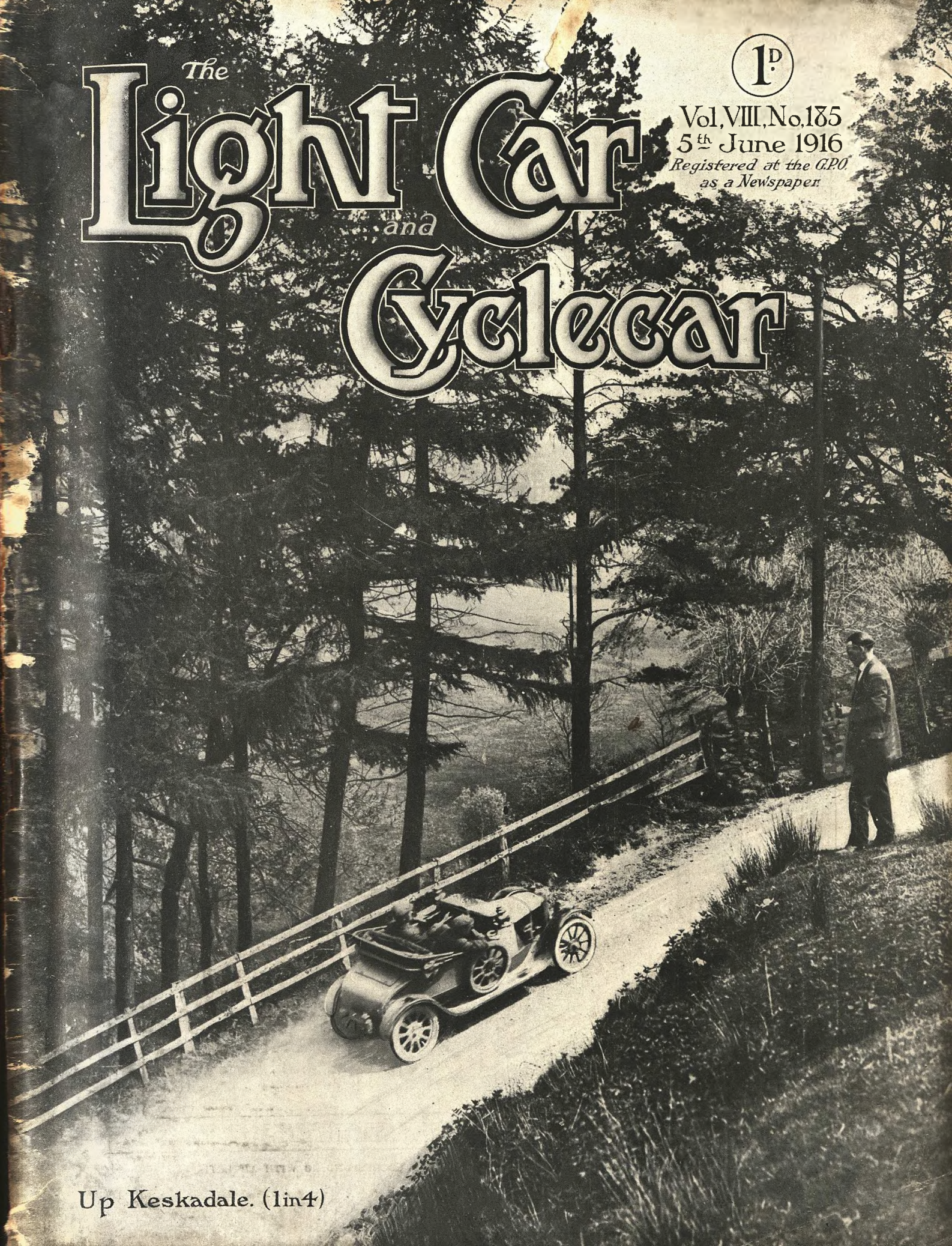


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Vol. VIII, No. 185
5th June 1916
*Registered at the G.P.O.
as a Newspaper.*

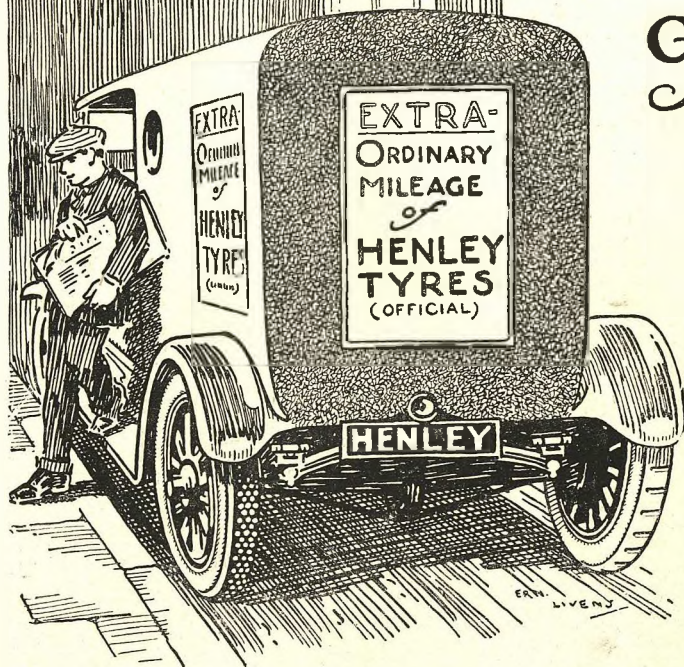
The Light Car and Cyclocar



Up Keskadale. (1in4)

HENLEY TYRES

GOOD NEWS
for MOTORISTS



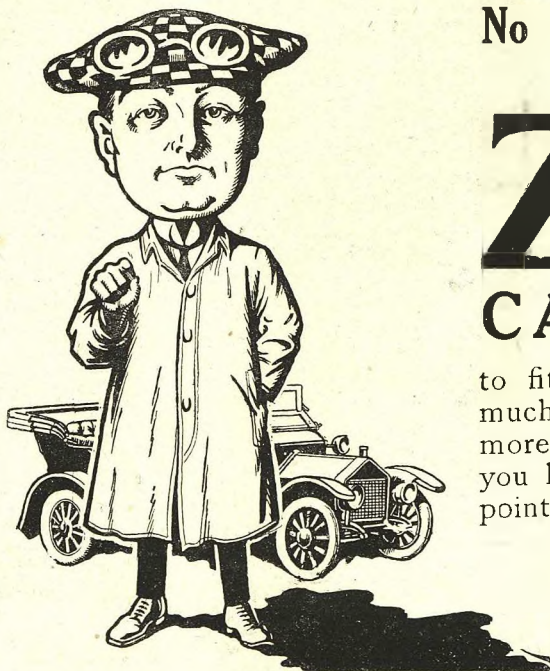
Henley Tyres can be relied on for the maximum mileage possible from any Pneumatic Tyres, although they cost no more than others, therefore reducing your running cost to the minimum.

Manufacturers:—

W. T. HENLEY'S
TELEGRAPH WORKS CO., LTD.

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



No matter what your Engine
there's a

ZENITH CARBURETTER

to fit it. It will make the engine so much better in its running and so much more economical. And that's a point you have to consider to-day, both from point of view of patriotism and pocket.

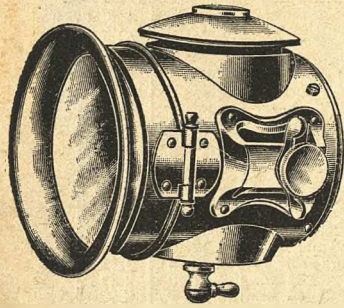
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ZENITH CARBURETTER Co., Ltd.,
40-42, Newman Street, London, W.

Telephone—Regent 4812-4813.

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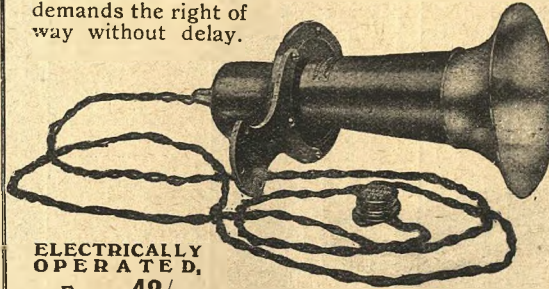
TRADE MARK.



Acetylene Side Lamps.
A well-made British Lamp, suitable for use as a side lamp or as a head lamp on cyclecars.
With red rear light. Brass finish.
No. L 26/1. Per pair, 42/-

SPARTON — the dominating WARNING SIGNAL.

demands the right of way without delay.



ELECTRICALLY OPERATED,
From 42/-

HAND OPERATED, 21/-
(all finishes).

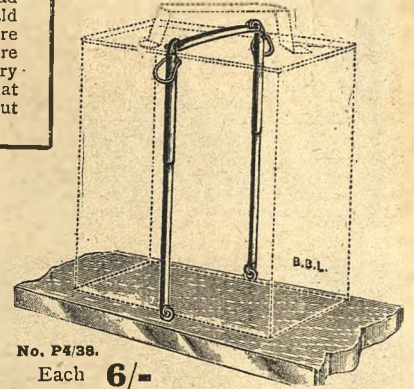
On the country road, where road courtesy demands that you herald your approach a long time before you whizz past your neighbour, there is no signal so dependable as the Sparton. In a factory test a Sparton signal was sounded 332,560 times. That means 598,698,000 vibrations of the diaphragm without loss of tone or carrying power.

The CELERIO Cyclecar JACK.

British Made.
The strongest and most efficient Jack on the market.
Raises from 7 in. to 11 1/2 in.
No. J 1/48
Each 7/6



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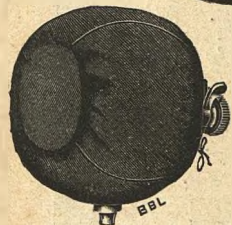
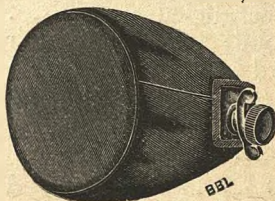
No. P4/38.
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Specially made for "DUCO" Electric Lamps (as fitted to Brolt Lighting Sets).

Made of best quality Black glossy waterproof material, lined selvyt.
Well-made and finished.



Can also be supplied in "Osef" material at same price.

- SMALL SIZE.**
No. L 71/44 Head Lamp ... 5/-
.. L 71/45 Side Lamp ... 2/4
.. L 71/46 Tail Lamp ... 1/-

Raybestos the most durable BRAKE LINING.

Make the brakes grip quickly, with the least jerkiness, because it is made of long fibre asbestos woven with brass wire and treated in a way that gives the greatest gripping power. Raybestos is made in various widths and sizes by a special process, which gives the highest co-efficiency of friction.



Look for the Silver Edges

PRICES ON REQUEST.

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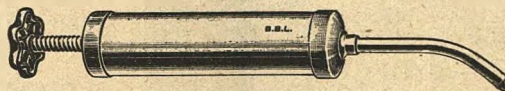
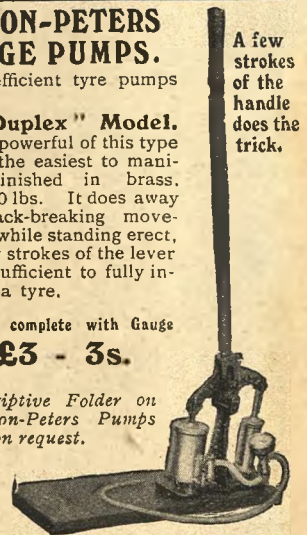
the most efficient tyre pumps ever made.

"Ideal Duplex" Model. is the most powerful of this type made, and the easiest to manipulate. Finished in brass. Pressure 150 lbs. It does away with all back-breaking movements, and while standing erect, a few strokes of the lever are sufficient to fully inflate a tyre.

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Descriptive Folder on Gleason-Peters Pumps sent on request.

A few strokes of the handle does the trick.



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Size, 13 in. overall, barrel 7 x 1 1/2 in.
No. S75/28. Each, 5/9

The goods illustrated on this page are obtainable from all Moto Dealers and Garages. In case of difficulty apply direct to—

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TO THE READER

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Special Tyre Bargains

THE ABINGDON RUBBER CO., LTD

Weekly Clearance List.

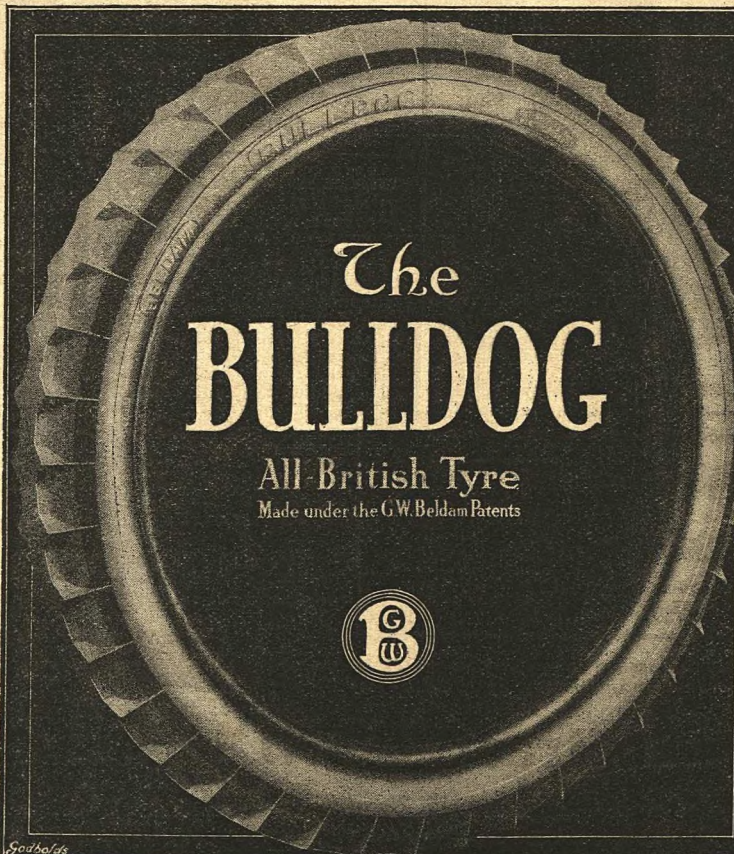
Size.	Make.	Type.	List Price.		Clearance Price.		Size.	Make.	Type.	List Price.		Clearance Price.		
			£	s.	d.	£				s.	d.	£	s.	d.
550 x 65 650 x 65	Henley	Steel studded	2	8	9	1	16	6	710 x 90	Avon	Round grooved	2	17	6
	Henley	Steel studded	2	10	10	1	18	0		Michelin	Square	2	9	9
	Goodrich	Safety tread	2	0	0	1	12	0		Michelin	Steel studded	3	10	3
	Avon	3-ribbed (heavy)	1	17	6	1	12	6		Avon	Sunstone grooved	3	2	0
	Avon	3-ribbed (ex. h'vy)	2	0	0	1	15	0		Avon	Square tread	2	9	9
	Avon	Sunstone grooved	1	17	9	1	12	6		Abingdon	Square tread	2	11	0
	Avon	Round grooved	1	17	3	1	7	0		Abingdon	Grooved	3	2	6
	Avon	Steel studded	2	9	6	2	3	0		Continental	Steel studded	3	12	3
	Avon	Heavy square	1	9	9	1	6	0		Spencer Moulton	Safety tread	2	9	9
	Abingdon	Square tread	1	10	6	1	3	0		Goodrich	Safety tread	3	2	6
	Abingdon	Grooved	1	17	6	1	5	0		Goodyear	Dia. rub. non-skid	3	5	9
	Continental	Basket patt. n'skid	1	19	6	1	4	0		Avon	Grooved	2	4	6
	Henley	Round tread	1	10	6	1	1	6		Goodrich	Round Tread	1	18	0
	Henley	Grooved	1	17	6	1	5	0		Avon	Square tread	1	17	0
	700 x 80 O'size 650 x 65	Goodyear	Dia. rubber n'skid	2	10	0	2	0		0	Avon	Sunstone grooved	2	6
Avon		3-ribbed	2	8	6	2	1	6	Avon	Steel studded	3	7	0	
Avon		Sunstone grooved	2	3	6	1	16	6	Avon	Steel studded	3	7	0	
Avon		Square tread	1	18	6	1	8	6	Continental	Steel studded	3	12	0	
Avon		Steel studded	3	0	0	2	11	0	Henley	Steel studded	3	4	9	
Goodrich		Round tread	1	14	0	1	7	0	Henley	Round tread	1	18	0	
Avon		Combination n'skid	3	0	0	2	12	6	Avon	Square tread	1	16	6	
Goodyear		Round tread	2	0	0	1	14	0	Avon	Sunstone grooved	2	5	6	
Goodyear		Dia. rubber n'skid	2	10	3	1	17	6	Abingdon	Steel studded	3	4	9	
Avon		Sunstone grooved	2	3	0	1	17	6	Avon	Steel studded	3	3	6	
Avon		Square and round	1	14	0	1	10	0	Henley	Grooved	2	2	6	
Avon		Steel stud	3	3	0	2	12	0	Henley	Round tread	1	14	9	
Goodrich		Round tread	1	15	0	1	7	6	Avon	Square tread	1	13	9	
Clincher		Rubber stud	1	18	0	1	0	0	28 x 3	Avon	Round grooved	2	2	6
Henley		Grooved	2	0	6	1	10	0		Michelin	Steel studded	3	1	9
710 x 90	Abingdon	3-ribbed	3	2	6	2	4	0		Victor	Square tread	1	2	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.

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100, CHARING CROSS ROAD — LONDON, W.C.
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THE "BULLDOG"
Tyre is made with the scientific Beldam design of rubber tread—which affords an unparalleled road-grip. It is built to a very high standard at a moderate price—there is no other tyre which gives so much quality value for money.

Note the prices quoted and send your order to-day. All standard sizes stocked; write for complete list.

Size.	Price.	Code Word.
650 x 65	£1 10 9	Busser
700 x 80	1 14 0	Bevus
700 x 85	1 15 0	Buvox
710 x 90	2 9 9	Butis
760 x 90	2 14 3	Burgus

THE BELDAM TYRE CO., LTD., Brentford, Middlesex.

Agent for New Zealand: J. F. Fitzgerald, 139, Lambton Quay, Wellington.

R. E. JONES

GARAGES LTD

THE LIGHT CAR SPECIALISTS

6 GUINEA TAX.



109
1914, 9.5 h.p. **STANDARD**, with Rhyd body, detachable wheels, spare and tyre, acetylene head lamps, separate generator, oil side and tail lamps, just repainted azure blue, and in perfect mechanical condition £185

6 GUINEA TAX.



110
Late model 4-seater **LAGONDA**, done very little mileage, condition as new £170

6 GUINEA TAX.



111
BABY PEUGEOT, with our special design body, racing model, disc wheels, hood, screen, speedometer, many extras, scarcely used. Property of an officer £180

6 GUINEA TAX.



115
1915 **LAGONDA**, coupe, in new condition, guaranteed perfect .. £140

— WE ARE —

CASH BUYERS for Modern Light Cars.

NEW CARS.

SINGER, standard model, just delivered, dynamo lighting £275

McKENZIE, just delivered, C.A.V. dynamo lighting .. £220

G.W.K., standard model .. 185 Gns.

SAXON, self-starter and electric light £175

WHITING-GRANT, electric light £160

BABY PEUGEOT, sporting model, fitted with hood, screen, and boot £165

Delivery Charges Extra.

TO IRISH BUYERS:

We have, in Belfast, a **BABY PEUGEOT**, fitted with our design body, complete with 5 lamps, etc., in new condition £180

6 GUINEA TAX.



116
1914, 4-cyl., 10 h.p. **ENFIELD** Antalet, wire detachable wheels, four new tyres, splendid condition .. £150

6 GUINEA TAX.



117
7.9 h.p., 2 cyl., **SWIFT** cyclecar, 1913 model, 3 speeds and reverse, staggered seats, luggage box at rear, Stewart speedometer, horn, acetylene sidelamps with generator, clock, repainted Norfolk Grey, splendid condition .. £95

6 GUINEA TAX.



118
1914, 10 h.p. **SINGER**, complete with 12-volt Rotax dynamo lighting set, repainted, and in splendid condition £185

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119
1915, 10 h.p. **CALTHORPE**, Grand Duke Michael model, 12-volt dynamo lighting set, splendid condition throughout £200

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CARDIFF: City Road.

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Telephone: Mayfair 2826.
Telegrams: "Erjonegara, Wesdo."

Telephone: 4686.
Telegrams: "Petrol, Cardiff."

Telephone: 1301 Central.
Telegrams: "Petrol, Swansea."



Made in England and
guaranteed by the
Sole Manufacturers:
**THE LODGE SPARKING
PLUG CO., LTD.,**
BIRMINGHAM & RUGBY.

LODGE PLUGS

**NO
SHORTAGE.**

Sold at all Garages, at
the pre-war price
of **4/-** each.

THE IDEAL PLUG FOR LIGHT CARS.



HARRODS

Car-buying at Harrods is car-buying made easy. London's most comprehensive stock of all makes in spacious showrooms where the closest scrutiny of every car and every accessory can be made at leisure and in comfort, and where the disinterested counsel of expert assistance is always at the service of clients.

DEFERRED TERMS are willingly and promptly arranged at Harrods. A quarter down is all that is required, whilst $2\frac{1}{2}$ per cent. is the moderate charge on the balance.

HARRODS LTD.,
Richard Burbidge,
Managing Director. LONDON, S.W.

CAN SUPPLY ANY MAKE OF LIGHT CAR
or CYCLECAR for Cash, in Exchange, or on Easy Terms.

ACTUALLY IN STOCK.

NEW CARS.

10 h.p. ALLDAYS, lighting set and starter ...	£240
6 h.p. BABY PEUGEOT	£183
8 h.p. G.W.K. ...	£194 5s.
8 h.p. CROUCH, Sporting Model ...	£145
11 h.p. SAXON, with mag-neto ...	£150

SECOND-HAND CARS.

8 h.p. G.W.K., 1913 ...	£110
11 h.p. SAXON, 1915 ...	£110
10 h.p. CALTHORPE, 1916, 4-seater ...	£240
8 h.p. HUMBERETTE, 1913, air-cooled ...	£650

Above Cars are offered subject to being unsold in the meantime.

HARRODS

LTD.

Milady of the Car—

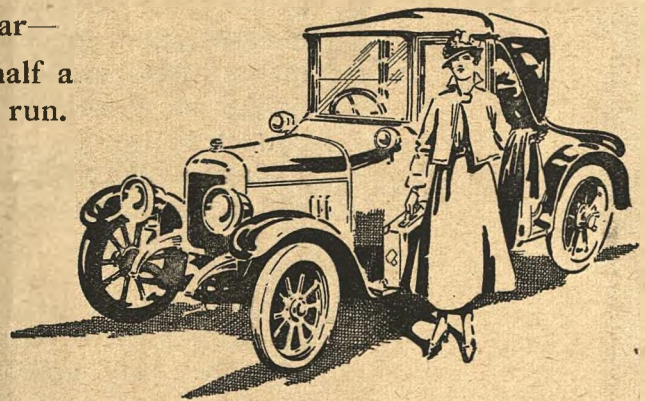
THE lady motorist has unquestionably come to stay. Cars of the reliability of the CALTHORPE Minor has made motoring as easily within her reach as cycling or golf. The CALTHORPE she can start herself—drive herself—and maintain herself, for the Calthorpe is so light on tyres and petrol that running costs are brought to a minimum. Certainly no car has done more towards popularising motoring with the gentler sex than the wonderful little Calthorpe.

As **fast** as a big car—

As **reliable** as a big car

Climbs like a big car—

But costs less than half a big car to buy and to run.



Calthorpe *Minor* 10 h.p.

Prices from 185 Gns.

CATALOGUE and nearest Agent's address from the CALTHORPE Motor Co. (1912), Ltd., Bordesley Green, BIRMINGHAM.

**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.

A5

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 carburetters 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.

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Row, LONDON, E.C.



Go to the Garage
that bears this Sign



Many Roads,
but only one Tyre—
the

GOOD YEAR

Have you asked yourself why, wherever you go, whether town or country, you see an increasing number of cars fitted with Goodyear All-Weather Tread tyres?

When you know that Goodyear tyres cost more than most other tyres, perhaps you are surprised to see so many London taxis fitted with them.

These taxi tyres are not sold at cut prices, but our business with taxi drivers is growing for just the same reasons that our business with the general motorist is growing.

The Goodyear All-Weather Tread has proved by actual test to give

1. *The best service.*
2. *The greatest mileage—consequently the lowest cost per mile.*
3. *The most efficient skid-resisting grip both on town and country roads.*

Next time you are in a taxi ask the driver why he uses Goodyear Tyres, which in initial cost are dearer than most others.

THE GOODYEAR TYRE & RUBBER CO. (Gt. Britain), LTD.

Central House, Kingsway, London, W.C.

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*Glasgow, Dublin, and Belfast.
Bowmanville, Ontario.*



—126

**TO THE
READER**

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B1



The conquest of Honister Pass.

A.C. light cars have always been noted for their hill-climbing abilities, but their latest performance, the conquest of Honister Pass, puts into the shade anything they or any other light car have done before. The cars were two of the well-known 10 h.p. models, driven by Mr. K. E. Don, a private owner, and M. A. Noble, the A.C. Company's Manager. The Pass has a gradient in parts of 1 in 3, to which, as a measure of difficulty, must be added a surface inches deep in loose stones. Both A.C.'s performed their task without hesitation, in spite of hairbreadth skids on precipitous slopes. The power reserve of the 10 h.p. A.C. engine—which was not built for this class of work—needs no higher testimonial.

AUTO-CARRIERS (1911), LTD.

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(Opposite Bakerloo Tube Station).

Telephone—2150 Hop.

Works—Thames Ditton, Surrey.



B2 **HELP THE MOVEMENT** by letting advertisers know that their advertisements in "The Light Car and Cyclecar" interest you.

In Confidence

'Sphinx' plugs are really very good.



SOLD BY ALL DEALERS OF REPUTE.

Simms' Method of Tyre Restoration

You can repair any cover or tube, even if it is badly worn or cut, and make it as good as the day it left the makers, by means of

SIMMS VULCANISER

which is the simplest and most certain of all tyre repairing devices. Anyone can, even the veriest tyro. Skill is not required. Simms Vulcaniser is automatic, foolproof, and absolutely safe. It can neither injure the tyre nor the user. You will find it a good rule to always carry it in the car locker, for you never know when you will meet with tyre trouble.

Price, ready for instant use
anywhere 24/-

Smaller size for inner tubes
only 15/-

DESCRIPTIVE LIST POST FREE.

Simms Motor Units ^{LTD}

191, Wardour St, Oxford St, London, W

AND ALL DEALERS.

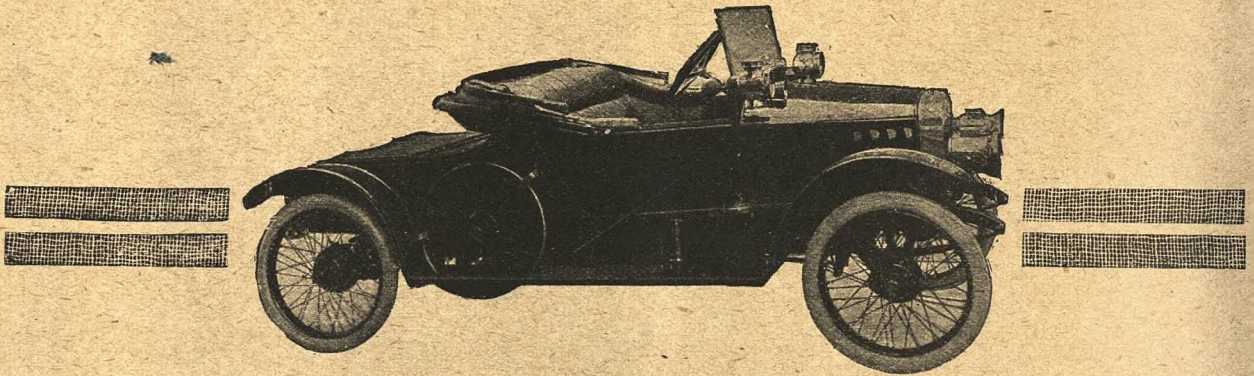


E. I. H.

**TO THE
READER**

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B3



The fascination of friction drive—

Have you ever experienced it ?

If you have never driven a car you will be astonished at the simplicity of the G.W.K., and the ease with which it can be driven; you can, in fact, learn to drive it with confidence in half an hour. If you *have* driven a car, you will probably be even more astonished and certainly more delighted at the ease and silence with which gear changing is made on the G.W.K., for gear changing consists simply of moving a lever either forward or backward; no "timing" is necessary, there is no "double clutching" to be done. And you get an infinite number of gear ratios, which make hill-climbing an easy matter; you have "a gear for every gradient." The G.W.K. friction drive is simplicity itself, and wear is reduced to an absolute minimum—two big advantages over the orthodox gear box. Owners of G.W.K.'s would tell you that they would require a good deal of inducement to return to the ordinary method of transmission. If you have never driven a G.W.K. there's a new and pleasant experience in store for you. Take advantage of it. It is worth noting that while the G.W.K. friction drive is proved by successes in the most important trials, there has not arisen one successful imitation. Write to-day and arrange for a trial run.

The British Built

G·W·K

STANDARD MODEL, 2-cyl. engine, water-cooled, friction drive, variable speeds and reverse, hood, screen, five detachable wheels (four with tyres), lamps, and all tools, etc.

185 GNS.

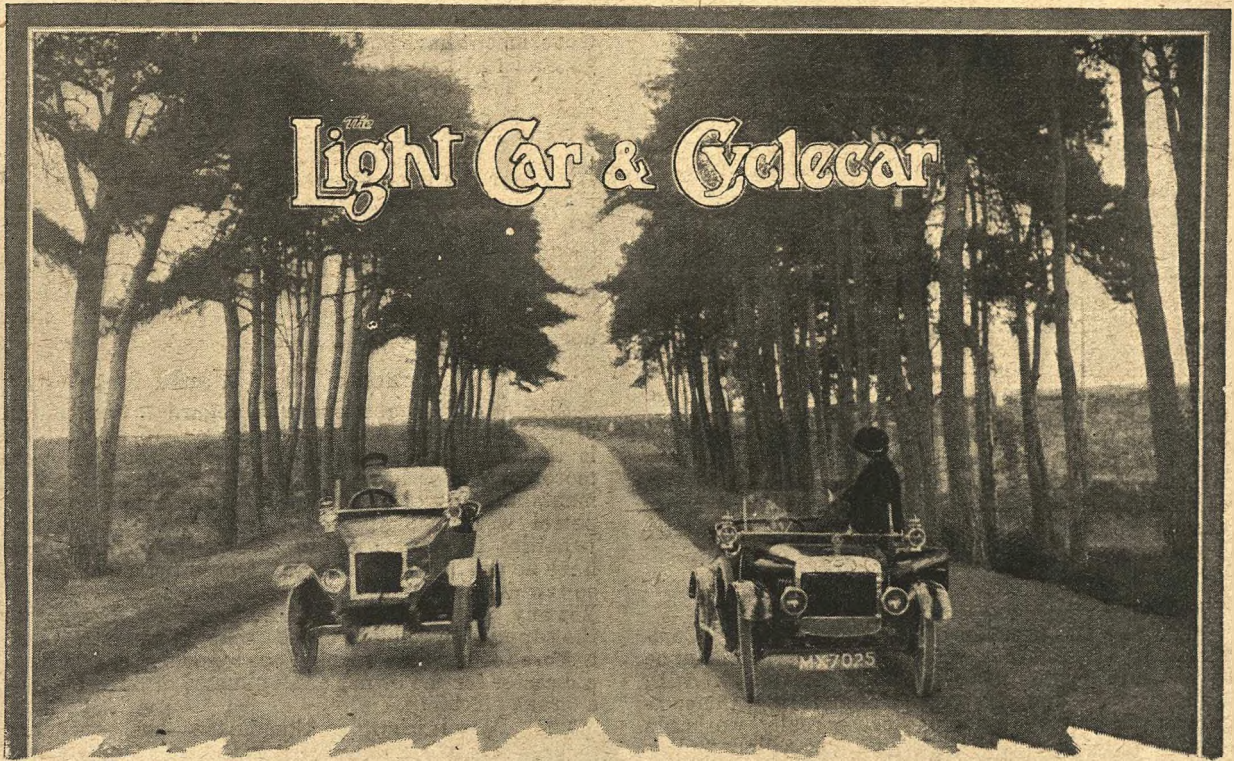


G.W.K. LIMITED,
Cordwalles Works, Maidenhead.

TELEGRAMS "CARS, MAIDENHEAD"
 TELEPHONE 562 MAIDENHEAD

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A PETROL-ELECTRIC LIGHT CAR. (SEE CENTRE PAGES.)



On Hartford Bridge Flats. An officer and his family on a Standard passing a G.W.K.

NOTES, NEWS AND GOSSIP OF THE NEW MOTORING.

Are the new taxes going to be dropped?

We still await the committee stage of the Finance (No. 2) Bill to ascertain this.

If they are dropped, it is generally expected that another 2d. will be put on the price of petrol, making it 3s. per gallon. Well, there is nothing like round figures.

The adjournment of Parliament means further delay in reaching the Committee stage of the Finance (No. 2) Bill. The increased taxes for cars above 16 h.p. become due on 30th June.

The manufacturers are unanimous in condemning the proposals of the London Chamber of Commerce with regard to their after-war tariff proposals. They characterize them as "inadequate."

It is being alleged—absolutely without authority—that motorists are enormously increasing the consumption of petrol by making use of the Daylight Saving scheme.

Still, we do not forget how the "Daily Mail" assured its more gullible readers, in the beginning of the voluntary campaign, that young men in motors were borrowing other people's babies in order to pose as married men. "Pleasure" motoring is another "Daily Mail" myth.

No bank holiday at Whitsun.

Instead, a three-four day holiday at August.

If there is not another shortage of something or other by then!

Anyway, we will forgo Whitsun and look forward to a good long rest—motorless?—in August.

The Petrol Supply Committee is gradually coming to the end of its labours. It will probably bring forth—a mouse.

In buying No. 2 petrol do not pay more than 2s. 9d. per gallon for it. If the dealer insists upon 2s. 10d. report him to the Secretary of the M.T.A.

Those who keep urging that private motoring should cease in war time forget that the motorcar is as much a necessity as the bicycle or a pair of boots.

In France there are no restrictions of motoring, except that monthly police permits have to be obtained as a check upon the use of cars for purposes of espionage.

Witness in a Wigan charge of driving to the common danger: "One of the cars was a small two-seater at the front." And a motor omnibus behind, perhaps. Quite an interesting vehicle!

Beware of tar-spraying operations. A friend of ours recently was literally smothered by the wind-blown tar spray, his car, passengers and himself getting into a nice mess.

THE PETROL SUPPLY COMMITTEE. A Report Expected Next Week.

Unintelligible "Intelligence."

Under the heading of "Pleasure Petrol," whatever that may mean, appears some more intelligent anticipations of the political correspondent of the "Daily Mail" on a subject dear to the heart of that curious journal. We learn that the amount of petrol required by the British Expeditionary Force equals the normal consumption in the United Kingdom in peace time. Who has been giving Cabinet secrets (?) away this time? Then appears the following ungrammatical and utterly unintelligible paragraph:—

"The need of considerable restrictions in the use of petrol for pleasure cars has therefore become very urgent, and it is intended to bring new regulations into force almost immediately—probably next week. The intention is that all Sunday motoring shall be allowed in future except under a special licence, which will not be given for cars used for pleasure."

If our readers can make anything of the last sentence they are cleverer than ourselves. It is also added that there will be little difficulty in defining what is "pleasure" motoring and—most important—the proposals require ratification!

What the Supply Committee Will Do.

Whatever the decision of the Petrol Supply Committee, it is feared that, with such manifest reluctance to consult those in a position to speak with authority regarding the position of motoring, the committee will not be able to draft a really workable scheme regarding the stopping of so-called "pleasure" motoring. Motorists have had a great deal to contend with, and some unfair scheme, such as it is feared may be produced, will lead to retaliation. The

Government have been saved millions of pounds in the generous action of motorists in placing their cars at the disposal of the authorities at their own expense, and this gratuitous work, together with the outings for the wounded, will be stopped if the patience of car-owners is tried too far. The most likely proposal is one for the issue of permits, which will be granted if the applicant is successful in inducing, or influencing, the local controlling committee in his favour. No doubt many permits, under such a scheme, would be issued or refused according to the whim of local committees, the members of which may or may not have national—as distinct from local—grounds for their decision.

A Scheme That Would Not Work.

All sorts of suggestions with regard to the control of petrol supplies continue to be put forward. One is that the ticket system should be adopted, each motorcar owner having to state his normal requirements and petrol consumption, upon which so much petrol would be allowed. In spite of pains and penalties for supplying inaccurate information, we have no doubt what the result would be, especially as so few drivers really know what their consumption is. Yet any other system would be hopeless. Supposing the supply allowed was based on horse-power? What a disaster for the man with an economical car, and what a disaster for the owner of an old car, or one below an average efficiency.

The Petrol Supply Committee has executive powers, and any proposals it makes can be enforced. If an announcement is made next week the time will be very opportune, for protests in Parliament cannot be heard until the House sits again.

THE WHITSUN HOLIDAYS (?)

Whether the average man who works at high brain pressure should take a little relaxation on Whit Monday is largely a matter for his personal conscience plus the actual necessity. If it is undesirable that munition workers should take a holiday it is almost equally inappropriate for those who toil with their grey matter. We say "almost" advisedly, because, whereas with the manual worker it is a case of taking several days, the busy professional man will only be able to snatch the Monday for a holiday jaunt, and, not being governed by any trade union, will work extra hard both before and after to make up the time lost. If the munition workers would do that, a general Bank Holiday next Monday would be no loss to the country, but a gain. In this connection we

heard a comment the other day from a well-known director of Government work. It was to the effect that in one part of the paper he read Lloyd George's exhortation on Whitsun holidays, and in another that a cabinet minister had gone away motoring for a week-end to recuperate. The two cases are not on a par, as it is manifestly obvious that it is more important for those who direct labour, the brain workers, to keep in the pink of condition than for those upon whom no responsibility rests.

The Government have decided, however, that next Monday shall not be a Bank Holiday, but that Monday and Tuesday, 7th and 8th August, shall be so regarded. For those who find "summer" holidays impossible this will make a useful break.

The Front Cover Picture.

In our last issue we illustrated the attack on Honister Pass, from the Buttermere side, that was made with remarkable success by two 10 h.p. A.-C.s. Another pass climbed, during the week-end, was Hard Knott, some more exclusive photographs of which appear on another page. On our front cover is depicted the ascent of Keskadale, a hill in the Lake District which is very rarely climbed by cars, showing Mr. K. E. Don's 10 h.p. A.-C. making light of the ascent, which, indeed, it did.

The Job We Should All Like.

The "snip" in these times appears to be to get into the R.A.C. section of the Army, whatever it is. We met one owner of an old 60 h.p. Napier the other day, doing 8 m.p.g. and costing a fabulous amount in tyre upkeep. Now the owner has a nice uniform, with

"R.A.C." on the buttons, gets all his petrol and tyres free, a man to assist him, and 12s. 6d. per day into the bargain, which, as he says, just about keeps him in drinks. But the best part of all: motoring in war time and not a word of protest! Of course, he is over military age.

A Discourse on Hats.

"The Times," which seems to have become a censorian of things motoring, and even enters into the modes of the masses, describes the contents of some of the cars en route to Gatwick races. Thus we read of five men of the artisan class wearing cloth caps; a lady with a huge feathered hat; three men in straw hats, and, oh greatest horror! "a man in a bowler hat and a young woman." We agree that people who wear bowler hats when motoring should be suppressed, if that is the purpose of the article.

MORE SENSATIONAL MOUNTAINEERING—ASCENT of HARD KNOTT.



Last week we illustrated exclusively the successful ascent of Honister Pass by two 10 h.p. A.-C.s. This week we illustrate the ascent of Hard Knott Pass, accomplished the same week end. (1) Nearing the top. (2) Restarting after a photograph. (3) The last bit. (4) Speeding up round a corner. (5) The top of Hard Knott. (6 and 7) Some corners.

A CENSUS OF MOTOR TRAFFIC. Misleading Results.

ON Sunday, 28th May, "The Times," as reported in its issue of 29th May, carried out a census of motor traffic on 14 main roads radiating from London. The observations were made for a period of one hour, between 10.30 a.m. and 11.30 a.m., during which 633 motorcycles and 807 cars were counted. The total was made up by 147 motor omnibuses and chars-a-bancs. The observers were stationed 10 to 20 miles out of town.

"The Times" says: "A careful estimate of the cars and their passengers justifies the statement that the greater part of the traffic was attributable to pleasure seeking." There was barely a score among the passengers of wounded soldiers, but as the count was taken in the morning this is not at all surprising, as the hospitals do not release their patients as a rule until after they have had their lunch. It is observed that the majority of the passengers were of the middle classes, fully two-thirds being women. In many cases the cars were driven by women.

It will be noticed that the average number of motor vehicles, other than commercial vehicles, seen on the roads at each point of observation was 100. As such districts as Beckenham, Sidcup, Aldershot, Ealing, Slough, Epsom, and Redhill were selected, it is quite likely that many of the cars apparently used for pleasure purposes were being used on business journeys. Many owners who are on some form or other of munition work are using their cars for visiting outlying factories on Sundays as well as on Saturdays. Ladies doing voluntary work, nursing, etc., frequently use cars for getting to the hospitals. Of those who

were actually on pleasure bent, no doubt many were indulging in reasonable recreation. It is admitted that many of these cars contained officers, but because a car contains a mixed load of officers and civilians—such as will be seen in the neighbourhood of munition factories on every day of the week—it is not safe to draw the conclusion that they are joy-riders.

The fact that "The Times" has undertaken a census shows the attitude which the Northcliffe papers are taking up over this matter of motoring. We hope, if their efforts are successful, that the motor industry will remember the papers that brought about any restriction or stopping of motoring, and the great inconvenience and loss that such a step would cause.

A census on these lines is absolutely misleading, unless the occupants of the car are stopped and asked what their business is. Some time ago one of the motor bodies conducted such a test without stopping the drivers, and we took the trouble to ascertain from the Scouts what they were putting down the various cars as. We were not at all surprised when a doctor whose practice was actually in the vicinity was put down as a joy-rider. He was obviously making his round of calls. Three other car drivers passed who were known to us, and these were put down as private motorists on pleasure, although we happened to know that they were simply travelling between their factories, and for a long time past had been working day and night.

A census on such lines as "The Times" purports to give is grossly unfair, misleading and utterly unreliable.

FROM AN EX-SECRETARY OF THE CYCLECAR CLUB. The Life of a Soldier in India.

We have received a characteristic letter from Mr. Frank Thomas—"Tommy" to the initiated—the erstwhile secretary and captain of the Cyclecar Club, who is now in India. He writes: "A soldier's life out here is just the very laziest existence imaginable. Native servants for the vast sum of 4d. per week do everything for one—make beds, clean rooms, boots, equipment, wash up, and run messages. We parade from 6.15 until 8.45, and do the goose step and other military tournament stunts dear to the hearts of all sergeant-majors. I believe I could walk along a chalked line now after the most riotous night out that ever was. We breakfast, and then instruct our sections in the bungalows from 10 till 12. Just fancy me instructing anybody in anything! After 12 the day is our own, but it is too hot to do anything till 6 at night. I very seldom go out of barracks nowadays. The beer is so thick, so hot, and so watered, and the whisky so expensive, and there is nothing else to do, unless one is an admirer of Charlie Chaplin or Hamlet or other 'movie' attraction. I hate the lot of them.

"The one saving clause in all India is that bananas are 12 a penny and cigars a half-penny each. Bananas are, of course, only sticks of dysentery, and smoking makes one thirsty, but still one must not grumble, must one? The only thing that keeps me from the padded cell is a most decrepit old Triumph motorcycle. It belongs to a major here, and I chauff. it for him. When I took on the job he complained that it was very hard to start, that he had to turn off the petrol every time he stopped, as it ran out of every corner of the carby, and that the engine made a noise. After a most careful examination. I found that the extra-air slide was wide open and the cable rusted

solid to the covering. The needle-valve was bent nearly double and was also stuck wide open. The small-end bush was almost non-existent, and there was a groove in the cylinder wall that would admit a sixpence between the piston and cylinder. Having put most of these right, and at the same time gained a reputation as a super-tuner, I simply go over to his garage with a supercilious air, open the tool roll with a smugness only comparable to that of a stone image of Buddha, and toy with an adjustable tappet, what time three or four admiring natives wait my commands to pump the tyres or clean the crankcase. I then condescend to take the bus out to 'test' it. On my return, a 'house-boy' brings out iced drinks and biscuits, or a large slice of melon, to wash the dust off the back of my neck.

"Another peculiarity of this country is the economic waste of energy by the natives. If you want your boy to fetch your boots from the repairer's, you take a deep breath, and in language as near to that of Billingsgate as your cultured mind can compass, you instruct him to 'Purple-well pump some all-fired blooming energy into his long-forgotten twisted limbs and jolly-well get a blistering move on down to the blessed boot wallah's and get your blue-black perspiring welted boots. One time!' The net result is that he jumps up and down for three or four minutes, says 'Yes, sahib,' and bolts out of the door. He returns with your boots, if at all, in time to present them to your great-grandchild, who promptly disclaims ownership, by the way. I forgot to mention that you are unmarried at the time of sending the boy on your errand."

NOTES, NEWS AND GOSSIP (contd.).

From the 1st June the price of Moseley motor tyres will be reduced, grooved covers by 10 per cent. and tubes by 7½ per cent.

Notes and Queries.

We should be glad if our readers would note that we are unable to answer questions regarding the purchase of cars except by post, and that all inquiries must be accompanied by a stamped addressed envelope for the reply.

Pious Manchester.

It is announced that the posters, "Don't use a motorcar for pleasure," have not been posted up in Manchester because the Economy Committee believe that no cars in that district are being used for such purpose. Another case of "strong representations," and we should like to know why other districts have not been omitted.

A Versatile Genius.

Dr. Low, whose scientific researches have embraced everything from patent egg-boilers to world-destroying inventions, penetrating into such by-ways as the cause of the buzz from a gnat's wings, has broken out in a fresh place. He has devised and partly written a new Revue, which will be on at Cardiff shortly, and later will be seen in London. There is, of course, a motoring scene in it.

A New British-made Petrol.

We are informed that a new British-made petrol will shortly be available, and, in fact, that a first consignment of over 900,000 gallons is now being offered to the members of the M.T.A. and the public. It is claimed that there is no need for any alteration of the carburetter in using this spirit, the distribution of which is in the hands of the Little British Motor Spirit Co., 37, Norfolk Street, Strand, London, W.C. The preliminary Press notice sent out is very vague.

Private Motors and Petrol.

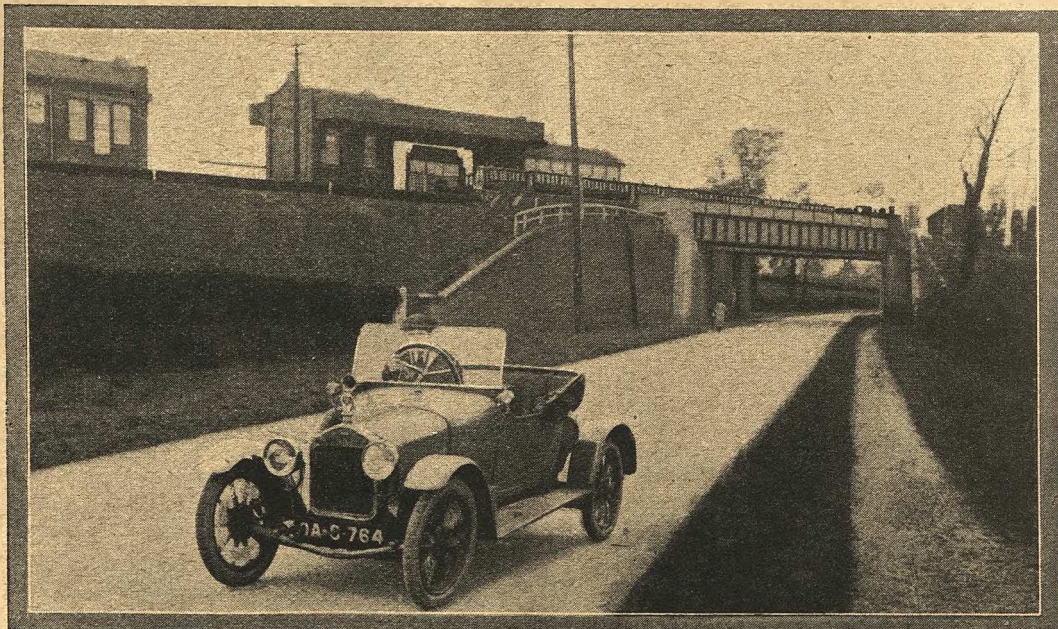
If ever private motoring is stopped, the plight of many business men and those who live a considerable distance from a railway station will be unenviable. Cabinet ministers also will be affected—at least we hope so. If it were stopped, the saving of petrol would be insignificant, probably less than one per cent., for private cars consume only a very small proportion of the supplies.

Outings for the Wounded.

The spasmodic and more or less unorganized outings for the wounded which many motorists are providing could, we think, be brought under Government control with advantage. We suggest that committees should be appointed for each city or place of importance, and that all motorists willing to lend their cars for this service should be put in touch with these committees. The cars available could then be fairly apportioned, the drivers being free to take the wounded men where they liked, and entertain them as they wished. We fancy that, under some sort of general and recognized control, many more motorists would lend their cars for this very commendable purpose.

The Cost of Motoring.

Just how expensive motoring can be compared with the economical form of it provided by the light car is illustrated by an article in "The Motor" last week. The cost for an 18 h.p. car is given as 10.93d. (nearly 11d.) per mile on a basis of 7000 miles, which is a very good average. On a light car the cost would not be more than 3d. per mile. It is true that the wages of a licensed driver are included in "The Motor's" estimate of the cost of motoring, but even leaving out this item the charges are heavy. Thus the petrol consumption of 20 m.p.g. (not all 18 h.p. cars will be as good as this) makes a big charge in the annual expenses, and emphasizes the importance, if economy is to be maintained, of keeping down the engine dimensions in a light car. The tyre bill for the year is given as £30, the depreciation no less than £58, and repairs at £33.



The modern station "bus." Light cars are in considerable use in linking-up the station with outlying country houses. The car is a three-speed Stellite with the latest type of body.

“INADEQUATE.”

Futile Proposals for an After-war Tariff.

A SPECIAL committee of the London Chamber of Commerce which is giving attention to the capturing of enemy trade, has issued a scheme for a tentative tariff, which is designed to stimulate the development of home manufacturers and prevent the dumping of enemy goods into the market after the war.

So far, so good, but the tariff suggested is absolutely inadequate, and that is the opinion of a number of manufacturers with whom we have communicated and whose replies appear below. The following is the tariff suggested:—

Present Allies.—Minimum rates, 10 per cent., 5 per cent., 2½ per cent., and free.

Friendly neutrals (giving United Kingdom most favoured treatment).—General rates, 20 per cent., 10 per cent., 5 per cent., 2½ per cent.

Other neutral countries (those giving preference to other foreign countries).—General rates, 20 per cent., 10 per cent., 5 per cent., 2½ per cent., plus surtax equal to preference given to other countries.

Enemy countries.—Maximum rates, 30 per cent., 15 per cent., 7½ per cent., 5 per cent.

WHAT THE MANUFACTURERS THINK.

Our Views Endorsed.

We entirely endorse your views that the proposed tariff for cars and parts thereof to be levied on friendly neutrals would certainly be totally inadequate, more especially in view of the great disorganization which has taken place in connection with the motor industry.

THE SWIFT MOTOR CO., LTD.,
ROBERT BURNS, General Manager.

50 Per Cent. to 75 Per Cent. Tariff for the U.S.

There is only one item in the suggestions put forth that we agree to, and that is the Allies should pay 2½ per cent. to 10 per cent. With regard to the United States, who have such an enormous population to supply that they are enabled to put gigantic outputs on the market, these people should be penalized to the extent of anything from 50 per cent. to 75 per cent. On no consideration should the Chamber of Commerce allow anything from this country to come in under this, or, at all events, make a duty for all stuff and all parts of motorcars the same as the States put up against this country. What's fair for one is fair for the other.

With regard to enemy countries, absolutely prohibitive duties should be imposed, so that it is impossible for them to come in at all. It is not the time now to talk of 5 per cent. to 30 per cent., but absolute stoppage for years to come.

We agree with you that the proposals are quite inadequate, not only that, but childish and ridiculous, and one would think emanated from some of our wonderful Liberal politicians, or, at all events, have been made by members of the Chamber of Commerce who were dealers with friendly neutrals or enemy countries, and want to make it mighty easy for them. They are certainly not trying to protect the motor industries of this country. We would suggest that the businesses of the members of the Chamber of Commerce who vote on this matter should be scrutinized very carefully to see whether they are importers or manufacturers.

G. W. K., LTD.,
A. G. GRICE, Managing Director.

Equal Tariff Against Neutral Countries.

We do not consider the proposals of the Chamber of Commerce at all adequate. In regard to neutrals we must treat them as they treat us. So long as America imposes a duty of 40 per cent. on motorcars imported from this country we must impose a duty of 40 per cent. on cars imported from America. America is piling up vast capital at our expense, and we cannot afford to give her any advantage. So long as America was our debtor we could afford to receive payment in goods. Now that we are debtors to America we cannot afford to increase our debt by purchases. As regards the Allies, we shall be undoubtedly influenced to some extent by sentiment. Moreover, at the close of the war they will owe us large sums which can only be repaid in goods. Nevertheless, I think that concessions should be made on the principle of “do ut des.” We should not treat even Allies as we treat our own Empire. As regards our enemies, I can only echo the words of Mr. Hughes, “We must look after our own interests and not provide a market for German goods.” Germany has made out of her trade with this country the millions which enable her to continue this war.

It seems to be a common belief that when the war is over

the English manufacturer will have the time of his life, and that he can afford to be generous to his rivals. There is no reason for this belief. Our trade will have to be recovered before it is extended, and the recovery will not be easy.

Malvern. MORGAN MOTOR CO., LTD.

Period Exclusion of Enemy Goods.

We do not consider the proposals of the Chamber of Commerce would be satisfactory. Our idea would be to charge duty to all neutrals at least equal to the amount of duty which they charge to us on similar importations. If we pay 45 per cent. duty in order to import British made cars into America, America should pay 45 per cent. in order to import American productions into this country. As regards enemy countries, we consider that for a certain period of years their productions should be excluded from the market. With regard to our Allies, no special preference would be necessary if the above arrangement of a reciprocal duty was adopted.

ALLDAYS AND ONIONS PNEUMATIC ENGINEERING CO., LTD.

America 40 Per Cent., France 12½ Per Cent.

In reply to your letter of the 27th ult., the fiscal proposals of the Chamber of Commerce so far as cars are concerned appear to us inadequate, and the margin allowed, namely 2½ per cent. to 20 per cent., is altogether out of proportion.

A satisfactory way to overcome the difficulty and to prevent friction between the various nations would be to impose the same duty on foreign cars as the various countries impose in this country on cars of British manufacture. In this way American cars would have to pay 40 per cent. and French cars 12½ per cent., and so on.

CALTHORPE MOTOR CO. (1912), LTD.,
L. ANTWEILER, Director.

High Tariff for 10 Years for Enemy Countries.

My own personal opinion of the Chamber of Commerce fiscal proposals is this. With regard to enemy countries, I would strongly advocate the imposition of as high a tariff as is possible (excepting in cases where we are absolutely unable to supply a particular class of goods), and this tariff to remain in force for at least 10 years from the date of the signing of peace.

ERNEST J. MITCHELL,
(THE PALMER TYRE, LTD.).

Continue the Present 33⅓ Per Cent.

We are in receipt of your letter of the 27th ult. in regard to the Chamber of Commerce fiscal proposals, and would say that we hardly think the suggested taxes on imports are high enough. We should like to see the present rate of 33⅓ per cent. continued after the war.

AUTO-CARRIERS (1911), LTD.,
A. NOBLE, Sales Manager.

Motor Trade Inquiry.

Answering your letter dated 27th ult., we have to inform you that the Board of Trade has issued through the Society of Motor Manufacturers and Traders a questionnaire, which covers most of the ground you ask our opinion upon, and to which we have replied fully.

SINGER AND CO., LTD.,
E. H. MANSELL, Sales Manager.

Topics of the Day

Private Motoring and Petrol.

WE understand that the Petrol Supply Committee of the Board of Trade feels that drastic action must be taken with regard to the use of motor spirit. Up to the moment of going to press, however, the Committee is unable to say in which direction that action should be taken. Meanwhile, for nearly six months, those who use motor vehicles from necessity, as many thousands do, and those connected with the motor industry, have been in a state of the greatest uncertainty, with frequent threats to stop the use of motors, but no attempt to put such threats into force or even to place the real facts before the public. Hundreds of pounds are spent on ridiculous posters, newspapers urge the Government to stop motoring, and are continually stirring up class prejudice against motorists, bitter controversies arise over taxes that are still under consideration, while the real cause of the shortage of petrol, if there is an actual one, and not one artificially created, goes on undetected. If economy must be employed in the use of petrol, it is no use endeavouring to achieve that end by stopping, or curtailing, private motoring. The amount saved would be comparatively trifling, for the vast bulk of the petrol supply is devoted to purposes over which the private motorist has no control, such as munition manufacture, military and naval uses, passenger vehicle traffic and commercial transport.

The Real Sources of Waste.

LAST week "The Motor" stated that the competition between motorbuses and tram services wasted no less than 60,000 gallons of petrol a week. We have since been assured that this is underestimating the facts, and that the quantity is nearer 100,000 gallons! Compare with this what might be saved by stopping private motoring! At each big race meeting, encouraged by the Government, more unnecessary pleasure motoring is seen, with a greater use of petrol, than takes place in the whole country amongst other so-called pleasure motorists, but even then the quantity of petrol used is trifling compared with that absorbed by the motorbuses, with their continually extending country routes, and the extensive char-à-bancs services. Nor is this the only source of waste. Greater still must be the quantity of petrol used for military and naval purposes absolutely unnecessarily. We hear too often to disbelieve the statements, instance after instance, of how petrol is distributed without regard to necessity; used for washing clothes or lorries; and generally poured away like so much waste water. Is it for this that motoring in this country has been placed under a cloud, and the small amount of recreative motoring that continues condemned?

Proper Government Control Needed.

IT is a scandalous state of things, and the pity of it is that there appears to be no member of Parliament prepared to make a stand against the slur that is cast upon ordinary motorists and the stupidity of the suggestions that seek to place upon them the follies of far greater users of petrol. No one who has to pay nearly 3s. per gallon for fuel can afford to waste it: it is only those for whom the contract price is trifling in comparison, or who have not to pay for it at all, who can continue to use it indiscriminately. If the Government were to take over the distribution of petrol and to control its use in such a way that waste was impossible, there would be plenty for everybody. There is another matter that should be inquired into, and that is what happens to the millions of gallons of benzole from which toluol is extracted for the well-known high-explosive T.N.T. It must be quite usable as a motor spirit. No doubt it is also usable, and perhaps is being used, for industrial purposes, but is there none available as motor spirit?

The Light Car and Cyclecar

Largest Circulation.
Mondays—1d.

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TEMPLE PRESS LIMITED

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NATIONAL PAPER ECONOMY.

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.

Letters.

EDITORIAL Communications should be addressed to The Editor, "The Light Car and Cyclecar," 7, 9, 11, 13 and 15, Rosebery Avenue, London, E.C.

Letters relating to ADVERTISEMENT and PUBLISHING Departments should be addressed to The Manager. SUBSCRIPTIONS should be forwarded to the Manager (rate, 6s. 6d. per annum, or pro rata).

ADVERTISEMENT COPY, Blocks, &c., should come to hand by Tuesday morning to ensure careful attention and allow time to submit proofs, except when an earlier time is specified.

Return of MSS., &c.

Drawings, Photographs and MSS. not suitable for publication will be returned if sufficient stamps are enclosed for this purpose, but the Publishers cannot hold themselves responsible for the safe keeping or return of contributions.

Subscriptions.

"The Light Car and Cyclecar" will be mailed regularly at the following rates:—

	12 ms.	6 ms.	3 ms.
United Kingdom	6s. 6d.	3s. 3d.	1s. 8d.
Canada	8s. 8d.	4s. 4d.	2s. 2d.
Elsewhere... ..	10s. 0d.	5s. 0d.	2s. 6d.

LIGHTING-UP TIMES.

London ...	9.43	Edinburgh... ..	10.24
Newcastle ...	10.11	Liverpool	10.7
Birmingham	9.56	Bristol... ..	9.53
Dublin	10.25		

For Dublin the local mean time (one hour after sunset) is given. If Greenwich time is required 20 minutes must be added.

MOON.—Moon rises 2.47 p.m. next Saturday, sets 1.17 a.m. Full moon 15th June.

THE CALL OF THE ROAD.

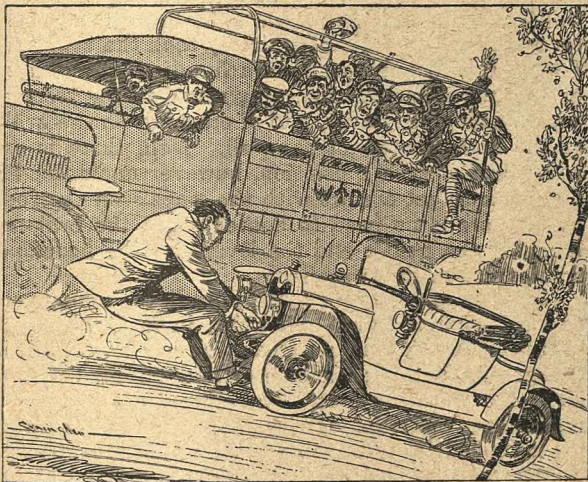


THE JOTTINGS OF JOHN GILPIN, JNR.

A GREATLY OVERRATED PASTIME.

WITH the thermometer soaring giddily in the hundred-and-twenties, either Fahrenheit or Centigrade, whichever is worse, there was only one thing to do. Accordingly, I rang up all my close-fisted friends and the unprincipled manufacturers who lock up their cars all the week-end, and gave them a little advice on the depreciation of motor vehicles that rest idle in the garage; while all those who selfishly indulge in pleasure motoring I warned of the scarcity of petrol. It was not any good: they had all struck the same idea as I had, to wit, that iced drinks in town come more expensive than petrol in the country, and they wanted to economize too. One had not a clutch; another was two tyres short; yet another had melted his big-ends.

But it fell about that, just before the thermometer burst, a decrepit-looking crock, a bit baggy in the wheels and asthmatical in the engine, but the best that I could commandeer, came my way on the promise of putting it into good order. With this horror I was left alone in a diminutive back yard by the discreet owner, to get it out as best I might, and



"There is humour in everything—for those who can see it."

to get it running if I could. Having first discovered that the latter operation was possible—the prospect of finding that it was not, after having extricated the crock from its garage (by courtesy), was unnerving—I proceeded to divest myself of all superfluous clothing. Later, I discovered that a string of beads is really quite a warm garment on a real summer afternoon, but that is by the way.

Half-an-hour's toil got it out somehow, and there only remained to don my garments and to turn the starting handle. Here my nerve must have completely left me, for the correct process was to get it started first and dress afterwards. Presently I lost other things besides my nerve—a stone in weight, some flesh and blood, for instance. I gained, however, the insignia of the black hand, thanks to a recent attempt on the part of the owner to repaint the dumb-

irons, on one of which I leant for support as I swung the handle. Finally it started.

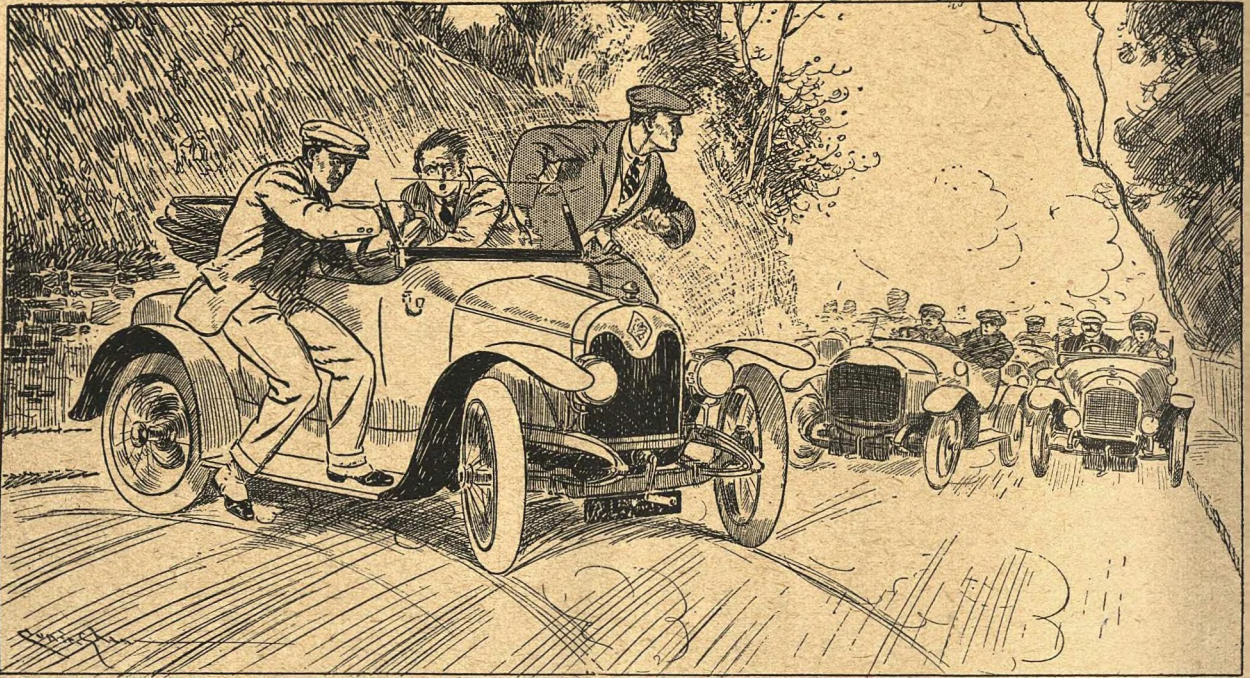
The groans that proceeded from the clutch and the boiler riveting that struck in from the engine made a horn unnecessary, which was just as well, as the one provided would not work; but that and an ominous creaking from the back axle decided that a call at the nearest garage was advisable. We poured in oil and pushed in grease indiscriminately, and presently were bumping along out of town at top speed—some



"The awful truth was forced upon my attention."

15 m.p.h. I use the term bumping in its mildest sense; the pedantic who have ridden in an unsprung brick cart would have found more appropriate terms. And so to the first hill. In went second, none too happily; a few more yards and in went first, by the aid of which, being somewhere about 50 to 1, we were able to crawl at a speed that threatened to prolong the journey to nightfall, accompanied by the most awful din of breaking iron, a column of steam and a dense cloud of smoke that rose from underneath the floorboards and reached as high as the tops of the trees, until I was not sure whether I had borrowed a Turkish bath, a steam-roller, or a model on a small scale of Dante's Inferno. Half-way up we stopped.

I viciously flooded the carburetter and caught hold of the starting handle, and off flew the hand brake, the car starting down the hill at a speed much greater than it had come up, dragging me with it, until a wrench at a wheel turned it into the gutter. I have only to mention that this operation was witnessed by a party of pessimists on Government lorries apparently bound for the Front, to indicate that there is humour in everything for those who can see it. When at length I desisted from efforts at starting, the spectators had moved on, and I began an investigation. The carburetter was found in such a position that it could only be extricated with a pair of asbestos hands, or by one used to the climate of the nether regions. Eventually—time 3.30 p.m. and no lunch as



"I have a wild impression of rushing round to the steering wheel, swinging it over, and of crashing on the brake as the back wings met the wall." (N.B.—The sketches are grossly libellous.—"J. G. Jnr.")

yet—it was pulled to bits, nothing found wrong, and a start from the first turn of the handle obtained.

We proceeded gaily for another 100 yards, until an ominous backfiring decided me to pull to the off and shady side for a further investigation. It was while making an inspection and endeavouring to keep my feet from setting permanently in the half-molten tar, that a big car came roaring up the hill, scattering stones (fond delusion) with its steel-studded tyres, some of which I felt struck me in a sensitive spot. It was about an hour later, ten miles further on, when stopping for much-needed refreshment, that the awful truth was forced upon my attention, for as I rose from my seat the cushion accompanied me. Here, I might mention, that, being summer time, I had put on a nice light summer suit. This will explain, to those who saw the strange spectacle, why a steaming human being wrestled for two hours with carburetter, valve and plugs in a thick winter's coat.

The return journey was equally exciting. The off-side back tyre provided the principal scene in this act. Having by this time grown reckless, I sat down in the tar and completed the disaster of Act 1. Further on, the process was repeated when the spare wheel gave out.

Next day, nothing particularly untoward happened until a gentle rise produced the demon in the carburetter, and we came to a standstill. One of the passengers—there were two—was rather glad, I think. He had got into the bad habit of clipping his words short, and was apparently holding in his false teeth; but it was not my fault if the springs—if there were any—had rusted up solid.

As I clambered out on the off side I gave minute instructions as to holding the hand brake on if the car endeavoured to run back. I turned the handle and the car began gently to jerk backwards. "Brake!" I commanded, and gave another lug at

the handle. At that moment both passengers sprang to life. One feverishly dabbed a foot on the accelerator pedal and the other resolutely took the brake off. I have a wild impression of a hundred cars coming up the hill at speed, of rushing round to the steering wheel, swinging it over, and of crashing on the brake as the back wings met the wall. Well, there is one advantage of such a position, however undignified it may look to get a start with the wheels on the foot-path, there is no need to bother about the brake or labelling the pedals and the levers for the benefit of amateur motoring passengers.

It was at this moment that the radiator commenced to shed copious tears, and wept, in fact, with such profusion that it was not clear whether I was still in charge of a bathing machine or had assumed possession of a watering cart. Thereafter, driving was a nightmare, punctuated with stops for tyre repairs, for a choked jet (always on hills, which meant using the spare can as a sprag, and, having arrived at the top, going back for it), and lengthy rests for the engine to cool down, when gallons of water had to be poured into the watering can department.

I forgot to mention at the beginning that I was driving with obscured numbers. Accordingly, it was only in the nature of things that I got stopped in a ten-mile limit at the only moment all day that the engine showed signs of accelerating to double that speed. But it was not furious driving that was the trouble, but these numbers.

"I see you are driving a car with dirty numbers, sir," said the sergeant politely.

"It's a municipal watering cart, sergeant, not a car," I replied, "can't help the mud splashing up. Doing a public service, y' know."

"Why, yer boiler's bust," he said, and with a glance at my dirty raiment, bid me good day. And that was the only bright interlude of the week-end.

I am now firmly convinced that the pastime of pleasure motoring is greatly over-estimated.

JOHN GILPIN, JNR.

OILERS AND GREASERS.

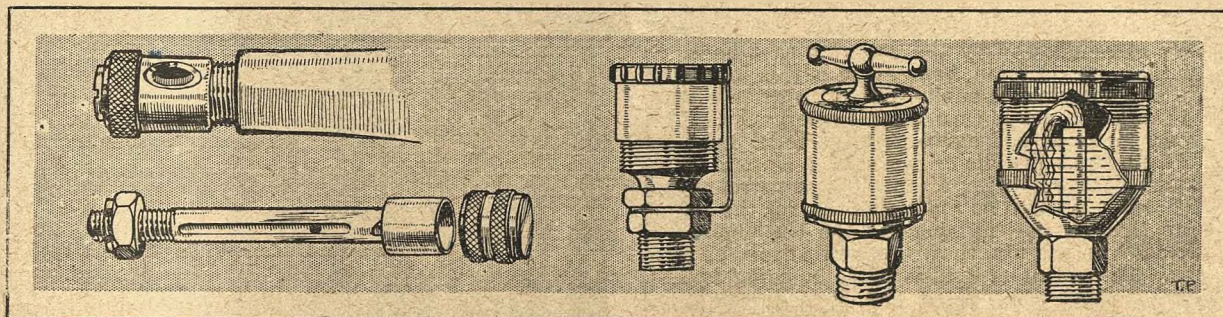
Some of their Faults and Misuse.

THE lubrication of the springs and spring shackles, universal and ball joints on a light car is a minor detail in light car maintenance that receives least attention. When a light car is totally dismantled it is generally found that a great many working parts have been starved of lubrication, amongst them principally the shackle pins of the springs, and yet in order that a car may run freely and ride on the road comfortably every moving part must be kept lubricated. The failure of the general lubrication of a car can be attributed to numerous causes: the types of greasers or oilers used; the manner and place in which the oiler is fitted, the lubricant which is used, and the attention which these minor parts receive from the owner. Often the owner of a light car, having struggled for some time with badly designed oilers, finally returns to the force-feed oil-can in place of grease and greasers.

In some older models it will be found that oilers are more numerous than greasers, sometimes placed

The thread of the cap is also apt to give a certain leakage if the exit hole of the greaser is small, and only by using various grades of grease can this be overcome. Usually the passages and exit from the shackle bolts are far too small, and there is a tendency for the grease to clog them. Only on a few shackle bolts and universal joint pins is the exit for the grease to the bearing in the form of a slot. The usual action is for the friction to heat up the bolt and melt the grease inside, which then performs its allotted task, but in the time which it takes to heat the bolt a great deal of wear may take place.

One of the best types of greaser is in the form of a small grease gun. The cap contains a screw-down flange in the centre and when screwed right home, preventing any leakage, pressure is exerted by the central plunger. However, these are usually made in such diminutive sizes that only a small quantity of grease can be put in at a time, and constant attention is required.



Types of oilers and greasers in common use. From left to right here are: an oil cup; a spring shackle-bolt greaser; an ordinary type of screw-down greaser; the plunger, or grease gun type; a wick-feed oiler.

with the opening in a position that makes it impossible to replenish the oil. This is a case simply of careless fitting, but if the oiler is turned round it either strips off the thread or else the oiler is left loose and falls off with the vibration of the car. The only satisfactory method by which these oilers can be induced to remain in their proper position is by screwing them on to a thin lead washer, if they have a flange above the thread, or filing the end off the thread until the screw turns to the right position.

Most modern light cars, however, are fitted with a simple form of greaser consisting of a hollow bolt and a cap. The lower end of the bolt is cut with a thread to screw into the chassis, while the upper part of the bolt carries a thread for a screw cap. The two threads are divided by a nut and a flange. The action of the greaser is simple. When the cap and the hollow portion of the bolt are filled with grease, the cap is screwed on to the bolt and the further it screws on the lower it becomes on the bolt, exerting a great pressure on the grease owing to the slow thread, so that screwing the cap finger tight is using 10 lb. or 12 lb. pressure on the grease. The first fault to find with this simple form of greaser is the fit of the threads. The brass thread of the greaser is not usually a good fit in the steel or iron thread on to which it screws. When any opposition is offered to the grease in its proper channels it will find its way along the thread and leak from under the flange. It is almost impossible to pull the greaser down tight on the flange for fear of stripping the thread, but a lead washer will sometimes provide a cure.

There seems to be no reason why the old oilers such as were fitted to gas engines should not be used. In these a wick drew off oil from a reservoir and fed it to the bearing in a constant drip feed. The system on a stationary part is very economical, and there is nothing which can go wrong if ordinary attention is paid to it.

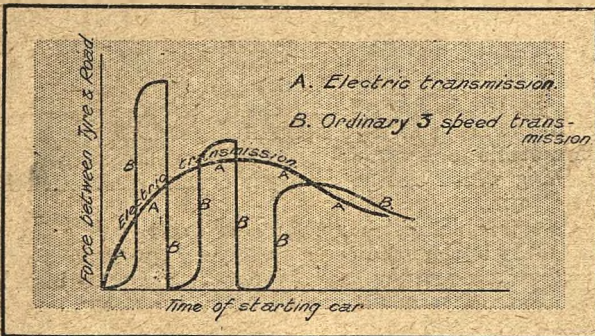
One trouble which nearly every owner of a light car finds is that the caps fly off any greaser on any part that is rotating at high speed, such as a clutch member. The usual means of securing them is a piece of flexible wire held round the base of the greaser and fitting in notches in the cap. This becomes bent in use and loses its spring, so that it does not fit tightly on the cap. The most satisfactory means of getting over this trouble is to tighten the cap down on to a spring washer, although this wastes a certain amount of grease and takes a longer time than merely screwing the cap one turn down.

The grease which is used is the greatest solution to most of the problems. Some people use thick, hard yellow grease for all the greasers, but this is sold more for large bearings such as hub caps and packing back axle bearings to prevent oil leakage than for general lubrication. The best method of selecting grease is to try the different grades through the smallest greasers and choose that which suits the particular part best. It is not necessarily a hard grease which gives the best results as a lubricant; a good quality thin grease such as Prices, or Sternol, is usually effective and economical.

HAVING regard to the interesting discussion that has recently taken place in the pages of this journal upon the steam light car, it is somewhat surprising that so little has been said as to the application of electricity to the light car. The application of electricity to the petrol engine began with a small accumulator for ignition purposes; this was both expensive to maintain and inefficient. It was always going wrong and giving trouble, and the introduction of the high-tension magneto marked a great step forward in the progress of the motor industry. Curious as it may seem, the next step will probably be the disappearance of the magneto, for the much larger and more efficient storage battery now included with a dynamo lighting set should render a return to coil ignition quite convenient and safe.

It is generally agreed that the future light car should have an engine starter as a standard fitment, and there seems no doubt that the electric type worked from the lighting battery will be found the most suitable. Moreover, the battery is now utilized to work the horn, and there seems no reason why it should not be called upon, in addition, to supply energy for such purposes as heating the induction pipe or even pumping the tyres. Thus more and more work will devolve upon the accumulators, necessitating an increase in their capacity until the final stage—electric transmission for driving the car—will be easily and naturally attained. Indeed, this has been clearly foreshadowed by the accounts that have, on more than one occasion, been given in this journal of the use of the electric engine starter to drive the car for a short distance in case of some emergency.

Every motorist will agree that the ideal light car should possess a flexible engine and an electric transmission. With all its improvements, the petrol engine is not and never can be really flexible, for the simple reason that its power depends upon the number of explosions per minute, that is, upon its speed of revolution. The result of this is that, in going up-hill, just when most power is needed, it quickly falls off owing to reduced speed, a change of gear being the only alternative to an ignominious stop!



Curve of comparative starting torque, between electric and ordinary three-speed transmission.

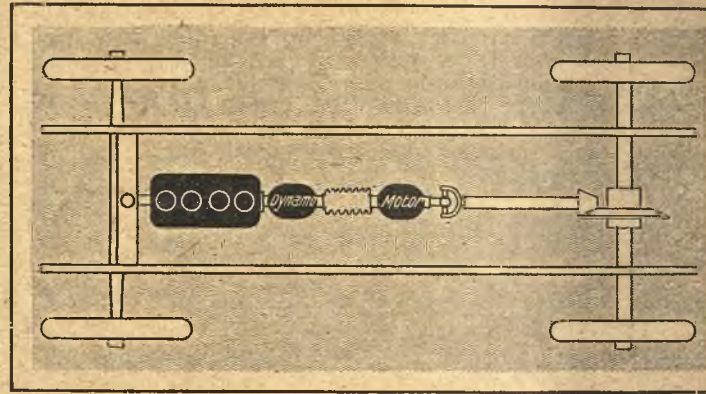
Neither can the present systems of transmission be said to be elastic, for whenever a clutch is employed the power is applied spasmodically. This means that the car is started by a series of jerks, often causing great strain to the machinery and heavy wear on the tyres. Belt drive constitutes the most elastic system at present; but, unfortunately, for good or ill, it is not trusted by the average motorist, and although a smooth clutch and, to a greater degree, a skilled driver may reduce the evil, it cannot altogether disappear. On the other hand, by the use of electricity, power can be applied evenly and continuously, so that even the unskilled driver would be able to start his car without any undue strain on any part. The great advantage, however, of the electric motor is that, in

THE PETROL-ELECTRIC

The Great Possibilities of a Coming for Starting and Lighting is Leading

one form of it at any rate, the "torque" or turning strength, as it may be called, is greatest at low speeds. The behaviour on a hill is thus precisely opposite to that of a petrol engine, the machine pulling its strongest at low speed when the need is greatest. Electric drive therefore seems ideally flexible and elastic, and if it can be also practicable and economical, there can be little question that, ultimately, it will become almost universal.

It may be worth while to consider briefly what has



Electric transmission—Tilling-Stevens type.

already been achieved in order to try and ascertain in what way the application of electric drive to the light car may be expected to develop. Many readers may remember the black and yellow cabs that were to be seen on the London streets in the late 'nineties; they ran quietly, but for their chain drive, but were not a success, and soon disappeared. The reason of their failure was undoubtedly the lead-sulphuric acid accumulators, which were heavy, costly and very easily damaged. Since then accumulators have been very much improved, especially with the introduction of the Edison nickel-iron accumulator. This, although more costly than the lead plate type, is much lighter, and, what is most important, is practically indestructible even with irregular charging and discharging.

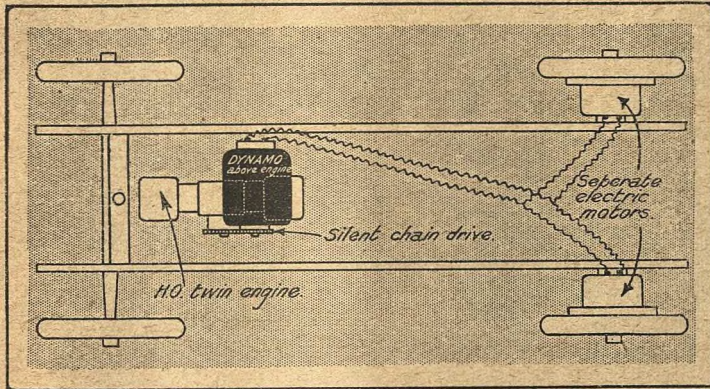
As an example of a modern accumulator-driven vehicle, the Lloyd Electric light van may be cited. Its interesting feature is its separate front-wheel drive, there being a small electric motor geared to each front wheel. The great advantage of this is that electric power is applied directly to the road wheels, thus doing away with clutch, gearbox and differential back axle. Owing to this and to the fact that the car is pulled rather than pushed, there is no tendency to skid, while the front-wheel drive very much reduces the strain on the tyres when turning corners. The controls are simple and very little skill is needed in driving. Its dependence upon a central station for charging the accumulators would render such a vehicle impracticable as a light car in this country at the present time, but this would be remedied by the addition of a petrol engine and dynamo for charging the batteries while running the car, and the method of transmission is the interesting feature for the purposes of this article.

Another suggestive type well worthy of consideration is the Tilling-Stevens petrol-electric vehicle.

TRIC LIGHT CAR.

pe—How the Extension of Electricity
to its Adoption for Driving Power.

This has no battery, no clutch, and no gearbox. It has an ordinary four-cylinder engine in the usual position under the bonnet; the flywheel of this is directly coupled to a dynamo which generates electricity. The current thus obtained is used to drive an electric motor attached to a cardan shaft and differential back axle. In brief, this machine is exactly similar to an ordinary shaft-driven car with gearbox and clutch replaced by their electrical equivalent. Usually an electric car is stopped by switching off the current;



Suggested electric transmission for a light car.

for ordinary driving this is not necessary with the Tilling-Stevens, the dynamo being so arranged as to give no current when the engine is "ticking over"—much in the same way that a magneto will give no spark if rotating slowly. Thus, when the driver wishes to start the car, he simply accelerates the engine; the dynamo, now running at a higher speed, generates current, which causes the motor gradually to start the car. Ordinary hills are mounted by opening the throttle, while down-hill the throttle is all but closed and the machine "free wheels." In order to reverse, all that is necessary is to reverse the current by means of a special switch. One great advantage of this is that, unlike the gearbox reverse on an ordinary car, it may be applied at any time, forming a powerful emergency brake. In case of stiff hills, where more power is needed, a small lever is provided which, by a method familiar to electrical engineers, will modify the dynamo so as to allow the engine to drive it at a higher speed, thus giving out more energy.

Anyone watching the driver of a Tilling-Stevens petrol-electric omnibus will be struck with the ease of control. No knowledge of electricity is needed, and no skill for changing gear. There is a foot brake, a hand brake, an accelerator pedal, and two small hand levers on the steering column, one of these accelerating the reverse and the other modifying the dynamo for heavy gradients. In addition to simplicity in driving, great economy is claimed for this type, partly due to the more natural speed of the engine, much slower than the cardan shaft, thus reducing wear and tear of its moving parts and saving petrol.

With the aid of the foregoing descriptions it should not be difficult to suggest the probable form of the future electric light car, and the following is submitted as a reasonable specification.

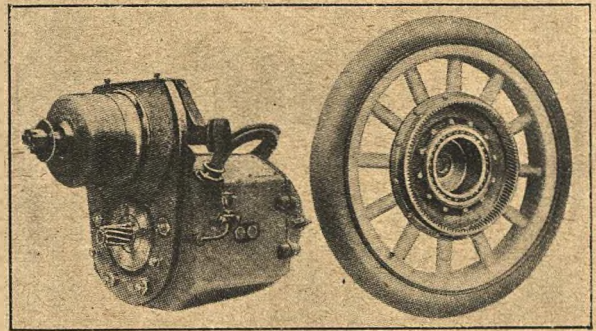
The engine should be a horizontally-opposed twin set with its crankshaft crossways at the front of the

chassis. This excellent form of engine runs smoothly, and is cheaper both to make and to maintain than a four-cylinder, while its position, with cylinders lengthways, avoids the usual difficulty in arranging width enough when used for ordinary shaft drive. The dynamo should be driven by silent chain, and should be similar in type to the Tilling-Stevens, but with the addition of mechanism by which it could be used to start the engine in the same way as the Scott combined dynamo and engine starter. A small portion of the current generated might be used to keep charged a storage battery for engine starting, lighting and other odd uses; but the main part of the current should be led to two series-wound motors, one of which would be geared directly to each driving wheel as in the Lloyd Electric.

Either the front or back wheels might drive, but perhaps the latter would be preferable, as it would avoid too much weight in front, and the steering might be lighter, although front-wheel drive is said not to interfere with the steering in the case of the Lloyd Electric. The controls would be of the same simple character as provided in the Tilling-Stevens and described above.

The question may be asked: Is such a vehicle practicable from the point of view of economy? There seems little doubt that it would be at least as cheap to make and cheaper to run than the average light car of to-day. The engine would cost less, and, if ignition were supplied from the battery, the magneto could be dispensed with. Thus there would be three electrical machines—the dynamo and the two driving-wheel motors; much heavier, it is true, but the same in number as is generally found on an ordinary light car giving the same facilities, viz., magneto, lighting dynamo and starting motor. But this increase in weight and cost of manufacture should be more than counterbalanced by the abolition of the gearbox, cardan shaft and differential.

As to economy in running, less petrol would be used with a two-cylinder engine, especially as it could run at a slower rate, while the power absorbed in transmission would be much less than with gearbox, bevel



The Lloyd electric motor and the gear ring of the wheel it drives.

or worm drive and back axle, also no gearbox grease would be needed. Last but not least, the really elastic drive would save a great deal of wear in the tyres.

The chief practical advantage would be the much greater ease in driving. There is no doubt that the chief difficulty in learning to drive an ordinary car is experienced in connection with gear changing. Some unfortunate people never can and never will be able to do this properly, while even a highly-skilled driver finds hilly country much more tiring than an equal distance on the level, where little gearing down is needed. With an electric car as outlined there would be no gear changing requiring special skill, and this could not fail to add considerably to its popularity.

P.G.F.

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ADVENTURES WITH AN A.-C. "PRAM."

Our Artist Takes a Busman's Holiday.



"My own monologue included wild and fruitless speculations as to the reasons for the existence of the man who fitted a large butt-ended tube with no lubricant on the business ends."

THERE are various descriptions applied to A.-C. Sociables by their owners. Some are ecstatic; others, again, are unprintable; but to the elect it is known as the A.-C. Pram.

Now the concern of Auto-Carriers (1911), Ltd., is noted for its philanthropy. Accordingly, I ventured one day to request the loan of a "pram" from the works manager, Mr. Noble, and he cheerfully obliged with the only one available. It is true that it had long ago seen its best days, that its mileage was prodigious, and that a medley of drivers had left it in a condition of an immediate and imperative overhaul; but so long as it would go, I did not mind that. My adventures being over, and the "Pram" being safe and more or less sound in its native garage, I can now appreciate the humour of the happenings of that week-end better than at the time.

In the first hundred yards, after taking charge of the machine, I knew that at any rate I should not be bored—a slight play in the steering tiller guaranteed that, coupled with the fact that the works expert had taken five minutes to start the engine. A mile or two of waltzing along tramlines among Saturday afternoon London traffic further opened my eyes—in fact, made them bulge—to the possibilities of adventures to come. However, the steering peculiarities were soon mastered, and quite a pleasant run landed me home again.

Needless to say, my expectant passengers were ready and even willing to join me, and hastily swallowing a small soda and milk, I again took the helm. I have heard that the A.-C. 5 h.p. engine has the reputation of being the most wonderful single-cylinder air-cooled power unit now designed, and I can quite believe it. The car alone weighs between 5 cwt. and 6 cwt., and with 25 stone up it climbed the hill from Kingston Vale towards Kingston on top

gear, which is fairly high, probably about 5 to 1. The only other thing of note that day was a merry little waltz as we dodged the Kingston trams, and eventually the beast was put away to spend the night in company with a 90 Merc.

This probably had a bad effect on her morals, for next morning she refused to leave the garage for 20 minutes or so, and it was only after exhausting her repertoire of tunes by means of the starting handle that she condescended to depart.

We were bound for the seaside, and were making quite good time when, just beyond Leatherhead, we commenced rolling from side to side of the road, to the disgust of some cyclists, who evidently thought we did not like pacing them. I was quite certain the steering gear had given way, and pulled up, to find the back tyre flat.

My worst fears were realized. I remembered seeing a jack, pump, and spare inner tube put in the locker just before I left the works, and also remembered the cold feeling the sight of them gave me. Of course an ordinary puncture is nothing to make a fuss about, it is merely a very unpleasant but necessary evil, but the cover fitted was a steel and rubber-studded one, which looked as though it could smile at broken bottles and horse-shoe nails, and I diagnosed a butt-ended tube in trouble. Half-an-hour's wrestling with the cover, with three large levers to help me, and I had the doubtful pleasure of saying "I told you so" to my passenger, who had been out of range while I was working. The removal of the back tyre of an A.-C. Sociable is an interesting process at any time, but when it has to be done on a main road and one's cargo consist of a wife and a very small son of an exceptionally inquiring disposition it becomes quite interesting in its varied aspects!

Until now the sun had been very shy, but as I

ADVENTURES WITH AN A.-C. PRAM (contd.).

started work it came out very boldly, and I shed garment after garment to the very limits of decency. The road around me was a sight to bring joy to the eye of every cyclist, and I should think a record number passed me during the hour and a half I spent on



"The near side fence yielded gently."

the spot. After the first ten minutes or so I was quite disappointed if one passed without remarking to his companion "One of the pleasures of motoring!" or witty words to the same effect.

The varied items surrounding me consisted of the engine cover, or perhaps I should say bonnet, which must be removed in order to take off the mudguard, which also lay there. Then there was the jack, a new one, the colour scheme of which had evidently been designed so that it could be easily found—in the dark, if necessary, for the body of it was pillar-box red, and the handle a pale and beautifully-varnished yellow; there were three tyre levers, new and nickel-plated, and a new bright-red box of Patchquick, besides various tools and a pump, not to speak of fancy festooning of clothing on the car.

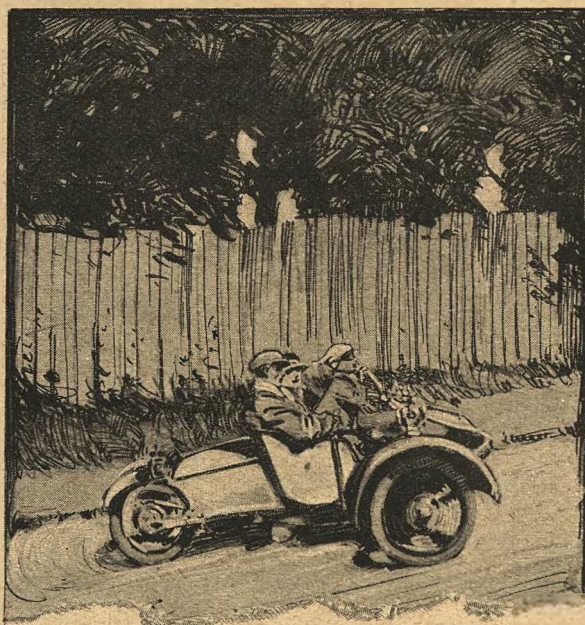
It was not very long before I found that the road had been liberally tarred a week or two before, and that if I stood in the same place for half a minute my feet were more willing to leave my shoes than my shoes were to leave the ground. Unknown to me, my small son made this interesting discovery at the same time, and evidently thought more of it than I did; his howls as his mother removed him from the danger zone making a cheerful chorus to my own monologue, which included wild and fruitless speculations as to the reasons for the existence of the man who fitted a large butt-ended tube with no lubricant on the business ends. I need hardly say that the spare supplied was an endless one, and, not being fearfully keen on removing the back wheel, I decided to try a repair. I stuck a Patchquick over the hole in the male end of the tube, and, after giving it 10 minutes to set, smeared both ends with engine oil and replaced tube and tyre. After pumping up—which metaphorically put the tin hat on my physical condition—and after putting everything away, I looked round for my passengers. Oblivious to such mundane things as motors, husbands and fathers, they were picking

flowers about three fields away. So I sat down to wait for their return to earth. This took a long while, for although they glanced over vaguely in my direction once, they either thought I was in the depths of despair, and therefore better alone, or they did not see me at all.

When they did arrive I found that, weakened by work and the gentle simmering in the sun, my efforts at starting the engine were very feeble, until, breathless and practically reduced to a state of gibbering idiocy, I swung the handle round about a dozen times, with a fresh word for each revolution, and the engine started. Of course, we went straight home—one does not take risks with patched butt-ends—and, of course, the repair held up.

Within half a mile of home we had a little example of the lady-driven car, which reminded my better half of insurance policies and the duties of husbands. We came up to a dangerous corner, which is a stopping-place for motorbuses, very slowly, and hooting loudly, when round came a Rolls-Royce doing about 35, and driven by a very supercilious female, who looked at us as though we were pleasure motoring! I may add that this corner is very appropriately named Hogger's Corner. The near side fence yielded gently, and the lady had just room to get by.

I have been promised another week-end with the A.-C., and in spite of my little troubles I am looking forward to renewing our acquaintance (with the fervent prayer that the mechanic who fits butt-ended tubes without lubricant on the ends will have transferred his usefulness to a military sphere). The machine is very comfortable and well sprung, and the engine a marvel of reliability, never showing any signs of overheating, plugging along up and down hill without a suggestion of a knock. The control is very simple, and a lady who had never driven a



"Plugging along up and down hill without a suggestion of a knock."

motorear of any kind previously—though she occasionally drives a motorcycle—managed to drive the A.-C. without any trouble. E.H.T.

[It is only fair to the manufacturers to add that the A.-C. was taken away at a moment's notice, and it was pointed out to the artist that it had been used for months by works messengers without attention. —Ed.]

A NEW AUTOMATIC LIGHTING DYNAMO.

A NEW dynamo has been introduced for light car use for which simplicity and reliability are claimed and which avoids cut-in and excess current regulator troubles, and, in some respects, new constructive methods are adopted. The Tredelect Engineering Co., Ltd., 11, Linden Arcade, Chiswick, London, W., are responsible for this new dynamo. The price is very low, the complete dynamo set, together with five lamps, switchboard, etc., being priced at only £13 13s. The output is 50 watts at 6 volts.

So far as the dynamo itself is concerned the armature is of the ordinary type, with the exception that



The charging indicator, which is fitted to the dash.

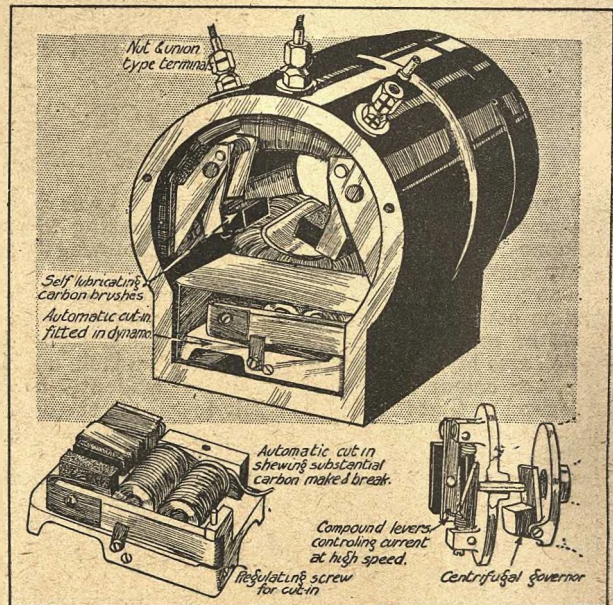
no solder or screws are used in its construction. The ends of the wires are spread out T-shape under the segments of the commutator and are thus unaffected by centrifugal force or heat. Although the machine is only designed to give 50 watts, it has been run at an output of 250 watts for eight hours. We inspected the machine upon which this test was carried out, and although the coils had been overheated it was in good working condition. Another constructional feature is that the commutator is made of special material which automatically recesses itself, assisting perfect commutation.

A special feature is the cut-in, which is entirely regulated by the amount of current generated. It is well known that if a dynamo is left in constant connection with the accumulators, when the voltage from the dynamo falls below the voltage of the accumulators, the current flows from them into the dynamo, and so some form of automatic switch is necessary to prevent this. The ideal type of cut-in is one which will cut in or out when the dynamo shows 0 amperes on the indicator, and this has been attained in the Tredelect cut-in. The cut-in is constructed with two simple electro-magnets, attracting an armature when a sufficient current flows to make them magnetic. One end of the armature is swivelled and carries an adjustable spring to hold it away from the coils. The other end carries a vertical carbon block which is brought into contact with two other horizontal carbon blocks making contact between them. When the dynamo is running the whole current passes through one of the coils, causing it to attract the armature and make a contact with the carbon blocks. By means of the spring adjustment the exact moment when the current is cut in can be

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regulated at zero amperes. Most dynamo cut-ins can be regulated to do this, but it is not always at zero amperes at which they cut out, and, consequently, the cut-in is set about 2 or 3 amperes, because once the armature has been attracted it takes far less current for the magnets to hold it. In this case the cut-out is entirely automatic. If the engine stops the spring takes the armature off, as no current is passing through the coils. If, however, the speed of the engine is decreased only so much as to cause the voltage of the dynamo to be less than that of the accumulators, the current flows back and must pass through the coils. This neutralizes the flow of current from the dynamo, and the armature is no longer attracted until the current from the dynamo again overcomes that from the accumulators. It will be seen that in traffic and at slow engine speed a great amount of charging time is saved.

The regulator for the excess current developed at high engine speeds is even simpler. It takes the form of a centrifugal governor. The regulator itself is constructed of three carbon blocks, two being connected together by the third held in position across them by a spring. As an alternative to passing



Sectional view of the dynamo, brush carrier, cut-in and excess current regulator.

through the third carbon block the current can pass through a resistance from one block to another. A plunger acting through a simple form of compound lever can raise the block from across the other, and it is operated by the extended arm of a swivelled weight, which is forced outwards by centrifugal force. Thus, at high engine speeds, the current passes through a resistance and is maintained nearly constant.

Carbon blocks are used throughout the construction for contact surfaces in place of platinum and other material, as it has been found that a greater surface of contact can be obtained, thus reducing heat and abolishing sparking. In fact, after one of these cut-ins had been used a year the carbon blocks were indistinguishable from new ones.

THE USE AND ABUSE OF THE LATHE.

A New Explanatory Series of the Greatest Assistance to the Amateur Mechanic.

I.—SOME INTRODUCTORY REMARKS ON LATHES.

THE lathe, as the average lightcarist usually sees it—in the general repair shop of the garage—gets grossly abused. A lathe should be treated with as much consideration as a maiden aunt from whom one has expectations, and is then rather more certain to do what is required than the aunt is. The garage lathe is comparable only to the public pencil of the post office. No draughtsman could use such a pencil, and no turner could use such a lathe. However, like the public pencil the garage lathe is enormously useful for the rough work it gets, and is sometimes sufficiently in order for a good mechanic to turn out decent work with it. It is mentioned here, not with any idea of depreciating its value from the repair-shop point of view, but merely to drive home into the amateur's mind that if his lathe is to do good work it must be better kept, better cared for, and far more carefully used.

As an introduction to lathe work, the beginner should cultivate the acquaintance of a skilled professional metal turner, and take some lessons in first principles. Failing this, he must have recourse to books, of which there are many. There is a short chapter in "The Motorist's Workshop" that may be of use.

An ancient fallacy, soon exploded when one gets into the society of professional turners, is that because anything has been "done on the lathe" it is consequently "dead true," "absolutely accurate," etc. It absolutely never happens like that. The work is as round as the mandrel of the lathe head-stock itself, of which it is a copy; in long pieces and

chuck work the parallelism of the piece can be ensured only by taking what seem to the uninitiated extravagant precautions. To the turner in metal, metal is always a soft and springy substance, always liable to warp or distort, and always trying its best to thwart him in his desire for true and accurate work. The beginner, therefore, should from the first

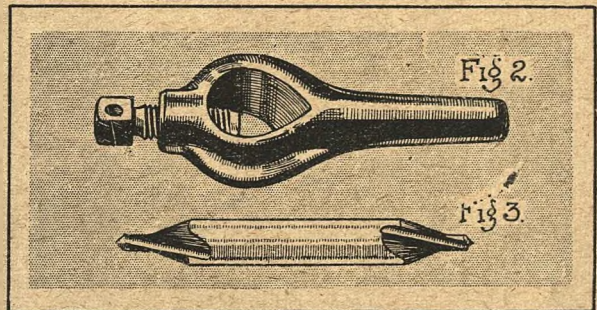


Fig. 2.—A lathe carrier. Fig. 3.—A Slocomb centring drill.

accustom himself to the idea that none of his work will ever be accurate, but only an approximation to accuracy within certain limits, and those limits depend on his lathe and the care and skill with which he uses it. It is true that almost anyone can rough down a piece within a 32nd in. or 64th in., but to finish work to fine dimensions needs long practice and experience.

Except in the roughest of work, where there is no desire to do better, first principles are of prime importance. They are frequently unknown to the average motor mechanic, who has "picked up" a little knowledge by watching others, who acquired their insight in the same way, and bad habits and ignorance of lathe principles stick to him through life like a stutter or a poor relation. These brief introductory statements may show the amateur that his lathe will not do turning all by itself. Each individual lathe wants knowing, too, just like a car, before first-class work is possible.

A beginner should first learn the care of the lathe itself. Its slides and screw motions should be kept clean and oiled and the mandrel lubricated freely when working. Tools should never be laid on the lathe bed. As regards the choice of a lathe, one with 5 in. centres is an all-round useful size, but, if of good quality, costs £50 or £60. For the amateur there is nothing better than the 3½ in. Drummond, which also is designed with an eye to motor repair requirements. The writer has had one of these lathes in use for the last three years, and has found it in many respects more convenient than the lathes for general engineering work of 5 in. centres and upwards of the engineering laboratory where he received his training.

Whenever possible, work should be turned in centres. The centres are conical pivots fitting in tapered holes, one in the revolving spindle of the lathe—generally called the mandrel—the other in the tailstock, otherwise known as the back centre or loose poppet: the latter term because it can be slid along the bed to accommodate work of different lengths. The taper holes and the centres must be wiped clean and have a drop of oil before the latter are inserted.

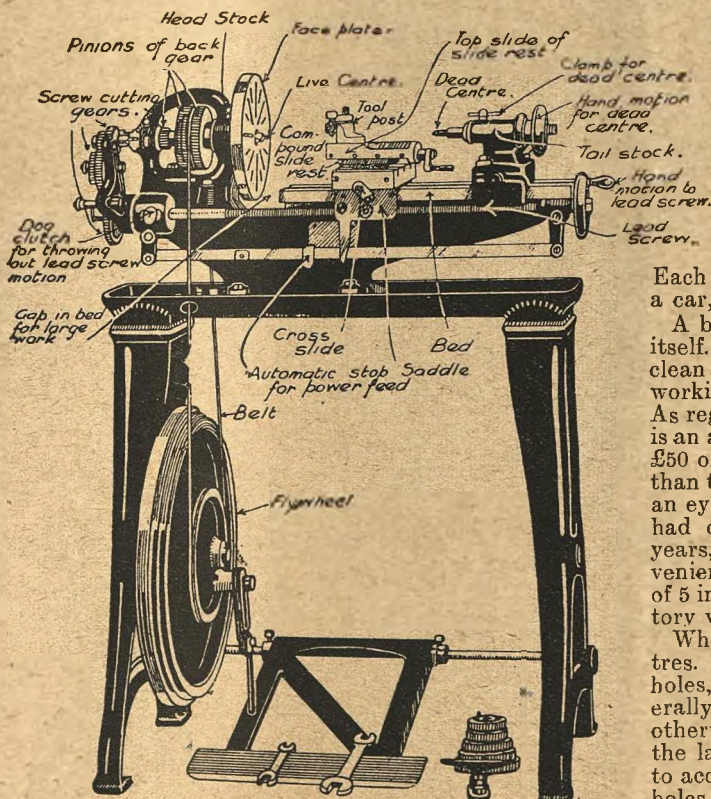


Fig. 1.—The working parts of a 3½ in. Drummond lathe.

USE AND ABUSE OF THE LATHE (contd.).

Conical holes of the same taper as the lathe centres are bored in the ends of the piece to be turned, and it is hung in the centres so that it swings freely. It is rotated by a carrier (Fig. 2) clamped on it by means of its set-screw, the tail of the carrier being driven round by a bolt projecting from the face-plate. Turning between centres has a practical advantage for many jobs, because the piece can be taken out of the lathe to try it in some part, and when replaced in the centres will run true enough for all but the very finest work. Work that is held in a chuck cannot be replaced to run true enough, even for ordinary work, without spending a great deal of time and trouble at the second chucking.

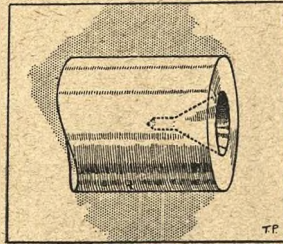


Fig. 4.—Piece centred for turning.

In every case when turning between centres the tapered holes in the ends of the work should have a small hole drilled in the bottom, so that the actual point of the centre gets no pressure. This small hole also acts as a reservoir for oil. A convenient tool, which does the tapering and the small centre hole at the same time, is the Slocomb combination centring drill shown in the sketch (Fig. 3). The next sketch (Fig. 4) shows the end of a piece when the Slocomb has done its work.

Work which from its nature cannot be turned in centres is fixed to the face plate by bolts or held in

a chuck. The chucks and face plates are screwed on the nose of the mandrel, where a thread is provided for the purpose. The chuck is a familiar object on the repair shop lathe, and no description is needed. The self-centring variety is self-centring in name only, after a little wear, but this is of no account when all the work can be done at one chucking, as is frequently the case. The self-centring chuck affords a ready means of gripping work approximately centrally. The chuck with independent jaws—especially when there are four jaws—is an almost indispensable adjunct to the three-jaw, self-centring chuck. The four-jaw independent offers opportunities for chucking rectangular and irregularly-shaped pieces that, without its aid, would prove tough problems for the face plate.

It happens fairly frequently that parts have to be turned outside concentric with the bore: a bush, for example. In some cases this may be done in the chuck, a piece of stuff being used that is an inch or two longer than required, this extra length serving to chuck it by. But the preferable method is to bore right through in the chuck, the piece being about $\frac{1}{2}$ in. longer than wanted, and then to remove it and tap it on a mandrel in centres, and turn the outside and face up the ends. The mandrel is any piece of rod, centred and turned in centres down to a tapping fit in the bush. The mandrel may be 1 ft. or 18 ins. long, and turned in steps of different diameters for different sizes of work. It is often necessary to make such mandrels for various special jobs, and, after a few years of turning, they accumulate in such numbers that one can almost always find one among one's stock that very nearly fits any fresh job that comes along.

(To be continued.)

THE FASHIONABLE MATT FINISH And Serviceable Car Painting for the Amateur.

TO be in fashion now a car should have a dark matt finish: the glory of varnish and the gleam of brass that were joys a year ago, shout "luxury-motoring" to-day, and luxury motoring, as all motorists know, is as much of a chimera as the war-babies that were so gravely expected. However, there can be no question of the durability and serviceableness of a matt finish in a dull colour, and it is one easily obtained by an amateur coach painter, whereas the mirror-like surface of the past was almost impossible without a dust-free drying room.

Plain paint gives quite a nice effect, but it must be mixed by a practical oilman or friendly coach painter; the household "ready-mixed" paints sold in gaily decorated tins are of little good, and since the presence or absence of brush marks depends upon using the paint of the right consistency, a little oil should be bought separately to thin it as required to suit the temperature, the worker, and the brush.

Matt surface enamels give no difficulty with brush marks, as they flow readily, and can be put on in fairly heavy coats. Like enamels of the glossy kind, they should be applied with flat, soft brushes, and laid on evenly, working the enamel about every way first of all, and then "stroking down" with light strokes in one direction. Two coats are usually sufficient, and there is not the same need for careful rubbing down between the coats as there is with work to be varnished. All chips and cracks should be filled before the first coat, a little enamel being rubbed into them before putting in the stopping, which may be ordinary putty, but is better if coach painters' stopping, of white lead and gold size. This can be had of the coach painter. These stopped places must, of course, be rubbed down with pumice powder

and a bit of cork, but not until the stopping is thoroughly hard, which will be in about 24 hours with the coach painters' stopping and three to five days with putty.

For colours, almost any dirty-looking brownish-grey will serve, and a way of getting the particular dinginess one fancies is to buy the paint or enamel white, and bring it to a good grey with vegetable black. The coach painter or oilman will do this, and the depth of grey attained will be the ground work of the ultimate muddiness. To this grey a yellow ochre or brown umber can be added to taste—as the cooks put condiments in soups, and in some cases a dash of red is a great improvement. Naturally, the more colours mixed, the more indefinite the tone becomes, but it should always be remembered that these mixed colours and the greys look several shades lighter on the car than they do in the paint pot. When the first coat is seen to be too light a further addition of the vegetable black will adjust matters satisfactorily in the large majority of cases.

All brasswork or plating should be covered where possible; such fittings as frames of screens and radiators, for example, and where the lighting is electric the lamps as well. Polished metal parts should be roughed over with glasspaper or coarse emery cloth before applying the paint, as it is then less liable to chip off. It is little good attempting to enamel oil or acetylene lamps, but they can be sent away to be japanned. Home japanning does not answer very well on account of dust-specks, that show very badly on curved surfaces, such as lamps, from every point of view. Almost the same may be said of the endeavour to achieve a grey body and black wings.

M.G.

Dunlop: Given up motoring? Just for the time being, eh?

Clubman: Yes! Couldn't fight myself, you know, so gave the car to the Red Cross people. Don't suppose she'll be much good by the time they've finished with her!

Dunlop: I'm afraid that's very true. What are you doing about another car?


Clubman: I'm tenth man on a waiting list for cars for delivery after the war and, by the way, I specified Dunlop tyres.

Dunlop: That's good—for us both!

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 Founders of the Pneumatic Tyre Industry,
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We are buyers of Modern Light Cars of good makes at top prices for cash.

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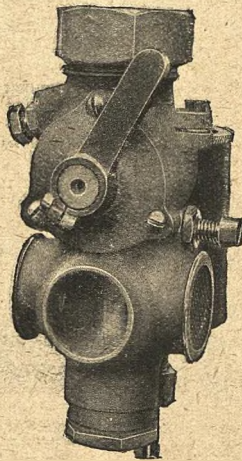
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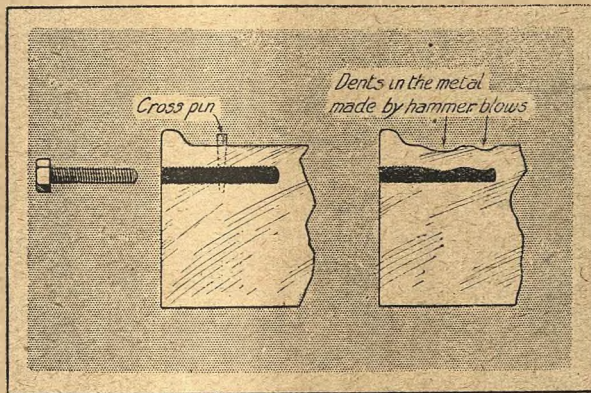
AMATEUR MECHANICS.

For the owner-driver who likes to potter about in the garage on dull days, turning his attention to constructing little improvements for his car, and who does not want to be at a loss for a means of getting home in the event of a breakdown.

Contributions to these Columns Invited.

Stripped Threads in Soft Metal.

IT is a mistake to use bolts in soft metal, such as aluminium, if they are subjected to much stress or vibration, for the threads in material of this character have only a very slight holding power, and any undue strain, or carelessness in tightening up the bolts, may strip the thread. If this should happen at home or near a garage the hole should be drilled out slightly larger and tapped, and a correspondingly larger bolt or stud can then be used. If the calamity should happen on the road and the hole is in, say, a boss, where the hole is not very far from the exterior, it is often possible to make the stud hold by reducing the size of the hole by hammering the external metal with a hammer. A soft metal will give somewhat under this treatment, and when the hole has been reduced slightly the stud can be trusted to cut a rough thread sufficiently strong to see one a short distance. If the construction is such that the parts



If a bolt should strip in soft metal, repairs can be effected as shown.

can be readily got at, a more workmanlike job would be to cross-peg the stud, i.e., drill a hole right through the boss and the stud and then drive in a peg of the same diameter as the hole. This makes an exceedingly sound job and can be thoroughly relied upon.

C.W.

Why Change Down Early?

Although the doctrine of the early change down has been preached to light car owners for several years, it is still not practised as much as it should be, probably because the driver fails to realize its really vital importance. No one is unaware that any engine labouring and pounding away distressfully on a hill is suffering. Quite apart from this strain on the engine, there are other factors which well merit consideration. On the lower gear, as the engine is running faster, the fan and the water pump also will be driven at a higher speed, which will tend to a cooler-running engine. Again, much smaller fuel charges will be required with the lighter load, and this also will tend towards a reduction of the likelihood of overheating. If drivers would only learn to change down at the first signs of engine flagging, we should hear far less of the bogey of water boiling when hill-climbing. Of course, it needs a bit of practice to change gear neatly and silently, when travelling at 20 miles an hour, but the skill is well worth acquiring.

W.F.

Consumption of Metal Filament Bulbs.

Certain people gifted with a mathematical turn of mind, but lacking electrical knowledge, are apt to fall into error when indulging in mathematics applied to metal-filament lamps. The very accuracy of their conclusions may lead them to speculate on possible errors in their calculations, whilst their lamps grow dimmer and dimmer as the journey lengthens. If the source of supply is not by a dynamo carried in the car, a wide margin of safety should be left, i.e., if the batteries are in good order and giving their full capacity a fair number of ampere-hours will be available at the end of the journey. The need for caution is greater with what are termed "half-watt" lamps. If anything the "half-watt" lamp, as used on light cars, is somewhat less efficient than the larger lamps used for street and similar illumination. Even with the larger lamp the commercial article usually exceeds the half-watt mark. It is, therefore, necessary to take this into consideration, and if our mathematical friends desire to work out the probable lighting hours of a given combination of which half-watt lamps form a part, it is safer to reckon on a current consumption of three-quarters of a watt per candle-power. I do not mean to infer that all half-watt lamps for car-lighting consume three-quarters of a watt per candle, or that lamp manufacturers are selling an old lamp under a new name, but rather that, pending the consummation of their ideas, manufacturers prefer to provide a stronger lamp in preference to one with a greater efficiency in power, but weaker filament. The half-watt lamp of two candle-power per watt is an accomplished fact, but does not yet appear as an article of commerce for car-lighting.

W.F.A.

The Fit of Floorboards.

Badly-fitting floorboards are obnoxious on various counts. We frequently notice on cars that, unless a certain board is held down by the pressure of the feet, there is a continual tattoo being played. Another type seems to have been designed expressly for the purpose of allowing us to hear as many of the engine noises as possible and to permit a good draught, accompanied by smells, and occasional splashes of oil to pass through. When attempting to correct these faults, the first thing is to see that the loose boards have been made of seasoned timber, for, if they are warped badly, it is scarcely worth while troubling with them, and they are better replaced. A great deal, however, may be done by the judicious use of a wood chisel. The ledges on which they rest should also be carefully trued up, and if they are not sufficiently substantial they should be stiffened. In many cases the boards will be found to have contracted through the heat, and it is then better to use something in the nature of a turnbutton to prevent any movement. The slots for the pedals are sometimes cut with more zeal than discretion, and, in these cases, an improvement can generally be effected by a little scheming in fitting a flap of rubber, which should follow closely the track of pedal, and can be a close fit, as it will "give" quite easily. A thick fibre mat, covering as much of the floor as possible, is an excellent means for palliating all these troubles, and is, moreover, the best vibration damper that could be used.

C.F.

B25

THOUGHTS & 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 Silent Gear-changing Method.

Having read your interesting article on double clutching when changing down, I thought that you might be interested in this method.

Changing down on a hill: Keep the accelerator pedal down the whole time. When the engine revolutions have fallen, slip the clutch out and in again while moving the gear lever to neutral. Almost instantaneously again slip the clutch out and in again while moving the lever from neutral to the next lower-speed slot.

The whole secret of the change is in rapidity of operation, in order that the speed of the layshaft is not unduly increased above that increase of speed required for silent meshing of the pinions.

With practice, this change can be made with perfect silence in less than a second.

B.E.F.

G. D. CANTON, A.S.C., M.T.

The Bird-feed Oiling System.

I have only just seen the letters from your correspondents with regard to the trouble with the bird-feed oiling system on my car, as the issue of THE LIGHT CAR AND CYCLECAR for the 15th May has been delayed in delivery owing to the recent troubles in Ireland. In reply, I would point out that the cap must be airtight, otherwise there would be a flow of oil into the sump when the engine was not working. This is not the case. There is no tap to shut off the supply. When oil is poured into the tank the rod is pulled up to prevent an excess of oil flowing into the sump, the screwing down of the cup presses down the rod and leaves the orifice open at bottom of oil tank. I followed Noel Pluvius' advice—contrary to directions of the makers—and filled up the tank to overflowing and went out enveloped in a cloud of smoke which accompanied me all day. I shall lower the pipes and try what effect this produces. I have tried all sorts of oil without effect.

M.L.

Roscrea.

The Wear of Belts.

Your reply to "W.B." (Weybridge) in last week's issue states that the use of expanding pulleys as a clutch and variable gear will prove thoroughly unsatisfactory, and that such an arrangement will reduce the life of the belts to about 1000 miles.

For the past two years I have been running a Warne cyclecar, which, as you are aware, has a clutch and variable gear upon the above principle and is provided with an arrangement for taking up the slack of the belts. The expanding pulleys form a smooth and most efficient clutch, and do not, as you suggest, put undue wear upon the belts. My mileage to date is 6100, and I am still using one of the original 1½ in. leather belts, which is, to all appearances, good for a much greater mileage. The other belt was, I regret, stolen after about 4500 miles running, and was then in perfect condition.

This satisfactory service I consider is due to frequent dressing of the belts with neatsfoot oil and an occasional application of belt grip.

H. W. PLEDGE.

67, Waddon Road, Croydon.

* * One swallow does not make a summer. Our experience of variable belt pulleys was unsatisfactory. Leather belts, constantly dressed, do last longer, but who wants to mess about with them? The clean, dry rubber belt is the only satisfactory form of belt drive, but it will not last long with variable pulleys. On fixed pulleys of large size it will give 10,000, or even 15,000 miles wear.—Ed.

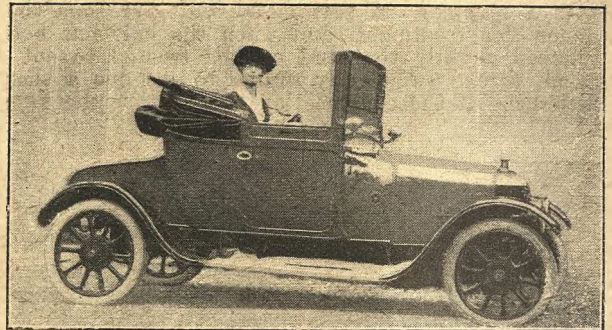
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Taking the Place of a Large Car.

I enclose a photograph of my mother, Mrs. Herbert Johnson, who recently bought a 10 h.p. A.-C. coupe to take the place of her larger car. She finds it most satisfactory, and it is always on the road, chiefly in connection with her auxiliary military hospital and War Work for Women on the Land.

Stockbridge

V.M.



Mrs. Herbert Johnson and her 10 h.p. A.-C. coupe, which has replaced a large car.

THE TAXES.

Philanthropy at Birmingham.

Seeing your reply in "Notes and Queries" to your correspondent "D.H.," with regard to the remission of the taxes, may I point out that I went in for a Humberette, purchased in the middle of the year, and I had the £1 tax which I had paid on a motorcycle allowed me. As an enthusiastic reader of your paper, I felt interested to inform you of the fact. Of course this only applied to Birmingham. Whether it would apply to other cities I could not say.

W. B. RICHARDS.

108, Holly Road, Handsworth, Birmingham.

* * This is another instance of the absolute lack of uniformity in controlling the motorcar taxes.—Ed.

The L.C.C. Method.

In your "Notes and Queries" column of the issue of 22nd May you state that the new tax on motorcars is not due until the Finance (No. 2) Bill has passed through the Committee stage of the House of Commons. The enclosed slip, sent me over a week ago by the London County Council, is dated April, 1916, and states that the new rates of duty are now in force. I am a new owner of a two-seater Swift and wish to be on the safe side, but do not want to pay the new tax until it is legally due. Am I safe in carrying out the instructions in the paragraph quoted above? If so, it seems a bit of sharp practice on the part of the L.C.C. to send me this notice.

(Rev.) EVERARD DIGBY, F.C.

Salisbury.

* * Other complaints were received, and we got into communication with the Treasury, who immediately put a stop to this practice of the L.C.C. The collection of the new tax now is quite unauthorized, and if any reader has paid it we should advise him to write to the Treasury with a view to having the amount remitted. Only the old tax should be paid at present; the balance is not due until the Bill has passed the Committee stage, if the taxes are then adopted, which is very doubtful.—Ed.

HOME-BUILT CYCLECAR OF ORIGINAL DESIGN. Chain-drive and Novel Front Suspension.

I am sending you photos, and sketch drawings of a cyclecar I have just constructed, which may interest some of your readers. Since I took to the bicycle and sidecar I have realized that that arrangement is far from ideal, is very uncomfortable for the driver, and a dreadful thing to drive without a passenger. I therefore made a hobby of designing four-wheel two-seater cyclecars, which I argued should be of the same h.p. and cost as the sidecar rival, giving motorcycle practice as far as possible and comfort for the driver, and I believe the enclosed to be the simplest four-wheeled two-seater cyclecar yet devised.

Setting out to obtain this machine, one is confronted with the problem of eliminating the cross strains to which an ordinary chassis is subjected, to withstand which it has of necessity to be strong and heavy, and I considered that until one has overcome the cross-strain difficulty, a light chassis is out of the question. As a probable solution of the problem, I adopted the central springing arrangement for the front axle and the pivoting of the latter, as shown in the drawings; this allows the front axle and wheels to act quite independently of the chassis frame and the back wheels. The chassis frame merely carries the transmission units. The body floats over the chassis, being hung on two C springs at the rear, and rests forward at one point on shock absorbers just in front of the engine; the body, therefore, is three-point suspended.

Long chain drive has been overcome by placing the engine between the feet of the passenger and driver. The engine is covered over by a movable casing in the body, and is not in the way of either person. The chain centres are 15 ins. from engine to gearbox and 30 ins. from gearbox to back axle. The gearbox is of A.J.S. type, with three speeds and cork clutch, and is operated by lever and quadrant standing up in centre of body. Chain adjustment is provided. The back axle is a light differential, which I was able to procure, though I should like to have incorporated one of my own design, much

lighter and stronger. As the axle was not fitted with internal-expanding brakes, I had to fit ordinary pulley brakes.

Steering is direct rack and pinion, all peculiar movements being allowed for. The steering column passes through a hole in the body front covered with flexible leather, and is slung from the dash, so that the wheel is always in the same relation to the driver. Throttle, magneto, and exhaust levers are fitted on the steering wheel. Wheel brakes and clutch are controlled by pedals, and a lever side brake is fitted. The chassis frame is of tube, though, had it been procurable, channel steel would have made a simpler job.

The inclusive weight is 4½ cwt. with 8 h.p. engine, but as I had to use a lot of heavy stock stuff, this weight is reducible to little over 4 cwt. With a 6 hp. engine the turn-out could be made to 3¾ cwt.

A bonnet extension of the body is added to act as an air collector and funnel, and will be improved in appearance.

I have lodged an application for a patent for a portion of the front of the chassis.

FRANCIS C. L. JOHNSON.

Mawan, Livermead, Torquay, Devon.

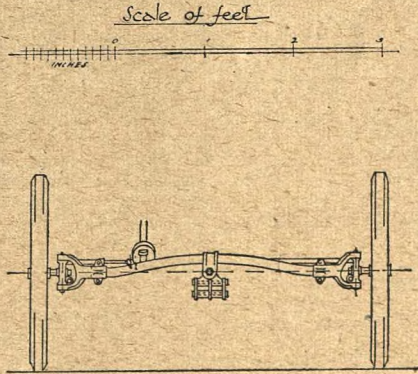
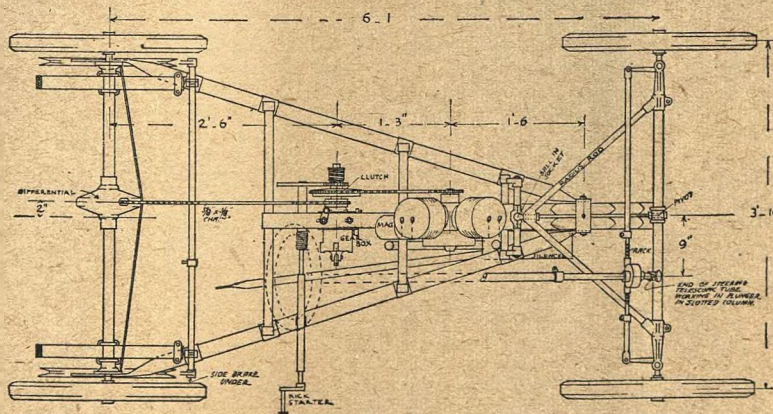
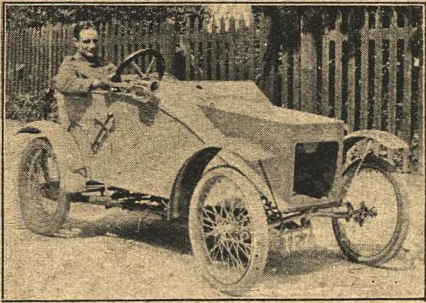
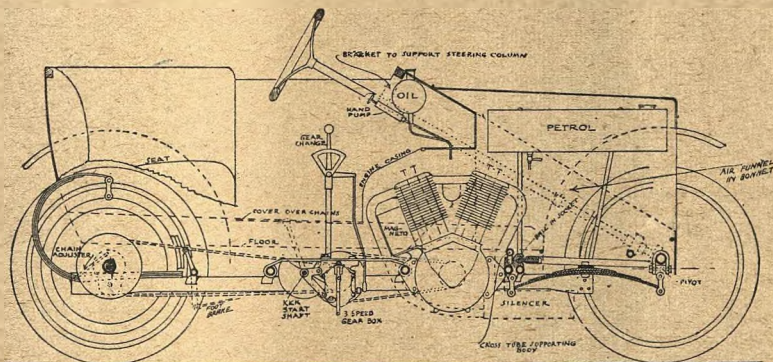
Misled by the Papers.

I am writing to ask your advice with regard to the stoppage of pleasure motoring. I use my car, which is an 8-10 h.p. two-seater, for business and pleasure. My wife is very delicate and the doctor has recommended her to get in the country as much as possible. We do not do above 50 miles a week, and as the car does 40 miles to the gallon I do not see why I should be stopped.

J.H.

Nottingham.

* * We think our correspondent has been misled by statements in the daily papers. Private motoring has not been stopped. We should hope in a case like this it never would be.—Ed.



Working drawing of the novel cyclecar built by Mr. F. C. L. Johnson, showing side elevation and plan views, front axle and (inset) photo of the complete machine with body fitted.

THOUGHTS AND OPINIONS (contd.).

The Disadvantage of the Turbine.

We see that one of your correspondents suggests the use of two steam turbines, one on each half of the back axle, thus doing away with the differential. We think the steam turbine would be useless, for several reasons.

(1) It consumes more steam per horse-power than the reciprocating engine.

(2) As a result, condensing becomes more difficult, or, if no condenser is used, the distance the car will travel on one fill of water is reduced.

(3) More fuel is needed to produce this extra steam.

(4) The starting torque of the turbine is not sufficient to overcome the inertia of the car when standing. The use of a clutch would no doubt remove this difficulty.

(5) There is such a small amount of clearance between the blades of the rotor and the stationary blades of the casing that the turbine requires an expert to execute repairs and to take it down, and any wear in the rotor bearings and thrust must be immediately taken up, or the rotor or casing will be stripped of its blades.

(6) The reverse is awkward to arrange.

If turbines were practicable, the differential could be dispensed with in the way your correspondent suggests. As it is, two separate reciprocating engines could be arranged, one to

each half of the back axle. But this would be more expensive and heavier than one engine and a differential. Why not do away with the differential gear? Its object is to prevent tyre skidding, but does it not cause as much as it prevents? Who has not seen one rear wheel spinning round whilst the other remains still, when the driver is trying to start? Again, when the brake on the cardan shaft is used it often happens that the wheel which has the least grip of the road spins round in the opposite direction to that of the car. And this is caused by the arrangement of gears called the differential, which is expressly fitted to prevent skidding! With a solid back axle at each turn in the road one back wheel would skid slightly, but consider how slight it would be. The wheels are but 4 ft. 6 ins. apart—90 per cent. of the running is in a straight line. The solid axle has much to recommend it. It is much cheaper to make and stronger than the common form with differential and the skidding which is caused by the differential when braking or starting the car would be obviated.

J. B. SANKEY.
F. ROXBURGH.

Letters should come to hand by first post Wednesday at latest to ensure insertion in the following Monday's issue. Letters cannot be forwarded. If the address does not appear in the paper it is an intimation that correspondence is not desired by the writer.

NOTES & QUERIES. ————— SELECTED REPLIES TO THE MOST INTERESTING QUESTIONS.

Replies are sent by post, and a stamped addressed envelope must be enclosed with the inquiry. Questions asked over the telephone, or by personal call, cannot be entertained.

EXCESSIVE CARBON DEPOSIT.—"J.H.J." (London, S.W.) is using a mixture of petrol and 20 per cent. paraffin, and is having trouble with the piston rings of a 1913 air-cooled Humberette carbonizing up in about 300 miles running, and asks for advice on a patent decarbonizer.—REPLY: We have very little faith in the various decarbonizing preparations, and should attribute the cause of the trouble to worn cylinders. We suggest that the cylinders should be reground and fitted with new pistons and rings.

TOO HEAVY A FUEL.—"H.C." (Eaglescliffe) has an air-cooled Humberette, which has suddenly developed engine knock. He thinks this is due to the motor spirit he has lately been using, which, however, answers admirably on a water-cooled Humberette. He writes: "Do you think an extra air inlet would help me, or would reducing still further the size of my jets be of any assistance?"—REPLY: We think you are using a spirit the specific gravity of which is too high for an air-cooled engine. We are afraid you will have to abandon it for petrol, but you might try if it is possible to make use of the crankcase release, using the hot air from it to warm the carburetter, or trying some other method of warming the carburetter and its air supply. An extra air supply might assist carburation, but we think your trouble is really due to improper atomization of a heavy fuel, which probably contains paraffin. To use paraffin successfully on an air-cooled engine, the air supply must be heated, the induction pipe must be kept warm, and the mixture must be broken by means of gauzes inserted in the inlet pipes.

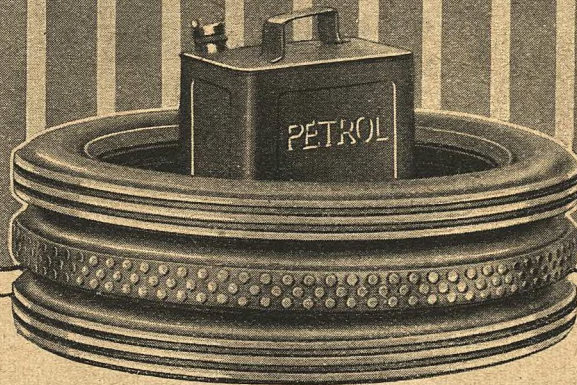
ENGINE TROUBLE.—"H.D.G." (Blackheath) complains that his 7 h.p. Swift boils on big hills. Also after it has run 300 miles a bad ignition knock develops, owing to carbon deposit. He writes: "I have tried a smaller jet without appreciable improvement. Do you think there can be anything apart from lubrication and carburation which would produce this effect?"—REPLY: We believe your trouble is entirely due to carburation; there is every symptom of it—overheating, excessive carbon deposit, etc. Your trouble is quite unusual with this car. You may have undue friction somewhere, or it may be due to bad air leaks, faulty plugs, faulty magneto, some derangement of the cooling or lubrication systems. We would advise experimenting with the present carburetter, adjusting the magneto and endeavouring to discover what you can for yourself. If you are unable to do so, you might get in touch with the Colville Motor Works, 40, Chiswick Common Road, W., if they are still able to take on private work. (Subsequently, we have heard from this correspondent that the trouble proved to be a tight bearing.)

BURNT PLATINUM CONTACTS.—"G.F.H." (Sturminster) owns a 1914 Grand Prix Morgan, which overheats, and the water boils. The engine is tuned exactly as instructed by the makers. The magneto is a U.H., and for some reason the points on the contact breaker burn away very rapidly. (This was enclosed for inspection.) The pistons are a good fit, rings all free from carbon, big and small-ends in good condition, inlet guides were renewed three months ago, new carbon brushes fitted to magneto, etc.—REPLY: The condition of the points on the contact breaker is very unusual. We should advise you to take the magneto to pieces and examine it closely for any irregularity. Apparently the condenser is faulty, the effect of which would be to burn away the platinum points very quickly. This would cause late firing, misfiring, and loss of power. When replacing the contact breaker, it should be adjusted so that the width of the gap is just the thickness of a visiting card and no more. Probably the gap is not sufficient or it might be too great. This magneto being a U.H., we should advise you to write to Messrs. S. Wolf and Co., Ltd., of 115, Southwark Street, S.E., and ask their opinion, as they are the people who handle it in this country. It occurs to us that another cause of your trouble may be faulty valve springs, which want replacing frequently.

ROUTE REPLIES.

CHESTERFIELD TO INGLETON.—"F.W.G." (Chesterfield) wants to know the best route from Chesterfield to Ingleton.—REPLY: You have the choice of two routes to Ingleton. The more direct runs via Sheffield, Huddersfield, Halifax, Keighley, Skipton and Settle, and is about 90 miles. The other is through Worksop, Doncaster, Ferrybridge, Aberford, Harewood, Otley, Ilkley and Skipton. This is some 30 miles longer, but less hilly, and avoids industrial districts.

CANTERBURY TO BOURNEMOUTH.—"I.C.C." (Canterbury) desires to know the best route from Canterbury to Bournemouth via Brighton, missing the main roads if possible.—REPLY: The best way would be through Chilham, Charing, Pluckley, Biddenden, Cranbrook, Hawkhurst, Hurst Green, Burwash, Lewes, Brighton, Shoreham, Worthing, Arundel, Chichester, Havant, Fareham, Southampton and Lyndhurst. Making Brighton an obligatory calling point, you inevitably strike main roads along the coast. If you cut out Brighton, you could keep off important routes for a much greater distance, i.e., going by way of Biddenden, Goudhurst, Tunbridge Wells, E. Grinstead, Crawley, Horsham, Billingshurst, Petworth, Midhurst, Petersfield, W. Meon, Bishop's Waltham and Southampton. This is hardly a fast route, but it is very picturesque.



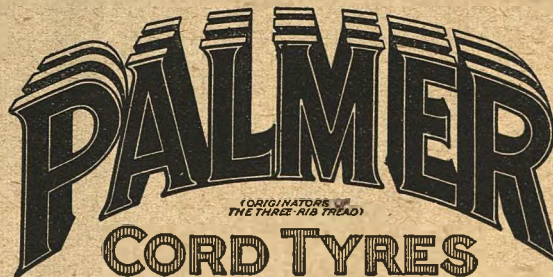
Palmer's, Petrol and Power

ALL Lightcarists keen on increasing efficiency and reducing cost of upkeep—and who is not, these days?—should send for the booklet (with an interesting series of diagrams), entitled "Palmer's, Petrol and Power." It describes efficiency comparisons between a car fitted with ordinary canvas tyres, and the same car fitted with British-made Palmer Cord Tyres. It proves the saving of 10% of Petrol—equivalent to 6d. per tin; it proves

an increase of 7% in speed; and, with gear in neutral, an increased coasting distance of 100%. Not mere theory, but scrupulously checked averages of actual tests and a record of positive facts. Write us for it now.

The following sizes are now available, and can be supplied by return:

	Per Cover.	Endless Tube.
	£ s. d.	s. d.
710 x 85 mm. Ribbed tread only, for 650 x 65 mm. round base rims	2 17 6	14 6
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THE PALMER TYRE, LIMITED,
119, 121, 123, SHAFTESBURY AVENUE, LONDON, W.C.
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St. Mary's St. Nottingham—Greyfriar Gate. Leeds—54, New Briggate. Manchester—263, Deansgate.

TO THE
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you will be working for the cause of the new motoring.



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 SPECIAL TERMS TO THE TRADE.


ROBERT W. COAN
 Best Quality ALUMINIUM CASTINGS
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 PAY YOUR MOTOR
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 Exceptional Terms
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 Write for particulars of Lloyd's Motor
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 Quality and Cheapness Combined. Guaranteed Weatherproof
 Made in Sections to bolt together.
 Illustrated Catalogue post free.
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 Motor Car Houses.
 From £3 - 5 - 6
 Made in sections to bolt together. Made of well-seasoned in. T. & G. and V-jointed Matchboards, and complete with floor and window.
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 Britain's Pre-eminent
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 Every phase of Motoring.
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 The Authority on Motor
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 20th Century Magnets
 American Supplies Co. Ltd.
 162 Gt. Portland St. London, W.



B30 **HELP THE MOVEMENT** by letting advertisers know that their advertisements in "The Light Car and Cyclecar" interest you.

PERRY for Punctuality!

THAT little PERRY shown below is absolutely unbeatable for all-round Dependability. Whatever the call—for short "dash-about" trips or the long, steady tour—the PERRY is always "punctual."

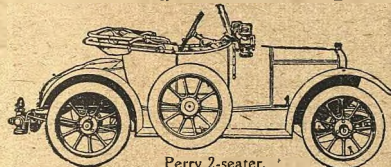
IMMEDIATE DELIVERY

PERRY and CALTHORPE
PERRY, 2-cyl., 2-seater . . 140 Gns.

Also the famous Calthorpe Minor models:—
CALTHORPE Coupe, Grand Duke Michael,
and CALTHORPE 4-seater.

Free Trial Trips on any model. Special Buying Terms to suit your convenience. Liberal Exchanges. Call at once for fullest inspection. Immediate Deliveries—No Premium asked.

P. J. EVANS,
87-91, John Bright Street, Birmingham.



Phone: Mid. 662.

Wire: "Lycar," B'ham.

Perry 2-seater.

MOTOR SUPPLY

Have in Stock

MORGAN G.P.	New discs, hood, screen, lamps drip feed, 700x80 tyres, mech. horn, extra footboards, etc.	£145
SINGER	6 months in use only. Done 5000. Stone Grey. Dynamo, 700x85 heavy Kempshalls, dicky, speedometer. Worth £260	230
SINGER	1914. Dynamo lighting, extra heavy tyres two new steel studs. A perfect overhaul. New hood. Painted to perfection ...	195
HILLMAN	1914. In course of complete overhaul. New hood and repainting. Will be almost as new by 6th June ...	185
PERRY	1914. Two-cyl. model in great condition. Many extras and refinements. Economical. Great climber ...	125
STANDARD	1914 model. Fine electric set. Paint as new. Speedometer. Almost every modern accessory	190
G.W.K.	1915 de Luxe 3-seater model. Special rear body. 700x80 tyres. Just completely overhauled. Like new ...	150
HUMBERETTE	1914 w.c. Brown finish. Sound order. Tyres and all wearing parts really good	105
G.W.K.	1913. Overhauled and painted 3 months ago. This car looks, and is running, as well as when new ...	100
SWIFT	7-9, two-cyl. In course of complete overhaul. Economical and reliable. Ready 6th June. Bargain ...	85

Also PERRY 1913, G.W.K. 1914, VICEROY 1914, VICEROY 1915, four-seat, dynamo, NEW MORGAN, 10 h.p. M.A.G., Etc.

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Expressly designed for the use of those who travel by road. Compact and portable—yet nothing useful is omitted. Shows the great high-ways with a clearness no other map of its scale can equal. Every motorist should possess one.

On cloth 2/- net. Paper 1/- net.
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Ladies Learn to Drive.
BECAUSE it is a healthy, enjoyable, and, if desired, highly remunerative outdoor occupation in which they can help their country which is in great need of women drivers owing to the scarcity of men.
F.S.M. pupils are driving for the Government Departments, Trade,

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UPHOLSTERY AND HOOD MATERIALS FOR LIGHT CARS.

Equal in appearance and durability to the best leather.

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WM. E. PECK & CO.,

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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.

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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, all new tyres and tubes, recently overhauled and upholstered, 3 electric, 1 headlamp, generator, hood, screen, speedometer, new spare chain, tools, clock, good as new, £50, trial given. Russell, c/o Tamplin, Twickenham Green, Twickenham. Phone, 96 Richmond. 186-a105
- A.-C.** Sociable, B type, hood, screen, 4 lamps, etc., must sell, joining up. Kear, 1 Meadow Close, Sutton, Surrey. 185-a769
- A.-C.** Sociable, 1914, reverse, in good condition, hood, screen, lamps, speedometer, tools, luggage rail, fibre mat, spares, £45, has not been used this year, can be seen by appointment. B. W. Ives, Bertram Cottage, Green St., Enfield Highway. 185-a768
- A.-C.** Sociable, hood, screen, lamps, accessories, good condition. £25; after 6.30. Lawrence, 59 Arthurdon Rd., Ladywell. 185-a763
- A.-C.** Sociable, 2 speeds, 2 brakes, good condition, complete all accessories, spares, tools, etc., hood, screen, lamps, horn, new tyres, speedometer. £45 or nearest offer. Full particulars on application to Smith, 12 King Edward's Avenue, Chelmsford. 185-a757
- A.-C.** Sociable, 5-hp, 2 speeds, hood, screen, lamps, tyres and paintwork excellent condition, £38. P. J. Evans, John Bright St., Birmingham. Trade 185-a777
- A.-C.** Sociable, B type engine, fine running order, and in good condition, selling owing to Derby Group, £40 or offer. Queen's Arms, Norland Rd., Shepherd's Bush. 186-a717
- A.-C.** Sociable, August, 1912, hood, screen, side doors, luggage carrier, front brakes, headlight and generator, side and tail lamps, horn, speedometer, pump, tool roll, spares, jack, good condition, and new tyres, £50. At Mr. Knight's Garage, Church St., Reigate. 185-a716
- A.-C.**, 10hp, 1914, dickey seat, 5 detachable wheels, full equipment, £160. Service Company, 292 High Holborn, London. Trade zzz-215

LIGHT CARS AND CYCLECARS FOR SALE
(continued).

- A.C.**, 10hp, 1914, speedometer, extra air valve, 5 detachable wheels and tyres, all as new, car been thoroughly overhauled and painted, £170. G. L. Francis and Co., 22 Pantton St., Leicester Sq. Trade 185-329
- A.-C.**, 1914, 2-seater, painted royal blue, hood, screen, C.A.V. dynamo lighting set, speedometer, 5 Sankay detachable wheels, perfect mechanical condition, fully equipped, bargain, £190. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Telephone, 3426 Mayfair. Trade 185-364
- A.-C.** light car, 9hp, hood, screen, Stepany, lamps, all in excellent condition, exchange combination, or sell, £55. T. Linney, Longdon Green, Rugeley, Staffs. 185-a725
- ADLER**, 1913, 10hp, two-three-seater, dickey easily fitted, Zenith, Bosch, Stepany, tyres as new, spares, lamps, 3 speeds and reverse, £75 or nearest for quick sale. Brittain, 27 Waterloo Bridge, London. 185-a784
- ALLDAYS Midget.** Introductory bargain sale. To introduce my new premises to you, I am offering bargains, on cash, exchange or deferred payment terms. Alldays, 1913, at £85. See my miscellaneous advert., also notice new address, Marian G. Paige, the only Lady Motor Dealer (12 years practical experience), 177 Gt. Portland St., London, W. Tel., "Wopansh, Wesdo, London." Phone, Mayfair 2639. Note new address. Trade 185-308
- ALLDAYS Midget**, 1914, in exceptional nice condition throughout, £85. Percy and Co., 337 Euston Rd., London. Trade 185-322
- ALLDAYS Midget**, 8hp, twin-cylinder light car, June, 1913, 3 speeds and reverse, 5 detachable wire wheels fitted, 700 by 80 Dunlop oversize grooved tyres, hood, screen, speedometer, lamps, extra air inlet, tools, recently overhauled, Zenith carburetter, fine running order, 75 guineas. H., 6 King's Rd., Brington, Bristol. 185-a731
- ALLDAYS**, 10hp, 2-seat, dickey, 5 wire wheels, in good condition, £130, owner enlisted, done very small mileage. E. Hopkin, Eastwood, Notts. 185-a710
- BABY PEUGEOT**, de luxe model, late 1915, painted yellow, fitted with hood, screen, 4 lamps, tools, and spares, running boards, and luggage carrier, 45 miles to gallon, perfect in every way, only done 800 miles, 135 guineas. Kinross, Old Evington, Leicester. 185-a429
- BABY PEUGEOT** de luxe model, in stock. Alfred Wastnag, 65 Gt. Portland St., W. Mayfair 3005. Trade 185-273
- BABY P.-UGEOT** de luxe, 1915, £140, no offers. Write, Gibb, c/o Street's, 30 Cornhill, E.C. 185-305
- BABY PEUGEOT**, 1916, 7.5hp model de luxe, complete with all accessories, £190. Ware and de Freville, Ltd., 6 Gt. Marlborough St., Oxford Circus, W. Gerrard 6472. Trade 185-335
- BABY PEUGEOT** de luxe, late 1915, painted grey, black wings, hood, screen, luggage carrier, electric side and tail lamps, Stepany wheel, horn, fully equipped, car had very little use, perfect condition, bargain, £145. Mebes, 156 Gt. Portland St., W. Telephone, 3426 Mayfair. Trade 185-370
- BABY PEUGEOT** de luxe, as new, full equipment, £115. Cook, 23 Clapham Rd. Phone, Brixton 826. 185-a741
- BABY PEUGEOT**, 1915, first-class condition, all accessories, 2 spare tyres, seen by appointment, bargain, £120. Harmsworth, Christ Church, Oxford. 187-a720
- BAYARD**, 8hp, 2-seater, just been overhauled and repainted, new hood and tyres, first-class order, suit doctor or lady, privately owned, seen appointment, £170. Orome, 76 Overcliff Rd., Lewisham. 185-a756
- BEBE PEUGEOT**, 1915, splendid order, newly painted, lamps, Stepany, etc., complete, bargain, £125. Sinclair's, Motor Body Builders, 45 Horseferry Rd., Westminster. 185-a744
- BEDELIA**, 8hp, racing cyclecar, sociable, engine recently overhauled, torpedo body, painted blue, hood, adjustable screen, speedometer, electric lamps and horn, also mechanical fittings in polished brass, tyres nearly new, a real bargain for £60, or exchange for 4-seater Ford, photo. 283 Portland Rd., S. Norwood. Trade 185-a790
- CALCOTT** cars. Watkins and Doncaster, Ltd., The Hall, 95 Great Portland St., authorized retail and sole wholesale agents for London and the Home Counties. Telephone, 6565-6 Mayfair. Trade zzz-345
- CALCOTT**, late 1915, 10hp, 2-seater, with special dickey seat, hood, wind-screen, 5 detachable wheels and tyres, 12-volt dynamo lighting set, 2 horns and all accessories, price £225. R. Bamber and Co., Ltd., 33 Liverpool Rd., Southampton. Trade 185-117
- CALCOTT**, 1915, 2-seater, new October, dynamo lighting, dickey, 2 horns, speedometer, only run 3200, faultless, £240. Below.
- CALCOTT**, 1914, 2-seater, dynamo, speedometer, spare petrol can and carrier, £200. Smith and Hunter, 15 Little Portland St., Oxford Circus. Trade 185-349
- CALCOTT**, late 1915, dynamo lighting, speedometer, spare wheel, etc., paintwork unscratched, car in very fine condition, £235. Below.
- CALCOTT**, 1914, 5 lamps, speedometer, spare wheel, car just repainted and engine overhauled, fine condition throughout, £190. Stretton and Smith, 23 Woodstock St., Bond St., W. Trade 185-345
- CALCOTT**, 10hp, 2-seater, dynamo lighting, dickey seat, in stock, latest model. Alfred Wastnag, 65 Great Portland St. Mayfair 3005. Trade 185-274
- CALCOTT**, second-hand, in excellent order, special car, complete with electric side and rear lamps, acetylene headlamps, separate generator, specially upholstered, speed clock, mats, hood, cover, etc., £210. Colmore Depot, 49 John Bright St., Birmingham. Trade 185-377
- CALTHORPE** 1916 coupe, 10hp, lighting set and self-starter, bulb horn, spare wheel and tyre, for immediate delivery. Prices and particulars, English Light Car Specialists, Robinson's Garage, Green St., Cambridge. Telephone, 388. Telegrams, "Cars." Trade 185-353
- CALTHORPE**, 1913, 12hp, 4-seated body, fitted with hood, screen, and screens for back seats, 5 detachable wheels and tyres, cantilever springs at rear, in splendid running condition, £130. 56 Terminus Rd., Eastbourne. Trade 185-a783

So many letters and wires:—

Rushden, Northants,
25th May, 1916.
..... Would you be good enough to withdraw my advertisement in your next issue, as I have had so many letters and wires for my car this last week, and it is now sold. Thanking you, and wishing your paper prosperity.

H. INGLE.

LIGHT CARS AND CYCLECARS FOR SALE (continued).

CALTHORPE, 10hp, new last year, dynamo lighting set, spare wheel, hood, screen, all tools, wide 2-seater, perfect, trial, bargain, 150 guineas. Hook, 441 Brighton Road, Croydon. Trade 185-370

CALTHORPE, Introductory bargain sale. To introduce my new premises to you, I am offering bargains, on cash, exchange, or my special deferred payment terms. Calthorpe, 1915, £175. Marian G. Paige, the only Lady Motor Dealer (12 years practical experience); 177 Gt. Portland St., London, W. Tel., "Womanish, Wesdo, London." Phone, Mayfair 2839. Note my new address. Trade 185-311

CALTHORPE, P. J. Evans, John Bright St., Birmingham. Immediate and prompt delivery 4-seater, coupe, Grand Duke Michael and sporting models. Trade 185-278

CALTHORPE, 10hp, 1915, 4-seater torpedo, painted grey, one-man hood, side curtains, screen, 5 Sankey detachable wheels, electric side and tail lamps, acetylene headlamps, generator, good tyres, perfect mechanical condition, car only done 3000 miles, genuine bargain, £225. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Telephone, 3426 Mayfair. Trade 185-366

CALTHORPE, 10hp, 2-seater, acetylene headlamps, electric side and tail, horn, clock, dickey seat, 5 wheels and tyres, grey. Colmore Depot, 49 John Bright St., Birmingham. Trade 185-374

CALTHORPE, 1915, G.D.M., 2-seater, completely equipped, in good order, £185. Storey's.

CALTHORPE, 1914, 2-seater, completely equipped, in splendid order, £150. Storey's.

CALTHORPE 2-seater, 1915, dynamo lighting, self-starter, in splendid order. Storey's.

CALTHORPE coupe, 1915, dickey, dynamo lighting, in good order. Storey's, 118 Gt. Portland St., W. Trade 185-381

CALTHORPE coupe, 1916, new dynamo lighting, in stock.

CALTHORPE new 1916 sporting chassis, fitted with our special design 3-seater body, concealed hood, dynamo lighting, in stock. Storey's, 118 Gt. Portland St., W. Trade 185-382

CARDEN, Introductory bargain sale. To introduce my new premises to you, I am offering bargains, on cash, exchange or deferred payment terms. 1915 Carden, £66, and one new painted, £70. See my miscellaneous advert., also notice new address, Marian G. Paige, the only Lady Motor Dealer (12 years practical experience), 177 Gt. Portland St., London, W. Tel., "Womanish, Wesdo, London." Phone, Mayfair 2839. Note new address. Trade 185-309

CARDEN, Two 1914 models, 4-5hp J.A.P. engines, one finished in white and black, and the other in red, £65 and £62 respectively. Maude's, 100 Gt. Portland St., London, W. Trade 185-297

CARDEN, 1914, 5-6 J.A.P., 2-speed, £35, or nearest offer. D. Woodhams, Wingham Lodge, Rochester, Kent. 185-3736

CHARRONETTE, 2-seater Charronette, sports 2-seater, £250 and £270 respectively, with C.A.V. lighting set. 65 Piccadilly, W. Trade 187-708

NOTICE.

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

CHATER LEA, 1914, 2-seater, 8hp, worm drive, £95. Taylor, 6a Orde Hall St., W.C. 185-3706

CRESCENT, Introductory bargain sale. To introduce my new premises to you, I am offering bargains on cash, exchange, or deferred payment terms. Crescent, 1913, £75. Marian G. Paige, the only Lady Motor Dealer (12 years practical experience), 177 Gt. Portland St., London, W. Tel., "Womanish, Wesdo, London." Phone, Mayfair 2839. Note my new address. Trade 185-310

CRESCENT, 1914, 2-seater, in nice order, £65 to clear. Percy and Co., 337 Euston Rd., London. 185-326

CROUCH, 1913½, good order, just been overhauled, and new Binks carburetter added, new gears, etc., paint and tyres good, £70, bargain. Brierley, Leyburn, Yorks. 185-3477

CROUCH car, 6-8hp, first-class condition, spare wheel, speedometer, etc., smart, comfortable, economical. Daintree, 8 Cambria Rd., Evesham. 185-2718

DAY-LEEDS, 10hp., 1914, 2-seater, dickey, 5 detachable wheels, 2 horns, tools, etc., etc., biscuit colour, upholstered in green, splendid order, easy starter, £160. 4 Bond St., Hull. 185-281

ENFIELD 1916 light cars, 10hp, 4 cylinders, spare wheel and tyre, dynamo lighting set, 2-seater, £215, 3-seater, £230, coupe, £255; cash, exchange and extended payments; 2-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., 232 High Holborn, W.C. Trade zzz-570

ENFIELD, 10hp, 4-cylinder, 5 detachable wheels, nickel finish, painted biscuit and black, several extras, only used for demonstration, splendid condition, £150. Roper and Wrecks, 112 Arundel St., Sheffield. Trade zzz-922

ENFIELD, 10hp, 3-seater body, clover leaf type, dynamo lighting, 5 Sankey wheels, speedometer, etc., hardly used, guaranteed, £190 cash, deferred payments or exchange. Service Co., 292 High Holborn, London. Trade zzz-364

ENFIELD 4-cylinder 10hp light car, supplied in March, 1916, all the latest improvements, only done 100 miles, owner having no further use will accept £135. Roper and Wrecks, 112 Arundel St., Sheffield. Trade zzz-282

ENFIELD Autolette, 1914, 8hp, 3 speeds, complete, hood, screen, 5 lamps, horn, speedometer and Stepney, £75. P. J. Evans, John Bright St., Birmingham. Trade 185-279

ENFIELD, 10hp, 1915, 3-seater, dynamo lighting, 5 detachable wheels (2 with steel-studded Dunlops), speedometer, electric horn, primrose and black, has been carefully driven by lady and is in perfect condition, as new, price £185, no offers. Trial and inspection at Bayliss and Rogers Garage, Solihull, Birmingham. Phone, 39 Solihull. 185-3739

GLOBE cars and vans, new and second-hand, in stock; also all components; overhauls undertaken. Tuke and Bell, Ltd., Globe Car Manufacturers, Carlton Engineering Works, High Rd., Tottenham. Trade 185-355

LIGHT CARS AND CYCLECARS FOR SALE (continued).

G.N., 1914, 8hp, 3 speeds, 2-seater, hood, screen, 3 lamps and generator, excellent condition, £75. Cass's Motor Mart, only address 5 Warren St., Euston Rd. Museum 623. Trade 185-361

G.W.K. A Car without a gearbox. Sole agent for Manchester. Gourlay, Fallowfield. Trade 189-c334

G.W.K., 1916 models, buff or blue finish, in stock. Palmer, 202 Great Portland St., London, W. Mayfair 4942. Trade 195-81

G.W.K., recently overhauled and repainted, 2 new tyres, Rushmore headlights, smart, fast, economical to run, 95 guineas. Roberts, Knowl Hill, Twyford, Berks. 185-5113

G.W.K., 1913-14, 2-seater, hood, screen, 4 lamps, painted biscuit and black, speedometer, 700 by 80 tyres all round, £105; 3 months guarantee, 12 months insurance free; exchanges and deferred terms 5 per cent. B.C.ow. Trade 185-360

G.W.K., 1912, 2-seater, screen, 2 lamps, mechanical horn, in excellent order, bargain, £65. Cass's Motor Mart, only address 5 Warren St., Euston Rd., W. Museum 623. Trade 185-366

G.W.K., 1914, sporting body, just repainted and overhauled, oversize tyres, all lamps, spare rim and tyre, speedometer, etc., £120. Stretton and Smith, 23 Woodstock St., Bond St., W. Trade 185-346

G.W.K., 1915, wide body, 5 detachable wheels, full outfit of accessories, excellent condition, £150, no offers. Box 8307, c/o "The Light Car and Cyclecar." 185-a789

G.W.K. Introductory bargain sale. To introduce my new premises to you, I am offering bargains, on cash, exchange, or deferred payment terms. G.W.K.s, 1913, £85 and £89. Marian G. Paige, the only Lady Motor Dealer (12 years practical experience), 177 Gt. Portland St., London, W. Tel., "Womanish, Wesdo, London." Phone, Mayfair 2839. Note my new address. Trade 185-312

G.W.K., 1913 model, with dynamo lighting and full equipment, in fine order throughout, £35. The Light Car Co., 321 Euston Rd., London, N.W. Phone, Museum 3143. Trade 185-342

G.W.K., 2-seater, Coventry-Simplex engine, hood, screen, lamps, headlights, etc., £92 10s., exchange quoted. Collier, Deal St., Luton. Latest type. Trade 187-269

G.W.K., with lamps, mechanical horn, etc., excellent condition, £95. Hayes, 344 Euston Rd. Trade 185-291

G.W.K., 1913, hood, screen, spare wheel; speedometer, complete, just repainted, £90. Elce and Co., 15-16 Bishopsgate Avenue, Camomile St., E.C. Trade 185-286

G.W.K., 1914, 8hp model, complete to usual catalogue specification, excellent order and condition, £125. Maude's, 100 Gt. Portland St., London, W. Trade 185-301

G.W.K., 2 1916 G.W.K.s, fitted with hood, screen, lamps, spare wheel and tyres, etc., £195 each, list price 185 guineas, no premiums. Ware and de Freville, Ltd., 6 Gt. Marlborough St., W. Gerrard 6472. Trade 185-336

G.W.K., 1913, 5 lamps, Stepney, been thoroughly overhauled and repainted, spare tyre (unused), £95. G. L. Francis and Co., 22 Panton St., Leicester Sq. Trade 185-330

G.W.K., 1913, thorough condition, recently overhauled, speedometer, Stepney, clock, and electric lamps, £95. Briggs, Motor Engineer, 79 Chapel Rd., Worthing. Trade 185-a735

G.W.K. G.W.K. light car, 1916, latest model, just arrived from works, immediate delivery, 5 detachable wheels, 5 lamps, horn, etc., the cheapest car to run; make sure of this now. Wilkins, Simpson and Co., 11 Hammersmith Rd., London. Trade 185-1619

G.W.K. 1916 light cars, 2 in stock, latest models, immediate delivery, trade supplied; we are G.W.K. experts and special authorized agents. Wilkins, Simpson and Co., 11 Hammersmith Rd. Trade 185-1620

HILLMAN, late 1914, dickey seat, thoroughly overhauled, excellent condition, small mileage, standard equipment, also many extras, including speedometer, side and tail lamps, electric, acetylene headlamps, immediate sale, sacrifice 160 guineas. Hintlesham, Leas, Westcliff. 185-319

HILLMAN, 1914 model, 8hp, 2-seater with hood and screen, 5 detachable wheels and tyres and all accessories, in very nice order, £175. The Light Car Co., 331 Euston Rd., London, N.W. Phone, Museum 3143. Trade 185-341

HILLMAN, 2-seater, dynamo lighting set, splendid order, £185, 344 Euston Rd. Museum 3541. Trade 185-292

HORSTMANN'S. 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 St., Kingsway. Regent 5086. Trade zzz-359

HORSTMANN, 1915 (July), 10hp, 2-seater, self-starter, driven by lady, in perfect order throughout, £140. Riach, A. Swarby, Folkingham, Lincolnshire. 185-a781

HORSTMANN, 1915, standard model, full equipment, mileage under 3000, £135. Welton, 60 Smithford St., Coventry. 185-a779

HORSTMANN, late 1915, 4-cylinder, 3 speeds and reverse, fitted self-starter, 5 lamps, condition as new, £150. Colmore Depot, 49 John Bright St., Birmingham. Trade 185-375

HUMBERETTE, 1914, water-cooled, complete, like new, £90. Freeman, Oakes and Co., Sheffield. Trade zzz-921

HUMBERETTE, 1914, water-cooled, excellent order throughout, had little use, electric light, £105. 37 Dunbar Avenue, Norbury. 186-a430

HUMBERETTES, all models, all prices, 14 in stock to select from, £55 to £135, one brand new. Percy and Co., 337 Euston Rd., London. Trade 185-321

HUMBERETTE, late 1913, 3 speeds, reverse, speedometer, hood, screen, Stepney, brand new Palmer cord tyres, absolutely new and perfect condition throughout, all accessories, spares, £52 seen after 7.30. 5 Forester St., Canal Rd., Mile End Rd., E. 185-c746

HUMBERETTE, 8hp, in splendid condition, done 6000 miles, wonderful hill-climber, three speeds and reverse, hood, screen, lamps, smart, economical, reliable little car, many useful improvements, any reasonable trial, £70. Frain, Snainton, Yorks. 185-a780

HUMBERETTE, 1914, air-cooled, recent overhaul, perfect condition, Stepney, tyres very good, £68, or combination part payment, real bargain. 146 Wheelwright Rd., Erdington, Birmingham. 185 a776

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

LIGHT CARS AND CYCLECARS FOR SALE (continued).

HUMBERETTE, 8hp, 1914, air-cooled, model, with speedometer and all accessories, £70, or near offer; also 8hp water-cooled model, with Stepany, spare tyres and all accessories, indistinguishable from new car, £100 net; inspection and trial with pleasure. Wm. Betts, Ltd., 126-128 High St., Wandsworth. Phone, Putney 1698. Trade 185-307

HUMBERETTE. Introductory bargain sale. To introduce my new premises to you, I am offering bargains, on cash, exchange or deferred payment terms. Humberettes from £65 to £95. Marian G. Paige, the only Lady Motor Dealer (12 years practical experience), 177 Gt. Portland St., London, W. Tel., "Womanish, Wesdo, London." Phone, Mayfair 2839. Note my new address. Trade 185-313

HUMBERETTE, 1913, complete, with lamps, horn, hood, screen, Stepany wheel and tyre, engine thoroughly overhauled, body repainted and revarnished, absolutely indistinguishable from new, 56 guineas, honestly worth £20 more; we are prepared to take any motorcycle of good make in part payment. Julians, Broad St., Reading. Phone, 1024. Trade zzz-288

HUMBERETTES, 1914, air-cooled, £70; 1914, water-cooled, £100; 1913, air-cooled, £65. Phone or call. Hayes, 108 and 344 Euston Rd. Museum 3541. Trade 185-290

HUMBERETTE, 1915, 8hp, 2-cylinder, 2-seater, completely equipped, in excellent order, £120. Storey's, 118 Gt. Portland St., W. Trade 185-384

LAGONDA, 10hp, twin-cylinder, 2-seater, wire wheels, engine requires overhaul, car and tyres in good condition, accept first reasonable cash offer. Moss Lodge, Rochdale. 185-a719

MARLBOROUGH 10hp sporting 2-seater, 5 detachable rims and tyres, dynamo lighting, in excellent order, £175. Storey's, 118 Gt. Portland St., W. Trade 185-383

MARLBOROUGH, 8-10hp, 4-cylinder, 3 speeds and reverse, Warland detachable rims, spare rim with tyre complete, and additional new cover and spare tubes, specially-designed streamline bulbous-back roomy 2-seater torpedo body, painted blue, 5 lamps, boa constrictor horn, clock, and speedometer, flush-in dashboard, cost £260, accept £195. Apply G., 18 Old Cavendish St., W. 185-304

MATHIS, 1914, 10hp, 2-seater, dynamo lighting, in exceptional nice condition, £160. Percy and Co., 337 Euston Rd., London. Trade 185-327

MATHIS, 1914, 8hp, sporting model, bucket seat, disc wheels, new tyres all round, just been repainted and overhauled, £140. Maudes', 100 Gt. Portland St., London, W. Trade 185-302

MERLIN cyclecar, 8hp J.A.P. engine, never been used, wants finishing, £50. Roper and Wreaks, 112 Arundel St., Sheffield. Trade zzz-283

MORGANS. We are contracting agents. Book for early delivery. Repairs and overhauls guaranteed. Burelli's, 2 Albany Rd., Cardiff. Trade 187-c176

MORGAN, G.P., 10hp, disc wheels, just delivered, officer ordered abroad, for sale, price (with extras), £117 nett, no offers. Particulars, Gaston, 30 Evelyn Gardens, London. zzz-314

MORGAN, sporting, 1913, hood, screen, speedometer, lamps, little used, £65. Gallup, 619 Garratt Lane, S.W. 185-a447

MORGAN, 1915, sporting model, perfect condition, hood, screen, lamps, spare tyre, chain, etc., £89. Judge, Edgworth Rd., Sudbury, Suffolk. 185-a444

MORGAN, 1915, Grand Prix No. 1, excellent condition, £110. Warren, 6 Warren St., N.W. Trade 185-334

MORGANS, 1915, G.P., disc wheels, hood and screen, in nice condition, £110; a 1914, fully equipped, £95; a 1914 A.-O.-Morgan, £70; exchanges arranged. Percy and Co., 337 Euston Rd., London. Trade 185-323

MORGAN, Grand Prix, 1915, side-by-side valves, screen, 3 lamps, horn, disc wheels, just repainted red and black, just thoroughly overhauled, £117 10s., 3 months guarantee, 12 months insurance free, tuition free, deferred terms 5 per cent. Below.

MORGAN, Grand Prix, 1915, No. 1 model, painted blue, screen, 5 lamps, disc wheels, speedometer, mechanical horn, bargain, £112 10s. Cass's Motor Mart, only address 5 Warren St., Euston Rd., W. Museum 623. Trade 185-357

MORGANS. If you want one for Whitsuntide write Potter, Morgan Specialist, Leicester Grove, Leeds. Trade 185-a748

MORGANS. Some models in stock, also chains, valves for M.A.G. and J.A.P. engines, Stepany and Palmer tyres, all kinds of spare parts, prompt attention, price right. Potter, Morgan Specialist, Leicester Grove, Leeds. Trade 185-a749

MORGAN de luxe, 1914, recently overhauled, repainted red, disc wheels, hood (new), windscreen, speedometer, 8-day clock, Stewart warning signal, bulb horn, four lamps, Low generator (head, dash and tail lamps, electric), mat, large toolboxes, spares, including 2 chains, tools, excellent condition, £77 10s. Camebus, Ormesby, Lower Park, Loughton. 185-a745

MORGAN, sporting 1915 body, lamps, generator, horn, hood, screen, drip feed, patent detachable back wheel, tyres perfect, car had little use, £75. Pine, Camden Rd., Bridgwater. 185-a732

MORGAN, 1913½, standard, hood, screen, lamps, engine just overhauled, tyres as new, £60. Sayce, Fire Station, Worcester. 185-a730

MORGAN, 1914, 8hp, sporting, hood, screen, lamp, horn, clock, etc., new Dunlop combination back, many spares, in splendid condition, £70. Clarke, Jeweller, Stowmarket, Suffolk. 185-a729

MORGAN, G.P., 1915, water-cooled, hood, screen, spare tubes, tools, lamps, etc., fast and perfect, bargain, best first cash offer over 84 guineas. 74 Handcroft Rd., Croydon. 185-a782

MORGAN, 1913, sporting, in excellent condition, fast, reliable, marvellous hill-climber, brass-mounted screen, hood, lamps, spare chains, tools, etc., waterproof magneto, spring cushion, any trial here, £60. Taylor, Northam Rd., Bideford. 185-a772

MORGAN, 1915, No. 1, w.-c., G.P., absolutely new condition, hood, screen, 5 lamps, large generator, disc wheels, hand Klaxon, painted carmine, picked out white, bargain, £110. 18 South Bruton Mews, Bond St., W. 185-a771

MORGAN, 1915, No. 1, Grand Prix, new Dunlop oversize tyres all round, 700 by 80, Lucas dynamo lighting set, 5 lamps, electric horn, hood, screen, mats, tools, jack, etc., finish dark red, new condition throughout, £117. C. W. Braithwaite, 96 Highgate, Kendal. Trade 185-a755

MORGAN, 1914, standard, 2000, hood, screen, tools, lamps (unused), good tyres, sound throughout, nearest £70. 44 Victoria Avenue, Barrow-in-Furness. 185-a753

LIGHT CARS AND CYCLECARS FOR SALE (continued).

MORGAN, red, sporting, late 1913, Blumfield engine, Binks 3-jet, inside gate change, new hood and side curtains, adjustable screen, electric side, tail and dash lamps, new 700 by 85 Stepany and Dunlop, three lockers, new high gear chain, run little since war declared, £68. Yates, 7 Burgoyne Rd., Walkley, Sheffield. 185-a752

MORGAN de luxe, 1914, repainted, overhauled, very smart, 1915 improvements, good order, tyres like new, hood, screen, lamps, price £70. Apply 6.30-8, 5 Clovelly Gardens, Upper Tulse Hill, Brixton Hill. 183-a854

MORGAN, 1914, G.P., water-cooled J.A.P., hood, screen, 5 lamps, speedometer, royal blue, £95. Loke, Winchester. Trade 185-a713

MORGAN, Grand Prix, 1914, No. 2, 8hp J.A.P. engine, water-cooled, overhead valves, speedometer, large tyres, electric lamps, complete, £85. Elce and Co. Below

MORGAN, 1916, de Luxe model, in stock, fitted with J.A.P. engine, hood, screen, lamps, mechanical horn, 80 mm. tyres to all wheels, complete, £125. Elce and Co., 15-16 Bishopsgate Avenue, Camomile St., E.C. Phone, Avenue 5548. Trade 185-285

MORGANS, 1916, sporting, £114 8s.; de luxe, £127; 1914-15 Grand Prix, £98 10s.; Standard models, £59 10s. and £65; exchanges quoted. Motor Exchange, 68 Horton St., Halifax. Trade 187-267

MORGAN. Introductory bargain sale. To introduce my new premises to you, I am offering bargains, on cash, exchange or deferred payment terms. Late 1914 Morgan de Luxe, £79, as new mechanically. Marian G. Paige, the only Lady Motor Dealer (12 years practical experience), 177 Gt. Portland St., London, W. Tel., "Womanish, Wesdo, London." Phone, Mayfair 2839. Note my new address. Trade 185-314

MORGAN, 1911, G.P., No. 1, with J.A.P. engine, side valves, Binks carburettor, complete with hood, screen, Lucas dynamo lighting set, etc., as new throughout and finished white and black, £130; also 1915 G.P. No. 1 model with J.A.P. engine, side valves, Binks carburettor, Watford speedometer, £125. Maudes', 100 Gt. Portland St., London, W. Trade 185-298

MORGAN, sporting, complete, hood, screen, speedometer, lamps, good as new. Colmore Depot, 49 John Bright St., Birmingham. Trade 185-373

MORRIS-COWLEY, practically new, done under 500 miles, dickey, speedometer, luggage grid, 2 horns, £235. Apply, Car, 51 Old St., E.C. 185-a778

MORRIS-COWLEY, 2-seater, 1916, extra heavy tyres on all wheels, Lucas electric lighting, guarantee 94 m.p.g., only run 2000 miles, £175. Apply, Pte. 7204, London Scottish, Richmond Park Camp, S.W. 185-a774

MORRIS-OXFORD, 1913, just repainted and overhauled, in beautiful condition, 5 wheels, 5 lamps, tyres first class, bargain, £135. Rey, 378 Euston Rd., N.W. Trade 185-72

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, overhauled, repainted, new standard body fitted, along van body to fit, 5 wheels, 5 lamps, bargain, £150. Roper and Wreaks, 112 Arundel St., Sheffield. Trade zzz-923

MORRIS-OXFORD, 1914, de luxe, 2-seater, 5 lamps, dickey, speedometer, usual accessories, £160. Smith, 15 Little Portland St., Oxford Circus. Trade 185-351

MORRIS-OXFORD, late 1913, hood, screen, 5 lamps, 5 detachable wheels, speedometer, just overhauled and repainted, £125. Mason, 38 Gresham Rd., West Kensington, London, W. 185-a760

MORRIS-OXFORD de luxe, 1914, pearl grey, 5 Sankey wheels, 5 lamps, Watford speedometer, dickey seat, not 5000 miles, private owner, £165. Tranter, Birmingham Rd., Kidderminster. 185-a755

MORRIS-OXFORD, 10hp, late design, special Colonial model, extra long body and wheelbase, French grey, very fast and powerful, complete with hood, screen, spare wheel, lamps, horns, speedometer, clock, and tools; it has 2 new covers and tubes; trial run arranged; property of an officer, £150. Grandex, 86 Gray's Inn Rd., W.C. Trade 185-a709

MORRIS-OXFORD de Luxe, late (November) 1914, painted stone grey, with 5 lamps, 5 detachable Sankey wheels, 2 horns, including a Stewart mechanical horn, speedometer, clock, perfect in every way and fully equipped. Julians', Broad St., Reading. Phone, 1024. Trade zzz-289

MORRIS-OXFORD, 1914, Model de Luxe, exceptional car, specially tuned, in perfect condition, hood with curtains, screen, 5 lamps, clock, extra air, 5 detachable wheels and tyres, 2 non-skids, mats, tools, etc., painted mole grey, with black mudguards, £190. 94 Gloucester Rd., S.W. Trade 185-303

MORRIS-OXFORD de luxe, 10hp, 1914, painted green, black wings, 5 lamps, 5 Sankey detachable wheels, speedometer, petrol can carrier, dickey seat, good tyres, mechanically perfect, fully equipped, bargain, £185. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Telephone, 3426 Mayfair. Trade 185-367

MORRIS-OXFORD chassis, 5 detachable wheels and tyres, lamps, etc., to include 2-seater body to order, £170. Colmore Depot, 49 John Bright St., Birmingham. Trade 185-376

P.D.A., 1913, 8hp Precision, water cooled, dual ignition, £50, no offers. Whitelam, 14 Princess St., Chesterfield. 185-a737

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

PERRYS in stock, latest 1916 8hp models, 3 speeds, complete, hood, screen, lamps, horn, 5 detachable wheels and tyres, £2 2s. tax and 40 m.p.g. P. J. Evans, John Bright St., Birmingham. Trade 185-280

PERRYS, 1916, 8hp models, 2-4-seaters and coupes, earliest deliveries, exchanges entertained. R. Bamber and Co., Ltd., 33 Liverpool Rd., Southport. Trade 188-116

PERRY, 1914, in exceptional nice condition, £125; a 1918 at £110. Percy and Co., 337 Euston Rd., London. Trade 185-334

PREMIER, 7-9, 2-seater light car, hood, screen, lamps, etc., excellent climber, £58 10s., or exchange. Motories, 68 Horton St., Halifax. Trade 187-268

RILEY light car, 2-seater, with electric lamps, only used 50 miles, bargain, £105, any trial. Timberlake's Garage, Wigan. Trade 186-78

RITZ, perfectly new, latest type car, just arrived, with all fittings, complete, bargain, £125. Timberlake's Garage, Wigan. Trade 186-79

RITZ, 10hp, 4-cylinder, 2-seater, new, £145, keen exchanges quoted. Motories, 68 Horton St., Halifax. Trade 187-270

LIGHT CARS AND CYCLECARS FOR SALE (continued).

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

SAXON, 11.9, brand new 1916 model, slightly shop-soiled, overstocked, accept £140. Roper and Wrecks, 112 Arundel Street, Sheffield. Trade 223-925

SAXON new 1916 model in stock, painted cream and black, complete with magneto, £150. Tuke and Bell, Ld., Motor Department, Carlton Engineering Works, High Rd., Tottenham, N. Trade 185-356

SAXON cars. Although the tax is doubled, the Saxon tax is now only £6 6s. Petrol 40 m.p.g. Plenty of latest 1916 models for instant delivery. All spare parts stocked. We usually have demonstration Saxons of latest type at bargain prices. Lowe and Wood, Ld., 280 Broad St., Birmingham. Trade 191-d197

SAXON, 11.1hp, late 1915, been very little used, most economical running, magneto ignition, standard colour, any trial or expert examination invited, sacrifice £100, cash wanted. 32 St. Michael Sq., Gloucester. 185-a775

SINGER, phaeton or coupe, 1916 models, dynamo lighting, prompt delivery. London Depot, 17 Holborn Viaduct, London, E.C. Trade 233-39

SINGER, 1916, 10hp., brand new. We have 2 cars in stock, both with dynamo lighting, one with dickey seat, immediate delivery, reasonable prices. Layton's Garage, Bicester, near Oxford. 'Phone 35. Trade 189-782

SINGERS, new season's, dynamo lighting, fully equipped, delivery from stock, £250; unequalled allowance for your car. Stretton and Smith, 23 Woodstock St., Bond St., W. Trade 185-91

SINGER, 1916, 10hp, 2-seater, dynamo lighting, in stock. Palmer, 202 Gt. Portland St., W. 'Phone, Mayfair 4942. Trade 195-82

SINGER, 1915, 10hp, 2-seater and dickey, hood, windscreen, 5 detachable wheels, dynamo lighting set, Klaxon and bulb horn, speedometer and all accessories, little used, excellent condition throughout, price £225. R. Bamber and Co., Ld., 33 Liverpool Rd., Southport. Trade 185-118

SINGER, 1916, 10hp, dynamo lighting set, dickey seat, hood, screen, detachable wheels and spare, speedometer, actually in stock. Julian's, Singer Specialists, Broad St., Reading. 'Phone, 1924. Trade 233-204

SINGER, 1916, 10hp, 2-seater, dynamo lighting, £240. Trade 233-204

SINGER, 1914, 10hp, dynamo lighting, £175.

SINGER, 1913, 10hp, electric lamps, £135. Percy and Co., 337 Euston Rd., London. Trade 185-325

SINGERS, new season's, dynamo lighting, fully equipped, delivery from stock, special prices, unequalled allowance for your present car. Stretton and Smith, 23 Woodstock St., Bond St., W. Trade 185-343

SINGER, 1915, dynamo lighting, speedometer; this car is practically unsoiled, perfect throughout, £230. Below.

SINGER, 1914, dynamo lighting, spare wheel, etc., just repainted, bargain, £165. Stretton and Smith, 23 Woodstock St., Bond St., W. Trade 185-344

SINGER 1916 coupe, brand new, dynamo lighting, upholstered Bedford cord, finished blue, 5 special Dunlops, just delivered, available immediately, price £310. Particulars, English Light Car Specialists, Robinson's Garage, Green St., Cambridge. Telephone, 388. Telegrams, "Cars." Trade 185-354

SINGER. Immediate delivery of 1916 model, brand new, with dynamo lighting and usual extras, £260. Below.

SINGER, 1916, 2-seater, dynamo lighting, dickey, speedometer, clock, Klaxon, dickey, mileage only 2500, £240, perfect throughout. Below.

SINGER, 1914, 2-seater, dynamo, speedometer, recently repainted and thoroughly overhauled, £180. Smith and Hunter, 15 Little Portland St., Oxford Circus. Trade 185-348

SINGER, 1916, 2-seater, as new, dynamo lighting. Storey's, 118 Gt. Portland St., W. Trade 185-385

SINGER, late 1914, 2-seater, dynamo, exceptional finish, not scratched, any trial, beautiful car. 106 Dale St., Liverpool. 185-a727

SINGER, 10hp, late 1914, dynamo lighting, very little used, indistinguishable from new, £215. 23 Corbett Rd., Cardiff. 185-a715

SINGER 1914 light car, dynamo lighting set, just thoroughly overhauled and painted and new hood, speedometer, £175. Box No. 8304, c/o "The Light Car and Cyclecar." 185-a787

SINGER, 1915, dynamo lighting, spare wheel and tyre, shock absorbers, electric and bulb horn, whistle, clock, speedometer, spare petrol can and carrier, all in excellent condition, £220. Gascoigne Bower, Automobiles, 20 Cranbourn St., W.C. Trade 185-a750

SINGER 1914, light car, dynamo lighting set, complete, £165, or motor-bike part. Cross, Effingham Sq., Rotherham. Trade 185-306

SINGER, 1916 model, 10hp, brand new, in stock for immediate delivery. Below.

SINGER, 1915-16, 2-seater, with dynamo lighting, dickey seat, etc., in perfect condition, £235. Below.

SINGER, 1913 model, 2-seater, with dynamo lighting and fully equipped, in very nice order, £135. The Light Car Co., 331 Euston Rd., London, N.W. 'Phone, Museum 3143. Trade 185-340

SINGER, 1915, 10hp, special speed model, detachable wheels and spare, plated fittings, recently repainted and upholstered, and thoroughly overhauled, £235. Maudes', 100 Gt. Portland St., London, W. Trade 185-299

SINGER, 1914, 10hp model, complete with Rotax dynamo lighting set, 3 speeds and reverse, 5 detachable wheels, hood, screen, speedometer, etc., £185. Maudes' 100 Gt. Portland St., London, W. Trade 185-300

SINGER, 10hp, 2-seater, dynamo lighting, in stock. Alfred Wastnag, 65 Gt. Portland St., W. Mayfair 3005. Trade 185-275

SINGER, 10hp, 1916, new, immediate delivery. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Telephone, 342. Mayfair. Trade 185-372

STANDARD 1914 light car, £185. R. E. Jones (Garages), Ld., Swansea. Cash or easy terms. Trade 233-103

STANDARD, 1914 model, dickey seat, speedometer and full equipment, guaranteed £180. Service Co., 292 High Holborn, London. Trade 223-977

STANDARD, 9.5hp, 1914, late coupe, dickey, C.A.V. lighting and many extras, smart little car, in splendid order. Storey's.

STANDARD, 1916, 9.5, coupe, dickey, new, painted grey, in stock. Storey's, 118 Gt. Portland St., W. Trade 185-380

LIGHT CARS AND CYCLECARS FOR SALE (continued).

STANDARD, 1914, 9.5hp, 2-seater, with dickey, spare wheel and all accessories, condition as new, £195. Howard Smallman, Garages, St. Nicholas Rd., High St., Sutton, Surrey. 'Phone, 1000. Trade 185-a728

STANDARD, 9.5hp, 1914, 2-seater, dickey seat, 6 Sankey detachable wheels, good tyres, speedometer, lamps, tools, etc., recently repainted and repolished grey, excellent condition, very fast, a bargain, £180. Box No. 8308, c/o "The Light Car and Cyclecar." Trade 185-a788

SWIFT, 1914, 7-9 cyclecar, excellent condition, and guaranteed perfect, £215 another, 1913, £295. Warren's, 6 Warren St., N.W. Trade 185-333

SWIFTS, 1912, 1913, 1914 and 1915 models, in stock, we have a large selection, £65 to £135. Percy and Co., 337 Euston Rd., London. Trade 185-320

SWIFT, 1915, 10hp, dynamo lighting, speedometer, only done 400 miles, better than new, £245. G. L. Francis and Co., 22 Panton St., Leicester Square. Trade 185-331

SWIFT, 1914, 7-9hp, 2-cylinder, 2-seater, hood, screen, 3 lamps, shock absorbers, just repainted, excellent order, £125, 3 months guarantee, 12 months insurance free, tuition free, exchanges, deferred terms 5 per cent. Cass's Motor Mart, only address 5 Warren St., Euston Rd., W. Museum 623. Trade 185-358

SWIFT, 1914, 2-seater, 7-9, Stepney, nearly new tyres, repainted grey, £120. Smith, 15 Little Portland St., Oxford Circus. Trade 185-350

SWIFT, 1914, 7-9, 2-cylinder cyclecar, everything first-class condition, 2-seater, hood with special side curtains, screen, lamps and generator, speedometer, Stepney, etc., £110. Johnson, Electric Theatre, Coalville, Leicestershire. 185-a742

SWIFT cyclecar, 7hp, complete with Stepney hood, lamps, etc., equal to new, £135. Apply Fred Smith, Station Hill, Basingstoke. 185-a707

SWIFT, 7hp, 2 ignitions, Stepney, speedometer, hood, screen, lamps, artillery wheels, scuttle dash, side door, £62. Dr. Finny, Kingston-upon-Thames. 185-a709

SWIFT, 7-9hp, 1914, grey, fully equipped, perfect order, privately owned. 11 Alexandra Rd., Reading. 188-a773

SWIFT, 7-9, 2-3-seater, grey, hood, screen, lamps, perfect condition, cheap, or exchange motor-bike or combination. Cridland, Water Orton, near Birmingham. 185-a769

SWIFT, 1914, 10hp, 2-seater, dynamo lighting set, what offers. T. Baker and Sons, Reading. Trade 185-a759

SWIFT. Introductory bargain sale. To introduce my new premises to you, I am offering bargains, on cash, exchange, or deferred payment terms. Swift, 2-cylinder, 1915, as new, £215. Marian G. Paise, the only Lady Motor Dealer (12 years practical experience), 177 Gt. Portland St., London, W. Tel., "Womanish, Wesdo, London." 'Phone, Mayfair 2835. Note my new address. Trade 185-415

NOTICE.

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

SWIFT, 7-9hp, 1914, painted slate grey, black tyres, acetylene lamps, generator, Stewart speedometer, extra air, oversize wings, as new, wire wheels, mirror, mechanically perfect, fully equipped, bargain, £120. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Telephone, 3426 Mayfair. Trade 185-355

WARNE, 9hp, late 1913 model, a new car, only used for demonstration purposes, hood and screen, 3 speeds and reverse, Stepney, 5 lamps, dashboard clock, speedometer, £85, a bargain. Maudes', 100 Gt. Portland St., London, W. Trade 185-296

WARREN-LAMBERT, 10hp, 2-seater, Blumfield water-cooled engine, 3 speeds and reverse, 700 mm. by 80 mm. Dunlop tyres, hood, adjustable screen, clock, speedometer, and lamps, only run 2000 miles, perfect, better than new, owner-driven, £80. Ellis, Baden Terrace, Cleckheaton, Yorks. 185-a722

WHITING-GRANTS in stock, cash or easy terms. R. E. Jones (Garages), Ld., Swansea, London, Cardiff. Trade 233-919

WHITING-GRANT. Introductory bargain sale. To introduce my new premises to you I am offering bargains on cash, exchange or deferred payment terms. Whiting-Grant, 1915 electric starter and lights, £150. Marian G. Paige, the only Lady Motor Dealer (12 years practical experience), 177 Gt. Portland St., London, W. Tel., "Womanish, Wesdo, London." 'Phone, Mayfair 2838. Note my new address. Trade 185-316

WILLIAMSON, the Rolls-Royce of 3-wheelers, new model, in stock, £126, no premium. Motorics, 68 Horton St., Halifax. Trade 187-271

PARCELCARS.

A.C. box carrier, hood, screen, lamps, etc., £50, for immediate service. Alfred Wastnag, 65 Gt. Portland St., W. Trade 185-152

A.C. box carrier, perfect condition, £35. Rowe, Baker, Harpenden. 185-a764

ALLDAYS, 8hp, 3-wheel delivery van, 2 speeds and reverse, water cooled, wheel steering, seat for 2, box at front, £37. Seen at Brooks and Spencer, Barlow Rd., Levenshulme, Manchester. 185-a703

MISCELLANEOUS LIGHT CARS AND CYCLECARS:

BRIGHTON. Perry, Morgan, and other small cars. Turpin's, 22 and 29 Preston Rd. Trade 204-m843

LONDON'S light car and cyclecar experts. If you are considering purchase of a light car or cyclecar, call and see us; we guarantee satisfaction; exchanges arranged. Percy and Co., 37 Euston Rd., London. Trade 223-453

F. MEBS AND SONS, the original light car specialists, have one of the largest and most varied stocks of light-type cars in London. All cars fully equipped and ready for immediate use. Pay a visit to our showrooms. We are bound to fill your requirements. 156 Gt. Portland St., W. Telephone, 3426 Mayfair. Trade 185-41

PRIVATE OWNER
AND TRADER

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

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:—Swift, 1914, repainted, £125; Morgan, G.P., 1915, repainted, £117 10s.; Morgan, G.P., £112 10s.; G.W.K., 1913-14, £105; G.N., £75; G.W.K. £65. All above cars overhauled, repainted, guaranteed 3 months, 12 months insurance free, tuition free, exchanges, no combinations, deferred terms 5 per cent, trials free. For full particulars of above cars see small advertisements. 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 St., Euston Rd., W. Museum 623. Trade 185-362

DENBY motorcycle, 6hp twin engine, wants completing, £25. Roper and Wrecks, 112 Arundel St., Sheffield. Trade zzz-284

LIGHT car, 8-10, twin engine, air-cooled, magneto, friction drive, B. and B carburettor, hood, windscreen, 5 detachable wheels, 5 lamps, etc., £45. Darke, Draper, Sutton, Surrey. 185-a726

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 Rd., Leytonstone, London, N.E. Trade zzz-505

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 Rd., Leytonstone, London. Trade zzz-183

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

CYCLECAR components: Channel steel reinforced wood frames, with quarter-elliptic springs, £4 5s. 3d.; countershafts, friction sets, axles, wheels. Denby and Co., Ltd., Ilkley. Trade zzz-936

FOUR Calthorpe pistons, 1914, complete, with rings and gudgeon pins, perfect, £1 5s.; Jones speedometer, 760 by 90, perfect, £2. Batchelor, Clarence St., Kingston. Trade 185-a767

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 Rd., London. Phone, Museum 3143. Trade 185-338

GEARBOX from Swift car, 90s.; brass radiator, 50s.; four covers and tubes, 700 by 85, £5; leather hood, 40s.; folding windscreen, 35s.; Castle de Luxe trembler coil, 20s.; frame, axles, wheels and differential in good order, well made, £6; petrol tank, with indicator, 7s. 6d. Essendene, New Milton, Hants. 185-294

LITHANODE 4-volt dynamo, resistance coil, switchboard, one accumulator, mahogany box, £5. New, Winchcombe, Glos. 185-a738

7-9hp a.i.v. **J.A.P.** air-cooled twin engine, Sepsray carburettor, Bosch magneto, in cradle, £14; iron 2-compartment petrol and oil tank, with brass oil force pump, 10s.; 16 in. friction gear, ferodo-faced, complete, £2; 14 in. leather-covered steering wheel, with steel tube and cable steering, 10s.; front axle, 2 front, 2 back wire wheels, with 4 re-shod 700 by 65 Dunlop tyres, 4 ditto new tubes, £4; 4 semi-elliptic 1 1/2 by 24 in. springs, 10s.; 8 ft. Coventry 3/4 by 3/8 motor chain, 5s.; or £20 the lot. Wray, Highfield, Bubwith, Selby. 185-a734

ACCESSORIES.

J.M. shock absorbers for light car, nearly new. Jessop, 7 Coleridge Rd., Crouch End, Hornsey 573. 185-a758

810 by 90 **STEPNEY** complete, dynamo, lamps, horn, accumulator, carburettor, toolbox, new sparking plugs, jack, pump. Beardshaw, Auctioneer, Wood Green. Trade 185-a740

MECHANICAL horn, brand new, list price £2 12s. 6d., black and brass finish, unique opportunity, 30s.; after 7 only. F. Barthorp, 12 Elm Park Rd., Chelsea, S.W. 185-a714

ENGINES.

J.A.P., 8hp twin, overhead valves, air-cooled, complete with magneto, induction and exhaust pipes, brand new, specially built and tuned, unable to be used for purpose ordered, £35 or nearest offer. Willways, Ltd., St. Augustine's, Bristol. Trade 185-a721

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-639

EXCHANGES arranged in light or medium cars, or for motorcycles. Colmore Depot, 49 John Bright St., Birmingham. Trade 185-378

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 Rd., London. Phone, Museum 3143. Trade 185-339

EXTENDED PAYMENTS.

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

ALBERT LAW (late motorcar manager for Wm. Whiteley, Ltd.). Deferred payment specialist, is now the managing director of the Purley Motor Garage, Ltd., Purley, Surrey. All makes of cars supplied by deferred payments, and he will be glad to advise on these matters free. Ring up 103 Purley (not a trunk call from London), or write, when you can be assured of his personal attention. Trade 189-433

EXTENDED PAYMENTS (continued).

INSURANCE. Lloyd's motor policies, payable monthly. Before insuring elsewhere, write for prospectus. Manager, General Insurance Co., 199 Piccadilly, London, W zzz-992

FOR HIRE.

If you want to hire a Standard, Calcott, Singer or any other make light car, for a day, week-end, week, or month, call at Warren's, 386 Euston Rd., Phone, 3081 Museum. Trade zzz-959

DRIVE yourself in a Calcott, Singer, Morris-Oxford, Standard or Hillman. Rey's can let you have one for a day, week-end, week, or month; moderate charges. Rey's are the largest light car hirers in London. Call, write, or telephone (Regent 4219), Rey's, 378 Euston Rd., N.W. Trade 235-177

HOODS AND SCREENS

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

TODD and CO., Duncan St., Islington. Shop-soiled hood and screens, suitable Morgans, etc., cheap; hoods recovered. Phone, 249 North. Trade 185-c387

INSURANCE.

WHY pay your insurance premium a year in advance when you can pay monthly without extra cost? Lowest rates for light cars. Before insuring elsewhere write for prospectus of Lloyd's motor policies, payable monthly. Manager, General Insurance Co., 199 Piccadilly, London, W. zzz-970

PATENT AGENTS.

PATENTS. Inventors advised free. Write for booklet. King's Patent Agency, Ltd., 165 Queen Victoria St., London, E.C 185-363

REPAIRERS.

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

RADIATOR and lamp repairs by skilled workmen, lowest prices, quickest delivery, no cure, no pay. Lloyd Motor Radiator Co., 377 Monument Rd., Birmingham. 187-1488

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 Rd. 186-127

SWIFT MOTOR CO., LD., undertake the repair and overhaul of any make of car at their extensive new premises, 132-134 Long Acre; specialists in light car repairs; renovating and repainting of coachwork, also body-building, panel beating, etc. 132-4 Long Acre, W.C. 187-272

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

WANTED, smart mechanic, exempt military service, also boy with mechanical brains. Paige, 177 Gt. Portland St. 185-317

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 St., Regent St., W., or the works: 21a London Rd., St. John's Wood, N.W. zzz-221

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 St., Seven Dials. Phone, 371 Brighton. 220-512

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

TYRES AND TUBES.

ST. MARTIN'S. The cheapest house for all kinds of accessories, new and second-hand. Write for our giant list.

ST. MARTIN'S. Tyres and tubes for light cars, hundreds of bargains, new and second-hand; our prices are the lowest; write, mentioning requirements, or call.

ST. MARTIN'S. Stepney wheels from 25s.; also liners, gaiters, etc.

ST. MARTIN'S. Retreading and repairs of all descriptions.

ST. MARTIN'S. We supply all your requirements. We can buy or sell your car on commission. We can quote you for tyres, lamps, lighting sets, magnetos, carburettors, etc. Call or write. St. Martin's Motor Works, 12 Upper St. Martin's Lane, London, W.C. (one minute from Leicester Sq. Tube). Telephone, Regent 5070. Trade zzz-196

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

TYRES AND TUBES (continued).

ECONOMIC. Continental 550 by 75 and 700 by 80, very heavy rubber-studded covers, 31s. 6d.; Palmer cord heavy 3-ribbed cyclecar covers, fully guaranteed, latest pattern, 700 by 80 50s., 710 by 85 57s. 6d.

ECONOMIC. Kempshall special oversize nico-skid, 700 by 85 and 26 by 3, for 650 by 65, in stock; special allowance for old covers.

ECONOMIC for 30 by 3 and 30 by 3½ Ford covers and tubes, in stock. Special terms to commercial users.

ECONOMIC for all requirements. Lamps, speedometers, etc.; quickest despatch, keenest prices; retreading and repairs; a tread for every casing.

ECONOMIC TYRE CO., 137 Lewisham High Rd., New Cross. 'Phone, New Cross 1393. Open till 9; early closing Thursday. Trade 185-1600

WANTED.

Cars.

WANTED, for cash, immediately, any makes, second-hand light cars. Rey, 378 Euston Rd. Tel., Regent 4219. Trade 211-420

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

WANTED, light cars, cyclecars, spot cash paid, bring or send. Wandsworth Motor Exchange, Ebner Street, Wandsworth (Town Station). Trade 186-8814

WANTED, Morgan runabouts, fair prices given for clear purchase, or taken in part payment car or motorcycle. James Fryer, Ltd., Commercial Road, Hereford. Trade zzz-303

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

WANTED, Singer, Calcott, Standard, or other good makes of light cars, either for spot cash or exchange. R. Bamber and Co., Ltd., 33 Liverpool Rd., Southampton. Trade 185-115

GENTLEMAN requires delivery before Whitsun of new Hillman, Calcott, Singer or Morris-Cowley. Send cash quotation and delivery date to Box No. 8208, c/o "The Light Car and Cyclecar." Trade 185-51

WANTED, 1915 Hillman, Singer or Calcott. Particulars and cash price to Box No. 8209, c/o "The Light Car and Cyclecar." Trade 185-52

WANTED immediately, modern 2-seater, not above 4-guinea tax, must pass expert examination; no dealers. Box No. 8259, care of "The Light Car and Cyclecar." 185-4457

THE PYTCHLEY AUTOCAR CO., LD., are open to purchase for cash any modern and good make of light car; special price for Standard, Calcott, Singer, and Swift light cars. 216 Gt. Portland St., W. Telephone No. Mayfair 4535. Trade 187-153

WANTED, light car, not earlier than 1914, must be in really good condition. Mansions Motor Co., Ltd., 78 York St., Westminster, S.W. Trade 191-175

WANTED. Rey's are buyers for cash of Calcotts, Singers, Standards, Perrys, Hillmans, and all good makes. Regent 4219. Rey's, 378 Euston Rd., N.W. Trade 196-779

WANTED. Rey's will give £225 for 1915 Calcotts, £175 for 1914, £210 for 1915 Singers, and £150 for 1914. Rey's, 378 Euston Rd., N.W. Regent 4219. Trade 196-178

WANTED, your second-hand car, exceptional prices paid on sight, bring or send. Percy and Co., 337 Euston Rd., London. 185-328

G. L. FRANCIS and CO. require good light cars, top prices given. Calcott, Singer, Morris-Cowley and other good makes. 22 Pantou St., Leicester Square. Trade 185-332

STRETTON and SMITH will pay top prices for Stellites, Calcotts, Singers, Morris-Oxfords, Perrys, or any other modern cars of reputed make. 23 Woodstock St., Bond St., W. Trade 185-347

CASS'S MOTOR MART require to purchase A.-C., Calcott, G.W.K., Hillman, Humberette, Morgan, Morris-Oxford, Perry, Singer, Standard and Swift light cars. Mr. Cass will personally call and inspect your car free of charge, within 150 miles. 5 Warren St., Euston Rd., W. Museum 623. Trade 185-359

LIGHT cars bought. Colmore Depot, of Birmingham, will give good cash price for good English second-hand light cars. Trade 185-379

YOU will obtain the highest price for your light car from Smith and Hunter, 15 Little Portland St., Oxford Circus. Cars sold on commission and collected any distance. 'Phone, Mayfair 1550. Trade 185-352

WANTED for commercial, travelling, second-hand light car or cyclecar, all-weather body preferred, any good make, must be thoroughly reliable and pass expert examination, no fancy prices. Simmons, Cullercoats, Gerrard's Cross, Bucks. 185-792

WANTED, 10hp Singer, 1916 model, new or nearly so. Baines Bros., Gainsborough. Trade 185-472

WANTED, 1915 Singer light car, must be in first-class order. Fullest particulars and lowest cash price to 26 Bowness Rd., Barrow-in-Furness. 185-471

1914-15 G.P. MORGAN No. 1, must be mechanically sound and bear investigation, condition of paint and bodywork immaterial, no fancy prices and no dealers, 1914 Perry considered, Bradford district. Full particulars, Box 8306, c/o "The Light Car and Cyclecar." 185-475

WANTED, 10hp A.-C., 1914 or 1915, would consider any other make. Box 8303, c/o "The Light Car and Cyclecar." 185-476

WANTED, modern light car, 2-seater, good make and condition, £65. Letters only. Wells, Fairlight, Kingston Hill. 185-477

LAGONDA, 1915, 4-cylinder, 4-seater, in part exchange for 1915 4-seater Ford, in new condition, what offers? Car and Marine Motor Co., Coke St., Harwich. Trade 185-466

LIGHT car wanted, state particulars and lowest cash price. Douglas, Westcotes Lodge, 26 Wimbledon Park Rd., Wandsworth, S.W. 185-4761

WANTED, Singer, A.-C., Calcott or Standard cars for cash, or sell on commission. Gascoigne Bower, Automobiles, 20 Cranbourn St., W.C. Trade 185-4751

MORGAN, G.P., 1914, side valves, special cams and exhaust pipes, speedometer, lamps, hand Klaxon, many spares, recently overhauled, £85. 72 Cornwall Rd., Brixton, S.W. 185-4723

We specialize exclusively in light cars and cyclecars and are always open to buy any make. Offer us what you have for sale. We please ourselves by pleasing you. The Light Car Co., 331 Euston Rd., London. 'Phone, Museum 3143. Trade 185-337

WANTED—Cars—(continued).

MONEY. Money. Money. If you want any, and have a Singer, Calcott, Calthorpe, Hillman, Baby Peugeot, Carden or Perry car to sell, call round at once, before going anywhere else. I will buy from you quicker, give you a better price, and complete the deal with less trouble than any house in the trade. Marian G. Paige, the only Lady Motor Dealer (12 years practical experience). Note new address, 177 Gt. Portland St., London, W. Tel., "Womanish, Wesdo, London." 'Phone Mayfair 2839 Trade 185-318

WANTED, Calcotts, Singers, Morris-Oxfords, Standards, Hillmans, Humberettes, G.W.K.s for spot cash, new or second-hand, good prices. Maude's, Gt. Portland St., London, W. Trade 185-295

SWIFTS, Singers, G.W.K.s, Humberettes and all standard makes of cars bought for cash, best possible prices given. 'Phone, Museum 3541. Hayes, 344 Euston Rd. Trade 185-293

WE will purchase for cash light cars of any make, good price offered, write or 'phone particulars. Elco and Co., 15-16 Bishopsgate Avenue, Camomile St., E.C. 'Phone, Avenue 5548. Trade 185-287

WANTED for cash immediately, any good make second-hand light car, distance no object. Alfred Wastnage, 65 Gt. Portland St. Mayfair 3005. Trade 190-276

LADY requires immediately modern light car. Tilly, 16 Blackstock Rd., Finsbury Park. 185-1613

LIGHT car, G.W.K. preferred, £20 down, balance £5 month, guarantor. P.; Deben Lodge, Melton, Suffolk. 185-a/712

TRAVELLER requires 2-seater Swift, G.W.K., Standard or light car of good make; state fully equipment, price, etc.; London district. A. W. Edwards, Edward House, Walthamstow. 185-4711

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WANTED, 1914 or 1915 Singer, Calcott or Standard for prompt cash. Advertiser, 240 Finchley Rd., London. 185-1590

Wanted—Miscellaneous.

THE Editor of "The Commercial Motor" will be pleased to be advised of any stocks of old type or obsolete commercial-vehicle spare parts, as well as of spares for those touring-car models which are commonly used for conversion to delivery vans, etc. Particulars should state types and principal parts available, and these will be included in the Spare Parts Bureau list published regularly in the editorial columns of "The Commercial Motor." Letters should be marked "Spare Part," and addressed to The Editor, "Commercial Motor," 7 Rosebery Av., E.C. zzz-75

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"MOTORISTS' HANDBOOK," containing 200 questions and answers; a most useful and instructive book; the novice should always keep a copy on his car, price 1s., by post 1s. 3d. The Motor Training Institute, Ltd. (Dept. D), 10 Heddon St., Regent St., W. zzz-287

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"MOTOR CYCLING MANUAL," 3rd edition, 50th thousand. The work of practical motorcyclists. The third edition of "Motor Cycling Manual" is undoubtedly the best handbook on the motorcycle extant. It has been thoroughly overhauled, greatly enlarged, and 130 new illustrations added. Covers every point in connection with the working of the engine and driving the machine on the road. Special up-to-date section on sidecars; 1s. 6d. net in cloth; 1s. net in paper, postage 3d. extra, from "The Light Car and Cyclecar" Offices, 7-15 Rosebery Av., London, E.C.

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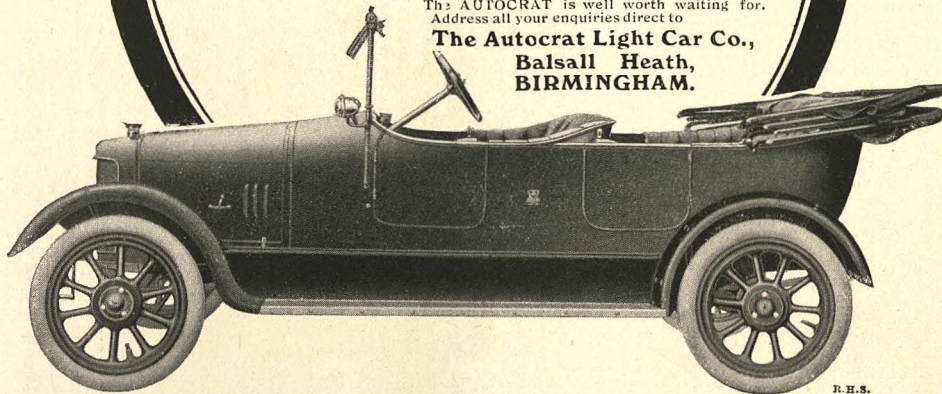
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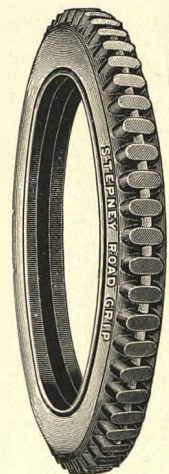
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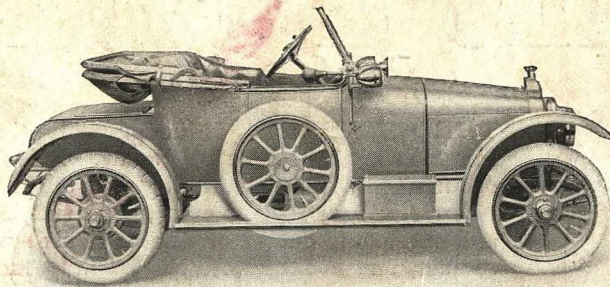
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