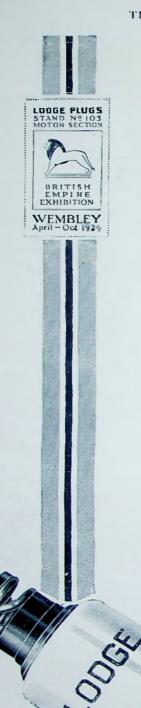


AUGUST 15, 1924.



2

By far the best and greatest test of all for any plug is its use by every class of motorist, in every type of engine, on every sort of road, every day.

The plug which most efficiently passes this thoroughgoing test is



PLUG

which has considerably the largest sale in the world of all British made plugs.

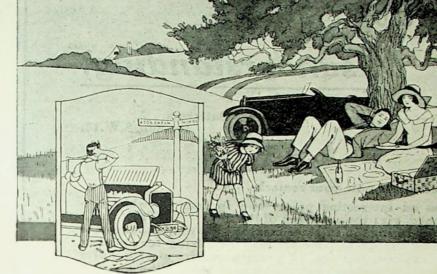
> Every part of every model of the Lodge plug is of Brilish manufacture. Sparking plugs are an example of articles which are made better in England than anywhere else in the world.

LODGE PLUGS LTD. - RUGBY

Standard model (C3) 5 -(5/6 in Irish Free State) Packed in sealed red metal box. Of accessory dealers and garages everywhere.

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

Rs



Your Holidaymake it a day of rest

EVERY season the crankshaft of the average car makes twenty million revolutions—sending pistons up and down. Twenty million friction risks! Twenty million calls for scientific lubrication!

Isit a wonder, then, that trouble follows the careless request "Give me a quart of oil"? Is it a wonder, then, that thoughtless lubrication turns many a promising holiday into a work day?

If you want your car to give you a real holiday, it is only fair that you should supply it with real lubrication.

Then :

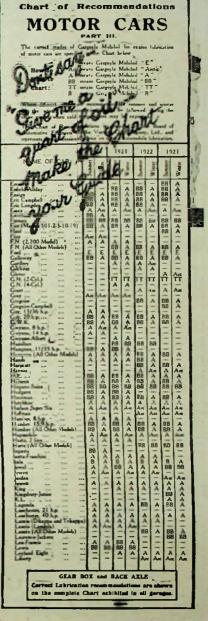
You leave trouble behind you instead of carrying it with you under the bonnet. You explore for pleasure instead of for engine knocks.

You face a cool day's pleasure—instead of a hot engine's troubles.

This greater protection and economy will be yours the day you begin to use the correct grade of Gargoyle Mobiloil.

If your car is not listed in the partial chart shown here, consult the complete Chart of Recommendations at your dealer's, or send for our booklet

"Correct Lubrication" which includes the complete Chart of Recommendations, together with instructive information for the car owner.



REMEMBER:

Ask for Gargoyle Mobiloil by the full tille. It is not sufficient to say "Give me a gallon of 'A' or 'BB'." Demand Gargoyle Mohitoil "A" or Gargoyle Mohiloil "BB." or whichever grade is specified for your car in the Chart of Recommendations.



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

AUGUST 15, 1924.

Clearing up a

Misunderstanding.

Copy of our reply to :-

Battersea, London, S.W.11.

A Motorist.

Dear Sir,

We have your letter and note your remarks.

You touch upon an interesting point—one in fact on which we are frequently questioned, viz: the retention of the term "WINTER" for a lubricant which is in use during the summer months. We may explain that Winter grade of Huile de Luxe, which we are now supplying for summer use for water-cooled engines, has for 15 years been the most popular lubricant for winter use for motorcycles. You may ask: Why adopt a motorcycle oil for a water-cooled car engine? Why not keep to Motorine, which is a rich compound lubricant?

The answer is to be found in the improved designs which have been developed in recent years. The modern water-cooled engine develops more power per unit of cubic capacity. It runs at higher average speeds, and simultaneously has a higher Mean Effective Pressure, conditions which call for improved lubricants. Huiles de Luxe—as compared with Motorines —are richer in fatty matter and are, in consequence, better able to stand up to severe conditions, particularly high rubbing speeds at high temperatures and pressures.

We are supplying Winter Huile de Luxe for many high efficiency engines, such as Alpine-Eagle Rolls-Royce. Riley, Alvis, Bentley, Rhode, Triumph, Beardmore, Sunbeam, Talbot, Vauxhall, Austin, Albert, Gwynne, Calthorpe, Fiat and Wolseley "10."

It is excellent for these during summer weather.

The superiority of Winter Huile de Luxe lies in its ability to stand up to the most severe conditions of speed, load and temperature, its extraordinarily clean working and its complete freedom from any tendency to gum up or to leave rubberlike deposits in crankcase and timing gear.

The builders of the "finest car in the world" use and recommend our oils exclusively.

Regarding supplies, it is our desire and intention to sell only through the motor trade, and several agents in your district hold stocks. However, should you experience any difficulty, our principles would not stand in the way of supplying you direct.

As you will see from the E/R List and Literature which we enclose, Motorines A B and C are each 7/3 for 1-gallon tins and 29/2 for 5-gallon drums. Huiles de Luxe are 7/9 for 1-gallon tins and 31/3 for 5-gallon drums. All these prices include carriage.

Yours truly, PRICE'S PATENT CANDLE COMPANY LTD.

P.S.—If any of your friends are in doubt as to oil for their cars or have any lubrication troubles, you know we are always happy to advise. Enquiries and requests for E/R List and Literature should be addressed to—

PRICE'S PATENT CANDLE COMPANY LTD. BATTERSEA, LONDON, S.W.11.

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

2

All about the Wonderful



I want you to thoroughly test the "Mitchell" Plug Tester for one week at my expense.

Let me tell you all about it.

'The "Mitchell" Plug Tester is the most efficient of all ignition testers. With its aid one can at once diagnose the condition of the spark at the plug, and can also detect short circuits or leaks due to faulty insulation in the wiring between the magneto or coil and the plugs.

The Old-Fashioned Way.

The old-fashioned way of testing a set of plugs is by "shorting" each plug in turn with a screw-driver.

This method is most unsatisfactory, as, apart from the possibility of getting a violent shock, it is very difficult to tell whether a plug is only missing occa-sionally, or whether it is out of action altogether.

It is impossible to determine whether the spark is too feeble to fire the charge regularly at all speeds and on varying mixtures, neither will the screw-driver tell you if the plug is "shorting" internally or is broken.

Sometimes a plug ceases to spark owing to a concealed break occurring in the high tension wiring beneath the insulation. With a screw-driver it is practi-cally impossible to detect this fault in the first place, and, secondly, to locate the break. The "Mitchell" will trace the trouble to its source in a moment.

The New Scientific Way.

The "Mitchell" Plug Tester is a scienthe invention of British manufacture throughout, which not only locates the faulty plug in a matter of seconds, but actually diagnoses the nature of its trouble. In appearance it is a highly polished vulcanite tube, with a round matulia hash as Consistents. metallic knob, or Conductor, at one end, and an oblong inspection window in the centre. At the other end is a bright red Erinoid cap fitted with a neat plug-hole for use with the "Detector," described When the Conductor is applied later. to the top of a plug with the enginerun-ning, a series of orange flashes appear in the window, each flash coinciding with the timing of the spark at the plug points. The intensity and regularity of the flashes indicate the character of the spark

"Mitchell" Plug Tester.

Will Solve Your Ignition Troubles in a Few Seconds.

How to use the "Mitchell" Ignition Tester.

Apply the metal knob or Conductor to each of the plug tops in turn and watch the orange flashes in the window

Regular flashes of uniform intensity indicate that the plugs are firing correctly Flickering flashes, not clean-cut, but very close together, mean that the distributor is dirty, or that there are leaks in the

feed wires.

Dim or occasional flashes show that the spark is weak. This may be due to a foul plug, plug points too close together, or a defective plug. If attention to these points makes no improvement, it often happens that one of the cams on the magneto is worn, thus causing too small a "break." Alternatively there may be current leaks, a defective coil or magneto, or a dirty a defective coil or magneto, or a dirty distributor.

If through any of the above causes the plug is absolutely "dead," there will be no suspicion of a flash.

Very vivid flashes on one plug compared with the others indicate a stronger electrical discharge, which, on a weak igni-tion service, would probably indicate too wide a spark-gap,

If flashes show when the Conductor is a half-inch or more from the top of the plug it may mean a spark-gap too wide for the spark to jump across. Alternatively, may mean a broken plug or porcelain. Alternatively, it



The Value of the "Detector."

3

The "Mitchell" is the only ignition tester which is fitted with a "Detector." This extremely useful device, by increasing the intensity of the flash and at the same time "cutting out" the cylinder under test, enables one to make a more exacting and exhaustive test than is possible by any other known method.

To use the "Detector," unwind the flex contained in the neat metal Container (supplied separately), and insert the small plug, attached to the loose end in the of the "Mitchell" Plug Tester. Lay the "Detector" on any metal part of the en-gine, and apply the Conductor to the plug tops in the usual manner. The flashes will be greatly intensified and the particular plug under test will cease firing. The value of this dual test will readily be appreciated. Take, for instance, the case of a broken plug which is not sparking at the points, owing to internal spark-ing. The employment of the "Detector" would show a series of regular flashes indicating that the ignition as far as the plug is O.K. With a properly working plug there would be a noticeable 'miss'' or decrease in the 'revs'' owing to the ''Detector'' 'cutting cut'' the plug in question, and a corresponding increase with the removal of the tester. In the case of the broken plug in question, however, the entire absence of any variation in the "revs" would at once draw atten-tion to the fact that the plug was not firing, this being due to internal sparking as above described.

FAIR, STRAIGHTFORWARD OFFFR.

Send for a "Mitchell" Plug Tester now, use it for a week, and if you are not thoroughly satisfied your money will be returned in full.

Price 8/6 Post Free.

Complete with Directions and Special Detector as illustrated below.

Address your communications to-HARRY MITCHELL.

The London Motor Supplies Co., Twickenbam Middlesex.

('Phone: Richmond 1588.)

Snecial Demonstrations at Gamages, Dunhills, and Army & Navy Stores. Also stocked by Selfridges, Jenke, Henetithks, Service Co., and other well-known establishments in London and the Provinces.

known establishments in London and the FOREIGN AGENTS: FOREIGN AGENTS: FRANCE: Frank J. Fay, 26, Avenue Bosquet, Paris SPAIN: Harry Walker, Calle Rosellon 192 Barcelona HOLLAND: Max Nuces Voorburtwal 100, Amsterdam S. AFRICA: Shorts Motor Co., 35, East Burger St. Blocumfontein.

Applications lovited from other countrie

This is the "Detector" referred to above, which is supplied with every "Mitchell" Tester. enables tests of a more exhaustive nature to be carried out than is possible

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

AUGUST 15, 1924



GI

A.

Your G.W.K. licence free.

That's the interpretation of the new G.W.K. prices reduced from guineas to pounds -a year's motoring virtually free of licence. The G.W.K. with its wonderful disc drive provides " a gear for every gradient," allowing the engine to run at its most efficient speed, always. It saves your engine, your tyres, and, of course, your pocket.

Have you seen a G.W.K on a gruelling hill ? That's when the gear tells, and when the G.W.K. is in its happiest mood. May we prove these facts to you by actual demonstration ? We shall be happy to fit in with your arrangements, any time, anywhere.

NEW PRICES:

10'8 h.p. Two-Seater £200 10'8 h.p. Two-Seater Coupe Model £250 10'8 b.p Four-Seater £225 10'8 h.p. Four Seater £255

All G.W.K. Cars are now fitted with the G.W.K. Stlent Helical Gaar. Synchronized Four-wheel Brakes on "H" Models, £10:0:0 extra.



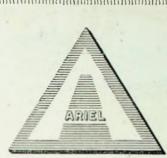
G.W.K. Ltd. (Successors to G.W.K. (1919), Ltd.) (1919), Ltd.) Cordwalles Works, MAIDENHEAD. Telephoue: Maidenhead 024. London Distributers: London Distributers: W. G. Nicholl, Ltd., 50.56, Whiteomb St., W.C.2. Accut: Capt. Richard Tweivetreas, P. & P. Vandervell, 199, Pio-cadilly, W.1.



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

H.P.

5









TWO cars entered gaining TWO SILVER CUPS (Highest Awards)

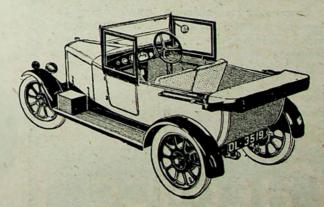
standard model £198

PETROL: 45 m.p.g. OIL: : :1,500 m.p.g. TYRES: 10,000 miles

icial 300 MILES IN A DAY

MEMBER of the staff of this journal recently made a test of the "ARIEL 10" in what he described as a "Cross Country Spurt." He stated that the car's gross time for the journey to Colwyn Bay was only half an hour more than that of the average Irish Mail time. The return journey beat the train time by half an hour in spite of torrential rain. The secret of the Ariel's success is undoubtedly its high-power-weight ratio, for the car weighs only 11 cwt., while the engine develops 22 h.p. at 2,500 r.p.m. He describes it further as a fascinating car and a positive joy to drive, and says that it must be a good light car on which one could cheerfully set forth to cover 300 miles in a day.

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.

AND A CARLEY A CAR A C

AUGUST 15, 1924



Why do you use Chemico Car Polish-

Have a shot at this competition and in a Prize

We know that once you have used Chemico Car We know that once you have used Chemico Car Polish you will use no other. Buy a bottle from any Garage. Try it. Write on a postcard your three best reasons "why I use Chemico Car Polish." Mention on your card the name of the Garage supplier. Ist Prize, £10. 2nd Prize, £5. 100 Consolation Prizes A prize of £5 goes to the Agent supplying the winning competitor. Winners will be published in "The Autocar." Last day, September 31st, 1924.

Chemico Car Polish is acknowledged to be the best in the world. It removes grease, stains, and minor scratches, and restores the original brilliancy of the most beautiful coachwork.

Make your car a shining example with Chemico Car Polish. Easiest to use, quickest and most certain in results. Last, but not least, it is permanent in its effects. Prices 2/-, 3/9, and 7/6

> The County Chemical Co., Ltd., Chemico Works -Birmingham London : Hungerlord St Commercial Rd., E. Glasgow : 15, York St. Dublin : 59 & 40, Golden Lane



ίΑ



SENSES FIVE -IF Α

The Sense of Comfort engendered by unusually good upholstery. Specially long semi-elliptic springing, plenty of leg-room and full accommodation for passengers or luggage.

The Sense of Appearance is gratified by the smart lines of the coachwork, complete equipment and careful finish to every detail.

The Sense of Economy follows a 35/40 m.p.g. petrol consumption over al country. Oil 1,000 m.p.g. Exceptionally light on tyres.

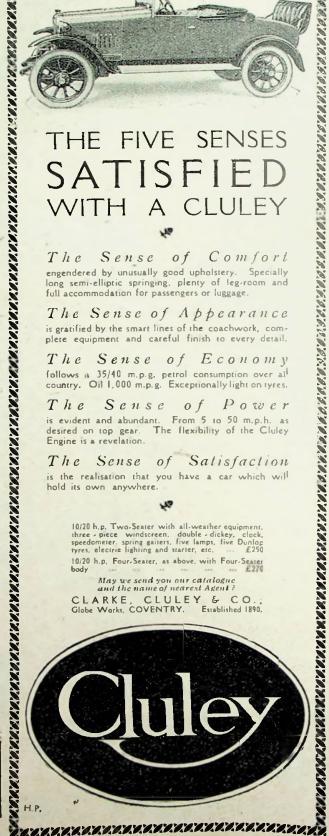
The Sense of Power is evident and abundant. From 5 to 50 m.p.h. as desired on top gear. The flexibility of the Cluley Engine is a revelation.

The Sense of Salisfaction is the realisation that you have a car which will hold its own anywhere.

10/20 h.p. Two-Seater with all-weather equipment, three-piece windscreen. double-dickey, clock, spedometer, spring gaiters, five lamps, five Dunlop tyres, electric lighting and starter, etc. £250 10/20 h.p. Four-Seater, as above, with Four-Seater

12

May we send you our catalogue and the name of nearest Agent? CLARKE, CLULEY & CO.; Globe Works, COVENTRY. Established 1890.



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

Augusr 15, 1924.

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

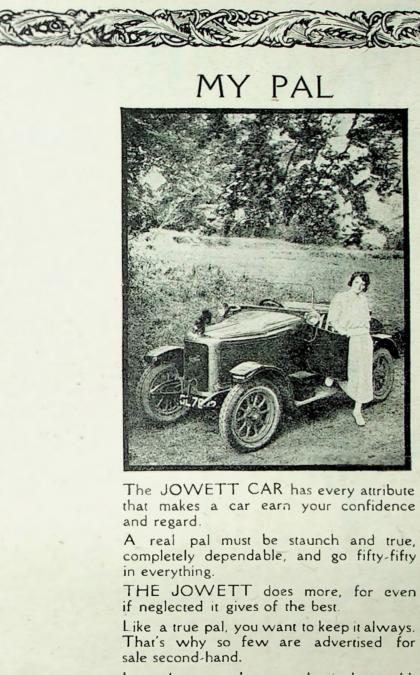
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Avausi 15, 1924.





It costs less to run than any other in the world, and little more to buy than the cheapes!

Complete with everything that makes a car a pal.

ONE SIXTY EIGHT POUNDS

May we send you our literature?

JOWETT CARS, IDLE, BRADFORD.

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

0000

AUGUST 15, 1924

Getting Down to Facts

10

THE questions of car comfort, safety, the proper protection of the well - tuned mechanism from jars and jolts, and the economical running of the car, are answered by the perfect functioning of the car springs, so

HE FITS JEAVONS



MAKES THE BEST CARS BETTER

The only spring gaiters which guarantee the positive and uniform distribution of oil to every part of the spring leaves. A tube conveys lubricant the full length of the spring and feeds the Wick Lubricator which, completely surrounding the spring, distributes the lubricant to every part and leaves nothing to chance. Get down to facts-post the coupon.

> BRITISH EMPIRE **EXHIBITION 1924** SEE OUR EXHIBIT

No. 209 Motor and Cycle Section Falace of Engineering.

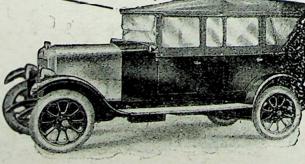


925 MODELS & PRICES. MPROVED body design longer wheelbase—additional equipment — and the introduction of a new model, are features of the Bayliss Thomas 1925 programme. You will do well to let us give you fuller details of car value unsurpassed. THE NEW 11-22 h.p. MODEL. A model exactly meeting the requirements of the

car owner demanding a good mar-gin of power with real economy of operation. A brief specification is as follows: Engine 66 x 100 mm. bore and stroke. Three forward speeds and reverse. Electric startspeeds and reverse. Electric start-ing and lighting with five lamps, clock, speedometer, spring gaiters, folding luggage carrier, windscreen wiper, spare wheel and tyro, and full kit of tools. Roomy two-door four-seater body with all-weather equipment £259

"Comfort Tyres" (set of five) £1 extra

BAYLISS, THOMAS & Co. PROPRIETORS, THE EXCELSION MOTOR CO. LTD. THE EAUGUSION MOTION CULLUD. TYSELEY. BIRMINGHAM. Phone :: 277.8 Acocks Groom. Wirms :: 277.8 Acocks Groom. We are makers of the EXCRLO PHONE '' If interested in wireless weste for silustrated folder. DISTRIBUTIONS: LONDON : Mann & Orotton's, Lid Io, Lower Growton Place, S.W. B. S. Manhall, Lid., 17a, Hanovar Sature, W. B. S. Marshall, Lid., 17a, Manovas, Square, W.1
 Square, Square



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

AGENTS WANTEE AUBOAD

FIRST

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London to Land's End - GOLD MEDAL

Etc., Etc., Etc.

UTOMOBILES

Easter Light Car Handicap

Brooklands, May 3rd

Arpajon Speed Trals

Sydenham Hill Climb

Eastbourne Hill Climb

Caerphilly Hill Climb

Brooklands, 81 Miles

Porthcawl Speed Trials -

A FEW 1924 SUCCESSES. Sole Concessionnaires : S.M.S. Ltd., 17a, MOTCOMB STREET, BELGRAVE SQUARE, S.W. 1. Phone : Victoria 8856.

PRICES.

0 h.p. 3-seater	£178
0 h.p. Sports	£190
0 h.p. 4-seater	£199
0 h.p. 2-seater	£198
0 h.p. Grand Prix	£290
0/15 h.p. 4-seater	£325
0/15 h.p. Saloon	£425

Every model (except the Grand Prix supplied without starter) is equipped with starting, lighting, clock, speedometer, and five tyres.

Every model can be supplied on Deferred Payment and any car taken in part exchange.

1921 – 1922 – 1923.GRAND PRIX RACES-FIRST in 4 CountriesBROOKLANDS 200 MILES-FIRST, SECOND & THIRDRELIABILITY TRIALS-FIRST in every Entry

WORLD'S RECORDS for 1,100 c.c. Class held by the

SALMSON



Sole London Distributors.

31, Brook Street, Bond Street, W.1 Mayfair 2965.

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

B₅

MAXALDING means CONTROL

of the whole of the Physical, Nervous, Digestive and Alimentary Systems, and can be effectively performed without drugs or apparatus, anywhere and at any time. The illustration shows the wonderful control secured by

A POSTALLY INSTRUCTED MAXALDITE

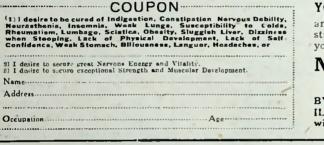
who is here seen contracting the right leaflet of the *rectus abdominis*, and depressing the left leaflet. The mastery of this sixth sense gives the most amazing concentration (thought and action being simultaneous), and ensures complete freedom from any stomach, bowel or liver trouble.

Read these genuine and unsolicited testimonials to the efficacy of Maxalding by Correspondence

A Lady, age 35, who in spite of having taken plenty of outdoor exercise, including Tennis, could never secure a bowel-action without resorting to purgatives, writes, after receiving the first part of a treatment: "I am in receipt of your letter of the 4th of March. I was on the Continent, but my life is so taken up with strenuous work that I have put off smaller things — where writing is concerned. Yes, the bowels are quite regular now, and have been for some time."

A Gentleman. Newspaper Proprietor and Editor, age over 70, writes: "Since I consulted you three years ago and put into steady execution your clear instructions, I have had health that has made life and work easy, and I like being fully occupied. Every morning and every night I have done the exercises. You can use this in any way you like, it is due to you, but do not put my name in an advertisement. You can give my name and address in private letters if you like."

A Medical Man writes: "I have mastered lesson 5 of the 'Fitness Course,' and am ready for lesson 6. Since I commenced the course on January 1st I have never missed a day's exercise, and am pleased to say that physically and mentally I am a new man."



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-

IF YOU DO NOT WISH TO CUT THE PAPER, PLEASE WRITE A LETTER."

Mr. A. M. SALDO, 40P, PALL MALL, London, England. BY AN EARLY POST OR MAIL you will receive an ILLUSTRATED EXPLANATORY BOOKLET, tog ther with Mr. Saldo's personal diagnosis of your case.



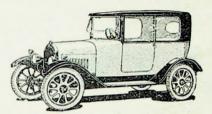
READERS, NOTE.—It assists the small car movement and the advertiser, and ensures you prompt attention, to mention "The Light Car and Cyclecar" in your enquiries.

12

Be

"The most wonderful little engine they have ever seen."





The 8 h.p. Saloon Model,



8 h.p. Light Car (Chummy body) £250
8 h.p. Light Car, Two-Seater, with dickey seat - £250
8 h.p. 3-Seater Saloon - £310

Ask your Dealer about it.

DO NOT HESITATE to send your enquiries to "The Light Ca: and Cuclecar."

Well-known experts have tested the Humber 8 h.p. Models and they say that they have never met with an engine of the same cylinder capacity to compare with it; that everything connected with the performance of the car is most gratifying, and that only 25 years of Humber thoroughness could explain it.

This popular Car is standardised with the following bodies—a 2-Seater with comfortable dickey seat; one with chummy body, seating 2 adults in front and one adult or 2 children in the rear, and a 3-Seater Saloon. The 2-Seater may be inspected at the British E m pire Exhibition, Wembley — Exhibit No. 70, Motor and Cycle Section, Palace of Engineering.

The handsome lines of the coachwork and the comfortable dickey seat will be instantly appreciated. The car is all-weather equipped, and within a few seconds can be converted into a cosy, weather-proof vehicle. Ideal for general purposes, and *economical*.



AUGUST 15, 1924.



EVERY TUESDAY

D

SUBSCRIPTION. 3 ms. 6 ms. 12 ms. U.K. and Canada -6/6 131-26/-Abroad 8/2 16/3 32/6 Specimen Copy Post Free.

Send for this free booklet containing useful motoring information and particulars of many practical handbooks, maps and journals.



Features of this week's issue of "The Motor," August 12th.

The National Motor Journal

TARA CARA CARA CARA

- MORE RAIDS ON MOTORISTS' MONEY ? A United Policy Needed for the Protection of the Motorist.
- TOURING IN SCOTLAND. Hints on Routes and Road Surfaces, Hotels Hills and Highland Beauty Spots.

PRINCE HENRY'S NEW SUNBEAM.

- SOLUTIONS TO EVERYDAY PROBLEMS .- 11. A Series Giving Useful and Practical Information for the Owner-Driver.
- PREVENTING А CAR FROM RUNNING BACKWARDS.
 - Various Irreversible Mechanisms which could be Used.
- THE TWO-WHEEL CAR. The Problem of Balance and How it can be Solved.
- A GYROSCOPIC AUTOMATIC GEARBOX.
- A VARIABLE-RATIO STEERING GEAR. New Mechanism Which Has Been Developed to Cope with Low-Pressure Tyres.

THREE-POINT COACHWORK SUSPENSION.

A NEW AMERICAN CAR WITH MANY NOVEL FEATURES.

MORE PICTURES OF THE GRAND PRIX D'EUROPE.

LESSONS OF THE GRAND PRIX.

Amongst the contents of next Tuesday's "Motor" will be the following :-HOW TO FOLD AND ERECT A HOOD. WHEN DESCENDING HILLS. The Best Driving Methods to Adopt in Various Circumstances. RADIES WHICH NEED NO ATTENTION. Rapid Progress of Air Cleaners and Oil Rec: ifers in America. Amente. THE SUPERCHARGED TWO-STROKE ENGINE, A CAR BUILT SPECIALLY FOR WORLD'S RECORDS. A 350 h.D. Single-Seater. A NEW CHASSIS LUBRICATION SYSTEM. THE ADVANTAGES OF BUMPERS.

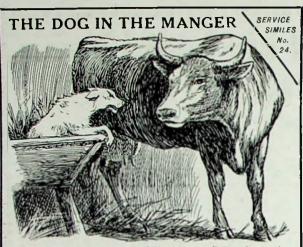
MENTION of "The Light Car and Cyclecar" when corresponding with advertisers assists the cause of economical motoring.

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THE LIGHT CAR AND CYCLECAR

AUGUST 15, 1924.



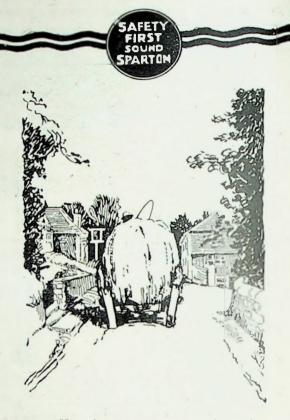
A dog lay in a manger, and by his growling and snapping prevented the oxen from eating the hay which had been placed for them. "What a selfish dog 1" said one of them to his companions, "he cannot eat the hay himself, and yet refuses to play there to set who can." allow those to eat who can."

The Service Company is never "the dog in the manger." We willingly help our customers and at the same time enhance our reputation by giving the public service and value. We supply all makes, new and second-hand, for cash, exchange or easiest of easy payments.

DEFERRED PAYMENTS

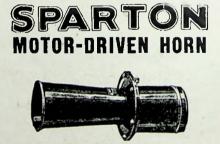
Any make supplied. Deposit from one-filth purchase price, and balance, plus 5% per annum, in 12, 15 or 18 monthly instalments. Tax and insurance can be included.





TOT only does Sparton clear the road but-it always works. Its thorough dependability and loud imperative note are absolutely essential for country driving. Moderate in price - from 35/-, with

exceptionally low current consumption -2 amps. on 12 volts—accessibility, if adjustment of tone is desired—its penetrating note and absolute reliability-these are points worth remembering when choosing your motor horn. Ask your dealer to demonstrate.



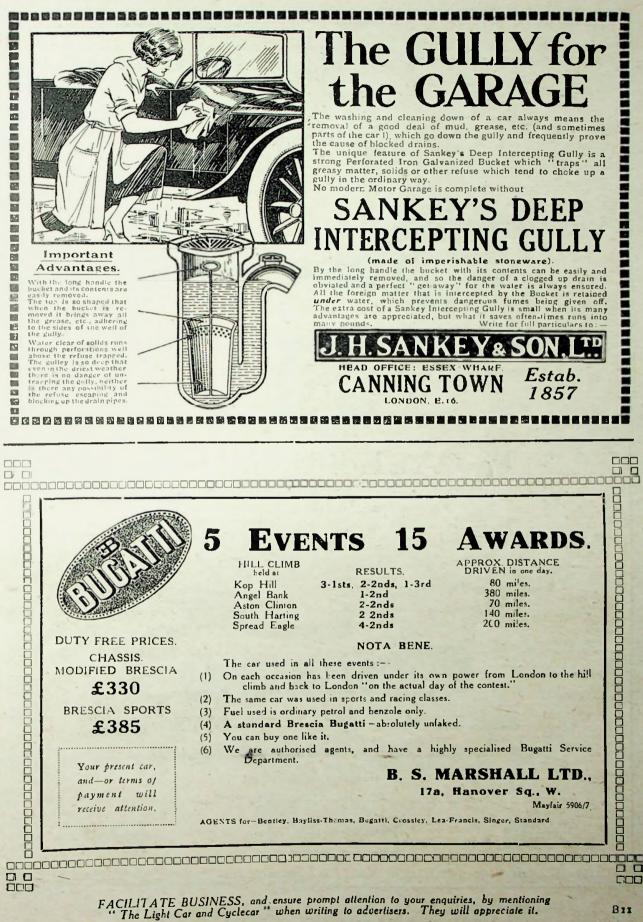
MODEL A.J - All Black

Write for folder S.D

ALFRED GRAHAM & COMPANY, St. Andrew's Works, CROFTON PARK, LONDON, S.E.4. 'Phone: Sydenham 2820-1-2. "Navalhada, Catgreen, London." SHOWROOMS : 25-26 Savile Row W.I. and 82 High Street.

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

THE LIGHT CAR AND CYCLECAR



BII

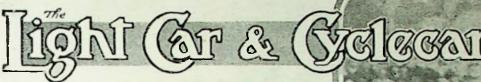
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AUGUST 15, 1924.



"The Light Car and Cyclecar," August 15, 1924.



NOTES, NEWS AND GOSSIP OF THE WEEK.

Holiday Month.

Practically every main road in the kingdom has been alive with motor traffic during the past fortnight, a large proportion of the vehicles being light cars loaded with holiday luggage and making for popular seaside resorts.

Short Measure.

Two guineas costs against the police was awarded last week by the Bow Street Magistrate when it was shown that a police control was 19 yards short of the measured furlong which it purported to be.

Trouble-free Light Cars.

In the course of a run from Dumfries to Tewkesbury, made during last week-end, a member of the staff reports that although much of the road was crowded single light car was seen in not a trouble.

London Theatre Traffic.

A booklet has been prepared by the R.A.C. in which full details of the new West-and theatre traffic regulations are contained. Copies may be obtained by members and associate members on application to the secretary.

Such Horrid Stuff!

Petrol, it seems, must be abolished. By four votes to three Prestwich Council Health Committee decided to order the removal of the petrol pumps from foot-paths as they are "a danger to the public health." There is still hope for horse breeders.

They Never Grow Older!

As an interesting commentary upon the difference of opinion in England at the present time concerning women drivers, their efficiency or otherwise. we note that in California a woman can obtain a licence at the age of 18, even without the consent of her parents, while a man cannot obtain his until he is turned 21.

Traffic. "Cops' in England.

Protests are being raised by motorists who have been caught by plain-clothes' policemen on motorcycles and eventually policemen on motorcycles and eventually fined. Writing in a contemporary, a correspondent asks: "Why, if the police wish to have traffic 'cops' in England, as in America, they do not 'play the game' and adopt the whole idea—put-ting these 'cops' in uniform?" No 612. Vol. XXIV.

THE SMALLEST RACER.

This 14 h.p. amateur-built racer is claimed by its designer and builder to attain a speed of nearly fifty miles per hour-

Cheap Petrol Caution.

If the cheaper brands of petrol are used great care should be taken to filter it properly when pouring it into the tank. Some brands contain a fairly large proportion of jet-clogging impuritina

Bromley Respite for Motorists.

During the fortnight's summer holi-dey of the police timekeeper at Bromley, dry of the police timekeeper at Bromley, Kint, there was no trap, writes a corre-spondent. On his return at the week-cuid the 10-mile trap in London Road was again operated. A number of light curs was stopped. Special caution should be always observed in the Bromley dis-trict / rict

Make Sure of It.

If you have not already done so, why not place a definite order for *The Light Car and Cyclecar* with a newsagent? This journal enjoys the unique distinc-tion of being the only one in the world devoted exclusively to small economical cars. The whole question of cheap motoring is dealt with by an experienced editorial staff, which has made a special study of the movement since its incep-tion over a decade ago.

LIGHTING-UP TIMES	
for Saturday, August 16th, 1924.	
London 8.50 Newcastle 9.7 Birmingham 9.1 Dublin 9.23	
Lighting-up time(rearlights) in England, Wales, Scotland and Ireland is half an hour after sunset.	
Moon-Last Quarter, August 22nd.	



Veterans Still at Work.

A correspondent writes to inform us that between Circncester and Gloucester last Sunday he passed no fewer than four A.C. Sociables, all apparently running well. Yet they say that the £100 cyclecar is not a proposition !

Away, Tramlines !

It is proposed by the Keighley Corpo-ration to remove the tramlines from some of their main roads and to employ trolley buses instead. A trolley-bus is electrically propelled, taking its current like a tram from an overhead wire, but it runs on rubber tyres and can use any part of the roadway. We should like to see more of them.

Singer Honeymoon Tour.

The Home Secretary's only daughter and Mr. R. S. Gledhill, of Bromley, Kent, are spending their honeymoon in a 10 h.p. 1923 Singer. Their house at Wendover Road, Bromley, has a garage large enough to accommodate both of the light cars owned by Mr. Gledhill, who is a house agent and auctioneer and makes good use of bis Singers. makes good use of his Singers.

Proverbs for Motorists.

We are indebted to a reader for the following motorized proverbs :-

"It's a poor car that won't run fast downhill."

"Safety is the best policy." "Spare the brakes and save the

"Spare the brakes and save the tyres." "Tis better to have spare oil lamps than never to got home at all." "Fine adjustments make fine re-sults." "You can turn the crank with the switch off, but you can't make it go." "It's not the cars that weigh the most that give most m.p.g." "Be never in haste at a bend." B13

"Obstruction" in Folkestone. A correspondent informs us that the

police have begun to prosecute motorists, on the grounds of obstruction, for leav-ing cars outside Fuller's Restaurant in the Sandgate Road.

More Name Posts.

North of Preston several villages are now equipped with Ministry of Trans-port name posts. In view of the fact that the A.A. has long ago erected more informative name discs, the expense in-curred by the M.O.T.'s effort is of doubtful value.

A Surprise Hill-climb. An amusing story is told of how a certain hill-climb in Ireland was at-tended by a number of crack English light car drivers. They all met at the foot of the hill for the first time, each one having arrived in the firm belief that he was the only English driver over there, and that, in consequence, he there, and that, in consequence, i would be certain to sweep the board! he

Patrol's Presence of Mind. Patrol W. Stradling, an Automobile Association "Scout," showed consider-able presence of mind recently when coming off duty at 1 a.m. He partially subdued a sudden outbreak of fire in a country cottage, and at considerable risk to himself entered the building and rescued two women. With the assist-ance of the village constable he then put out the fire and rendered first-aid to injured women before they were taken by ambulance to Cardiff Hospital.

Dimming Headlights in South Africa.

Considerable controversy has arisen in South Africa owing to the Transvaal Automobile Club recommending motorists not to dim their headlights when passing through ill-lighted suburban roads. Instant protest was raised by the supporters of the dimming practice, and the trouble was heightened by the Deputy Commissioner of Police, who advised that headlights should be dimmed that neadignts should be dimmed both in town and suburb. The practice has been condemned by both the R.A.C. and the R.S.A.C. for Eng-land and Scotland.

CRIPPLES.



MOTOR TERMS TRAVESTIED. No. 25 .- Query : What is the Term ?

We offer a prize of ONE GUINEA for the most apt motor term received. No solution will be judged before 11 a.m. on Tuesday next. (The solution to last week's picture will be found in "Around the Trade ")

Edinburgh's Poor Signposting.

Edinburgh is not a well-signposted city, and would be improved by the white signposts such as are used in Bir-mingham. Without a Michelin guide the passage through the Scottish capital is no easy matter.

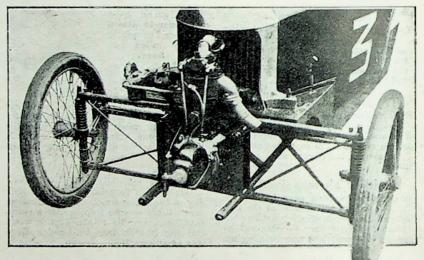
Noisy Petrol Tanks.

Tank drumming is generally unmis-takable, especially when the tank is fitted in the scuttle. If there is any doubt, pressure by the hand or foot on the tank may cure the drum tem-porarily. A permanent cure may neces-sitate the tightening of the tank attach-ment or the introduction of felt packing.

Blunt Signs in U.S.A.

weep.'

"Don't covet your neighbour's side of the road."



A FRENCH ONE-LUNGER.

OUTING FOR BOURNEMOUTH

Members of the Bournemouth and District M.C. and L.C.C. starting off for the residence of Mr. Howard Neave, J.P., each with crippled pas-sengers from the Victoria Home. B14

Front view of one of the Morgans which competed in the Cyclecar Grand Prix. It is fitted with a single-cylinder engine

"Look out! You may meet a fool around the corner." "Stop !-Look !!-and Live !!!!"

Producer-gas Trials.

The Royal Automobile Club of Bel-gium is considering the organization of a trial of lorries and tractors running on gas produced from portable plants using wood or charcoal. Any make or vehicle and producer may be entered, and application for details should be made to Prof. R. E. Mathot, president of the technical committee of the R.A.C. of Belgium, 58, Avonue des Arts, Brussels. Experiments with portable gas plants for propelling motor vehicles have reached an advanced stage, several different designs giving lower running costs than where liquid fuel is employed. The disadvantage to the plan, so far as small cars are con-cerned, is that the producers in their present form are of rather unwieldy dimensions. The Royal Automobile Club of Bel-

Citroen in Australia

A Citroen gained first place in the most important event of the day at the Aspendale Park 8-hour motor races held recently in Victoria, Australia.

White Coats for A.A. Fatro's.

A.A. patrols are being equipped with white coats and gloves in order that motorists may more easily observe and respond to their signals where the patrols are stationed on point duty.

Rover Booklets.

Following the big demand which we found to exist for 1921 Rover instruction books and the subsequent reprinting of the series by the Rover Co., we are asked to point out that it is only the 1921 books which are now being reprinted, later booklets being actually in stock.

A.A. Holiday Activity.

During the August Bank Holiday, covering four days A. A. patrols gave information to 35,564 members and assisted 3,427 car owners with emergency supplies. First-aid service was rendered to 60 road users by the patrols and roadside assistance was given to 2,470 vehicles.

The Boulogne Week.

A largo number of British entries were received last year for the four days' motor racing in Boulogne. This year five events will be spread over four days. On Thursday, August 28th, the speed trials over a timed three kilometres from a flying start will be held in the morning, and a hill-climb up the St. Martin Hill has been arranged for the afternoon. On Friday the Concours d'Elegance will be held. The Grand Prix de Boulogne for light cars and cyclecars will be run off on Saturday, beginning at about 8 a.m. The course measures about 250 miles, and the race will certainly be keenly contested. At 11 a.m. on Sunday is the race for the Georges Boillot Cup. This is for touring cars fitted with wings, hood, etc. Entries at double fees close on August 16th. British entries already received are numerous.

ONE INSERTION SECURES A BUYER.

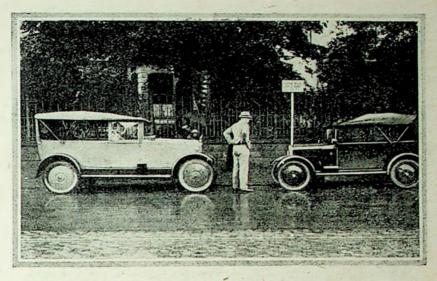
19th July, 1924.

"Thanks to my advert. of yesterday in 'The Light Car and Cyclecar' I have already sold my cyclecar. Kindly refund cost of second and third insertions." J. G. H. Kidd.

Sell your second-hand car quickly by advertising it direct

to small car enthu iasts through "The Light Car and Cyclecar."

(See particulars of Special Scheme in Small Advertisement Section.)



COVENTRY PARKING PLACE.

The latest Coventry car park is opposite our Midland offices. A Rover Nine is seen alongside a notice which states, "Parking place for two cars (at owner's risk)."

Game after 80,000 Miles. The entry form of a Morgan enthusiast who entered in the Cumberland

County M.C.C. Alan Trophy Trial, and who proposed to run a car with 80,000 miles to its credit, read :--Make of machine : Morgan knocked-

about.

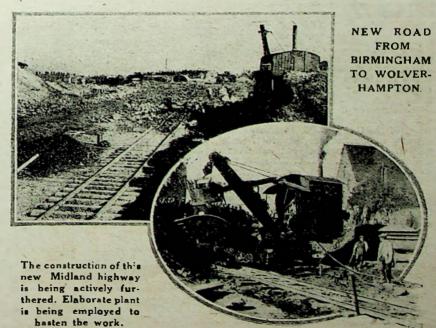
Number of cylinders : Mostly two. Horse-power : Nearly eight.

Police and Brakes.

Attention is drawn in *The Commercial* Motor to a new police crusade on brakes. The Motor Cars (Use and Construction) Order, 1904, stipulates that cach of the independent brakes shall be in good working order and shall be capable of causing two of the wheels on the one axle to be so held that they shall be effectually prevented from revolving, or an equivalent effect obtained. Holiday Touring Articles. We still continue to be inundated with readers' articles describing their holiday motoring tours, and naturally many have to be rejected. Readers are specially requested before submitting articles to send a synopsis with specimen photographs, and thus to avoid being disappointed.

Welcome Home.

His many friends in the trade will be glad to hear that Capt. Tet Riley, late of Riley (Coventry), Ltd., has returned on leave from Africa, where he has been cugaged on Government transport duties. The heat in the bush is so greatthat even when a radiator is filled up with fresh water it is too hot to touch, for which reason small air-cooled cars like the Rover and A.B.C. are greatly in demand.



Angust 15, 1924



BIRMINGHAM TRAFFIC SCHEME.

356

quickly controlled, the Birmingham authori-ties have let into the surface of the street strips of white concrete, behind which on-coming traffic must wait when signalled to stop by the constable on duty.

To enable traffic at cross-roads to be more

A Useful Guide.

Trust Houses Ltd., Short's Gardens, London, W.C.2, have issued a compre-hensive guide to Trust Houses. The information in respect to each house includes location, accommodation, attrac-tions, local points of interest, telephone number, and so forth.

Southampton-Exeter Trial.

The fourth annual Junior Car Club South-Western Centre Southampton-Exeter Reliability Trial will be held on Exeter Reliability Trial will be held on Saturday, September 6th the principal awards being the Perrin's Trophy and the Young Cup. A completed entry form with the entry fee of £1 must reach the hon. organizing secretary, Mr. G. F. Smith, 16, Station Hill, Eastleigh, Hants not before than the last poet on Hants., not later than the last post on August 25th.

A Horstman Success.

A standard Horstman four-seater, fully loaded, was awarded the Campbell Cup and gold medal for the best per-formance in the Irish Two Days' Reliability Trial.

Shock-absorber Trials,

A sum of 250,000 francs is being voted towards the expenses of the Paris Municipal Shock Absorber Trials to be held in October. A sum of 50,000 francs is to be distributed in prizes. The trials is to be distributed in prizes. The trials will be held during the period of the Paris Motor Show.

A Climb Postponed.

The Essex Motor Club's annual hill-climb which had been fixed for September 6th has been postponed to October 18th, as the first-named date clashes with that of another event. Particulars will be sent to member about the middle of September.

K.S.L.C.C. Reliability Trial.

It has been decided by the Kent and Sussex Light Car Club to hold a relia-Sussex Light Car Club to hold a relia-bility trial on August 16th, instead of the hill-climb arranged for that day. The start of the trial will be from the Spa Hotel, Tunbridge Wells, at 2.30 p.m., and entrants must be at the starting point by 1.45 p.m. Entries closed Monday last, August 11th. We understand that a good entry has been received.

Wye Valley Club's Gymkhana.

In connection with Hereford Regatta, the Wye Valley M.C. and L.C.C. organized a motor gymkhana, which proved to be one of the principal attractions of the day. The various events aroused keen interest, and were witnessed by large crowds of spectawitnessed by large crowds of specta-tors. Light car prize winners were:--Musical chairs: 2nd, Mr. Bolt and Miss Dawson (10 h.p. Wolseley); halloon bursting: 1st, G. H. Goodall and Miss Loe (Morgan), 2nd, G. B. Cooper and Mrs. Cooper (10.9 h.p. Clyno); spearing the potato; 2nd, Mr. Bolt and Miss Dawson (10 h.p. Wolseley).



DANGEROUS CORNER MADE SAFE.

In order to make the junction of Lichfield Grove and Squire's Lane, Finchley, safe, Mr. R. Ellwood assigned sufficient land to the council to permit of an easy bend.

AC. All-weather Equipment. We are asked to point out that the we are asked to point out that the metal-framed celluloid side windows fitted to A.C. cars, on which "S.S.," the contributor of "Rich Mixture," commented recently, were of an experi-mental type, and that all future de-liveries of the model in question will be fitted with glass windows

Morgan Club Run.

fitted with glass windows.

The opening run of the Morgan Club The opening run of the Morgan Chib takes place on Sunday, 17th inst. Start-ing from Hyde Park, Marble Arch, at 10 a.m., the route will be to Harrow, Pinner, Rickmansworth, Chalfort St. Giles, Beaconsfield and Collum Green, where a halt will be made for an olfresco lunch. The return journey will be becomen and will isclude Barpham be leisurely, and will include Burnham Beeches, Eton and Windsor. A wel-come will be given to all owners of three-wheelers.

Alan Trophy Trial.

In glorious weather the Alan Trophy Trial of the Cumberland County M.C.C. was run on Saturday last.

The club again proved itself capable of finding a winner, only one competitor finishing without losing marks.

Inishing without losing marks. The only car to lose marks on time was the Austin Seven driven by F. Dias, of the C.C.M.C.C. Probably the entrant who most tempted providence was G. G. Dias, who turned out with a Margan runabout with 80,000 miles to its aradit its credit.

The course, which was slightly under 200 miles, comprised the lakes of Cumberland in the forenoon section and the moor of the eastern part of the county in the afternoon section.

county in the afternoon section. The provisional results, which were issued within two hours of the last man finishing, are:—Alan, Trophy, Capt. A. W. Brittain (9 h.p. B.S.A.); Oarr Cup I. H. Dickson (9 h.p. Rover); gold medals, A. W. Brittain, I. H. Dickson; bronze medals, F. Dias (Austin Seven), J. G. Friars (10 h.p. Clyno). These were the only cars to finish the These were the only cars to finish the course.

THE LIGHT CAR AND CYCLECAR

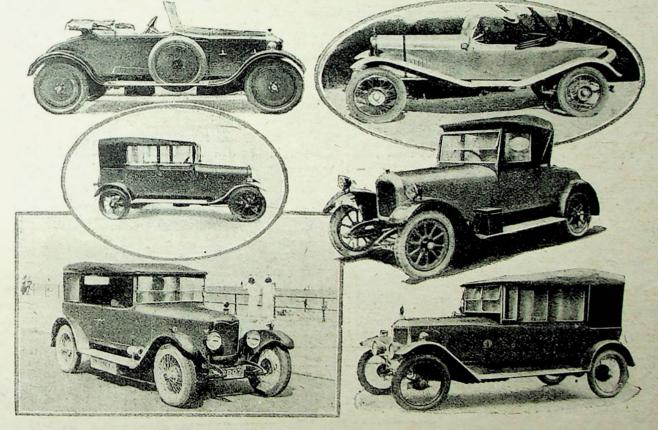
LIGHT CAR LUXURY. THERE ARE STILL MOTORISTS WHO BELIEVE THAT LUXURIOUS DRIVING IS TO BE HAD ONLY IN LARGE CARS, BUT THERE ARE NUMBERS OF LIGHT CARS WHICH GIVE EQUAL LUXURY AT HALF THE COST.

UNTIL three or four years ago it was considered that a luxury car must necessarily be of 40-50 h.p. -Rolls-Royce, Lanchester and Napier all made only one model, which, of course, conformed to that requirement. Doubt was shed, however, on the need for using such large engines, and during the last two years both the Rolls-Royce and Lanchester companies have designed, and are now actively producing, models with engines of only half the capacity of those which, four years ago, were considered alone to be ideal for luxury motoring.

The new models are not cheap cars-they are, on the other hand, very expensive, but they embody every conceivable refinement. It is appreciated that Many of these enthusiasts, however, are not interested in luxury motoring, as it is revealed by the larger "quality cars." They have no use for polished mahogany, for mother-of-pearl fittings and for silver plating: they demand mechanical rather than superficial refinement. And in many of the more costly light cars they obtain it—shorn of its glamour, perhaps, but existent nevertheless. The illustrations on this page depict a few of the well-known luxury light cars and there are many

The illustrations on this page depict a few of the well-known luxury light cars, and there are many more. For all of them there is a useful demand, which shows every evidence of increasing.

Before long it appears that the quality light cars will occupy the same exalted position in the

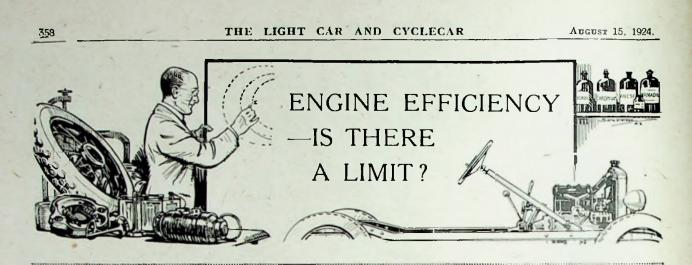


A FEW AMONG MANY The photographs depict six examples of luxurious light cars, types to suit all tastes being - depicted. (Left to right from the top) The Royal A.C., the Alvis Super-Sports, the Lagonda saloon, the Belsize, the Riley all-weather and the Horstman all-weather.

the type of motorist who can afford, and who insists upon, the last word in luxury does not necessarily prefer a large and relatively cumbersome car. His tastes, it would seem, are not even met entirely by the new models to which reference has been made.

In consequence, the last two or three years have witnessed the introduction of luxury light cars, and these are enjoying ever-increasing popularity. It has been found, in fact, that there are enough wealthy enthusiasts to provide an adequate market for several makes which, fitted with expensive bodies, retail at a price approaching £700. "stable" of the wealthy as the equivalent type of horse-drawn vehicle enjoyed twenty years ago. The small saloon will have usurped the proud position of the costly brougham, the all-weather and open touring types that of the victoria and the sports models that of the dogcart.

It seems probable that the large luxury cars may take the place of the family coach: they may exist among cobwebs except when they are brought out into the light of day to be admired on state occasions. Light cars will then no longer need their prefix "light": they will be "the only wear."



"IT IS PROBABLE," SAYS THE WRITER OF THIS ARTICLE, "THAT THE PETROL ENGINE IN ITS PRESENT FORM APPROACHES FINALITY AND THAT SUBSTAN-TIAL ADVANCES MAY MEAN RADICAL DEPARTURES FROM PRESENT PRACTICE."

HEORETICAL efficiency, as applied to engines used in automobiles, is regarded by most motorists as of an academic nature. Moreover, it involves questions of physics and thermodynamics that are completely over the heads of the driving public, and, it must be confessed, not widely understood even by designers.

Nevertheless, steady progress is being continually made which can be followed by the layman, without involving the use of expressions like "entropy" or "dissociation." In that which follows it is hoped that an accurate idea can be obtained by those whose only contact with scientific matters is the use of a car.

It was said at the outset that the subject is re-garded as academic. This is true in a measure as the petrol engine as it is to-day is a remarkably efficient piece of mechanism, perhaps the most efficient for obtaining mechanical energy from fuel, certainly the simplest and lightest. It may prove that any means of obtaining a further substantial gain in efficiency could be fitted only at an increase of cost, weight or complexity that makes it undesirable for use on vehicles.

The most efficient engines to day are for stationary purposes, and the nature of the problem in that case is to subordinate everything to reducing cost of operation. It is in these directions that the most active

work is going on to improve the effi-ciency of the power unit. So far as the motorist is con-cerned it may pay better to improve the fuel and its methods of distribution rather than to produce engines re-quiring higher temperatures and pressures to obtain the desired result.

This may seem a

TOTAL HEAT ENERGY OF FUEL--AIR STANDARD PROBABLE - UNAVAILABLE -ACTUAL LIMIT AVERAGE PERSORMANCE This diagram clearly shows the difference between the actual and theoretical output of an engine. The gain in power of a specially-tuned engine is plainly indicated by the arrows.

This may seem a startling confession to those who have read that the petrol engine has a thermal efficiency of only some 25 to 30 per cent. A few years ago articles appeared suggesting that it was possible to increase this to 30 or 90 per cent., and diagrams of certain systems which appeared to lead in the right direction were given. It is a regrettable fact that such hopes were based upon a misapprehension. They rested on nothing more solid than the thermal equivalent of the Irishman's pronosal to get rid of his equivalent of the Irishman's proposal to get rid of his **B18**

waste soil by digging a large hole in which to bury it! To understand the subject we must go back to the early years of the century when it became desirable to establish a simple ideal standard of performance with which actual engines could be compared. The scientists and engineers to whom the matter was referred decided that what is known as the "air standard" formed the best basis at that time available.

A Theoretical Standard.

This standard was arrived at by considering what would be the effect if the engine contained only air (which, as every schoolboy knows, contains only simple gases) instead of the compound gases formed by the combustion of fuel-air mixtures. This air was imagined to be heated without loss, to give its pressure in due course to the piston, and finally to arrive at the point at which it began its cycle of operations. operations.

It was recognized that this air standard was not entirely satisfactory, seeing that the burnt gases of internal-combustion engines might be expected to act differently from pure air. The proposers themselves pointed out that the theoretical pressures were not reached in practice.

The air standard was therefore adopted only as a provisional one, suitable for all practical purposes in

the state of know-ledge that then existed, but open to correction when scientific knowledge had sufficiently progressed.

In the intervening period much has been done. The difficult nature of the task will be appreciated when it is realized that flame temperature is about 3,600 degrees

F., , at which all but a few substances melt. F., at which all but a few substances melt. Recent work has shown that, on account of the different properties of the gases used, no internal-combustion engine can approach the ideal efficiency of the air standard. In other words, the standard is too high, and sufficient credit is not given to actual engines. It is possible, therefore, that the air standard will be replaced by some other which is more in accordance with actuality. This will cut both ways; we can pride ourselves on

August 15, 1924

ENGINE EFFICIENCY (contd.).

our present achievements as being considerably better than they appeared by the air standard, but these achievements give correspondingly less scope for future improvement. Indeed, it is probable that the petrol engine in its present form approaches finality, and that any substantial advance can be obtained only by a radical departure from present practice.

What the nature of this change may be there is at present no indication. It has been pointed out many times that more research takes place in a decade now than previously occurred in a century. A great many workers are developing along

various lines, and several of their experiments are already sufficiently promising to justify actual trial.

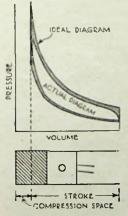
No Good for Cars.

" theoretical " Very few engines as at present designed appear to be suitable for automobiles, and it seems probable that their first use, at any rate, will be for central power stations where, as explained above, first cost, weight and complexity are subordinated to Some may be efficiency. adapted for marine propulsion, which may be regarded as requiring qualities intermediate between those of the stationary plant and the automobile engine.

It may be of interest to review briefly some of the types of power plant from which a successor to the petrol engine may be forth-coming. Space and the necessity for avoiding technicalities forbid anything but a short reference to each case.

The Dicsel engine, although about 30 years old, is still being developed in various forms, of which the Doxford and the Fullagar are promising types. These bear a superficial resemblance to the double-piston engine used at one time in the Gobron Brillé car, as older motorists may remember it.

The Still engine is developed from the Diesel, and contains a boiler which is connected with the cooling jackets, the heat from which is thus partially utilized



and made to serve a useful and economical purpose. When it economical purpose. was first introduced, this novel power unit attracted considerable attention in technical cir-

THEORY AND PRACTICE.

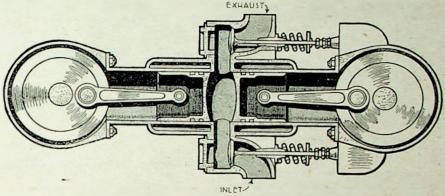
These diagrams show very clearly the pronounced difference which exists between theoretical and practical results. The difference between the two efficiency curves (shown shaded) represents wasted energy.

cles. The Burstall system also comprises an internal-combustion engine with external units, the essential being a "heat accumulator.

Steam power is represented by the Benson generator, in which steam is generated at the amazing pressure of 3,200 pounds to the square inch. At this pressure water water At this pressure water passes into steam without ebullition, and even the surface of the water dis-appears. An experimental plant has been built and definite gains in efficiency have been obtained.

Another steam idea, now being tested in America, involves the use of mercury which is boiled in a mercury boiler. The heat is afterwards transferred to steam with, it is claimed, a great increase in thermal economy. The cost of the necessary plant is prodigious.

Our old friend the internal-combustion turbine is still on the horizon and may possibly be an accom-plished fact. Certain German periodicals have claimed that several successful large plants have been constructed, but no details are available. A well-known British gas-engine maker paid a special visit to Berlin in order to find out some particulars, with the intention of purchasing rights if the system was satis-



Double piston engines of the type which this illustration diagrammatically depicts have been successfully used in cars. With this arrangement the crankshafts may be coupled A TESTED NOVELTY. by a connecting rcd or any other suitable means.

factory. Every obstacle was put in his way, and there is even some doubt whether such turbines exist.

In the meantime, active work is going ahead in motorcar factories throughout the country with a view to obtaining increased efficiency from power units of more or less conventional design. Most readers of *The Light Car and Cyclecar* are familiar with the design of various supercharging devices, and they appreciate that with the aid of a supercharger almost any high-efficiency engine can be made to give improved results. Superchargers, however, are con-sidered in some quarters to have limitations, while there are drawbacks in connection with their wide adoption which many experts consider to be insuperable.

Two-stroke Limitations.

From time to time two-stroke engines of novel design are introduced, but it is noteworthy that they design are introduced, but it is noteworthy that they seldom reach the production stage. At the same time, it should not be thought that there are not immense possibilities in the two-cycle principle. Engines of this description are very widely used for stationary power plants and for marine work, while in the smallest sizes they enjoy great popularity as power units for motorcycles, chiefly because of their simplicity and absence of highly stressed valve gear. By many authorities it is considered remarkable that two-stroke engines have not been more widely

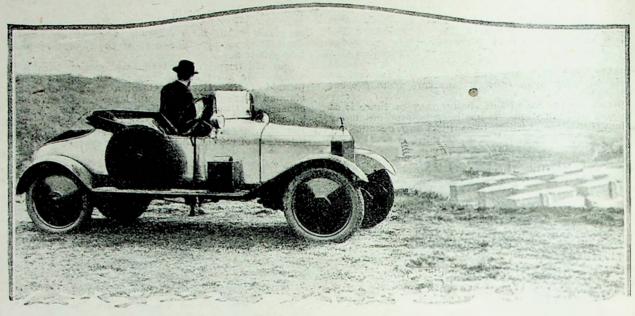
that two-stroke engines have not been more widely used on small cars, and the only assumption which can be drawn is that the critical mind of the average small car owner will not put up with the intermittent misfiring and poor idling which seem to be inseparable from the type.

It must also be borne in mind that a two-stroke engine, as we know it at present, is seldom so economi-cal in small sizes as a four-stroke. And economy, after all, is the keynote of efficiency.

An engine which develops colossal power for given size cannot hope to enjoy universal popularity or a widespread demand unless its high power output is backed up by reasonable economy. C.H.

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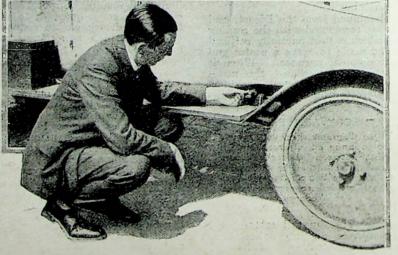
Overlooking Alton Camp at the top of Aston Clinton Hill.

AN ERIC-CAMPBELL CRITICALLY SURVEYED. EXPERIENCES AND IMPRESSIONS AFTER 5,000 MILES' RUNNING WITH A 10-22 H.P. STAFF CAR.

HE 1924 Eric-Campbell, which, with its 1.498 c.c. Coventry-Simplex engine, is rated at 10-22 h.p. (£11 tax), is a car which lends itself admirably to what have come to be regarded as the niceties of driving. Its power-weight ratio is high, and one must, therefore, always be in proper command of the controls : its gent. make of light car in roughly the same price class. Its sporting lines are distinctly pleasing, and the equipment of the type under review, i.e., the Popular model at £245, is complete, such fittings as clock, Stewart speedometer, Brolt electric starting and lighting, electric horn, oil gauge and all-weather

controls; its gearbox requires understanding, therefore polished changes can be made only by skill and fore-thought, and its clutch is compara-tively heavy-a factor which eneliminates tirely the possibility of clutch slip, and encourages one to drive on the throttle and gears alonenot always the path of least resistance in cars with very light clutch springs.

Once mastered and even a tyro would find little difficulty after the usual tuition—it becomes a fascinating vehicle to handle, boasting of easy starting, fine ac-



CONVENIENT TO ______ LUBRICATE. Long cantilever springs are used for the rear suspension; handily placed greasers providing for the lubrication of the pivot pins.

celeration, an excellent top-gear performance, both on the level and on hills, and a degree of comfort in bodywork, finish and suspension which might be equalled, but could hardly be surpassed, by other $a20^{\circ}$ bore and stroke of 66 mm. and 109.5 mm., giving a capacity of 1,498 c.c. The four cylinders form a monobloc casting with side valves, but in contrast with many other power units the head is not detachable.

equipment being standard. There is a c om f or t a b l e dickey with sprung seat, and ample room in the boot for luggage and tools. The body is panelled with aluminium of a fairly stout g a u g e, mounted on a substantially seasoned ash f r a m e work, whilst the upholstery is in blue and matches the wings.

A brief reference to the specification will reveal the sturdy lines upon which the whole car is constructed. The majority of our readers are familiar with the Coventry-Simplex engine, which, it will be remembered, has 3

ERIC-CAMPBELL (contd.).

Priming cups are fitted over the inlet valves, and the whole unit is designed to give long and trouble-iree service. The carburetter is a Zenith; ignition is by B.T.H. magneto; cooling by thermo-siphon, and lubrication by pump.

A conc-type ciutch of ample proportions transmits the drive through a short shaft to the three-speed gearbox (with right-hand control), the ratios being 1.2, 8, and 12 to 1. The final step in the transmission is by open propeller shaft to spiral-bevel differential, and semi-floating axle. The outside hand brake takes effect on 10-in, drums on the rear wheels, whilst the foot brake operates contracting shoes on a drum situated immediately behind the gearbox.

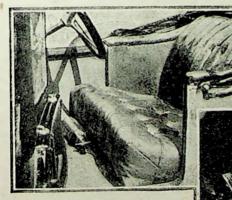
The frame is of pressed steel throughout, a sub-frame carrying the gearbox. The suspension is by semi-elliptics at the front and full cantilevers at the rear, whilst the wheels are of the Michelin detachable disc type shod with 710 mm, by 90 mm, Avon tyres which have so far given every satisfaction.

The car has now covered approximately 5,000 miles over give-and take country, including a number of long - distance sprints, and its performance has given every cause for satisfaction. There is not a single breakage to record, and one can set out on the longest cross-country journey with a degree of confidence which adds to the pleasure of the trip.

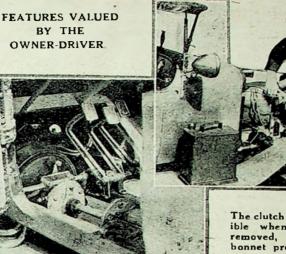
At first everything was inclined to be stiff, as one would naturally expect on a new car, and it may reassure those who taken delivery have just of models similar to the one under discussion to know that the ten-dency for the gear lever to stick in the first or reverse notch very soon vanishes; also, that the stiff-

ness of the steering, which is noticeable during the first three or four-hundred miles' running, automatically cures itself.

This, however, does not relieve the owner of the



COMFORT FEATURES. The front seat is wide and the squab is set at a suitable angle. pocket is provided in the forward portion of the lid of the dicky seat.



The clutch and gearbox are accessible when the floorboards are removed, while the three-piece bonnet provides very easy access to the engine.

responsibility for seeing that the steering connections receive plenty of lubrication ; in fact, the axle should be jacked up frequently so as to reverse the loads

on the bearings, and grease should be squeezed in plentifully through the greasers, which are provided wherever required.

In passing, it may be mentioned that two special screwdown greasers are fitted so that ubrication can be fed direct to the faces of the steering forks which are under load.

The Eric-Campbell has a good reserve of power, thanks to its high power-weight ratio, and even with three up second gear can be used habitually in order to get away on the level. In this gear the car can be accelerated rapidly to 20 m.p.h., and, upon changing up, accelerates smartly.

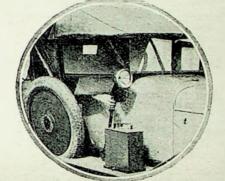
The majority of main-road hills can be tackled on the 4.2 to 1

can be tackled on the 4.2 to 1 ratio providing that the gradient is not too long. As an instance, River Hill, near Sevenoaks, can be all but climbed in this gear, but it is far preferable to change down, finishing the climb to, say, 27 m.p.h. than to labour over the summit at about 20 m.p.h. on top. Despite the somewhat kick

Despite the somewhat high top-gear ratio, it is seldom necessary to change down even in traffic. From about 6 m.p.h. the car will accelerate easily, whilst the maximum speed yet attained is 52 m.p.h. Forty m.p.h. is a comfortable touring speed, whilst at 35 m.p.h. the car appears merely to be idling along. Without making any extravagant claim, it may be said that, over ordinary roads, a 30 m.p.h. average is easily attainable, and it must be remembered that

such an average is only just within the capa-bilities of many larger and more expensive cars, which are less economical to run.

For the first few hundred miles the brakes gave cause for com-plaint, the foot brake being practically inoperative, and the hand brake far from efficient. They have been, allowed to go their own way, however, and have improved to an extent which brings them well up to the average. There is at pre-sent one "snag" which rather spoils the charm of the tout B21



A flap in the side curtains is provided for operation of the external hand brake.

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ERIC-CAMPBELL (contd.).

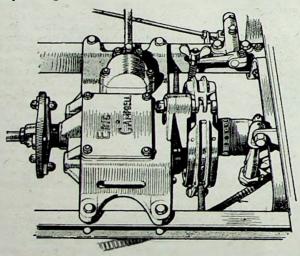
cnsemble, and that is a transmission period which becomes noticeable at 38 m.p.h. This is all the more aggravating, as on other Eric-Campbells of the same type which the writer has driven the condition does not exist. Fortunately it is not a serious drawback, and, moreover, it is one that can be, and will be, cured. It is mentioned only because in a critical survey of this description such points as these must, *ipso facto*, be discussed.

From the point of view of the owner-driver, one of the most engaging features of the car is the accessibility of its working parts. The engine bonnet is of the three-piece type, comprising two side-members and a hood. All three are readily removable and as easily replaced, so that instant access can be obtained to any part of the engine. Again, the floorboards merely have to be lifted out in order to disclose the clutch-withdrawal mechanism, gearbox and transmission brake, their accessibility eliminating the need for using a pit when it becomes necessary to make any adjustment or inspection.

Attention to Details.

The floorboards in the boot are not detachable, nor is there any necessity to remove them, for the back axle can be approached easily from the rear of the car, as also can the brake-adjusting mechanism.

The detail work has been given particularly careful attention, this being exemplified by the fitting of castellated and split-pinned nuts and bolts throughout, also the provision of screw-down greasers of ample capacity at such points as steering connections, shackles, cantilever-spring pivot pins and brakeoperating mechanism. Such attention undoubtedly



The gearbox is mounted on a subframe. It carries the pivot pin for the foot-brake shoes at the rear. The sketch clearly shows the brake-operating rods, also the anchorage for the front end of the torque stay.

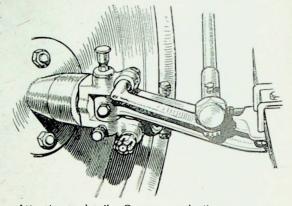
gives the owner-driver a great measure of confidence, for he argues that, if such foresight has been expended on comparatively small points, the whole design must have benefited by equal care and attention.

The Eric-Campbell boasts of what may be described as an inviting passenger compartment, the seat being extremely wide, the squab deep and well upholstered, the mahogany dash well finished and furnished, and a final touch of refinement provided by a mat which is cut to fit round pedals and gear gate.

Journeys up to 200 miles have been undertaken in one day without any suggestion of fatigue or stiffness at the end of the run, a contributory factor being H22 the comfortable and natural angle of the seat and the ample legroom provided.

The steering wheel is, in the opinion of some critics, too large in diameter, its chief drawback being that it tends to obscure the driver's vision on the near side of the car; in fact, the writer experienced this difficulty, but very easily cured it by purchasing a small cushion, which brings his line of vision up to the correct height, and enables him to enjoy all the advantages of the added leverage of a large steering wheel.

Although the car is fitted with an engine which is



Attention to detail. Greasers and oil cups are provided at all the important points in the steering layout. The massive nature of the steering components will be noticed.

practically the maximum within the light car limit, it is surprisingly economical in fuel, and on long runs will exceed the 35 m.p.g. which is claimed by the makers. On oil it is equally economical, and will cover anything from 1,200 to 1,500 miles per gallon. Economical running is, in fact, a feature of numbers of cars of this type, and it must be borne in mind that a comparatively large engine which is called upon to work well within its limit must necessarily give longer and more trouble-free service than a smaller unit which is generally working to its maximum capacity.

The weight of the car, fully equipped and including a spare two-gallon tin of petrol and spare onegallon tin of oil, is just under 14 cwt. The following are the general dimensions :--Wheelbase, 8 ft. 6 ins.; track, 3 ft. $7\frac{1}{2}$ ins.; overall length, 12 ft.; width, 4 ft. $5\frac{1}{2}$ ine.; height to top of screen, 4 ft. 7 ins.

The Electrical Equipment.

No description of the modern light car is complete without a reference to the lighting and starting equipment. The 6-volt Brolt set fitted on the Eric-Campbell has proved to be entirely reliable if one excepts the need for the fitting of new brushes in the dynamo within the first few hundred miles' running, and a tendency for the starter-motor Bendix drive to jam before the pinions had properly settled down to their work. The switchboard, which is arranged in the centre of the facia board, is of the usual Brolt type.

The beam thrown by the combined head and side lamps is good, and permits comfortable and safe speeds after dark. The accumulators are large, substantial and fitted to the running board, where they are accessible. This position is probably the best for light-car work as, always being in sight, the accumulators are thus never out of mind.

In conclusion, it may be stated that the car has more than come up to the expectations of its owner, who, be it said, had been led to expect a good deal. It is a make which can be recommended with confidence, especially with regard to its liveliness, reliability and comfort. The address of the manufacturers is the Vulcan Iron and Metal Works (1918), Ltd., Durdan Works, Southall, Middlesex.

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CYCLECAR DEVELOPMENTS IN GERMANY.

The twin cylindered two-stroke engine.

Note the cooling arrangements.

A TWO-CYLINDER TWO. STROKE ENGINE AND FRICTION-DRIVE.

ANS GRADE was the first German to build an aeroplane, but after the war, when his activities in this direction were curtailed, he turned his attention to the construction of a cheap motorcar. His ingenious cyclecar is the subject of no fewer than 30 patents; he claims to have only 300 parts in his machine as against the two thousand odd to be found in a normally designed four-cylinder car.

The power unit is a simple twin-cylinder air-cooled two stroke engine, and the cooling fan, which is placed in a cowl, is driven by a leather belt. At 1,800 revs. per minute the power developed is 16 b.h.p. from the 805 c.c. unit. The bore and stroke of the engine are 70 mm, and 105 mm., and the large stroke-bore ratio is most unusual in a two-stroke engine. Oil is supplied to the engine by a piston pump, and a Grade carbu-retter is used which gives a fuel consumption of 56 miles per gallon.

From the engine the power is carried via a long shaft to a friction wheel and thence by chain to the solid rear axle.

A single boat-shaped pressing forms both the chassis and the bottom part of the car's body—a construction which gives lightness, with exceptional strength and rigidity. It also favours low seat-ing, while allowing the seats to be brought a reasonable distance from the floor. Above this pressing is the floor. Above this pressing is built the sides of the body, the bonnet and the nose-piece.

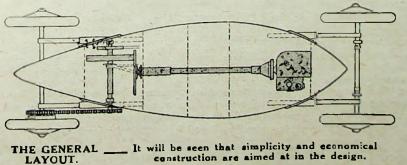
Absence of Castings.

In connection with the bodywork, the bonnet fastening and the simple door fastener are minor details of note.

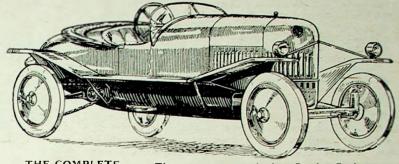
The car is fitted with what must

the early in the state with the first and the con-starter. The equivalent of the torque tube for the cardan shaft is fitted with a U-shaped handle. By pushing the tube forward, the dogs that are cut on its front end engage with the flywheel, and a pull-up of the handle starts the engine.

Quarter-elliptic springs are fitted all round, and the axles, like many other parts of the structure, are made of welded steel, castings being singularly absent from the construction. The rear axle is attached to



It will be seen that simplicity and economical construction are aimed at in the design.



THE COMPLETE ____ The appearance, of the Grade Cyclecar, CAR. although unconventional, is quite attractive.

the springs through the medium of chain adjusters. It is tubular, and carries a single internal-expanding brake in the chain wheel. The other brake is fitted to the friction-wheel shaft.

Steering is effected by a chain wheel on the end of the steering column. From the ends of the chains (there are more than one) cables run to the front axle. The lever shown in the centre of the steering

wheel is for locking the telescopic joint, for the wheel can be shifted backwards and forwards to allow for alternative driving positions. This refinement is unusual in so cheap a'car.

Simple Refinements.

The spring gaiters are simply sailcloth bags, which are slipped over the springs in the course of the construction of the machine. The makers state that the grease filling will last for two years. The ends of the gaiter are bound to the spring with iron strip, and they can be slipped up the spring for replenish-ing. Although somewhat crude in conception, the idea appears to have distinct possibilities.

The weight of the car is only 8 cwt., while the wheelbase is as long as 9 ft. Great claims are made for the perfect streamlining, and although the production rate is

160 per month, this will have to be increased, as pro-duction is months behind sales.

It is questionable whether such a design would appeal to the British cyclecarist, but there are points which undoubtedly should assist our constructors to view the modern cyclecar from a fresh aspect. The two-cylinder two-stroke engine, for instance, com-mends itself as an ideal power unit, principally on

account of its wonderfully even torque, whilst the care which has been expended on the prob-lem of adequate cooling should remove one of the bugbears of a layout incor-porating two side-by-side cylinders.

With regard to the transmission, it must be presumed that the propeller shaft positively separates the discs both for changing gear and to obtain a neu-tral position, for no "dishing" is re-vealed on the driving disc, as in English practice.

The wire and bobbin steering, than which there was none more popular and so comfortable to operate, is a feature which will appeal to many cyclecar enthusiasts. J.H. J.H.



A Roadside Census.

"I VERILY believe that enclosed cars now equal in number the open ones," said a friend to me as we spun along a national highway on a recent Sunday. Certainly there appeared grounds for the supposition, for cuclosed cars seemed to swarm. However, to test the matter, we pulled up, and having half an hour to spare, amused ourselves by observing the vehicles that passed. My friend's theory was soon as dead as Cock Robin. Here are the results of the "census": -Enclosed cars, 9; open cars, 53; cars with hoods up, 4. There were also 4 motor coaches, 29 sidecar combinations, 27 motorcycles, 2 horse vehicles, 1 A.A. Scout, and 1 tramp.

Gaskets Good and Bad.

I sometimes happens that in the course of removing a cylinder head for decarbonizing the combustion space the gasket is damaged too badly to be used again. In cases of this kind it is generally advisable to obtain a new gasket from the makers of the engine, for which reason every wise owner will keep one of these spares by him in the garage. The importance of this is illustrated by the experiences of an owner who replaced the original gasket with one not supplied by the makers. Trouble with water leaking into the cylinders set in, and the fitting of a second spare only brought the same results.

Later on he obtained a gasket from the makers of the engine, a comparison of this and the unsatisfactory gaskets revealing the fact that certain small differences in the contouring of the two gaskets made all the difference between unsatisfactory and satisfactory running.

Gears and Speed.

RECENT experiences with two light cars employing exactly the same type and make of engine demonstrated how small modifications in design may make a considerable difference to the running of a vehicle. The increased liveliness of one car when compared with the other was difficult to account for until one discovered that not only was its powerweight ratio slightly better, but that it was geared rather lower. These two features accounted for its extraordinary liveliness on hills and when picking up. It is often thought that with an engine that seems quite lively at, say, 45 m p.b., a higher maximum would be available if the top-gear ratio was increased. But in the case in point I tested the gear ratios very carefully and found that the faster car actually had the lower gear. Admittedly, it was a p24 hundredweight lighter than the slower one, but that could not have accounted for a difference in all-out speed of 6 m.p.h.

The fact that a lower top gear may sometimes lead to a high maximum speed was further borne out by a manufacturer friend of mine, who recently introduced a new four-seater model. This being heavier than the standard two-seater it was decided to gear it .3 to 1 lower, a change which produced an added speed of 4 m.p.h.

No-twist Horns.

FOLLOWING my recent remarks with regard to the admirable bulb horns so widely used on small cars in France, I have received a sample nickelplated horn of exactly the type I described, from the Motor Necessories Co., Cookham, Berks. The horn in question has an excellent and most penetrating note, but one of its best features is that the retail price is only 9s. post free. Probably the most convenient horn fitting for light cars is that provided on the model sent to me; all that is necessary is to drill a hole through the woodwork beneath the screen frame, when a single knurled nut rigidly secures the horn. The accessory in question is one of the few which I am able from time to time whole-heartedly to recommend.

A further example coming in the same category hails from Etienne et Cie, 61, Great Eastern Street, E.C.2. This is described as a coach horn, and closely resembles my ideal pattern. The model sent for examination and test is finished in black and nickel, and the price is 10s. 6d. The construction is robust, the bulb large and the fitting similar to that which 1 have outlined above. Either pattern, in my view, is superior in many ways to the cheap electric horns which are now so widely fitted as standard on small cars.

A Combination Best.

ELECTRIC buzzer horns impress me as being admirable for town use, but they are hopeless as chars-à-bancs removers and for general use on country roads. In conjunction with a no-twist bulb horn, however, a very good combination for both town and country use is secured.

On the subject of warning signals, what has happened to exhaust whistles and sirens? A dozen years ago these were much the most effective road clearers and suffered from the sole disadvantage that they were liable to be clogged up by the dirty, oily exhausts of the period. I should think that now this

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RICH MIXTURE (contd.)

disadvantage has been largely removed the time is ripe for their reintroduction.

Several of the sirens at one time so popular were driven by a little friction wheel which bore, when the control was operated, against the flywheel, and one, I believe, was revolved by suction from the induction pipe.

The Starter to the Rescue.

I HAD often heard of drivers extracting themselves from awkward situations by the use of their electric starters, but until the other day I had never tried the experiment myself. I was attempting the passage of a flooded road with the water over the running boards and, there being every sign of the depth increasing, I decided to return whence I had come. Behind me were some 250 yards of water when, to my dismay, the engine abruptly ceased to work. Then I thought of the electric-starter dodge as

Then I thought of the electric-starter dodge as being certainly worth trying in preference to tinkering with the engine in a foot or two of water. With reverse gear engaged and the clutch out I pressed the starter, which spun the flywheel, and on the clutch being let in gently, slowly propelled the car out of the stream in a series of spasms. The starter seemed none the worse for its efforts and the battery seemed to be well up to its work.

On Hair-pins.

THOSE who forsake the broad highways for the unheaten track will learn more about handling their cars in a day than they would in a year under more ordinary conditions. In the Lake District and in Scotland there are paths where a good car can go, if the driver knows how to handle it, where road space is at a premium. Take the case of negotiating a narrow hair-pin bend, for instance. The correct method is to approach wide, if necessary taking the grass with the outer pair of wheels and then to lock full over in one movement if possible, the effect of this rapid locking being to bring the inner rear wheel into the angle of the hair-pin.

In a recent trial I saw two cars of identical design negotiate a fairly casy hair-pin. One came round with a foot to spare, the other ran up the bank and might have turned over. The answer was simple enough, for the first driver approached wide, while the second came up in the middle of the road and was slow in swinging over the lock.

Level-crossings.

IT seems extraordinary that in this year of grace traffic on the Great North Road should still be held up between Newark and Doneaster by a series of level-crossings. The last time I used this road every one of the crossings was closed, while the time before I was more lucky, for every one was open. If the amount of time wasted annually by motorists at these crossings were converted into hard cash one would imagine that the amount would pay for at least one bridge. Why the railway lines have not been spanned before it is difficult to imagine, for, presumably, the road came before the railway, and the latter should not have usurped the privilege of making other traffic conform to its needs. S.S.



A PEACEFUL _____ If the highways are left for the byways there are still plenty of old-fashioned fords to "SPLASH" _____ lend a spice of adventure to the day's ramble. The scene depicted is alongside the thirteenth-century bridge at Geddington, near Kettering; the car is a Lagonda.



WHY SOME ARE EFFICIENT AND OTHERS USELESS—IMPROVEMENTS AN OWNER-DRIVER CAN EFFECT — CAUSES OF BOILING — BEST RUNNING TEMPERATURES.

THERE is a tendency nowadays to discontinue the use of a fan as an aid to cooling and to rely more upon improved radiator design, together with better-shaped water jackets and passages. This practice is all very well if the car is to be used in temperate climates, but the same engine in the tropics will usually be very liable to boil its cooling water at the least provocation.

water at the least provocation. In this article it is proposed to discuss methods whereby overheating may be largely prevented. First of all, a fan may be regarded as essential, but any fan will not do; it must be properly designed for its job and run at the correct speed. But as the same fan cannot be uniformly efficient at all speeds a compromise must be effected. Of course the ideal fan would be one having variable speed and pitch, automatically controlled. The pitch of a fan, or air-screw, by the way, is the theoretical distance through which the fan would move in one revolution, assuming no slip and regarding the air as a solid body. Imagine the air as a nut and the fan as a bolt screwed into it and you have the idea.

If the fan has a fine pitch it will need to be driven at a higher speed to create a given draught than if it had a coarse pitch. But if it has too coarse a pitch and is driven very fast, cavitation will set in—that is, the air will be blown away from the blades faster than free air can flow in, and so the fan will run, as it were, in a vacuum doing no useful work. Now the speed of a motorcar engine varies greatly, and the fan, being driven by the engine, will have a corresponding speed variation. Some fans are driven at engine speed and some are geared up, but they can all be equally efficient provided their pitch is correctly chosen.

The owner of a car having a sheet-metal fan can try the effect of altering the pitch by twisting the blades more or less, but they should each be twisted by the same amount.

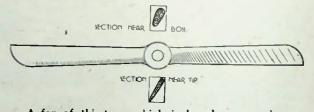
Streamline Blades Desirable.

A two-bladed fan based on aeroplane-propeller design would seem to be as mear the ideal as possible, since here the pitch varies throughout the length of the blade, being fine at the tip and coarse at the boss. so that at any speed some part of it is doing useful work. One of the illustrations shows an air-screw of this type, and it will be seen that the blades are of streamline section—a very desirable feature, which makes for high efficiency. Again, in a fan of this type, when run at its ideal speed, the whole of each blade is doing its full share of work, as the coarse ng6 pitch at the boss is revolving at a slower peripheral speed than the finer pitch at the tips. A fan should be as light as possible consistent with

A fan should be as light as possible consistent with strength and, therefore, laminated wood, as in an aeroplane propeller, or cast aluminium are about the best materials to use. But whatever the design or material it is most essential that the blades should be polished and in perfect balance if real efficiency is sought.

A fan requires a fair amount of power to drive it, and if there is very much skin friction due to rough blade surfaces not only will power be absorbed and wasted, but the volume of air delivered will be less. Therefore, if you seek efficiency smooth your blades as much as possible.

Greater attention should be paid to balancing the fan, as nothing is more detrimental to efficiency than an unbalanced body revolving at high speed. Undue stresses are set up in the fan itself, in the support



A fan of this type, which is based on aeroplane propeller principles, is more efficient than one fitted with "flat" blades.

brackets and in the drive, and, whilst the vibrations set up might pass unnoticed in driving the car, their bad effects will be shown in breakages and drive troubles.

It is not a difficult matter to balance a fan reasonably well, and a few words as to the best method may not be out of place. The fan should be dismounted from the engine and, with a good fitting rod through its centre, be set up on a pair of straight edges, as shown in one of the illustrations. The two edges must be exactly parallel and horizontal. If the fan be out of balance it will come to rest with the heaviest blade downwards, and so steps must be taken to lighten that blade by careful filing and scraping, trying the effect at frequent intervals on the straight edges.

When the blades stay in any position, with no tendency to turn of their own accord, they are in balance. The fan may then be polished and refitted to the engine. It is very seldom that much metal needs to be removed for balancing; never lighten a

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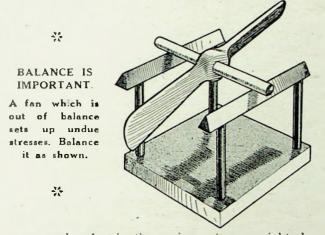
THE DESIGN OF COOLING FANS (contd.).

blade by drilling it, as not only will its efficiency be destroyed, but, when running, it will turn itself into a sort of humming-top.

So far as the drive is concerned, nothing much can be done beyond seeing that there is no slip. A good V belt of the link variety is probably best, but very good flat-belt drives are to be seen. The day may sometime dawn when belts and their attendant troubles will be obsolete and fans will be positively driven through the medium of a clutch.

There can be no hard-and-fast rule as to the correct position of the fan relative to the radiator; that is, whether the fan shall be close to or away from the tubes, or whether the fan centre shall be in line with the radiator centre. This is largely a matter for experiment and must vary with different types of radiator.

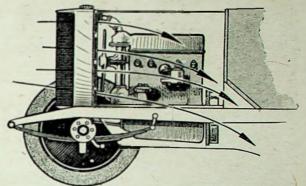
One thing, however, must be borne in mind, and that is that it is no use drawing in a large volume of air through the radiator unless ample means are provided for its subsequent exit from the bonnet. Some cars have their engines almost completely boxed in, so that the hot air under the bonnet has no chance of



escape and a fan in these circumstances might do more harm than good. Therefore, to help the fan the freest possible path should be provided for the hot air to get out. The bonnet should have louvres cut in it, and if an undershield is fitted it should be open aft and not brought round so as to embrace the gearbox. An illustration shows the path the air currents should take and, combined with the louvres in the bonnet, a slight extractor action will be set up when the car is in motion.

For use in really hot countries it would coem that there is a distinct advantage in having pump circulation, as then the whole volume of water is kept in fairly rapid motion, and a maximum quantity is exposed to the cooling action of the radiator in a given time. Again, as the cylinder jackets are on the delivery side of the pump, the water in them can be kept at a slight pressure, which gives it a better chance to circulate properly through any restricted passages in the block, and so largely to prevent the formation of steam pockets in extra-hot corners of the jackets.

Thermo-siphon cooling answers admirably for all ordinary purposes, and there is more than one make of car employing this system with excellent results



An exit as well as an entrance must be allowed for the air stream which, after all, is the true cooling medium,

under extreme conditions of high climatic temperature. But it cannot be denied that the factor of safety is not so high as with pump circulation.

The thermo-siphon system, relying as it does upon the difference in density existing between hot and cold water, is apt to be rather sluggish at times; in fact, if the temperature of the whole system became equal circulation would stop.

The position of the radiator relative to the cylinder block and the sizes of the inlet and outlet water pipes are matters of prime importance in thermo-siphon cooling, and every effort must be made to give the water as unrestricted a passage as possible.

A reasonably large head tank on the radiator is an advantage, and if the tubes are exposed to a good draught set up by the fan there should be no risk of the water reaching boiling point, assuming, of course, that the engine is in proper running order and not overheating by reason of wrong timing, excessive carbon deposit, or faulty carburation.

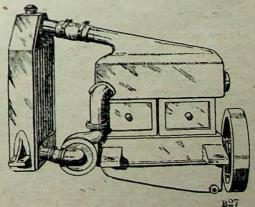
A normal running temperature of about 85 degrees Centigrade is a good figure to aim at, as this allows a margin of 15 degrees before boiling point is reached. Actually, the ideal running temperature of an engine is above boiling point, and engines have been designed which were steam "cooled." The Antoinette aeroplane engine used by the late Hubert Latham is an example. Given a good oiling system and freedom from distortion, an engine will run efficiently at an exceedingly high cylinder temperature. as is shown by the performances of many air-cooled engines. B.M.J.

RIVAL TYPES.

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On the left a thermosiphon layout is shown, and, on the right, one that embodies a circulating pump. The former is more simple but the latter is more positive.

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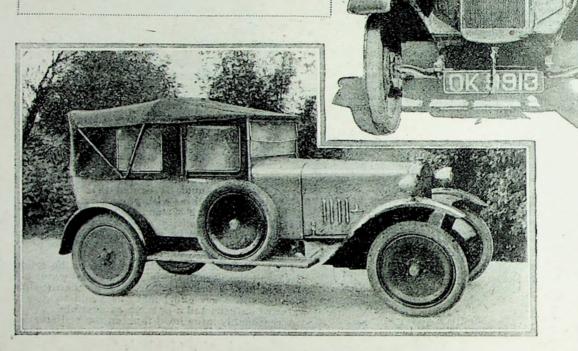


August 15, 1924.

TESTING THE 8.9 h.p. McKENZIE.

A SERVICEABLE AND ROOMY LIGHT CAR, WITH A PARTICULARLY LIVELY ENGINE, AND A SOUND PERFORMANCE. FULL DETAILS OF THE BEHAVIOUR OF THE CAR ARE GIVEN.

369



NE of the more refined of the smaller light cars, the 8.9 h.p. McKenzie, has a number of features which appeal to the connoisseur. Mechanically the specification is very sound and the closest examination of the car does not reveal any point which is theoretically incorrect or open to improvement by modification or redesign. The various units employed are among the best of their class, while the manner in which the car is erected leaves nothing to be desired.

In consequence, although the superficial finish is not particularly good and unimportant luxury items are omitted from the specification, the price is somewhat higher than that of a number of other small cars of apparently similar specification. At the present time £225 is considered to be a fairly high price for a 9 h.p. car with a three-lamp lighting set, chummy body and normal finish, and this fact was borne in mind in forming a judgment with regard to the performance and value of the car we tried, and which, incidentally, had covered some 25,000 miles before our 600-mile test started.

In accordance with current practice the engine and gearbox are built together as a unit, the clutch and flywheel being completely enclosed in an aluminium casing, extensions of which form the rear bearer arms for the unit.

The engine is an 8.9 h.p. Coventry-Simplex, a full description of which has previously appeared in *The Light Car and Cyclecar*. It may be well, however, to recount its outstanding features. The bore is 60 mm. and the stroke 95 mm., the capacity being 1,074 c.c. Push-rod operated overhead valves are B28

used, the rocker gear being enclosed by a ribbed castaluminium housing.

50

Longevity of the wearing parts of the engine is assured by the adoption of forced-feed lubrication and large bearing surfaces, factors which contribute also to the remarkable capabilities of the engine for maximum output for sustained periods

Immediately behind the centrally controlled threespeed gearbox fitted to the McKenzie is a large fabric-dise universal conveying the power by means of an exposed propeller shaft to a similar universal on the spiral-bevel rear axle. The ratio between the crown wheel and bevel pinion provides for a top gear of 4.5 to 1, second being 7.8 to 1, and first 14.6 to 1.

These ratios are found in practice to be almost ideal except when the car is fully loaded; fairly frequent changes down to second are then necessary, but this minor drawback is more than compensated for by the fact that the engine revolutions, even at a speed of 40 miles per hour, are not unduly high.

The use of a rear axle not provided with a differential allows the brakes to be arranged so that one operates in a drum on each rear wheel. This plan permits large shoes and working parts to be used, and we found that as a consequence the action of the brakes was extremely powerful and progressive, either being capable of locking the rear wheels if applied with sufficient force.

Another feature for a differentialless car, which we believe to be exclusive to the McKenzie, is that the steering is extraordinarily light, much lighter, in fact, than the majority of cars the rear wheels of which cannot revolve independently.

AUGUST 15, 1924

TESTING THE McKENZLE (contd.).

This very desirable state of affairs is brought about by the use of worm-and-wheel steering of simple frictionless design employing a drag link which is set transversely and connected at its outer end to an extension of the near-side steering arm behind the track rod. The steering forks through which the pivot pins pass are a part of the stub axle instead of being formed on the end of the front axle proper.

Our impressions of the car, in addition to the excellent steering and powerful brakes, included extreme ease of gear change and a general feeling of being at ease behind the wheel. From the driver's point of view the car is very conveniently arranged: his seat is adjustable and the angle of the seat cushion and back squab has been carefully worked out.

The pedals are large and well placed and the central gear and brake levers, each of which is surmounted by a wooden knob of useful proportions, may be operated by merely dropping the hand from the rim of the wheel

When only the driver was in the car we found, as one always does with a small four-seater, that the springing-quarter-elliptics all round-was on the hard side, but with one, two or three additional passengers no complaint can be made on this score. Rolling on corners is conspicuously absent, and the car holds the road well under all conditions.

To facilitate access to the rear seats, the front passenger's seat is arranged to hinge sideways and, the rear compartment having thus been gained, the impression of roominess conveyed by the external

> FEATURES OF INTEREST.

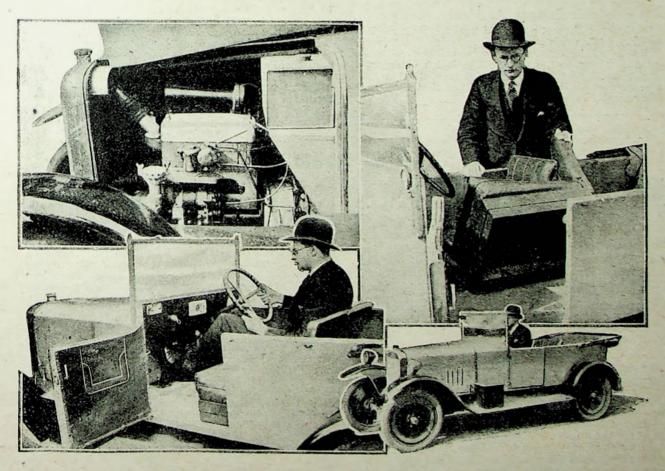
appearance of the car is confirmed. From the forward edge of the rear seat cushion to the back of the front seats, when the latter are adjusted for a driver and passenger of normal height, there is 19 ins. clearance, which is found in practice to be more than ample.

The all-weather equipment, as one of the illustrations shows, is complete, and we found that, like the hood, it was easy to erect. With the two-panel windscreen, the top half of which is adjustable, the car in bad weather is quite comfortable, aithough an improvement would be effected if a better joint was made between the hood and the top of the screen. This matter, however, is one which an ingenious owner could easily remedy for himself.

The weight of the 8.9 h.p. McKenzie in touring trim is 14 cwt., which proves to be a by-no-meansexcessive burden for the very willing little engine. Fifty miles per hour is the maximum speed claimed by the makers, and we satisfied ourselves that this could be exceeded. The best speed in second gear was found to be thirty-six miles per hour, while seventeen miles per hour could be touched on bottom gear. On steep hills an early change to second is necessary, and this permits even such formidable ascents as River Hill, in Kent, to be topped at a speed considerably in excess of the legal limit.

Petrol consumption proved to be at the rate of 44 m.p.g., and the amount of oil consumed during 600 miles' running was negligible. Although no fan is fitted the radiator required no water to be added.

The McKenzie cars are made by McKenzie Motors, Ltd., Bath Passage, Birmingham.



An accessible engine, convenient controls and roomy passenger accommodation are points revealed by these illustrations. There is only one door, the spare wheel being carried on the offside running board.

AUGUST 15, 1924.

Every Motorist Should Know That – THOUGHTLESSNESS OFTEN SPELLS DANGER. A POTENTIAL SOURCE OF GRAVE ACCIDENTS DISCUSSED IN DETAIL.

ON more than one occasion The Light Car and Cyclecar has drawn attention by means of short news paragraphs to the danger of leaving a car unattended on one side of a country main road whilst its occupants wander off light-heartedly to a nearby beauty spot in order to picnic. But as the practice is increasing it is felt that far greater prominence must be given to the danger of this practice, which is rapidly becoming one of the greatest menaces of the road.

Two recent accidents, directly attributable to it, have come to our notice and may be quoted. In the first, a motorcycle combination had been left as indicated, but on a slight bend, so that cars approaching from either direction were unable to see it until within thirty or forty yards. The inevitable happened when two cars approached from opposite directions. Each driver decided to accelerate as the best means of avoiding disaster, but the actual passing of the cars tool: place exactly where the sidecar stood, the near-side rear-wheel hub cap of one carstriking the combination and hurling it into the ditch, severely injuring its careless owner, who was sitting adjacent to it.

A Serious Accident.

In the second case, a car had been left in a similar position, but on this occasion a car and a motorcyclist endeavouxed to pass. The cause of the accident escaped injury, but, owing to the lack of clearance at the point of passing, the motorcyclist's leg and arm were crushed to such an extent that both had subsequently to be amputated.

This Week's Hint.

SOLDERING WITHOUT AN IRON.

THE majority of amateur motor mechanics doubtless consider it impossible to do a serviceable soldering job without the use of a so-called "iron," but, in point of fact, an iron is seldom used by an expert, except when it is impossible to do without one.

Probably the most usual soldering repair which the owner-driver is called upon to carry out is the attaching of nipples to copper piping. They are used almost invariably for the petrol and oil pipes, and, due to the additional cost, soft solder, which easily breaks away, is nearly always employed instead of silver solder or brazing, either of which makes a permanent joint which it is almost impossible to break.

Prepare With Care.

To solder a nipple to the end of a piece of copper piping without the use of a soldering iron, the end of the pipe and the inside of the nipple must first be carefully cleaned and polished with emery. The pipe should be a good fit within the nipple, not so tight that it needs driving on nor so slack that the nipple falls off when the piping is inverted.

nipple falls off when the piping is inverted. To tin the parts, get a blow-lamp or gas jet hurning with a clean, blue flame and hold the end of the pipe in the flame until it begins to change colour. It should then be dipped into the fluxite or spirits, after which the pipe, with the tip of a stick of solder bearing against it, may be returned to the flame and B30 We are of the opinion that it should be a punishable offence to leave a car deliberately in a position, such as that described, where it may be a potential cause of danger to other road users.

Where it is a case of breakdown, the vehicle should be pushed, if possible, on to the grass at the side of the road. If movement, however, is impossible and the car must be left in its dangerous position for any length of time, the onus of avoiding an accident rests on the shoulders of the owner, who should keep a sharp eye open for approaching traffic and wave it down should the necessity arise.

Ignorance to Blame.

The worst offenders are those who have just taken up motoring, and who have not yet acquired a proper road sense. As a general rule they have no idea that they are transgressing the common laws of the highway, and usually it is only necessary to draw their attention once to the situation in order to prevent a recurrence of such behaviour. Motorists will be doing themselves and their host of fellow road users the greatest service by courtcously explaining to such offenders the nature of their offence.

It should be added that whereas on wide roads the practice is not so dangerous, narrow roads and sharp bends are prolific causes of hairbreadth escapes if not actual disasters. Motorists who desire to picnic or stop awhile, in order to smoke or read, should at least so park their cars that the two near-side wheels are off the road, thus leaving the greatest possible room for passing traffic.

it will be found that it is just as easy to tin the pipe as it is to tin an iron.

Once the pipe end has been thoroughly tinned the nipple should be held in a pair of pliers. It must be dipped in spirits or fluxite and then held with one hand by the pliers in the flame, the pipe being held in the flame with the other. So soon as the tinning on the pipe end begins to show signs of running, the nipple may be slid back to the end and the whole dipped into spirits or fluxite. It will be found that the resulting joint is quite as secure as if an iron is used.

For Bowden Wires.

For attaching nipples to Bowden wires, a very similar procedure may be adopted, but in this case it is necessary, after the parts have been cleaned, to thread the wire through the nipple before commencing operations. When the wire has been tinned the nipple may be slid back to the end, and the whole dipped into the flux and reheated, when a secure attachment will be effected.

For patching holes in sheet metal, repairing sprung seams and other sheet-metal soldering, it is almost impossible to effect a good repair without the use of an iron, but for all classes of Bowden wire and pipe work owner-drivers would find that with a little practice they could do better work in less time by leaving the iron on the bench and effecting the junction with the parts held in the flame.



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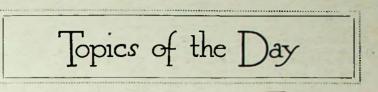
Ghe LIGHT CAR & CYCLECAR

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

Only cars the engine capacity of which does not exceed 1,500 c.c. (1) litres) come within the scope of "The Light Car and Cyclecar," that capacity being generally recognized and accepted as the limit for a light car engine.

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Competing with the Large Car.

THE history of motoring shows that the large luxurious car has I always been regarded as the real motorcar. In consequence, those who have been accustomed to large cars are still inclined to look down on the light car as being a type of vehicle beneath

Luxurious Small Cars.

their dignity. When they have decided to spend money on a new car-which is synonymous with saying when they have decided to lay down a comparatively large amount-they have turned instinc-

tively towards the heavier type of vehicle without troubling to inquire whether they could not obtain an equally luxurious, speedy, and far more economical machine in the light-car market.

A brief survey of the models under 1,500 c.c. reveals the fact that there is a number of such cars, and even a millionaire might be proud of being seen driving one of them, or even of being driven by a uniformed chauffeur. To bear out our statement we are including in this issue a page of photographs showing some representative types and makes, and we recommend the studying of these reproductions to those who hitherto have blindly supported the larger and more expensive types of cars.

It will be seen that externally they compare favourably with any other car in the world, whilst their interior fittings are beyond reproach. It may be argued by large-car motorists that there is always the question of horse-power to consider, and that they are happier when they know they have a powerful engine beneath the bonnet, but it should be pointed out that perform. ance depends upon power-weight ratio, which means that the capabilities of an efficient 1,500 c.c. machine should, and does. equal that of most of the larger cars. If speed and speed alone is the goal at which the prospective purchaser aims, the light car again can fill the need, for there are on the market at present light cars which are guaranteed to attain speeds up to 80 m.p.h. in touring trim.

Design of Cooling Systems.

THE R.A.C. Trial in the spring and, later, the Scottish Six Days' Trial, have shown beyond any shadow of doubt that there is still plenty of room for improvement in light-car watercooling systems. Manufacturers are not always sufficiently gener-

ous with the cooling surfaces of their radiators, neither do they in all cases allow for a sufficient Study Fan water capacity to keep the engine cool under all Efficiency.

conditions. An article in this issue suggests, however, that either of these steps might be retrograde and that a better plan to follow would be the study of cooling fan efficiency. It is clear that improving the fan would be very much less extravagant and more economical in weight than redesigning radiators and cooling systems generally ; it might be said, in fact. that a fan which gives maximum efficiency would be very little dearer than one which was grossly inefficient.

If the designs of the cooling fans of a dozen light cars are examined it will be seen that they differ so much from one another that they are clearly produced in a very haphazard manner. If it were not so then surely all would be alike, or at least they would bear a very strong resemblance to one another. A tendency has been noticeable during the last few years for lightcar manufacturers to dispense with fans in favour of larger-but still not always large enough-radiators. We would suggest that before others follow in their footsteps they might be well advised to look to the design of the fans they are now using and first make sure that minor modifications to the contour of the blades might not prove just as effective as the more costly procedure.

AUGUST 15 1924

'I this time of the year the thoughts of the motorist turn A instinctively towards long days in the country, far from the madding crowd, the car loaded with sufficient provisions to last until home is reached again.

Every motorist is quite capable of arranging for a single meal, say lunch, but when it comes to providing an eleven o'clock snack, lunch, and finally tea, the problem is one which requires much more careful handling, otherwise the day's outing may be entirely spoiled.

By starting at a fairly early hour, not later than 8 a.m., it is possible easily to cover anything from 130-150 miles before nightfall, allowing an ample margin for the pienic halts and without endeavouring to maintain a high average speed; in fact the run, if organized properly, will devolve into a summer-day ramble.

Although the usefulness of the thermos flask is beyond ques tion, it can hardly be relied upon to provide hot drinks throughout the day unless at least half a dozen flasks are carried, and although hot milk and coffee may be stored in this way in order to provide actively and an are the stored in this way in order to provide refreshment at about 11 a.m., it will be preferable to take a Prinus stove outfit for use in con-nection with the tea picnic. Bearing this in mind, the house-wife upon whom rests the responsibility for arranging the menu will know how to formulate her plans.

With the exception of the hot beverage, it is far better to arrange for cold meals throughout the day, for any attempt at elaborate cooking by the wayside will prove to be a failure. At the same time an endeavour must be made to serve up dainty as well as substantial meals in order to add to the attraction of the outing, whilst in no way underestimating the appetites of the party.

Duties for Males.

A man as a rule is a very poor hand at offering suggestions. and so materfamilias must undertake the somewhat delicate business of mapping out the menu; but this does not relieve the male members of the party of every duty, and they may make the necessary preparations for storing and carrying the viands in the car.

This naturally raises the question of the properly equipped picnic basket, and it may be said that, although a matter of 30s. or $\pounds 2$ may have to be expended in the purchase of one of these the outlay will be well repaid, for such an outfit will last literally for years.

The modern picnic basket contains all the essentials for a comfortable alfresco meal by the roadside including knives, forks, plates and glasses-the majority of these, however, are of the unbreakable type and are not quite of the same quality or pattern to which one is accustomed at the dinner table proper. The outfit should also include a Primus stove. If it is decided to save the expense of a picnic

basket, ordinary household utensils may be used, but considerable care must be taken in packing them so that there is no chance of a breakage. Cardboard "ware" is preferable, and may be purchased at very reasonable prices.

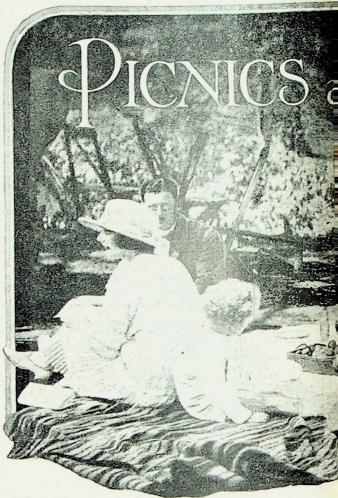
Undeniably, however, a white tablecloth spread under a tree and loaded with proper tableware is far more attractive, and even glass can be carried quite safely if table-napkins are used for packing.

Keep Food from Paraffin.

Particular care should be taken to see that the basket containing the day's provisions is as far removed as possible from the spare petrol and oil tinsit is surprising how easily food becomes tainted even by only moderately close proximity to such spares

As to the actual menus for the various meals of the day one or two suggestions may be offered. At the outset it should be remembered that juvenile members of the party have an almost uncanny inclination for demanding liquid refreshment at all times of the day -the same may be said possibly of the adults, but they will certainly look after their own interests,

whilst the youngsters may be forgotten. It is a good plan to take a fairly large bottle of drinking water in order to satisfy the thirsts of the former, whilst as to the latter there is a variety of liquid refreshment from which to choose such as в32



THE PLEASURE OF A PICNIC WILL BE THIS ARTICLE CONTAINS INVAL BEHIND." MEALS ENJOYABLE, WHILE INDICATING SHOULD

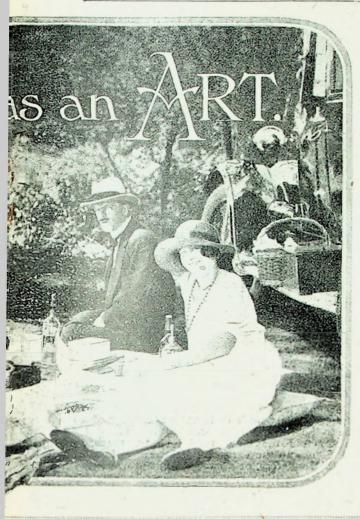
lemonade, ginger beer or, if something of a stronger nature be demanded, light wines will be found more successful than most of the alternatives.

After three hours running in the early morning a stop may be made, and for this light repast biscuits and hot coffee are

suggested. A satisfactory luncheon is not so casily arranged, and it will depend mainly on the individual as to what is taken. fairly elabor A elaborate may menu be planned or, on the other hand, the meal may consist of two courses only, lowed by dessert. fol-

For an elaborate repast soup may suggest itself as the first item, and with the help of the Primus





MUCH INCREASED IF NOTHING IS "LEFT BLE SUGGESTIONS FOR MAKING ROADSIDE MANY PITFALLS WHICH THE BEGINNER AVOID.

> stove and the tinned variety of soup it may be very easily served. This might be followed by a salmon or lobster mayonnaise carefully prepared beforehand in a large bowl, and, needless to say, also very carefully packed. The third course might take the form of cold beef or

chicken with rolls and butter-incidentally pickles provide

an appetising addition. The sweet may

be trifle, fruit and cream or fruit and blanc-mange, the final item being cheese and biscuits

is certainly an elaborate menu, but

if one of the principal ideas of the outing is the picnic it will well

the trouble in the first

This

and hot coffee.

repay taken

place.



to enhance the joys of picnicking with a small car,

As a simple menu the soup probably would be barred, but an extremely appetising meal can be presented to the hungry motorists by providing cold beef, ham and tongue or chicken, with salad, rolls and butter. As an alternative, a veal and ham pie or sausage rolls can hardly be excelled. For a sweet, fancy pastries are ideal, whilst fruit should certainly not be omitted from the provisions. The serious part of the business will commence with tea,

The serious part of the business will commence with tea, however—that is from the point of view of the head cook—for the whole success or otherwise of the meal depends upon expert handling of the Primus stove or whatever type of cooker is employed.

Primus stoves, if the instructions for working them are carefully carried out, will give excellent results. The most important thing when depending upon one for boiling a kettle at a picnic is not to forget a supply of prickers for clearing the jet in the event of it becoming stopped up, while a flask of methylated spirit will prove invaluable for heating the burner prior to lighting up. A kettle can be boiled much more quickly with a Primus stove if the stove is stood in the bottom of a biscuit tin, in which position draughts will be excluded. As an alternative to a Primus stove an A.L. picnic cooker might be carried. This consists of a simple gas burner using acetylene gas supplied by a cylinder.

It is a mistake to cut bread and butter in the morning and store it ready for the afternoon meal, especially as it is very little extra trouble to take a loaf and cut thin or thick bread and butter as required when the proper time arrives. The scaled bottles in which milk is delivered nowadays by up-todate dairies form an excellent way of carrying this necessary commodity, and the scal should not be broken until it is desired actually to use the contents of the bottle. Jam and cake should, of course, be included.

Don't Leave Refuse.

There is one point which every picnicker should remember, and that is not to leave an untidy litter at any spot where an alfresco meal has been taken. Paper bags and cardboard plates can be repacked neatly into the basket and disposed of at home in the proper way. As a general rule it will be found that should any further

As a general rule it will be found that should any further refreshment be required on the journey there will be some useful leavings which the housewife will be only too glad to cee caten up, and it should be sufficient, as indicated,

to provide light morning refreshment, one good midday meal, and a fairly substantial tea.

Before arranging any such trip as that which has been outlined every member of the party should make up his mind not to make a "trouble" of the picnicking business. Small things are bound to go wrong, and the man or woman who expects to sit down to luncheon by the roadside with the same degree of comfort and with the same assortment of food as that with which he is familiar at home had far better give up the idea to begin with and not spoil the enjoyment of others.

Precautions may be taken, however, to guard against a picnic being spoiled by minor matters, and in this respect care should certainly be taken to guard against the unfortunate effects of gnat bites and kindred petty annoyances. At this time of year, especially as the sun begins to sink, the air is usually fairly thick with gnats and midges, but their unwelcome presence will be avoided if care is taken to choose a picnic ground which is not in the vicinity of a pond or other stagnant water; the neighbourhood of marshy ground should also be shunned.

Preparations in convenient-sized bottles and jars may be obtained from chemists for reducing the irritation and danger of insect bites, but, if nothing else is available, moistened tobacco dabbed on to the part which has been stung will allay the irritation. A rivel attraction to lure wasns away from a niching

A rival attraction to lure wasps away from a picnic "table" is a better plan than shooing them away to avoid their unwelcome attentions. A sound scheme is to place at some little distance from the festive board a saucer partly filled with beer or stout to which has been added a few lumps of sugar. The wasps, preferring this dainty to the fare spread out by the picnickers, will then be persuaded to keep at a distance.

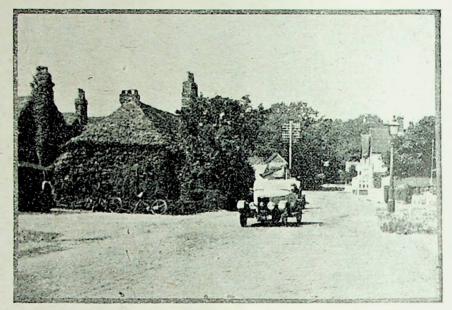
THE LIGHT CAR AND CYCLECAR

AUGUST 15. 1924.

NEW WAY FROM BRIGHTON. A

WHO WOULD FOLLOW THE MAIN ROAD WHEN THERE IS TIME TO SPARE AND A ROUTE TO TOWN THROUGH QUAINT VILLAGES AND DELIGHTFUL FOREST LAND?

HOUSANDS of small car owners journey from Lon don to Brighton in the course of the summer, and the majority travel south and north by the main road through Crawley and Handcross. If speed be a consideration, there is wisdom in so doing, for that road is excellent and promises to be one of the finest roadways of our land, but there are side roads wandering north and south not far from the highway which lead through a wealth of beauty in the heart of the quiet country of which he little dreams who has held his course only along the crowded artery.



MID SUSSEX MEADOW LAND.

A more generous margin of time must be allowed, but the price is small for the gain. Five miles north from Brighton, just beyond the forking of the road at Pyecombe, the way bends left to Poynings, under the Devil's Dyke, and, in a mile, reaches the neighbouring village of Fulking, where there is a massive drinking fountain crected in memory of John Ruskin and from which a ceaseless stream of sparkling water pours into the rivulet that runs at the roadside.

Large farmsteads lie along this way, and Edburton, Large farmsteads he along this way, and Edburton, the next village, has in its pretty church one of the few lead fonts of Sussex. Another mile and the road turns right and left at right angles. This spot might have been reached by taking the Shoreham road from Brighton and thus passing the old wooden bridge over the Adur, a bridge which doubtless will soon be supplanted by a modern structure.

Link With the "Roadmender."

Turning right after leaving the Edburton road there is a delightful run of three miles to Henfield. The roads in this neighbourhood are very good and there is comparatively little traffic. Beyond Henfield, Mock Bridge is crossed, and readers of the "Road-mender" will recognize the spot and will recall that the author, "Michael Fairless," spent the last two years of her life at Mock Bridge House across the field to the west of the bridge.

This is in the scattered village of Shermanbury, where a road through the gate on the right leads under an avenue of overarching trees to Shermanbury Church. The stone stairway to the gallery of the church outside the building is an almost unique feature of this quaint little church. A short distance north stands the fine old mansion of Ewhurst, surrounded by a beautiful moat. A massive Perpendicular gateway gives entrance to the gardens.

Three miles north from Shermanbury the magnificent Carthusian Monastery of St. Hugh will be noted on the left of the road. It was built in 1877, on the expulsion of the religious orders from France; its tall spire is a conspicuous object for many miles around. в34

Rural England is seen at its best in the heart of Sussex where the by-roads lead through charming villages miles from the main road

The meadow land in this part of Sussex is very beautiful, and the wealth of trees is somewhat of a surprise to those who know Sussex best by its Downs. From Cowfold the main road may be reached through Bolney to the east, or northward by Lower Beeding to Handcross, or a more delightful way may be taken westward to Horsham. There the righthand road should be taken immediately on entering the town and followed in the direction of Crawley for just over a mile, then the right branch must be taken at the dividing of the way, into St. Leonard's Forest.

A Charming Variation.

This is one of the original great forests of Sussex which, linked up with Ashdown Forest, stretched from Hampshire to the far coast of Kent. What remains is beautiful, and the roadway through the forest land, at times densely wooded and again wild in its open heath, affords a charming variation from the usual route.

At Colgate the left-hand road should be followed so far as the entrance to the beautiful grounds of Holmbush, where the great Beacon Tower rises high above the trees. Cars may be run through the gates and left near the tower while the ascent is made. A charge of threepence allows the visitor to climb the one hundred feet of stairway, and from the summit there is a magnificent view over the whole of Sussex, a view that is worth much to see.

Descending and returning to Colgate, the London road is reached at Pease Pottage in two miles.

This diversion will add only a few miles to the ourney and as much time as one cares to spend in journey and as much time as one cares to spend in lingering along pleasant and perhaps unfamiliar ways, while if one does not linger, but goes straight to one's destination, the probability is that, owing to the density of traffic on the main roads, the unfre-quented by-ways would save time. The by-ways will also serve to give a lasting impression of the beauti-ful nature of the Sussex country to right and left of the beaten track. the beaten track.

ALLAN PHILLIP.



anold sea rover.

THE following letter was written by an owner of a Rover Eight resident at Baily, Co. Dublin :-

July 22nd, 1924.

" IUST a few lines to let you I know how completely satisfied I am with the 8 h.p. Rover you sold me about 15 months ago. I have not had one single involuntary stop during the 11,300 miles I have now covered, except for tyre trouble.

"The twin opposed engine runs extraordinarily smoothly and is, in my opinion, nicer to sit behind than a small four-cylinder.

" The replacements have been almost nil, and the original sparking plugs are still working. As I live on the top of the hill of Howth I naturally do a lot of low gear work, but have never noticed the slightest sign of over heating, and am doubtful if such a thing exists on an air-cooled engine under normal load and driving conditions.

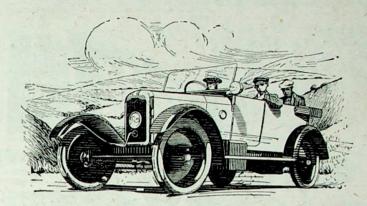
" The road springing is, in my opinion, about as good as can be got on a small car.

"The way I have always been treated by the Rover Company has done much to make me a very satisfied customer indeed

Yours faithfully,

J. F.]."

8 H.P._Horizontally - opposed twin-cylinder engine, three speeds and re-verse, worm axle with differential. Equipment comprises hood with all-weather side-curtains, spare wheel and tyre, electric lighting, horn, full kit of tools, etc. 2-SEATER (with dickey) or 4-SEATER £160SALOON £214Weymann type)



"Self Praise 99

A DVERTISEMENTS generally speak well of the goods they represent, but sometimes self-praise fails to carry conviction. When, however, those who have paid their own good money for the article in question are sufficiently enthusiastic to write a letter of appreciation, one feels that such praise IS recommendation. Many Rover Eight owners have sent us similar letters to the one which appears in the adjoining column, and our booklet of such letters-" Endorsing the Rover"-will be sent on request if you are still in doubt as to whether the 8 h.p. Rover would do all YOU would ask of it. The originals of all letters are to be seen at our Coventry Works.

"You can never over-rate the Rover Eight."



THE ROVER CO., LTD., Please send me catalogue, etc., COVENTR Telephone : 518. Telegrams : " Rover." 61, New Bond Street, LONDON, W.1. Telephone : Mayfair 157. Telegrams : "Roverdom Phone." Lord Edward Street,

DUBLIN. Telephone : Dublin 1060, Telegrams : "Rover, Dublin."

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.

h.P. Rover

of the



The World's Motor Classic Castrol's Crowning Conquest

Continental Cracks Choose British Oil-

1st.	Signor G. Cam	ari		··· ()	Alfa Romeo)
2nd.	M. A. Divo		·		(Delage)
3rd.	M. E. Benoist				(Delage)



The above and other successes were made on Castrol Standard Grades, which can be obtained at all garages, etc.

Over 160 British Car and Motorcycle Manufacturers use and officially recommend WAKEFIELD CASTROL.

B36

All cars which finished were lubricated with



C. C. WAKEFIELD & CO., LTD. All-Brilish Firm. WAKEFIELD HOUSE, CHEAPSIDE, LONDON, E.C.2.



MENTION of "The Light Car and Cyclecar" when corresponding with advertisers assists the cause of economical motoring. ADODST 15, 1924

SPICE OF NOVELTY.

USEFUL ACCESSORIES OF SPECIAL INTEREST TO OWNERS OF SMALL CARS. A NUMBER OF MEANS FOR MAINTAINING CLEANLINESS BOTH INSIDE AND OUTSIDE THE CAR.

Impregnated Cleaning Cloths.

Much of the messiness of cleaning bright work is overcome if special cloths impregnated with polish are used. These impregnated with polish are used. These are obtainable in varieties suitable for cleaning coachwork and upholstery, nickel-plating, brass and aluminium from Johnsons, 72, Highbury Park, Lon-don, N., at a cost of 78. for a complete outfit. We have been given a demon-stration of the usefulness of these clean-ing doths and car recommend them to ing cloths and can recommend them to small car owners.

To Renovate Celluloid.

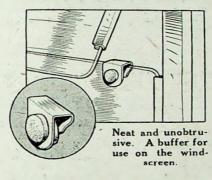
Luksnu is a preparation which has been introduced recently for renovating celluloid side curtains. In the form of a liquid, it is applied freely to the celluloid with a soft, clean cloth and allowed to remain on the surface for a short time. After polishing with a clean cloth, it will be found that the condition of the celluloid after one application of Luksnu is much improved ; two or three applications restore it approxi-mately to a new condition. The price of a tin that holds a sufficient quantity of Luksnu to renovate a complete set of side curtains is 3s., from the Metala-stene Co., Poulton-le-Fylde, Lancs.

Bulb Horns.

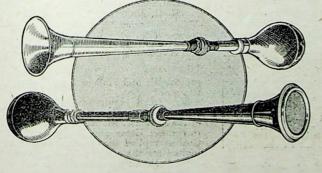
Two very useful horns for small cars are illustrated in the accompanying sketch. The nickel-plated model is marketed by the Motor Necessories Co., Cookham, Berks., at 9s., post free, and

To Prevent Windscreen Rattle.

A two-panel windscreen is not very a two-panel whiscreen is not very satisfactory unless the two panels over-lap in the closed position; but, when this is the case, they sometimes rattle together, setting up an objectionable



noise and creating the likelihood of the glass being broken. To overcome the difficulty a neat little accessory has been introduced at the price of 9d. a pair. These consist of small metal clips, on which are mounted rubber pads. The which are mounted rubber pads. The clips may be slipped over the lower panel, and the rubber pads, which face forward, serve as a stop for the upper panel when it is lowered. The fittings are obtainable in either nickel or brass finish from S. Mills and Co. Ltd., Stan-dard Works, Nineveh Road, Handsworth, Birmingham.

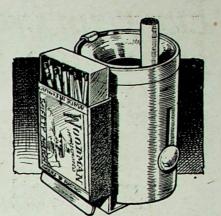


we understand that large stocks are penetrating note, which will be found to be an excellent road-clearer. The fitting is of a simple nature, which can be carried out at home.

A horn of similar appearance, but finished in black and nickel, is handled by Etienne et Cie., 61, Great Eastern Street, London, E.C. This horn has also a simple fitting. It is very strongly made and gives a pleasing and penetrat-ing note. For country work it is ideal, while it is equally effective for use in towns. The price is 10s. 6d.

A Useful Spotlight.

Among a variety of useful and in-teresting electrical gadgets marketch by the Runbaken Magneto Co., Ltd., Derby Street, Manchester, is their "Spot-lite," further described as the Seven in One. This accessory costs £4 10s., and it is unusual inasmuch as it incorporates a small unspillable auviliare battery it is unusual inasmuch as it incorporates a small unspillable auxiliary battery which is kept fully charged from the car electrical circuit. This battery is brought into use only when the spot-light is used as an emergency light in the event of the car lighting failing.



useful accessory for motorists who take a pride in keeping the interior of their cars clean and tidy.

An Accessory for Smokers.

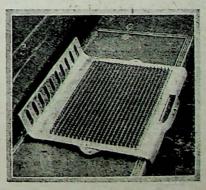
Known as the Marlboro' smoker's compactum, a useful fitment, which should appeal to owners of light cars, particularly of the enclosed type, is manufactured by Speight's Autocessary Co. The address is 125, High Holborn, London, W.C.1.

A Cleaning Mop.

A. W. Cook, of Davey Place, Norwich, is marketing a useful mop, par-ticularly adapted for washing the under parts of a motorcar. The mop itself is composed of hair and, consequently, does collect grit, and the wooden part, into which the bristles are fixed, is covered with rubber. The retail price is 9s. 3d. or 10s. carriage paid, complete with 12 months' guarantee.

Step-mats.

The appearance of a car is enhanced The appearance of a car is enhanced and its smartness retained, while the inside is always clean, if a step-mat is fitted on the running boards. A good oxample which has been recently placed on the market is illustrated in the ac-companying photograph. The mat is of where a durable quality and it is fixed companying photograph. The mat is of rubber of durable quality, and it is fixed within a cast-aluminium frame, which is highly polished, and may be readily attached by means of wood screws or bolts to the running boards. An exten-sion of the frame along one side pre-vents the valances being kicked when entering the car. The price is 15s., from Etienne et Cie. Etienne et Cie.



A handsome step-mat which, apart from its usefulness, will add to the appearance of a car. B37

EFFECTIVE. Two useful bulb

CHEAP BUT

borns the nickelplated model costs 9s. and the

black and nickel model 10s. 6d. See accompanying paragraph.

NEARLY 50 ENTRIES FOR 200-MILES. FORMIDABLE DARRACO, ASTON-MARTIN AND BUGATTI TEAMS-DARK HORSE IN 750 C.C. CLASS-NINE AUSTINS TO RUN.

E NTRIES for the 200-Milo Race, which will be held at Brooklands by the Junior Car Club on September 20th, now total 47, and it is possible that others may be received before August 21st, which is the closing date at double fore fees.

As will be seen from the appended list of entries, the nine Austin Sevens in the 750 c.c. class formathe British hope against one six-cylinder French Vagova.

The Vagova, as readers will remem-ber from the full account we gave of this revolutionary car last February, has a six-cylinder supercharged engine with a bore and stroke of 49.7 mm and 64 mm. The six cylinders are cast separately, and the whole are enclosed

in a separate aluminium water jacket. The heads of the cylinders are cast in three pairs, and the overhead valves have no springs, being positively opened and closed by an arrangement of super-imposed camshafts. This miniature en-gine develops 35 h.p. to 40 h.p. against the brake at 5,500 r.p.m. to 6,000 r.p.m.

It does not seem probable that the Austin Sevens will differ materially from the type with which our readers are familiar, it having been the policy of the company always to race cars which differ only very little from the standard production.

In the 1,100 c.c. class three Salmsons will race against three Morgans, a Frazer-Nash, a Newton, and Mr. Pickett's unnamed entry.

Formidable in the 1,500 c.c. class are the two Alvis cars, the two A.C.s and the three Darracqs; but these will not the three Darracqs; but these will not have it all their own way, for there are four Aston-Martins and four Bugattis out against them, in addition to the two Thomas Specials, both of which have already.rovealed their capacity for lapping at remarkably high speeds. The four Horstmans will form a strong team which will take some beating while the which will take some beating, while the lone Riley is likely to give a good account of itself.

S. H. Newsome's two Warwick cars for the same chassis as that entered for but at the last moment withdrawn from last year's race. They are to have Janvier engines, which have a bore and stroke of 60 mm, and 130 mm. -a stroke of comm. and 150 mm. -a stroke-bore ratio which is unusual for racing. A feature of the engine is the very large overhead valves, these being $1\frac{1}{2}$ ins. in diameter. The bodies which will be fitted to the Warwicks will be of good streamline form, the in-tention being to "fair off" every pos-sible source of wind resistance. Only one Frazer-Nash, it will be seen,

has been entered.

LATEST LIST OF ENTRIES.

7	50 c.c. Class.		1,500 c.c. Class (conti	nued).	
Eutrant.	Driver.	Car.	Entrant.		Car.
E. C. Gordon England	Entrant	Austin		Entrant	Horstman
E. C. Gordon England		Austin	E. R. Hall	D	Aston-Martin
Gordon Hendy	Entrant	Austin	H. W. Purdy	22	Horstman
J. P. Dingle	Entrant	Austin	S. H. Newsome		Warwick
Capt. A. Waite	Entrant	Austin	S. H. Newsome		Warwick
Capt. A. Waite	L. Kings	Austin		AL. D. L CACOCK	Aston-Martin
Capt. A. Waite		Austin 🐃	E. Lefrère		Bugatti
	Entrant	Austin	A. Huntley Walker		Darracq
A_S. Bigge	Entrant	Austin	A. Huntley Walker		Darracq
		Vagova	A. Huntley Walker	D. Resta	
	00 c.c. Class.		J. O'Day	G. Blackstock	Bugatti
		Salmson	J. O'Day		
	O. Wilson - Jones	Salmaon			Bugatti
	O. Wilson - Jones	Salmson	J. G. P. Thomas		Thomas-Special
A. Bovier			G. Duller		Thomas-Special
F. N. Pickett	E. Ringwood	Morgan	P. L. Densham		Bugatti
H. F. S. Morgan		Morgan	B. S. Marshall		Doham
H. F. S. Morgan	Entrant	37 3	G. E. T. Eyston	The second secon	Aston-Martin
N. B. Newton	Entrant	Morgan-J.A.P.	V. Gillow		Aston-Martin
E. B. Ware	Entrant	Frazer-Nash	TI (11)	Entrant	
J. A. Peacock	Entrant	Flazer Rash	Mrs. Agnew	0 0 11	
1.	500 c.c. Class.		E. G. Fery		Horstman
	C. G. Coe	Horstman		K. Don	A.C.
r. G. John	A 14 TT		S. F. Edge		A.C.
		Alvis	N. B. Newton		Ceirano
A. O. DOM					

MOTORING MATTERS IN PARLIAMENT. TRAFFIC BILL PASSED-STATIONARY TRAMCARS-NORTH CIRCULAR ROAD-USE OF REFLECTORS.

A FTER a chequered career, the Lon-don Traffic Bill passed into law on Thursday in last week, when Parliament adjourned until the end of September. During its progress through the House of Lords the Bill was amended so as to give the Minister of Transport power to regulate the number of trancars to be run on the streets, while the operation of the measure was extended to the year 1930 1930.

The Commons disagreed with both proposals, and eventually the Lords abandoned their demand with regard to the trams and it was decided that the Act should remain in force until 1928. In reply to Mr. Stranger, Mr. Rhys

B38

Davies (Under-Secretary to the Home Office) said he was not in favour of the automatic suspension or withdrawal of a automatic suspension or withdrawal of a licence on the conviction of its holder of driving to the danger of the public. Each case should be dealt with by the court at its discretion. Mr. Gosling, replying to Mr. Bower-man, said he had no power to issue regu-lations, similar to those operating in Choose facility of the successful parts

Glasgow, forbidding mechanically propelled vehicles to pass stationary tram-cars engaged in putting down passengers.

Legislation would be required, and ho was not satisfied that it was desirable. To this Mr. Bowerman retorted : May we take it that it is of less importance to protect life and limb in London than in

Glasgow? Mr. Broad inquired when it was in-tended to proceed with the construction of the section of the North Circular Read to connect Essex and Middlesex. Mr. Gosling replied that tenders were being invited for the construction of this part of the North Circular Road, and the work was to go forward this autumn as one of the schemes to which the London County Council was contributing as a means of absorbing unemployed from the administrative county of London. The advisability of the compulsory use

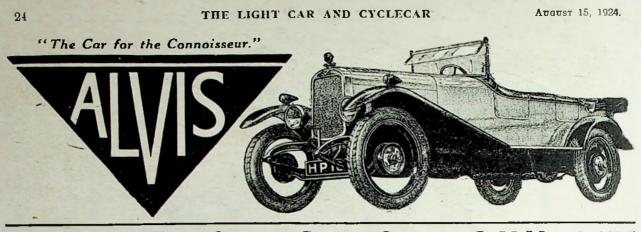
of mirrors for motorcars has again been taised, Mr. Penny, the Member for Kingston-upon-Thanics, asking if Mr. Gosling had received a resolution on the subject passed by the Survey County Council.

Mr. Gosling said he had received the resolution, but he was not satisfied that the universal adoption of mirrors would assist in proventing accidents.

Alvis



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



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

SUPREMACY

SUPREMACY takes a lot of getting! The oldest ALVIS Car saw daylight only four years ago, yet to-day its supremacy is undoubted everywhere.

When Motoring Enthusiasts speak of Perfection they mention ALVIS! When Hill-Climbing feats or Speed Trials, or any arduous Competitions are to be won, you will always find ALVIS Cars doing spectacular things and, more important still, nearly always driven by enthusiastic private owners on Cars exactly as you can buy them.

No make of Car in the same period has so many famous successes to its credit as the ALVIS, and thousands of Motorists know that it provides such delightful motoring as can be experienced on nothing else !

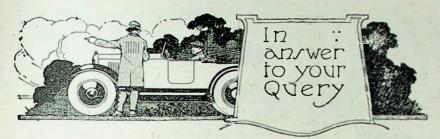
IN INS
Marin salar
A STATE OF
Frank
The GOLD CUP
awarded to the ALVIS as WINNER of the 200 Miles INTERNATIONAL LIGHT
CAR RACE, Brooklands, Oct. 1923, at an average speed
of 93'29 m p.h.
STANDARD MODEL.
DE LUXE MODELS.
12/40 h.p. 3-Seater £475 With 12/50 h.p. O.H.V.
Super Sports Engine, estra 275
12/40 h.p. 4-Seater £495 With 12/50 h.p. O. H.V.
Super Sports Engine.
• extra £80
axtra E80 12/40 h.p. 5-Scater £535 12/50 h.p. 2-Seater Super
extra £80 12/40 h.p. 5-Scater
48771 EX0 12/40 h.p. 5-Scater4335 12/50 h.p. 2-Scater Super Sports O.H.V6550 12/60 h.p. 4-Scater Super Sports O.H.V2575 12/40 h.p. V - fronted
extra EX0 12/40 h.p. 5-Scater
extra LN 12/40 h.p. 5-Scater
12/40 h.p. 5-Seater , 1335 12/50 h.p. 2-Seater Super Sports O.H.V. , 2550 12/50 h.p. 4-Seater Super Sports O.H.V. , 2557 12/40 h.p. V-fronted 3-Seater Coupe , 2575 12/40 h.p. 4-Seater Coupe Saloon , (164

ALVIS CAR & ENGINEERING CO., LTD., BRITISH EMPIRE EXHIBITION STAND No. 120 COVENTRY. 91 & 155, GT. PORTLAND STREET, W.1

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

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AUGUST 15, 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.

Motor Show This Year.

V.D. (Croydon) .- The two Show dates come nuch closer together this year than last, the Scottish being held from November 21st to 29th, much earlier than last year, while that at Olympia opens on October 17th and lasts until the 25th.

Air-Valve Brake.

A.G.L. (Birmingham).—An extra air valve may be made to serve as a brake by opening it fully with the throttle closed. The retarding action is created by the compression of the air so ad-mitted by the pistons. The braking action is naturally inconsiderable, but its effect is beneficial in hilly districts.

The Trailer Caravan.

K.P. (Anerley) .- The only conditions K.P. (Anerley).—The only conditions concerning the attachment of a trailer caravan to your car are that it shall have a brake and a number plate. Re-garding dimensions, it must, of course, follow the rules set down for any vehicle on the road. In answer to your last query, there is no tax extra to be paid, neither is it necessary to obtain a special hence for it a special licence for it.

Carburetter Adjustments.

H.E.M. (Glasgow).—As you state that you are a beginner and know very little about your car, we do not advise you to tamper in any way whatever with the carburetter setting. It would need an expert to improve upon the tune of the instrument as each out by the the instrument as sent out by the makers, and if you attempt to adjust it yourself you are almost certain to be disappointed, while you may have con-siderable difficulty in restoring it to its original candition. original condition.

The Best Wheels?

S.L.D. (Hackney).—It is impossible to say which are the best road wheels, and the question is purely a matter of personal opinion. For strength and lightness wire wheels are considered to be the best but they are your difficult lightness wire wheels are considered to be the best, but they are very difficult to clean. Steel-spoke wheels are easier to clean than the wire variety, and no question with regard to their strength and suitability for everyday needs has ever arisen. The popularity of disc wheels is largely due to the fact that they are cheap and easy to keep clean. They possess the disadvantage, how-ever, that if the back axle is noisy the discs tend to intensify the noise, set-ting up an u-pleasant drumming.

Shock Absorbers.

E.G.F. (West Hampstead) .- A num E.G.F. (West Hampstead).—A num-ber of appliances, the functioning of which differs widely, are advertised as shock absorbers, and, although their apparent effect on the suspension of a car appears to differ widely, most of them certainly improve rear-wheel grip and provide improved comfort. The manufacturers of your car have doubtless experimented with the principal types, and will be able accordingly to advise you which they consider to be most suitable,

10 h.p. Swift.

E.R.P. (London, W.10).-You are perfectly correct in believing that the 10 h.p. Swift is a high-grade production from the works of manufacturers with an excellent reputation. The Swift light cars have been on the market for a considerable number of years and you would find one of them quile suitable for your needs. The maximum speed is slightly in excess of 50 miles per hour, petrol consumption approximately 40 miles per gallon and tyres should give a mileage of 8,000.

Stiff Springing.

" MASCOT " (Hartley Row) .- It is not uncommon for the springs of a new car to be rather harsh in action. You will to be rather harsh in action. You will find that after you have covered 1,000 miles or so the springs will bed down and more comfortable riding will result. In the meantime, you will find that an improvement will be effected if the springs are frequently painted with a half-and-half solution of engine oil and paraffin. It is not much use smearing the outsides of the spring leaves with thick grease, as this remains on the sur-face where it is, of course, ineffective.

Double Clutching.

S.H. (London, E.C.4.).-The term double clutching signifies that in making a change of gear the clutch, instead of being merely depressed and re-engaged after the change has been made, is operated twice during the change. The operation of double clutching when changing down is carried out as fol-lows :- Depress clutch pedal, shift gear lever to neutral, engage clutch, acceler-ate, free clutch and simultaneously en-gage the lower gear. Follow the same sequence of operations when double clutching "up," but do not accelerate when the gear lever is in the neutral position. double clutching signifies that in making position.

To Renovate Celluloid.

A.G.M. (Hampstead).—Scratched and discoloured celluloid side curtains are certainly unsightly. They may be easily renovated by employing one of the pre-parations which are specially put up for the purpose. A satisfactory renovator is marketed by the Metalastene Co., Poulton-le-Fylde, Lancs.

Odd Sparking Plugs.

F.C.N. (Margate).—It is true that there is a popular belief to the effect that if odd plugs—that is, plugs of different makes—are fitted in an engine misfiring will result. This supposition, however, has no actual foundation in fact, assumof course, that the reach and gap of all of them are approximately correct.

Oil for Gearbox.

R.G.H. (Bridlington).-On no account use grease in your gearbox. The manu-facturers specify thin oil because grooves facturers specify thin oil because grooves and channels specially designed to con-vey a lubricant of this consistency are provided. If grease is used the oilways will become clogged and the bearings will consequently run dry. It is true that the use of a heavy lubricant per-mits a dwell in neutral when changing up.

Car Number Plates.

H.M. (Sydenham) .- The regulations H.M. (Sydenham).—The regulations for the number plates on a car are as follow :—The figures and letters must be $3\frac{1}{2}$ ins. high and $2\frac{1}{2}$ ins. wide, ex-cept the numeral "1," which will not, of course, be $2\frac{1}{2}$ ins. wide, and every part of every letter or figure must be $\frac{3}{2}$ in. in thickness, and they must be separated by $\frac{1}{2}$ in, while a margin of 1 in. must be left round the plate. Morgans and other three-wheelers have to carry car plates. to carry car plates.

Oily Brakes.

Oily Brakes. N.R.T. (London, S.W.18).—The fact that black oil is splashed on to the inner side of your rear tyres clearly indicates the reason why your brakes do not act properly. The trouble is due to oil from the back-axle casing working out around the axle-drive shafts and into the brake drums. If you draw the brake drums off the axle shafts, you will find that felt washers are pro-vided to prevent this oil leakage. If the felt washers are renewed the trouthe felt washers are renewed the trou-ble should be overcome.

Transmission Back-lash.

H.E. (Richmond).—The fact that when one of your back wheels is jacked up with the top gear engaged you can rock the back wheel so that a point on the tyre moves through an arc approxi-mately 4 ins. in length, indicates that considerable wear has taken place in the transmission. It is probable that the universal joints are badly worn, and that there is considerable back-lash be-tween the crown wheel and bevel pinion. In addition, the pins which carry the differential bevel wheels are probably badly worn. Since you have some mechanical ability there is no rea-son why you should not strip down the axle yourself, and if yon decide to do this it will probably pay you to apply to the makers of the car asking them to furnish you with instructions as to the correct sequence in which the vari-ous parts should be dismantled and assembled. H.E. (Richmond) .- The fact that ous parts should be dismantled and assembled.

THE LIGHT CAR AND CYCLECAR



We welcome at all times letters sent us by readers for publication in these columns, and, while taking no responsibility for the opinions 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.

The Trade or Private Seller ? - A Technical Point.

Touring in Scotland.

I did not think of visiting Scotland until last year, for the reasons put forward in your recent editorial comment on the subject, but last year's experience encouraged me to go back again, and I have just returned from a

again, and I have just returned from a fortnight's holiday covering three days out Reasonable

Charges. Charges. So far as prices are concerned I do not find any difference between Scotland and England. Admittedly, the roads are

bad, and I avoided the ferries. The garage charged me 2s. for Shell and 2s. 4d. for pure benzole, 2s. 6d. washing and polishing the car, and 7s. for a full week's garage. On three or four occasions the car was brought from the garage to where we were staying for our convenience.

As an example of how we fared on the road, in Pitlochry 8s. was the highest that we paid for bed and breakfast. There is nothing to be afraid of in Scotland but the roads. M. HALL.

Buying Second-hand.

Raving read the very interesting and enlightening article in your recent issue, entitled "Plain Facts About Second-band Buying," I venture to submit one or two remarks which

may be of guidance to any of your readers interested in the purchase of second-hand The Trader's View.

view. Cars. It certainly is to be very much regretted that a large section of the public look upon the motor sales-man with a certain amount of suspicion. Personally, I am sure there is not nearly so much justification for this at the present time as there might have been eight or ten years ago, and in all trades you will find a man who does not know where to draw the line between good business and commercial dishonesty. During the last few years the motor to be a second to be a s

commercial dishonesty. During the last few years the motor trade has been revo-lutionized to a very great extent, with the result that big profits are no longer reaped by the motor agent. It posi-tively does not pay him to spend the time and money "doctoring" a second-hand car. Granted it may be possible for him to obtain a better price for his car by giving it a coat of paint or varnish; but this can be hardly called "doctoring." I think it is quite safe to assume that the type of man who would put sawdust in the gearbox to effect temporary quiet running docs not have any useful existence in the motor trade to day. The public has no room for him; neither have his fellow traders. No firm of any standing will endanger their reputation by selling a "dud" car, knowing full well it would not give B42

satisfaction to the buyer, unless they are in a hurry to file their petition. On the other hand, a few firms, such as my own, are quite willing to give a guarantee with a second-hand car, and where this is the case the purchaser can be absolutely sure that he is getting "the goods" he is paying for. This is not done, of course, unless the condition of the car warrants a guarantee being given. If the public would take your advice to heart and deal with traders who have built up their business largely on recommendations from satisfied chents, I feel sure there would be many more "happy days" for all concerned. J. A. SPENCER. GORDON WATNEY AND CO., LTD.

The Effect of Turbulence.

I was very interested in your article headed "Turbulence: Its Effect on Performance," which was published recently in your journal. A Difference of Opinion. There is not very much in some of the

ideas your contributor expounds. For in-

ideas your contributor expounds. For in-stance, he seems to regard spherical combustion space as of paramount importance, and shows a concave piston top to complete the picture. There was a time when we had concave piston-tops, but the truth is that a lighter piston can be made with a flat top, and as lightness is of extreme importance in all reciprocating parts, the probability is that the piston with the flat top gives better results than can be hoped for with a concave true. concave top.

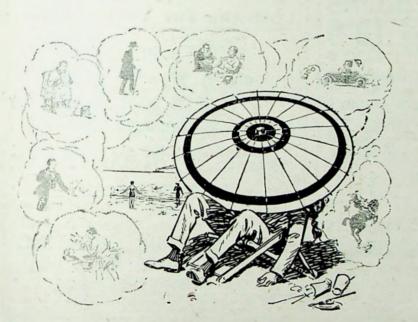
There is one other point of view, and that is a flat piston top offers less area to be heated by the gases. The engines which we now make with the flat piston tops are more powerwhich we now make with the flat piston tops are more power-ful than they were when we had a concave piston. Possibly the reason is partly this—that if one stirs a cup of tea to dissolve sugar, as set out in your article, the sugar will dis-appear much more rapidly if you first of all stir in one direc-tion and then in the other. In other words, round and round is not the way to agitate it, and certainly a piston with a flat top could have a more disturbing effect on the gases than one with a concave top. If a bunch of people are all going in the same direction, they do not mix and jostle much unless they come across obstructions, and one must not forget, also, that the piston is constantly moving up and down in the evinthat the piston is constantly moving up and down in the cylinder, and thus the gases are either having to follow it or being

der, and thus the gases are either having to follow it or being compressed by it. I think turbulence of extreme importance, but I do not think a concave piston in conjunction with a concave head necessarily is the best way to get it. S. F. EDGE. * "Our contributor will be invited to reply to this interest-ing letter, which is somewhat disputed by the efficiency of the spherical-headed Knight engines.—ED.

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I AM STILL ON MY HOLIDAY.



ONE of my colleagues has written to say things are going so well that, if I like, I can, stay away for another month or two. I appreciate this indication that the business is properly organised and is not dependent upon any individual The lifting of the McKenna Duties has depreciated the value of second-hand cars a good deal, but, because my firm deals with them on the right basis, it is able to make exceptionally liberal allowances.

25

If you purchase a Talbot 8—and there is no better car—you will get something of which you can be lastingly proud on terms which are lastingly satisfactory.

If you like, you can have cash for your old car and get the new one on my "Pay-as-you-Ride" scheme.



nwick Wright 150, NEW BOND STREET, LONDON. W.I.

Jelephone: Mayfair 2904

Telegrams: "Talsundar, Phone, London"



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

BAA

OUR READERS' OPINIONS (contd.).

Further Opinions of the Light Car "Limit."

Co-operation Necessary.



It is, I believe, generally recog-nized that Britain produces the best light cars in the world, and this en-viable position has undoubtedly been attained through specialization on the part of many British small car manufacturers. Your paper, which has done so much to promote the small car movement, very wisely adopted 1,500 c.c. as the limit of engine size for all light cars; likewise with our leading small car clubs, such as the Junior Car Club, 1,500 c.c. has been the accepted limit for light car engines.

thousands of pounds and years of labour have been Many expended—in fact, no effort has been spared—to obtain the maximum power from engines under 1,500 c.c., and such remarkable progress has been made that cars fitted with such engines to day are more powerful, more flexible and decidedly more economical than those built only a few years

History Repeats Itself.

History Repeats Itself.
There is evidently a strong consensus of opinion among makers of light cars that the limit for the economical light car should be 1,500 c.c. Of course, the term "light" car is a courtesy title, for weight has nothing An Unbiassed to do with it, although, with regard Opinion. to economy, weight tells at least as much as horse-power. But I think it should be taken into consideration that the 1,500 c.c. limit is quite a recent one. As lately as 1913 the limit was 1,100 c.c. In a list compiled in March, 1913, there are no light cars which exceed 1,100 c.c., and very few are over 1,000 c.c. In a list of "cyclecars and light cars under 1,100 c.c. In a list of "cyclecars and light cars over 1,500 c.c., showing that the 1,500 c.c., limit was not then invisely there were only 10 out of 120 which exceeded 1,100 c.c.; it is noticeable that all the 10 are extinct. In a list of "light cars and cyclecars for 1915" there were included 7 cars over 1,500 c.c., showing that the 1,500 c.c. limit was not then invisely but, on the other hand, there were 76 types under 1,100 c.c., against 40 others. against 40 others.

against 40 others. To-day we have changed all that. The light cars around 1,500 c.c. are in the great majority; indeed, the number of types under 1,100 c.c. is almost negligible compared with the number approximating 1,500 c.c. The Rover Eight (not all are under 1,100 c.c.) is, of course, very much in evidence; so is the Morgan (sometimes, however, classed as a sidecar and sometimes as a cyclecar to distinguish it from four-

High Average Speeds.

It has often occurred to me that the speeds published in your correspondence columns, when read by a non-motorist (not to mention an anti-motorist) must influence that person's opinion against the pastime as a whole. Should They be I respectfully suggest to you that Published? these high averages would be better left out of new columns, alternative a two

ever safe they may be on a good road (and no same motorist would suggest they were otherwise), they are still illegal, and must suggest to the average person that we motorists do not worry about other road users or their safety

F. FEATHERSTONE.

The Use of Low-pressure Tyres.

Balloon tyres seem to be coming into their own. Possibly

Balloon tyres seem to be coming into their own. Possibly force of example will start the bus companies thinking furiously, and then we shall enjoy good-surfaced roadways. It is interesting to observe road surfaces
Their Effect on where pace is possible. The ripples or the Roads. corrugations developed are, no doubt, brought about by solid tyres, plus spring periodicity. Observe well-used bus routes.
It is quite a different story where congestion brings about a normal 12 m.p.h. pace, as in Great Portland Street, for example. Here the road surface is as good now as when it

ago with much larger, but far less efficient, power units. The remarkable results achieved with small engines are cer-tainly due to fixing the limit at 1,500 c.c., and as this has become the recognized limit throughout the motor world, it would be extremely unwise to make any alteration at the present stage. The R.A.C. probably had its own reasons for fixing the limit at 1,600 c.c. for the Small Car Trial this year, but the small number of entries that the trial attracted does not seem, in any way, to have justified the action of the Club in this matter, and the fact that the Gwynne Eight car, which won the trial, had the smallest engine of all the finishing cars, rather suggests that the limit of 1,500 c.c. is quite high enough already. The remarkable results achieved with small engines are cer-

uite high enough already. The recognized limit is 1½ litres, and by all means let us stick to it, for no useful object could be achieved by in-creasing this figure. A little co-operation on the part of manufacturers, small car clubs and competition drivers is all manufacturers, small car crugs and competition drivers and that is necessary, and this, I feel sure, will be forthcoming. At present we do know where we stand, but any alteration will now mean chaos, with resultant losses to the motor trade as well as to the British motoring public.

C. W. D. CHINERY.

wheeled light cars), the little Austin (now usually placed in a 750 c.c. class by itself), and one or two others. But the number verging on 1,500 c.c. is legion. At a¹ recent com-petition 1,100 c.c. was increased to 1,200 c.c. At Sheisley, on the other hand, 1,000 c.c. was substituted for 1,100 c.c., obviously with intent to encourage the 750 c.c. class at the expense of the 1,100 c.c. cars. In this year's J.C.C. General Efficiency Trial, it is true, the first three places were all taken by cars under 1,100 c.c.—two three-wheelers and one four-wheeler—but a complaint was raised that the bigger cars competed at a disadvantage. It is a little difficult to understand why, but we are told to expect a change in the regulations in order to give the bigger cars a chance of beat-ing the smaller ones. ing the smaller ones.

ing the smaller ones. In your recent list of entries for the J.C.C. 200-Mile Race the 1,100 c.c. class is represented only by two English three-wheelers and three French light cars. Does all this portend the extinction of the 1,100 c.c. class? It is sometimes said that the three-wheeler is moribund (I have the best of reasons for knowing that one three-wheeler is very much alive), but it might seem just as likely that the 1,100 c.c. four-wheeler is being crowded out. I do not myself believe that this will happen, but in the circumstances it would hardly be surprising if some makers of the 1,100 c.c. vehicles did not entirely sympathise with the outcry against raising the 1,500 c.c. limit. They have seen the limit raised against themselves. H. GEORGE MORGAN.

Malvern Link.

was laid down. It is the pace that undoubtedly kills the road surface, and commercial considerations as to the ex-pediency of fitting low-pressure tyres should not be allowed to interfere with the comfort of motorists generally, who pay the major portion of the country's revenue for motor taxation.

It would be interesting to hear what your readers think. G. A. RICHARDSON.

The Disabled Driver's Licence.

As one who is certain to be a sufferer if the proposal to refuse driving licences to disabled persons is made law, I wish to enter my protest against this ridiculous suggestion. I have a stiff right knee as a result of Another war wounds, and it would not have been Protest. possible for me to resume my pre-war occupation as commercial traveller but for the fact that I are able to get round to see my construmts in

the fact that I am able to get round to see my customers in

the fact that I am able to get round to see my customers in a Rover Eight car. Since 1922 I have covered 30,000 miles in this car, and have always had perfect control. I have been troubled, as probably most ex-soldiers have, by red-tape restrictions re-garding medical boards, etc., but surely this proposed legis-lation is the crowning insult from a "grateful country"! I have written to my local M.P., and agree with your correspondent, "B," that every ex-Service man likely to be affected should do the same. B45

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August 15. 1924

OUR READERS' OPINIONS (contd.).

Difficult Starting,

Your correspondent "Very Worried" indeed has cause to

Your correspondent "Very Worried" indeed has cause to feel annoyed with his occasional difficulty in restarting a hot engine, and I venture to make a suggestion which will remove his difficulty. Provided the engine Another Suggestion. If fair tune and runs regularly, once started, the difficulty is apparently con-nected with carburation. Hence the trou-ble is either a weak mixture or a rich mixture. If weak, flooding the carburetter should effect an casy start, and, if rich, an easy start should be assured by onening the throutle flooding the carburetter should effect an easy start, and, it rich, an easy start should be assured by opening the throttle wide, which induces an attenuated mixture from the car-burefter. A difficulty in starting is frequently encountered through a speck of dirt on the needle-valve seating, which causes flooding, and the above simple remedy is not generally known I trust this will cure your correspondent's trouble. LESLIE LYONS.

I have not noticed any reply to "Very Worried," who has trouble in starting an 8 h.p. J.A.P. when it is warm. I have had the same trouble, and have been held up for an hour before the engine could be induced to Mixture too start. I have experienced this difficulty Rich. with an engine fitted to a much longer induction pipe, but to a lesser extent, and it seems to be caused by the carburetter getting warm, due to conduction along induction pipe, and thus giving too rich a mixture. I have got over the trouble by stopping the engine by opening the extra-air valve to full extent and not by switching off. This procedure fills the induction pipe with air or a very weak mixture, and I find the engine starts at the first pull over. at the first pull over.

at the first pull over. As an extra precaution 1 close the petrol tap. Trusting this may eliminate his cause for complaint, although the very short induction pipe of the 8 h.p. J.A.P. F. W. DAW. makes it difficult.

"Very Worried's" letter, which appeared in a recent issue of your journal and dealt with difficult starting, has inter-ested me considerably, as I have met the same phenomenon

Helpful with my 10 h.p. o.h.v. British Anzani engine. The engine has always started well suggestions. when cold, but, after running, it used often to be a question of minutes before I could restart. "Very Worried" does not say what carburetter he

restart. "Very Worried" does not say what carburetter he is using; mine is a two-jet Binks. I cannot claim to have completely cured the complaint, but by trying various expedients the trouble has been greatly minimized. First, I replaced an inlet valve, the stem of which was badly worn. This made for better running at low speeds; secondly, I tested the petrol level in the float chamber, and, finding it high, reduced it considerably. I then enlarged the slow-running jet slightly, and, to compen-sate for this, decreased the main jet. Finding, also, that the type and condition of the air-intake gauze greatly affected the running of the engine, I devised an intake which enabled me to vary the aperture. Of these expedients, the enlarging of the slow-running jet

me to vary the aperture. Of these expedients, the enlarging of the slow-running jet certainly produced the greatest effect, but I have naturally suffered from increased petrol consumption, especially when driving in traffic. In my own case I feel that the psychology of the starter to a great extent accounted for the difficulty. On finding the engine completely unresponsive at the first attempt, I used to flood the carburetter; this resulted in a flooded engine and much subsequent energy. I now keep the throttle almost closed, and can start gener-ally at the first turn, whether the engine is hot or cold. Flooding the carburetter still proves absolutely fatal, how-ever. B. G. GALPIN.

Revive the A.C. Sociable.

In your issue of recent date a letter pleads for the revival of the A.C. Sociable. I also should be very glad to see this happen. I drove one for two years, and only found two things that wanted alteration. one being Another Reader's that the timing would shift occasionally Plea. after a backfire. I imagine this was due to the magneto being driven at engine speed. This happened to me three or four times. The other drawback was the jumping of the chain, presumably owing to the acute angle formed at the engine sprocket. It never happened to me, but I saw it occur with others on half-a-dozen occasions. The steering by tiller was delightfully B46 B46

easy. I should be glad to have a cyclecar for the sake or the weather protection, but I have to be contented with motorcycle combinations. I do not want high speed, although one of my combinations is a high-powered twin capable of higher speeds than those at which I care to drive. Water-cooling I have no use for, and I would not be

bothered with it.

bothered with it. The steering of the cyclecars which I have looked at put me off them. The direct steering practically means the same as driving a powerful combination with about 15-in. handlebars. In the A.C. Sociable the tiller gave the same effect as a wheel of over 3 ft. diameter. Another thing I liked about the A.C. was that I, who am no mechanic, could "tinker" about with it and do most of my own work, owing to its simplicity. The gear-changing also was delightfully simple, and I

The gear-changing also was delightfully simple, and I never yearned for a third speed, being quite content to go slowly up stiff hills. Lastly, it was most economical to run.

Three-wheelers and Safety.

Petrol Filters.

In the recent discussions concerning three versus four-

In the recent discussions concerning three versus four-wheeled cyclecars I have seen no mention of the important question of safety. I am not experienced in the matter, but I have seen some very bad skidding with Danger of three-wheelers, although I am fully aware Skid. that this is often the fault of the driver, and not necessarily due to the design of the vehicle. Nevertheless, if one gets on to a steeply cam-bered road the single rear wheel soon begins to slide. My suggestion is that twin rear wheels be fitted, just a sufficient distance apart to allow of the chain drive sprocket being fitted between them. This arrangement would give a much better road grip, but would the machine be taxed as a four-wheeled car? B.H.C. Portsmouth. Portsmouth.

May I be permitted to make a few remarks with regard to the article on choked filters which recently appeared in "Rich Mixture"? I am sure the excel-

Approaching lent article made by Tecalemit, Ltd., 10, the Ideal. Little Portland Street, London, which consists of a chamois leather strainer, and has a visible plate-glass body, would cause him to enange his views considerably. This filter has a spacious sized body, which is instartly detechable for elevering his views considerably. This filter has a spacious-sized body, which is instantly detachable for cleaning purposes by releas-ing four small screws, which each have a large slot, and can be unscrewed with a penny, thereby obviating the twisting of the petrol pipe by the application of a spanner of any description. I am sure the above concern would be only too pleased to give any readers who have had trouble in this respect full particulars of this article on application to them. C. N. GREEN.

An Echo of South Harting.

I notice in a recent issue of your journal a paragraph in

I notice in a recent issue of your journal a paragraph in the pages dealing with South Harting hill-climb, which states that I "seemed to find it necessary to do quite a lot of work with the steering wheel " on each ascent. Miss Pink I should like to explain that the treads of both my front tyres were worn un-evenly, causing a bid steering "wobble." This had been corrected by balancing the wheels, but, in order to comply with the regulations, I had to remove the balance weights first before the event, and as the steering is very sensitive and the surface of the hill loose, it was almost impossible to bold the wheels straight at speed. Inci-dentally, I spent some time the evening before on the "Dodge-em" at Wembley, which may well account for any difficulty in remembering which way to turn the wheel. Taunton.

CONDENSED CORRESPONDENCE.

C.J. (E.C.3) writes in appreciation of the excellent service rendered by Gaffiken. Wilkinson and Co., of 8, Dover Street, London, S.W., in connection with a car which he recently hired from them for a long week-end tour.

Mr. H. C. Leat informs us that he found a can of petrol lying on the roadside when he was motoring into Ashburton one afternoon recently. Our correspondent would be glad to have the opportunity of restoring the cash value of his find to the loser. Will this person therefore please communi-cate with Mr. Leat, at 2, Richmond Street, Totterdown, Bristol. giving the colour of the can and the approximate date of his loss? date of his loss!

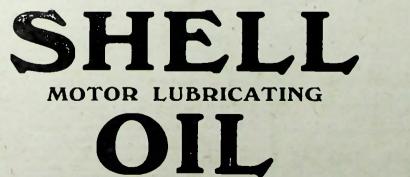
AUGUST 15, 1924.

That extra horse!

HAT a difference that extra horse makes on a steep hill! The extra quality of Shell Motor Lubricating Oil makes the same difference in the pulling of your car.

The motor car engine has to operate under the widest possible variation of load conditions. At one moment it is just turning over lightly in traffic —the next, you put your foot down and accelerate under full throttle, subjecting the whole mechanism to the maximum strain. Some oils maintain lubrication up to a certain speed and then break down; others vary in quality from time to time. Shell Motor Lubricating Oil maintains effective lubrication at all engine speeds. Its quality never varies. It gives you that security which means so much.

In four grades — Single, Double, Triple, and Golden Shell. Consult "SHELL READY - REFERENCE TO CORRECT LUBRICA-TION," obtainable from your garage, or post free from Shell-Mex, Ltd. (Motor Oils Dept.), Shell Corner, Kingsway, W.C.2.





Tells."

SHELL-MEX, Ltd. (Motor Oils Dept.), Shell Corner, Kingsway, W.C.2.

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



AROUND THE TRADE

The first three Mathis cars in the Grand Prix de Tourisme were using Solex carburetters. -0.0

Messrs. Dunlop ask us to request any motor trader or agent who has not received a recent call from a Dunlop representative to advise them at headquarters. -0.0-

The London office of Messrs. Ramsdens (Halifax), Ltd., manufacturers of the Jeavons lubricating spring gaiters, has been removed to 147-9, Gt. Portland Street, London, W.1. -0.0-

The Rhode car which won a silver cup in the recent Scottish "Six Days," was equipped with Dunlop low-pressure tyres, and was remarkably free from troubles connected with wheelspin.

Englebert Tyres, Ltd., announce a reduction in the retail prices of their wheels for low-pressure tyres. Spoke wheels in light car sizes cost 26s. 3d., disc wheels being listed at 13s. 6d. -0.0-

Dunlops have issued a pamphlet warning motorists against and illustrating the effects arising from the practice of run-ning normal type cord tyres at balloon tyre pressures, with the idea of gaining increased comfort.

In the European Grand Prix Race at Lyon the seven cars which completed the course were using Castrol Oil. Six of them were Continental machines, and their selection of a British oil is certainly significant of its quality.

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Clear Hooters, Ltd., Highgato Square, Birmingham, an-nounce reductions in the retail prices of their electric warning devices. They also point out that they now only include cable when it is specified. The push-button is always included.

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Useful picnic baskets are marketed at reasonable prices by the Cooper Collapsible Box Co., Ltd., Clarendon Works, Hull. These are made up in a variety of sizes being fitted for two, four or six persons, the prices varying from $\pounds 1$ 6s. up to $\pounds 4$ 19s. 6d.

-0-0-

F. H. Hayward and Co., Ltd., point out with reference to a recent paragraph in this journal that their offices have been established in Leadenhall Street, E.C.3. for 27 years The offices of their motor department are at 40, Pall Mall, S.W.1, the same address as that of their showrooms.



A Super-charger.

MOTOR TERMS TRAVESTIED

Solution to No. 24

Numerous were the allusions to "Starters" and "Starting" with reference to last week's Travesty, and variations of terms mentioning "Feed" and "Induction" were also frequent. The winning solution was adjudged to be "A Super-charger," submitted by Mr. F. T. Hardy, Lancy, Beaverwood Road, Chislehurst, Kent, who has been awarded the prize of one guinea. This reader is to be heartily congratulated, as this is the second occasion on which

as this is the second occasion on which

as this is the second occasion on which he has met with success in this competition, the first time being the 15th Travesty of the series. One other reader, Mr. Halford, of Leicester, also submitted "A Super-charger" as his solation, but in accordance with our rules, the first attempt to be judged takes the money. Hard luck, Mr. Halford! "Friction Drive" was a good effort, and "Mounted on the "" was ingenious." Won't kick, won't bite," "Vegetable Oil" and "Coaxing" hardly struck us as being motoring terms, whilst "A Novel Pro-peller" should surely have been addressed to one of our associated journals dealing with motor boats or ships.

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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AUGUST 15, 1924.

THE LIGHT CAR AND CYCLECAR

(Supplement 1.) 29



MENTION of "The Light Car and Cyclecar" when corresponding with advertisers assists the cause of economical motoring. 30 (Supplement ii.)

B50

THE LIGHT CAR AND CYCLECAP

AUGUST 15, 1924.



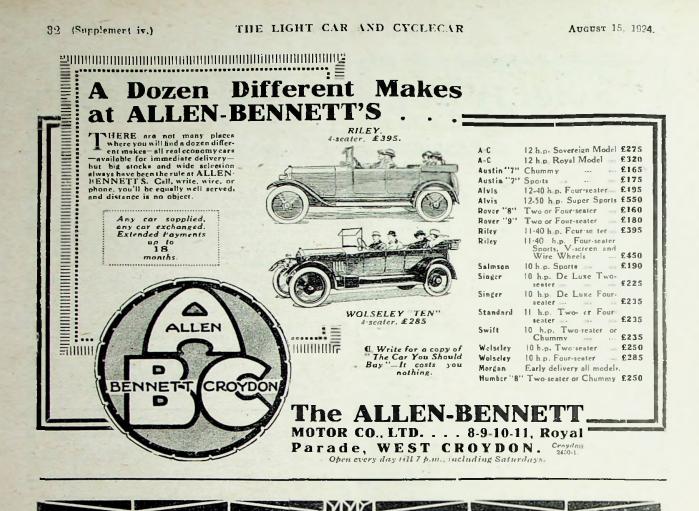
TO THE READER.—By mentioning "The Light Car and Cyclecar" when replying to advertisements, the progress of the small car movement will be assisted. THE LIGHT CAR AND CYCLECAR

(Supplement iii.) 31

BATTERIES

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AN INDISPENSABLE HAND-BOOK FOR MOTORISTS.

EASILY UNDERSTANDABLE. OVER 100 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 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.

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

AUGUST 15, 1924.

THE LIGHT CAR AND CYCLECAK

SECOND-HAND AND NEW 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.

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DEDGIT SYSTEM. The provide the service of the serv

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Copy lor, and all matter relating to advertisements must reach our Head offices first post Tuesday, and should be addressed to THE MANAGER, "THE LIGHT CAR AND CYCLECAR." 7-15, Roseneny 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 milted and returned.

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Owing to postal delays and irregularities, it is advisable to post advertisements EARLY ON MONDAY so as to ensure, as far as possible, that they reach us by the FIRST POST on Tureday. Lately serveral 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. Soveral second-hand, all models in stock guaranteed. from £100; deferred payments and part exchange. zzz-164
 A.B.C. cars. Repairs of every description and special tuning by experi-onced A.B.C. mechanica. E. S. Inglis, A.B.C. Specialist, head office, 284-29 Upper Maryloboot St., G. Fortland St., W. 1. Works, 20-24 Williams Mowa, Stanbopo St., N.W. 1. Telephone, Museum 2502. zzz-97

Mowa, Stannopp Sc., transformer, excellent condition, fully licensed, £125; A.B.C., 1924, sports, 2-scaler, excellent condition, fully licensed, £125; exchange or bire-purchase. The Light Car Co., 331, 410-414 Enstoa 612-340 Rd., London.

A.B.C. 1921, Surbiton, new tyres all round, tared for year, just re-painted, £112 10s., or exchange motorcycle and cash. 51 Upper Richmond Rd., East Putney. 612-0619 A.B.C. Sports, June, 1922, Specialloid pistons, pumerous extras, new being repainted and overhauled by makers, owner going abroad, £105. Write, 36 Emerson Rd., Hford. 613-5581

A.B.C., 1922, special sports, £115; also 1921 2-scater, dickey, starter, £95. Bartlett's, 93 Gt. Portland St. 612-801

A.B.C., 1922, 12bp, Regent, 2-seater and dickey, dynamo lighting, fully equipped, licensed, exceptional condition 110 guineas. Below.

A.B.C. 1923 sports 2-scatter, dynamo, starter, speedometer, etc., licensed, very good condition, 125 guineas. Below.

A.B.C. 1922 2-seater, ausk dickey sent, dynamo, speedometer, revolution counter, extra headhamps, splendic condition, tyres almost now, 110 guineas; oxchanges or deferred. Edwards, 175 Gt. Portland St. W. Mayfair 4027. 612-823

Maylair 4021.
 A.B.C., 1922, 2-scator, new engine, splendid condition, tared, insured, 12-b696
 A.B.C., 1922, Regent model, hought brand new January, 1924, mueage 3,600, condition perfect throughout, licensed, full insurance, 2125
 Evard, 35 Glillon Gardens, Goole.
 612-b678

A.B.C. £105. 1921 Surbiton model purchased in 1922, taxed De-cember, new tyres, 2 doors, dickey, side scroons, unscratched, just had 240 spont on it; exchanges and deferred payments. 325 High Rd, Chiswick. 'Phone, 303. 612-b734

A.B.C., 1922, racing model twin carburettars, streamline body, aeroplano windscreen, built for and accomplishes some speed, £110; cash, deferred, erchangos Railton Cobham and Co., Ltd., 5 Cumberland St., Dean-gate, Manchester. Central 2681. 612-276

A.B.C., 1922 Sports model, new condition, £115. Parker's, Ltd., Brad-shawgate, Bolton; also 246-52 Deansgate, Manchester. 612-201

A.B.C. F.O.C.IL, Ltd., offer 1923, 2 seater and dickey, special body, first-class condition, bargain £125. 5 Heath St., Hampstead (near Tube). 612-230

A.B.C. Sports, 1922 absolutely new condition, standard equipment, owner invalided, 295. Box No. 6454, care of "The Light Car and Cyclecar." 612-b523

A.B.C., 1922, sports model, 2-scater, dynamo lighting, detachable disc wheels, spare, tyres good, all accessories, taxed till December, many extras, whole in really myst-class mechanical condition, exceptionally (ast and reliable, paintwork open to improvement, otherwise perfect, open to any examination willingly, 288. Benmotors, 50-32 lligh St., Wandsworth, 8.W.18. Battersea 1509. 612-778

Wandsworth, 8.W.18. Battersea 1509. 612-778 A.C. Wanted, second-hand A.C.s for each or in part exchange for new models. Highest market value allowed, balance by deferred terms if required. Immediate delivery of new models. Cathness and Ca. Ltd., 65 Gt. Portland St., W.I. Tol., Langham 2172. 612-211 A.C., 1924, Empire, any-weather, 2-scater, painted dark blue, fully equipped and in excellent condition, tax paid, £260. Cathness and Ca. Ltd., 65 Gt. Portland St., W.I. Tel, Langham 2172. 612-212 A.C. Try Henly's. You cannot beat their terms. 91 and 155 Gt. Portland St., W. Mayfair 4201. 222-297

A.C., 1922, special sports model, 2-seater, aluminium body, dynamo and starter, speedometer, revolution counter, clock, excellent condition and small mileago, £225. Maudes, 100 Gt. Portland St., London, W.1. 612-287

A.C. 1923 12bp coupe, only run 6.000 miles, excellent condition, tax paid, £285 Newaham Motor Co., 245 Hammersmith Rd., W. 6. Phone, Hammersmith 80. 612-837

A.C., 1923, 4-seater, luggage carrier, taxed for year, absolutely un-scratched, total mileage to date 3,000, many extras, £310. 51 Upper Richmond Rd, East Putney. 612-b606

Richmond Rd., East Futney. A.C., 120 guiness; 1920-21, 11.6bp, 2-seater, fitted with C.A.Y. lighting and starting, iax paid 1924, beautiful condition throughout, exception bargsin; extended payments and exchanges. White and Mears, 9a Brick St. Peccadilly. Phone, Grosvenor 1804. 612-765 A.C., 1921, 2-seater, in perfoct condition, dynamo lighting, large dickoy, 2 spara wheels, ready for any fourney, any examination, taxed year, £150. Stamp, Bartack Rd., Christchurch, Hants. 612-165 A.C., 1932, 2-seater, and State Reads and State Reads

A.C., 1923, 12hp, special 3-scater sports, £255. Bartlett's, 93 Gt. 612-803

A.C., 1922, 2-scater, large dickey, starter, taxed £170. Smith and flunter, 90 Gt. Portland St. 'Phone, Museum 8136. 612-786

A.C., 1921 Sports, tax paid for year, aluminium body, unmarked and in exceptionally nice condition, £167 10s., extended terms. A. P. Rey, 378-384 Euston Rd. Muzeum 7600. 612-221

A.C., 1923, 200-mile racing car, fitted with practically new engine, speed 90 mp.b., ran in 1923 race, and in only one race since, only crasson for selling owner no longer allowed to race, car all ready for the track, and a bargain for anyone wishing to enter for this year's race, licensed for year, price £375. Berks and Bucks Motor Co., Ltd., Frances Bd., Windsor. 612-736

A.C., 1923 Royal model, practically new, taxed year, 235 guineas. James, over Alexander's, 482 Harrow Rd., Paddington. 612-738 A.-C. 1922, Royal, 2-scater, fullest equipment, faultless condition, 1924 appearance, taxed December, £190, exchange Morgan. 284 South Lambeth Rd., S.W.S. 612-5739

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.

B53

LIGHT CARS AND CYCLECARS FOR SALE . (continued).

ALBERT, 1921, 11.9hp, 4-seater, back screen, taxed, £135. Bartlett's, 93 Gt. Pottland Si. 612-798 ALVIS. New or second hand. I'ry lienly's. Die Sole London Distribus tors. You cannot best their terms. 91 and 155 Gt. Portland St., W Maylair 4201. Alvis Spare Parts and Service Dept., 31-32 Foley St. Maylair 4203.

ALVIS 1921 11hp 2-scater, dickey, starter, .C125. Bartlett's, 95 Gt. 612-800

Portland St. AMILCAR. Boon and Porter, Ltd., Amilcar specialists, offer immediate delivery from stock of latest model semi-specie clover-leal 3-scater all-weather with starter, £215; overlanges. Boon and Porter, Itd., 159-161 Castelnau, Barnes, S.W. 13. Hammersmith 1177. 612-811

weither with stater #215; overbauges. Boon and Porter, I.td., 169-161
Casteinau, Barnes, S.W. 13. Hammersmith 1177. (199-161)
Casteinau, Barnes, S.W. 13. Hammersmith 1177. (199-161)
ARIEL 10, 1924. A-scater model, brand new, do luxe type, all-weather quipment, 5 lamp set, speedometer, etc., alightly shop-soiled only, £190. [1928]
ARIEL 9, 1923 model, dynamo liphting, speedometer, all-weather Guipment, 5 lamp set, speedometer, etc., alightly shop-soiled only, £190. [12-258]
ARIEL 9, 1923 model, dynamo liphting, speedometer, all-weather 5-scater, £120. Black and Finch, 222 Gt. Portland St., W. 1. [Phone, Museum 2271. 612-258]
AUSTINS. Try Henly's You cannot beat their terms. 91 and 155 Gt. Portland St., W. Maylair 4201. (22-258)
AUSTIN SEVEN, 1924 Brooklanda, fitted with sloping V vinderceen, wings and numerous other extras, mileago under 1,000, winner of numerous other extras, mileago under 1,000, winner of numerous cher extras, mileago and advectare, extras, extras extras, extras extras, extras extras, extras extras, extras extras, extras extras, extras, extras, extras, extras, extras, extras, extras, extras,

AUSTIN 7, 1923, chummy, nsual equipment. tyres unpunctured, Hart-fords, in perfect order, taxed and insured, £125; would exchange and cash for Austin Sports. 407 King's Rd., Chelsea. 612-663 AUSTIN, 1923, 71p tourer, tax paid, small mileage, excellent condition, £110. Lookers, Ltd., Manchester. 612-253

Chokers, Ide. Manchester. 612-253
 AUSTIN 7, very late 1923, Chummy, all-weather, side screens, speedometer, year's fax, new condition throughout, last, guaranteed, any trial, £10. 7 Cowdrey Rd., Wimbledon. 612-b591
 AUSTIN 7, 1923, dynamo lighting, electric horn, good tyres, hood, side curtains, all accessories, year's tax, small mileage, any trial, absolutely perfect throughout, 100 gns, bargain, 239 Goldhawk Rd., Shepherd's Bush. 612-b684

herd's Bush. 612-b684 AUSTIN Seven for sale, late 1923, disc wheels, £110 or near offer. 14 Northdown Rd., Margate. 612-b678 AUSTIN 7, 1923, speedometer, spring gaiters, taxed, insured, perfect running order, £120. 52 Kimberley Avenne, Seven Kings. Thone, 10rd 1156. 612-b678 Av. sports 2-seater, aluminium body, 9hp Blackburne, 3 speeds, reverse, hood, screens, fully equipped, speedometer, clock, taxed, perfect, £55. trial. Central Motors, Chesham, Bucks. 612-a794 A.V. moncar, 1921 model, 8hp, fully equipped, £35; exchanges and deferred payments. 'Phone, Putney 1827. Andrews Motor Mart, 151 White Hart Lane, Barnes. 622-296 A.V., £25; exchanges, deferred navments, 1921 A.V. moncars, 192-296

A.V., £25; exchanges, delerred payments. 1921 A.V. monocar, 6hp J.A.P. 2 speeds, disc wheels, smart, fast. Scabridge, 35 Hansler Rd., East Dulwich. Sydenham 2452. 612-755

Bicar, 1921, 9hp, perfect condition, fast, trial given, price £45. ley, 33 North Side, Clapham Common. 612-b660

A.V. Bicar, 8.0bp, J.A.P. engine, hood, screen, lamps, speedometer, dizes, very last and in good order, £25. Sellar, La Corbiere, Uxbrldge Common, Middlesex. 612-b597

Common, Middlesex. BAYLISS-THOMAS, Into 1923, 9hp. 4-seater, starter, in new condition, Beensed bud insured, £150, any trial. II., 26 Wyptond St. Putney. 613-5527 BELSIZE-BRADSHAW. Gordon Watney and Co., Ltd. 31 Brook St., W. 1 ('Phone, Maylair 2966), London agents. Several second-hand in stock, guaranteed, from £100; deferred payments and part exchanges zzz-165.

BELSIZE-BRADSHAW, 1922, 2-seater, all-weather attachment, lifensed December, excellent condition, 80 guineas. 7 Market Bt., Leicester. 612-b707

BELSIZE-BRADSHAW, 1922, 2-senter, Royal blue, speedometer, gradi-meter, step mat, all-weather curtains. Michelin cord tyres, fully equipped, £110. See below.

BELSIZE-BRADSHAW, 1923, 2-seater, dynamo lighting and self-starter, apecdometer, taxed, fully equipped, excellent condition. £125. Mebes and Mebes (Established 1853), The Original Light Car Specialists, 144 Gt. Portland St., W.I. 'Phone, Langham 2230. 612-749

GL. Portland St., W.I. Thohe, Languan 2200. G12:1-0 BELSIZE-BRADSHAW, 9.8hp, coupe, registered February, 1924, dickey, dynamo, self-starter, licensed, fully equipped, superb condition, 145 guineas. Edwards. 175 Gt Portland St., W.I. Maylair 4027. GLESIZE-BRADSHAW, 1922, 2-3-snater, good condition, 475 Lowis, Sherwood Cottage, Oxford Rd., Uxbridge. G12-8692 GLESIOT-WHIPPET, 1921, Shp Blackburn, Lucas dynamo lighting, £35; another with dickey seat, £30; exchanges, deferred terms. Phone, Putney 1827. Andrews Motor Mart, 151 White Hart Lane, Barnes. 612-6992

BLERIOT-WHIPPET 1921 2-seater, 9hp, Blackburn, electric Impr, spare wheel, taxed, new Dunlop cords, very good condition, £27; ex-changes Teddington Garage, 160 High St., Teddington, Kingaton 2562. 612-5529

BLERIOT-WHIPPET, 1921, beautiful condition, full electrical equip-ment, £35. Bloxam, Rosebank, Parrock Rd., Gravesend. 612-b578

BLERIOT.WHIPPET, 1923, 8hp 2-seator, brand new electric entrine, spare which, mechanical starter, etc., 79 guincas; exchanges or deferred. Edwards, 175 Gt. Portland St., W. 1. Maylair 4027. 612-813

BLERIOT WHIPPET. F.O.C.H., I.td., offer Blerlot-Whippet, fully equipped, excellent condition, bargain, £30. 5 Heath St., Hampstead (near Tube). 612-231

SECOND-HAND

LIGHT CARS AND CYCLECARS FOR SALE (continued).

(continued). BLERIOT.WHIPPET, 1921, 2-scater, 8-Ohp Blackburne engine, cruip-ped and in perfect condition, tax paid. £29. G. R. Naylor. 406 Garratt Lane, Earlstleid, S.W. Phone, Wimbledon 2041. 612-644 BUCKINGHAM, 1922-23, 10hp, 5-scater, dynamo, hood, screen, etc., detachable wheels, £75; exchanges. Cleveland Garrage, Ackworth BUCKINGHAM, 1925. 10hp, 2-scater, dickey, dynamo lighting, shi betweather equipment, 89 guineas; exchanges or delerred. Edwards, 155 GL Portland St., W.I. Maylair 4027. 612-814 BUCKINGHAM, 1922 (Sept.), 3-scater, polished aluminium body, dynamo lighting, condition as new, £60. Willetts, Lanesfield, Etting-shall, Wolverhampton.

shall, Wolverhampton. **BUCATTI**, 1921, 4-scater, 68 m.p.h., faxed for year, tyres as new. dy-namo lighting, electric horn, fully equipped in every way, 180 gm, or exchange motorcycle and cash, 51 Upper Richmond Rd. East Putney. 612 6607

BUCATTI, 1922, 4-seater, excellent condition, accept £240 or near offer, or would exchange Rover 8 or similar. 4 St. Stephen's Rd., Hounslow. 612 h654

Hounslow. 6124654 BUCATTI, 1914, Brescia model, sports 2 scater body, very fast, 6125 cash, deferred, exchanges, Railton Cobham and Co., Ltd., 5 Camber-land St., Deanegate, Manchester, Contral 2681. 612-277 CALCOTT, 1921, 2-scater, dicky, Lucas lighting and starter, speedo-meter, clock, tyres as new, very small mileage, finished Royal blue, tax paid December, £135. Mandes, 100 Gt. Portland St., London, W 12-289 CALCOTT 1921 2-scater, conce, with dicky, dvamo and starter, excel-lent condition, fully equipped and licensed. £150; exchange or bire nur-obase. The Light Car Co., 331, 410-414 Euston Rd., London, 612-349 CALCOTT 1923 4 10.5hn starting lichting, run few miles, dicky, alle

CALCOTT, 1923 4, 10.5hp, starting, lighting, run few miles, dickey, all-weather, 2185; 1924, new, just artived a: above 14 £265; offers, exchange, deferred. Cleveland Garage, Ackworth. 'Phone 33 612-b574

CALCOIT, £90; 11hp, 2-seater, dickey, dynamo, lighting, 5 detachable wheels, smart and reliable car. Salmon, 2 Bradbourne Park Rd., Seren-oska. Kent. 612-b572

CALCOIT, 290: 11hp, 2-seater, dickey, dynamo, lighting, 5 detachable wheels, smart and reliable car. Salmon, 2 Bradbourne Park Rd., Seremosks. Kent. 612-b572
 CALCOIT, 1916, 10hp coupe, with dickey seat, dynamo lighting, and in excellent condition, £65. Pilkington's, Grosvenor Garage, Bolton. 612-b589
 CALCOIT, 1916, 10hp coupe, with dickey seat, dynamo lighting, and in excellent condition, £65. Pilkington's, Grosvenor Garage, Bolton. 612-b589
 CALCOIT, £95, 1919, 10hp, 2-seater, dickey, dynamo lighting, and triainvited Vivian, 33 Spenser St., Victoria St., SW.1, Vie 8677
 CALCOIT, 1922, June, 10.5hp, 2-seater, dickey, dynamo lighting, self-starter, speedometer, altweather hood, side curtains, electric and bulb horns, double sereen, grease gun lubrication, pring gaiters new Dunlop tyres, taxed till December, repainted and in splendid condition. £155.
 CALCOIT, 1919, coupe, in first-class condition throughout, etc., 612-b580
 CALCOIT, 1919, coupe, in first-class condition throughout, recently painted in dark blue and completely overhauled, tax paid, dynamo lighting, upholstered grey Bedlerd, privately owned, any trial, £125, Tay, Motors, Okehampton. 612-b581
 CALCOIT, 2-seater, 1922 model, dickey, starter, lorely condition, taxed, £145, exchanges, Instalmenta, Ashbw's, 162 Grosvenor Rd. Vauxhall Bridge, S.W. 'Phono, Victoria 3433.
 CALLOFT, 2-seater, Deroy don agents Calthorpe cars. Promptest delivery new models with efficient service to Iollow Large stock second-hand cars to select from . Defored payments and exchauges arranged. North End, Croydon. Phone 2624. 222-754
 CALTHORPE, 1921, 2-seater, starting, lighting, licensed, 80 gps.

CALTHORPE, 1921, 2-seater, starting, lighting, licensed, 80 gns. Tamplin Motors, Malden Rd., Cheam. Sutton 21. 612-b585 CALTHORPE, 1918, 2-senter, £60. J. Fisher, Abbey Hulton, Stok-612-b667

self-starter, fully

CALTHORPE, 1922, three-muarter coupe, dickey, self-equipped, reedy for use, £135. 5 Putney Bridgo Rd., Putney 2728. Wandsworth 612-513

CALTHORPE do luxe 1922 2-seater, double dickey, self-startor, tax paid, genuine bargain, £125. 5 Putney Bridgo Rd., Wandsworth. Putney 612-31

CALTHORPE, 1922, £135, sports model, aluminium body dynamo lighting, taxed December, 2 spare wheels, now tyres, large copper petrol tank at rear, exceedingly fast; exchanges and deforted payments. 325 ligh Rd., Chiswick. 'Phone, 3063. 612-b732

CALTHORPE, 1922, 10hp, 4-scater, dynamo lighting, starter, fully equipped, excellent running order, appearance indistinguishable from now, tax paid, £129. 83 Penshurst Rd., Thornton Heath. 'Phono, 1672. one, 1572. 612-x524

now, far pale, 2125, 60 ft. and 612-1524 **CALTHORPE** coupe, 1923, 4-speed model, Bedford cord, good order, 2175. Smith and Huuter, 90 Gt. Portland St. 'Phone, Museum 8136. 612-12787

612-787 CALTHORPE 1917 10hp 2-scater and dickey scat, good condition. 270. Parker's, Ltd., Bradshawgate, Bolton; also 246-52 Deansgate, Man-chester. 612-202

CALTHORPE 10.4 bp 2-scater, marcon finish, leather npholstery, tax paid, car bad very careful use, £155 cash, or £38 15s down and 12 payments of £10 3s, 5d, with option of special relate. Lamb's, Ltd, 387 Easton Rd, N.W; 50 High Rd., Wood Green; opposite Hoo 8t. Station, Walthamstow. 612-220

CALTHORPE 1921 2-seater, in exceptionally good condition, £95. A. P. Rey., 378-384 Euston Rd. Museum 7600. 612-222

CARDEN official repair depot All spares for Carden cars stocked; complete overhaufs undertaken. Send for list of improvements Arnott and Harrison. Ltd., inanulacturers of New Carden light cars. 22 Hythe Rd., Willesden, N.W. 10. Phone. Willesden 2297. 222-237

CARDENS: Cardenall Cardenall We always have new in stock at prices from £25 to £35, 2-speed, side-by-side seating, hood, screen, etc. Phone, Putney 1827. Andrews Motor Mart, 151 While Hart Lanc. Earnes. £12-298

CARDEN, do luxo 2-seater, electric lamps, speedometer, clock, horn, hood, etc., condition as new, $\pounds 50$, or consider part exchange motorwele and sidecar. II, Colwell, Lewes. 613-0658

"THE MOTOR MANUAL." The most comprehensive handbook on motoring obtainable. 2s. 6d. net. 2s. 9d. post free.

LIGHT CARS AND CYCLECARS FOR SALE (continued).

CHATER-LEA 2 eater car, in good running order, £32. Newnham Motor Co., 245 Hammersmith Rd., W. 6. 612-838

CITROENS. Try Heniya You cannot beat their terms. 91 and 165 Gt. Portland St. W. Maylair 4201. 222-298

STROEN, 1923, 2-seater, 7.5, lighting, starting, speedometer, all-stather, 5,000 miles, excellent condition, 2115 or oller. Higinbothan, 33 Melrose Avenue, Wimbledon Park. 612-b164

CITROEN, 7.5hp. June 1922, 2-senter, self-starter, speedometer, etc., tax paid, good condition throughout, £85, Hurst, 3 Tulse Hill. Phone, Brixton 117. 512-796

CITROEN, 1922, 7hp. 2-seater, taxed for year, very nice condition, 295: Newnham Meter Co., 245 Hammersmith Rd., W. 6. 612-834

CITROEN 1920 21 4-reater, self-starter, side curtains, taxed, splendid order, 295 or offers: exchanges, deforred payments. Pengo Motor Co., 43 Green Lanc, Penge. 'Phone, Syd, 604 CITROEN, 7hp, 1923, 2-seater, taxed for year, electric lighting and starting. in first pass condition thronghout, 95 gm, or exchange motorcycle rel cash. 51 Upper Richmond Rd., East Putney, 612-b605

CITROEN, 2-center, 11hp, 1921, just been overhauled and repainted, taxed for the like new, £95. Greaves, 6 Sheldon Rd., Cricklewood, 612-b571

Condom 612-6571 CITROEN, 1924, 3-seater, 7.5, Conforta, starter, all-weather, taxed, not 10 weeks old, a real snip, £155. Pole Wedmore, Yate, Glos. CITROEN, 90 guineas, 1922, 2-seater, 7hp. tax paid for the year, self-tarter, stric lighting, excellent conditon throughout; exchanges, ex-tended payment. Mears and Bishop, 225a Hammersmith Rd. W.6. Hammersmith 2230. 612-768

Lammersmith 2230. 612-768 CITROEN, 1923, 11.4hp, 2-seater, English body, double dicker, a.w. curtain, i.f. t. condition, year's licence, £185 Pickworth and Hull. 107 Gt. Portland St. W.1. Langham 1998. 612-248 CITROEN, 1924, 11.4hp, 4-scaler, current model, fitted balloon tyres, dightly stoen soiled, accred £210 Boon and Porter, Ltd., 159-161 Casteloau, Barnes, SW 13. Hammersmith 1177. 612-808 CITROEN, 1922, 11.4, de uxe, sound condition throughout, tax insur-ance year, fully equipped, C145. Sydenbam 2432. Moore Park Hotel Woodvale, Honor Oak, SE,23. 612-328

Woodvale, Honor Oak, S E 23. 612-329 CITROEN, 1922, 7.5hp, 2-scalor, dynamo and starting, epare wheel, oxcellent condition. 298 105. Elco, Ltd. 11-15 Bishopsgale Avenue. Camomile St., E C.3. Phone, Avenue 5548. 612-274 CITROEN, 1923, 2-scaler, 11 Ahp, English body, excellent order, £175. Smith and Hunter, 90 Gt Portland 8t. Phone, Museum 8136 612-789 CITROEN, 7.5hp, 1924, shop-soiled, others, North Esser Motor Co. Saffron Walden. Phone 16. 612-209

CLULEY 1923, 11bp. 2-senter with dickey, all-weather body, tax paid, excellent condition and appearance, £195. Newnham Motor Co., 245 Hammersmith Rd., W. 6 'Phone, Hammersmith 80 612-859 CLULEY, 1924, 2-scater, 10-20hp, shop-soiled, fullest equipment,

CLULEY soupe, 1923. double dickoy seat, licensed year, as new, £265. Smith and Hunter, 90 Gl. Portland St. Phone, Museum 8136. **CLYNO.** 1924. 10.8hp do luxe 4-scater, used only for a few demonstra-tion runs, guaranteed as new, £198. Simister, Jordangate, Macclessfeld, 612-326.

CLYNO 1924 4 saler, as maker's specification, as new, shop-soiled, £200. North Essex Motor Co., Salfron Walden. 'Phone 16. 612-210 COVENTRY-PREMIER, 1922, into model, 2-scater and double dickey: scchanzos and deferred terms, 'Phone, Puthey 1827. Andrews Motor Mart, 151 White Hart Lane, Barnes 612-300

Mari, 151 While Hart Lane, Barties CUVENTRy-PREMIER, £68; exchanges, deferred payments; 1921-22, 2-scaler, dickey, special body, dynamo, 5 detachables, hood, screen, taxed, nice condition. Scabridge, 35 Hansler Rd., East Dulwich. Speciaham 2452.

nice condition. Scabridge, 35 Hansler Rd., East Dulwich. Sydenham 2452 COVENTRY-PREMIER, 1921, 3 speeds, reverse, dynamo lighting, do-tachable whoels, speedomoter, good condition, wonderlak car, tax paid, any trial, 60 gns 21 St. Albans St., Woymouth. 612-b694 COVENTRY-PREMIER, 3-wheelor, water-cooled, dynamo lighting, spica-did condition, £85, near ollor. Connott, "Thornbury," Uctfield. COVENTRY-PREMIER, late 1921, special sports, 2-seater, polished sluminium discs and bonnet painted primrose, dynamo lighting, tax paid, exceptionally emart, in excelent condition. £50. Willietts, Lance field. Ettingshall, Wolverhampton. 'Phone, Sedgley 61. 612-269 CROUCH, £25; exchanges, deferred payments; 1920, 2-3-seater, electric lamps, hood, screen, 5 detachables, fast, comfortable, economical Sea-bridge, 35 Hannior Rd., East Dulwich. Sydenham 2452. 612-762 CROUCH, £25; 1914, 2-3-seater, good condition, tyres good. 5 lamps. Griffin, 35 Park St., Islington, N. CROUCH, 1921, 10bp, 3-speed and reverse. lamps, horn, speedometer, spare wheel, new tyres, in excellent mechanical condition, £45, G R. Naylor, 406 Garratt Lane, Earlsfield, S.W.18. 'Phone, Wimbledm 2041 D.F.P., 1923, 85hp, English 4-seater body, real leather upholstory.

D.F.P., 1923, 85hp. English 4-scater body, real kather upholstory, starter. nll-weather equipment, splendld order, 165 guiness; exchanges or deferred Edwards, 175 Gt. Portland St., W. 1. Mayfair 4027

deferred Edwards, 175 Gt. Portland St., W. 1. Mayfair 4027 DOUGLAS, 10hn, 2-scator, 1921, dynamo lighting, self-starter, excel-lent condition, very fast, £58, targain. 85 Penshurat Rd., Thornton fleath. 'Phono 1572. ENFIELD, 10hp, 4-cylinder, 3-speel and roverso, 5 detachable wheels, 5-lamp dynamo lighting set, 3-seater clover-leat body, hood, screen, tools. This car has been very little used and is in excellent condition, £65; exchanges or deforred. Andrews Motor Mart, 161 White Hart Lane, Barnes. (22-301)

ENFIELD-ALLDAYS, 9hp, 4-cvlinder, 2-scater, 1916, dynamo lighting, Sankey wheels, spare, smart, good, £70. Owner 65 Lewisham Hill, S.F. 612-b633 ERIC-CAMPBELL, 1922, 11hp, 4-scater, long wheelbaso, starter, iszed, £125. Bartletts, 93 Gl. Portland St. 612-802 G.N. specialists. Repairs; sparss of every description in stock: largest service agency in Midlands. The Redditch Garages, Ltd., Redditch. Phone 117. zzz-546 SECOND-HAND

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C.N., 1921, dynamo lighting, spare wheel, speedometer, overhauled, re-painted, £45. Cobbett, 92 High St., Guildford. 612-a806 C.N.s. Several good second-hand cars in stock for immediate sale; southern service agents; expert G.N. mechanics; all spares stocked. The Eastgate Garago, Lowes. 615-5705

Eastgata Garago, Lowes. 615-b705 G.N. 1921 2-seater, dynamo lighting, speedometer, 5 detachables, 248; another, gas lighting, 240; exchanges; deferred. 'Phone, Putney 1827. Andrews Motor Mart, 151 White Hart Lane, Barnes 612-302 C.N. 1922 2-scater, £65; exchange or hire-purchase. The Light Car Co., 331, 410-414 Euston Rd., London. 612-341

Co. SSI, 410-414 Euston Rd., London. C.N., 1922, dynamo lighting, new hood and repainted, bargain, £62 10s. Earls, Tho Atheneum, The Vale, Hampstead, N.W. 3. 612-x535 G.N., 1921, coach-built aluminium body, C.A.V. dynamo, large head-lights, ide door, Nichelln disc wheels, cord tyres, many refinements, tup-top condition, cost £340, accept £90, or exchange for good 3-wheeler or Scott Sociable. Thomas Price, Harewood House, Cardill, wheeler or Scott Sociable. Thomas Price, Harewood House, Cardill, 514-5586

G.N., £52, exchanges, deferred payments. 1921 G.N., 2-seater, hod, sreen, electric lamps, clock, speedometer, nice condition. Seabridge 35 Hanaler Rd., East Dulwich. Sydenham 2452. 612-758

C.N., 1923, 10hp, 4-cylinder, 2-scater and dickey, dynamo, etc., splendid order, 110 guineas. Below.

G.N., 1922, 8hp, 2-scater and dickey, Frazer-Nash o.h.v. engine, dynamo, side curtains, many extras, 95 guincas. Below. C.N., 1922, Shp. 2-seater, dickey, dynamo, licensed, as new throughout, 75 guineas. Below.

C.N., 1922. Shp. 2-scater, all-weather, dickey, dynamo, fully equipped, licensed, exceptional condition, 80 guineas. Below

licensed, exceptional condition, 80 guiness. Below
C.N., 1920, Bhp, 2-seater, speedameter, spare wheel, licensed, good order, 40 guineas; exchanges or deferred. Edwards, 175 GL. Portland St. W. Mayiar 4027.
C.N.s, two, 1921, dypamo lighting, repainted red and blue, in tip-top mechanical condition, 45 gns., or exchange motorcycle and cash. 51 Upper Richmond Rd., East Putney.
C.N. and Normer, 1921, brand-new back tyres and hood, aluminium dash, large steering wheel, taxed 1924, tools, spares, perfect condition, 109, 55. Homestead, Smitham Bottom Lane, Parley.

1095. 612-b568
G.N., Lodero, 1921, perfect condition, any trial, 67 guineas. Stapylton, Springdalo, Marson Rd., Clevedon, Somerset. 612-b566
G.N., 1920-21, 50 guineas; owner-driven 13,000 miles, very completely equipped with Smith's dynamo lighting, new black hood, shock absorbers, 5 disc wheels, tyres nearly new. The car has been most carefully treated and just overhauled by makers. Guaranteed perfect condition. A gennine opportunity for a chesp car. Private. 14 Gourock Rd., Eltham, S.E.9. 612-b569

Rd., Eltham, 5.2.5. G.N., Vilesse, now 1921, just overhauled, grey and aluminium, D wings, ongine nearly new, dynamo, lamps, Klaxonette, speedometer, 5 wheels, 249, part exchange solo or combination; appointment. Barrabrook, 601d/ord Rd., Chertsey. 612-b640

G.N., 1922, late, all in extra good condition, sell cheap. Spurling. 8 Conthopo Rd., Gospel Oak, Hampstead, N.W.3. 612-b649

Conthopo Rd., Gospel Oak, Hampstead, N.W.3. 612-6649 G.M., Black and Finch, 222 Gt. Portland St., W.1, concessionairea G.N. cars, have 1920 touring model, 255; 1922 touring model, 275; 1922 all-weather model, 277 10s.; 1922 Vitesse model, overhead cam-shaft, dynamo lighting, speed 75 m.p., polished aluminium body, 2150; 1924 Anzani-engined Sports, speed 75 to 80 m.p.h., polished alu-minium body, small milesge, 2230. Others in stock from £40 upwards. Phone, Museum 2271. 612-260

G.N., 1920-1. dynamo lighting, speedometer, good order, £53. 61 Derby St., Rochdale. 612-b668

G.N. £48, offer. Smart 1921 (July) G.N., licensed, electric, acetylene lighting, just overhauled, mechanically perfect, genuine, Fruiterer, next "George." Wanstead, E.11.

G.N., £75. 1922, dynamo lighting, spare wheel, taxed, new tyres speedometer, in spinoidid condition throughout; exchanges and deforred payments. 325 High Rd., Chiawick. 'Phone, 303. 612-b733

C.N. Legero late 1922, won many awards, £67 10s. E. J. Anderson. 21 Walsingham Rd., Enfield. 612-b698

 21 Waltingman Rot, Enterd.
 C.N., 1921, dynamo lighting, in perfect order, any trial, £46, tax paid. Day, Motors, Okehampton.
 G.N., 1922-23, exceptional condition, front handle start, dickey scat, 59 guineas, guaranteed. 31a Hydethorpe Rd., Baiham. Phone, Stranham guinen 3440.

G.N., 1923, dynamo, dickey, disc wheels, many accessories, excellent cr filtion, £85. W.B.G., 5 Lambeth Palace Rd., S.E.I. Hop 5279, G.N. An exceptionally well cared for 1922 8.75p G.N. 2-scater and dickoy, fully equipped with dynamo, electric lighting (5 lamps), horn, peedometer, clock, etc., 5 detachable wire wheels all trees as new, paint, hood and side curtains excellent, upbolseer, tap and clock of 10, private owner. 21 Balham High Rd. 'Phone, Streatham 3055.

G.N., new Mav, 1924, sporting, fast, special, £100, body three-quarter-seater, shalt drive, guaranteed perfect, small mileage. 100 guiness. Niss S., 52 Linver Rd., Parsons Green. 614-b744
 G.N., 1921, Shp. Lucas dynamo lighting, spare wheel, good tyres. Speedometer, fully equipped, in excellent condition, £48. G. R. Naylor, 406 Garratt Lane, Earlsfield, S.W. Phone, Wimbledon 2041. 612-745

406 Garratt Lane, Earlsfield, S.W. Phone, Windergon 2042. Olertoo G.N., 1921. 2-seater, dickey, dynamo lighting, detachable wheels, sparse, tyres almost new, all accessories, taxed tril December, many extras, upholstery, paint and hood very good, in first-class condition willingly, £58, choice of 3 others all as above. Hermoters, 30-32 High St., Wandsworth, SW-18. Battersea 1509. GREGOIRE, 1923. Shp. 4-cylinder, 1.098 a.c., 2-seater, semi-snorts, very fast, 40 m.p.g., folding screen, hood, with envelope, etc., £85 or best offer. Nash, 105 Cadogan Gardens, S.W. CRECOIRE, 95. 1922.3 2-seater milesee 3000 dynamo, water-

CRECOIRE 9.5hp, 1922.3, 2-scater, milcage 3,000, dynamo, water-cooled, 4-cvlinder, overhead valves, epare wheel, never used, guaranteed perfect, £90, 55 m p.h., 45 m p.g. Emmony, 54 Beck St., Nottingham. 612-b296

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0.W.K., Shp. 4 speeds, speedometer, £45. Maudes, 100 Gt. Portland St. London 612-288

C.W.K., 1920, 4-cylinder, 2-seater, sunk dickey, very smart. running pericetly, 268: also 1919 2-cylinder engine, overhauled, £38. Penge Motor Co., 43 Green Lane, Penge. 'Phone, Syd. 604. 612-315

Motor Co. 43 Green Lane, Penge. Phone, Syd. DO4.
G.W.K., 1921, 2-scater, with dickey, spare wheel, dynamo lighting, great bargain, £55. Bunting's Exchance. Wealdstone, Middlescy.
G.W.K., 1921, dyname, 2-3-scater, double dickey seat, new tyres all round, taxed, in good condition, 80 guineas, or exchange motorcycle and cash. 51 Upper Richmond Rd., East Putney.
G.W.K. F.O.C.H., Ltd., offer 1920-21 G.W.K., 2-scater and dickey, dynamo, excellent condition, bargain. 5 Heath St., Hampatead (near Pube).

Q.W.K. Several good second-hand cars in stock from £65 upwards; ex-abanges and deferred terms arranged. North Essex Motor C., Salron Walden. Tel. 16.

Walden 181, 10. G.W.K., 1921, 10.4bp, 4-scater. dynamo lighting, detachable wire wheels, spare, tyres very good, all accessories, taxed, upholstery, paint and hood very good, in first-chaes mechanical condition, exceptionally reliable, smart and fast toering car, open to any examination willingly, #85 Benmotors, 30-32 High St., Wandsworth, S.W.18. Battersea 612-780

G.W.K. 1921, 2-scater, dickey, all-weather, taxed, paint as new, £70 Denman Motor Agency, 4 Denman Place, Piocadilly Circus Regent 985

GWYNNE 8, 1923, small 4-scater, 3,000 miles' guarantee, tax paid

CWYNNE 8, 1923, 2-seater, tax for year, perfect, £130 Denman Motor Agency, 4 Denman Place, Piccadilly Circus Regent 986. 612-353

GWYNNE 8, 1923, 2-seater de luxe, double dickey, side curtalus, farter, many extras and licensed, just overhauled, £138; also Gwynne 8, 1923 chummy, statter, speedomeler and many extras fully licensed, 2138. Obinery, Gwynne Specialist, Olympia Motor Oc., 1 Hammer-mith Rd. Kensington. 'Phone, Western 4140 and 3568. zzz-12

GWYNNE 8, 1923. Obummy body, electric lighting and starting, very small mileage, all-weather stachment, £135. 7 Market St., Leloster. 612-b709 GWYNNE 8, 1923 2-seater. dynamo lighting, starter, tard, also 1923 d-seater (chummy), dynamo lighting, tared, £140 each. Both cars almost like new. The Gatage (Batablished in this street over 14 years), 12 Oorn-wall Terrace Mews, N.W.1 (rear Baker St. Tube Station). Phone, Lang-ham 2933.

HANDS, 1922, 10bp, 2-seater and dicker, starting and lighting, repainted and new bood, thoroughly overhauled, bargain, 100 guineas; exchanges, extended payments. Mcars and Biahop, 225a Hammersmith R4, W 6. Hammersmith 2230. 612-771

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HILLMAN racing car, run consistently at Brooklands, stream-lined, adapted for last road use, dynamo, screen, mudguards, spiondid condi-tion, £195; extended terms. A. P. Rey, 378-384 Enston Rd. Museum 612-223

7600. HGRSTMAN, 1924, 12-30hp Anzani engine, 4-scater, touring model, pholatered in real leather, spare wheel, tools, 5 lamps, speedomeler, olock, electric horn, dash lamp, luggage grid; this car has not done 5,000 miles, and is in excellent condition throughout, price £260 a bargain Box No. 6167, c.o. "The Light Car and Cyclecar" zzz-958

HORSTMAN, 1921, 11bp 4-seater, starter, taxed 1924, transmission 2125. Bartletts, 93 GL. Portland St. 612-805

HUMBER, 1923, 8hp. chummy, excellent condition, just overhauled, clock, hood, corer, etc., 8,000 miles, any trials, £175. Rolmes, 11 Golden Bq., W.1. 612-b130

HUMBER, 1924, 8hp. Chummy. carefully run 1,000 miles, absolutely new condition, tax paid, insured July 1925, dynamo lighting and starter, lock, speedometer, electric and bulb horn, etc., £209. Box No. 6459, a.c. "The Light Car and Cyclecar." 612-b655

JOWETT, 1923, 4-seater, complete, with extra accessories, mileage under 900, tax paid, £170. Bennett, Log Cabin, Challent St. Giles, Bucks.

JOWETT, 1924 (March), 4-scater, as now, starter, oversize tyres, Solex carburetter, special exhaust, giving deep note, licensed to year end, 2175 or near offer. Howard, The Cedar House, Ripley, Surrey, 612-b577

JUWETT, 1923, 2-scater and dickey, self-starter, tax December, small mileage, open to R.A.O. examination, £140. 30 Harold Rd., Upper Norwood 612-b682

Norwood. 612-b682 JDWETT, 1923, 2-saster, double dickey, speedometer, extra sir ralre, tool bit, etc., £125; trial by appointment. Phone, 19 Paimers Green, 75 Warwick Rd, N.11. 612-b673 UOWETT, 1923 (Sept.), lighting, starting, speedometer, years tax, in excellite condition. A.S.O., 166 Gt. Portland St., W1. Telephone, Museum 6626. 612-268

JOWETT, 2-seater, dickey, Wtarter, fully licensed and insured, any trial, £145. H., 26 Wymond St., Putney. 613-x526 UGWETT 1923 Thp 2-seater, dickey, dynamo lighting, iully equipped, new condition, 130 guineas; exchanges or deforted. Edwards, 175 Gt. Portland St., W.1. Maylair 4027. 612-817

KINGSBURY, milesge under 2,000, perfect order, dynamo, 5 lamps. mearest to 270. 12 Grange Rd., Willesten Green. 612-b583 LACONDA, 1921, 11 hpromps with double dickey, starter and lighting. wery nice order, 2115. Newnham Motor Co., 245 Hammersmith Rd., W. 6. Thone, Hammersmith 80. 612-833

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SECOND-HAND

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LAGONDA conpe. 1921, complete, fully equipped, tax paid, bargain 26 lligh St., Safiron Walden. Phone 16. 612-207 LAGONDA coupe, 1914, dynamo, taxed, trial, private, £45 or ex-change, cash adjustment Robinson, Charlemont, W. Broniwich 614-5593

LACONDA coupe, 1922 medel, lighting and starting, repainted and licensed, 95 gns. 7 Market St. Leicester. 612-5708

Hoensed, 95 gns. 7 Market Nr. Leicester. D12-0500 LACONDA coupe, 1923 model, being repainted and overhauled, £165. Strettom and Smith, 12 Woodstock St., Oxford St., London. 612-309 LEA.FRANCIS 1923 10hp 2-scater and dickey, dynamo lighting, horn, sparo wheel, unregistered, used two or three times for demonstration purposes, now condition, tyres excellent, £135. G. R. Nayler. 406 Garratt Lane, Earlifield, S.W.18. 'Phone, Wimbledon 2041. 612-741

Garraft Lane, Earlineid, S.W.18. Foore, Winnetcom 2041, 012-04 MARLBOROUCH, Chp. 4-cylinder, sports 2-seater, painted aluminium, oltetrio light, trial, £55. Chean-side, Worcester Rd., Sutton. Tel. 1377. MARLBOROUCH, 1914, 2-seater, sporting appearance, pice order, licensed, £50. Stretton and Smith, 12 Woodstock St., Okhed St., London., 612-508

MARSEAL, 1924. 4-seater, small mileage, dynamo lighting and starter, all-weather equipment, £155 Maudes', 100 Gt. Portland St., London, W.1. 612-286

w.1. MATHIS, 1923-24, very special 8hp 2-seater sports, milrage negligible, overy conceivable accessory, including wire wheels and Hartfords, cost £595, sell £245; exchanges entertained. Motor Mac's, Louison Rd, Bouthampton. zzz.895

detachable

Southampton. 222-895 MERRELL-BROWN, 1921, 4-cylinder Coventry-Climox, detachable wheels, 4 now tyres, licensed December, £50. Paulton' Gatage, North st., Wolverhampton. Tel. 1335. MORCAN specialists James and Co. (Sheffield), Ltd., 263 (Ecclesal Rd., Sheffield Telephone Central 2460 Good stock of sparse carried If in difficulty wire us New and second-hand machines nearly silways in stock. 222-337

stock 222-337 MORGAN Service Depot. Official appointed repairers by the Morgan Motor Co. for London Full range of spares carried New and second-hand machines always in stock Trade supplied Official agents. Housac's, 243 Lower Clapton Rd. E. 5 Daiston 24018 rzz-84 MORGAN, 1920-21, G.P. dynamo, miendid condition, £80, or exchange combination and cash, offers. C. Thompsen, 64 Matthiaa Rd. N 10 Dalston 2108. 6714-08

Dalston 2108. MORGAN, Sontember 1922, Anzani acro, fitted with dynamo lighting, speedometer, clock, specilight, alumining discs, hood, new spreckets and chains, special induction, giving 60 miles p.h. and 75 to the gallac, ongine overhauled by makers, mechanically equal to any 1924, 100 guineas, all in policy transferable, 150 Uxbridge Rd., Shepherd's Bush. 612-b661 Store and the second state of the following Morgans for sale. All fully guaranteed

1922 Grand, Priz, w.-c. M.A.G. engine, speedometer, hood, screen, tax paid, just overhauled, £95. 1822 Grand Priz, w.-o. M.A.G. Lucas dynamo, hood, screen, speedometer, etc. £95.

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1924 De Luxe, Ehp w.-c. J.A.P., dynamo, hood, screen, etc., as new, #125

1920 Grand Prix, 8hp w.-c. J.A.P., lamps, horn, screen, tools, etc., extra child's seat at rear, ±75.

1924 Grand Prix, w.-o J.A.P., dynamo, finished red, fully equipped, C138, brand new, immediate delivery. 1924 Standard Popular, 8hp, a.-c. J.A.P., fully equipped, finished grey, £110.

Any of the above machines can be supplied on deferred terms. Your present machine accepted in part payment. Homac's, Morgan Service Dept, 243 Lower Clapton Rd, N.E. Phone, Dalston 2408. 612-776 MORGAN, 1923. de luxe, 8hp J.A.P. w.-c., spares, insured March, splen-did condition, £95 or near offer; evenings. Challen, 64 Wahn Lane. Willesdon Green. 612-b643

Willesdon Green. 612-b643 MORGAN, 1924 Aero, 10hp, o.h.v., racing Blackburne, S.P.J. jet, disc. front-wheel brakes, clock, speedometor, dash lighting, aluminium step. electric and hulb herns, dyname lighting, electric blue colour, very smart and fast machine, coat over £200, practically brand new, taxed, insured. £160 or eller; any trial. 97 Elmsleigh Rd., Wandsworth. 612-b636 MORGAN, £45, exchanges, delerred paymente, hout 1916, JA.P. hood, screen, lamps, smart, runs well; also 1921 de luro Morgan, M.AG. w-c., smart, fast, £72. Seabridge, 35 Hansler Rd., East Dulwich. 612-760

Sydenham 2402. MORGAN, Grand Peix, 1920, tyres as new, taxed for year, 55 guineas, or exchange motorcycle and cash. 51 Upper Richmond Rd, East 612-b603

Patney. 612-b603
 MORGAN, £65. 1921 G.P. Morgan, w.-c., J.A.P., clock, specilometer, overhauled and repainted, new tyrcs, exchanges or deferred arranged. Ras, 11 Willoughby Rd., Hampstead, N.W. 3 (near Tube). 612-b579
 MORGAN, sporting, about 1915-16, hood, secreen, lamps, etc., discs, new bevol and crown wheel, new chains, back forks and mudguards, any trial, £29 10s., ne offers. Burrows, Belmont House, Ackworth
 MORGAN, £80, 1921-22, 4-speed, M.A.G., water-cooled, Grand Prix model, dynamo, Bybring, speedemotor, tared December, new tyres, splendid runner; exchanges, 325 High Rd., Chiswick. 'Phone 305. 612-b737
 MORGAN, 1924, Grand Prix, dynamo, J.A.P., speedometer and discs, taxed for the year, in first-class order, £117 10s. Below.

MORGAN, 1923, Grand Prix, dynamo, Anzani engine, speedometer, discs, etc., excellent order, taxed, £107 10s. Below.

MORGAN, 1922, Grand Priz, dynamo, M.A.G., speedometer, etc., re-painted, mirror, spiendid condition, taxed for year, 297 10s. Eles, Ltd. 11-15 Bishopsgate Ave., Camomile St., E.C.3. Phone, Avenue 5548 612-271

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MORCAN de luxo, M.A.G., 1920, speedometer, clock, side screens, shock absorbers, elc., smart, any trial, £65, offers. Billiam, Mount Pleasant, Bracknell, Berts.

Bracknell, Berts. 612-069 MORCAN, do luxe, 1923, 10hp, water-cooled M.A.G., dynamo lighting, taxed, splendid condition, 95 guineas. 44 Marberton Rd., Upper Holloway, N.19. 612-0670

Laxee, spiendid condition, 95 guineas. 44 Harberlon Rd., Upper Holloway, N.19.
MORGAN, 1923, very late Grand Prix, 1924 improvements, dynamo lightlag, taxed, condition as new, £95. 31a Hydethorpe Rd., Bahnm. 612-733
MORGAN, J.A.P., late model, engine, etc., as new, beautifu apperance, fax paid, drive away, bargain, 58 guineas. Oakhurst, Hainault Rd., Ohlgwell, London. 'Phone, Chigwell 27.
MORGAN, do luxe, 1920, Ship J.A.P., colour blue, speedometer, tax paid, tyres very good. £65. Hall, 91 St. Peter's St., 8t. Albana. 612-295
MORGAN, 1921 de luxe, M.A.G. A.C. dynamo, ratchet brake good condition snip, £65. Moseley, Rhyswg, Abercara, Mon. 612-x528
MORGAN, 1923 G.P., water-cooled, a.h.v., Anzani engine, dynamo lighting, ycar'slicence, splendid order, 98 guineas. Below.
MORGAN, 1923 G.P., dynamo lighting, electric horn, etc., splendid ordor, 95 guineas; schanges or delerred. Edwards, 175 Gt. Portland Bt. W. Maylair 4027.
MORSAN, 2023 CFORD, 1914, 2-senter and dirkey. £65: cash, deformed

Bt. W. Maylair 4027. 612.822
 MORRIS-OXFORD, 1914, 2-senter and dickey, £65; cash, deferred exchanges. Railtou, Cobiam and Co., Ltd., 5 Cumberland St., Deansgate, Manchester. Central 2681. 612-278
 MORRIS OXFORD, 1915, w-c engine, acetylene lighting, spare wheel, milleage no. 10,000, perfect couldion, £68. Morgan, Peegrate, Nature M. W. Green, N.15.
 NEW CARDEN, £59; 1923, practically new, 1,300 miles, speedometer, 5 detachabit., fully enupped, electric lighting, taxed, any trial. 76
 Langham Rd., W. Green, N.15.
 NEW CARDEN, conc. only, 1923, senter. The bood sereen 5 detachabit.

Detachabit, huly coupped, electric lighting, taxed, any trial. 76 (12-6638)
 NEW CARDEN, one only, 1923, 2-seater, 7bp, hood, earcen, 5 detachable wheels, any nice condition. 255. Below.
 NEW CARDEN, one only, 1924, family model, will carry 5 adults or 2 children and 2 adults, new and unregistered, used demonstration only; exchanges and deforted term. Thone, Putney 1827. Andrews Motor Mart, 151 White Hart Lane, Barnes.
 NEW HUBSON, 10hp, w-c M A.G. engine, fully equipped, spare wheel first registration flay, 1925, excellence to condition throughout, any trial, bargain, £100, no olders, George, 87 Sperling Rd, Tottenham, 612-m338
 PALLABIUM, 1924, Victory model, delivered new Juno 1st, 2,500 miles only, absolutely as new, 2315. Black and Finch, 222 Gt. Portland St. W. 1. Thone, Museum 2271.
 PERRY, 1915, Thp, 2-scarer water-cooled dynamo lighting types.

PERRY, 1915, 71h, 2-scier, water-cooled, dynamo lighting, tyres almost new, tax paid for the year, smart appearance, £48. C R. Naylor, 406 Garratt Lane, Earlsfield, S.W.18. 'Phone, Wimbledon 2041.

PEUGEOT, 1922, 8-10hp, sports car. very handsome, boat-shape, 2-scater, completely fitted, dynamo lighting, specially tuned engine, real bargnin, 285; exchanges, easy terms, etc., arranged. Cummings, 101 Fulbam Rd., London, S.W.3. 612-284

PEUCEOT de luxe, lato 1923, 8-10hp. 2-seator, with dickoy seat, dynamo, etc. etr fully equipped and little used, bargain, £105; ex-changes, cave terns, etc., arranged. Cummings, 101 Pulham Rd., London, S.W.S. 612-283

Charloges, Party terms, etc., Arranges. Cummings, 101 Punkar Rd., 612-283 RENAULT 8bp 2-door English coupe (registered March, 1924), 2 months old, painted blue, blue leather upholstery, leather head, dickey, starter, balloon tyres, electric rear warning sign, clock, speedometer, years licence, new condition throughout, 250 guincas; exchanges or deferred Edwards, 175 Gt. Portland St., W 1. Maylair 4027. 612-818 RHODE, 1923, dynamo lighting, taxed, side screene, clock, speedometer, as new, £125. Greaves, 6 Sheldon Rd., Cricklewood, London. 612-b570

as new, £125. Greaves, 6 Sheldon Rd., Cricklewood, London. 612-b570 **RHODE**, 9 5hn. 1922, occasional 4-seator, grey, black wings, dynamo Ughting, speedometer, clock, dash lamp, cocoanut mats, fully equipped, excellent condition, taxed for year, £135. See below. **RHODE**, 9.5hn, 1923, all-weather saloon, dynamo lighting, self-starter, speedometer, clock, dash lamp, 5 lamps, petrol can and carrier, luggage carrier, Micholin halloon tyres, tax paid for year, fully equipped, ex-cellent condition throughout, £175. Mebes and Mebes (Est. 1893), The Original Light Car Specialists, 144 Gt. Portland St. W. 1. "Phone, Langham 2230. Green and the second starter of the second s

AHODE, 1922, clock, speedometer, new tyres, Everlastic tubes, £125. 85 West End Rd., Southall, Middlesex. 612-b631

RHODE, 1922, excellent condition and appearance, 50 miles' trial run, 2115. Parker, c.-o. Powell, Chorley Wood, Herts. 612-b701 AICHARDSON light cars. Spare parts in stock. Richardson's, Mill-thorpo, near Sheffield zzz-275

RICHARDSON, 1920, 8hp J.A.P., splendid condition, sparse, ctc., £30. Silver Becch, Coroners Lane, Farnworth, Widnes, Lancashire, 612-b690

RILEYS. Guaranteed by the Kiley specialists Exchanges. Lewes Motor Works, Sussex 615-1942

RILEY 1923 special snorts 4-scater "Show Car" in practically new condition throughcut, £325; exchanges or hire-purchase. The Light Car Co., 331, 410-414 Euston Rd., Lendon. 612-343

Car Co., 331, 410-414 Euston Rd., Lendon. 612-343 RILEY, 1924 (March), winner medals and cups, 4-seater sports, black and red does over 60 m.p.h., many extras and real all-weather car; any trial. Havers, 1 Castleton Mansions, Barnes. 612-b685

RILEY, 1924 11-40hp, 4-scatter, praotically new, used for few demon-strations, £305. Pickworth and Hull, 107 Gt. Portland St., W.I. Langham 1998. (512-219)

Ritz, 4-cylinder, 10hp, perfoct condition, revarnished, 40 m.p.g., English screen and wings, up-to-date appearance, acetylene lighting, 1916 car, gearbox and differential perfect, reliable, £48. 47 Hamilton Rd., Reading. 612-b699

Rd., Reading. ROVER, 1922, splendid condition, guaranteed mechanically perfect, dynamo lighting, side curtains, mirror, mat, petrol carrier, 2 spare tyres, kil, 85 guiness. Owner, 4 Gaywood Rd., Walthamstow. 612-a195 ROVER EIGHTS. If you want to buy a

ROVER S. If you want to sell a

ROVER 8. Write, Call or 'phone The Hampton Eng. Co. You can be certain of a straight deal. St. John's Rd., Hampton Wick, Middlesex. 'Phone, Kingston 202. 612-662

LIGHT CARS AND CYCLECARS FOR SALE (continued).

ROVER 8, 1921. grey, recently repainted, new wings, fully equipped, spring galters, elock, speedometer, dashboard lighting, tyres good, £75; by appointment. Pamsey, 93 Sussex Rd., Watford. 612-b647

FOVER 8, 2-scaler, 1923, perfect condition, A.W. screens, laxed Decem-ter, insured April 1925, any trial, £100. 147 Elborough St. Jouth-fields, S.W. 612-b728 ROVER Eights in guaranteed mechanical order. 1924 4-seator, £125; 1923 Chummy model, £110; 1922 de luxe 2-seater, £95; all in excellent condition and tax paid. Godfreys, Ltd., 366-8 Euston Rd. N.W.A. fuseum 3401.

Museum 3401. Museum 3401. ROVER 1923 Chummy, excellent condition, extras £95; 1922 2-setter, painted blue, very nice order, £80. Newnhum. Motor Co., 245 Ham-meramith Rd, W.6. ROVER, 8hp, sports, 1921, lorely order, taxed year, £65; exchanges; deltrred payments. Penge Motor Co., 45 Green Lane, Penge. 'Phone, Sydenham 604. ROVER, 8hp, 1924 4-seator model de luxe, with starter, painted grey, extra pair O.A.V. headlamps, tenneau cover, hood, envelope, cic., tax paid, smartest Rover on the road, run 800 miles, £150. Filk-ingtons, Grosvenor Garage, Boltan. ROVER, 8hp, 1923 Chummy model, self-starter, speedometer, very nice cordition throughout, £112. Kirk and Co., 22 Fraed St., Faddington, W2. 'Phone or wire Paddington 6049. ROVER, 8hp, 12, 2, speice dynamo lighting entre wheel speedometer

ROVER Shp 1921 2-scater, dynamo lighting, spare wheel, speedometer, observation mirror, good tyres, tax pald, £72. Kirk and Co., 22 Praced St., Paddington, W.2. Phone or wire Paddington 6049 612-752 ROVER 8, 1921-1922, dickey seat, taxed, tip-top condition, 85 guineas, or exchange motorcycle and cash. 51 Upper Richmond Rd., East Putney. 612-651

guineas, or exchange motorcycle and cash. 51 Upper Richmond Rd. East Putney. 612-b611 RUVER, £68; exchanges, deferred payments, 1921 Rover 8hp 2-seater, dynamo, hood, screen, 5 detachables, nice condition. Scabridge, 35 Hansler Rd., East Duivich. Sydenham 2452. 612-759 POVER, £69; exchanges, deferred payments, 1921 2-seater, dynamo, new hood, side screens. 5 detachables, taxed splendid condition. Sen bidge, 35 Mansler Rd., East Dulwich. Sydenham 2452. 612-753 ROVER, 8hp, 1921, dynamo, mechanically sound, £65, no offera. Careland Garage, Ackworth. 612-b573 ROVER 8, 1924, de luxe, 4-seater, starter, new condition, 'taxed and insured, ±155. Seen and tried by appointment at Gatilands, New Barnet. Tcl., Barnet 421. 612-b569 ROVER 8, 1921, painted blne, speedometer, nice condition, god tyras, 265. Sydenham 2452. Hibier, Moore Park Hotel, Woodwale, Honor Oak, S.E. 23. ROVER 8, 1924, 4-seater model de luxe, self-starter, clork, speedometer, etc., taxed and insured, as new, £145. 112 Strond Green Rd., Finsbury Park, N.4. FOR 8, 1921-2, low mileage, excellent condition, almost new Dur-

meter, etc., taxed and insured, as new, 2145, 112 Strott Gi2-687 Finshury Park, N.4. Gi2-b687 **ROVER 8**, 1921-2, low mileage, excellent condition, almost new Dun-lops, bnlb and electric horns, mat, mirror, speedometer, sparse, taxed year, 275, 29 Underhill Rd., East Dulwich. Gi2-b680 **ROVER 8**. We usually have several 2 and 4 scaters to choose from, from 270 upwards. Cash, deferred, exchanges. Railton, Coham and Ca, Ltd., 5 Cumberland St., Deausgate, Manchester. Central 2681. G12-579

HUVER, chummy, 1923, in excellent condition, £110. Faulton's Gar-age, North St., Wolverhampton. Tel. 1335. 222-794 ROVER 8, 1921, dynamo, spare wheel, speedometer, very good condi-tion, £65. Elec. Ltd., 11-15 Bishopsgate Ave., Camomile St., E.C.3. 'Phone, Avenue 5548. 612-272

^{(Phone, Arenue 5548.} 612-272 **ROVER 8,** 1922, 2-seater, good order throughoul. £85. Smith and Hunter, 90 Gt Portland St. Phone, Museum 8136. 612-785 **ROVER.** 1922, dynamo lighting, spare wheel, Michelin cables through-out, hood, windscreen, speedometer, electric and hulb horns. etc. and year's tax paid, £78, no offers. Delancey St. Garage, Camden Tawn, N.W.1. 612-b533

612-5533 ROVER, 1922 model, 8bp, all-weather equipment, splendid order and condition, tax paid, etc., £80; exchanges or easy term; arranged. Com-mings, 101 Fulham Rd., London, S.W.3. 162-198

ROVER 8, Chummy, late 1925, new tyres, speedometer, electric horn, condition and appearance faultless, £100. Robinsons, Drepers, Lowestolt (South). 612-b595

ROVER, Shp. dynamo, dickey, glass side screens, coupe attachment, 80 guineas. Maitland, Winton, Guildford. 612-b598

ROVER, 8hp, dickey scat. 5 wheels, new August, 1922, licensed. £85. Gore Bros., Market St., Atherton, Lancs. 612-x522

ROVER 8, 1922, 2-seater, dynamo lighting, spare wheel, 4 side screens, clock speedometer, 2 new Dunlop cords, sat Brico riugs just fitted, expert examination invited, £75. Ralph, 62 Basharst Mews, 612 240

ROVER 8, £70, 1922, good order. 2 Lordship Park Mews, Allerton Rd., Green Lanes, N.16. 612-b639

ROVER, Shp. 1924, 4-seater, starter, clock, speedometer, a.w. curtains, as now, year's tax, £145. Pickworth and Hull, 107 Gt. Portland St., W.1. Langham 1998. 612-250

ROVER 8, 1923, chumnw, tax paid, excellent condition, appearance as new, £115, owner bought larger car. Seen at McKinnon's Motor Works, Stafford Rd., Wallington. 612-x538

ROVER, 1923. 8hp, chummy, dynamo, clock, speedometer, taxed, in excellent condition. A.S.C., 166 Gt. Portland St.W.1. Telephone, Museum 6626. 612-267

ROVER, 1922. 8bp, 2-sealer, excellent condition, £80. Bartletts, 93 Gt. Portland St. 612-804

ROVER, 1924. 8hp, 2-seater, dickey, finished blue, many extras, taxed for year, £125. Boon and Porter, Ltd., Rover ageuta, 159-161 Castel-nau, Barnes, S.W. 012-610

ROVER. 1922, 8hp de luxe 2-seater, clock and speedometer, dynamo, fully espisped, licensed, superb order, 88 guineas; exchanges or deferred. 175 Gt. Portland St., W. Maylair 4027. 612-819

ROVER, 8bp. 1922, dynamo, speedometer, side curtains, and full equipment, excellent condition and appearance, £70, year's tax. Cabbon, Westgate House, Bedford Place, W.C. 612-511

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SECOND-HAND LIGHT CARS AND CYCLECARS FOR SALE

(continued).

ROVER, 1924, 8hp, 4-seater, dynamo, speedometer, side curtains, etc., perfect condition, very fast, appearance as new, colour Nile blue, taxed for year, £125. Martin, 10 Herbrand St., Russell Squara, W.C. Tel., Museum 6554. 612-310

ROVER Eight, 1923, 2-seater, all-weather attachment, licensed December, perfect condition, repainted, 90 gns. 7 Market St., Leicoter.
 SALMSON. Apply to the London distributors, Gordon Watney and Co., Ltd., lor second-hand Salmson cars. Several always in stock. Part exchanges and special deterred terms arranged. 51 Brook St., London, W. 1. Phone, Maylair 2966.

SALMSON. Mann and Handover, Ltd., authorized agents for Salmson cars, always have a selection of good second-hand models; delerted terms or part exchange. 116 Gt. Portland St. Museum 2878. zzz.745

SALMSON, 1922, electrically equipped, taxed, insured May, nice condi-tion, 90 guineas. Jerdan, High St., Milton, Sittingbourne. 612-b657

SALMSON, 1932, 2-scater de luxe, dynamo biennecount. 61226037 owner-driven, general condition perfect, any examination, taxed year, £100. Stamp, Barrack Rd., Christehurch, Hanis. 612-b665 SALMSON 1923 4-seater all-weather model, only done 2,000 miles, in perfect condition, £135, Black and Finch, 222 Gt Pertland St. W. 1. Phono, Museum 2271. 612-261

5ALMSON, £98, 1922. 2-seater and dickey, dynamo lighting, sparo wheel, 8-day clock, speedometer, leather hood, taxed, appearance like new, rans perfectly: exchanges and deterred payments. 325 High Rd. Chiswick. Phone 503. 512-be36

SALMSON, 1924, 10hp, 3-senter Sports, 5 lampa, clock, specameter, starter, etc., fast, brand-new condition, £145. 10 Beechcroft Mansions, Streatham; after 7. 612-b294

Stratnam; atter 7. 612-b294 SALMSON, late 1922, de luxe, atl-weather, dickey, dynamo, speed-mieter, oressize tyres, taxed, perfect condition, £100. K.J. Motors, Bromley 614-239

Bromley 614-239 SALMSON, 10hp, 1922, de luxe, 2-seater with dicker, dynamo light-ing, tax paid, good condition, alter 7, £90. Smith, 59 Munster Rd. Fulham, S.W.3. 612-b637

SAXON, 10hp 4-cylinder, any trial, £32. Lovatt, Streatham Rd., 612-500 Mitcham.

SCOTT SOCIABLE, 1924, well coulpped, taxed and quite equal to new, sceept £95, or exchange with Morgan. Seen at Bunting's Exchange, 612-255 Wealdstone.

SCOTT Sociable, new Aug., 1923, like new, offers, letters only Green, 60 Rauclagh Rd., Ealing, W. 612-b626

SCOTT Sociable 1923 with 1924 features, demonstration model, new oversize tyres, speedometer, litting steering wheel, ammeter, 2 extra electric lamps, many sparse and tools, just been painted dore grey with black lining and recently overbauled, in really good condition competition engine which has climbed Beggar's Rocst, £85. Worsley, Oakley Grango, Bedlord. 612-b700

SiNGER, late 1923, Z-seater de luxe, full equipment, perfect order, almost new appearance, tax paid, £155, 109 Goldhurst Terrace, Hamp-tead, N.W.6

-tead, N.W.6 612-881 SINGER, 1913, 2-seater, good condition, licensed to September, £80 or near offer; seen by appointment. Lennard; The Grange, Mottingham, 8.E.9. 612-824

SINGER, late 1920, 2-seater, dickey, dynamo, statter, new tyres, hood, 80 guineas. Lumsden, New Broughton, Wrexham. 612-b669

SINGER, 1924, 10hp, 2-scater oc luxe, starter, speedometer, etc., very good condition, £175, Newnham Motor Co., 245 Hammersmith Rd., W.6. Phone, Hammersmith 80. 612-835

Phone, Hammersmith 80. **SINGER**, sports, thoroughly overhauled, dynamo and slarter, bargain, 185, or exchange G.N. and cash. Earls, The Athennum, The Vale, Hampstond, N.W. 3. 612-853

Hampstond, N.W. 5.
 iINGER. 2-seater, 1915 model, dynamo lighting, spare wheel, speedo-meter, clock, dasblight, observation mirror, good tyres, very nice condi-tion throughout, bas been thoroughly overhauled, £55. Kirk and Co., 22 Praed St., Paddington, W.2. Phone or wire Paddington 6049. 512-754
 SINGER, £85; exchanges, deferred payments, very nice 1919-20 Singer oute, dickey, lighting, starter, Bedford cord, 5 detachables, smart, last. Seabridge, 35 Hansler Rd., East Dulwich. Sydenbam 2452.

iINGER, 1917, 2-3-scater and dickey, repainted reliow and black, iynamo lighting, good tyres, fully taxed, recently overhauled, £57 10a., or exchange metorcycle and cash. 51 Upper Richmond Rd, East Put-nes. 612-5601

SINGER, 1921, £95, 2-seater and dickey, dynamo lighting, starter, new tyres, tawed Decomber, appearance like brand new, mechanically perfects exchanges and deferred payments. 325 High Rd., Chiswick. 'Phone 503. SINGER, 1920, 10hp, 2-seater sports, £65. Bartlett's, 93 Gt Portland 612 799

SINCER, June, 1923, de luxe, 4 mater, self-starter, tax paid for year, ready for immediate use, smart throughout, £145. Commings and Simpson, 5 Putney Bridge Rd., Wandsworth. Putney 2728. 612-314

SINCERS. Eight second-hand Singers for sale. For details, see dis-played advert, on another page. Frank Whitworth, Ltd., 139 New St., Birmingham. 612-200

SINCER 1924 10bp 2-seater de luxe, 2 weeks old, mileage negligible, tax paid, £210 Parker's, Lid., Bradshawgate, Bolton; also 24652 Deansgate, Manchester. 612-203

Readers of "The Light Car and Cyclecar" should also read "The Motor," which forms a comprehensive review of the motoring world, and contains many remarkable bargains in larger cars.

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

SINGER coupe, 1920, electrio lighting, starter, clock speedometer, ex-cellent running order, £75. Flint, Hazlemere, High Wycombe. 612-b594 SINGER 1924 de luxe 4-seater, excellent condition, luggage carrier and rails motor-meter, petrol carrier, iax paid, owner returning abroad, £180. 8 Hitchin Rd., Baldock, Herts. 613-b599

First, incorrecter, perfor carrier, its paid, owner fettining abroad, 5180. 8 Hitchin Rd., Baldock, Herts. 613-5599
SINCER, 1921, 10hp, 2-scater, sports model, self-starter, good tyres, spare wheel, dynamo lighting, and condition as new, £85. G R. Naylor, 406 Garratt Lano, Earlsfield, S.W. Phone, Wimbledon 2041. 612-739
SINCER, 1925, 10hp, late model, 4-scater, de luxe, slarting, lighting, all-wenther equipment, taxed 1924, one owner. £160; exchanges, es-tended payments. Mears and Bishop, 225a Hammuersmith Rd. W 6. Hammersmith 2230. 612-769

Rammersmith 2230. SINGER 10, 1917, all-weather, 2-seater, dicker, dynamo lighting, de-tachable wheels, spare, tyree very good, all accessories, taxed till Decem-ber, leather upholstery, paint and hood very good, just completely re-mainted, exceptionally smart and reliable, £75. Below. SINGER 10, 1920, 2-seater, dynamo lighting, etarter, detachable wheels, spare, tyres new, all accessories, taxed, green leather upholstery, paint and hood very good, side curtains, many extras, exceptionally smart and reliable, £85, both open to any examination willingly, many others as above. Benmotors, 30-32 High St., Wandsworth, SW 18. Battersea 1509.

GINGER, 2-scater, 10hp, excellent condition, dynamo lighting, sparo wheel and tyres, all twres good condition, any trial, £50. 41 Green-leal Rd., Walthamstow, E.17. 612-b681
 SINGER, 1924, 4-scater de luxe, balloon tyres, grey, licensed, only run 4.000 miles, excellent condition, £195. Alfresco Garage, Ltd., Frizing-hall Rd., Bradford. 612-b671

SINCER, 1916, 2-scater, 10hp, 3 speeds, dynamo lighting, spare wheel, dickey scat, smart and reliable little car, £45; exchauges, Teddington Garage, 160 High St., Teddington, Kingston 2562.
 SINCER, 10hp, standard model, spare wheel, aluminium bonnet dickey, £40. Maudes, 100 Gt. Portland St., London.

240. Maude's, 100 Gt. Portland St., London, 612-225 STANDARD. Moores Preste, Croydon agents Standard cars. Promptet delivery new models with efficient service to follow. Large stock second-hand cars to solect from. Deferred payments and exchanges arranged North End, Croydon. 'Phone 2624. zzz-756

STANDARDS. Try Henly's. Yon cannot beat their terms. 91 and 155 Gt. Portland St., W. Mayfair 4201 zzz-300 STANDARD 1924 11.4hp 4-seater, 6 months' old. Clergyman, 58 West Rd., Buxton. 612.b665

STANDARD, 1923 2-scater, all-weather, with double dickey, lighting, starting, clock, speedometer, hully licensed and insured until April, 1925, 2148. Chinety, Olympia Motor Co., 1 Hammersmith Rd., kensington Phone, Western 4140 and 3568. zzz-229

272-229 STANDARD, 1924, 11.4, 4-scaler, very small mileage, practically new, tax paid, £190. Below.

STANDARD, 1923, 11.4, all weather, 2-scater, starter, as new, £175 Lionel H. Pugh, 9 South Molton St., W. Mayfair 4433. 612-265

STANDARD, 1924, 4-senter, 11.4hp, hardly used, perfect throughout, 2195. Smith and Hunter, 90 Gt. Portland St. 'Phone, Museum 8136.

STANDARD, 1923 11.4hp 2-seater, tax paid, £165. Harris' Garage, Slough. 612-190

Stough. STELLITE, 1919, No. 1,369, 2-seater, overhauled and repainted green. licensed to end of year, electric lighting, £100. Stevenson's Garage, Tunbridge Wells. Tel. 425. zzz-160

SWIFTS. Try Henly's. You cannot beat their terms. 91 and 155 Gt. Portland St., W. Maytair 4201. zzz-301

SWIFT. Moores Presto, Croydon agents Swift cars. Promptest delivery 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. zzz-755

SWIFT. 1923. 10hp. occasional 4-seater, dynamo lighting, starter, apcedometer, all-weather equipment taxed. Hartford anock absorbers fitted all round, almost new appearance, £155 cash: exchange, delerred payments. W. T. Dunn, Ltd., 526 Euston Rd., N.W. 1. 'Phone, Nuseum 5391.

Swiff, 1924, 10hn, 2-seater, sunk dickey, dynamo, clock, speedometer, eelt-starter, all-weather equipment, licensed, new condition, 172 guiness; exchanges or delerred, 175 Gt Portland St., W. Mayfair 4027 612-8260

SWIFT, 1920, 2-seater, fully taxed, as new. £100, cash, deferred, ex-changes Railton, Cobham and Co., Ltd., 5 Cumberland St., Decussate, Manchester. Central 2681. 612-280

TALBOTS. Try Henly's. You cannot beat their terms. 91 and 155 Gt. Portland St., W Maylair 4201. zzz-302

TALBOT, 1923, 8-18, 2-scater, with dickey, side curtains, etc., bargain price. Stanford and Gray! Ltd., Regent House, Regent St., W.1. May-fair 518. zzz-890

TALBOT, 1923, 8-18, 2-scaler, all-weather, dickey, perfect condition. tax fully paid, £145. Lionel H. Pugh, 9 South Molton St. W.L. Mayfair 4433. 612-266

TALBOTS. 1924 10-23 three-quarter coupe, this car is practically unused and equal in every way to new, great bargain, 330 guincas, taxed. 1925 three-quarter coupe, as above, spocial magneto model, 2 spare wheels, unsolied condition, 285 guincas, taxed. 1923 5-scater all-weather fourer, luxurious car, as new, 235 guincas, taxed. Ex-changes or deferred. James, over Alexander's, 482 Harrow Rd., Padding-ton. Willeedon 1744.

TALBOT, 1923, 10-23hp, 4-scaler, lighting, starter, overhauled, 225 guincas. Smith and Hunter, 90 Gt Portland St. 'Phono, Museum 8136. 612-782

TAMPLIN, 1920. 2-scater, Shp J.A.P., 3 speeds, dynamo, speedometer, good condition, 16 guineas. 51 Upper Richmond Rd., East Puter 612-b602

 TAMPLIN, 1923, 2-scater, 9bp, 3 speeds and reverse, electric lighting, year's tax, absolutely as new. £52; oxchanges. Teddington Garage, 160

 High St., Teddington. Kingston 2562.

B59

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LIGHT CARS AND CYCLECARS FOR SALE (continued).

TAMPLIN, 1920 2-scater, only done 2,000 miles, car in periect condi-bion, paintwork unscratched, very ccanomical, spiendid hill-elimber any trial or examination, prior £28 Phone, Hornson 3403. O'Donnell, 96 Fortess Rd., Kentish Town, N.W.5.

TAMPLIN, 1921-22, 8bp. dynamo, re-enamelicd, good condition, 30 rinens, 2 Market Place, Romford. 612-5592

VINOT sports. Dorman engine, very fast, £75; cash, deferred, exchanges. Railton Cobham and Co., Ltd., Cumberland St., Deansgale, Man-chester. Central 2681. 612-281

WAVERLEY, 1925, 11hp. 4-scaler, starter, taxed, as new, £165. Bartlet's, 93 Gt. Portland St. 612-797 WESTW00D sports, 1921, very fast, £125; cash, deferred, exchangea Pailton Cobham and Co., Ltd. 5 Cumberland St., Deansgato, Manchester. Coatral 2681. 612-282

WOLSELEY, 1923, 10hp, 2-scator, sunk dickey, dynamo, all-weather equipment, aplendid order, 155 guineas; exchanges or deferred. Edwards, 175 Gt. Portland St., W. Maylair 4027. 612-821

WOLSELEYS. Try Honly's. You cannot beat their terms. 91 and 155 Gt. Portland St., W. Mayinir 4201. 235-303

WOLSELEY 1921-2 10hp 3-seater and dickey, dynamo and starter, excellent condition, £150; exchange or hire-purchase The Light Car Ca, 331, 410-414 Erston Rd, London 612-344

WOLSELEY mater. 7bp, lighting and starter, tax paid, in beautiful condition, 1 and model, a real bargain, £155. Telephone Motors, 15b Allsop Pl., Baker St. Station 'Phone, Langham 1307. 612-334

WOLSELEY 1923 7hp de luxe 2-seater, double dickey, double acreen, speedometer, mai, petrol can carrier, all-weather hood, with side cur-tains, excellent condition, not done 3,000 miles taxed till December, 127 103. Wilkins, Simpson, opposite Olympia, London, 'Phone, Hammersmith 238. 612-b524

WOLSELEY 1924 10bp Sports model, in practically new condition, very small mileage, list £495, price £295. Carsons' Automobiles, Ltd., 41 Brick St., Park Lane, 'Phone, Grosvenor 2552. '- 612-197

WOLSELEY 1924 10hp model do luxe, now but slightly show-room sniled, £275, usual price £325, special bargain; cash or casy pay-menta Wilkins, Simpson opposite Olympia, London. Thone, Ham nersmith 238. 612-1528

WOLSELEY, 1921-2, 10hp. de luxe, 2-ecafer and double dicker, start-ing, lighting, taxed 1924, bargain, £130; exchanges, extended par-menti, Micans and Bishop, 225a Hammersmith Rd., W.6. Hammer-mith 2230.

WOLSELEV, 197 guineas, 1924 model, 10hp 2-scater de luxe, tax paid, new condition throughout, mileage negligible; extended payments and exchanges. White and Mears, 9a Brick St., Piccadilly. 'Phone, Grosvenor 1804. 612-766

WOLSELEY 7, 1923, lighting, starter, taxed, beautiful condition, £130. Smith and Hunter, 90 Gt. Portland St. 'Phone, Nuscom 8136. 612-785 WOLSELEY, 10hn, 2-seater do luxe, 1922-23, starter, dicker, speedo-mater, clack, lively condition, £165. Asbby, 162, Grosvenor Rd, S.W. Phone, Victoria 3433. 612-264

LE ZEBRE, 8hp, 1921, 2-scater, double dickey, English body, dynamo lighting and starter, fully equipped, insured and taxed, £80, smart appearance, S., 14 Belgrave Rd., N.W. 8. 612-b651

LE ZEBRE, 1922, brand-new, chummy 4-seater. £145; 1922 2-seater, £125; 1921 2-seater, dynamo and starter, £65; exchange or hire-pur-chase. The Light Car Co., 331, 410-414 Eusten Rd., London, 612-339 LE ZEBRE, half list price, brand new, 8hp chassis, 4 cylinders, 4-speed, 1 and s., 5 wire wherls and tyres, lamps, tools, etc., £95; or with 2-scater hour complete, £135. All sparse stocked. Boon and Porter, Ltd., 159-161 Castelnan, Barnes, S.W.13. Hammeramith 1177. 612-809

LE ZEBRE, 1921 8hp 2-scater, 4-cylinder, spare wheel, dynamo light-ing, 4-speed and reverse, and in good condition, mechanically sound, £59. G. R. Naylor, 406 Garratt Lane, Earlsfield, S.W.18. Phone, Wimbledon 2041. 612-740

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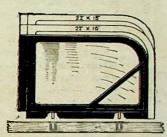
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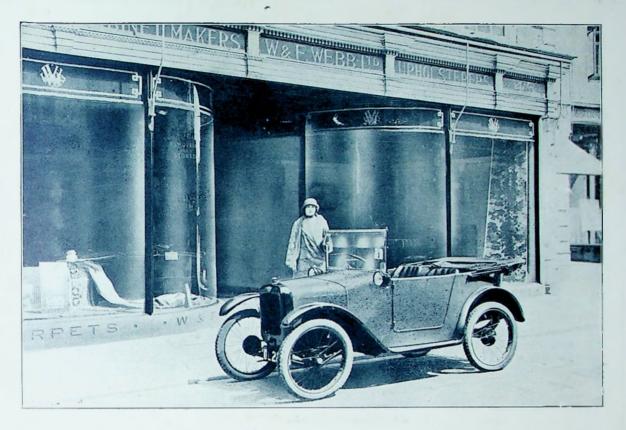
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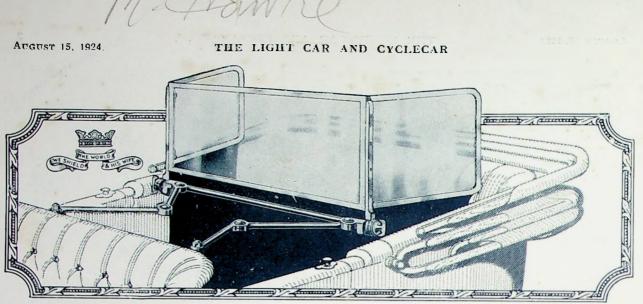
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