give you good market value, spot cash down, no delay; no models previous to 1913 wanted. Ring up Holborn 5777, or write Wauchope's, 9 Shoe Lane, London. Trade 183-324

WANTED, light car, well-known make, with or without body or with box body, lowest price. Full particulars to Taylor's Co., Ltd., 74 Chancery Lane, London, W.C. 176-d206

WANTED, a high-class light car, two-seater or coupe, prompt cash, any distance. Alfred Wastnag, 65 Great Portland Street, W. Trade 176-223

HUMBERETTE, Singer, Calcott, Standard, or any good make for cash. J. Phillips, 164 Elm Park Mansions, Park Walk, S.W. zzz-758

THE Car and Tyre Mart will purchase your car for cash; distance no object; expert advice gratis. Write, phone or wire, 113 and 114 Long Acre, W.C. Trade zzz-732

CALCOTT or Stellite wanted, state age, mileage, condition and lowest cash price. Main, 36 Parade, Leamington. Trade 174-b795

WANTED, light cars, cyclecars, spot cash paid, bring or send. Wandsworth Motor Exchange, Ebner Street, Wandsworth (Town Station). Trade 186-b814

WANTED, cyclecars, light cars, at once, highest cash prices paid. Wandsworth Motor Exchange, Ebner Street, Wandsworth (Town Station). Trade 174-h165

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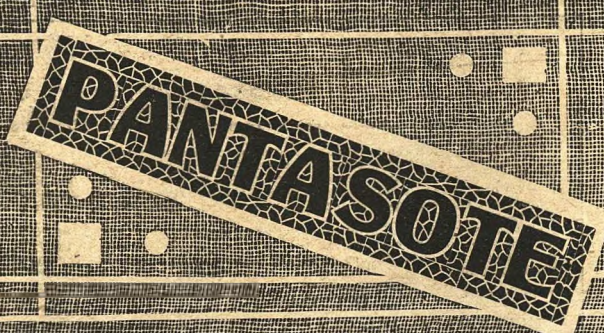
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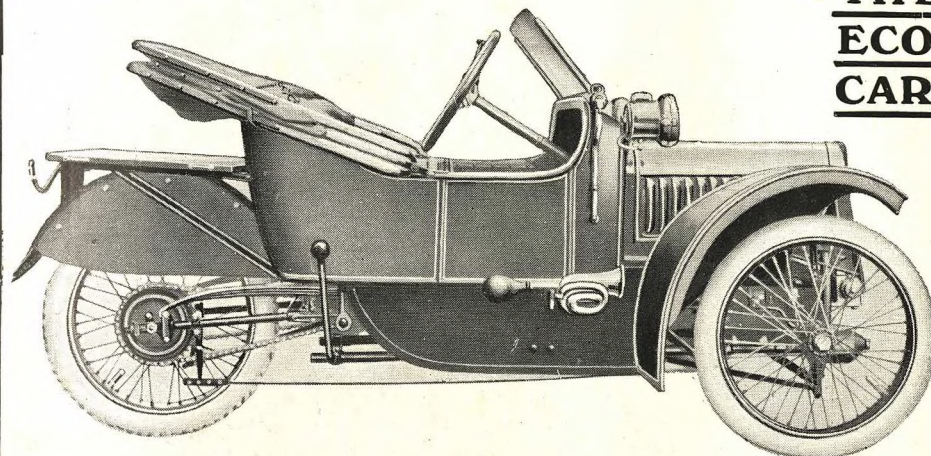
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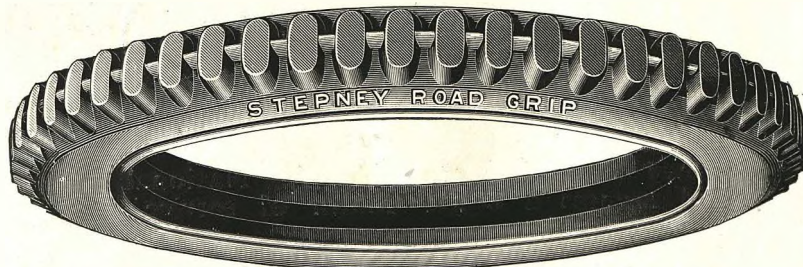
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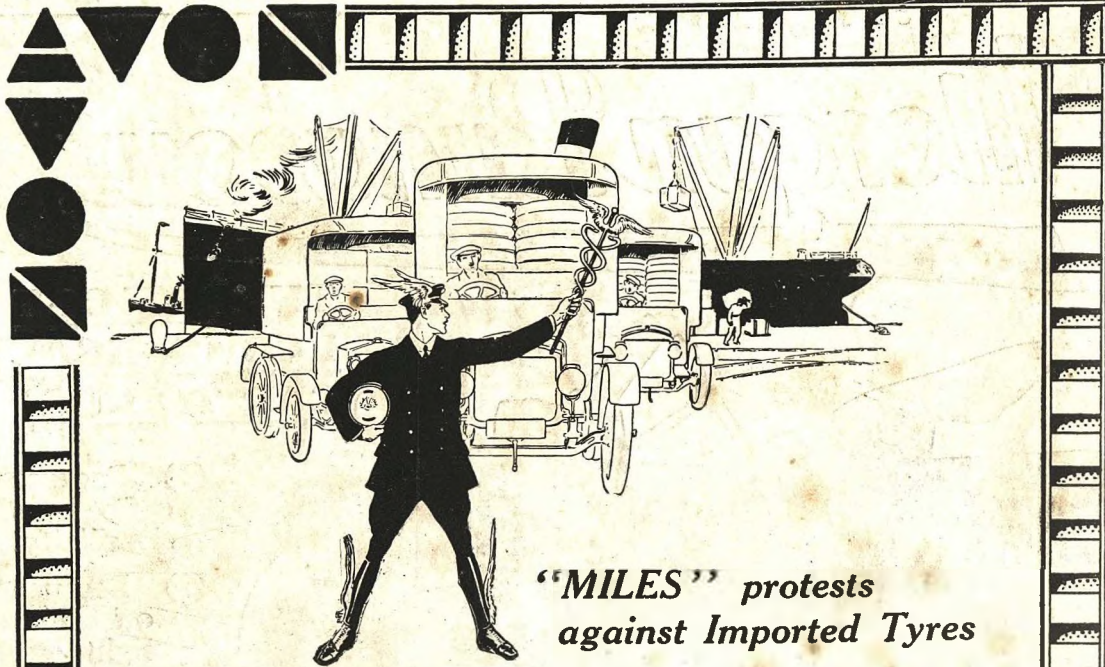
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