

London motorists anxious to test the capabilities of their cars need not take adventurous cross-country journeys to satisfy themselves. Within a ten-mile radius of Charing Cross several useful acclivities can be found. Our photograph shows Swains Lane, Highgate (1 in 7)—an excellent second gear test. Other London hills are illustrated and described in this issue this issue.

MAY 30, 1924.





ometimes motorists complain that their instructions for repairs or adjustments to be carried out to their cars are not attended to by public garages. The fauit is not always that of the garages.

Motorists are inclined to regard any mechanic or other employee whom they first encounter in a repair works as competent to receive orders direct from cus-

garage this is not so, for it is obvious that instructions must pass through the office if they are to be properly recorded and executed under supervision.

It is therefore important to ask for a member of the staff of a garage who has authority to accept instructions and advisable to see that he makes a written note of the details, so that there may afterwards be no difference of opinion as to what was ordered to be done.

Many up-to-date garages now make a point of confirming all instructions for repairs, an

a c k n o w l c d gment form being made out while the motorist is giving the order, which he is then asked to sign. This system is obviously to the interests of all concerned, for a copy of the form is retained by the garage, and there cannot be any otherecent minudow



subsequent misunderstanding. If a car has to go into a repair works and remain there for longer than a day, all loose articles should first be removed and left at home. Odd tools and other articles lying about in the dcor pockets and under the nest cushions are a source of much worry to garage proprietors; not because of pilfering, but because such oddments easily become mixed up with their own or other customers' property. The owner should, if the car is likely to be in dock for two or three days, go over all the



Motorists and Public Garages

detachable equipment that is on the vehicle with one of the garage staff, and agree a written list with him.

This system is greatly to the advantage of both parties, for not only does it enable the garage people to have everything ready when the vehicle is to be fetched away, but it also prevents the owner himself from making the mistake of insisting that a tool has been misappropriated when, in fact, the tool was not on

the car when it was sent in. Of course, any special implements, such as valve and hub-cap spanners, should accom pany the car on its going into dock. A garage proprietor has a lien on any car for work that he may do to it; that is to say, he is entitled to retain possession of the vehicle



session of the vchicle until his account has been paid. When dealing with a garage where one is unknown, the usual banker's or other substantial reference should be given, if credit is desired, so as to avoid delay in delivery when the repairs are finished.

Practically every garage concern disclaims, by notice and by conditions printed on their stationery, all responsibility for damage caused by fire, theft, or road accidents. Motorists need not worry much about this, for their own insurance policies, if those policies are on standard lines, cover these risks. If, however, a car is not insured, the owner should ask the garage management to have it covered temporarily, and should at once pay the appropriate premium; it will not be a great sum. The disclaimer does not relieve a garage proprietor of responsibility for damage caused by the negligence of his men; what is "negligence" is a question depending on the circumstances of any given case, but, roughly, it means failure to take such care of the property in his charge as a reasonable man would take of his own goods.

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1-1.	POLICY

D.A.318.

PLEASE REVER TO " THE LIGHT CAR AND CYCLECAR " IN YOUR LETTERS TO ADVERTISERS,



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MAY 30, 1924.



왏똜왌촧뺥챓હ닅쏺혂쓭닅혂븉븉븉븉쓭햜닅**뵦**렮롺뜛렮뜛렮닅닅닅닅<u>렮</u>렮닅닅닅닅닅닅닅닅닅닅 

"I-a stock SEABRODK Carfaced the R.A.C. 1,000 mile **TRIAL over the Worst HILLS and** Roads in Britain-Did You?"

28 cars entered-16 finished.

The Seabrook Record.

Reliability and Economy proved.

All Prices Guaranteed till October 1st.

**Petrol Consumption:** 39<sup>.</sup>1 m.p.g. **Oil Consumption :** 2,000 m.p.g.

3

Speed round Brooklands on completion of Trial— 4891

Seabrook 9'19 (Occasional Four) - Price £250

This matter, in so far as it refers to an R.A.C official trial, is approved - H.H.G.

New Model 12/24 SEABROOK DE LUXE, with front wheel brakes, full cantilever springs, right hand gear change. 3-piece screen, antique English leather upholstery, Michelin Comfort tyres, etc. £325 Without front wheel brakes ... £295

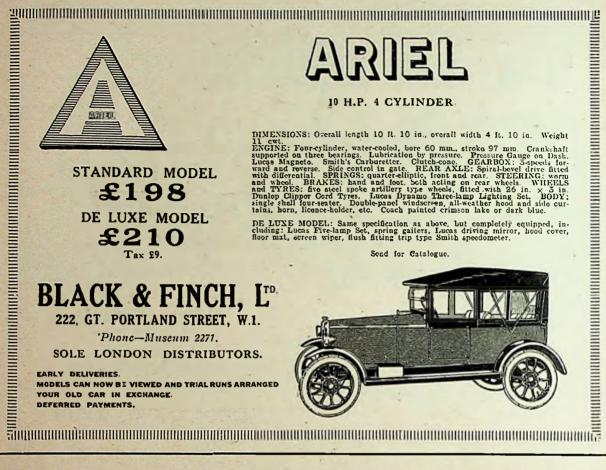
SEABROOK BROS. (Est. 1896), 57, Great Eastern Street, London, E.C.2. . H. MORRIS, Celia Street. BURNLEY Auto Express Engineering & Transport Co., 160, Woodhouse Lane. LEEDS 꼸챵춙쭕춯섉섉똜똜춣춙炎쓝쓝윩윩쓹쓝쓝쓝쓝쓝쓝쓝쓹쓝쓹쓝윩윩쓹쓹쓹쓹쓹쓹쓹쓹쓹쓹쓹쓹

FACILITATE BUSINESS, and ensure prompt allention to your enquiries, by mentioning "The Light Car and Cyclecar" when writing to advertisers. They will appreciate it.

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MAY 50, 1924.







WHEN REPLYING to advertisements, mention "The Light Car and Cyclecar." It helps the advertiser and you, and assists the small car movement generally.

A



### —that is what it costs to run the "ARIEL TEN"

Not the least of the many "ARIEL" advantages is its low running costs, which place it well within the reach of the amily man of moderate means. The "ARIEL TEN" is a most economical car, yet the service it affords compares very favourably with that of the larger and higher priced cars.

PETROL	45 m.p.g.
OIL	1,500 m.p.g.
TYRES (Dunlop)	10,000 miles.

standard model £198

de luxe model £210

> Tax £9. Lucas Electric 'tarter £12 extra to either model.

Send for Catalogue. ARIEL WORKS LTD., Selly Oak, BIRMINGHAM

READERS, NOTE.—It assists the small car movement and the advertiser, and ensures you prompt attention, to mention The Light Car and Cyclecar" in your enquiries.

C.W.

MAY 30, 1924.



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## PROTECT your passenger with a "STARLING REAR SCREEN."

It will fit your car, no matter what the size or make.

Your friend will enjoy the open road behind a "STARLING," because it gives complete protection and a clear view. Order at once, you can have immediate delivery. All that is necessary is to name the make of your car. A STARLING, which will only take you a few minutes to fit, will then be despatched to you per return.

We are confident you will be pleased with the STARLING, therefore. we invite you to try one at our expense, ou our SATISFACTION OR CASH REFUNDED principle.

The "V" 4-Pauel Celluloid Screen with Standard Fitting.

PRICE  $\pm 3:7:6$ With Sliding Fitting 10/- extra.

Supplied with Black or Khaki Apron.

The " Empire " 6-Panel Glass Screen is scientifically constructed for strength and gives added distinction to any car when fitted.

PRICE  $\pm 12:12:0$ -Nickel or Black Finish.

Our Illustrated Booklet will tell you all about our Screens, it is yours for the asking.

THE STARLING CO., LTD., "L," Empire Works, Highgate Road, BIRMINGHAM. DISTRIBUTORS:

Hobday Bros., Ltd., LONDON. S. E. Whiteley Ltd . MANCHESTER. The Sheffield Subbly Co., Ltd., SHBFFIELD. Fred. W. Murray. GLASGOW.

Timson Bros., NEWCASTLE ON.TYNE.



Front seat of Light Car converted into pneumatic cushion on the Float-on-Air (patent) system at a cost of £3

> Pneumatic upholstery gives luxury to Light cars that is only equalled by Balloon Tyres But look at the difference in cost. You can convert existing seats on the MOSELEY

### **UAT-ON-AIR** (patent)

System for £3 and upwards according to size. But it must be MOSELEY Float-on-Air. which is the only tubular system working at low pressure, thus giving perfect comfort.

**Combine MOSELEY Float**on-Air Cushions with

# MOSFI CABLE TY

AVID MOSELEY & SONS. LTD.

Branches at :

BIRMINGHAM.

and you have perfection of comfort with minimum trouble and expense.

Illustrated pamphlet on application.

MANCHESTER.

GLASGOW.

LIVERPOOL.



LONDON

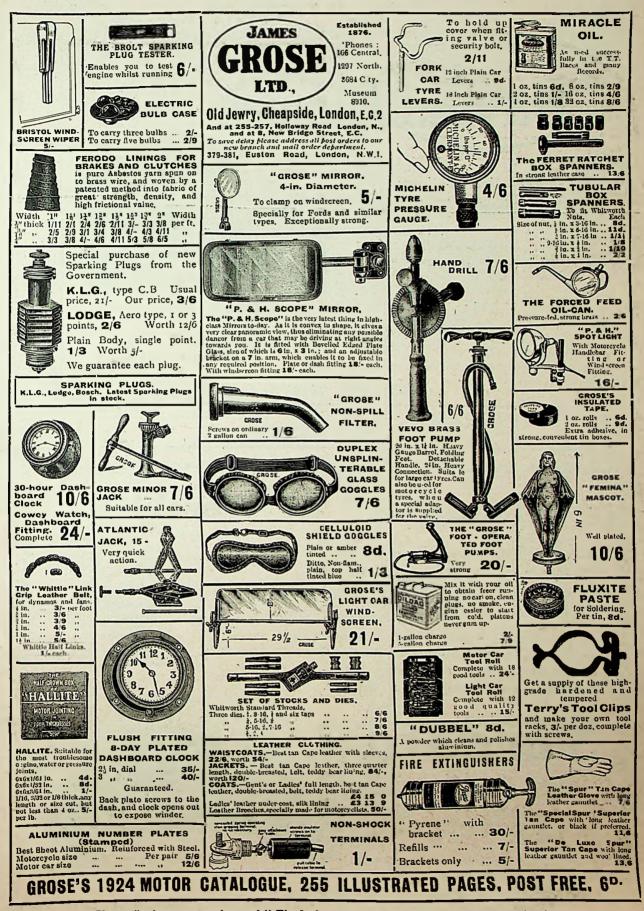
ARDWICK

NEWCASTLE-ON-TYNE.

DO NOT HESITATE to send your enquiries to " The Light Car and Cyclecar."

MAY 30, 1924.

### THE LIGHT CAR AND CYCLECAR



The small advertisement columns of "The Light Car and Cyclecar" form a unique mart for the disposal of all goods of interest to small car users.

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11 h.p. "Canley" 2-scater, price





Dunlop Tyres. Send for particulars. The Standard Motor Co., Ltd., Coventry, London Showrooms: 49, Pall Mall, S.W.1.

Seaters

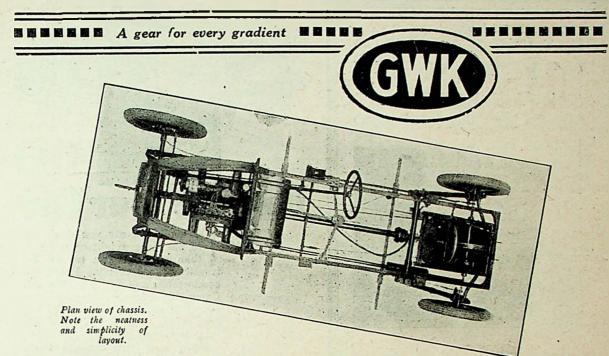
"COUNT · THEM · ON · THE · ROAD.

Seaters

MENTION of "The Light Car and Cyclecar" when corresponding with advertisers assists the cause of economical motoring.

#### MAY 30, 1024.

### THE LIGHT CAR AND CYCLECAR



# Is gear changing your greatest difficulty?

### **PRICES**:

10.8 h.p. Two-Seater<br/>Standard Model ...200 gns.10.8 h.p. Two-Seater<br/>Coupe Model ...250 gns.10.8 h.p. Four-Seater<br/>Standard Model ...225 gns.10.8 h.p. I'our-Seater<br/>De Luxe Mode ...255 gns.

Synchronised Four-Wheel Brakes on "H" Models, £10-10-0 extra. It is most probably. Every owner of a G.W.K. is an expert, because the operation is so simple —a novice can make a clean, noiseless change at the first attempt. There are other charms, too, of friction disc transmission as embodied in the G.W.K., which must be experienced to be appreciated. Hill climbing has no terrors for the G.W.K. owner, because there is a gear for every gradient. There are no teeth to crash, no clutch to burn out. Think what

this means when you are touring in unknown country. The G.W.K. is the "different" car —therein lies its fascination.

> G.W.K. Ltd. (Successors to G.W.K.(1919), Ltd.)

MAIDENHEAD Telephone · Maidenhead 634, London Distributors : W. O. NICHOLL, LTD. 50 54, Whiteomb Street, W.C.3.

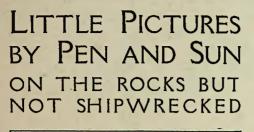
> Agents W. H. DALTON Ducester News, Paddington, W.2. R. TWELVETREES,

WORKS

CORDWALLES

TO THE READER.—By mentioning "The Light Car and Cyclecar" when replying to advertisements, the progress of the small car movement will be assisted.

MAY 30, 1924.





This delightful little snap at Brimham Rocks shows the extraordinary utility of the JOWETT.

It can be handled equally well by my lady as by her lord, who "pays the bill."

And the paying will not place his finances "on the rocks."

No other can be run for less. BUY HER ONE



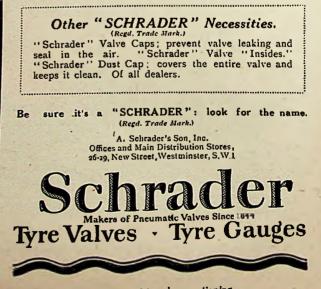
ALO



I N loading a car you don't try to put more weight on one side than another. You try to distribute the load evenly. It is more comfortable, and better for the car. Carry this argument to your tyres. When inflation is uneven, when one tyre is too hard and another too soft, the body balance is upset, steering is more difficult, and the tendency to skid when brakes are applied is greater. Apart from these disadvantages you lose many miles of tyre wear through incorrect inflation.

Balance your car by making sure that the near side tyres are inflated to the same pressure as the offside. You can do this with the "Schrader" Tyre Pressure Gauge. This records the air pressure instantly in lbs. per square inch and you can tell in a moment if your car is balanced. You get increased riding comfort and maximum tyre mileage.

The price of the "Schrader" Tyre Pressure Gauge is 6/2. From all dealers.



FACILITATE BUSINESS, and ensure prompt attention to your enquiries, by mentioning "The Light Car and Cyclecar" when writing to advertisers. They will appreciate it.



BRITISH EMPIRE EXHIBITION

SEE OUR EXHIBIT in the MOTOR&CYCLE

SECTION WEMBLEY April October

1924

EXHIBIT Nos. 116-117

THE OWNER OF THE OWNER OWNER

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**CONSISTENT RELIABILITY** 

# The R.A.C. Small Car Trials

in

### gained for the

12/24 h.p. Lagonda Allweather Saloon Model "R"

# A SILVER MEDAL

### in Class "G."

The Lagonda which was the only Saloon Model entered in the Trial, put up a wonderful all-round performance with a speed of 48.51 m.p.h.—a petrol consumption of 34.9 m.p g.—an oil consumption of 5 pints 13 ounces, and NO LOSS OF MARKS FOR RELIABILITY. In fact, "The Lagonda Saloon ran like clockwork throughout the Trial."

Vide " The Light Car and Cyclecar."

11

Prices from £295

Fall particulars from an Action Agency or LAGONDA LIMITED, 195, Hammersmith Road, London, W.6 And at Staines, Middlesex.

WHEN REPLYING to advertisements, mention "The Light Car and Cyclecar." It helps the advertiser and you, and assists the small car movement generally.

MAY 30, 1924.



READERS, NOTE.—It assists the small car movement and the advertiser, and ensures you prompt altention, to mention "The Light Car and Cyclecar" in your enquirtes.

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### A Story of Satisfaction from THE TENNIS COURT.

WITH a SINGER at my service, I have no cause, these days, to dress in haste, arriving hot and flurried on the courts, completely 'off' my game. No longer does a foot-weary enthusiast tramp home tired and weary after many 'hot' sets. All that sort of thing is relegated to the past. The service of the SINGER makes all the difference to my own 'service.' No 'faults' with either of us. She's 'game' for anything. A 'deuce' of a fine car. Time was when sodden courts after rain took all the zest from the day, but now, whilst courts are drying, we pack up our troubles in the SINGER and go off for a joy-ride, seeking health and pleasure in a different way. Plenty of room for the 'mixed double,' we're a happy, comfortable, contented lot, serene in the service of the SINGER."

### Here's a Singer to suit every taste.

10 h.p. Popular Two-Scater, £200. 10 h.p. Popular Four-Scater, £210. 10 h.p. De Luxe Two-Scater, £225. 10 h.p. De Luxe Four-Scater, £235. 10 h.p. Saloon, Weymann Body, £275. Rotax Lighting and Starting Equipment. All Singer cars can be purchased on Deferred Payments through any Singer Agent, Illustrated Catalogues and full particulars sent with pleasure.

SINGER & CO., LTD., COVENTRY. London Showrooms: 17, Holborn Viaduct, E.C.1 London Service Depot: York Works, Brewery Road, Holloway, N.

The Story of the Singer is always a Story of Satisfaction.

DO NOT HESITATE to send your enquiries to "The Light Car and Cyclecar."

The Specification

The Specification comprises :-British Anzan' 4-cyi. N96 c.c. Engine, 12 v. Starting and Light-ing Set (5 lamps), Speedometer, 8-das Clock, duplex front spring-ing, Spring Gaiters, Electric Horn, Crouch Patent Clutch, Compen-seted Braking. 3-panel Screen, adjustable Screen to dickey, Doors both sides. Best English leather upholstery, exceptionally fine coachwork.

MAY 30, 1924.

TO the man who "knows a good thing when he sees it," the

14

TWELVE | THIRTY h.p. at £295

is irresistible. You cannot buy more for its is irresistible. Tou cannot buy indic to the price of £295—you cannot get in any other car for the money, or anything near it, the "life," the real power, the refinement, or the quality, or the completeness in every way of the CROUCH. Compare the Crouch with anything you like at the same pilce, or more. There can be no more decisive test—and you'll be bound to admit that the Crouch comes out of it with more than oredit. Let us put comes out of it with more than credit. Let us put you in touch with the nearest CROUCH agent.

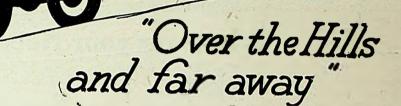
**CROUCH MOTORS** (1915), Ltd. **Tower Gate Works**. COVENTRY Coventry 819. 



The small advertisement columns of "The Light Car and Cuclecar" form a unique mart for the disposal of all goods of interest to small car users.

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THE

BRITISH EMPIRE EXHIBITION SEE OUR EXHIBIT No. 123-4 in the MOTORS CYCLE SECTION PALACE OF ENGINE WEMBLEY April-October 1924

MODELS AND PRICES, 10 h.p.2-seater with Dickey or "Chummy" \$235

10 h.p. <sup>4</sup>Coupe- **£285** Cabriolet - - **£285**  SWIFT OF COVENTRY LTD., London Depot: 133, Long Acre, W.C.2. 15-17

is renowned for its long life and trustworthiness under the most arduous conditions. Thus it evidences the excellent design, workmanship and material devoted to it. Some of the pre-war two-cylinder Swifts are still giving every satisfaction in strenuous daily service.

Here is what the owner of one of them writes :-

### Buckinghamshire, 28/4/24,

"I must again thank you for having met me so generously in the matter of spare parts for my old Swift car. I was informed afterwards that the parts were not really required as the old ones only required readjustment. Though I had visioned a new Swift car for this year I am afraid that the Herculcan strength, wonderful longevity and continued reliability of my cld car will not allow me to throw over its services while it still promises to go on and on. Long before I had it, it apparently belonged to some vigorous Scot in the Highlands, and even now it goes up freak hills on top gear and the monotonons consistency of its two-cylinder beat strikes shame into the hearts of those modern car owners who happen to be BEHIND!"

The 1924 Swift Models are better value than ever. May we send you the new Swift Art Catalogue?

Manufacturers :

Y LTD., COVENTRY Dublin Depot : 15-17, South King Street.

MENTION of "The Light Car and Cyclecar" when corresponding with adverlisers assists the cause of economical motoring.

MAY 30, 1924.



The car that wins all the prizes

17

what about the R.A.C. Small Car Trials? which entailed fines of hundreds of pounds for the slightest deviation from standard.

In these Trials the RHODE proved once again its 100 per cent. efficiency, for with only two cars entered it gained

# Class C (£170-£205) Silver Cup and Gold Medal (only car to finish). Class D (£205-£240) Gold Medal

(first in merit of the only two Competitors who finished out of eight!) and petrol consumption - in Class C 36.8 m.p g.;

and in Class D 39 4 m.p.g. Now it's time you looked into this. Let your Rhode Agent give you a demon-stration. His name is on this list.

THE LIGHT CAR AND CYCLECAR

MAY 30, 1924.

RHODE MOTOR Co. TYSELEY. BIRMINGHAM

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FACILITATE BUSINESS, and ensure prompt attention to your enquiries, by mentioning "The Light Car and Cyclecar" when writing to advertisers. They will appreciate it.

MAY 30, 1924.





WHEN REPLYING to advertisements, mention "The Light Car and Cyclecar." It helps the advertiser and you, and assists the small car movement generally.



SPECIAL GOLD MEDAL for CONSISTENT RUNNING HILL CLIMBING and CONDITION after TRIALS also SILVER MEDAL in Class E.



The Hall Mark of Quality.

BRIEF SPECIFICATION. 4 cylinder engine  $63 \times 100$ . Thermo - syphon cooling; pump lubircation; magneto ignition, electric starting and lighting, 5 lamps, 3 speeds, reverse; cone clutch. Right hand gate control;  $700 \times 80$ cord tyres; spare wheel and tyre, tools, side curtains opening with doors, elc.

This is what the Lea-Francis did: Made fastest time of the day irrespective of class in 10 out of 11 officially timed hill climbs.

55.55 miles per hour at Brooklandshighest speed in Class E.

Petrol consumption, 35.4 m.p.g.

Lubricating oil consumption, 1,600 m.p.g.

Under a Bond of £250 we guaranteed the R.A.C. that this car was in every detail even to carburetter setting and engine timing—exactly similar to that supplied to every purchaser of this model. Just one of our ordinary production cars.

At the end of the Trials the car was in perfect condition—nothing broken, nothing loose, nothing lost.

### LEA - FRANCIS QUALITY COUNTS.

Exhibit No. 280, Bay 32, Motor & Cycle Section, Palace of Engineering, Brilish Empire Exhibition.

> READERS, NOTE.—It assists the small car movement and the advertiser, and ensures you prompt altention, to mention "The Light Car and Cyclecar" in your enquiries.

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### THE LIGHT CAR AND CYCLECAR

MAT 30, 1924.

### **MAXALDING MAKES YOU FIT WITHOUT DRUGS OR APPARATUS READ BELOW THE ACTUAL WORDS OF A FEW OF THE THOUSANDS** OF CASES THAT HAVE BEEN TREATED SUCCESSFULLY BY POST.

Age 41. "Constipation cured. Sleep more refreshing, and I do not feel fatigued after undue strain as I used to."

Age 23. "Indigestion has ceased ; appetite increasing. I am beginning to lose that iceling of fear that I experienced so much. The head pains have entirely vanished."

Age 28. "Development is improving rapidly; mental concentration good; insomnia, depres-sion and languor vanished and replaced by almost dynamic energy. You have my eternal gratitude."

Colonel, age 44. "I consider the exercises as laid down by you superb for the body. I have discussed your extraordinary system with my officers, and some of them propose enrolling as your students. They are interested in the wonderful difference in me already."

(1) I deeire '~ be cured of INDIGESTION, CONSTI- PATION, NERVOU · DEBILITY, NEURASTHE IA, INSOMMA, WE K LUNGS, SUSCEPTIBUITY TO COLDS., RHEUM TISM, LUMBAGO, SCI WHEN STESTI-SLUGGISH LIVER, DIZCHEDPMENT, SLOG STLF-CONFIDENCE, WEAK STDMACH, BILIOUSNESS, LA G.OR, HEADACHES, OR
1 desire to secure great Nervous Energy and Vitality.     1 desire to secure exceptional Strength and Development     Name

Addreu

Occupation

A SKILLED MAXALDITE. Age 32. "My confidence which was almost nil is now great. I have not had a recurrence of mental depression for weeks. My Nervous system, to my great joy, is getting stronger every day. Sleep better, health bettor, and step more buoyant."

Age 75. " I have not that tired feeling that I used to have when walking. I am feeling benefit from Maxalding."

Age 39. "I have put on muscle and weigh 16 pounds heavier. Reserve energy has greatly increased, and I can indulge in my favourite sports without any ensuing feeling of exbaustion."

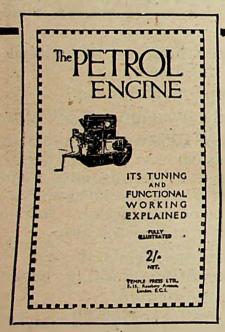
Age 52. "I feel a lot lighter on foot and indi-gestion is quite gone. A flannel band I used to wear round my waist now falls over my hips, so you can judge there is a difference."

### YOU CAN FIND OUT ALL ABOUT MAXALDING

and its application to your case by writing a letter, or striking out the unnecessary items on the coupon. adding your name, address, age and occupation, and posting it to-

### Mr. A. M. SALDO, 40P, PALL MALL, London, England.

BY AN EARLY POST OR MAIL, you will recoive an ILLUSTRATED EXPLANATORY BOOKLET, Iogether with Mr. Saldo's personal diagnosis of your case.



Ase.

PRICE Z/- NET. Oblainable from all booksellers or direct from the publishers, 2/3 post free.

## UNIQUE work, dealing in simple

A language with the secrets of engine tuning for speed, power and economy, and the tuning of carburetters of all makes, and for any purpose.

PETROL ENGINE

A Manual of Motor Mechanics.

THE

The functional working of an internalcombustion engine is also dealt with in a complete and concise manner.

Send for this free booklet containing useful information, and giving particulars of many other books on motoring.



TEMPLE PRESS LTD., 7-15, Rosebery Avenue, London, E.C.I. Wholesale Agents: E. J. Larby, Ltd., 30, Paternoster Row, E.C.4

DO NOT HESITATE to send your enquiries to "The Light Car and Cyclecar."

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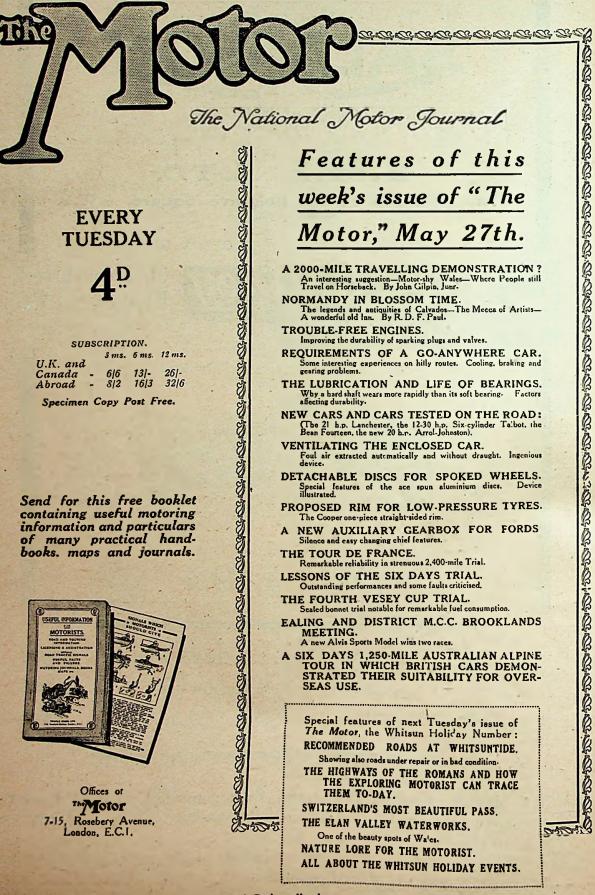


EVERY MODEL (except the Grand Prix, supplied without starter) is equipped with Starting, Lighting, Speedometer, Clock, 5 Wheels and 5 Tyres.

EVERY MODEL can be supplied on Deferred Payment and any Car or Motorcycle taken in Part Exchange.

> The small advertisement columns of "The Light Car and Cuclecar" form a unique mart for the disposal of all goods of interest to small car users

MAY 30, 1924.



MENTION of "The Light Car and Cyclecar" when corresponding with advertisers assists the cause of economical motoring.

Timken Axles are made in all sizes for passenger cars from 1-12 H.P. to the larger 7-seater, and for Com-mercial Vehicles from 10 cwt. to 6 tons.

### TIMKEN AXLE PRIMER A non-technical treatise on the design and construction of axles, sent free on request.

# The light car-a giant's hammer

F the axles do their job, stand up to the hammerings of the road, the rest of the car will take care of itself. In a light car the axle must be the sturdiest unit of the whole, since it must bear, practically unaided, the stresses and strains of road shocks.

That is why British manufacturers of Light Cars are adopting the new Timken Light Car Axle. This axle has been specially designed for its job; built from the right materials by the right methods. A worthy successor to the long line of good Timken Axles, it is main-taining, it will continue to maintain, the tradition which has preserved for twenty years the unbroken leadership of Timken-built Axles.

Timken Axles for Light Cars are designed for Standard Wheel Tracks both 4 ft. and 4 ft. 8 in., and to take engines with cylinder capacity up to 1,700 cubic centimetres. They are made suitable for cars with four-seater bodies, having a total weight (less passengers) ready for the road up to 16-17 cwt.

Rear Axles have pressed Steel Banjo Housing-the large diameter of the casing ensuring a rigid back axle of exceptional sturdiness with a large margin of safety. Fitted with Timken Patent Duplex Internal Brakes. There is easy access to the spiral bevel gears and the differential. Equipped throughout with Timken bearings. The use of Timken bearings on the front axle hub means that heavy loads due to steering thrusts, etc., are ideally met.



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TIMKEN AXLES

ELS DETROIT ELECTRIC DORRIS IOKA (JAPAN).

DLEY-KNIGHT 1

KISSEL LAFAYETTE LEACH-BILTWELL LIBERTY LINCOLN (U.S.A.) LINCOLN (AUSTRALIA) MCGARLAN

ON -

GE JEWETT

RLESS MONT MIER STON

RESIL. IDDLE IDDLE ROCK FALLS. ROCK FALLS. ROCK FALLS. ROCK FALLS. STERES. STERES. STERES. STERES. STERES. STERES. STERES. STEVENS. DURYEA STEVENS. STEV

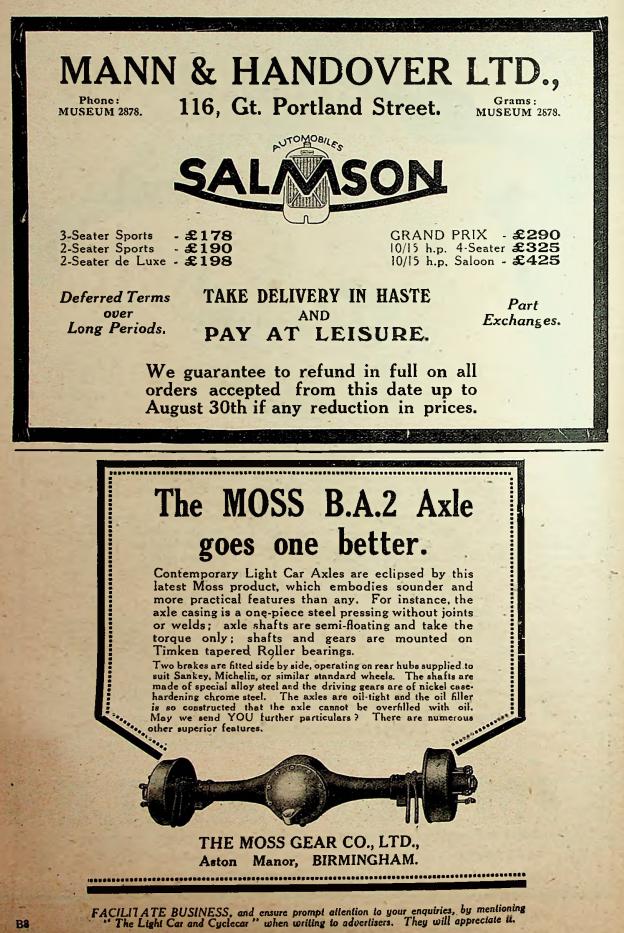
WINTON YELLOW TAXICAB

AND OTHERS



TO THE READER.—By mentioning "The Light Car and Cyclecar" when replying to advertisements, the progress of the small car movement will be assisted.

MAY 30, 1924.



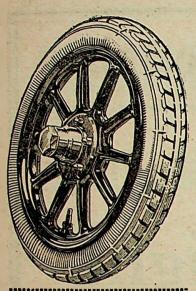
MAY 30, 1924.

THE LIGHT CAR AND CYCLECAR



WHEN REFLYING to advertisements, mention "The Light Car and Cyclecar." It helps the advertiser and you, and assists the small car movement generally.

MAY 30, 1924.



26

We are exhibiting at the BRITISH EMPIRE EXHIBITION WEMBLEY, APRIL to OCT. LONLON. 1994. Brhibit No. 13, Motor & Cycle Section. Our Stand Phone No. will be Wembley 2000 SANKEY wheels PATENT ALL STEEL

are the only wheels which are stamped bodily out of sheet steel in two complete sections, rim and all. These sections are then welded unbreakably together, so giving maximum strength with minimum weight. For perfect wheel service specify Sankey Wheels. Every genuine wheel is stamped "Sankey Patent."

SANKEY WHEELS FOR LOW PRESSURE TYRES. We are now manufacturing Sankey Patent' Steel Wheels in the following sizes:---

715 × 115 73

**730 × 130 775 × 145** 

Owin' to the unprecedented demand we have been unable until now to keep pace with the flood of orders with which we were inundated. give immediate delivery of these wheels to suit all cars.

JOSEPH SANKEY & SONS, LTD., HADLEY CASTLE WORKS, WELLINGTON LONDON OFFICE : Mr. R. JENKINS, Ulster Chambers, 168, Regent Street, W.1.

**IVIV** 

# **A NEW EDITION**

ENLARGED, RE-WRITTEN, AND WITH OVER 100 NEW ILLUSTRATIONS.

A compact encyclopædia of electrical information for motorists, clearly explaining the principles of all ignition systems, starting, lighting, and road-warning equipment, which is practically standard on all cars to-day, and, in addition, describing and illustrating various modern auxiliary appliances.

This new edition of "THE MOTOR ELECTRICAL MANUAL" has been entirely re-written and brought up to date, and contains upwards of 100 new illustrations.

It provides all the electrical information the motorist requires for practical purposes, and no previous knowledge of the subject is necessary to understand it.

TEMPLE PRESS LTD., 7-15, Rosebery Avenue, London, E.C.I. Wholesale Agents-E. J. Larby, Ltd., 30, Paternotter Rew, E.C.4. PRICE 2/6

Of all principal booksellers and bookstalls, or direct from the publishers, 219 post free. Send for free Booklet giving particulars of many other books on moloring



READERS, NOTE.—It assists the small car movement and the advertiser, and ensures you prompt attention, to mention "The Light Car and Cyclecar" in your enquiries.

/IVINL

MAT 30, 1924.

THE LIGHT CAR AND CYCLECAR



MAY 30, 1924. -



# R.A.C. SMALL CAR TRIALS

# Special GOLD MEDAL was awarded for General

Performance to the LEA-FRANCIS fitted with the



# CARBURETTER

You can have a Zenith on a Month's trial and test its capabilities for yourself.

Send for particulars to ZENITH CARBURETTER Co., Ltd., 40-44, Newman Street, W.1. Telephone Museum 4812-4813-

MENTION of "The Light Car and Cyclecar" when corresponding u ubadverlisers assists the cause of economical moloring.

MAY 30, 1924.





VESEY CUP TRIAL (Provisional Results)

# 4 GOLD MEDALS won by four "Austin Seven" Cars-

# 100<sup>°</sup>/. Success

The course comprised two hundred and eleven arduous miles. By the rules of the trial fuel tanks were sealed and engine bonnets locked throughout. The slightest trouble would have meant failure, but Austin quality won through in faultless fashion.

All made clean and speedy ascents of **BWLCH-Y-GROES**—on which many other cars failed.

BUY AN AUSTIN AND BANISH CARE.

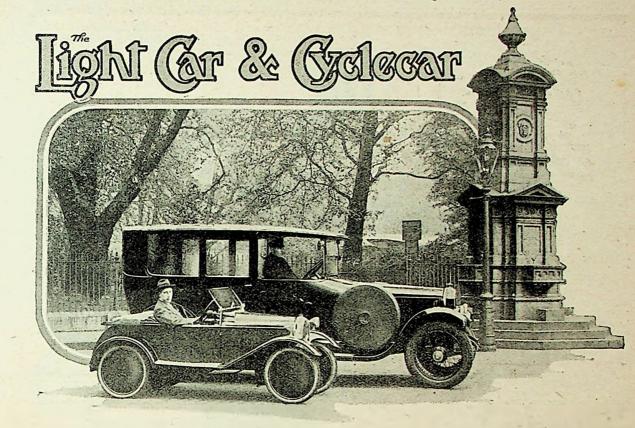
### The AUSTIN MOTOR CO., Limited LONGBRIDGE - - Near BIRMINGHAM. LONDON

Showrooms, Service Depot and Hire Department: 479-483, OXFORD ST., W.1 (near Marble Arch).

TO THE READER.—By mentioning "The Light Car and Cyclecar" when replying to advertisements, the progress of the small car movement will be assisted.

BI4

"The Light Car and Cyclecar," May 30, 1924.



**EXTREMES IN PRICE** SIZE, ECONOMY AND COMFORT

Although so widely separated on the score of price, size, economy and comfort, the luxurious saloon car and the tiny New Carden have much in common. From the point of view of appearance the smaller car—one of the cheapest two-seater vehicles on the British market—can hold its own.

### Notes, News and Gossip of the Week.

### The R.A.C. Trials.

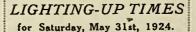
As announced exclusively in The Light Car and Cyclecar last week, D. Chinery (Gwynne) was the winner of the £250 cup offered for the most meritorious performance in the R.A.C. six-days' trials. The complete official list of awards gained by cars with engines of less than 1,500 c.c. capacity is given in this issue.

### Supercharging in Italy.

It is generally believed that Conti-nental manufacturers have considerable faith in supercharging devices, but we understand that, so far as Italy is con-cerned, the Fiat Co. is the only promi-nent manufacturor expressing a direct interest in these devces.

### For Theatre-goers.

In response to continued demands, we have reprinted The Light Car and Cyclecar "London Theatre Guide," which, in addition to a complete list of which, in addition to a complete list of theatres and a block plan showing their locality, gives a detail list of garages in the West End area which cater especi-ally for theatre-going motorists. Copies of the guide will be sent free on receipt of a stamped and addressed envelope, and quantities up to 50 will be forwarded to garages, etc., on application. No. 601. Vol. XXIV.



Edinburgh 10.13 Liverpool ... 9.57 Bristol ... 9.44 London .. 9.34 Newcastle 10.0 Birmingham 9.47 Dublin ... 10.10

Lighting-uptime (rearlights) in England, Wales and Scotiand is half an hour after sunset, and in Ireland one hour after sunset.

Moon, New Moon, June 2nd.

Thou Shalt Not Covet! Speaking of motorcars, Lord Sumner is reported to have said recently, "I doubt if any invention has done more to sow, to water and to ripen a feeling of jealousy between classes." But surely this applies to every luxury beyond the reach of the multitude. Does not a cigar "ripen a feeling of jealousy" in the heart of the vagrant collector of cigarette ends?. And do not ecstly furs and jewellery arous feelings of envy among those who cannot afford them? Of course they do, but are not such feel-ings often akin to ambiticn? Scottish Show Date Altered.

It has been considered in some quarters that the Scottish Motor Show, held in January, comes too late, and, now that the Olympia Show has been advanced to early October, it is felt that the interval between the two national Shows is too great; therefore, the date of the next Scottish has been fixed for November.

### Lower Tax Next Year?

Lower lax lNext Year? Nearly 100 Members of Parliament, -who are also members of the A.A., met-at dinner in the House of Commons re-cently; all political parties were well represented at the gathering. A dis-oussion took place on the question of motor taxation, the trend of the speeches indicating that the basis of taxation should be altered from the present system to a duty on motor spirit but it was to a duty on motor spirit, but it was recognized that a radical change such as this cannot be brought about at pre-sent. It was, however, the view of nearly all the speakers that light pneumatic-tyred vehicles were at present over-taxed, and that they considered they were justified in asking for the inclusion in the Finance Bill of a re-duction for next year of 25 per cent. of the existing tax.

### One Guinea Offered.

Our Motor Travesties competition, in which readers are invited to supply the missing title of the sketch representing a well-known motor term is catching on. Instead of the artist's original drawing, we now offer a weekly prize of one guinea to the sender of the first postcard bearing the correct solution (beginning with No. 14). No solutions are judged before 11 a.m. on the Saturday morn-ing immediately following publication.

Royal Air Force Pageant. Readers are reminded that the fifth Royal Air Force Pageant will take place at the London Acrodrome, Hen-don, on Saturday, June 28th. This year it is hoped to introduce new features, which should make the display even more comprohensive and attractive than on previous occasions. Presumably there will be ample accommodation for there will be ample accommodation for CATS

Air Cooling in the Tropics. Mr. Tet Riley, the youngest of the well-known Coventry motoring family, writes from the Gold Coast, where he has writes from the Gold Coast, where he has been stationed for some time past, and says-how much he has been impressed by the performance of air-cooled cars in the district. The water-cooled cars apparently have to stop about every 50 miles to replenish their radiators, which are then nearly at boiling point, while the little air-cooled Rover twins go plug-ging along merrily without any trouble whatever.

### Great Dolomite Road Open.

The London offices of the Italian State The London offices of the Italian State Railways and State Tourists' Depart-ment announce that the Great Dolomite Road (from Bolzano to Karersee, Cortina d'Ampezzo and Dobbiaco, about 90 miles), passing through the heart of the fanous Dolomite country, is now acces-sible for motor traffic. The snow cleared away about a fortnight earlier than usual, on account of the warm and sunny conditions that have mergailed for sveral usual, on account of the warm and sunny conditions that have prevailed for several weeks past. It is anticipated that the Stelvio Pass (the highest road in Europe, 9.051 ft.) will be open by the middle of June.



MOTOR TERMS TRAVESTIED. No. 14.-Query: What is the Term ?

We offer a prize of One Guinea for the First Correct Solution. See an accompanying paragraph.

### (The solution to last week's picture will be found in " Around the Trude.")

### Trials Inquiry.

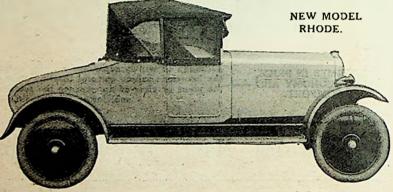
We understand that a committee has been appointed by the Gloucestershire Standing Joint Committee to inquire into the question of reliability trials, hill-climbs, etc., held on public roads.

### Light Cars at Clipstone.

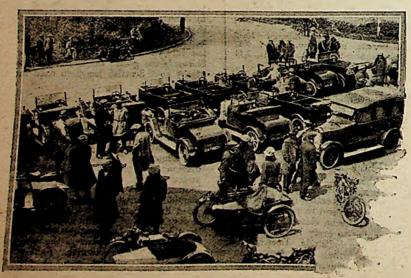
Two Morgans, driven by R. Blake and J. Silvester, competed in the A.-C.U. and J. Silvester, competed in the A.-O.D. Speed Trials organized by the Hudders-field Club at Clipstone Drive. They were successful in gaining first and second places in the passenger machine "General" class up to 1,100 c.c., the speeds being 76 m.p.h. and 75 m.p.h., while Silvester also gained third place in the Mansfield Club Championship.

### The Most Northerly Club?

A new association, known as the North of Scotland Motor Union, has been formed for the purpose of holding trials, competitions, etc., amongst motorists in the North. The Union is made up of a number of affiliated clubs, and the president of the Union is the Hon. James Stuart, M.P. Full details can be obtained from Mr. William Law, Junr., 87, High Street, Elgin, N.B.



Generously equipped, this new Rhode two-seater and dickey body, mounted on an 11 h.p. chassis, will sell at £235.



**CLYNO OWNERS** "GET TOGETHER."

B16

On Sunday last Stonebridge was the scene of a On Sunday last Stollebridge was the scene of a very successful rally of Clyno owners and their cars. Altogether there were twenty eight Clynos present. The example might be copied.

### Insuring the Car.

The Royal Automobile Club is now in a position to effect insurances with all the leading companies, and every assist-ance will be given to members in carry-ing out the necessary negotiations. The insurance department is situated in the new touring offices at 83, Pall Mall, London.

### Skegness Speed Trials.

Five challenge oups are among the 11 trophies offered in connection with the Skegness neck-and-neck motor races, to beighess neck-and-neck motor races, to be held on the foreshore on Wednesday and Thursday, June 18th and 19th. There are classes for touring and sports models up to 1,500 c.c., up to 3,000 c.c. and also unlimited. Both scratch and handicap events will be arranged. We learn that the course is in even better learn that the course is in even better trim than last year, and there is suffi-cient room for four cars to run abreast. The event is being promoted by the Skegness Advancement Association. Entries close on June 4th, and forms can be obtained from the secretary. Mr. R. J. G. Dutton, Council Offices, Skegness.

### Petrol Tax in Sweden?

The Swedish Government has introduced a Bill proposing a tax on motor spirit. If the Bill becomes law the re-venue thus raised will be used for road improvement.

### Developing the Social Side.

Endeavours are being made by the Junior Car Club, South-West ern Centre, to hold a social func-tion at the White Horse Hotel, Romsey, after the annual climb at Dean Hill, which takes place on June 14th. Dinner will probably be followed by music and dancing, and members desiring tickets are invited to communicate with the hon. secretary, Mr. T. G. Hay-ter, Union Bank Chambers, High Street, Southampton.

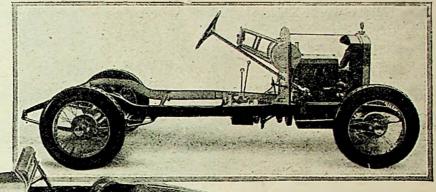
#### The Garage Problem.

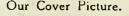
Motoring house hunters will be interested to know that ample provision will be made on the Lauglield Estate, Naze-ing, Broxbourne, for soace beside each house to accommodate \_ mage. The 

### Tyre Tester's Mileage.

41

Of the six mon in charge of the tyre-testing fleet of cars attached to Fort Dunlop, (ne has covered 93,085 miles in the 17 months between November 1st, 1922, and March 31st, 1924.





The picture on the cover this week depicts Swain's Lane, near the Old Gate House, Highgate. The two cars shown are both staff cars of The Light Car and Cyclecer, that in the foreground being a 12-24 h.p. two-seater Lagonda and the following car being a 10 h.p. de luxe two-seater Eric-Campbell. Wo hope shortly to be able to publish our impressions of the performances of these two cars during the first 5,000 miles of their "lives."

R.A.C. Issues Wembley Tickets

Tickets for admission to the British Empire Exhibition at Wembley are pro-curable by members and associate mem-bers of the R.A.C. upon application to the touring department. This arrange-ment has been made with the authori-ties in order that members and associate members department to the sector members may obtain their tickets actu-ally in the Club building without any trouble.

> Light car users contemplating the purchase of a new car, have in the small advertisement columns of "The Light Car and Cyclecar" a unique mart for the disposal of their present vehicles.

No other journal caters exclusively for small car motorists, and for this reason "The Light Car and Cyclecar" is the most effective advertising medium for all goods of in-terest to them,

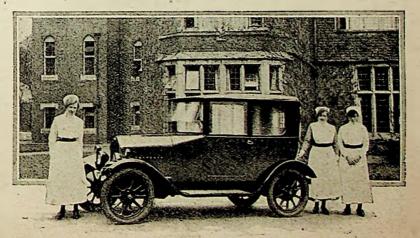
estate is within 14 miles of Broxbourne Station, and is close to the termina-tion of the new North London to Broxbourne arterial road, Every house will be detached, and the smallest plot will have a frontage of 60 ft. Squire, Her-bert and Co., 4, Lancaster Place, Strand, W.C., are planning the estate.

Two views of the 8 h.p. Maximag light car, one of the outstanding exhibits at the Geneva Show. Judging by appearances it is a very neat and workmanlike job.

Madresfield Speed Trials. Prominent amongst the forthcoming events of the Worcester and District Motorcycle Club is the Madresfield Speed Trials, which are fixed for July 10th.

For South-West Londoners.

Barkers Motors have just opened a very fine garage in Balham High Road, London, S.W. This is fitted with elec-tric charging plant and overhead wash-ing gear suitable for the owner-driver who likes to look after the car himself.



### HUMBER EIGHT AS PRIZE. The premier award in a competition which has been organized on behalf of the Coventry and Warwick Hospital is the 8 h.p. Humber saloon shown above.

To Venice and Back. "To Venice and Back in a Two-seater" (Cassell, 6s. net) deals with a rollicking motor trip undertaken by two beginners. The narrativo is humorous and instructive, and can be recom-mended particularly to those of our readers who may be contemplating a tour on the Continent.

Information for Travellers.

A complete touring service bureau, organized by the Dunlop Rubber Co., at 45; Kingsway, London, W.C.2, is now at the disposal of motorists. Up-to-date maps, guide-books and works of refer-ence may be examined, and the advice of the Dunlop staff is placed at the motorist's service. motorist's service.

### New Four-Cylinder Rover.

One of the most interesting features of this issue is the detailed description of the new 9 h.p. four-cylinder Rover, which will sell for £180 and will be marketed as an additional model to the existing two-cylinder air-cooled car.

### Best Roads to the Exhibition.

An invaluable guide issued by the Commissioner of Police of the Metro-polis outlines the best approach routes from the main trunk roads to the British Empire Exhibition at Wembley; also the ways of approach in the London area which will avoid, so far as possible, con-gested traffic centres.

### Constantinesco Car on View.

A recent addition to the Palace of En-A recent addition to the Falace of the gineering at Wembley is the famous Constantinesco converter, which is shown mounted into a stripped chassis, and already has aroused considerable in-terest. A striking feature of the whole layout is the diminutive single-cylinder engine by means of which the vehicle is propelled.

### Kerbside Pumps.

Kerbside Pumps. A Bill will shortly be introduced into Parliament by Mr. S. Webb whereby kerbside petrol pumps and other measur-ing instruments will automatically be governed by regulations similar to those existing under the Weights and Measures Act. Inspectors will examine the pumps in order to check their accu-racy and, if passed, such pumps will be officially stamped.

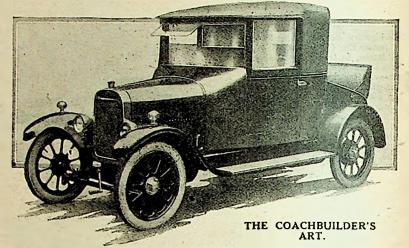
### The Great West Road.

In the House of Commons recently Mr. Gosling, the Minister of Transport,

### The Lycett Trophy.

Three-wheeled cyclecars and four-wheeled cars will be eligible to compete for the Lycett Trophy in the Birmingham Motorcycle Club's Birmingham-Lian-dudno Trial, which takes place on Satur-

### Morgan Obtains a "Gold." H. F. S. Morgan notifies us that the stowards of the Colmore Cup Trial have decided to allow the claim which he put forward for a gold medal. The pub-lished award was a silver medal.



A special coupe body, by W. J. Hardyman and Co., Ltd., Fulham, on a Clyno chassis. A comfortable double dickey seat is provided.

day, June 7th, starting at 12.30 p.m. The trophy will be awarded for the most meritorious performance of the day, meritorious performance of the day, whilst, in addition, the club silver cup is offered for the best performance in each class: there are also gold, silver and bronze medals. Entries close on June 3rd, and all communications in connection with this event should be ad-dressed to Mr. M. Turner, 16, Legge Lane, Birmingham.



LEAVING THE CHECK. J. L. Murray (Hampton) starting in the second section of the Newcastle and District Club's 24 hour trial to Edinburgh and back.

informed Lt.-Col. Howard-Bury that it was intended to make provision for through traffic from Chiswisk to the Bath Road by June 16th. It was not ex-pected that the road would be com-pleted in all details for 18 months, as it pieced in all details for 16 months, as it was necessary to build a number of houses for tenants who had been "turned out" on the line of the road. The total cost of the highway so far had been £635.000. B18

Racing at Herne Bay.

A special feature of the motor races which have been organized by the Kent Automobile Club for June 21st is a special class for novices. Another in-teresting point is that classes have been arranged for cars with engines under 800 c.c. Full details can be obtained from the hon. secretary, Mr. F. J. Hyam, Orange Court, Downe, Kent.

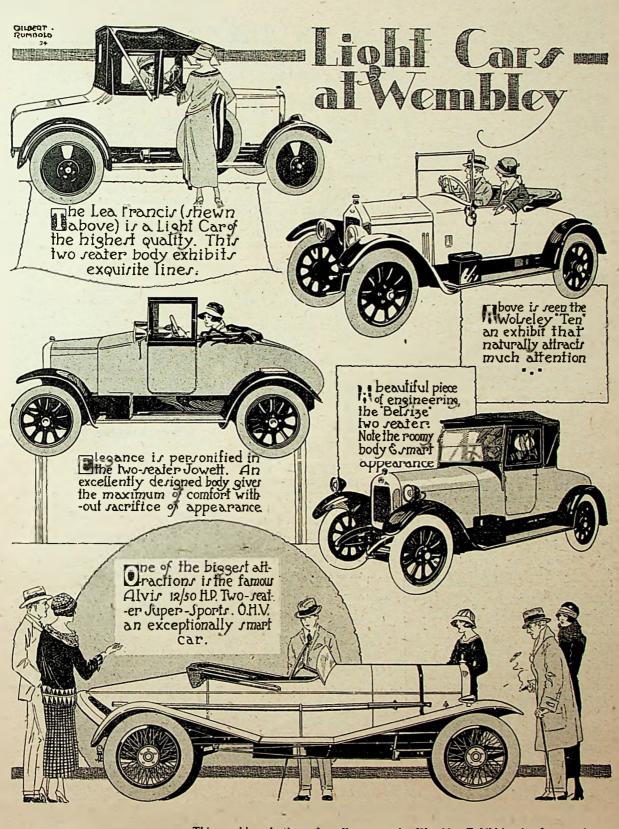
Surbiton Club on Holiday, Surbiton Club on Holiday. Following the South Harting Hill-club, which has been organized by the Surbiton Club for to-morrow, May 31st, and which has attracted a very fine entry list, it is proposed to hold a social week-end at the New City Hotel, Middle-ton, near Bognor. Those who are unable to go to Middleton on Saturday, but wish to join the party, should arrive in time for lunch at one o'clock on Sunday. Sunday.

### The Bol d'Or.

Twenty-one light cars and cyclecars are already entered for the Whitsuntide are already entered for the Whilsuntide 24-hour trials, known as the Bol d'Or, which takes place in the Forest of Saint-Germain, near Paris. The total entries up to date number 89, including the motorcycle and sidecar classes. The trials should be interesting this year as the Saint-Germain circuit is officially recognized by the Automobile Club de France, and there is a possibility that world's 24-hour records may be estab-lished. The event is organized by the Association Motocyclecariste de France.

### The London-Holyhead.

The light car results in the London-Holyhead Trial organized by the Ealing and District Motor Cycle Club are as follow .-- The Maude's Challenge Shield follow:--The Maude's Challenge Shield for the best performance was won by Rex Mundy on an Ansaldo car. F. A. Longman (Palladium), gold; V. G. Walsgrove (Rilay Sports), gold; V. G. Brownsort (A.C.), gold; S. Griffith (A.C.), gold; P. H. Jones (Ariel Ten), gold; M. P. de Satge (Riley Sports), gold; R. Ewen (Palladium), no award; S. Marr (Palladium), gold; Ian Macdonald (Calthorpe), gold; W. White (Lagonda), gold; J. Cocker (Clyno), gold; A. C. Maskell (Morgan-Blackburne), award under consideration; H. E. K. Sawtell (Morgan), gold; A. G. Gripper (Morgan-Blackburne), non-starter.



**TYPICAL "BRITISH** EMPIRE CARS, No. 3. This week's selection of small cars at the Wembley Exhibition is of more than ordinary interest. The Lea-Francis performed with conspicuous success in the R.A.C. six-days' trials, the Jowett is one of the most popular small cars on the market, whilst the Wolseley and Belsize have a world-wide reputation. The Super-Sports Alvis is one of the most striking exhibits.

MAY 30, 1924. -

# OFFICIAL AWARDS IN THE R.A.C. TRIALS.

GWYNNE WINS THE CUP. BOTH RHODES AWARDED GOLD MEDALS. SPECIAL

GOLD MEDAL FOR THE LEA-FRANCIS. CHEAPEST TYPES SCORE.

THE provess of Chinery's Gwynne and the winning of two gold medals by Rhode cars are the outstanding performances revealed by the official list of awards won in the Royal Automobile Club Six Days' Small Car Trials. The list is published in full on this page, all the starters being shown so that readers may see exactly how they have fared.

It will be seen in the case of four classes, i.e., Class B, Class C, Class D and Class F, that there were only two finishers. In Class F there were only two starters. The most keenly fought class awards were in Classes E and G, there being five starters in the former and four starters in the latter.

Tatlow, who wins a silver medal as a class award, has been given, in addition, a special gold medal for the splendid pace he showed on hills, for his consistent running and for the excellent condition of his Lea-Francis car at the conclusion of the trial.

Lea-Francis car at the conclusion of the trial. The Class F gold medal might be described as having been won on power-weight ratio, and much the same applies in the case of Class G. In both these classes the gold medal was carried off by speedy performances on the hills, on the acceleration test and on the speed test.

### Marks Lost.

In Class F, Bruce lost a total of 458 marks, while the Galloway lost 590. In Class G Smallwood lost 460 marks, Oates 524, Brimlow 708 and Parker 812. As we forecast last week, Gray (Rhode) and Deverill (Gwynne) were very close together in Class D, the actual number of marks lost by them respectively being 418 and 486.

The smaller cars did extremely well in Class E, and it is unfortunate that with so comparatively large a number of entries, only two competitors could gain awards. The marks lost were as follow: Chinery 337, Tatlow 410, Wood 532, Mason 629, Johnstone 741.

The Wolseley would have been still nearer to winning an award had it been faster on hills, on acceleration and on the level, while the Seabrook would also have lost many fewer marks had it not been for a series of minor mishaps which caused a total of 160 marks to be deducted on the score of reliability. The Wolseley ran extremely well throughout the trial. 190 Noteworthy for the remarkably small number of marks lost for attention to the cars either in the depot or on the road are the following: W. H. Oates (Lagonda), D. Chmery (Gwynne), J. S. Wood (Wolseley) and C. Gray (Rhode). In the order given these cars lost for "Reliability" 10, 12, 13 and 13 marks respectively. Next best on this count was H. E. Tatlow (Lea-Francis), who lost 15 marks, while B. A. Hill (Rhode) lost 20.

The best performances on the hills were by H. F. Smallwood (Palladiun) and H. E. Tatlow (Lea-Francis), who each lost only one mark. Next in order came D. Chinery (Gwynne), who lost 15, C. Gray (Rhode), who lost 57 marks, C. A. H. Mason (Seabrook), who lost 60, and J. C. Wood (Wolseley), who lost 70.

It is clear that in one respect at least—that of petrol consumption —there was room for improvement in the method of allotting marks. In all other tests of petrol consumption it is usual to employ a

	WINNERS OF AWARDS. 2250 Oup for the Most Meritorious	
	Performance.	
	D. Chinery (Gwynne).	
	Silver Cups for Best Class Performances.	
	B. A. Hill (Rhode).	
÷	D. Bowden (Trojan).	
į	Special Gold Medal for Hill-climbing, Consistent Running, and Condition after	
	the Trial:	
	H. E. Tatlow (Lea-Francis).	
-	min fellenter liste size all the starters	
	The following lists give all the starters in the various classes, tegether with the	-
	awards won: CLASS B.	-
1	D Bowden (Trojan) Gold Medal	
	B. Woodhouse (Trojan) Silver Midal G. Poppe (Austin) Retired	
	CLASS G.	
	S. E. A. Watson (Surrey) No award	
1	B. A. Hill (Rhede)	
	CLASS D.	•
		1
-	J. F. Deverill (Gwynno) Sliver Medal	
	seal) Retired	
-	CLASS E.	
	D. Chinery (Gwynne) Gold Medal H. E. Tatlow (Lea-Francis) Silver Medal	
1	G A H Mason (Scabrook) No award	1.0
1	D. J. S. Wood (Wolseley) No award D. Johnstone (Galloway) No award	1
1	D. Johnstone touriousy in the	
	CLASS F. Gold Medal	1
	V. A. Bruce (AC.) Gold Medal V. E. Leverett (Galloway) Silver Medal	
	CLASS G.	
	II. F. Smallwood (Palla Galla Stadal	
	dium)	
	C. Brimlow (Argyll) No award M. D. Parker (Argyll) No award	
	M. D. Parker (Argyn) thousand	

formula which takes into account the size of the engine and the deadweight carried. In the case of the trial which has just concluded, however, the question of power and weight was not regarded in deciding the number of marks which each competing car should lose on the score of petrol consumption.

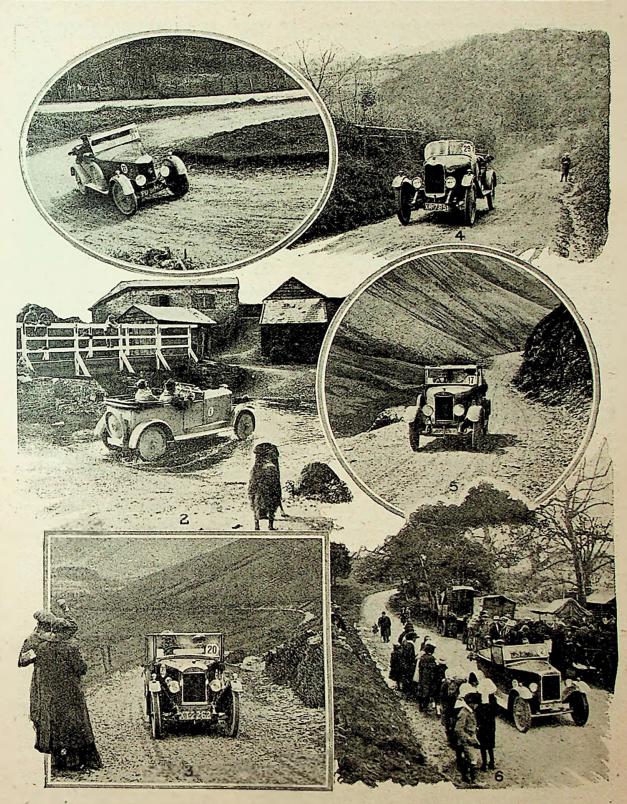
the score of petrol consumption. The actual plan adopted was simple but by no means conclusive, entailing, as it did, the deduction of one mark for each three-halfpennyworth of petrol consumed. This plan favoured the lightest cars while imposing a considerable handicap on such cars as the Lagonda saloon. In this respect as well as in the marking generally, the results are not quite so conclusive as they might have been, and this is emphasized by the face that the runner-up for the Cup would receive only a silver class medal if it were not for the fact that the Club decided to award a special gold medal.

### Where Lighter Types Score.

Perhaps the most outstanding result of the trial is the further convincing proof that in events designed to test roadworthiness and general efficiency, the lighter types of four-wheeler score over the larger and more luxurious types.

types. The Gwynnc, which wins the cup in the R.A.C. Trials, was also the joint winner, it will be remembered, of the Westall Cup in the Junior Car Club's General Efficiency Trial, and the long list of successes secured by these little cars is undeniable evidence that they are roadworthy to an extreme degree. The history of the Gwynne dates back only a matter of three years, and the presentday chassis is almost identical with that which characterized the first car of this make. It has recently appeared as a light four-seater and "sports." We should like again to draw our

We should like again to draw our readers' attention to the very exhaustive tabular matter relating to actual performances of the competing cars which appeared in last week's issue of *The Light Car and Cyclecar*. These tables, it will be remembered, were published in conjunction with informative articles analysing the tables and indicating exactly how those cars which had engines of less than 1,500 c.c. performed throughout the trial.



WINNERS OF PRINCIPAL AWARDS IN THE ROYAL AUTOMOBILE CLUB TRIALS.

A full list of special and class award winners is given on the opposite page. The pictures shown above depict some typical portions of the difficult thousand miles course chosen by the R.A.C. as a suitable testing ground for up-to-date small cars. The cars shown are those winners of principal awards which had engines of less than 1,500 c c. capacity. (1) V. A. Bruce (A.C.) on Erwood Hill. (2) B. A. Hill (Rhode) negotiating a water-splash. (3) D. Chinery (Gwynne) on Bwlch-y-Groes-he was awarded the £250 Cup for the most meritorious performance in the trial. (4) H. F. Smallwood (Palladium). (5) H. E. Tatlow (Lea-Francis) to whom a special gold medal has been awarded in addition to a silver Class medal. (6) C. Gray (Rhode).

MAY 30, 1924.

# **REDUCING THE LABOUR OF MAINTENANCE.**

Ways in Which the Tasks of the Owner-driver Have Been Lightened.

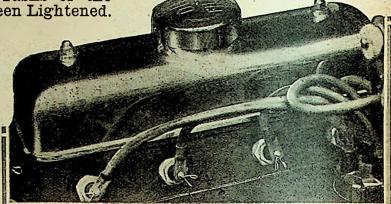
THERE will always be a certain number of owners who thoroughly enjoy such processes as washing, lubricating and adjusting a car, but to the majority of people these tasks are an irksome toll paid for the joy of motoring. This, fact has been realized by manufacturers in recent years, and a number of detail improvements have been made with the object of lightening the labours of the ownerdriver.

driver. The all-important question of lubrication has at last come in for due attention, an important step in the right direction being the widespread adoption of grease-gun systems for chassis parts. In this connection should be mentioned the improvement in the accessibility of the oil fillers provided on the

crankcase, gearbox and back axle. In some cases the crankcase filters are exceedingly well arranged, so that they can be removed and cleaned without the necessity for dismantling other parts. It must be recorded, however, that in certain instances the removal of a filter is a long and laborious process, and involves the wastage of a considerable amount of oil.

### Fabric Universal Joints.

Noteworthy progress has been made in the adoption of designs which entirely obviate the need for lubrication. A good example of this trend is the substitution of fabric universal joints for those of the metallic variety. The fabric joint is perfectly noiseless, easily renewed, and requires no adjustment or lubrication during its working life. We may also cite the so-called "oilless" bush, in which the fibre surfaces are impregnated with a graphite composition. These should be quite suitable for parts in which very little movement occurs, such as spring

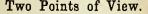


ACCESSIBILTY LIGHTENS LABOUR. The photograph shows the accessible oil filler orifice and sparking plugs of the 10.23 h.p. Talbot. Owing to the clean design of the cylinder block it can be kept spick and span with a minimum of trouble.

shackle pins, and still further reduce the labour of lubricating the chassis.

Iubricating the chassis. It must be remembered that by reducing the number of parts requiring periodical oiling the life of the chassis is materially increased, because many private owners are apt to be lazy, and a neglected part, which ought to have frequent lubrication, is bound to wear rapidly. The use of ball and roller bearings is to be commended for similar reasons, as these useful devices only require sufficient lubrication to prevent rusting and reduce the small amount of friction present between the balls and their cages.

Other parts which require adequate protection and lubrication are now arranged on more sensible and accessible lines, and frequently felt washers are provided, which prevent the ingress of dirt or the egress of lubricant, where a rotating shaft projects from a housing. In this connection spring gaiters should also be mentioned, as these prevent the leaves of the spring from rusting and retain the grease.



As regards ease of adjustment there are two points of view, one held by the exasperated owner, and the other by the irate manufacturer whose engine may have been irrevocably damaged by undue tinkering. The writer remembers the case of a lorry, the crankcase of which was provided with two wide doors through which the big-ends could be reached. It was found that, whenever the driver imagined that the engine was producing a knock, he removed the doors and tightened up the bigend bolt—with disastrous results.

This is an extreme case, and it cannot be denied that parts requiring fairly frequent adjustment should be made as accessible as possible. Particular attention should be given to the brakes, as, when adjustment is difficult, the owner is apt to run the car for such a long period without attention that the brakes gradually gct



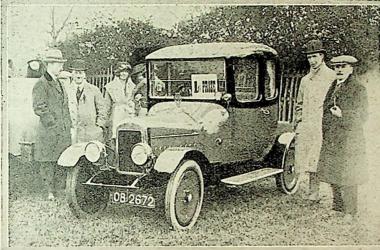
PRESERVING COACHWORK MADE EASY A Singer car with Weymann Saloon body. The surface of the "coachwork" readily can be cleaned with a sponge. There is no varnish to crack or blister.

### REDUCING THE LABOUR OF MAINTENANCE (contd.).

MAY 30, 1924.

.nto a generally ineffective condition. In several chassis a large hand-nut is provided, which can easily be reached by removing a floorboard, and by means of which the brakes can readily be adjusted.

Nothing makes a car look more disreputable than damaged bodywork and sadly neglected fittings, but it must be admitted that in many cases the finish given to the body is so delicate and requires such careful handling that no owner-driver could reason-



### SAVING TIME AND TROUBLE.

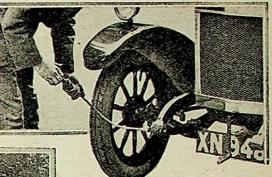
The upper photograph shows the pressure feed or grease gun system of lubrication as fitted to the 10-20 h.p. Turner. The lower photograph shows the reward of constant attention to cleanliness. A car frequently cleaned is easily kept clean.

ably be expected to maintain the pristine beauty of the car for very long. An all-black finish for fittings, such as windscreen pillars, door handles, and the like, may not look so pretty as the nickel variety, but it is certainly far more serviceable for those who subject their cars to really hard usage. Similarly, the grey matt finish often given to the bodywork of French cars cannot compare with the highly polished product turned out by the best coachbuilding concerns, but it is nevertheless infinitely less trouble to the owner who may be called upon to look after it.

### Beauty or Utility?

To sum up: it is a question of whether beauty or a really serviceable finish is the main requirement, and the answer to this, of course, depends to a large extent on the use to which the car is put. Personally, the writer prefers to use a car which, after 200 miles have been completed in a day's run, does not require a couple of hours' hard labour with the hose and a sponge. There is no doubt that the Weymann body, an innovation of 1923, will continue to make steady pro-

There is no doubt that the Weymann body, an innovation of 1923, will continue to make steady progress, for it represents a type of body which not only cheapens production, but lessens considerably the labour of maintenance. It boasts of no glossy varnished finish and has merely to be sponged down in order to restore its initial pristine appearance.



47

It is worthy of note that the more simple a car is the less will it require attending to, and in this connection the really simple cyclecar is worth mentioning. When working parts are reduced in number to an absolute minimum it is obvious that the attention which the driver must give his machine is also reduced, and when at last the £100 ideal cyclecar appears in numbers, owners will appreciate the advantages to be derived from a vehicle in which one of the essentials is simplicity.

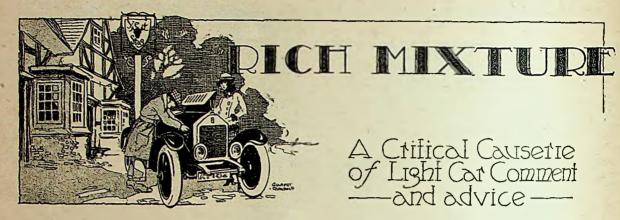
One observes that considerable attention is being given to the £100 Ideal Specifications in the pages of *TheiLight Car and Cyclecar*, but the whole subject seems to appeal to designers from the mechanical point of view only. Of course, a practical layout is one of the most important features of such a car, but also attention must be given to the probable amount of labour which will have to be expended in looking after the finished product.

finished product. Taking a typical specification point by point, ample provision must be made for preventing oil being splashed in all directions by the engine; carburetter, magneto and dynamo must be accessible, and, if the final drive is to be by chains, they must be of large section and *enclosed*. The aim of the designer should be to provide a final drive which will last as long as the car itself: thus in the case of the chassis a high factor of safety must be adopted, so that there will be no possible chance of breakage.

WILLICITY THE KEYNOTE.

The more simple the machine the less energy is required to look after it provided that it is a workmanlike job to begin with. Here is the New Carden. Note the easily cleaned body panels and disc wheels.

MAY 30, 1924.



### A Wonderful Week-end.

48

A CORRESPONDENT writing to me from India runs into many thousands of words explaining what he describes as "a wonderful week-end" spent motoring in the Ghats. His destination was only 75 miles from the starting point, but the journey took from 4.30 a.m. until nearly lunch time, the run consisting of "climbing about for hours on rough, hilly tracks which wind round the mountains."

After breakfast the following morning, when a run to a village 25 miles away was suggested, it was found that a back tyre was flat; the wheel was changed, but when only two miles out another tyre burst.

"Having no more spare wheels," he writes, 'we had to mend the burst tyre. The road was so hot it was unpleasant to stand on it. We put the spanners down after we had got the wheel off, and when we wanted them again they were so hot we could not touch them until we had poured the contents of a water-bottle over them. When the repairs had been completed we had to proceed very gingerly," he writes, "because the roads were so hot we were afraid of the tyres melting. Every time we passed any water we drove through it to cool them off."

Personally, I have no conception how they ever made their solution stick, but my correspondent's experiences certainly go to show that much as we malign our climate, there are many worse—at least, from the motorist's point of view.

### Taxation Relief.

I WAS very interested to learn that a hundred members of Parliament who met at a dinner at the House of Commons recently were almost unanimous in agreeing that the £1 per horse-power tax acted unfairly on light cars. In suggesting that 15s. per horse-power would be a suitable scale for next year, I think that they will have the co-operation of all small car owners.

Actually the M.P.s, or at any rate most of them, were in favour of the abolition of the existing horsepower method of taxation and the introduction of a tax on fuel, but they realized that it is hopeless to expect such a drastic change for next year, as it is exceedingly improbable that the report of the Departmental Committee which has investigated the matter will be available in time for any modification in next year's motor taxation to be made, even presuming that the report will favour the change, a very doubtful presumption in view of what has already been said on the subject.

### Are Grease Guns Perfect?

NUMBERS of readers seem to agree with my views relating to the relative merits of chassis lubrication by grease gun and by the older method of using small screw-down greasers. Several readers write to say that they agree that the grease gun with nipples and flexible connection is anything but perfect. They think that many examples provided as standard with small car equipment are too small and consequently need very frequent replenishment.

One correspondent says that the means provided for connecting grease guns to the nipples are seldom ideal, while the time which must be spent in greasing up—if the filling of the gun is included—is notmaterially less, he says, than by the older method.

I am beginning to think that for chassis lubrication a combination of the grease gun and grease cup system is needed. Cups could be fitted to such points as steering connections, spring shackle pins and so forth; but at the more important points, for example, the stub-axle pivot pins, cups could be fitted which were, in effect, miniature grease guns. These could be arranged to hold, say, an egg cupful of grease, and their internal organization could, in my opinion, follow closely the design of a grease gun so that considerable pressure could be exerted without the grease escaping round the threads.

### Messy in the Extreme.

WITH a car so equipped, when one was on a long run grease could be forced to all parts concerned in a matter of a few moments, while the cups would not be empty if they were of an adequate size until at least a fortnight's tour had been completed. As it is I find that when I am away with a car for a week or so it is necessary on at least two mornings to find a very dirty grease gun in an equally dirty locker, to fill it up from a disgustingly filthy grease tin, and engage its connections with a number of more or less accessible nipples, most of them liberally coated with grime.

How much more simple it would be merely to give half a turn to grease cups of adequate size or a similar movement to grease-cup-cum-gun fittings arranged as permanencies at the points where it is most essential for an adequate supply of lubricant to be fed.

Doubtless readers will write saying that the idea has possibilities, but that they deplore any measure which may add to the cost of small cars. I would

### MAY 30, 1924

### RICH MIXTURE (contd.).

counter by saying that if any material increase in cost would be incurred by the adoption of such a pian, that increase could readily be catalogued as an extra.

### Screen Wipers.

SINCE writing at some length on the question of windscreen wipers a few weeks ago, opportunities have been afforded me of testing nearly all the most popular makes.

I have found that they are all satisfactory provided they are properly fitted, and this latter question must not be overlooked if they are to give any real satisfaction.

The criticisms I have made when commenting on wipers was that the cheaper types were not always as satisfactory as they might be, but I have since found that it is possible to get very good results from a considerable number of them.

Among those which I have found completely successful are the Stadium Bowden-wire-operated wiper, the Terry and the Desmo. The Stadium wiper needs to be fitted very carefully, and has proved especially satisfactory in my case on a car fitted with a single-pane screen, as with this type of screen a simple and very rigid bracket can be used.

The Terry wiper consists of two strips of impregnated material clipped to the screen by means of a hairpin-shaped leaf spring which passes over the top of the screen. This wiper is slid along the glass half a dozen times when the glass is wet, and thence-forward rain ceases to form in drops. The effect of the wiper is approximately equivalent to that

obtained by the old-fashioned apple and potato methods. The advantage of the Terry accessory is that it needs no fitting and that it is merely clipped on, while it is always handy and cannot possibly go wrong.

The Desmo wiper I deliberately fitted upside down, that is with the centre about which the squeegecs strike an arc at the lower instead of the upper part of the glass. This plan is very satisfactory, as the squeegec wipes the rain downwards and clear of the screen, whereas when the conventional plan is followed it merely lifts up the rain and, on the second sweep, lets it all run down again.

### For "Gadget" Fiends.

ON the subject of accessories I should like to point out to all those of my readers who are really enthusiasts-I mean the type who would never dream of wearing a waistcoat the pockets of which did not house a No. 0 King Dick, a pocket screwdriver, a magneto spanner and so forth-that there is a new gadget, which, if they are to retain their local reputation as pukka experts, they cannot possibly afford to be without.

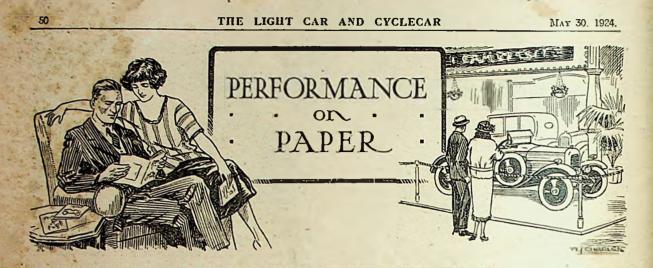
This novelty takes the form of what is technically known as a "pocket propelling pencil." In its design is embodied a small glass tube containing, I believe, Neon gas, making the pencil also an admirable plug tester. The gadget is called the Runbaken Ignition Pencil Tester. It is very little larger than an ordinary pocket pencil, and I have found that it acts extremely well both for writing and for detecting dud plugs. It deserves to oust the micrometer from the pocket of every enthusiastic and critical small car "expert." S.S.

### THE N E W ROVER.

A full description of the new 9 h.p. Rover appears elsewhere in this issue. The car, which is, so far as dimensions and general layout are concerned, roughly similar to the existing two-cylinder model,



cooled o.h.v. engine and a robust workmanlike little chassis. It is accessible and should prove as easy for owner-drivers to keep in first-class condition as the renowned two-cylinder model. It will be seen from the chassis plan and complete car illustration shown herewith that apart from the new engine no outstanding alterations from conventional



IN THIS ARTICLE IS SHOWN HOW, BY MEANS OF SIMPLE CALCULATIONS, THE ROAD-WORTHINESS AND HILL-CLIMBING POWERS OF A CAR CAN BE DETERMINED SIMPLY FROM CATALOGUE FIGURES.

N the past the car owner had only a hazy notion of the horse-power of his car; he knew that it came within certain limits, and he paid the tax accordingly. But to-day the owner is only too aware of the R.A.C. rating of his car, as it costs him the equivalent number of pound notes each year.

It is obvious, therefore, that an owner or prospec-tive buyer will ask what other factors are there and their relation to each other, besides the Treasury rating which must be taken into account in order to determine the merits or demerits of a car. It is hoped that the following formula will be of

service in such a case, viz :-

The R.A.C. rating of a car should not be less than  $25.5 \times W \times D$ 

GXS

where W = weight of a car laden in tons. D = diameter of tyres in millimetres.

G = gear ratio on bottom gear.

S = stroke of engine in millimetres.

It will be shown later that this formula is the h.p. rating required for a gradient of 1 in 4, with a bad road surface (i.e., a resistance equal to 100 lb. per ton). It is obvious, therefore, that this h.p. should not be greater than the R.A.C. rating, other-wise the car will fail to climb a hill of this magnitude.

The question will probably be asked at this point why should the merit of a car be determined by the ability to climb a freak hill—a hill that will possibly be met only once or twice in a year. There are two answers to this question, the first is that the lowest gear should be such that the driving wheels are almost on the point of slipping when the engine is developing maximum torque, and this point is being rapidly approached when climbing a 1-in-4 gradient; secondly, this formula represents the performance of a car when new and in good condition. When the engine gets dirty and loses its compression, due to wear of piston rings and valves, the hill-climbing capacity diminishes, and unless there is a reserve of power failure to climb hills of 1 in 6 or 7 will be a common occurrence.

Assuming. therefore, that this formula represents the performance that any new car should be capable of, it should be an easy matter to figure out what the Treasury rating should be and compare it with the engine of the car under consideration.

The various particulars required in this formula can be obtained, usually, from the makers' catalogue. The following examples have been worked out from 1120

the actual data given for various cars, and show the scope and usefulness of the formula.

Car A.—Data: Diameter of wheels, 710 mm.; weight of car laden, 15 cwt. (.75 torf); bottom gear ratio, 12 to 1; stroke, 109.5 mm.; bore, 66 mm.; number of cyclinders, 4. The h.p. rating should be:—  $25.5 \times W \times D$  $25.5 \times .75 \times 710$ 

$$G \times S$$
 = 12 × 109.5

Now, h.p. of this car by the R.A.C. rating equals .8. This car, therefore, fulfils the conditions 10.8. specified.

Car B.—Data: Diameter of wheels, 650 mm.; weight of car laden, 12 cwt. (6 ton); bottom gear ratio, 10.5 to 1; stroke, 98 mm.; bore, 81 mm.; num-ber of cylinders, 2. The h.p. rating should be:—

25.5 × .6 × D 25.5 × .6 × 650 = 9.75

 $10.5 \times 98$ 

The R.A.C. rating of this car is 8.75. We are, therefore, 1 h.p. short of our requirements. We can, however, find what the bottom gear ratio should be to fulfil the conditions.

H.P. = 
$$\frac{25.5 \times W \times D}{G \times S}$$
 G =  $\frac{25.5 \times W \times D}{H P \times S}$ 

= .

 $G \times S$ 

= 11.6 = bottom gear ratio.8.75 × 98

Car C .- Data: Diameter of wheels, 700 mm.; weight laden, .7 ton; bottom gear ratio, 17.4 to 1 stroke, 95.2 mm.; bore, 66.7 mm.; number of cylin-ders, 4. The h.p. rating should be :--2

.6

$$5.5 \times W \times D = 25.5 \times .7 \times 700 = 7$$

G × S 17.4 × 95.2 • The R.A.C. rating is 11 h.p. This car shows a surplus of 3.4 h.p. This result was not altogether unexpected, owing to the low bottom gear ratio. The drawback to having such a low gear with only a three-speed box is the great skill that is required to change quietly from the first mean to the second gear : another disadvantage is the gear to the second gear; another disadvantage is the high stressing of the driving and propeller shafts. The gear ratio that would have given really better results is:

25,5 × W × D	$25.5 \times .7 \times 700$
	11 × 95.2
= 11.9  or  12  to  1	in round figures.

MAY 30, 1924.

# A FOUR-DAYS' TOUR FOR £3.

CAR IN WHICH IT IS WITH A POSSIBLE TO CAMP OUT, TOURING CAN BE MADE VERY INEXPENSIVE. By G. L. MOSS.

"LET'S go to North Wales for a week-end and sleep in the car." It was my wife's sug-gestion. Accordingly we left Learnington on a Friday morning with the idea of sleeping in the car if the weather was fine, and, if wet, of spending our views to be deour nights at hotels.

The car, an 11 h.p. Riley four-seater all-season model of the two-door type, with tip-up front seats, lends itself admirably for use as a dormitory. The removal of the two front seats takes only two minutos or so, while the spreading of a mattress and blankets on the floor occupies a few more minutes

blankets on the floor occupies a few more minutes. Our kit was easily packed in the back and consisted of the usual cooking utensils, a Primus stovo (which had seen its best days in the trenches), a which had seen its best days in the treathes, a mattress, three blankets, one enamel basin, an old canvas valise, a change of shoes and stockings, pyjamas, and a good supply of food, fruit and drinks, for Wales can be a thirsty place on Sundays. We took the usual route through Stonebridge, Castle Bromwich and Cannock to Shrewsbury, where we public down a for where outside the town for lunch

we pulled up a few miles outside the town for lunch. The weather was glorious, the roads good, and the car was running splendidly. Business worries were forgotten and we enjoyed a feeling of satisfaction that we were entirely on our own, with no rooms to be found and no hotel bills to pay.

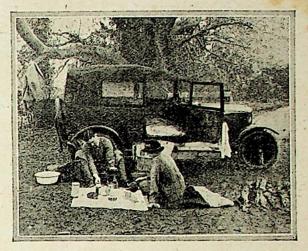
Dinas was easily climbed on second gear, and about two miles from Dolgelly we started to look for our first camping ground. We crossed the river on the right-hand side of the road by a pretty bridge and eventually found a glorious little glado by a brook about 100 yards off the road. The car was backed in, away from the sight of man, the side curtains were erected, the bed made, supper cooked and then—sweet slumbers cooked, and then-sweet slumbers.

### That Camping Feeling.

Two blankets with the windscreen open were quite sufficient; there was ample legroom for a full stretch and both of us slept well. By removing the back-seat cushion and spreading the mattress over the wooden portion of the seat an excellent pillow of just the right height was easily improvised. These who have not excellent the menderful

Those who have not experienced the wonderful sensation of waking on a spring morning with the sun shining brightly, the birds singing, and a brook babbling nearby have missed one of the greatest joys of life. I am not a poet and am as fond of my bed as any man, but the sensation of climbing out of a car into bright sunlight and of enjoying a quick sponge down in cold water are things never to be forgotten to be forgotten.

After breakfast, packing up was only a matter of minutes, and then—the open road again. We took the road through Dolgelly to Barmouth, where took the road through Dolgelly to Barmouth, where we pulled up for a supply of fruit, bread and "prickers" for the Primus. Thenceforward the run from Portmadoc through Aberglaslyn Pass to Beddgelert is possibly the finest in Wales. The road surface is good and the gradient well-engineered, while the scenery, which is well-wooded, with a typical Welsh river in the valley, would rank among the first six heauty spots of the kingdom. A hasty visit was made to the Swallow Falls at Bettws-y-Coed, but there were too many trippers and



### Camping kit must be cut down to the minimum, but it is unwise so to reduce it that meals cannot be taken in comfort.

chars-a-bancs for our prevailing mood of leading the "simple life." We climbed the old Roman Pass

the "simple life." We climbed the old Roman Pass from Penmachno on second speed, this hill being one of the finest passes in North Wales. The sur-face is good and the gradient for about two miles is exceptionally steep. It much resembles Bwlch-y-groes, but is not so long. The run down to Festzniog is wild and rugged, with an expansive view from the top which makes it hard to believe that civilization is only a few miles away. Saturday night was spent a few yards off the shores of Bala Lake. An inviting lane lead-ing up from the main road looked promising, and on inspection was found to be a long winding drive on inspection was found to be a long winding drive to an unoccupied house. The car was driven in under the trees among the fallen leaves of last autumn and a better camping ground would have been hard to find.

### Breakfast—and Squirrels.

Breakfast—and Squirrels. On waking in the morning two squirrels were playing in the trees ten yards away, and not a soul was seen or heard until we took the road again. We climbed up the Bala side of the famous Bwlch-y-groes about 10 a.m. The gradient is stiff and the road wild and rugged. There is a sheer drop down into the valley on the right-hand side. The Riley climbed the entire way on second gear and, although the fan belt was off, there was no overheating. Lake Vyrnwy was the site of our last camping ground. The lake is surrounded by railings, and some difficulty was encountered in finding a god camping place. At length an inviting track through a gate up a short stiff gradient led to the back of

a gate up a short stiff gradient led to the back of a glorious pine wood.

The front seats, we found, made excellent chairs when placed on the grass, and the old army valise kept them and other articles dry throughout the night. Monday again proved fine and a good splash in the river, a hasty breakfast, and an excellent run home finished the cheapest and most enjoyable four days' outing of our lives.

Throughout the trip the Riley, which is a 1921 model, ran perfectly and the tool kit was not touched. The petrol consumption worked out at approximately 33 m.p.g. Only one quart of water was added to the radiator and no extra oil was required.

Our list of expenses (total, £3 1s. 5d.) proved that, given good weather, the heart of a gipsy and a nonetoo-deep pocket, a touring holiday can be achieved at considerably less expense than staying at home, having a good dinner, "doing a show" and the other usual ways of spending a week-end in town.

B27

MAX 30, 1924.

### DETAILS OF THE LONDON-EDINBURGH. ENTRY LOWEST FOR THREE YEARS, BUT MORE CARS THAN LAST YEAR. CARS AT HALF-MINUTE INTERVALS. ROUTE THE SAME AS IN 1923. KIRKSTONE PASS THE ONLY TEST HILL

THE entry for the London-Edinburgh Trun, held at Whitsuntide every year by the Motor Cycling Club, seems to be snowing a steady decline. It will be seen from the panel in the centre of this page that in 1923 there were nearly 40 fewer runners than in 1922, but this was apparently attributable to the fact that there was a hitch in the arrange-ments, due to the M.C.C. failing until the last moment to get the sanction of the Royal Automobile Club for the run to be held. to be held.

It was thought last year that this fact was probably the sole reason why the entry was rather disappointing, but it seems that the influence of last-minute arrangements.did not make itself felt so much as was popularly believed at the time

### Representative Entry.

This year there are 345 entries all told, and although this total is nearly 50 fower than in 1922, it is, nevertheless, extremely satisfactory. We suggest that it is disappointing only because it is an M.C.C. run which, as all the world knows, ensures for it greater popularity and better support than any other event held under the auxpices of any other club. This year's run will start at

THREE-WHEELED CYCLECARS

Wrotham Park, near Barnet, which venue has been kindly placed at the disposal of the Club by the Earl of Strafford. The first competitor is due off at 7 p.m., the order of starting as regards type of machine being solo motorcycles, sidecars, three-wheelers, and finally cars. Competitors will start at half-minute intervals, No. 1 starting

L	ondor	-Edinbu	rgh Entr	ies.
Motorcycles.		Cars,		
	Solo,	Sidecar.	3.wheel.	4-wheel.
1922	129	110	20	133
1993	126	91	20	119
1934	127	83	12	123

at half a minute past seven. As there are 345 entries, the last man will start at 9.53.

The route, which is the same as last The route, which is the same as last year, is by way of Potters Bar, Hatfield and Stevenage, the competitors follow-ing the main North Road through Ret-ford, Doncaster, and then branching off for Ferrybridge, Aberford, Ilkley, Sottle and Kendal to Windermere. Kirkstone Pass, beyond Amblesido, is the principal

test hill. After Kirkstone Pass the route lies by way of Moffat to Edinburgh.

Kirkstone Pass is difficult by reason of its length rather than its gradient, and it is generally considered to form a fairly severe test. The climb starts almost in Ambleside; it is three miles long, and at the summit the road is 1,500 ft. above sea-level.

### Gradient of 1 in 6.

The long pull generally causes the cars to be enveloped in a cloud of steam when they near the summit, which is approached for the last quarter of a mile by an average gradient of 1 in 6. The surface of the hill is seldom very read and in the scene of min it is ensure good, and in the event of rain it is genergood, and in the event of rain it is gener-ally extremely slippery, presenting con-siderable difficulty for three-wheelers, the single driving wheel of which must grip a muddy, slimy surface already churned up by some 200 motorcyclists. Full details of the slithering route of the London Ediployer, will form a feature

London-Edinburgh will form a feature of *The Light Car and Cyclecar* next week, while in the following issue-namely, that dated June 13th—a full illustrated report of the event will be included.

### COMPLETE LIST OF CAR ENTRIES.

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211 *D. G. Prentice, 8.9 h.p. Morgan, 212 S. G. Smith, 8.9 h.p. Morgan.	. 0
ZIZ B. G. Smith, 8.9 n.p. Morgan.	5
<ul> <li>212 B. G. Smith, 6.9 R.P. Morgan.</li> <li>213 A. J. Sproston, 8.9 h.p. Morgan.</li> <li>214 D. W. Rhodes, 5-6 h.p. Scott-Sociable.</li> <li>215 W. A. Bouetts, 5-6 h.p. Scott-Sociable.</li> <li>216 F. W. Dame, 10 h.p. Morgan-J.A.P.</li> <li>217 S. A. McGatthy, 12/N-h.p. Morgan-J.A.P.</li> <li>218 G. H. Goodsll, 10/h.p. Morgan-M.A.G.</li> <li>219 J. Robinson, 10 h.p. LSD.</li> <li>220 H. E. K. Sawtell, 10 h.p. Morgan-Angal.</li> </ul>	0
214 D. W. Rhodes, 0-6 h.p. Scott-Sociatio.	
215 W. A. Bouette, 3-0 h.p. Soott-Socialite,	
ZIO F. W. Dame, IU n.p. Morgan-J.A.P.	20
217 S. A. McCarthy, 198h.p. Morgan-J.A.P.	2
218 G. H. Goodall, 101h.p. Morgan-M.A.G.	2
219 J. Robinson, 10 h.p. L.S.D.	2
220 H. E. K. Sawtell, 10 h.p. Morgan.	2
	2
222 A. O. Maskell, 10 h p. Morgan.	2
CARS.	2
The time of departure of the first car com-	2
petitor, L. A. Baddeley (11.9 h.p. Riley) is	2
8.51%, the other competitors following at half-	2
minute intervals.	2
223 °L A. Baddeley, 11.9 h.p. Riley.	2
224 W. Ocoper, 11.9 h.p. Morris Sports.	2
223 <sup>4</sup> L A. Baddeley, 11.9 h.p. Riley. 224 W. Ocopar, 11.9 h.p. Morris Sports. 225 G. R. B. Chiesman, 11.9 h.p. Morris-Oxford.	2
226 F. Broomfield, 11.9 h.n. Morris-Cowley,	2
227 P. W. White 12 h p. Lagonda.	2
<ul> <li>225 G. R. B. Chiesman, 11.9 h.p. Morria-Oxford,</li> <li>226 F. Broomfold, 11.9 h.p. Morris-Cowley,</li> <li>227 P. W. White, 12 h.p. Lagonda,</li> <li>228 J. F. Deveril, 8 h.p. Gwynne,</li> <li>229 R. G. Jackson, 10.6 h.p. G.W.K.</li> <li>230 H. Carless, 9 h.p. McKenzie,</li> <li>231 T. A. McKenzie, 9 h.p. McKenzie,</li> <li>232 A. W. Brittain, 10 h.p. B.S.A.</li> <li>233 R. G. Mundy, 14 h.p. Ansaldo,</li> <li>234 V. A. Bruce, 15.7 h.p. A.C.</li> </ul>	2
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234 V. A. Bruce, 15.7 h.p. A.C. 235 J. B. Bainbridge, 48.2 h.p. Rolls-Royce.	20
205 J. B. Binoridge, 48.2 L.p. Rolls-Royce.	29
230 W. H. Shephard, 11.9 h.p. Riley.	28
236 W. H. Shephard, 11.9 h.p. R:ley. 237 W. L. Allen, 12 h.p. Austin.	28
258 I. P. Mardonald, 12 h.p. Calthorne.	28
239 H. B. Shutes, 14 h.p. Vauxhall-Princeton.	28
240 A. Ulark, 12 h.p. Alvis Sports.	29
241 S. H. Roo, 11.9 h.p. Riley.	29
242 A. R. Abbott, JI h.p. Olyno,	29
243 J. van Hooydonk, 16.5 h.p. Ester.	29
244 P. H. Jones, 10 h.p. Ariel.	29
245 D Floch 10 hp Agial	29
246 R L. Parsons IO h p. Arial	290
247 D N Latte 11 A b n Humber	29
246 R. L. Parsons, 10 h.p. Ariel. 247 D. N. Lotts, 11.4 h.p. Humber, 248 M. Richoux, 12 h.p. A.B.C. 249 H. N. Murphy, 10.15 h.p. Fist. 260 W. Fist. De Daniew	298
240 H N Mamber 10.15 hp Mich	
050 W W Eles JEO ha Dentley	299
251 A Q Calance 15 Q h a Deciler	300
250 W. H. Elec, 15.9 h.p. Bentley. 251 A. G. Gripper, 15.9 h.p. Bentley. 252 E. G. Bronhead, 12 h.p. Austin. 253 A. Proctor, 15.9 h.p. Wolseley.	301
263 A Produce JEO La Michalus	305
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256 25890122345666789901223456778901223456678990122345678990122345667899012234567899012234567899012234567899

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- - OFFICIAL CARS.

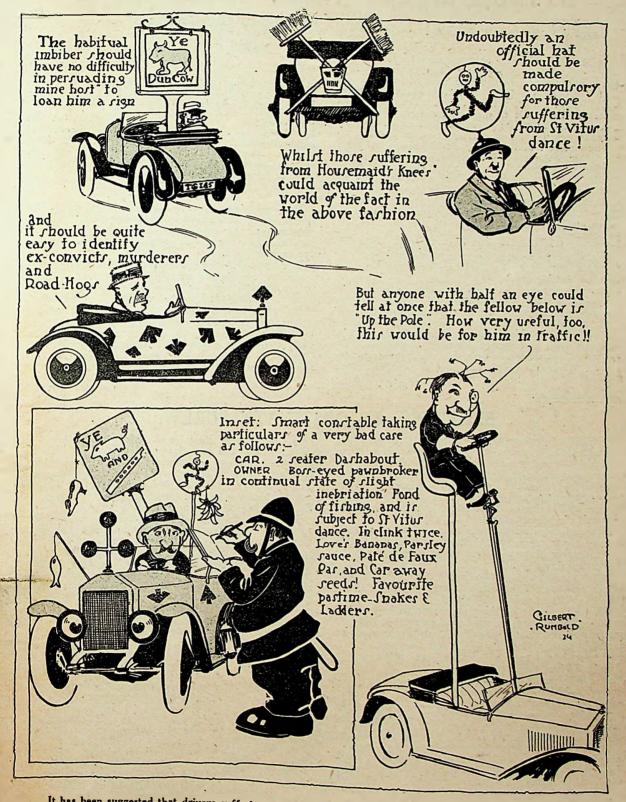
J. F. Grundall (15.9 h p. Humber) and W. H. Wolls (27.3 h p. Bulok) will precede the com-petitors, starting at 7 p.m.

52

TRIES.
303 "H. F. Smallwood, 12 h.p. Palladium.
304 A. B. Chadwick, 10 h.p. Trojan.
305 B. Woodhouxe, 10 h.p. Trojan.
306 B. Woodhouxe, 10 h.p. Riley.
308 J. Swoodhouxe, 10 h.p. Riley.
309 J. S. Martia, 10.5 h.p. Eric-Campbell.
309 J. S. Martia, 10.5 h.p. Riley.
301 G. Formilli, 6.7 h.p. Now Carden.
314 E. Lexter, 10 h.p. Hands.
315 G. Pormilli, 6.7 h.p. New Carden.
314 B. Lexter, 10 h.p. Hands.
316 G. Portyl, 14 h.p. Beza.
317 A. G. McCarquedhie, 30-98 h.p. Vauxhall.
318 H. J. Rickwood, 10 h.p. Trojan.
319 H. J. Rickwood, 10 h.p. Trojan.
320 W. K. J. Shirlaw, 10 h.p. Trojan.
321 W. K. J. Shirlaw, 10 h.p. Trojan.
322 W. K. J. Shirlaw, 10 h.p. Molsolog.
323 W. K. J. Shirlaw, 10 h.p. Straker-Squire.
324 D. J. Stoae, 10 h.p. Stoger.
325 M. O. H. Darts, 10 h.p. Molsolog.
326 M. O. Stoae, 10-12 h.p. Straker-Squire.
327 W. Buddell, 14-30 h.p. Loyd-Lord.
331 T. L. Goodman, 12 h.p. Whitlock.
333 T. L. Goodman, 12 h.p. Whitlock.
334 M. W. Ewen, 10 h.p. Switt.
334 M. W. Ewen, 10 h.p. Switt.
335 J. A. Driskell, 95 h.p. D.F.P.
338 W. W. Radtord, 10 h.p. Switt.
339 W. V. Radtord, 10 h.p. Switt.
339 W. V. Radtord, 10 h.p. Switt.
339 W. W. Radtord, 10 h.p. Switt.
339 W. W. Radtord, 10 h.p. Switt.
339 W. V. Radtord, 10 h.p. Switt.
339 W. W. Radtord, 10 h.p. Switt.
339 W. W. Radtord, 10 h.p. Switt.
339 W. W. Evans, 12 h.p. Switt.
339 W. W. Radtord, 10 h.p. Switt.
339 W. W.

MAY 30, 1924.

# SIGNS OF THE TIMES.



It has been suggested that drivers suffering from any physical defect should be compelled to bave signs attached to their cars indicating the nature of the defect for the guidance of other road users. We hope the matter will not be carried too far !

MAY 30, 1924.

### Every Motorist should know that-" TRAPPING " IS NOT ABOLISHED.

### Sidelights on Speed Limits and Driving to the Common Danger.

**DESPITE** several contradictions which have appeared in the technical Press there is still a prevailing impression that the 20 m.p.h. speed limit and "trapping" have been abolished. Nothing could be farther from the truth, but the rumour has arisen as the result of discussions which have taken place centering in the advisability of either abolishing the speed limit or raising it to 30 m.p.h. The motorist who sets out to conform entirely with

the letter of the law as it stands at present is embarking upon an almost impossible feat, that is, if he is but for business and not for pleasure. Thus it is that millions break the law every day and take the risk of being "trapped." The authorities do not like the term "trap" and they describe an endeavour to catch motorists who are exceeding the 20 m.p.h. as a " control."

The usual procedure is as follows :-- Three men are engaged, only one of whom is in uniform. The first, in plain clothes, endeavours to camouflage both his mission and his appearance, but as the unsuspecting motorist passes him he gives a pre-determined signal, acting upon which the second plain-clothes man sets his stop-watch going. Thus the motorist is timed over a certain section-generally a furlong-and it remains for the third man (in uniform) to stop the motorist after he has passed out of the control. The system is not dead accurate, but, in fairness to the police, it should be stated that a prosecution is

This Week's Hint.

seldom undertaken unless the average number of miles per hour through the control works out at over 21 m.p.h.

Motorists who endeavour to dispute the figures given by the police are wasting time-moreover, they will probably prejudice their case, and, as fines derived from "trapping" do not benefit either tha police or the district in which they are imposed, it is better to look pleasant and pay up when the time arrives. As a general rule it is unnecessary for the motorist himself to appear in a case of this kind, but he must be represented either by his own solicitor or by a legal representative of an association to which he belongs.

The case having been heard and the amount of the fine fixed, the defendant will be notified that he must pay the amount into court by a certain date. He may also be required to submit his driving licence for endorsement.

In addition to the recognized control there is the question of estimated speed through a 10-mile limit, and a summons can be issued on this count on tho evidence of one police constable only.

He is not called upon to state the definite speed, but can put forward the plea that, in his opinion, the motorist was travelling at, say, 26 m.p.h. As in the case of a proper control it is uscless to argue with the arm of the law unless proof can be produced to show that his approximations are valueless.

### STARTING AN OBSTINATE SCREW.

THERE are two golden rules to be observed when withdrawing a screw, particularly when it is difficult to move. One is to use a screwdriver of the correct size and with a properly ground edge, and the other is not to let the screwdriver slip out of the slot when attempting to turn the screw. Directly the slot in the head is damaged the difficulty of removing the screw is increased tenfold.

Greasy hands, an inaccessible position, or a small handle to the screwdriver, all create difficulties, and the following hints will save much time and temper and many screw heads.

After placing the screwdriver squarely in the slot of the screw, grip the blade as close to the screw as possible with an adjustable spanner. This will enable sufficient pressure to be exerted

on the head of the screwdriver to prevent it slipping out of the slot in the screw head whilst the spanner is used to undo the screw. Screws with rounded heads are more damaged than those with flat or

cheese " heads, and additional care should be taken, remembering always that nothing looks worse than a screw head that has been damaged as the result

If the screw is extraordinarily obstinate, a good plan is to pour

paraffin over it and leave it for some time. The paraffin will penetrate between the threads,

and this percolation often has the desired effect of loosening the mud or rust which is causing the trouble. Vinegar, being a

of careless treatment.

**B30** 

easily

The use of a movable spanner to tighten or loosen a screw.

very dilute acid, may, by slightly corroding the metal, attain the same result. If the refractory screw still does not yield, an attempt should be made to move it with a hammer and a metal punch, hitting the latter in such a manner that the force of the blow impinges on a point at one or the other end of the slot.

This treatment will, of course, ruin the head of the screw, but there are occasions on which this fact would be of minor importance compared with the necessity for removing the offending piece of metal. Should this treatment be of no avail, nothing remains but the almost infallible cure, namely, drilling out the screw, and retapping the hole. There are cases where the thickness of surrounding metal will not stand this drilling-out process, but where it will, care should be taken to see that the operation is com-menced in the exact centre of the head.

It is always advisable, after removing a tight

The is always advisable, after removing a tight screw, to replace it with another, as the threads of the former may be slightly out of pitch, or the slot in the head may be insufficiently deep to pro-vide for the necessary leverage. Prevention being undoubtedly better than cure, it is suggested that the threads of anything in the nature of a screw (or value

the nature of a screw (or valve cap) which is liable to stick, either through mud, rust, or heat, should be liberally coated with graphite before screwing it into position. If this precaution were always taken, the necessity for the above remarks would hardly arise.



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# LIGHT CAR & CYCLECAR

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

The journal is published every Friday. There should be no difficulty in obtaining a copy at any bookstall or newsagent, as arrangements have been made to ensure a regular supply. Should any difficulty be experienced, we should be greatly obliged to receive the name and address of the reader's newsagent.

### CONTENTS.

	PAGE
News of the Week	39
Small Cars at Wembley	43
Official Results of R.A.C. Trials	44
Reducing the Labour of Mainten-	
ance	46
Rich Mixture	-48
Performance on Paper	50
A Four Days' Tour for £3	51
Preliminary Details of the London-	
	52
London's Test Hills	56
The New Four-cylinder Rover	58
A Reader's Ideal £100 Cyclecar	61
Bwlch-y-Groes Again	63

Topics of the T

55

### Short Cuts to "Experience."

IF you are prepared for an emergency it is likely, when it arises, to have much less serious consequences than when it catches you unawares. This is an age-old axiom with an application that is universal, but it applies with special emphasis to motorists.

The man who has been driving for a number of The Art of years will probably have encountered almost every Being Prepared. condition of road and traffic, and he will therefore

be a much safer driver than those who have held driving licences for only a year or so. Among the latter, unfortunately, are many who have the impression that, because they have mastered the controls of their cars under normal conditions, they must necessarily be expert drivers.

In this issue there is an article which tells Londoners where they may find test hills near home which will call for handling of their cars on second gear in a manner approximately similar to that which is necessary in bottom gear for ascending the hills of Devon and Cornwall, of Wales, Scotland, and the Lake District. We advise readers who have no experience of the gradients in these comparatively distant touring centres to acquire some skill at hill-climbing on the hills we mention or on any others with single-figure gradients which may be within reasonable distance of their homes before starting for Whitsun tours in any of the districts named. When practising, it is well for a driver to learn the knack of restarting on a gradient and also to familiarize himself with the general "feel" of a car which has a strong tendency to run back. If, after such practice, he is baulked or misses a gear on a 1 in 3 gradient he will be prepared to act promptly and to handle his controls in the most effective manner.

The same advice applies with regard to circumstances other than hill-climbing. He is a wise man who learns on broad, quiet roads the best means for correcting a skid, and he is a still wiser man who spends monotonous moments at the wheel when on a long run in picturing emergencies and making a mental note of how he would act should those emergencies arise. Only by such means or by years of experience is it possible always, no matter what may happen, to BE PREPARED.

### The Police and Road Trials.

WE wholeheartedly agree with any action taken by the police with a view to preventing club secretaries from holding trials on public roads which are entirely unsuitable for the purpose. Cycling, walking, and running, as well as motor events,

Commissioner's issued by the Chief Commissioner of Police, and it Common-sense Protest. greatest care should be exercised when organizing

trials to obtain the co-operation of the local police.

The Commissioner plainly states that he does not wish to interfere unnecessarily with legitimate sport, from which it may be gathered that he is fully conversant with the value of speed trials and hill-climbs. The issue rests, then, with the promoters of competitions, on whom falls the responsibility for seeing that the arrangements are above reproach. That the Commissioner is very generously conceding a point in the interests of genuine sport is proved by his remark that "the use of the highway for purposes other than bona-fide travelling has no legal sanction." Putting two and two together, it is clear that he has no quarrel with organizers of trials, but that he wishes it to be known that such events must not interfere in any way with the use of the roads by persons employing them for the more important purpose of travelling from one place to another.

B31

nfortunately detant test hills of

NUMBERS of our readers are unfortunately debarred from visiting the far-distant test hills of which they read so much in the pages of The Light Car and Cyclccar, but doubtless they often wonder how their cars would perform on such gradients.

gradients. It is frequently said that nobody knows less about London than the Londoner, and, with regard to the many test hills which exist within a 10-mile radius of Charing Cross, it is undeniably true. The photographs on these pages show only four, but they are representative examples, and, if inquiries are made, it will usually be possible to discover some sort of test hill in the immediate locality of every reader's home.

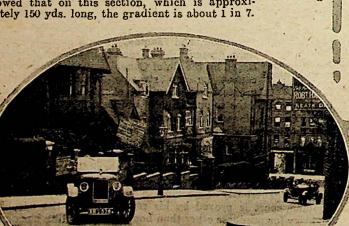
At the outset it should be explained that these hills do not boast of gradients of 1 in 4 or even 1 in 5, but their usefulness lies in the fact that they are excellent second-gear climbs. It is quite possible by judging the performance of a car on this gear to estimate its probable performance on a far worse gradient using bottom gear. The heights of Hampstead and Highgate need

The heights of Hampstead and Highgate need no introduction to Metropolitan motorists, but there must be many who are familiar only with the well-known approaches, such as Fitzjohn's Avenue and North End Road. If the motorist makes his way to Kentish Town Road and continues along Highgate Road to the Parliament Hill Fields tram terminus, he will be at the parting of two ways, both of which entail second-gear work for practically every small car.

### A Stretch of One in Seven.

If he continues straight on he will strike the lower slopes of West Hill, and he will be surprised how soon it will be necessary to drop into second, for the gradient rapidly stiffens to about 1 in 10, and it cannot safely be rushed. Following a fairly easy right-hand bend, the steepest stretch of about 1 in S<sup>1</sup>/<sub>2</sub> is encountered; there is a matter of 40 yds. of this, which finishes the climb. The total length of the hill from the tram terminus is about <sup>1</sup>/<sub>2</sub> mile.

is about a mile. Returning to the tram terminus, a second and even steeper hill may be trued by turning sharp right along Swain's Lane and bearing left, in a gentle curve. This hill is deceptive, inasmuch as the major part of it can be surmounted in top gear; it rises to exactly the same elevation as West Hill, but the last part necessitates hard pulling on second. Measurements which we took recently showed that on this section, which is approximately 150 yds. long, the gradient is about 1 in 7.



Netherhall Gdns

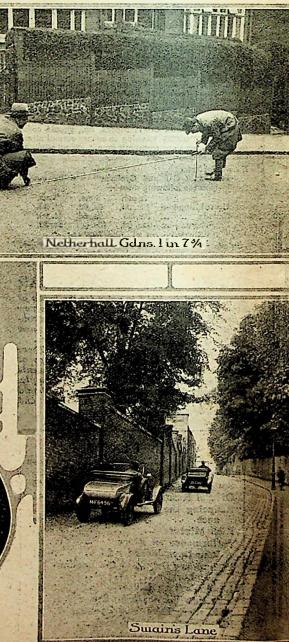
LONDON'S TEST HILLS.

Netherhall Gardens, which rises abruptly out of Finchley Road and leads into Fitzjohn's Avenue, is an old but often untried friend. Its severity lies not so much in the gradient, which is about 1 in  $7_4^3$ , as in the fact that the driver cannot get a run at it, and must perforce tackle it almost from a standing start. As a result, it brings many cars down to bottom gear.

The same may be said to apply to Campden Hill Square, which lies to the left as one approaches

Gaugir

in Seco



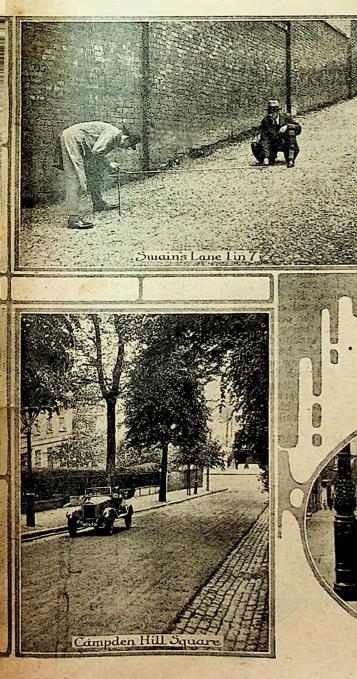
MAY 30, 1924.

≡:a Car's Performance by Its Efficiency d Gear-Four Excellent Test Hills for the Owner-driver.

Holland Park Station (Central London Tube Rail-way) going towards Shepherd's Bush.

This is not by any means so steep as Netherhall Gardens, and, if the latter is found too much for a second-gear climb, it is interesting to tackle Camp-den Hill and see whether it can be surmounted on this gear.

Although other test hills exist within a ten-mile radius of Charing Cross, it would be hard to beat the four named, which represent progressive stages



in severity, regarded, as has been stated, entirely from the point of view of second-gear ascents.

Of equal importance to the pulling power of the or equal importance to the pulling power of the engine is the efficiency of the brakes, and, when testing the former, a unique opportunity for trying the latter is provided. When the braking power is a decidedly uncertain quantity and the driver is, perhaps, unaccustomed to holding the car on a steep acclivity, precautions must be taken, and there will be no durger if the following recommendations are be no danger if the following recommendations are followed :

Assuming that the car is in second gear when it reaches the steepest portion of the hill, the driver should declutch and apply both foot and hand brakes, leaving the lever in the second-gear notch and hold-ing out the clutch. If both brakes are unequal to the task of preventing the car from running back. the task of preventing the car from running back-wards, the clutch can be slipped and the engine switched off with the left hand. This should either stop the vehicle or enable a safe backward run down

to more level ground to be accomplished. In the former case the wheels must be securely scotched before attempting to declutch and engage first gear preparatory to making a restart. It is not advisable in the first instance to change from second to first. The gear might be missed,

when, if the brakes were ineffective, the car would run backwards.

### Measuring Gradients.

Measuring Gradients. The methods adopted by us for measuring the gradient of these hills may be of interest, the necessary adjuncts being a small spirit-level, a ten-foot line and a two-foot rule. One end of the string is held on the road surface whilst the operator at the other end pulls it tight and moves it gently up and down until, by means of the spirit-level, he is satisfied that it is dead level. The distance from the string to the ground is then measured and divided into 120 ins., which at once gives the gradient. It is possible to estimate the gradient to a couple of decimal places, but owing to the rough surfaces of the average hills such fine results are hardly necessary, nor probably are they entirely accurate. accurate.

accurate. Ten feet is chosen as the length of the line, but obviously for a long steady gradient a far more accurate estimate can be obtained by using a line of greater length. In the absence of a second operator the string may be either pegged to the road or anchored by the back wheel of the car, which is allowed to come to rest on it. With a ten-foot line and two-foot rule gradients up to 1 in 5 can be measured.

West Hill

MAY 30, 1924.

# NEW 9 h.p. £180 FOUR-CYLINDER ROVER.

Additional Model Incorporates o.h.v. Water-cooled Engine, Pump Cooling and Complete Forced-feed Lubrication. Robustness, Accessibility and Efficiency the Principal Characteristics.

53

IN TWO SEATER FORM.

HE announcement that the Rover Co., Ltd., of Coventry, are about to produce an o.h.v. water-

Life announcement that the nover con, how water-Coventry, are about to produce an o.h.v. water-cooled four-cylinder 9 h.p. car as an additional model to their already famous and extremely popular 8 h.p. two-cylinder air-cooled model will arouse very great interest among light car owners. In general appearance the new "Nine" is very similar to the "Eight"; in fact, to a casual observer the radiator cap and the rather lower position of the starting handle are the only dis-tinguishable features. Apart from the engine the two chassis are very similar, the 9 h.p. chassis and body being built of components which have been thoroughly tested for several years on the 8 h.p. model. The water-cooled engine, too, has under-gone the most gruelling trials, and in one month alone covered over 10,000 miles without any adjust-ment being made, climbing such famous hills as Bwlch y-Groes with ease.

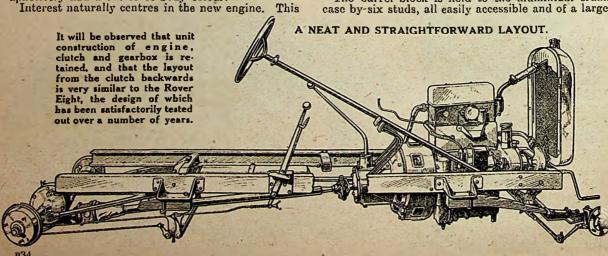
### Three Models of the "Nine."

The new "Nine" is being made in three models. In its simplest form with two-seater and double In its simplest form with two-seater and double dickey or full four-seater body the price is £180, with electric starter the price is £192, and in de luxe form, with either two-seater and double dickey or full four-seater body the price is £12 extra. The standard equipment includes a three-lamp 6-volt Lucas lighting set, bulb horn, spare wheel and tyre and all-weather equipment, while the de luxe equip-ment consists of clock, speedometer, black leather upholstery and a choice of body colour. The body lines are distinctly pleasing, and it will be noticed that the familiar Rover radiator has been re-tained. A view of the four-seater appears on the second page of "Rich Mixture."

is a cleanly designed push rod-operated, o.h.v. unit, in which simplicity is combined with accessibility to a very high degree. Particularly notable is the thoroughness with which the lubrication system has been carried out, while another point of interest is the fact that a water pump is incorporated in the cooling system. The unit, which has a bore, stroke and capacity of 60 mm., 95 mm. and 1,074 c.c., develops over 20 h.p. at 3,000 r.p.m., utilizes a 5 to 1 compression ratio and complete with its three-speed compression ratio and, complete with its three-speed compression ratio and, comprete with its three-speed and reverse gearbox, weighs 329 lb., as against the 221 lb. of the "Eight." A normal oil consumption of 1,000 miles per gallon, a petrol consumption of about 45 m.p.g., and a maximum speed of over 50 m.p.h. indicate its general performance in a car weighing about 11 cwt.

### Engine Details.

Engine Details. The upper engine casting is an aluminium valve cover, which is secured to the detachable head carrying the valves and rocker shaft by four studs and nuts. The second casting consists of the head in which the valves are set vertically side by side, the whole of the combustion space being machined and the plugs being located on the near side under the exhaust manifold, which discharges to the rear. The cylinder barrel block is the third member, the cylinders being equally spaced along its length and the head with its gasket being attached to it by a number of long studs, several of which are also used to support the rocker-shaft bearings. The barrel block is held to the aluminium crank-case by-six studs, all easily accessible and of a larger



### MAY 30, 1924.

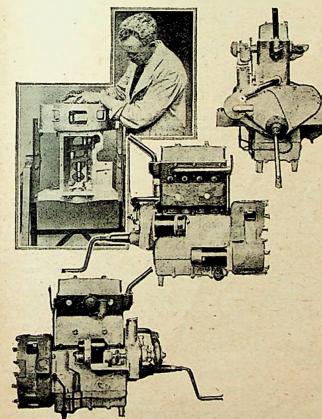
### NEW 9 h.p. ROVER (contd.).

size than is usually employed for this purpose. The crankcase is a very comprehensive casting, which incorporates the housing for the front main bearing, most of the timing case, oil-filler chimney, magneto platform and flange. The rear main bearing housing is bolted to the rear of the crankcase.

### Neat Crankcase Casting.

The lowest member incorporates the oil sump, the mouth of which is covered by a perforated zinc sheet, below which is a gear-type pump, which is submerged in oil and draws its supply through a detachable cylindrical gauze filter laid across the sump. The oil is forced to both main crankshaft and camshaft bearings, big-ends, overhead-valve gear and timing chains. The oil then drains back from the overhead platform through the push-rod passages in the side of the cylinder block, the pushrod chamber being rendered oiltight by means of a detachable aluminium plate secured by two nuts.

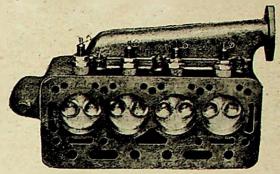
passages in the side of the cylinder block, the pushrod chamber being rendered oiltight by means of a detachable aluminium plate secured by two nuts. The timing cover is sealed by a plate into which the starting handle and housing is screwed and then locked by a grub screw, the timing gear itself being arranged in the following manner. First there is a Duplex roller Coventry chain to drive the Lucas 6-volt dynamo, the flange holding this instrument being pivoted about its lowest bolt to enable



The top left-hand photograph shows the crankshaft complete with rear bearing, being threaded into position. The remaining photographs present three views of the complete engine.

the chain to be tensioned when necessary, and the other bolts being accommodated in slots for the same reason. Inside the case there is an oil thrower to prevent excess lubricant working through to the dynamo.

In front of the roller-chain sprocket on the crankshaft is a second sprocket for accommodating the silent chain which drives the camshaft, the latter being located on the off side of the unit and being housed in two plain bearings. A second silent chain drives from the camshaft to another shaft, which is housed in a phosphor-bronze bearing in the back of the timing cover. The rear end of this shaft is coupled to the Lucas magneto by a single-peg drive



The combustion head, showing overhead tulip-type valves, cored water passages, sparking plugs and exhaust manifold.

disc, while the front end is provided with a jaw which drives the spindle of the rotary vane water pump. The Binneys graphite packing can be easily adjusted by means of two accessible nuts, while the total removal of the pump if necessary is also a simple matter, as it is fitted on to the outside of the timing-cover plate.

### The Lubrication System.

As in the case of the dynamo, provision is made by means of a quick pitch groove on the driving spindle to prevent oil leaking out of the cover, while the magneto base is secured to the platform by two fairly accessible studs. On the top of this portion of the timing cover is the oil chimney, which is provided with a spring-held lid and conical gauze filter enabling the oil to be decanted straight on to the timing chains.

decanted straight on to the timing chains. The details of the lubrication system are as follow. The pump is skew-driven from the rear of the camshaft, a T-piece feed pipe being fitted outside the crankcase on the delivery side of the pump. One lead is taken externally to the white metal rear main bearing. The crankshaft is drilled and the oil passes on to the plain big-ends, while a further lead by external pipe is taken to the camshaft bearings. External piping also leads upwards to the cylinder head, from which the oil is taken by duct pipe to the centre of the hollow rocker shaft. This is supported and fixed in five clips. It is cross-drilled so that the oil will lubricate the rockers, the latter also being drilled to enable the surplus to squeeze out on to the spherical adjusting pieces and cupped hardened steel tips of the duralumin push-rods, which have been adopted on account of their lightness.

The second lead from the delivery T-piece is taken to the front main bearing, thence via the drilled crankshaft to the front big-ends. A duct cast in the crankcase leads to the timing cover and camshaft, the oil being squirted on to the timing chain and falling into a well into which all the chains dip. Holes are drilled in the rear face of the timing cover to allow the oil to return to the base chamber when the level in the well has reached a certain height. Splash is relied upon for the castiron pistons and small-ends. The former are equipped with two rings above the fully floating gudgeon pin and a scraper ring, the groove for which is provided with oil holes. The gudgeon pin is prevented from moving sideways by split-spring rings.

### NEW 9 h.p. ROVER (contd.).

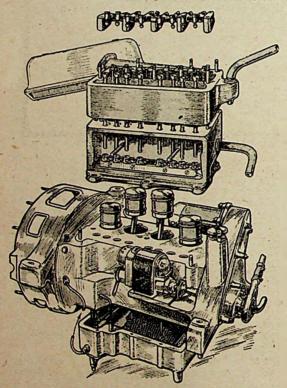
Cast-iron valve guides are pressed into the head and extend just above the rocker platform level, thus preventing a pool of oil from flooding the guides. The rockers themselves are kept separate

guides. The rockers themselves are kept separate by springs coiled round the shaft, the adjustment being by lock nut and spherical-ended screw. A lead is taken off the main lubrication system to a pressure gauge in the instrument board, and thus completes a very thoroughly thought-out scheme. The valves are semi-tulip shaped, being provided with deep slots to facilitate grinding-in, duplex springs and taper-split cones completing their fittings. The push-rod tappets have flattened sides to prevent them turning in their phosphor-bronze guides, all of the tappet guides being prevented from moving axially by means of a screwed-in strap which extends along the side of the crankcase. The upper ends of the tappets are hollowed out to receive the push-rods. receive the push-rods.

### Four-point Attachment.

The engine, with its three-speed gearbox and clutch, flywheel and electric-starter cover, is four-point attached direct to the side members of the frame. The radiator, which holds 13 pints of, water (the total amount of water being 21 gallons), is sup-ported on the front cross-member and is thus rather in front of the position of the dummy radiator used on the air-cooled model.

The clutch is of the single fabric-lined dry-plate



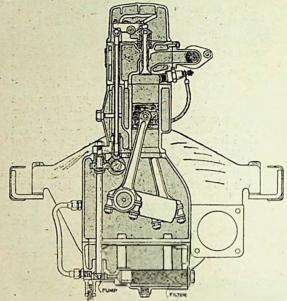
How the engine is built up. There are four main castings, including a detachable sump. All the working parts are cleanly designed and accessible.

type and requires no attention. The gear ratios, which are controlled by a central lever, are 4.84, 8.7 and 16.44 to 1, the reverse being 21.51. These ratios have been proved suitable by the most severe hill-climbing tests that a car can encounter. Within the last fortnight, for instance, one of the new "Nines" has climbed such notable ascents as Buttermere, Newlands, Hardknott, Blea Tarn and Wrynose in the Lake District-thus proving **B36** 

that it is capable of going anywhere where the wheels can grip. Furthermore, on this test the petrol consumption worked out at 38.5 m.p.g. and the oil consumption at 1,300 m.p.g.—figures upon which it would be difficult to improve with the average small car.

### Transmission Details.

The transmission utilizes an open propeller shaft of 13 ins. diameter, equipped at the front end with a Hardy fabric joint and at the rear with a sliding universal, the final reduction being by worm and the



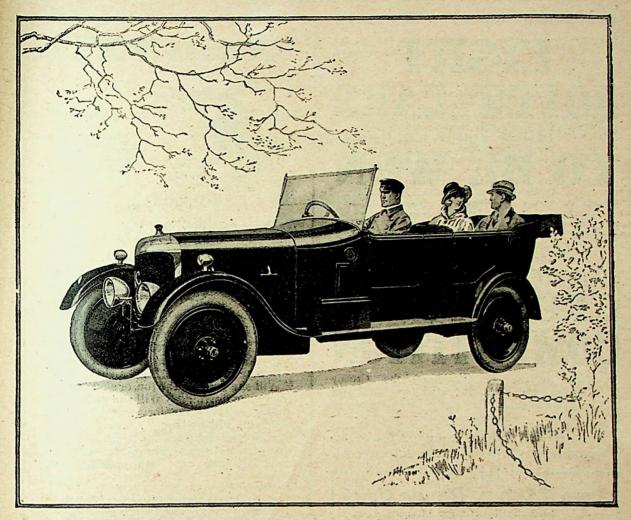
The general construction of the engine is plainly shown in the above cross-section and the special perspective drawing on the left. Of particular interest are the design and method of operating the overhead valves.

torque being taken by a triangulated member, which is spring loaded at its forward end. Both hand and foot brakes operate upon the rear wheels, which are of the three-stud, quickly detach-able disc type, shod with 3-in. Dunlop cords. The hand-brake lever is fitted on the right side, its adjustment as well as that of the pedal brake being by wing nut on the primary length of rod. A point adjustment as well as that of the pedal brake being by wing nut on the primary length of rod. A point of interest is that all wheel bearings have been enlarged, the front wheels running on special taper roller bearings and being mounted on a new H-sec-tion axle, which is very slightly dropped, as against the straight front axle used on the original 8 h.p. models. The thin ends of the rear quarter-elliptics are now provided with renewable plummer blocks, the housings of which are located in collars round the axle the axle.

### Hand Controls Modified.

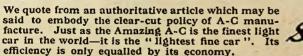
Greasers are now fitted to both the top and bottom of the stub-axle bearings, while the two-spoke steering wheel is an inch larger than that used on the "Eights." The hand controls have been moved to the right of the column, the spark lever being advanced to the left of the quadrant and the throttle being closed to the right. The petrol tank holds five gallons of fuel and is housed in the dash, the feed to the Smith single-jet car-buretter being by gravity. A neat strangler is provided. provided.

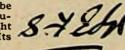
The dimensions of the car are: wheelbase 7 ft. 10 ins., and track 4 ft. The overall length is 11 ft. and the width 5 ft. 2 ins. 'The makers' address is the Rover Co., Ltd., Coventry.



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### **fhe light car and cyclecar**

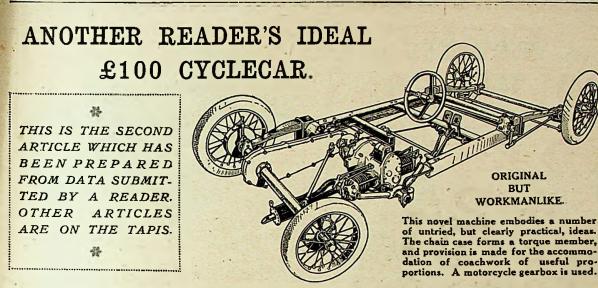
MAY 30, 1924.



DO NOT HESITATE to send your enquiries to "The Light Car and Cyclecar."

B38

MAY 30, 1924.



I N considering the problem of how to design a car which could be built for £100, it must be remembered that its most serious rival would be the motorcycle and sidecar outfit. Consequently, although the construction must be such that cheap production is ensured, adequate weather protection and reasonable comfort must be embodied in the design and the body must be built to accommodate at least three people.

The first essential is to get away from the idea of producing a small car which is really a large car in miniature. The fallacy of this practice can quite readily be demonstrated by a simple mathematical law which states that the volume of any space is proportional to the cube of the linear dimension. Applying this reasoning, it follows that if we design a car with a wheelbase of 8 ft., which is a reduced facsimile of a large vehicle with a wheelbase of 11 ft., then the space available for the passengers will be reduced, not in the proportion of 11 to 8, but in the ratio 11 cubed to 8 cubed. This proportion is actually 21 to 1, which means that there will be less than half the space available for passengers on the small car.

facsimile of a large vehicle with a wheelbase of 11 ft., then the space available for the passengers will be reduced, not in the proportion of 11 to 8, but in the ratio 11 cubed to 8 cubed. This proportion is actually 21 to 1, which means that there will be less than half the space available for passengers on the small car. The writer, therefore, considers it essential that the whole length of the frame should be available for the body, no space being wasted by a projecting bonnet. For this reason, he would advocate the location of the engine on a level with the frame somewhere near to the centre of the chassis, and in order that it might be satisfactorily accommodated, the horizontally opposed two-cylinder type would be selected. This engine, of course, possesses the advantage of a capacity for high revolutions without vibration. In order to cheapen production and avoid difficulties in the location of the radiator, the cylinders would be air-cooled.

### To Ensure Simplicity.

As regards springing, while there are several ingenious methods which could be used for a car of this type, the writer believes that the leaf spring possesses so many inherent advantages, and can be obtained in large quantities at such a low price, that it is not worth while to consider any other shock-absorbing device. Again to ensure simplicity, the quarterelliptic type of leaf spring would be selected. At the front a pair of such spring could be used

At the front, a pair of such springs could be used to locate a tubular front axle, while at the rear the tips of the springs would slide in guides fixed to the back axle casing, so as to position it transversely. These springs would not, however, be called upon to resist the thrust or the torque reactions.

These springs would not, nowever, be caned upon to resist the thrust or the torque reactions. This brings us to the question of the form of final drive that is most suitable. Despite its obvious disadvantages, the use of an enclosed roller chain is

### advocated on the grounds of simplicity and low cost, and, further, because the rigid chaincase, in conjunction with a pair of stay rods, could be used as a secure location for the back axle, and could take care of torque and thrust.

61

The back axle would then consist simply of a pair of tubes bolted to the chaincase and enclosing a solid driving shaft, at the centre of which the sprocket for the roller chain would be keyed.

At the forward end, this chaincase would be carried upon a trunnion bearing which would be part and parcel with the gearbox. The driving shaft emerging from the gearbox would pass through this trunnion bearing and would carry at the outer end the foremost chain sprocket.

foremost chain sprocket. The gearbox would preferably be of the straightthrough three-speed motorcycle type and would be secured by studs to form one unit with the engine crankcase. It would be necessary to incorporate a reverse gear in the box, but the epicyclic principle might be applied for this purpose with advantage. The engine and gearbox unit could be secured to a rigid cross-member of the frame, and the clutch, preferably of the single-plate variety, could be housed between the gearbox and the crankcase.

### Contracting Brakes.

A simple braking layout could be employed for a light vehicle of this kind, consisting of externalcontracting bands acting upon rear-wheel drums. An independent second brake might be placed at the driving end of the gearbox.

driving end of the gearbox. As regards minor details, which would have to be arranged on the cheapest possible lines, only a brief description need be given. The petrol tank, for example, could readily be housed in the forward part of the body along with an acetylene generator of reasonable size which would supply two side lamps and a tail lamp. The starting handle for the engine would, of course, project through the valance at one side.

The raked steering column would terminate in a box enclosing a simple worm and wheel mechanism secured to a side member of the frame, from which a drop arm and links would extend to the front wheels. The stub axles could well be mounted in steering heads of the Lemoine type, which lend themselves very well to brazed or welded steel tube construction. Such a vehicle would, admittedly, embody a number

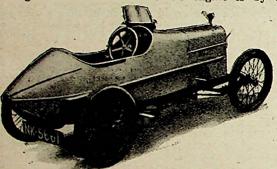
Such a vehicle would, admittedly, embody a humber of compromises between desirable' features and cheapness of production. However, the writer believes it would have a wide appeal to the class of road users which at present employs the motorcycle and sillecar, whereon only the passenger obtains the comfort which the driver would share in a cyclecar.

## A PRIVATELY BUILT SMALL CAR. An Ambitious Effort of an Amateur Enthusiast.

HE average privately built small car is rarely so well finished as to give it the appearance of a commercial proposition, but it will be appre-ciated from the photographs on this page that at least one amateur enthusiast has achieved this end.

This monocar, for such it is, was designed by Mr. S. Atkins, 5. Hadley Terrace, East Barnet Road, East Barnet, and it took him a little over 18 months to build.

The chassis is built up of 1-in. by 2-in. ash mem-bers, strengthened with  $\frac{1}{4}$ -in. steel plates on each side, the assembly being riveted together. An American air-cooled V-twin engine of 7-9 h.p. is used for the power unit, a fan being employed to assist cooling. The lubrication of the engine is by a



It will be agreed that this is one of the smartest-looking monocars yet brought to the practicable stage.

mechanical pump which is driven off the end of the camshaft.

The transmission throughout is by chain, the first

The transmission throughout is by chain, the first step from the engine being to a three-speed heavy-weight type of Sturmey-Archer gearbox, which is mounted with the engine upon angle-steel members. Incidentally, the top gear ratio is 34 to 1. From the gearbox the drive is taken to a counter-shaft running in Skefko self-aligning bearings, and from thence by twin chains to sprockets secured on the chassis side of the rear wheels. The back axle, which is of the solid type, is built up of 14-in. steel tubing of a fairly heavy gauge, the same material being used for the front axle.

It is indeed a big car in miniature, as will be gathered from this view.

The wheels are inclined to give true centre-point steering, the actual steering gear having previously done duty on a Ford.

Semi-elliptic springs are used to suspend the front axle, and quarter-elliptic springs are used at the rear. The driving torque is absorbed by suitably arranged rods running from the rear axle to the countershaft. Twenty-four in. by 2½-in. wire wheels fitted with Palmer tyres set off the general appearance of the little car.

The body, as previously mentioned, provides accommodation for one person, and although the photographs cannot show the effect of the French grey finish and the bright aluminium bonnet there is no doubt, considering that the instrument board is of policied, makemany, and wall, countered that the polished mahogany and well equipped, that the general effect is most pleasing. As will be seen, the windscreen is of the aeroplane type.

### Wood Frame and Zinc Panels.

The frame of the body is built up of birch members, the ribs being steamed and bent into position. Zinc was used for the panels, this metal being chosen on account of its ease of manipulation. The upholstery is finished in red.

The track is somewhat narrow, being only 3 ft., whilst the wheelbase is 6 ft. and the ground clearance 6 ins.

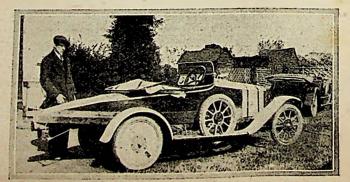
We are given to understand that this little monocar has given exceedingly good results and that it pro-vides a high degree of riding comfort. The designer and builder, in the hope that it may inspire other would be enthusiasts to build their own cyclecars in would be entitusiasts to build their own cyclecars in their space time, remarks that all the machining was carried out on a 3½-in. Drummond B.S. lathe, includ-ing both the rear sprockets. It is all the more interesting to note that Mr. Atkins is not a motor mechanic, and that this little car was built only for "the love of the thing." He has been well re-warded for his pains.

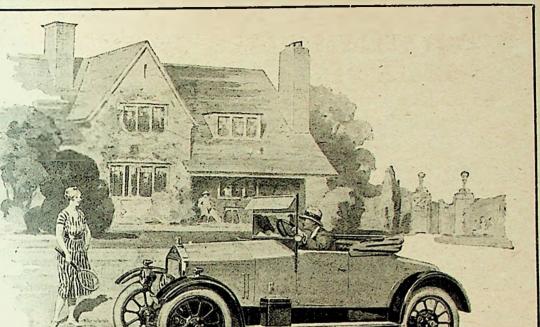
### HOME-MADE BODYWORK.

THE accompanying photograph depicts what would appear to be a successful at-tempt, on the part of one of our readers, at body-building.

He informs us that the work was done at home and mentions that the sides are constructed of alternate planks of teak and mahogany. The top panels are of aluminium, and the body is mounted on a 1915 A.-C. chassis.

The car, which we should imagine from the photograph, presents a sporting appearance, is equipped with an open exhaust. B40





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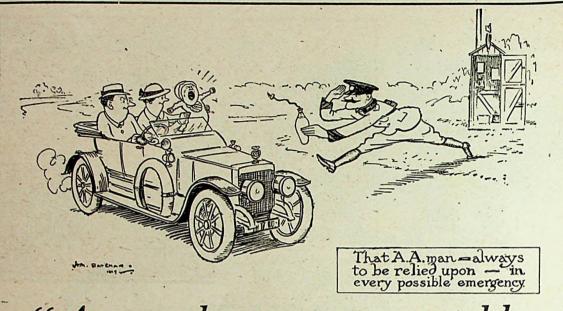
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The small advertisement columns of "The Light Car and Cyclecar" form a unique mart for the disposal of all goods of interest to small car users.

MAY 30, 1924.



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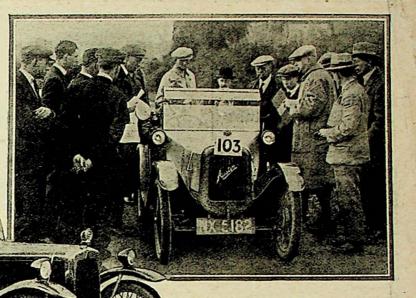
To learn more about the many advantages which follow A.A. membership write to-day for the booklet "Always Ahead," which can be obtained from the Secretary, The Automobile Association, 29, Fanum House, Whitcomb Street, London, W.C.2.

10 THF READER.—By mentioning "The Light Car and Cyclesar" when replying to advertisements, the progress of the small car movement will be assisted.

MAY 30, 1924.

# **BWLCH-Y-GROES ONCE AGAIN** ! Small Cars in the

Sutton Coldfield and North Birmingham A.C.'s Event.



Left The new sports model Ariel Fen, with G. Broughton at the wheel. (Right) B. W. Harcourt (Austin Seven) checking in at the finish.

AST Saturday the Sutton Coldfield LAST Salurday the Sution Continent and North Birmingham A.C. ran its annual Reliability Trial over the usual course from Birmingham to Bala, via Bwlch-y-Groes.

Out of 31 entries, eight cars exceeded Out of 31 entries, eight cars exceeded the 12-litre definition, the light cars con-sisting of four Austin Sevens, four Rhodes, two Gwynnes. a Lagonda, a sporting Ariel Ten, a Riley, McKenzie, Bayliss-Thomas, Crouch, Jowett, Singer, Clyno, Horstman, and A.C. The principal event of the morning run

us, of course, the ascent of Bwlch-y-Grees. The bottom corner caused no trouble whatever, but the steepest crest, where the gradient is about 1 in 4, caused the following drivers to fail :- Parsons (1,097 c.c. Aris), Faulconbridge (1,496 c.c. Crouch), Whitworth (1,096 c.c. Singer), and Mott (950 c.c. Gwynne). Some of these failures were undoubtedly due to the fact that, in order to perform well in the petrol consumption test, which was worked out on a ton-mile-pergallon basis, the cars were heavily bal-lasted and had their jets cut down to a minimum, the Gwynne and Ariel Ten being notable in this respect.

Faulconbridge's failure was due to the bursting of the rubber hose connecting the engine with the radiator. He lost all the water, but managed to trickle down into Bala, where he effected repairs and continued the afternoon's run.

An interesting feature of the event was the fact that all the bonnots were sealed at the start and every precaution was taken to onsure the accuracy of the petrol consumption figures, the cars being weighed within a short distance of the finish instead of near the start, as was the case last year.

Incidents were comparatively few, most of the competitors experiencing no-trouble runs. Norris, who was driving the original No. 1-engined Rhode-a

venerable works hack-made a good climb on Bwlch-y-Groes. Harcourt, on one of the Austin Sevens,

was nearly involved in an accident sevens, approaching the ".Buckley Arms" at Dinas, where a horse and cart blocked the road and a child ran out. Bromhead reported a no-trouble run in the identical Austin which Poppe drove in the R.A.C. Six Days' and which had also done well in the Land's End and Victory Trials. Arthur's Lagonda climbed a good deal of "Bwlchy" on second, while Roe's Riley, which put up an extremely good petrol consumption figure, was cquipped with the new Governor carbu-relter, as was McKenzie's McKenzie. The last-named climbed the greater part of Bwlch-y-Groes on second, but punc-tured on a non-stop section and had to run six miles on the rim.

Frank Hallam's Horstman carried four passengers, while Mott's little Gwynne actually weighed 17 cwt. with its ballast. Watson, who drove a similar machine, frequently economized petrol by switch-ing off and coasting in neutral.

### RESULTS.

63

(Small Gar Awards Only). Ton miles per gall. The Watson Gwynne Roso Bowl flor be performance by a car under 1,100 c.c.).-N. Temkinson (Rhode) ... ... 60.40

TCERE	nsen	(renone)	

GOLD M	EDALS.		
T. A. McKenzie (McKenz	ie)		55.57
J. H. Arthur (Lagouda)			51.73
S. H. Roe (Riley)			49.92
F. J. Bartlect (Jowett)		-	40.34
B. Norris (Rhode)			39.72
F. L. Guy (Austin) .	• 100	-	37.79
A. Watson (Gwynne)			35.60
Miss Roper (A.C.) G. P. Law (Clyno)		***	34.01
J. C. Toogood (Rhode)			31.83
G. S. Galloway (Rhode)			26.86
F. G. Bromhead (Austin			26.09
R. W. Harcourt (Austin		-	25.79
F. Hallam (Horstman) -			25.79
W. Milton (Austin)			23.11
J. G. Orford (Austin) .			-
E Sidwell (Baylis-Thon	128)		
Silver Medals: R. L. F	arsons (	Ariell, F	. whit-
worth (Singer), G. L. Th	iomas (1	umberi.	Bronze

Medal: F. Mott (Gwynno). Completed the Triat: O. N. Faulconbridge (Crouch).

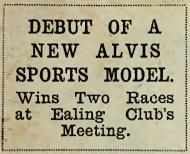
### SOUTH-WESTERN CENTRE THE A.-C.U. TRIAL.

OUT of eight entries received, five South-Western Centre A.-C.U. Trial, which was held over two out-and-home runs from Exeter. The morning circuit included many miles of greasy lanes and several formidable water-splashes, which worked much havoc in the motorcycle classes, but did not cause any failures amongst the cars. In the afternoon the course led over 50 miles of main road to the North Dovon, test hills--Porlock, Lynton, Lydiates Lane and Beggar's Roost

Porlock was in excellent condition and caused no trouble, but Dixon (Singer) took the lower hair-pin on Lynton too fast and pulled a rear tyre off, completing the ascent on the bare rim—a re-markable achievement. On reaching the summit, he sent a boy down to retrieve the cover, and regained it intact with the Parsons chain still fitted.

On Lydiates Lane, which was greasy, everyone made good climbs, all using chains, with the exception of W. H. Oates, whose Lagonda coupé climbed ex-Oates, whose Lagonda coupe climbed ex-cellently on its low-pressure tyres. Eddv's Austin Seven had ample power in hand, while Satterby's A.C. and Healey's A.B.C. were also good. Dixon was somewhat late, owing to his tyre trouble, but he soon made up time. Beggar's Roost, although very loose, did not cause any failures, all the cars mak ing good climbs. ing good climbs.

MAY 30, 1924.



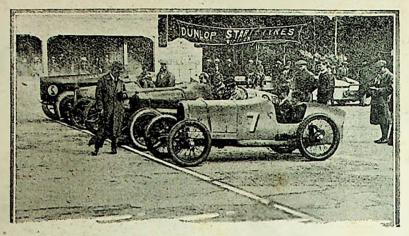
64

THE Ealing and District Motor Club held a successful race meeting at Brooklands on Saturday last. Rain fell in torrents up to half an hour after the allotted time for the start, but the weather cleared shortly before 3 p.m. and continued fine for the remainder of the afterneer. the weeting being acc the afternoon, the meeting being con-cluded without any interruptions.

### Four-speed Gearbox.

The feature of the meeting was the appearance of a new special sports Alvis, which competed in and won both of the car events. This new sports model incorporates several interesting departures from the mechanical details departures from the mechanical details of other sports models made by the manufacturers. The o.h.v. power unit, which has a capacity of 1,496 c.c., is identical to that used on other Alvis sports cars, although in this instance the four-speed gearbox is constructed in unit with the optime and constructed in unit with the ongine and centrally operated. The wheelbase is much shorter, being only 7 it. 6 ins., while slightly larger wheels are employed at the back than at the front; the chassis is also approximately 4 cwt. lighter. The hand brake takes effect on the

transmission, while the operating mechanism of the brake is particularly



START OF THE SEVENTH RACE. C. M. Harvey is seen at the wheel of the new Alvis (nearest camera). Note the larger diameter of the rear wheels compared with those at the front.

ingenious, being on the quick-thread principle. It is extremely powerful, and full pressure can be brought to bear on it by using only one finger. No differen-tial is needed.

### Only Two Starters.

In the first car race, which was re-stricted to vehicles with engines under 1,500 c.c., there were only two starters, this being due in no small measure to the fact that some were disqualified from the fact that some were disqualified from taking part, as they had not complied with the new Brooklands silencing regu-lations. The race resolved itself into a duel between C. M. Harvey's Alvis and A G. Miller's Bianchi. Despite the fact that there were only two runners, the race proved highly exciting, for after Miller had led the entire distance, Harvey opened out and beat him on the line by half a wheel, at an average speed of 75.57 m.p.h.

### Against the "Giants."

The other race was a handicap three-The other race was a handicap three-lap event for cars of any capacity. This race gave excellent indication of the speed of the new Alvis model, for Harvey, with only a moderate start against such cars as Thomas's Leyland, Norris's Wolseley Viper and Duller's Straight Eight Indianapolis Bugatti, quickly took the lead, winning very comfortably at 85.43 m.p.h., with Duller second and Thomas third.

Second and Thomas threa. Several light cars participated in an impromptu one-lap handicap for touring cars and motorcycles, which was, how-ever, won by Mrs. Gordon on a Stude-baker Light Six with a comfortable saloon body.

### MATTERS IN PARLIAMENT. MOTORING London Traffic-Bridges and New Roads-Compulsory Motor Insurance-Roads in Scotland.

THE condition of London traffic, of the Thames bridges, and of the exits from the Motropolis is being closely watched by Mombors of Parliament. Mr. Gosling (Minister of Transport) was asked by Sir H. Brittain whether, pend-ing the passage into law of the London Traffic Bill, he would put into force emer-gency regulations to ameliorate the pre-sent congestion? The Minister could only reply that until the Bill was passed he had no powers in this direction.

only reply that until the Bill was passed he had no powers in this direction. According to a statement by Mr. Clynes (the deputy leader of the House), the London Traffic Bill cannot be further considered until after the Whitsuntide recess, which is to extend from June 6th to June 16th. Although the Bill is through Committee, there will be a lot of discussion on the Report stage, after which the Third Reading has to be taken. Subsequently the measure has to run the Subsequently the measure has to run the gauntlet of the House of Lords. - It is obvious, therefore, that some considerable time must elapse before the Bill is

able time must elapse before the Bill is transformed into an Act of Parliament. Sir W. Davison asked whether the Ministry of Transport intended to hold an inquiry into the question of the Thames bridges, and Mr. Gosling re-plied that the London County Ccuncil was studying this problem. The Council would probably call into consultation other Metropolitan authorities. Any assistance which the Ministry of Trans-port could give was, he added, freely at the disposal of the responsible authori-ties, should they desire it. The urgent need of improving the roads in Scotland was brought out in a question put to Mr. Gosling. The Min-ister replied that he was making con-siderable grants for this purpose. A special investigation was being made into the condition of roads in Inverness-shire.

the condition of roads in Inverness-shire. He could not agree that the Glasgow-Edinburgh road, which would be a valu-able improvement, should be postponed. No contracts on this road had yet been let, but he hoped they soon would be.

Mr. Gosling informed Mr. Baker that the question of compelling motorists to insure against accidents had been, and still was, under consideration. Mr. Baker had suggested that the Govern-ment chould incide on the compulsions in Baker had suggested that the Govern-ment should insist on the compulsory in-surance of all motor vehicles, in order that injured persons might be able to obtain compensation. The Minister, that injured persons might, be able to obtain compensation. The Minister, however, pointed out that there were many difficulties in the way of compul-sory insurance, and, in any case, legis-lation would be needed. The question of level crossings over main autorial reads was reised by Vie

main arterial roads was raised by Vis-count Curzon, who asked if the Government were making any efforts to do away with them whenever possible. Mr. Gosling replied that he recognized that such crossings were a hindrance, and he was anxious to get them abolished wherever possible.

NEXT WEEK. Full Programme of all the Whitsuntide Small Car Events Including Further Particulars of the London-Edinburgh Run.

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HE DUNLOP VISIT The DUNLOP STAND No. 308, SERVICE is at your disposal. Call or write to 43, Kingsway. London, W.C.2. This Motor and Cycle Section, Palace of Engineering, at the British Empire Service is free to motorists. We invite EXHIBITION. you to use it. The famous Dunlop Cord on the efficient Dunlop Wire Wheel ILEAGE is the strongest test of tyre value, and it is on mileage particularly that Dunlop Cords are supreme over all other tyres. Dunlop Cords are made entirely in England. They cost less than pre-war tyres and yet give, on the average, double the mileage. Every British motorist should fit Dunlop tyres because they are Best-and British. Wherever they sell tyres-they recommend Dunlops. Ask at your garage. and be so DUNLOP RUBBER COMPANY, LIMITED, BIRMINGHAM. BRANCHES THROUGHOUT THE WORLD. C.F.H. 134 TTATTITITITITITITITITI

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### MAY 30, 1924

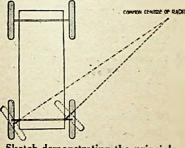


The services of the staff of "The Light Car and Cyclecar" are always at the disposal of readers. Queries of general interest will often be answered under this heading, but a stamped addressed envelope should always be enclosed. Correspondents are requested to write upon one side of the paper only.

### Piston Head Lubrication.

D.MoM.S. (London, S.E.8). - The trouble with the automatic inlet valves trouble with the automatic inlet valves on your engine is probably due to them sticking in their guides. The use of a reliable "upper-cylinder" inbricant, such as Mileage oil, might help matters. The addition of the correct proportion of an eil of this nature is also most useful in all engines, especially where there is a tendency for valves to stick open.

Ackermann Steering. E.E. (Manchester).—Practically all modern cars are fitted with this type of steering Reference to the drawing will show that the front axle is fixed perma-nently to the car, and that the wheels are negative or much bigged extensions are mounted on small hinged extensions, which are known as stub axles. These stub axles are linked together by a rod in such a manner that when the car



Sketch demonstrating the principle of Ackermann steering.

turns both front wheels swing on a radius from a common centre in line with the back wheels. This method obviates all drag between the road and the front-wheel tyres. It also gives the car a better "lock "; in other words, it enables it to be turned in a smaller circle without unduly reducing the width of the abaring front of the chassis in front.

### Fitting a Carburetter.

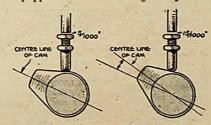
Fitting a Carburetter. N.O. (Oalcutta). — A carburetter should, whenever possible, be fitted with the float chamber towards the front of the engine, as, when going up-hill, the petrol level is thus slightly raised in the jet, which is an advantage. Similarly, when travelling down-hill, the petrol level is automatically lowered, and this tends to prevent any wastage as the re-sult of petrol flooding from 'the'jet.

Charging New Accumulator. O.F. (Aberdeen).—It is recommended that a new accumulator should be fully

charged, discharged and washed out and filled with fresh acid before recharging for service. The additional cost in-curred will be well repaid by the length-oned life of the battery.

Slipper Pistons. S.O. (Amersham).—Experiments have shown that a considerable amount of power is absorbed by oil friction between a piston and the cylinder in which it works. Especially is this so at high engine speeds. In order to reduce this function during the para base designed in engine speeds. In order to reduce this friction, pistons have been designed in which the surfaces touching the cylin-der walls have been reduced, so far as is possible, from the point of view of mechanical strength and other important factors. Pistons of this type are termed "slipper" pistons, and are largely futed in present-day cars.

Valve Timing. A.R. (Cork).—It is seldom that an alteration to the timing used by the manufacturers of any particular engine will make an improvement in its per-formance. Alteration to the shape of the cams requires special machinery, and is outside the scope of anyone who is not equipped with a knowledge of practi-



### How a small difference in tappet clearance may largely affect the valve timing.

cal engineering. A detail frequently overlooked by motorists, and which materially affects valve timing, is tappet clearance. Reference to the drawing will show that minute difference can make a large variation in the timing of the valves, often amounting to several de-grees. Unequal wear of the cams will affect valve timing, as will also a twisted camshaft.

### "Topping Up."

T.H. (Dartmouth).-This is a trade term used to denote the process of making up any deficiency of acid solution in an accumulator by adding distilled water or dilute acid as may be necessary to maintain the correct specific gravity and level.

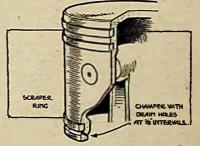
# Tapping Threads in Aluminium. C.A. (London). — When tapping threads in aluminium, great care must be used, and the tap removed frequently in order to clear away the motal swarf. Turn the tap only a short distance at a time, and use paraffin or turpentine as a lubricant.

### Aluminium Pistons.

Aluminium Fisions. T.H. (Loughborough).—Pure alumin-ium is not used for pistons, being un-suitable in this state. It is used as one of the constituents of an alloy, mag-nesium and copper in varying propor-tions being most frequently used in con-junction with it.

### Excessive Oil Consumption.

W.O. (Leeds).—We should advise you to have a "scraper" ring in the skirt of each of your pistons. This means replacing pistons; the illustration is self-explanatory. Large baffle plates at the



# A scraper ring fitted as shown tends to keep oil consumption low.

base of the cylinders may also assist matters, but care should be taken not to make them of such a size that in-sufficient oil and oil-" fog" can reach the cylinder walls.

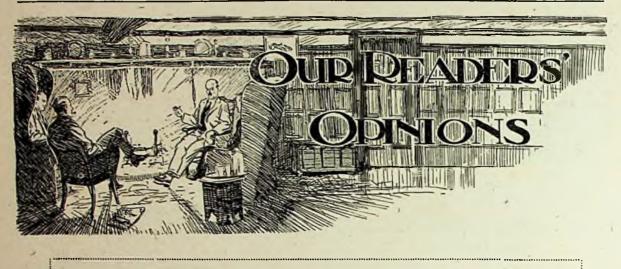
### Exhaust Gas Analysis.

Exhaust Gas Analysis. M.I. (Belfast).—It is quite possible to analyse the exhaust gas of an engine after trapping it from the exhaust pipe or from any individual cylinder, as may be desired. The gas is conducted by means of piping to a specially con-structed chemical apparatus, where each constituent is absorbed by chemicals and the amount measured. Exhaust-gas analysis, however, requires scientific training in the handling of apparatus of this nature.

Dynamotor Construction. U.N. (Oxford).—" Dynamotor" is a coined word describing an electrical accessory which serves the purpose of a combined starter and lighting dynamo. Its construction entails special winding, and its chief advantage is the saving in space, an important detail with modern light cars. A dynamotor is permanently light cars. A dynamotor is permanently in engagement with the engine, and for starting purposes takes its current from the accumulators until the engine speed is sufficient to arive it as a generator.

B47

MAY 30, 1924.



We welcome at all times letters sent us by readers for publication in these columns, and, while taking no responsibility for the opinious expressed therein, give preference to those letters which deal with subjects of general interest. No anonymous communications will be accepted, but the writer may use a nom de plume if desired. Letters should be as brief as possible, but not abbreviated. We reserve the right to make any alterations or deletions which we deem necessary.

### WHICH TYPE OF HORN?

### Bulb or Electric, but Not Mechanical.

### The Buzzer-type Electrical Horn Preferred.

The average motorist demands four things from his horn : Reliability, power, dignity and ease of operation. On these points, the choice of electric, mechanical or bulb horns must Electricity Scores Full

Scores Full

Scores Full Points. function without being looked after. Given reasonable atten-

tion, electrical and mechanical horns are equally reliable, but inattention affects electrical horns more seriously. Bulb horns are not generally reliable, as dust easily chokes the reeds.

Power gives the driver time to act; here the bulb horn fails, while the other horns carry equally far. Dignity in horns shows consideration; mechanical horns

have no dignity due to their intermittent, action; motor-driven electric horns cannot help rasping. Buzzer-type elec-tric horns, unlike the bulb horn, can have great dignity com-bined with power.

In ease of operation, electric horns obviously are vastly

Surely, then, the choice must be the electric horn, because it is first in reliability, except when it is not looked after, and first in power, ease of operation and dignity, in which the buzzer type leads the motor type.

I consider. a well-made buzzer-type horn ideal.

B. W. GALPIN.

### Mechanical a Poor Third.

For reliability fit a bulb horn, but for clearing the road give me an electric horn. The latter may go wrong in many ways; therefore, the former should be fitted on a new car.

The Politeness of the

Let its owner add an electric one if he desires. I like both. Apart from relia-

Buib Horn. buib horn calls attention effectively, and in a far more gentlemanly way. The electric horn can be aggravating.

It might be argued that it is cheaper for the new car to be filted with an electric horn and for the owner to fit the bulb horn if he desires. Rest assured the purchaser The mechanical horn belongs to a class which has no

outstanding claim to merit. It is not so reliable as the bulb nor as penetrating as the electric. Moreover, it is often awkward to fit, and invariably develops an annoying rattle. St. Andrew's Vicarage, H. CROWTHER-ALWYN. Hoyland, Barnsley.

348

### Bulb Horn Operated by Radiator Fan?

Most motorists will admit that the press-button electric horn is the most convenient to use in traffic, but it has its disadvantages, and few motorists rely on it alone. The chief of these is that the functioning of the horn

Simplicity and Reliability

depends, as a rule, on the condition of the battery, whereas bulb horns will work provided the bulb is moderately sound.

Hand-operated diaphragm horns are also liable to get out of gear, and generally they give a very unpleasant note. Taken all round, all three types are fairly reliable, and I think I may say absolutely reliable, if they get fair play and moderate attention.

I have forgotten most of my "Light, Heat and Sound," but I think it ought to be possible to produce a horn with penetrating note which would not be unpleasant to hear. Would it not be possible to operate a horn of the bulb type from the radiator fan? Probably a sufficient air pressure could be obtained by fitting a funne! immediately behind it. Co. Down, Ireland. H. H. BROWNRIGS.

Another Supporter of Electricity.

We may fairly assume that, for effectiveness and relia-bility, the present-day electric horn is at least equal to the bulb or mechanically operated warning device. The circuit

is simple, and the consumption of current is not excessive. The mechanism can be housed under the bonnet or in any con-Ease of Operation.

venient sheltered position, and long or short notes of warning can be given with minimum effort.

This case of operation is an outstanding advantage, as the driver can steer and warn with one hand, leaving the other free for traffic signals, gear change or hand brake. Indeed, it can easily become a habit—an exceedingly useful one— to drop the hand to the brake lever when giving a pro-longed warning to playing children or in view of other potential dangers.

I strongly favour the electric horn, controlled by a rock-I strongly favour the electric horn, controlled by a rock-ing ring within, and concentric with, the steering wheel. Wrists, thumbs or fingers are available to "sound an alarm," and to beginner or expert, speedman or potterer-more especially in grease or narrow lanes—this is of value, as steering control is not affected to any appreciable extent. Furthermore, this type is the only one which will penetrate to the ears of a char-à bancs, etc., driver. Exeter. W. R. BRIGHT.

\* The winner of the guinea prize will be announced in next week's issue.-ED.

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The balance you can pay in instalments to suit your convenience, and in practically every case, no further initial payment is necessary—just hand over your car.

It does not matter what make of car you have to exchange—I can give you the best price for it—because I am a Specialist.

You do not want to deal with General Practitioners. Go to a Specialist right away.

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READERS, NOTE.—It assists the small car movement and the advertiser, and ensures you prompt attention, to mention "The Light Car and Cyclecar" in your enquiries. MAY 30, 1924.

THE LIGHT CAR AND CYCLECAR

# T A SPORTING OFFER.

We are prepared to issue a written guarantee to the effect that if the prices of A-C or Singer cars are reduced before the 1st September, 1924. we will refund the difference in full, providing such cars have been purchased direct from us at the makers' current prices and a signed guarantee obtained at the time of purchase. The mere fact of having bought a car from us does not entitle the owner to a refund, production of the guarantee being essential.

In most cases we are also prepared to issue the guarantee in EXCHANGE deals, where a new car is purchased, and also in some cases where a new car of different make, but for which we are agents (see below), is concerned.

FULL PARTICULARS WILL BE FORWARDED ON REQUEST.



DO NOT HESITATE to send your enquiries to "The Light Car and Cyclecar."



The small advertisement columns of "The Light Car and Cyclecar" form a unique mart for the disposal of all goods of interest to small car users.

### OUR READERS' OPINIONS (contd.)

### THE IDEAL £100 CYCLECAR.

### A Second-hand Bargain Preferred-Criticism and Comment.

With reference to the recent correspondence on this subject, may I suggest that it would be more profitable to invest £100 in a sound second-hand proposition rather than on a new machine which has been built

£100 Too Cheap down to a (comparatively low) price? In to be Good. this case, the sum mentioned would pur-chase a used car in good condition having

a far more comprehensive specification and a better perform-ance than a new car, cheaply constructed, and in which it is admitted that everything would be of the simplest descrip-tion, could be expected to have. A.B.C.

### Manufacturing Difficulties.

As an automobile mechanic of some years' standing, and one who is very interested in the development of the cheap light cyclecar, perhaps I may be permitted to rifeicise the design of a three-wheeled oyclecar which

An Impracticable appeared in your issue of May 23rd. Design. I consider the design impracticable,

both from a mechanical and from a financial and manufacturing standpoint. I have myself built two three-wheelers, sorapping many

I have myself built two three-writelers, sorapping many components in doing so, and found my greatest trouble was the lying over of the rear wheel when cornering. This, your contributor states, cannot possibly happen with his design, but I would submit that a wide, rectangular, horizontal framework is the worst possible type of construction to deal with this trouble. It also entails a very long rear-wheel which is a very rear at its avtrame ands which is spindle, unsupported, except at its extreme ends, which is obviously bad.

obviously bad. With regard to the position of the engine, I admit that, whilst the nearer the driving wheel the better, in that a short transmission becomes possible; the position shown would be very unsatisfactory for an air-cooled engine. It is completely cowled in, the only entry for cool air being be-neath, and no exit for the heated air is visible. In the drawing the engine is shown attached to the frame by long bolts passing through the engine plates and projecting several inches before bolting to the frame very insecure and flexible method. and flexible method.

Regarding gears, your contributor may be satisfied with two-speed epicyclic gears. Personally, I am not, and I do not think that two speeds would be sufficient for a vehicle which must be primarily a go-anywhere-fully-loaded bus.

The suspension system would answer very well, and, not-withstanding the joints, bearings, etc., involved, is the best

### Detection of Crime.

It may be of interest to those of your London readers who intend touring in the West of England during the Whit-sun Holidays to know that police traps, are habitually worked by the local police on Bank-holi-Police Traps in day Mondays on the two main roads run-the West. ning to Exeter and Plymouth. The one trap is situate at the village of Middle Wallop, between Andover and Salisbury, via Salisbury Plain, the other being worked at the Park House cross-roads, approximately half-way between Andover and Amesbury, on the alternative route. on the alternative route.

on the alternative route. In both cases the police adopt the questionable principle of stationing the "trapper" in plain clothes, usually negli-gently leaning against a telegraph pole or other support. Furthermore, the speed of the motorist is only estimated by the "trapper," who, as is usual with all traps of this description, would seem to fail to make allowance for the fact that the smaller the car the faster it appears to be travelling, in comparison with larger cars, which, although travelling at the same speed, are allowed to pass freely without being stopped. In view of this, the motorist would do well to remember that the most efficient speedometer in the world is of no-avail against the estimate of the law, no matter if he be travelling well within legal limits. Nor does the defence that the road was perfectly deserted, and consequently clear, create any impression on country magistrates when drivers are before them. H.K.S. are before them. H.K.S.

East Twickenham.

red--Criticism and Comment.
part of the design. The Ackermann system of steering has already been proved satisfactory for light vehicles.
The suggestion to hinge the rear portion of the body would cortainly add to the accessibility of the chassis, although, if a dickey is provided, much would depend, and suspend, on the hinges. Incidentally, in the drawing no accommodation is provided for the legs of the dickey passenger!
From the manufacturer's point of view the design is unsound as a cheap job. There would be too much work in it. It must not be forgotten that, for a machine to be sold to the public at £100, the actual cost of manufacture should not exceed £70, leaving £15 manufacturer's profit and overhead charges and £15 for the agent, who also has overheads to meet (and very often sundry "commissions") before he finally takes his profit. It is important, therefore, that labour charges be kept down to the absolute minimum. For instance, in this design there are three separate frames to be assembled, 14 lugs to be riveted on, two transverse arms, fork ends, spring boxes, etc., to be machined, and a body requiring a heavy framework, inasmuch as only the centre portion actually rests upon the chassis, both front and rear overhanging.
Therefore, if the manufacturer is to provide a good, powerful engine, as he must to obtain the performance your contributor demands, combined with a presentable body, electric lights, etc., and if ho avoids shoddy material or unsatisfactorily cheap labour, I do not think he could do the job at £70.

Should this letter catch the eye of your contributor, I hope that he will not be offended at my frank criticism, and it that he will not be offended at my frank criticism, and it he would care to send his address to a fellow-enthusiast, I should have pleasure in forwarding him my design for tho ideal £100 cyclear, that he may treat it in a similar manner. Birmingham. T. W. WYNCOLL.

### A Comment on Lieut. Galpin's Letter.

I have taken much interest in this correspondence. The sketch and description of Lieut. Galpin's conception shows that it is both practicable and pleasing. If he will figure out the approximate £120-not £100. Cost to his specification, I am afraid he will not be able to sell it, allowing for advertising and agents' commission, below £120. Perhaps you could induce him to write further on the subject.

the subject.

A. E. PARNACOTT.

### A Troublesome Point.

I am an interested reader of The Light Car and Cyclecar, and was unfortanate enough to see your remarks with regard to Morgan number plates and Wilmslow too late, as I was fined 10s. there last week for using cycle-

Should be Car size numbers at the rear in place of car Size. size. The front plate was car size. I have since looked up old copies of The *Light Car and Cyclecar* to find out the correct size plates for Morgans, and it took me some time to find what I wanted It seems that it is absolutely essential for three-wheelers to carry number-plates at front and rear of exactly the same size as those used on four-wheelers.

I often remember having seen a reference in your paper, but when I have wanted to refer to it I have been unable to trace the issue among my stock of back numbers.

May I suggest that a portion of some page be reserved for an index of outstanding items. I believe it would be very useful as a reference, particularly as I feel sure that many people must keep their old copies. C. OLDFIELD. 35, Milner Street, Old Trafford, Manchester.

\*We vogret that it is impossible to provide a longer index in *The Light Car and Cyclecar* than that afforded by the contents table published every week on the same page as "Topics of the Day." For the benefit of readers who re-tain their back numbers for binding, we publish every six months a printed volume index which is obtainable from these offices - iter these offices .--- Ep.

### OUR READERS' OPINIONS (contd.).

### Where the Manufacturer Fails.

Is it not strange that manufacturer redits. Is it not strange that manufacturers of light cars cannot give more attention to details. A car round about the £250 mark is looked upon as something specially good in these times by many of us, and it is most disappointing to find faults which could obviously be remedied by any thoughtful person after one year of manufacture. My first disappointment was to find, after my initial ride of 60 miles, that the side curtains, which were macked in

of 60 miles, that the side curtains, which were packed in the dickey, were rubbed—a brand new car and side curtains looking second-hand. Apart from looks, it is essential that these should be very clear. A little soft material fitted be-tween them would have prevented this.

Second annoyance: the filler to the petrol tank (under the bound) is on the side of tank, and one cannot tell, even by the primitive method of poking with a stick, how much petrol there is. If the price of the cur does not allow for a dashboard petrol gauge, surely a rough indicator could be fixed on the tank itself.

Third complaint : pedals not adjustable-year 1924 !

Fourth complaints, peaks hot adjustable—year 1924. Fourth complaint: dickoy seat will not close with the cushion in its place. Another inch in the depth of the dickey surely would not entail much cost or spoil the appearance. N.13. W.C.B.

### Driving to the Common Danger.

Whilst travelling recently, from Southport towards Orms-kirk I had occasion to overtake another car on the outskirts of the latter town. Just as I was in the act of doing so, a two-seater Alvis, bearing a Coventry num-



ber and travelling in the same direction as Case. myself, tore past, compelling me to slow down in order to avoid a general collision involving all three vehicles.

I followed the driver into Ormskirk, and, despite the nar-rowness of the street, he endeavoured to "cut-in" between u bunch of cyclists and a car coming towards him. It was only due to the driver of the latter pulling up dead that an accident did not occur.

These incidents happened on Sunday, the 18th inst., between 6 p.m., and 7 p.m., and should this letter catch the eye of the offender I should like him to note that I have his number, and that, in the event of my witnessing a similar occurrence, in which he is the guilty party, I can either inform the police of his identity or prosecute him myself. SAFETY FIRST.

### Air v. Water Cooling.

Air v. Water Cooling. Under the heading, "Air v. Water Cooling," you ask if 10,000 miles without decarbonizing is possible. It certainly is. With large cars I imagine it happens frequently, but 10,000 Miles Without Decarbonization. when new. Not even a tappet has been adjusted, and I have no biea when it will need decarbonizm, but should have no hesitation in starting on a tour now. Last month it climbed Red Bank with four up, so, at any rate, its tune is not bad. The car is a Riley. Usual dis-claimer.

### Does Self-decarbonization Occur in Air-cooled Engines?

I should be interested to know if other readers of your paper have noticed the following phenomenon in the Rover Eight engine. Last Easter I completed a tour of over 1,009 miles in Scotland on my 1922 Rover Eight

A Pleasing Phenomenon. (which already has more than 10,000 miles Phenomenon. (or its credit), finishing up with a practic-ally non-stop run from Glasgow to South-port (212 miles) in the good time of 8<sup>t</sup> hours. Thinking that the engine would benefit by a good cleaning out, I removed a cylinder head, and found that I might have saved myself the transition of even or the picture head way the trouble, as a light deposit of soot on the piston head was all that was revealed. The base of the valve caps was abso-lutely bright and clean, also the leads of the valves and plug points. I scrapped drip feeds some months ago and fitted a new central oiling system.

. Is it possible that the high normal running temperature has the effect of burning out carbon as per oxygen process? Ainsdale, Lancs. W. OSMOND NELSON. Ainsdale, Lancs. в54

### INFORMATION WANTED.

Owing to pressure on our space it is impossible to include readers' replies\*to queries in "Our Readers Opinions," and correspondents anxious to help fellow car owners are courteously requested to communicate direct with the address which is given in most cases.

### Address Wanted.

Will the reader who wrote us on the 19th inst., asking for a route from Leicester to Tivetshall (Norfolk), kindly for-ward his address, in order that we may let him have the required information?

Rover 8.

Has any reader had an air inlet fitted to the induction pipe of his Rover Eight? If so, would he be good enough to let me know the result? H. W. TILBURY. Potters Bar, Middlesex.

### G.N.

I should be very grateful if any reader would either lend or sell to me a 1922 G.N. instruction book. Orchard Cottage, RONALD A. BURR.

Totternhoe, near Dunstable.

### Austin Seven.

I shall be glad of any information regarding the Austin Seven sports-average speeds, comfort, running costs and performance or rough and hilly roads. **F.** НUGH ТІРРЕТТ.

55, Abbey Road, Torquay.

I wonder if anyone can give me his experiences of the Austin Seven sports as regards durability, springing and quietness after having run some 1,000 miles; also general running? R. BONNER.

Worcester College, Oxford.

Aero Morgan.

Experiences and information concerning above, especially with regard to road-holding qualities, particularly on corners, shock absorbers, low-pressure tyres and front-wheel brakes. Suitability for competition work when fitted with 1,096 c.c. o.h.v. Blackburne engine. 17, The Leas, Folkestone.

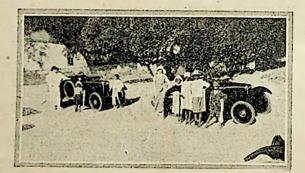
### Coventry-Premier.

Will some reader please inform me of the best setting for a Cox Atmos carburetter on a 1922 model of the above car? Aly petrol consumption works out at 30 m.p.g., which, I should think, could be improved upon by at least 50 per cent. Also, is petrol and benzole mixture suitable? If not, what is recommended? R. W. CHAMBERS.

7, South Brink, Wisbech.

### CONDENSED CORRESPONDENCE.

A Cape Town reader writes (enclosing a photograph of two 8 h.p. Rover cars), telling of the splendid service he



### Air-cooling in the Tropics Two 8 h.p. Rovers in South Africa.

has obtained from three light cars fitted with air-cooled engines which he has owned in South Africa. He lays particular emphasis on their freedom from overheating under all conditions.

J.H.S. (Liverpool) is enthusiastic concerning the improve-ment effected in his light car by the fitting of low-pressure tyres. He says that speed and hill during are in c. and Stability on corners and whilst comfort is much increased. Stability on corners and in grease is also excellent.

#### THE LIGHT CAR AND CYCLECAR

Joy-riding with the Hon. Bertie .- No. 20,

## The World and his Wife want an ALVIS-

"This is the weather to appreciate ALVIS superiority, when you can drive all day and every day without a hitch. This is the season to pile up mileages and find out the faults of the less enduring cars. Pals come to me for a lift because their cars are laid up. I oblige them, of course, but I don't forget to rub it in about the ALVIS reliability, and more and more of them are getting an ALVIS of their own. You can't get away from facts. There's my ALVIS always ready, never any trouble, always in perfect tune. There's the other cars, in garage and out for some repair or other. All the talking in the world won't alter the fact that ALVIS performance, reliability, comfort and general appearance is second to none. YOU find a pal with an ALVIS and take a ride. It will open your eyes to ALVIS superiority."

> Write for Catalogue and nearest Agent's name and address. THE ALVIS CAR & ENGINEERING CO., LTD., COVENTRY. LONDON DISTRIBUTORS: Henly's. Ltd., 91 and 155. Great Portland Street, W.1

TOURING MODELS. Owins to special d mynd we are how fitting our B and 5-Scater de Laus Bodies to the 5/B 12/30h.p. chassis at the following prices :-

13

SPORTS MODELS.

12/50 h.p. 4-Seater Super-Sports, O.H.V. .. £575

The GOLD CUP awarded to the ALVIS as WINNER of the 200 Miles INTERNATIONAL LIGHT CAR RACE, Brooklands, Oct., 1923, at an average speed of 93.29 m.p.h.

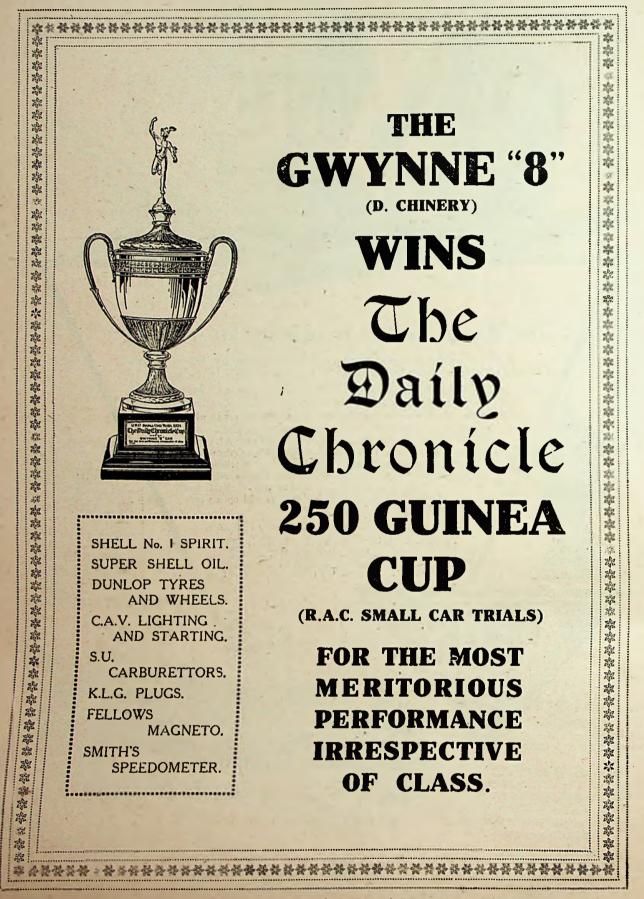
> BRITISH EMPIRE EXHIBITION, Stand No. 120.

12/50 h.p. 5-Seater Model de Luxe, £575

H.P.

MENTION of "The Light Car and Cyclecar" when corresponding with advertisers assists the cause of economical motoring.

B55



TO THE READER.—By mentioning "The Light Car and Cyclecar" when replying to advertisements, the progress of the small car movement will be assisted.

44



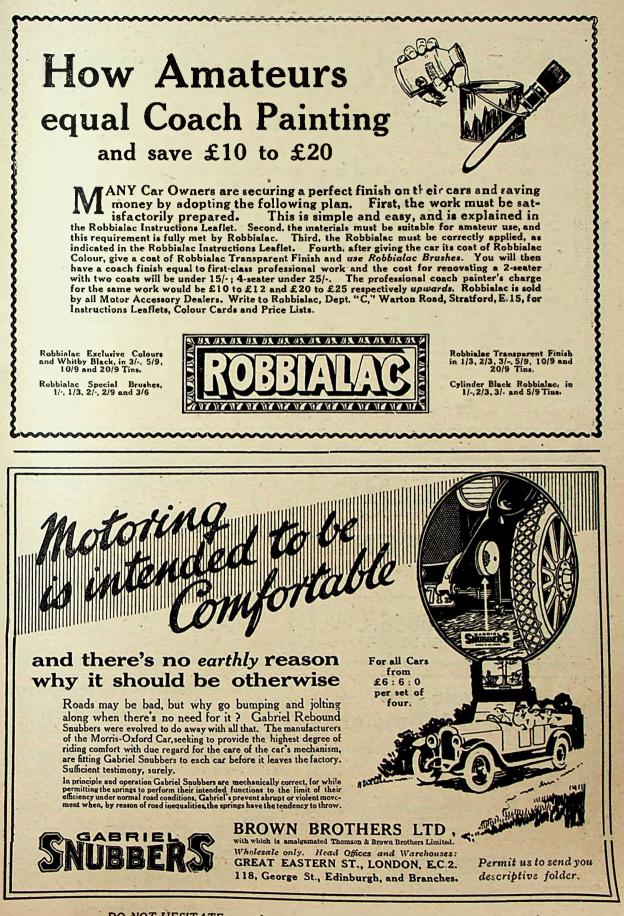
FACILITATE BUSINESS, and ensure prompt allention to your enquiries, by mentioning "The Light Car and Cyclecar" when writing to advertisers. They will appreciate it.

B57

45



#### THE LIGHT CAR AND CYCLECAR



DO NOT HESITATE to send your enquiries to "The Light Car and Cyclecar."

B59

Béo

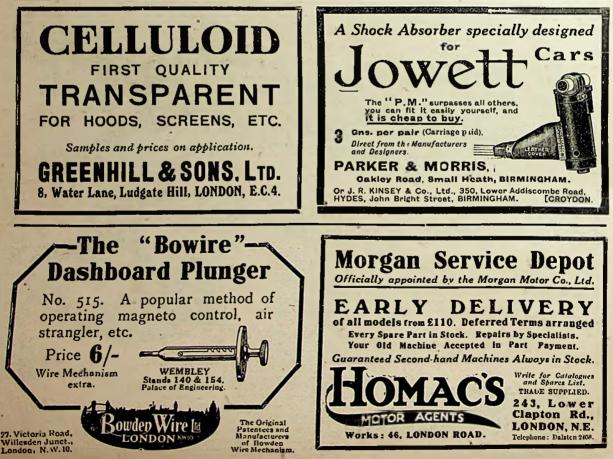
## **Useful Maps for Motorists**

## MAP OF ENGLAND AND WALES.

Scale 13 miles to the inch. Showing the whole of England and Wales; printed in colours to show the contour of the land. Cloth 4s. net; 4s. 2d. post free. Paper 2s. net; 2s. 2d. post free.

Send for free booklet containing useful motoring information and particulars of many other maps, books and journals. Map of 50 Miles Round London.— Scale 4 miles to the inch. In one sheet, with London in the centre, extending round a radius of approximately 50 miles. Cloth 3s. 0d. net; 3s. 2d. post free. Paper 1s. 6d. net; 1s. 8d. post free.

Obtainable from the Offices of :--"THE LIGHT CAR AND CYCLECAR," 7-15, Rosebery Ave., London, E.C.I.



The small advertisement columns of "The Light Car and Cyclecar" form a unique mart for the disposal of all goods of interest to small car users.

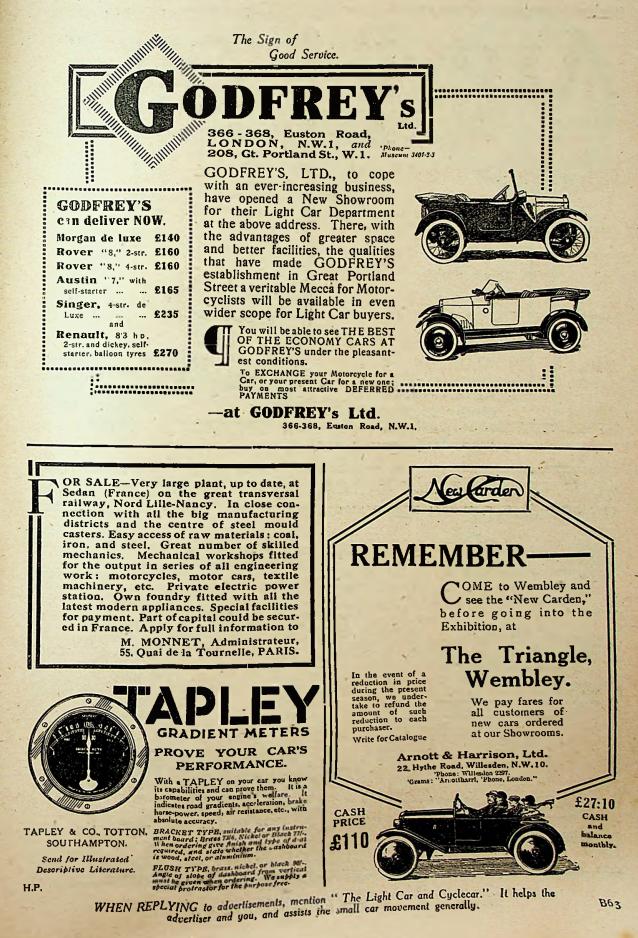


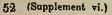


TO THE READER.—By mentioning " The Light Car and Cyclecar " when replying lo advertisements, the progress of the small car movement will be assisted.

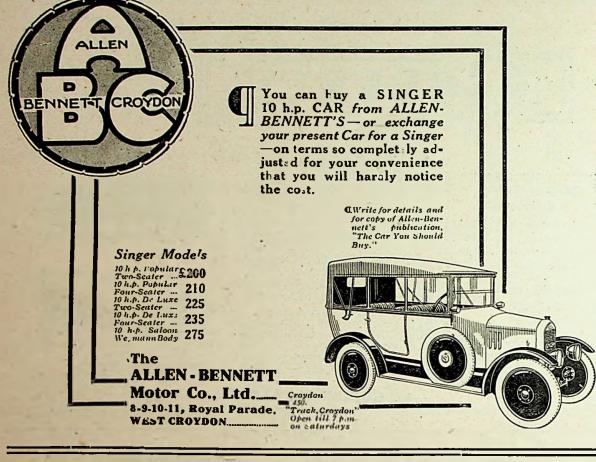
#### THE LIGHT CAR AND CYCLECAR

(Supplement v.) 51

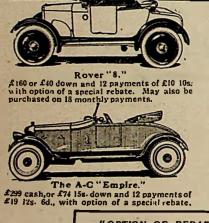




THE LIGHT CAR AND CYCLECAR

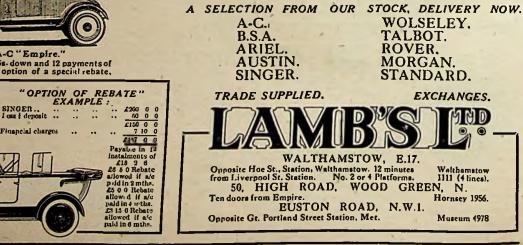


### YOU WOULDN'T BUY A CAR WITH SQUARE WHEELS!



F course not—yet our experience shows that first car purchasers are prone to do things just as much against their own interests.

But whether you are looking for your first car or your tenth you may come with certainty to Lamb's Ltd. Our one concern is to see you suited, to see you getting the utmost pleasure and service from the car we sell you. All our endeavours are bent to that end,



READERS, NOTE.—It assists the small car movement and the advertiscr, and ensures you prompt attention, to mention "The Light Car and Cyclecar" in you- enquiries.

#### Max 30, 1924.

## SECOND-HAND LIGHT CARS, CYCLECARS, and ACCESSORIES FOR SALE

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

#### RATES.

For advertisements in this section: 12 words 2/- (minimum); 2d. per word after. Subject to a discount of 5 per cent. for 13 consecutive insertions, 10 per cent. for 26, 15 per cent for 52. Terms: Cash with order, and otherwise nes.

DISPLAYED ADVERTISEMENTS. Scale of charges, with reduction for series, sont on application. Cheques, Postal Orders, etc., should be crossed and made payable to Temple Press Ltd.

#### REGULATIONS WITH REGARD TO ADVERTISEMENTS.

All advertisement orders are subject to acceptance in writing from the Head Office.

All advertisements and contracts are accepted and made upon the ex-press condition that "Copy" is subject to the approval of the Publishers generally, who also reserve the right to reject any advertisement, in whole or in part, referring to cars or accessories which in the opinion of the Publishers are outside the scope of the journal, and such relusal of copy shall not be a good ground for advertiser to stop a current contract. to refuse payment or to take action for breach of contract.

Advertisements received to the for instruction in the issue then closing for press will-unless accompanied by express instructions to the contrary -be inserted in the following issue. In the case of series orders, current copy will be repeated if new copy is not received at the time of closing for press.

Whilst every precaution is taken to ensure accurate printing, the Pab-lishers will not be responsible for printers' errors, nor will they be re-sponsible for advertisement blocks destroyed by fire or that are left in their possession for more than one year.

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 corer booking and cost of forwarding such replies. The words "Box , c/o 'The Light Car and Cyclecar,'" count part of the advertisement.

#### DEPOSIT SYSTEM.

DEPOSIT SYSTEM. For the convenience and security of our readers we have an approval-deposit system. The intending buyer forwards to our office the annount of the purchase money, which will be acknowledged to both parties. Notes or money order save time. Cheques must be made payable Temple Press Ltd., and are acknowledged to seller when "cleared." It a sale is con-eluded, we forward to the seller the amount agreed upon. If no sale is made, we return the amount deposited. In either case we deduct a com-mission of 14 per cent. (3d, in the £, 2s, 6d, muinum), on amounts de-posited up to £50, 1 per cent, on amounts from £50 to £100, and % per cent, on amounts exceeding £100, to core our express of booking, post-cent, on amounts dereding £100, to core our express of booking, post-cent, on amounts dereding £100, to core our express of booking, post-acticles on approval are not to be retained more than three days, unless by arrangement between the parties. All disputes to be settled by the arbitration of the failer of "THE LTGHT CAR ND CYCLECAR," whose decision shall be final and binding on both parties.

WARNING.-Acknowledgments of deposits or instructions to forward goods advertised are only written on our special headed paper, which berns a facelimite of the title of this journal. To prevent fraud, the adver-tiser should ACKNOWLEDGE IMMEDIATELY any such letter appar-ently coming from us, and delay forwarding the goods for a day or so. Should we, on receiving such an acknowledgment, and that no letter has been sent by us, we will wire the advertiser not to part with the goods advertised.

#### CLOSING TIME.

Copy for, and all matter relating to, advertisements must reach the Head offices first post Tuesday, and should be addressed to THE MANAGER. "THE LIGHT CAR AND CYCLECAR." 7-15 ROSEBERY AVENUE, LONDON, E.C. 1. If proofs of displayed advertisements are required, copy should be forwarded in sufficient time to allow of it being sub-mitted and returned.

Head Offices:-7-15 Rosebery Arenue, London, E.C. 1. Telephans, Clerkenwell 6000 (7 lines). Telegrams: "Pressimus, Holb., London."

#### NOTICE

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

#### SECOND-HAND LIGHT CARS AND CYCLECARS FOR SALE

A.B.C. Gordon Watney and Co., Ltd., 31 Brook St., W. 1 ('Phone, May-fair 2966), London agents. Several second-hand, all models in stock, guaranteed, from £100; deferred payments and part exchange. zzz-164 A.B.C. A. P. Rey. - 1922 sports model, excellent condition, £97 10s.; extended terws. 578-534 Euston Rd. Museum 7600. 601-282 A.B.C. 1922 2-seater sports, many extras, new condition, £110. Parker's, Ltd., Bradshawgate, Bolton; also 246-52 Deansgate, Manchester, 6017-65

A.B.C. 1922, tports, small mileage, dynamo, speedometer, side curtains, Dunlop cords, excellent condition, 100 guineas, or exchange motorcycle and cash. 51 Upper Richmond Rd., East Putney. 601-e794 A.B.C., 1922, Regent model, 2-seater, dickey, dynamo lighting, taxed, nice order throughout, £120. Below.

nice order throughoal, £120. Below. A.B.C., 1921, sports model, dynamo lighting, taxed very fast, £90., cash, exchanges, delerred payments. W. T. Dunn, Ltd., 326 Euston Rd., N.W.L. 'Phone, Museum 5391. A.B.C., 1921, large body, dickey, dynamo and starter, orerhanied re-painted, taxed, insured for year, fully equipped and perfect, £115, 518 Cricklewood Lane, N.W. 2. 601-e294 A.B.C., 1921, clorer-leaf, dynamo, starter, new tyres, perfect mechanical condition, £100, Peace 12d Oxford and Cambridge Mansions, Maryle-bone Rd, N.W.1.

601-6419 A.B.C., 1923, filted with special conch-built 2-senter body, large dickey, dynamo lighting, all-weather equipment, licensed, exceptional condition, 140 guiness. Below. A.B.C., 1923, 2-senter, sports, dynamo lighting, etc., licensed, splendid order, 100 guiness; exchanges or deferred. Edwards, 175 GL Portland St., W. 601-855

A.B.C., 192 or exchange 1922, Sports, good mechanical condition and appearance, £95, ange. 307 Goldbawk Rd., Shepherd's Bush 601-587

A.C. cars. Calthness and Co. Ltd. If you require a good second-hand A.-C. or desire your present car taken in part exchange for a new A.-C. apply to us. Owing to the numerous inquiries we receive we are able to allow top prices in part exchange We are also prepared to buy good second-hand A.-C. cars for cash. Calthness and Co. Ltd., the leading A.-C. agent-and specialists, 65 Gt. Portland St. W. 1. Tel. Langham 2172. 601.766 A.-C. Try fienly's. You cannot beat their terms. 91 and 155 Gt. Portland St., W. Mayfair 4201. 222-297

A.-C., 1914, 10hp, 4-cylinder, 2-seater, good mechanical condition, £40. Milne, Watson Rd., Wood Green. 601-d230

Allne, watson has, these of this make of car, either new or second-hand, are invited to send their requirements to The Garage, 12 Cornwall Terrate Mews, N.W.1 (by Mme. Tussaud's). Extended payments and cohorne.

A.C., 1923, Empire model, all-weather, in fine order, £200. Batchelor, 13 St. James' Rd., Kingston. 601-e764

A.C., 1922, 2-scater and dickey, I. and s., in good order, £190. Ernest Grimaldi, Ltd., 87 Gt. Portland St., W. I. Langham 2985. 601-773 A.-C., 1915, 10hp, 2-3-scaler, good tyres, year's tax, in splendid condi-tion, 49 guineas, exclanges, terms. Allber Garage, Thornsett Rd., Earls-field, S.W. Latchmero 4388. 601-792

A.C., 1920. 2-scater, in fine condition, £150 cash, or £57 105. down and 12 payments of £9 16s. 11d., with option of a special rehate. Lamb's, Ltd., 387 Euston Rd., N.W.; opposite Hoe St. Station, Wal-thamstor; 50 High Rd., Wood Green.

A.C., sports, special experimental model, V screea, complete equipment, instruments, dyname, etc., detachable hood, new tyres, excellent condi-tion, 98 guineas for quick sale. Box No. 5851, c.o. "The Light Car and Cyclecar."

A.-C., 1922, special Sports model, 2-scater aluminium body, dynamo and starter, specdometer, rerolution counter, clock, excellent condition and small mileage, £275. Maudes', Walsall Garage, Walsall. 601-855

A.-C., 1923 Empire model, all-weather side screens, taxed for year, Marles steering, repainted, #235. Newnham Motor Co., 245 Hammer-smith Rd., W.6. 'Phone, Hammersmith 1325. 601-366

A.C. The authorized A.-C. agents. The actual 1921 show model Sports A.-C. fitted with special 70 m.p.h. engine, in excellent condition, many extras, including 2 spare wheels, etc., taxed £225, or small depost and balance over 18 monthly payments. Allen-Bennett Motor Co., Ltd., 8, 9, 10, 11 Royal Parade, West Croydon. Telephone, Croydon 2450-1. 601-897

A.C. 1921 2-seater, starting and lighting, excellent condition, taxed for 1924, fust overhauled and repainted, bargain, £160; exchanges, ex-tended payments, Mcars and Bishop, 225a Hammersmith Rd., W.6. Hammersmith 2250. 601-872

ALBERT 1923 4-scaler, 4-speed and reverse, dynamo lighting and starter, all-weather equipment, speedometer, clock, 2 sparo wheels, in perfect condition, £175. Naylor and Kirk, 406 Garratt Lanc, Earthfield, S.W. 18.

S.W. 18. **ALBERT**, 4-scater G2 model, 2 spate wheels, lighting, starter, taxed, fully equipped, nice order throughout, £180 or offer. Write, "Linden." Harrow View, Harrow. **ALLDAYS MIDGET**, new scars, worm and berel, hood, 3 tyres, re-painted and overhauled recently, cost £50, sell £25; a reliable little bus. 7 Alwyne Rd, N.I. **ALVIS**. New or second-hand. Try Henly's. The Sole London Distribu-tors. You cannot beat their terms. 91 and 155 Gt. Portland st. W. Maylair 4201. Alvis Spare Parts and Service Dept., 31-32 Folgy St. W. Maylair 4203. ALWIS 1000 D2, 10 She event, Schen dyname, lighting will starter

ALVIS, 1922-23, 10.5hp sports, dicker, dynamo lighting, self-starter, clock, speedometer, dash lamp, electric horn, aluminum plates, lugrage grid, extra sparo tyre, new lood, tax pai, bargain, 2172 105; cash or casy payments Wilkins, Simpson, opposite Olympia, London. 601-e539

ALVIS, 1921-2, semi-sports, dickey, starter, sneedunoter, clock, extra. 60 m.p.b. guaranteed, exceptionally good condition throughout, £100, or exchange motorcycle and cash. 51 Upper Richmond Rd, East Putney, 601 792

Readers are referred also to "THE MOTOR" (Tuesdays, 4d.), which contains each week many hundreds of advertisements of new and second-hand cars of all kinds.

#### SECOND-HAND

#### LIGHT CARS AND CYCLECARS FOR SALE (continued).

AMILCAR, 1922. dynamo lighting, spare wheel, excellent condition, 28 gns. Clark's, 7 Exhibition Rd., S.W.7. 601-275 ARIEL, 1923, 91p, 4-scatter Churmy, few months' old only, dynamo lighting, numerous extras, tax paid, £145. Ernest Grimaldi, Ltd., 87 Gl. Fortland Sc., W. I., Langham 2985. ARIEL, new, soiled, 1924, de luxe Ariel 9, self-starter, 4 scater, painted blue, cost £201, all accessories, magnificent car, 155 guineas, guaran-teed. 391 King St., Hammersmith. 601-8844

AUSTINS. Try Henly's. You cannot beat their terms. 91 and 155 Gt. Portland St., W. Mayfair 4201. 222299 AUSTIN. Potential purchasers of this make of car, either new or second-hand, are invited to send their requirements to The Garage, 12, Cornwall Terrace Mews, N.W.1 (by Mme. Tussaud's). Extended pay-ments and exchanges. 601-530

AUSTIN 7, 1923. in particularly good condition throughout, speedo-meter, tax paid for the year, shock absorbers, ctc., subject to any trial, £120. Fredrics and Co., Ltd., 89 Gt. Portland St., W. 1. 601-761 AUSTIN, Thp. sports model, in stock, mileage from the works registered, £170, Box No. 5841, c.o. "The Light Car and Cyclecar." 601-e414

AUSTIN 7, 1923, Chummy, £125. Smith and Hunter, 90 GL Portland 5t. Phone, Museum 8136. 601-320

AUSTIN 7, 1924. electric starter, just delivered, milcage 200, tax naid, £155. Pickworth and Hull, 107 Gt. Portland SL., W. 1. Langham 1998.

AUTOGRAT, 1924, 10hp, 2-scater, all-weather, double dickey, fully equipped, shop-soiled, £220, including tax to December. Motor Garage, Winchcombe St., Cheltenham. 601-x953 A.V. monocars from £25; 2-seaters from £35. Open Saturdays until 5 o'clock. A.V. Motors, Park Rd., Teddington. Telephone, Kingston 710. 602-a585

A.V., 6hp. 1920. overhauled and repainted as new, £23, taxed, insured. 1 Belgrave R.L. Wanstead. Phone 407. 601-e828 1 Belgrave Rd., Wanstead. Phone 401. A.V. monocar, first-class condition, very little used, J.A.P. engine, as new. #35 or near offer. B. 91 Coversham Ave., Palmers Green, N. 601-371 A.V. monocars, from £25; 2-scaters from £35 to £70. We specialize in buying, selling, and exchanging and supply on deferred terms. 'Phone, Putney 1827. Andrew's Motor Mart, 151 White Hart Lane, Barnes. 601-572

BAYLISS-THOMAS, 4-scater, 1923, starter, curtains, accept £185, in-sured, full licence paid. 61 Westborough, Scarborough. 601-e833

BEBE PEUGEOT, 4-cylinder, w.-c., 2 speeds, reverse, hood, windscreen, side curtains, spare rim, lamps, taxed, good condition, what offers? Lavender Cottage, Heath Rd., Hillingdon. 601-e860

**BELSIZE-BRADSHAW.** Gordon Watney and Co., Ltd., 31 Brook St., W. 1 (Phone, Maylsir 2966), London agents. Several second-hand in stock, guaranteed, from £100; deferred payments and part exchanges. zzz-165

BELSIZE-BRADSHAW, 2-scater, late 1922, dynamo lighting, spare wheel and other accessories, carefully used, mileage under 5,000 and in exceptionally good condition, hood and paintwork like new, fully taxed, £100. Moore, 62 Avenue Rd., Highgale, N.6. Clerkenwell 6788. 601-630

BELSIZE-BRADSHAW. 1922, 2-sentor, tax paid for the year, excellent mechanical condition. 90 guineas. Hans Crescent Motor Co., 25 Basil 8t., Kutshtsbridge. 'Phone, Ken. 3301. 601-919

BLERIOT-WHIPPET. Astounding offer. 79 guineas. Brand-new 1923 (not shop solied) Bleriot-Whippet 2-soler, with full makers' guarantee, electric lighting, spare wheel with tyre, hood, screen, magneto ignition mechanical hand starter, pump, jack, tools, bedt drive and mechanical horn; any car or motorcycle taken in exchange; easy payments. Write, "phone or call. Short and Glass, Ltd., 362, 487, 488, 491 and 493 Upper Richmond Rd., East Sheen, S.W. 14. "Phone, Richmond 2362 and 2363. zzz-750

and 2305. BLERIOT.WHIPPET, £38; exchanges, deferred payments; 1921 Bleriot.Whippet, 2-seater, hood, screen, lamps, 5 detachables, nice con-Bleriot.Whippet, 2-seater, hood, screen, lamps, 5 detachables, nice con-dition. Seabridge, 35 Mansler Rd., East Dulwich. Sydenham 2452. 601-813

BLERIOT.WHIPPET, 1923, 2-scater, splendid condition, tax paid, £53. Dobbing, Bishopton, Ferryhill, Co. Durham. 601-c873 BLERIGT-WHIPPET, late 1920. 2-scater, 9hp, hand starter, electric and gas lamps, luggage grid, etc., spare wheel, £28, cash, deferred, or exchanges. Teddington Garage, 160 High St., Teddington, Kingston 2562.

**BLERIOT-WHIPPET**, 1923, 8hp, brand new, 2-senter, electric lighting, fully equipped, makets' guarantice, 79 guineas; exchanges or deferred. Edwards, 175 Gt, Portland St., W. 601-848 BLERIOT-WHIPPET, 1923, 9hp, 2-sealer, spare wheel, hood, electric lighting, run 1,200 miles, as new, bargain, £55. D., 5 Priory Gardens, Shepherd's Hill, Highgate. 601-g323

BRITON 1920 4-scaler, dynamo and starter, £95; exchange or hire-purchase. The Light Car Co., 351, 410 to 414 Eustan Rd., London. 601-887

**8.5.A.** 10hp do luxe model. August 1922, every rofinement, perfect order, £150, by appointment. Regers, 137 Clements Rd., East Ham. F. 6. 601-e838

BUCKINGHAM, 1923. 10hp. 2-seater, dickey, pastel blue, dynamo lighting splendid condition. £90. The Oak, Feltwell, Norfolk. 601-6772

BUCKINGHAM, 1922, practically new condition, guaranteed, £60. 28 St James St., Brighton. 601-864

BUCKINGHAM, 1923, 10hp. 2-seater, dickey, dynamo lighting, all-weather equipment, year's licence, 100 guineas; exchanges or deferred, Edwards, 175 Gt. Portland St., W. 601-849

BUCATTI, 1921. 4-seater model, first registered 1923, dynamo lighting, starting small mileage, £195; 1921 Breseia model, dual igniton, Bosch lighting and starting, fully equipped, £285. Black and Finch, 222 Gt Portland St., W. 1. 'Phone, Museum 2271, 601-835

CALCOTT, 1922, 10.5, 2-seater, dynamo lighting, repainted, £135. Smith and Hunter, 90 Gt. Portland St. 'Phone, Museum 8136, 601-325 CALCOTT. £95, 1919, 10hp, 2-seater, dickey, dynamo lighting, ycar's iax, etc., beautiful condition. Vivian, 33 Spenser St., Victoria St., S.W. I. Vic. 8677. 601-778

#### SECOND-HAND

#### LIGHT CARS AND CYCLECARS FOR SALE (continued).

CALCOTT, 10.5hp, 1919, 2-scater, dickor, dynamo lighting, 6 detach-able wheels, mart appearance; offers. Alderton, Reigate, 501-909 Phone 154.

CALCOTT, 2-seater, sacrifice, 68 guineas; appointment. Owner, 7 Park Pl., St. James's, Regent 2670. 601-531 CALTHORPE. Moores Presto, Croydon agents Calthorpe cars. Promplest delivery new models with efficient service to follow. Largo stock second-hand cars to select from. Deferred payments and exchanges arranged. North End, Croydon, 'Phono 2624. zzz-754

CALTHORPE. A. P. Rey. 1920, 4-seater sports, starter, tax paid for the year, £115; extended terms. 378-384 Euston Rd. Museuma 7600.

CALTHORPE racing single-scater, wire wheels, 80 m.p.h., £150. CALTHORPE, 1920. 4-scater, dynamo lighting, £125; cash, deferred, exchanges. Railton Cobham and Co., Ltd., 5 Cumberland St. Deans-gate, Manchester. Central 2681. 601-342

CALTHORPE car, 2-scater, 5 lamps. 5 detachable wheels, any trial or examination, bargain, £36 15s. Wilkins, Simpson, opposite Olympia, Loadon. 601-644

CALTHORPE, 1921, 2-scaler, starting, lighting, licensed, con-calthorpe, 1921, 2-scaler, starting, lighting, licensed, con-function, starting, lighting, con-lighting, construction, con-lighting, construction, con-lighting, construction, con-lighting, construction, con-lighting, construction, con-lighting, construction, con-scaltage, construction, con-scaltage, construction, con-scaltage, construction, con-scaltage, construction, con-scaltage, construction, con-construction, con-constructi

CALTHORPE, late 1921, 10hp, super-sports 2-scater, dynamo lighting, speedometer, clock, dash lamps, polished aluminium body, very fast, has been kept well and is in beautiful condition throughout, £115, Willetta Lamosfield, Ettingshall, Wolverhampton. 'Phone, 61 Sedgley. 601-355

Lanosfield, Ettingshall, Wolverhampton. 'Phone, 61 Sedgley. 601-555 CALTHORPE, late 1923, 2-scaler, run under 5,000 miles, appearance and condition new, tax paid, 185 gnineas. Hans Crescent Motor Co., 25 Hasil St., Knightsbridge. 'Phone, Ken. 3301. 601-921 CALTHORPE, 1922, 10hp, 4-scaler, electric self-starter and lighting, very geod condition, £155. Newnham Motor Co., 245 Hammer-milh Rd., W.6. 'Phone, Hammersmith 1825. 601-365 CALTHORPE, 1921, 10hp, 4-scaler, lighting, starting, clock, repainted, vear's licence, splendid order, 115 guincas: exchanges or deferred. Edwards, 175 Gt. Portland St., W. 601-858 CALTHOREE 1922, da hux 6 Assaler saltsforder all avisne (blue faved

CALTHORPE 1922 do luxo 4-scaler, sell-starler, all extras, fully taxed, £140; deferred terms and exchanges. Cummings and Simpson, 5 Putney Bridge Rd., Wandsworth. Putney 2728. 601-580 CARDEN official repair depot.

All spare for Carden cars stocked; complete overhauls undertaken. Send for list of improvements.

Arnott and Harrison, Ltd., manufacturers of New Carden light cars, 22 Hytho Rd., Willesden, N.W. 10. 'Phone, Willesden 2297, zzz-257 CARDEN, streamline, single-seater, unused, requires finishing, paint, etc., £24, bargain. Wood, 79 Fernhead Rd., Westbourne Park, W.9, 601-c858

CARDEN, 1924. Family model, used for demonstration purposes only, bargain, £95. Southern Garage, East Grinstead, Sussex. 'Phone 222. 601-e790

CARDEN, 1921, 2-soater, year's tax, new tyres, speedometer, fully equipped, £25. Denman Motor Agency, 4 Denman Place, Plecadilly Circus. Regeut 986.

CARDEN 1921 2-scaters, side-by-side seating, fully equipped, £22 to £55. 'Phone, Putney 1827. Andrew's Motor Mart, 151 White Hart Lane, Barnes. 601-573 Lane, Barnes. 601-373 CITROENS. 'Try Henly's. You cannot beat their terms: 91 and 155 Gt. Portland St., W. Maylair 4201. zzz-298

CITROEN, £125, 1921, 4-scater, taxed year, English mudgnards, smart, perfect order, near offer; exchange combination and cash. 181 Newton Rd., Burton-ou-Trent. 601-c868

Newton Rd., Burton-ou-Trent. 601-e863 CiTROEN. W. II. Jones and Co. The Citroen car specialists and authorized agents offer: #155. 11.4hp Citroen, 1922, 4-seater French de luxe body, speedometer, clock, perfect. #175. 11.4hp Citroen, 1923, 4-seater French de luxe body, tax paid. #236. 11.4hp Citroen, 1923, English 4-seater body, tax paid, mileage under 3,000. #2655. 11.4hp Citroen, 1925 English coupe, 2-seator and dickey, tax paid, pained blue, perfect. Exchanges and special deforred terms arranged. W II. Jones and Co. 101 Cft Portland St. W. 1. 7197 Maylair

Exchanges and special ocierted terms arranges. W. H. Jones and Co., 101 Gt. Portland St., W. 1. 7197 Maylair. 661-917

CITROEN, 1921, 4-scater, many extras, rear screen, fine condition, £120, Stretton and Smith, 12 Woodstock St., Oxford St., London. Maylair, 5129.

CITROEN 1921 4-seater, £125; 1920 4-seater, £85; exchange or hirc-purchase. The Light Car Co., 331, 410 to 414 Euston Rd., London. 601-889

CITROEN, 1923, 7.5hp. dynamo lighting, self-starter, in excellent con-dition, £115, or small deposit and the balance over 18 montbly instal-ments. Allen-Bennett Motor Co., Ltd., 8, 9, 10, 11 Royal Parade, West Croydon. Telephone, Croydon 2450-1.

**CITROEN** 1920 4-seater, dynamo lighling and self-starter, right-hand drive. This car has only been in uso 18 months, and is in exceptionally good condition throughout, mileage 10,000, guaranteed sound, £100. The Gables, Sylvan Hill, Crystal Palace. 'Phone, Sydenham 223. 601-x961

GULEY 1924 2-scater, demonstration car, licensed, little used, #230. Below.

CLULEY 1924 4-seater, taxed year, many extras, only done 1,000 miles, owner going abroad, £230. Smith and Hunter, 90 Gt. Portland St. Phone, Museum 8136. COVENTRY-PREMIER, late 1922, 4-wheeler, spiendid condition throughout, small mileage, new tyres, improved gearing, numerous add-tions, best offer over £75 accepted. Vicar, Eccleshill Vicarage, Bradford. 601-880

COVENTRY-PREMIER, 4-wheeler, lato 1922, under 6,000 miles, self-statter, perioet mechanical condition, new tyres, £125, cost £250, iaxod, insured. Knight, Outfitter, Soham. 601-c825

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#### SECOND-HAND

#### LIGHT CARS AND CYCLECARS FOR SALE (continued).

COVENTRY-PREMIER (Singer), 1923, engine 434, chassis 428, 2-scater, remance and side curtains, etc., ready to take four anywhere in comfort, any reasonable trial, £135. 10 Manor Parade, Sutton, Surrey, 601-837

COVENTRY-PREMIER. F.O.C.II. offer 1922 Coventry-Premier, 4-wheeler, dynamo, dickey, excellent condition, bargain, £87 10s. 5 Heath St., Hampstead (new Tube). 601-301

Waccter, dynamo, dickoy, excellent condition, bargain, 287 108. 5
 Heath St., Hampstend (neur Tube). 601-501
 COVENTRY-PREMIER, 1921, 3-wheeler and dickor, dynamo lighting. 625; cash, delerred, exchanges. Railton Cobham and Co., Ltd., 5 Cumberland St., Deansgate, Manchester. Central 2681. 601-366
 COVENTRY-PREMIER, late 1922, 8hn, double dicker, dynamo lighting. eslistarter, apeedometer, mats, Easting side screens, mitcage under 5,000, taxed till December, condition like neg, bargain, 495, cash or casy payments. Wilkins, Simpson, opposite Olympia, London. 601-6640
 COVENTRY-PREMIER, 1922, dynamo lighting, 2-seater and dicker, very fine order, L35. Batchelor, St. James Rd., Kingston. 601-6766
 COVENTRY-PREMIER, 1922, 2-scater, double dickey, dyname, speedometer, side screens, year's tax 5 new tyres, 280. Deeman Motor Agency, 4 Donman Place, Piccadilly Circus. Regent 986. 601-824
 COVENTRY-PREMIER 1922 4-wheeler, dynamo lighting, spare wheel. etc., only wants sceing, 475. Thone, Putney 1827. Andrew's Motor Mart, 151 White Hart Lane, Bartnes. 601-375
 CROUCH, 10hp, 1923. Economic 2-scater, dickey, light blue, black wings, dynamo lighting, self-starter, speedometer, dash lamp, all-weather coupe, petrol can and carrier, car in practically new condition, fully equipped, 2175. See below.
 CROUCH, 9hp, 1921, wide 2-scater, grey, black wings, acetylenn light.

CROUCH, 9hp, 1921, wide 2-scater, grey, black wings, acetylene light-ing, 5 lamps, speedometer, tyres good, excellent condition throughout, inily equipped, £65. Mebes and Mobes (Established 1893), The Original Light Car Specialists, 144 Gt. Portland St., W. 1. Phone, Langham 2230. 601-297

2230. 601-297 CROUCH, 1923, 8-18hp, royal blue, Lucas dynamo lighting, side cur-tains and hood to form a coupe, dasllamp, speedometer, aluminium plates, verv little used, tax paid, as new, £120, cash or easy payments. Wilkins, Simpson, opposite Olympia, London. 601-e656 CROUCH 10bp 1922 2-seater, double dicker, all-weather cortains, Lucas dynamo lighting, 2 spare wheels, speedomoter, the whole car in excel-lent condition, £110. Colmere Depot, 49 John Bright St., Birming-601-901

fent concitton, 2110. Connect on the second second

601-e784 DEEMSTER, 1924 model, 10hp, 2-scaler, sunk dickey, lighting, start-ing, speedometer, year's licence, splendid order, 155 gns.; exchanges or deferred. Ed wards, 175 Gt. Portland St., W. 601-850

DEEMSTER 1920 2-scater, draamo and statter, excellent condition, £85; exchange or hire-purchase. The Light Car Co., 331, 410 to 414 Eus-ton Rd., London. 601-892

DE MARCAY, 1921, 2-scater, 8.9 Anzani, detachable wheels, dynamo liphting, overhauled and repainted, £45. Culliford, 21 Oppidans Rd., Chalk Farm, N.W.3. 601-2326

Chaik Farm, N.W.S. 601-8226 ERIC-CAMPBELL, 1920, 10hp, 2-seater, dynamo, sports, £100. Bart-lotts, 95 Gl. Portland St. 601-537 ERIC-CAMPBELL, 1922, 10hp, 2-seater, polished aluminism body, rery nice condition, £125. Newnham Motor Co., 245 Hammersmith Rd., W.S. "Phona, Hammersmith 1325.

E.S.A., 1924, 10bp, 2-seater and dickey, English bodywork, 4-cylinder, w.c., o.h.i.v., dynamo lighting, new tyres, 3-speed and reverse, Bosch, Zenith cantilever springs, £165, or exchange or terms. Milne, Watson Rd., Wood Green. 605-e768

FIAT, 1921, 10-15, 2-seater, repainted, in excellent mechanical condi-tion, £225. The Hans Crescent Motor Co., 25 Basil St., Knightsbridge. 'Phone, Ken. 3301. 601-920

<sup>1</sup>Phone, Ken. 3301. 601-920 FRAZER-NASH speed model, 2-cylinder, 4 speeds, exceptional condition, winner of many premier awards; what offers or exchanges? Headingley Motor Co., Ltd., 8 Otley Rd., Leeds. 602-349 FRAZER-NASH, 1924, 11.9 Anzani sports engine, enclosed transmis-sion, rery chic 3-scater body, list price £450, will accept £325; would take Austin 7 or A.B.C. part. Headingley Motor Co., Ltd., 8 Otley Rd. Leeds. 602-348

G.N. specialists. Repairs; spares of every description in stock: sorvice agency in Midlands. The Redditch Garages, Ltd., Re 'Phone 117. zzz-546

sorvice agency in Midlands. The Redditch Garages, Ltd., Redditch. 2zz546
G.N., 1921, good mechanical condition. Inst. dynamo lighting, speedo-meter, spare wheel, good tyres (2 new), £50; drive 50 miles prospective purchaser. Nutt, 24 Eglinton Crescent, Ediburgh. 601-g505
G.N. Black and Finch, 222 Gt. Portland St., W. 1, sole concessionasires. havo Frazer-Nash G.N., boat-shaped body, guaranteed 60 m.p.h., £10; 1922 Legoro, very hast, £80; 1924 Anzani, 4-cylinder, guaranteed 75 m.p.h., £250; Vitesso, overhead camshalt model, aluminium body, dy-namo lighting, etc., apeed 70 m.p.h., £175; 1921 touring, £55. Phone, Museum 2271.
G.N., 1921, 2-senter, dynamo lighting, detachable wire wheels, spare, tyres as new, all accessories, full equipment, uphoistery, hood, and paintwork perfect, in first-class condition throughout, very smart, fast and reliable, open to any examination willingly, £58. Ben Motors, 165 G.N., 1923 de luxe, in excellent condition, done under 3,000 miles, 5 wheela, electric lighting, speedometer, capacious dicker, set tools, etc., for quick sale, 90 guineas. I. Campbell-Gray, 7 Collingham Gardens S.W. G.N. 1921 dynamo lighting, sparo, wheel, speedometer, taxed, excellent

S.W. 601-6777 G.N. 1921 dvnamo lighting, spare wheel, speedometer, taxed, excellent order, £52 10s. Clark's, 7 Exhibition Rd., S.W.7. 601-274 G.N., 1921, 1922, cylinders, aluminium pistons, chassis just completely orerbnuled, dynamo lighting, speedometer, clock, roltmeter, dashlamp special hody, coach painted red, air cushion, aluminium discs, shock absorbers, £70. 47 Oburch Rd., Riehmond. 601-8843

#### SECOND-HAND

#### LIGHT CARS AND CYCLECARS FOR SALE (continued).

G.N., 1922, aluminium body, dickey, taxed, £78 10s. 484 West Green Id., N.15 601-9831

G.N., 1920, improved body, dynamo lighting, speedometor, spare wheel, etc., tax paid, very good condition, £50. 37 Playfield Cressent, Dulwich, S.E.22.

G.N., 1921, dynsino, spare wheel, mechanical oiling, new hood, scuttle, rontilators, as new mechanically and in appearance, £65, or exchange motorcycle and cash. 51 Upper Richmond Rd., East Patney. 601-9790 motorcycle and cash. 51 Upper Richmond Rd., East Patney, 601-6790 G.N., 1920, 2-scater, dynamo lighting, speedometer, nice appearance, and mechanically perfect, £50. Naylor and Kirk, 406 Garrat Lanc, Earlsfield, S.W.18. 'Plione, Wimbledon 2041. 601-314 G.N., 1921, perfect condition mechanically, electric light, many expen-sive extras, £45. Griffin, Bridge Garage, Hinton Rd., Loughborongh Junction, S.E.24. 601-390 G.N., 1922, Sip, 2-scater, Legero aluminium body, dynamo lighting, spare wheel, etc., splendid condition, 79 guireess. Below.

G.N., 1922, Bhp, 2-scater, dynamo lighting, speedometer, spare wheel, dickey ceat, splondid condition, 79 guineas; exchanges or deferred. Edwards, 175 GL Porland St., W.
 G.N., late 1921 de luxo model, 2-scater and dickey, side screens, speedometer, dynamo lighting, spare wheel, tax till end of year, £58, or exchange combination or Morgan. Ta Northwick Terrace, Mich Vale. 6(1-5505)

G.N., 1920 or 1921, 2-scater, dynamo lighting, 5 detachable wheels, clock, spredometer, tools, etc., just repainted, new hood fitted, very smart, excellent condition thronghout, year's tax paid, £50. 83 Penshurst Rd., Thornton Heath. 'Phone 1572.

G.N., 1922-23, tax paid, 2-scater and dickey, dynamo lighting, any trial, 68 guincas. 31 Hydethorpe Rd., Balliam. 601-385

60 G.N.s and other small cars always in stock; write, call, or 'phone, Putney 1827. Andrew's Motor Mart, 151 White Hart Lano, Barnes. 601-374

G.W.K., 1922, 10hp, 2-scater, grey, black wings, dickey seat, dynamo lighting, speedometer, mirror, all-weather side curtains, good tyres, fully equipped, excellent condition throughout, £110. Mebes and Mebes (Established 1893), The Original Light Car Specialists, 144 Gt. Portland St., W.1. 'Phone, Langham 2230. 601-296

St., W.I. Phone, Langham 2230. G.W.K., £85, exchanges, deferred payments, 1920-21, 4-seater, dynamo, 5 detachables, taxed, insured, fast, smart Scabridge, 35 Hansler Rd., East Dulivich. Sydenham 2452. GU.S. Goll-Still G.W.K., de luxe 2-seater, 8-10hn, water-cooled, hood, screen, lamps, any trial, going cheap, offers; exchange motorcycle; instalments. Wands-worth Motor Exchange, Ebner St., Wandsworth (Town Staton). 601-800

G.W.K., 1921. 4-seater, excellent condition, just overbauled, dynamo lighting, £100 or near oller. Newman, Radley College, Abingdon. 601-854

G.W.K., 2-cylinder. 2-scater, pre-war Brooklands model, just overhauled and repainted by makers, dynamo lighting, £85. Below.

G.W.K., 1919, 2-cylinder, 2-scater, all-weather fittings, perfect condition, £80. Below.

G.W.K., 1913. 2-cylinder. 2-scater, in good mechanical order. £43. Royal Berks Motor Co., 29a King's Rd., Reading. 601-e871 G.W.K. 1921, 4-seater, perfect condition and appearance, dynamo, licensed, 285. 43 Green Lane, Penge, Telephone, Sydenham 604. 602-735

G.W.K., 9.2, 2-seater, good appearance, first-class mechanical condition, new pistons, new Lyres, £40. Bland, 77 London Rd., Gioncester. 601-e767

601-e767 C.W.K. 1925, 2-seater, dynamo and starter, splendid condition through-ont, registered, bargain, £120. J Wright and Co., Saffron Waldea, Tel. 16. 601-266

Tel. 16. C.W.K., 1921, 4-seater, cream, dynamo, speedometer, rear screen, nearly new hood, ongine just thoroughly overhauled, extras, 2 new tyres, ez-ceptional hill-climbor, owner-driven, getting motorcycle, deliver anywhere genuine bayer, £85. Clappen, Scarolt, Leysdowa, Kent. 601-6824 G.W.K. 1920 2-seater, dickey, dynamo lighting, excellent condition. £75. Maudes', Walsall Garage, Walsall. 601-829

G.W.K., 1922, 4-seater, dynamo and starter, fully licensed, excellent condition, £125; exchange or bire-purchase. The Light Car Co. 531, 410 to 414 Euston Rd., London. 601-878

GWYNNE 8, 1923, chummy, complete, tax paid, £155. Latrellie, 88 Woodlands Rd., Liford. 601-819

CWYNNE 8, 1924 chummy model, £195; buying 4-seater. Alderton, Reigate, Surrey. 'Phone 154. 601-910

HANDS, £125, 1922, 10hp, 2-seater and dickey, lighting and start-ing, absolutely as new, consider exchange. Ewers, Newton Rd., Burton-on-Trent. 601-c867

HANDS, 1922, 10hp, 2-scater with dicker, £110 cash, or £27 10s. down and 12 parments of £7 4s. 5d., with option of a special relate. Lamb's, Ltd., 587 Euston Rd., N.W.; opposite Hoe St. Station, Wal-thamstor; 50 High Rd., Wood Green.

thanstow; 50 High Rd., Wood Green. 601-362 HILLMAN cars Official repairers, London district, J. C. Brodis, Ld. 94a Chevne Walk, Chelsea, London, S.W.10. Telephone, Kenningtan 5200. All spare parts in stock. Well-equipped works. 650-4293 HILLMAN speed model, 1922, little used, any examination, guaranteed parfect, very last, aluminium body, copper exhaust, Hartfords fitted, pri-rate owner, bargain, £220; exchange entortained. Clews, 51 Gi, Hamp-rate owner, bargain, £220; exchange entortained. Clews, 51 Gi, Hamp-rate, separate front scats, dynamo, starter. 5 deschaber, rear sepre-luggage grid, speedometer, taxed, nice condition. Seabridge, 55 Hamler Rd., East Dulwich. Sydenham 2452.

"HOW TO DRIVE A MOTORCAR." Driving doubles dispelled Written by an expert driver. 3s. net. 3s 3d. post free.

"THE PETROL ENGINE." All about petrol engines and high efficiency tuning. 2s. net 2s. 3d post free

56 (Supplement 1.)

#### SECOND-HAND

#### LIGHT CARS AND CYCLECARS FOR SALE (continued). -

HORSTMAN, 1922. 4-scater, excellent order throughout, £165. Head-ingley Motor Co., Ltd., 8 Otley Rd., Leeds. 602-351 HUMBER 8. Spare parts, service, repairs, and second-hand sales depot, llumber, Ltd., Canterbury Rd., Kilburn, N.W.6. Phone Maida Vale 220-26

HUMBERETTE, 1914, £35. electric lights, tax paid December, good condition, any trial; deferred payments. Herbert Robinson, Ltd., Cam-pridge.

 HUMBERETTE, late '14, w.-c., full equipment, good running order, Z35. Miss Black, Torre Abbey Cottage, Torquay.
 601-4317

 HUMBERETTE 1913 3-seater, good order, all tyres good (2 new orer-size), lamps, hood. Singer blue, prirately owned, death cause of sale, Z38; seen any time by appointment. 'Phone, Tottenham 178. Corfe, 13 Ethorley Rd., N. 15.
 601-5312

JOWETT, 1923 (June), 4-scater, taxed, insured, electric, shock ab-sorbers, spare wheel, speedometer, hood screeus, etc., new condition, private owner, mileage 7,000, bargain, £140, or reasonable offer: West of England. Box No. 5775, co "The Light Car and Cyclecar." 601-651

JOWETT, 1923, as new, 2-scater, dickey, year's tax, small mileage, £140, or exchange new 2-scater Cowley and cash; private owner, Williams, 14 Summerland Rd., Minebead, Somerset. 601-e863

JOWETT, 1924, 7hp, 2-seater and dickey, immediate delivery; exchanges; easy payments. Batchelor, St. James' Rd., Kløgston-on-Thames. Phone 2966. 601-0765

JOWETT, 2-scater, with double dickey and self-starter. £180: we can deliver this wonderful car from stock. J. Proudman and Son, 156 Park St., Grimsby. 602-c845

JOWETT, 1921, model de luxe, perfect condition, 2-seater, double dickey, electric horn, mirror, licence nolder, mileage 7,000, reason selling bought larger tar. Frith, High St., Aylesbury. 601-0776

JOWETT 1924 2-senter, starter, periect and practically brand new, guaranteed, £150. Welford's, 28 St. James's St., Brighton. 601-865 JOWETT late 1925 4-scater, self-statter, oversize tyres, hardly soiled, practically a new car, taxed to December, £175. Wynirith, 30 Harold Rd., Norwood, S.E. 19.

Rd., Norwood, S.E. 19. KINOSBURY JUNIOR, 1921, 2-seater, sunk dicker, 3-speed and reverse (central change), dynamo lighting, detachable disc wheels, spare, tyres rery good, all accessories, taxed, upholstery, hood and paintwork perfect, in first-chass condition throughout, open to any examination, £58. Motors, 165 Lower Richmond Rd., Mortlake, S.W. 14. Richmond 2258. 601-816

LAGONDA, 1920, 4scater, perfect condition and appearance, £85, licensed. 43 Green Lane, Penge. Telephone, Sydenham 604. 602-736 LAGONDA, 2-scater, all-weather model, K.K., painted dark blue, black hord, fully equipped, in good condition, small mileage, owner purchasing coupe model, price £210. Lagonda, Ltd., 195 Hammersmith Rd. W.6. 601-280

LACONDA. 12hp, 1924, 4-scater, dynamo lighting, ecli-starter, speedo-ineter, clock, all-weather, spare petrol can and carrier, back screen, in practically new condition, deue under 4,000 miles, £275, or will ex-change for latos model Roser & or Austin 7 and cash. Advertiser, Royecot, Challont Common, Challont St. Peter, Bucks. 601-532 LAGONDA, 1924, 2-sester demonstration car, little used, bargain, £260. Below.

LAGONDA, 1921, coupe. lighting, starter, excellent condition, £155. Smith and Hunter, 90 Gt. Portland St. 'Phone, Nuscum 8156. 601-525

LAGONDA, 10hp coupe, in perfect mechanical condition, and excep-tionally smart appearance, all tyres almost now, £58. Naylor and Kirk, 4G6 Garratt Lane, Earlsueld, S.W.18. 'Phone, Wimbledon 2041. 601-316 LAGONDA, 1922, 4-seater, rear screen, fine condition throughout, tax jaid, £175. Stretton and Smith, 12 Woodstock St., Oxford St., London. Maylair 3129. 601-595

LACONDA, 1923, KK model, 2-seater, £165; 1921 2-seated coupe, E120; exchange or hire-purchase. The Light Car Co., 331, 410 to 414 Euston Rd., London. 601-891

LACONDA 1922 2-seater, dickey, starter, etc., perfect car, £135. 28 St. James's St., Brighton. 601-865

LEA-FRANCIS, 1924, 10bp chummy model, specially finished blue and autique grey leather, latest all-weather fittings, unused and fully guaran-tced, list price £250, accept £225. Boon and Porter, Ltd., 169-161 Castelnau, Barnes, S.W.13.

MARSEAL 1923 10bp 2-scater. Sports model, hood, screen, speedometer, E115. Maudes', 100 Gt. Portland St., London. Telephone, Museum 7676.

MATHIS, 1918. 2-scater and dickey, in splendid condition, dynamo, detachables, full tax, £68. Maynard, Woolhampton, Reading. 601-c827

MERCURY, 1920 model, 2-seater, dickey, spare wheel, speedometer, dy-pamo lighting, electric horn, like new, taxed 1924, £120; would accept piano or motorcycle part. 77 Craven Park Rd., Harlesdeu. 'Phone, Har-row 195. 601-782

MORGAN specialists. James and Co. (Sheffield), Ltd., 263 Ecclesall Rd., Sheffield. Telephone, Central 2460. Good stock of spares carried. If in difficulty wire us. New and second-hand machines nearly always in stock. z2z-537

MORGAN Service Depot. Official appointed repairers by the Morgan Motor 3. for London. Full range of spares carried. New and second-hand machines always in stock. Trade supplied. Official agents, Homac's. 243 Lower Clapton Rd., E. 5. Dalston 2408. zzz-84

MORGANS, new and second-hand, from £35; exchange, deferred. Cleve-land Garage, Ackworth, Yorks. 608-b128

MORGAN, late 1921, de luxe model, 10hp, thoroughly overhauled, repainted, in splendid running order, owner buying car. City Garage, liavant St., Portsca, Portsmouth. 601-d986

MORGAN, late 1921, de luxe. 10hp, air-cooled, magneto, acetylens light-ing, dise wheels, Watlord speedometer, watch, mirror, Klaxon horn, petrol can and carrier, tools, spare chain, etc., tyres and condition ex-cellent, bargnin, £66. Wilkins, Simpson, opposite Olympia, London. 601-e641

MORCAN, 1920, M.A.G., 10hp, water-cooled, do luxe, £69. Bartletts, 93 Gt. Portland St. 601-333

MORGAN, 1923 (August), de luxe, Shp J.A.P., w.-c., small mileage, taxed, new condition, any test; evenings. Challen, 64 Waln.-Lane, Willesden Green.

#### SECOND-HAND

#### LIGHT CARS AND CYCLECARS FOR SALE (continued).

MORGAN, G.P., M.A.G., taxed year, special body, overhauled, repainted, speedometer, electric and gas, £65. 500 South Lambeth Rd., S.W. 8, 601,2528

MORCAN, wearing parts recently renewed, rebushed, thoroughly good order Braddons, bulls shown, hought car, £50, offers. 129 Chatham St. Reading.

MORGAN, Grand Prix, 1923, o.h.v. Anzani, w.-c., dynamo lighting, Binks carburelter, hand control, foot accelerator, sposoometer, clock, elec-tric horn, bulh, discs, hood, tax paid, colour crimson, £115 or near. 20 Manchuria Rd., Clapham Common, West Side. 601-g297

MORGAN, Grand Prix, 1921, M.A.G., w.-c., Royal blue, new hood, taxed, £80 or near. 66 St. Kildu Rd., West Ealing. 601-g301 taxed, £80 or near. 60 St. Anda Rud., ness canne. MORGAN, 1921, family, 10hp, M.A.G., w.-c., new tyres, Rapson on back, diso whicels aluminium dash speedoneter acetylene lighting, taxed, excellent condition, £85. "Crossebuo," First Avenue, Gillingham, Kent. 601-6782

MORGAN, J.A.P., lale model, engine as new, beautiful appearance, tax paid, drive away, bargain, 58 guineas. 'Oakhurst,' Hainault Rd., Chigwell, London.

MORGAN, family, 1925, air-cooled, 8hp, spares and accessories, £95. Aldridge, 17 James Ave., Cricklewood, N.W.2. 605-c829

MORCAN, de luxe, 1919-20 8hp J.A.P., excellent condition, dynamo lighting, speedometer, clock, new tyres, E70 or near offer. 65 Malvern Rd., Dalston, London, E 8. 601-6796

MORGAN do luxe, 1922, 10hp M.A.G., w.-c., dynamo lighting, running boards, 2 Ortho side screens, Dunlop cord tyres, Jeff tube in back, hood cover, inside ratchet brake, disc wheels, petrol can and carrier, all tools and jack, good as new, little running, 96 guincas. Johnson, 33 Haw-thorn Ave., Newport, Mon. 601-e817

MORCAN, 1922, Family, dynamo, M.A.G. water-cooled, speedometer, re-painted, taxed for year, excellent order, £110. Below.

MORGAN, Grand Prix, J.A.P. engine, lighting set, good order and taxed till June, £65. Elce, Ltd., 11-15 Bishopsgate Are., Camomile St., E.C. 3. 'Phone, Avenue 5548. 601-845

E.C. 3. 'Phone, Avenue 5548. 601-845 MORCAN, 1922, 8hn, Family model, M A.G. engine, finished maure, all lamps and horn, 2105. Maudes', 100 Gt. Portland St., London. Tele-phone, Muzeum 7676. 601-831

MORGAN de luxe, 1923, water-cooled M.A.G., milcage under 2,000, just been revarnished, tax paid, £95, or small deposit and balance over 18 monthly mayments. Allen-Benzett Motor Co., Ltd., 8, 9, 10, 11 Royal Parade, West Croydon. Telephone, Croydon 2450-1. 601-899

MORCAN, late 1920. Acro 10hp w.-c. M.A.G., special racing body, electric lighting, clock, thoroughly overhauled, any trial, £65. Lorkin, 273 High Holborn, London. 'Phone, Holborn 666. 601-385

MORGAN, air-cooled, de luxe, tax paid, several extras, in good order throughout, any trial, £63. 50 Park Parade, Wembley, Middlesex. 601-g314

MORRIS-OXFORD, 2-seater, tax paid, £47 10s.; after 9 Friday. 7 Talbot Rd., Highgato, N.6. 601-c821

PALLADIUM, de luxe model, painted cream, many extras, tax paid, £250. 8 Otley Rd., Leeds. 602-552

PERRY, 1916, 2-seater, dynamo lighting, £75; cash, deferred, ex-changes, Railton Cobham and Co., Ltd., 5 Cumberland St., Deansgate, Manchester, Central 2681.

PERRY, 1915, 2-seater and dickey, dynamo lighting, £85; exchange or hire-purchase. The Light Car Co., 331, 410 to 414 Euston Rd. London.

**NHODE**, 9.5hp, 1922, occasional 4-seater, grey, black wings, dynamo lighting, speedomeier, clock, dashlamp, Klaxon and ordinary horns, tool-box on running board, spare petrol can and carrier, step mal, practic-ally new Dunlop cords, fully equipped, excellent condition, taxed for year, £135. Below.

RHODE, 9.5hp, 1923, all-weather saloon, marcon, black wings, dynamo lighting and self-starter, speedometer, clock, dash lamp, cigar tray, mirror, inggage carrier, hood envelope, extra-air, stepmats, mascot, 2 spare wheels, excellent condition throughout, taxed for year, £175. Mebes and Mebes (Established 1893), The Original Light Car Specialists, 144 Gt. Portland St., W.1. Phone, Langham 2230. 601-298

RHODE, 1923, chummy de luxe model, l. and s., clock, speedometer, taxed for year, £145. Ernest Grimaldi, Ltd., 87 Gt. Portland St., W.1. Jangham 2983. 601-774

RHODE TEN, fine condition, just fitted with new hood, tax paid for year, 125. 8 Otley Rd., Leeds. 602-350

RHODE 1922 4-seater Chummy, dynamo lighting, fully licensed, £115; exchange or hire-purchase. The Light Car Co., 351, 410 to 414 Euston Rd., Londen. 601 881

RHODE, 1925, 9.5hp, 4-scater, all-weather saleon, lighting, starting, fully equipped, licensed, 160 guineas; exchanges or deferred. Edwards, 175 Gt. Portland St., W. 601-851

RICHARDSON light cars. Spare parts in stock. Richardson's, Mill-thorpe, near Sheffield. zzz-275

RICHARDSON 8, 2-seater, dickey, electric and acetylene lighting, bood cover, mirror, new tyres, inst overhauled, splendld order, good appear-ance, licensed, £48. 79 Telford Avenue, Streatham. 601-c862 RILEYS. Guaranteed Rileys from £190. Write for list. 1922-3 models wanted in part exchange for 1924s. Lewes, Motor Works, Sussex. 601-532

Small car enthusiasts who have in view the purchase of a larger car should read "The Motor," the National Motor Journal, and consult the small advertisement columns.

15 7

A2)

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#### SECOND-HAND

#### LIGHT CARS AND CYCLECARS FOR SALE (continued).

RILEY, 1924. 4-scater all-weather, used for lew demonstrations, as new. £350. Paulton's Garage, Wolverhampton 'Phone 1335. zzz-324 RILEY, 1922, sports 2-scater, aluminium body, very fast, beautiful condition, £240, Smith and Hunter, 90 Gt. Portland St. 'Phone, Museum 8136. 601-524

ROGER, 1923, 2-seater and dicker, dynamo lighting, fitted with Coven-tuy-Climax engine, disc wheels, etc., perfect order, £85, or exchange Willetts, Lanesfield Ettingshall, Wolverhampton. 'Phone, 61 Sedgley. 601-554

ROVER 8. Potential purchasers of this make of car, either new or second-hand, are invited to send their requirements to The Garage, 12. Coriwall Terrace Mews, N.W.1 (by Mime Tussaud's). Extended pay-ments and exchanges. 601-551

ROVER, 1921. 3hn. sound condition, side shields, clock, etc., licensed, any trial, £90. Westminster Bridge Garage, 5 Lambeth Palace Rd. S.E. 1.

ROVER, 1924, 8hp, 2-scater de luxe and dickey, £130. Bartletts, 93 Gt. Portland

ROVER EIGHT, 1922, 2-seater, de luxe model, dynamo lighting, clock, speedcmeter, leather upholstery, mechanically perfect, appearance as new, insured and taxed to end of year, £95. Martin, 10 Herbrand St., Russell Square, WC. Tel., Museum 6594. 601-789

ROVER, Shp. 1923, chummy 4-seater de luxe model, clock, speedometer, leather upholstery, paintwork unseratched, mechanically perfect, taxed and insured for year, £125. Cahoon, Westgate House, Bedford Place. W.C.1.

ROVER 8, 2-seater de luxe, 1924 model, milenge 567, indistinguish-able from new, tax paid, £145; terms arranged if desired; would accept motorcycle part. 77 Graven Park Rd., Harlesden. 'Phone, Harrow 193, 601-781

ROVER, Shp, 1923, chummy de luxe, self-starter, clock, speedometer, taxed and insured 1925, new condition, £135. 112 Stroud Green Rd., Finsbury Park, N.4. 601-6848 ROVER, Shp model de luxe, marcon. dicker, taxed year, clock, speedo-meter, etc., beautiful condition, £98. Braus, 14 Turle Rd., Finsbury Park, N.4. 601-8849

Park, N.4. **ROVER 8**, 1921, speedomoter, dash lamp, oversize Duplops, £73. Spencer, Ilawthornden, Maidstone Rd., Rochoster. 601-c789

ROVER 8, 1923, chummy 4-scaler, taxed year, like new, £120. Smith and Hunter 30 Gt. Portland St. 'Phone, Museum 8136. 601-319

ROVER, 8hp. 1921, dynamo lighting, just returned from the coach-painters, appearance as new, mechanically perfect, £73. Below.

ROVER coupe, saloon model de luxe, 8hp, 1923, dynamo lighting, self-slatter, speedometer, clock, automatic screen wiper, interior lighting, avery stratt little car, and mechanically perfect, £130. Below. Naylor and Kirk, 406 Garratt Lane. Earlsfield, S.W.18. Phone, Wimbledon 2041. 601-515

ROVER, 8hp, 1920, dynamo lighting, excellent mechanical condition. £62 10s. Hudson, Bylaugh, Dereham, Norfolk. 601-e822 ROVER, 8hp, chummy, 1923, exceptional condition, unused during winter, guaranteed sound throughout, spares, estras, estended trial, £125 cash. Mason, 32 North St, Bishop's Stortlord. 601-0832 ROVER 8, 1992 royal blue, speedometer, Blinks carburetter, rubber floor mat, electric horn, new accumulator, R.O. side windows and cur-tains, £65. Purves, Garage, Brighton Rd., Horsham. 601-e774

ROVER 8, lale 1922 2-scater, as new, scarcely scratched, tax paid, clock, all accessories, real bargain, £110 Maile, 22 Comeragh Rd., West Kensington, W.14. 601-e771

West Kensington, W.14. **ROVER 8**, 1922, exceptionally good, many extra fittings, taxed Decem-ber, £80 James, over Alexander's, 482 Harrow Rd., Paddington. 601-871 ROVER 8, 1924 chummy model, taxed and insured until end of year, many extras small mileage, £125. 2 Codriggton Mews, Blenheim Crea-cent, Notting IIIII, W 11. 601-e415

ROVER coupe de loxe, dynamo lighting, starting, clock, speedometer, mascot, tyres new, double oiler, grand condition, tully insured, £130. Cope, 7 Wellington St., Woolwich. 601-e856

ROVER 8, 1923, licensed, good condition, electric lighting, £100. Kellys, Engineers, Llandudno. 602-e865 Kellys, Engineers, Llandudno. **ROVER** 8's. We usually have several to choose from. Railton Cobham and Co. Ltd., 5 Cumberland St., Deansgate, Manchester. Central 2681. 601-344

HOVER 8, 1921, excellent condition, good tyres, speedometer, dynamo lighting, etc., recently overhauled, £70. 63 St. Thomas Rd., South Hackney 601-g298

ROVER 8, 1922, taxed, insured, excellent condition, 76 gulaces; after 601-c875 ROVER 8, 1921, excellent condition, unused 12 months, paint good, tyres good. Pike, 102a Church St., Chelsea. Tele., 137 Ken. 601-c872

ROVER, Shp. 1921, 2-seater, excellent condition. £75; exchange or hire purchase. The Light Car Co., 331, 410 to 414 Euston Rd., London. 601-890

ROVER, 1923, Shp chummy model, tax paid, practically unscratched and indistiguishable from new, £115, or small deposit and the balance over 18 monthly payments. Allen-Bennett Motor Co., Ltd., 8, 9, 10, 11 Royal Parade, West Oroydon. Telephone, Croydon 2450-1. 601-896 ROVER 8, 1921. mileage 7,000, repainted, taxed for year, excellent condition, £77 10s. Elce, Ltd., 11-15 Rishopsgate Ave., Camonile St., E.C. 3. 'Phone, Avenue 5548. 601-846

ROVER, 1922, standard 2-seater, dynamo lighting, moderate mileage, £85. Bolow.

ROVER 1923 2-seater, Lucas dynamo and starter, small mileage, as now, £115. Maudes', 100 Gt. Porliand St., London, W. 1. Telephone, Nussum 7676

ROVER 8, 1922-23, taxed year, any trial, 83 guineas Hydethorne Motors, 31 Hydethorpe Rd., Balham. 601-382

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

ROVER 8, 1920, first registered February 1921, insured till August 31, taxed, in very nice condition, spare wheel, dyname, side screens, all good tyres, all accessories, £64, trinl. 14 Ritherdon Rd., Balham, S.W. Phone, Streatham 2765. 601-3524

ROVER 8, 1921, any trial or examination. 62 guineas. Hydethorpe Motors, Hydethorpe Rd., Balham. 601-334 ROVER, 1924, Shp. 4-soater, new, never been used. £140. Cammings and Simpson, 5 Pulacy Bridge Rd., Waadsworth. Puney 2728 601-351

SALMSON, 1924. 2-scater, actual car on view at last Olympia Show, eell-starter, dynamo, excellent tyros, taxed, used for demonstration pur-poses, £160. K.J. Motors, Bromley. 602-229 SALMSON. Apply to the London distributors, Gordon Watney and Co., Lid., for second-hand Salmson cars. Several always in stock. Part ex-changes and special deferred terms arranged. 31 Brook St., London, W. 1. 'Phone, Maylair 2966. 222-283

W.1. 'Phone, Maylair 2966. zzz-283 SALMSON, 1923, special sports. 2-scater, dynamo lighting, starter, V screen, enclosed hood, taxet dil December, many extras, very fast, nice order throughout, £125 eash: exchanges, deferred payments. W. T. Dunu, Ltd., 326 Euston Rd., N.W.1. 'Phone, Museum 5591. 601-787 SALMSON, 1922, oh.r., de luxo 2-scater, double dicker, leather uphol-sterr, side curtains, C.A.V. dynamo lighting, speedometer, spotlight, 3 new tyres, fast, good acceleration, perlect throughout, £90. Ralph, 62 Bathurst Mews, W.2. 601-267

SALMSON 1924 (new) Sports 2-seater, very last, well tuned up, in nso 5 weeks, owner going abroad, gennine bargain, including 12 months' guarantee, £175. Letters only, Waldock, Ryestead, Manor War, Guild-ford.

SALMSON 1922 (late) 2-senter, dicker, all-weather curtains, dynamo, specdometer, 5 new tyres, licensed 1924, beautiful condition, 2110; exchange Morgan. 234 South Lamboth Rd., S.W. 8 601-6320

exconinge Morgan. 234 South Lamboth Rd., S.W. 8 601-6320
 scott-sociable, 1925, almost new condition, Bonnisten, spare wheel, dynamo, etc., year's tax, 2115; deferred or exchange Kinsey's of Croydon, 350 Lower Addiscombe Rd. Those, Addiscombe 1129. 601-680
 scott SociAble, 1924 model, blue, splendid condition, Bonniksen, dash lamp, watch, tilting wheel, guaranteed, nearest £115. Gibbons, Broad St., Ely, Camos. 601-6770
 scott SociAble, delivered September, 1923, ran 1,000 miles, tax paid for the year, fully equipped, £90 or best offer. Brown's, Hawdon-side, Houghton-le-Spring. 601-6877

SCOTT SOCIABLE, 1924, practically new, guaranteed condition, fully licensed, £110. 28 St. James's St., Brighton. 601-862 SINGER. Potential purchasers of this make of car, either new or second-hand are invited to send their requirements to The Garage, 12 Cornwall Terrace Mews, N.W. 1, by Madame Tussauds. Extended par-ments and exchanges. 601-552

SINGER, 1914, 10bp, 2-seater, dickey, dynamo lighting, mechanicat horn, 5 detachable wheels and excellent tyres, recently overlaaded throughout, perfect order, taxed, £50. K.J. Motors, Bromley. 602-141 SINGER, 1924 Popular model, 2-seater and dickey, only used by us for fow trial rans, as news, special bargain, £179 15s. Wilkins, Simpson, opposite Olympia, London. 601-e643

SINGER, 10hp. coupe body, smart little car, excellent running order, detachable wheels and spare, tyres good, fully inspred, tax paid June, privately owned, £60. May, 117 Norwood Rd., S.E., alter 7.30, or phone Drixton 2573.

SINGER, 2-seater, 10bp, dynamo lighting, excellent running order, £45, or near offer. C., 17 Craamore Way, Muswell Hill. 601-e786

SINGER, coupe, 1921, 1. and s., drop head, taxed for year, £110. Ernest Grimaldi, Ltd., 87 Gt. Portland St., W. I. Langham 2285. 601-775

SINGER, 1921, 2-seater, dickey, starter, perfect condition and appen-ance, £90, licensed. 43 Green Lano, Penge. Telephone Sydenham 604. 602-737

SINGER, 1922 coupe, double dickey, many extras, tax paid, equal to new, £120; exchanges. James [over Alexander's], 482 Harrow Rd., Paddirgton. 601-270 SINGER, 1923, 10hp, all-weather body, engine overhauled, new tyres, tax paid, 310 guineas. Flick, Rose and Crown Hotel, Tonbridge. 603-8857

SINCER, 1924, Popular model, 2-scater, self-starter, used only for a lew trial runs, special price £179 15s. Eagles and Co., 275 High St. 601-797

601-797 SINGER, iChp, 1921. 2-seater, starting and lighting, extra large dicker scat, speedometer, mileage 7,000, £88, taxed. Eagles and Co. 275 High St., Acton. 601-798

SINGER, genuine 1921, smart 2-scater, dynamo lighting, 10hn, hood, screen, spare wheel, speedometer, biggest bargain in London. 89 gms; motorcycle part. Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station).

SINGER, 585; exchanges, deferred payments, very nice 1919-20 Singer coupe, dickey, lighting, starter, Bedford cord, 5 detachables, smart, fast. Scabridge, 35 Hansler Rd., East Dulwich. Sydenham 2452, 601-807

601-807 SINGER, 2-scater, Rotax dynamo lighting, 5 lamps. clock, spare wheel, tared, £42. Au/lerson, 21 Croft Rd., Merton, S.W.19. 601-8880 SINGER, 1916, 10hp, 2-scater, dynamo lighting, speedometer, side cur-lains, just overhauled, owner bought 4-scater, price 57 guincas. Giller, 12 Lansdow e Avenue, Slough 240. 601-864 SINGER 10, 1917, 2-scater, dicker, dynamo lighting, detachable wheels, spare, tyra very good, all accessories, tared, upholstery, hood and pains very good, mechanically perfect, esceptionally emart, reliable, open to any examination willingly, £55; always a good stock of Singers as above. Ben Motors, 165 Lowor Richmond Rd., Mortlake, SW.14. Richme ' 2258. 601-817

SINGER 1923 4-seater de luze, all-weather, small mileage, as now, tax paid, £180. Pickworth and Hull, 107 Gt. Portland St., W 1 Lang-ham 1998. 601-859

SINGER, 1921, 2-seater and dickey, starting and lighting, repainted, new hood, taxed, bargain, £85, exchanges, extended parments Mears and Bishop, 225a Hammersmith Rd, W. 6, Hammersmith 2250, 601-875

SINGER, 1924, 10hp, 4-seater de luxe, only used slightly for demon-stration runs, £215. Newnham Motor Co., 245 Hammersmith Rd., W 6. 601-368

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#### SECOND-HAND

#### LIGHT CARS AND CYCLECARS FOR SALE (continued).

SINGER, 1924, 10bp, Wermann saloon, lighting, starting, fully equipped, year's licence, new condition throughout, 235 guineas. Below. SINGER, 1922, 10hp, 2-scater coupe, lighting, starting, year's licence, 120 guineas; exchanges or deferred. Edwards, 175 Gt. Portland St., W.

STANDARDS. Try Henly's. You cannot beat their terms. 91 and 155 (st. Portland St., W. Maylair 4201. zzz-500

STANDARD. Moores Presto. Croydon agents Standard cars. Promptest delivery new models with efficient service to follow. Large slock second-hand cars to select from. Deferred payments and exchanges arranged. North End, Croydon. 'Phone 2624.

STANDARD. Potential purchasers of this make of car, either new or second-hand, are invited to send their requirements to the Garage, 12 Cornwall Terrace Mews, N.W. 1. By Madame Tussauds. Extended pay-ments and exchanges.

STANDARD 9.5 1914 2-scator, completely equipped, in first-class run-ning order, low price accepted. K. Lankester, 59 Eden St., Kingston. Phone 85.

Thome 85. STANDARD. A. P. Rey. 9.5bp. 1920, long chassis, tax paid for year, clatter, full equipment, £117 10s.; extended terms. 378-584 Euston Rd. Museum 7600. STANDARD, 1919, 9.5. 2-seater, dicker, speedometer, all-weather equip-ment, dynamo, good tyres, taxed, perfect condition. 82 guineas, or ex-change motorcycle and cash. 51 Upper Richmond Rd., East Putner, 601-791 601-791

STANDARD, 1924, 11.4, 4-scater, taxed, aluminium plates, 400 miles, £235. Smith and Hunter, 90 Gt. Portland St. 'Phone, Museum B136, 601-326

57ANDARD, 1924, 11.4bp, 4-scater, all-weather, mileage 2.000, faxed to December, guaranteed as new, first cheque £205 secures. Wilson, Little Orchard, Langley, near Windsor, Thone 27. 601-837 95ANDARD 1921 2-scater, dicker, full equipped, starting and lighting, £135. Black and Finch, 222 Gt. Portland St., W. 1. Phone, Museum 2271.

STANDARD 1923 11.4 2-scater, large dickey, small mileage, fully taxed, £185. Lionel II. Pugh, 9 South Molton St., W. Maytair 4453, 001-820

2185. Lionei II. Pugh, 9 South Molton St., W. Mayfair 4453, 001-820 STANDARD, 53 guineas, exchanges, deferred payments, 1914, 2-seater, dickey, 5 detachable wheels, electric headlamps, specdometer, goed ap-pearance, runs well. Scabridge. Below. STANDARD, £130, exchanges, deferred payments, 1920, long wheel-hase, 2-seater, dickey, 9.5hp, all-weather hood, lighting, starter, 5 de-tachables, tazed, wonderlul little engine, Eastbourne and back on top gear, smart. Scabridge, 35 Hansler Rd., East Dulwich. Sydenham 2452. 601-810

STANDARD, 1923, 11hp, 2-scaler with dickey, tax paid for 1924, £185, Newnham Motor Co., 245 Hammersmith Rd., London, W. 6, Phone, Hammersmith 1525. 601-369

Hammersmith 1525. 601-369 STELLITE 1914 2-seater and dickey, 5 detachable wheels, lamps, etc., in first-class condition throughout, thoroughly overhauled by makers, taxed till December, £40, no offors. The Gables, Sylvan Hill, Crystal Falace, S.E. 19. 601-3562 GTELLITE, 1920, 2-seater, dickey, dynamo lighting, fully equipped, licensed, 90 guineas; exchanges or deferred. Edwards, 175 Gt. Portland St., W.

St. W. 601-853
 STONELEIGH, 9hp. mileage 300, tax paid, £110. Summer Bros., Barrack Square, Corentry. zzz-651
 STONELEIGH, 3-seater, dynamo lighting, taxed for year, speedometer, brights (yrcs, new in March, 1924, £105. Naylor and Kirk, 406 Garrait Lane, Earlsfield, S.W. 18. Phone, Wimbledon 2041. 601-318

Fait Lanc, Estimation, S.W. 18. Phone, Wimbledon 2041. 601-518
STONELEIGH, 1923, chassis No. 863, 3-seater, 8.9, 6,500 miles, fully equipped, excellent condition, recently decarbiolized, fully insured, in-cluding for mechanical breakdown, until May, 1925, £95, no olfers. Apply, Saturday alter 3 p.m., or write, H., 20 Mornington Are, Cranbrook Parak, Illord. 601-g295
SURREY, May, 1921, chummy model, 3-seater, 11hp Coventry-Simplex rugine, 5 speces and reverse, dynamo lighting, speedometer, clock, electric horn, spare wheel, etc., usual equipment, year's tax, splendid condition throughout, any examination, £65, exchanges and defined. Ted dington Garage, 160 High St., Teddington, Kingston 2562. 601-g326

SWIFTS. Try Henly's. You cannot beat their terms. 91 and 155 Gt. Portland St., W. Mayfair 4201. zzz-301

SWIFT. Moores Presto. Croydon scents Switt cars. Promptest dolivery new models with efficient service to follow. Large stock second-hand cars to select from. Deferred payments and exchanges arranged. North End. Croydon. Phone 2624.

Croydon. 'Phone 2624. 22755 SWIFT, 1920, 10hp, 2-scater, dickey, Rotax lighting side screens, ro-cently overhauled superb condition, recommended with every confidence, year's tax, £110 or near cifer, Kintey and Co., 350 Lever Addickombe Rd., Croydon. 'Phone, Addiscombe 1129. 601-679 SWIFT, 1920, 10bp, 2-scater, dynamo, etc., £95. Bartletts, 93 Gt. Fortland St.

SWIFT, 1923, 10hp, chummy, as new, £165. Bartletts, 93 Gt. Port-land St.

Swiff, 1923, 1949, 1949, 1949, 201-355 Swiff, Cass's Motor Mart, Ltd. 1921, 2-3-seater, starter, dynamo, just overhauled and repainted, several new tyres, spleadid condition, E1555, also'carlier model, £97 10s.; deferred terms, exchanges. 5 War-ren St., W. 1. Museum 623. 501-777 SWIFT, 1923 de luxe 2-seater, lovely order, £150; exchanges or de-cerred. James, over Alexander's. 482 Harrow Rd., Paddington. 601-269

SWIFT, 7-9hp, 2-scater, fully equipped, in epiendid: condition, £50 or small deposit and balance over 12 monthly payments. Allen-Bennett Motor Co., Ltd., 8, 9, 10, 11 Reyal Parade, West Croydon. Telephone, Croydon 2450-1. 601-898

Croydon 2450-1. SwIFT, £38, exchanges, deferred payments, one of famous staggered-seat models, 2-seater, 7-9bp, hood, screen, lamps. Scabridge, 35 Hansler Rd., East Dulwich. Sydenham 2452. 601-812 SwIFT, 10bp, 1917, coupe, drop head, dynamo lighting, detachable wheels, spare, tyres as new, all accessories, full equipment, leather uphot-sterv, frameless windows, paintwork, etc., porfect, in first-class condition throughout, open to any examination willingly, 265 Ben Molors, 105 Lower Richmond Rd., Mortlake, S.W. 14. Richmond 2258. 601-814

Swiff, 7.8hp, 2.scater, Stepney, good tyres, acetylene, dark blue, smart eradition, tax paid, drive away, £55 or reasonable offer. Hutchison, 40 Derby Rd., Stapleford, Notts. TALBOTS, Try Henly's. You cannot beat their terms. 91 and 155 3t. Portland St., W. Maylair 4201. 222-302

#### SECOND-HAND

#### LIGHT CARS AND CYCLECARS FOR SALE (continued).

TALBOT, 1923, 10-23, 4-seater, very nice condition, licensed £250.

TALBOT, 1923, 10-23, sporting 2-scatter, splendid order throughout, £230. Delow.

£230. Below. TALBOT 8, 1922, de luxe 2-seater, good condition throughout £1c. Smith and Hunter, 90 Gt. Portland St. 'Phone, Museum 8136 601-321

TALBOT, 1923, 10-23hp, 2-seater de luxe, full equipment (ax paid, repainted, perfect condition, £250. Thorp, 14 Upper St. Martin's Lane, W.C.2. Regent 1384.

W.C.2. Regent 1984. 601-785 TALBOT, 10-25hp, late 1925, self-starter, dynamo, 4-seater, in magnifi-cent condition, tax paid year, all-weather side curtains, runs beautilully, cost £450, accept 225 guineas. Cornwall Motor Co., 7 Cornwall St. Livery St., Birmingham. 601-8647

Livery St., Birmingham. 601-e847 TALEOT coupe, 1923, 8-18hp real leather head and upholsterv, car in excellent condition, £225. G. L., Francis and Co., 110 Gt. Fortland 601-281 TALBOT, 1924, 10-23, practically brand new, 2-seater, taxed December-listed £350, sacrifico £280. James, over Alexander's, 482 Harrow Rd., Paddington. 601-272 TALBOT 10-25hp 1923 4-seater, all-weather curtains, lugrage grid, small mileage, as new, tax paid, £265. Pickworth and Hull, 107 Gt. Portland St., W. 1. Langham 1998. 601-840 TAMPLIN 1921 2-seaters, 8hp J.A.P., 3 speeds, £30 and £35. 'Phone, Putney 1827. Andrew's Motor Mart, 151 White Mart Lave, Barnes. 601-376 601-376

601-376 TAMPLIN, 1921, 2-seater, side-by-side, dynamo, clock, sneedometer, dises, good condition, 34 gns; or exchange motorcycle and eash. 51 Upper Richmond Rd., East Putney. TAMPLIN, 1922, 8hp, 2-seater, 3-speed and reverse, dynamo, etc., splendid condition, 65 gns; exchanges or deferred. Hammersmith Rd., W. 601-859

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C2 (Supplement xvi.)

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