
 the vessel gradually rise out of the water as its cargo of four million gallons of Pratts Motor Spirit is pumped to the shore tanks.

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Uniform everywhere Reliable always


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CITROEN BUILDING, BROOK GREEN. HAMMERSMITH. LONDON, W.6.<br>Telephones:. Hammersmith 2220.7.<br>Telegrams: "Citrolon, Hammer. London."

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Telephone: Gerrand 6272
Telegrams: "Citrocar, Piccy, London"

CAN BE RELIED UPON UNDER ANY CONDITIONS OF SERVICE.

Their scientific construction ensures this, hence their great popularity.
they are fitted on all the leading british cars as standard equipment.
THEN YOU THINK OF WHEELS
THINK OF
"Goodyear"

W. GOODYEAR \& SONS LTD., DUDLEY.



## 3 Models.

 sistent, all-the-year round, everyday service, the model here illustrated is a splendid combination of a utility and pleasure car on the same four wheels.I. Wrile for fuli particulars and name of nearest There is full protection and full comfort in storm and rain, with the freedom and enjoyment of a most nttractive open car when the hood is down. Recent detail improvements have made the AllWeather CROUCH-and the other wo CRC UCH Models-better even than they were before

This is the
4-Seater
All-weather CROUCH.

## CROUCH MOTORS (1915), LTD. Tower Gate Works - - Coventry. Loodan Agents : Merirs. B. S. MARSHALL, LTD., I7a, Hanover Square W.



10 h.p.

## 2-seater 4 -seater

 $£ 275$ Coupe $£ 298$or complete with four-whee brakes and balloon tyres:


THE HAMPTON asks no "favours"-demands no coaxing up that steep gradient-bears that extra load in an emergency uncomplainingly. The Hampton owner has the comforting knowledge of a reserve of power for the sternest test, the satisfaction of a staunch endumance that neither hardusage nor prolonged service can impair. Every Hampton owner is an enthusiasthe's proved the merit of his car. May we have the opportunity of eonvincing YOU too?
STROUD MOTOR MANUFACTURING Co., Ltd. DUDBRIDGE
Telephone: 271-2 Stroud.
Telegrams:" Widawak, Stroud.'

## 

## We have apologised

to all those wouldrbe owners of SWIFT 10 h.p. Cars who had to make shift with full fourseaters of other makes owing to our temporary inability to meet their requirements. To those who preferred and were able to await its introa duction, it will be welcome news to hear that the


## Full Four=Seater Model is now ready

The wheelbase has been increased to take the Fours Seater body (which has three doors), right=hand gear control has been substituted for the central type. 5 lamps are supplied instead of 3 , and magneto ignition replaces the battery system.

## NEW 245 PRICE FULLY EQUIPPED.



We can give IMMEDIATE DELIVERY from Stock of this MARVEL CAR.

## 2-Seater - £168 <br> 4-Seater - £192 <br> With Dickey $£ 170$. Balloon Tyres on either model £6-5-0 extra.

The Car which is INEXPENSIVE to buy, ECONOMICAL to run, RELIABLE, and does the work of the big Car.
Let us send you literature about this Car-it will interest you.
Visit our JOWETT Service Station in London.

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STMINSTEF

Garage Open Day and Night. Repairs to any make of Car. Moderate Charges.


PRICE
26
NET.
Obtainable from all principal booksellers and bookstalls, or direct froms the puelishers, $-2 / 9$ post free.

## READY TO-MORROW

## A NEW REWRITTEN, AND PROFUSELY ILLUSTRATED EDITION

A complete guide to the efficient and safe driving and handling of a car. All the subtleties and finer points of driving are fully dealt with by text and illustrations, and by following the instructions practically every emergency and circumstance arising from the crowded slate of the roads can be mel.
Driving for efficiency and for avoidable waste and undue wear and tear of the car is a subject also dealt with.

## TEMPLE PRESS LIMITED,

7-15, Rosebery Avenue, London, E.C.I.
Wholesale Agents: E. J. Larby, Ltd, 30, Paternoster Row, E.C. 1 .

## WHY 14 WHEN 7 SUFFICES?



Commander C. Elliot, R.N., with his 1923 Jowell, at Lagos, Nigeria.
The 7 h.p. Jowett performs wonders in the far places where roads are mostly conspicuous by their absence, and conditions anything but favourable. except that the sun often shines.
Across the belt of Africa, East to West,
"THE LITTLE ENGINE WITH THE BIG PULL" is daily adding to its laurels.
How easily, then, will it conform to your more reasonable demands?
WHY 14 WHEN 7 SUFFICES AND COSTS BUT HALF AS MUCH? The FULL FOUR JOWETT COSTS £192. Tax £7. 36 M.P.G. OIL, 1,500 M.P.G. 45 M.P.H. The 2-Seater ( $£ 168$ ) is even more economical. May we send you particulars of both models?

## JOWETT CARS, IDLE, BRADFORD.

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

ARISTOCRATS of the small car class, the II h.p." Standards"' possess all the good qualities of the famous 14 h.p. Models. They are handsome, roomy little fellows that cost little to run, hive a good turn of speed and climb well.


An 11 h.p. "Standard", "Canley" 2-Seater at Moreton-in-the-Marsh, Gloncestershire.


## EVERY TUESDAY <br> 

SUBSCRIPTION.


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


Offices of Tho Motor
7.15. Rosebery Avenue, London, E.C.I.

PRICE AS USUAL - 4d.

## ALL ABOUT BALLOON TYRES.

What the halloou tyre is and what it provides; the relation of low air pressures to suspension systems and shock-absorbing devices, and a reriew of all types, fully illustrated.

FOUR-WHEEL BRAKING SYSTEMS.
Points that should be understood regardjng braking on the front as well as the rear wheels; the principal systems reviewed.

## SALOON CARS FOR AUTUMN AND

 WINTER MOTORING.A review of a number of standardized enclosed or semi-enclosed models.

## ENCLOSED COACHẆORK.

Latest practice of well-known coachbuilders, as shown in examples of saloon, limousine, landaulet and coupé bodies.

In addition there will be one of H. M. Bateman's inimitable drawings entitled "A Truly Awful Moment," and a Pickwickian story, "The Eatanswill Motorbus," by Atherton Fleming.
This issue will be authoritative, very fully illustrated from exclusive drawings and photographs, and one that will be well worth keeping for reference.

## :: Order Now ::

## As Usual

The $12 / 24$ h.p. Lagonda Coupe Model entered in the Surbiton Motor Club's LONDON - BARNSTAPLE Night Trial, held on August 2nd and 3rd, 1924, again demonstrated its consistent reliability and

Second-hand Lagonda Cars in Stock.

## A Silver CUP

Prices from £295
Full barticulars frem any Molor Agency or LAGONDA LIMITED.
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## THE COAN "CONE" STEPMAT

THE MOTOR MAT THAT MATTERS THE ORIGINAL and ONLY STEPMAT OF ITS KIND PATENTED (No. 18:E02)


CAST ALUMINIUM NUMBER PLATES


Regulation Size - Silver Polished Nomerals - Black Ground Write for Booklets and terms.
R.W.COANLE

The Aluminium Foundries,
219, Goswell Road, London, E.C.I. Clerkenwell $14+466$ ( 4 lines). mes). "Krankases, Barb, London."

Save at least $£ 20$ per annum by Garaging your Car at Home!


Send p.c. for profusely illustrated book describing Thornber's Locjoint Weatherboards and Thornber's Garages.



What a difference! Last year you remember you took your hol day at holiday time-you landed down at your local station with your wife and saveral bags and sultcases In the early hours-had to, to get to your estination at any reasonable time. You had only carried those bags about 200 yards but they bothered you-you dropped them on the platiorm, told the porter to put some labels on the d- things and stlck them In the Van you booked and- The Lord preserve us." the train was Just moving out when you loaked through the window to flnd them still reposing where you dropped them! Then there was excltement, and so It was to the Journey's end-crowded tralns-heaps of other people's luggage-6everal changes hours late, and-as a natural consequence, the first and last days of your vacatlon were lost and utterly devoid of any recuperative benefit. $\qquad$
What a difference :-to day you bring the daintlest of all Two-seaters round to the gate "any old tlme"-you and the maid bring down the garden path the bags and other impedimenta of the tour and stow them In the commodious dlekey. You run back for the wife and have "Just one" Scotch and soda whlle you're walting-you start when you will for where you willthe first day is all hollday, and probably because it is the first seems of all those dellghtfuldays the most dellghtiul. At the end you put up at an old world Inn in an old-world village-no rusin-no hurry-no worry-and so it is to the holiday's end, and all on an expenditure which entirely Justifies our ologan-the most economical car In the worid-and with the satisfaction that only such a car-such a sturdy, swift, reliable little bus can bring.
" What a difference" !-Why not buy one to day?


RHODE MOTOR Co., Tyseley, B'HAM

## AN EXPERT'S OPINION OF THE $11 \cdot 9$ BRITISH ANZANI ENGINE.

The Manufacturer of a well-known and popular light car to which the British Anzani Engine is fitted, recently informed us that he has tried in his chassis every make of 11.9 proprietary engine on the market, and that in his opinion not one of them could be compared with the British Anzani Engine for power and speed, and general excellence of performance, and he has arranged with us for a supply of engines for his 1925 model.
If he, as an expert, backs his opinion by continuing to use the British Anzani surely it is well worth your while to follow his lead and see that your new car has a British Anzani engine.

We are exhibiting at Wembley and Olympia.


Write for details :-
The British Anzani Engine Co., Ltd.,

" Hump-back" Bridges THESE bridges can always be relied upon to provide a ittle sensation to the motorist. Take them at speed and as you dash over the crest you get that "Ieft in the lift" sensation . . if the road is clear. But there may be another sort of sensation when you top the rise-in the shape of a lorry, car, or farm waggonthen it is a case of sleady nerves and smart brake work. Brakes correctly adjusted and lined with Ferodo Lining will take control immediately you press the lever. Fercdo Linings never let you down-their grip never weakens. They stand the terrific stress of brake friction without slipping or seizing and they never break up.

FERODO LTD., CHAPEL-EN-LE-FRITH DEPOTS and AGENCIES: Lnndon, Birminghan, Leeds, Manchester Brishol, Belfast, Coventry, Neucasfle, Glastou, Carliste. Erishton



10 h.p. Grand Prix £290 GUARANTEED 70 M.P.H.

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Phone: Viclorara 8856 .

DELIVERY of all models (particulars of those not shown sent on application) can be given from stock.

EQUIPMENT on all models (except the Grand Prix supplied without starter) includes starter, lighting, speedometer, clock, horn, 5 tyres, elc.

DEFERRED PAY. MENTS can be arranged for all models. PART EXCHANGE arranged for any make of car or motorcycle.

SERVICE AND SPARE PARTS are given at the makers' Service depot as above.

## PRICES.

10 h.p. 3 -seater - $£ 178$ 10 h.p. Sports - $£ 190$ 10 h.p. 2-seater $£ 198$ 10 h.p. 4 -seater $£ 199$ $10 \mathrm{~h} . \mathrm{p}$. Grand Prix $£ 290$ 1015 b.p. 4 -str. $£ 3 ? 5$ $10 / 15$ h.p. Saloon $£ 425$

# 31, Brook Street, Bond Street, W.I <br> Mayfair 2965. 

# II thought of it <br> whilst shaving 

 -a perfect Battery, like a keen razor, helps to smooth away life's little worries." bULLDOG BATTERIES
in their one-picece conatianers of
"Dagenite" "

> are acid-proof and non-spillable, and mate a strong appeal to every owner who seeks car comfort and efficiency. dsk your dealer for particulars or wrife dircct for Catalogne "L."

## Peto \& Radford

(Proprietors: Pritchett \& Gold and E.P.S. Company, Ltd.) head ofpices and Showrooms
50, GROSVENOR GARDENS VICTORIA-LONDON, S.W.1.
Telephone: Victoria 3667 ( 4 lines). Tclegrame: "Storage, Sowest, London."


Motor Engines throughout the world are fitted with


GRAND PRIX de BOULOGNE Second Category.
B. S. MARSHALL on Bugatti Car fitted with the Zenith Carburetter FINISHED FIRST.

What better proofs could you have that the 'Zenith' will improve the running of your Light Car?
HAVE ONE ON A MONTH'S TRIAL.

ZENITH CARBURETTER 40-44, NO. LTD. 40-44, Newman St., London, W. 1


## 

THE FAMOUS "SERVICE"
1.-New Triple-proof Grandrille Gabardine 2.-Inter - lining throughout of nonperishable Oilskin 3.-Check lining. 4. - Detachable. warm, fleecy wool lining.
These coats must not be confused with others similarly described, but of far inferior quality, now bsing offered on the market at a low or at a similar price. Call in, sec, feel, and judge the materials usediry one on for style and cut. IF YOU CANNOT CALLtake advantage of OUR APPROVAL OFFER. Order by post-stating chest (over coat) and height measurement and satisfy yourself in your own home.

Our Guarantee. if not satisficd we will refund the remittance IN FULL with. out further question. provided thegarment is returned un. damaged in seven days.

Final offer of Car Accessories at Bargain Prices.
SEIZE THE OPPORTUNITY TO EQUIP YOUR CAR BEFORE IT IS TOO LATE

## MASCOTS

$12 / 6$ each $17 / 6$
CLOCKS
(Brass finish) at $17 / 6$ each
All 8.day movement by the leading makers.
Usually sold at prices from 75/-upwards.

ercury "" "Victory."


## HIGH HOLBORN, LONDON, W.C. 1



## wheels

WHETHER you decide to have low pressure or high pressure tyres on your car make absolutely certain of one thing . see that they are fitted to Sankey Wheels.

For Sankey Wheels are the strongest in the world no strain or stress is too great for them. . . They have never been known to buckle orbreak. Fit Sankey Wheels and ride in Safety

SANKEY WHEELS for LOW PRESSURE TYRES We are now manufacturing Sankey Patent Steel Wheels in the following sizes: $715 \times 115 \quad 730 \times 130 \quad 775 \times 145$


JOSEPH SANKEY \& SONS, LTD., HADLEY CASTIE WORİS, WELLINGTON. SHROPSHIRE
'Ibone: Wellington Salop, 66. Telegrame:'Sankey." Wellington. Shropa London Offce: Mr. R. Jenkine, Ulater Chambera, 168, llegent St, W.I


[^0]
## The 

Proof of the worth and distinction of the Amazing $A C$ is provided by no fewer than 28 R.A.C. CERTIFICATES This is a larger number than held by any other car in the world, and more than all other light cars combined. Second to the AC comes a car that sells for over $£ 2,000$. We can easily show you exactly why the Amazing $\mathbb{A C}$ can perform such wonders.
Let us give you a run on the, road or drive you down to inspect our Works and see them made


12 h p. 4-cyl. from $\mathbf{5 2 7 5 .}$
2 and 4 seaters and all types of bodies.
CCARSLImimical
55 \& 56, PALL MALL, LONDON, S.W. 1 "Phones: Gerrard 2232,6620 \& 6844. Wires: "Amazincar, Piccy, London" Phone. Kingsork: Thames Ditton, Surrey. Phone: Kingston 3340 ( 4 lines). " Hires. Aycemoco, Thames Diteon. -Phones: North 2go3/4/5/6. - H'ires: "Aucarriezo, 'Phone, London."


A SUMMER IDYLL. or "In Good Company." A happy snapshot of a small car enthusiast engrossed in "The Light Cor and Cyclecar." Her own choice-a9.5 h.p. Rhode-figures prominently in the background.


Italian Grand Prix
The mast important event in the motoring world this week-end is the Italian Girand l'rix, which will be run off at Monza on Sunday.

British Victories. luritish competitors scored well-merited trimmphs at the Boulogne Motor Mecting. A full description of the events in which small cars took part, will be found in this issue.

## Safety-linc Refuge.

A temporary triangular wooden refüge in Russell Square, London, has been replaced by a safety white line of the same shape, but it is questionablo ns to whother drivers will obey the unwritten law which it convors, and in that caso it s value to pedestrians is somewhat lost. It is an innovation, howover, which suggests possibilities.

High-handed Action.
If it is true that the Bournemouth Corporation has recontly made a regulation that it will requiro evidence that the applicant for a licenco as driver of any licensed vehiclo is physically fit to act in that capacity, and chat a certificate to this effect, signed by a qualified man, must be produced whon the application is mado, wo should like to know open what anthority they have acted. No. 615. Vol, XXIV.

## LIGHTING-UP TIMES <br> for Salurday, Sept. 6th, 1924.

| London | F.. | 8.5 | Edinburgh | 8.25 |
| :---: | :---: | :---: | :--- | ---: | ---: |
| Newcastle | 8.16 | Liverpool | $\ldots$ | 8.20 |
| Birmingliam | 8.13 | Bristol | $\ldots$. | 8.15 |
| Dublin | $\ldots$ | 8.33 |  |  |

The above are the lighting up times for rear lamps in Englaud, Wales and Scotland.
Moon-First quarter, 6th.

## Tramdemonium.

Tranusay systems are bad enough when they aro in working order, but when it becomes дecossary to effect. re pairs to the track, traffic conditions very often resemblo pandemonium. Striking instances which serve to illustrite the point aro now becoming tolerably familiar to Loodon motorists. They sro the stretch of track between Tally Ho Corner and Whetstone; Kentislu Town Road; Lea Bridge Road. Leylum. and Iligh Road. Leyton. Transport oflicuals would add materially to their oducation if they paid a visit to these centres and watched tho chass which exists under present conditions. It is sheer "tramdemonium."

## Royal Patronage

As usual. Mis Majesty the King has been graciously pleased to accord his patronage to the annual International Motor Exhibition which opens at Olympia next month.

## The Motor Show.

Readers should bear in mind that the Motor Show is being held earlier this year, the opening day for the public being Friday, October 17th. A somewhat unusual condition arises in that the Olympia Exhibition will he overlapped by the Motor Show which forms a pant of the engineering exhibits at Wembley.

## Eig Game in the Suburbs.

A member of our staff had an unusual experience the other night when driving along a road in Levton with only his small wing lamps alight. At a more than usually dark portion of the road lee found himself conironted by an elephant, which etood regarding the car with apparent interest. The beast "as in charge of two men, who explained that thoy were taking it for "garaging", with the local vet. after its periormance at a near-by music-hall.

By a singular coincidence a similar experience befell another of our staff some years ago in the Golders Green district.

## Races for Three-wheelers.

Three-wheeled cyclecars are eligible to compete in the Liverpoul Motor Club's races which will be held on Wallasey Sands on Saturday, September 13th. The first race is timed for 3 p.m.

## A New Standard Saloon.

An interesting exhibit at the forthcoming Olympia Motor Show will be a new il h.p. Standard saloon, to be known as the liccadilly. The price of the $11 \mathrm{~h} . \mathrm{p}$. two or four-seater is $£ 235$.

## Jowett Club's Rally.

Although mirred somewhat by bad weather, the Southern Jowett Light Car Club's rally last Sunday was a pro nounced success, orer a dozen members turning up at the meeling point at Virginia 1 ater. One of the most interesting liems of the dav's entertainment was a "General l'ost" competition for Lidy passengers.

## High-powered Motor Ships.

Remarkable developments in power units for large ocean-going motor ships are taking place and readers who seek information on these matters will find much to interest thom in the Septomber number of The Motor Ship. The highest-powered single-scrow motor ship forms the subject of a well-illustrated article, and among the many other interesting features in this issue are "Internal-combustion Turbines ". and "Standard Motor Shipbuilding.'

## Nola Bene.

The newly surfaced and weacherous section of the North Road, to which frequent reference has been made recently in this journal, begins at its southern end at the foot of what is known locally as "Dirthouse Hill," which is just beyond Cross Hall cross-roads, less than a mile through Eaton Socon. The very fact that it starts abruptly at the foot of a lill makes it all the more dangerous, whilst, if this were not sufficient, it leads off with a right hand curve. Speeds up to $35 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. with a well-loaded and welltwed light car are possible. but risky: $20 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. is about the safe maximum on the bends. When dry the surface is perfectly safe at all speeds. When wet, particular care is necessary.


MOTOR TERMS TRAVESTIED. No. 28.-Query : What is the Term ?

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

Increasing Visibility.
The car with improved windscreen shown in our frome-cover picture is an A.C. For 1925 several improvements have been introduced in the range of A.C. modets.

Calthorpe Reconsiruction. Calthorpe enthusiasts will be keenly interested in the fact that Mr. G. IV. Hands, the founder of the old company, has taken over the sole control of the Cathorpe Motor Co., Lid., Birming. ham. which has been enturely reconstructed.

## 1925 Design.

We are informed by Bayliss Thomas and Co., King's IRoad, Tyseley, Birmingham, that the 1925 models of the BaylissThomas are now in course of production and that improvements diave been effected both in the specification and in appearance. A description will form a feature in an early issue of this jommal.


Below is seen an official of the M.O.T. counting the

CONTRASTS IN "TRAFFIC', CONDITIONS vehicles as they go by on the Liverpool-Southport road at Birkdale in connection with the annual census. His duties would be light were he stationed amidat the scrub and sand of the Eastern desert seen above. The car is a $10 \mathrm{~h} . \mathrm{p}$. Hampton owned by a Cairo banking official.


B16

The Prince to Attend Banquet. H.R.I. the Prince of Wales has accepted the invitation of Sir Yarold Bowdento be present at the annual banquet of the Motor and Cycle Trades Benevolent Fund, which will be held at the Connaught Rooms on Tuesday, November 18th.

Non-success of Rubber Road.
The stretch of rubber roadway put down in Whitehall, London, as an experiment, has not been entirely successful, and is being taken up. The main fault was not due to the actual material, but to the difficulty of making it adhere to the conorete foundation


BETTER
SIGNPOSTING.
A commendable praciice which is spreading. The signpost can be read before the cross-roads are reached. (See paragraph in centre column.)

Climbinz Kidd's Hill.
The Kient and Sussex Light Car Club will hold a hill-climb at Kidd's Hill, Hartfield, on Saturday, September 13th, the first event being timed for 2 p.m. A preliminary notice contains the following significant clause: "Bugatti cars barred from all touring clnsses." Inquiries should be directed to Mr. Lewis Humphries, 12. Maning Street, Lewes, Sussex.

## INQUIRIES FROM EVERYWHERE.

## HOW THE ROVER CO. SECURED THEM

"We would like to add that we reccived an almost overabhelming response to our advertisement in your issue of May 30th, in which we offered full particulars of this new model to anyone who clip. ped the coupon. Even at the present time we are still receiving these coupons, many of them from remote placesoverseas."

The Rover Co., Lid.
(.4ugust 19th, 1924)

Don't Waste money experimenting, with divertising. Concentrate uponly small Liflit Car and Car journal.

## Unlimited Supplies.

Inquiries from garage proprietors for unlimited quantities of their No. 1 potrol are invited by the Blue Bird Motor Co. (1924), Litd., and at a recent meeting of the company the chairman said it was their intention to extend tho area of competition by opening new stations.

## Worcester Club's Trial.

The annual one-day reliability trial of the Worcester and District Motorcvele Clinb, Worcester Motor Club and Malverns M.C.C. will be held on Saturday, September 131.h, the start being from the Fox Inn, Bransford, near Worcester. approximately at 9 a.m. There will be a number of valuable awards for rars up to 1,100 c.c. and over. Full detals can be obtained from the hon. trials secretary, Mr. II. A. Bleckly, 63, Fort Royal Hill, Worcester.

## Improved Signposting.

Wo have already drawn attention to tho signposts at Cobham, which are placed not at the actual turning, but some 30 j ds. on each side, so that drivers can read the directions given in plenty of time to make tho correct turn. This system of signposting is now appearing in other parts of tho country, a notable example being found at Brampton Hut cross-roads on the North Road. The post cnrrying the direction arms, howover, might also very usefully display a cross-roads warning, as this is one of the most dangerous spots on this soute.

Four-wheel-brake Test
Mr. Raymond Mays's Buratzi has been fitted with Whitehead's fourwheel brakes, and on Friday last. was subjected to exhaustive brake tests at Brooklands.

## An Altractive Handbook

The Midland Car Club has now issued an attractive handbook for 1924-5. Amongst other features, it contains a motoring map of the Midlands, which should be of value to provincial motorists.

## Canada's Automobile Exports.

The export of passenger automobiles from Canada for the year ended June showed an increase in number, but a decrease in value, 52.149 being exported. This is an increase of 1,687 on last ycar, but the value of these machines was only $26,078,932$ dollars, a decrease of $1,701,950$ dollats.

## The Queen Visits Rubber

 Factory.On Tuesdav, August 26th, Her Majosty the Queen and Royal Party paid a visit to the worke of the North British Rubber Co., Ltd., at Edinburgh, where they were met by one of the directors, Sir James Wishart Thomson, and the works manager, Mr. W. Williams. Her Majesty watched the manufacture of various rubber goods, kut was particularly interested in the tyre department.

## A Thoughtful Policeman.

A policeman on point duty in a Metropolitan area, with whom we chatted re cently, mentioned that he always made a point of signalling to oncoming traffic in plenty of time so as to give drivers


> Long Acre, London, usually a scene of bustle and activity-often impassable - presents an almost deserted spectacle owing to the strik $=$ of Covent Garden porters.

ample opportunity not only to understand his signal but to act on it. Ii the police all over the country displayed the same degree of common sellie the teaffic would be far easier to control and driving would be more carefree.

## Ninety Per Cent. Cooling

An advertiser in a well-known motor paper states that he will exchange for a solo, combination or three-wheeler, a " Buckingham sporting cyclecar, 90 per cent. water cooled." A 10 per cent. loss of cooling efficiency sonnewhere, wo presume.

## Hard Luck!

For his defeuce, when charged with exceeding the speed limit, an Elyin motorist said that he was using larger tyres than hitherto, and had had no corresponding adjustment made to his speedomeler. The bench, however, was pmbitely incredulous.


## IF YOU WANT TO KNOW THE TIME-

In competitions, consult the timekeeper and not a policeman. A sidelight on the Alec
Ross Trophy Trial. The car is a Harper.

## Holiday Touring Articles.

Following our announcement recently that readers s'rould e:ot submit articles dealing with holiday tours without first submitting a synopsis with specimen pholographs to the Editor, we are reminded that $S$. Wolf and Co., Ltd. . 115, Southwark Street, London, S.E.1, the makers of the Solex carburetter, are offering prizes to motorists for such articles.

## Special " 200 " Number.

On September 26 th, a special 200 Mile Race Number of The Light Car and C'yclecar will be published. As its title implies, the principal feature of the contents will be the vivid story of the only annual long-distance car race held in this country: Profusely illustratad, and deal. ing with overy phase of the great Brouklands event, it will form a permauent souvenir, of which every motorist should make sure of obtaining a ropv. The price will be threepence, as usual. and, in addition to the report of the race, it will contain all the u6ual bright and nitractive features.

## An Uncomfortable Experience

An added source of danger caused by qramways was recently brought to our motice. Whilst being driven along a soad laid with conduit system tramlines the speedometer cable of al light car came adrift at one end and fell down the plough slot, where it came simultaneously in contact with the live rail and the surface protecting rail, and so caused a direct short circuit. The inner cable was fused solid with the metallic casing, but. luckily, the occupants of the car were unhurt. Probalily there was trouble at the lucal gesierating station!

H14

A Sensible Recommendation.
The Surrey County Council has expressed the opinion that all heavy motor velicles should carry reflectors so that the drivers shall be aware of the pre-

Why Not in England Also? A motor club in the United Stater, called the Argus Association, has now over 10,000 mombers, every one of whom has signed a plodge to obey a list of 13 soad rules.

## Pass the Salt.

Natal is experiencing extremely cold woather for this season of the year, so cold, in fact, that the springs on a car are reported to have become frostbitten, fracturing completely when tho car was traversing is rough section of road.

Brooklands Fatality.
It is with very great regret that wo lave to announce the death of II. Resta who was to have driven one of the Darracqs in the 200 -Mile Race. Resta mas attempting short-distanco world's records in a 2-litre Grand Prix Sunbeam last Weduesdav, whest, while travelling down the railway straight, the car dashed through the fence :ril the off side and immediately set on fire. Resta was killed instantaneously and Perkins, the meclanic, was badly injurel. The accident occurred on the fastest section of the track.

## A Novel Award.

In the London Bamistiple trial, which was held on Angeat 2nd, there was a novel additional award presented hy Mr. A. J. Whitehearl, consisting of a complete set of Whitehead front-wheel brakes, finted free of all costs to the car making the Lest performance. Unfortunately, however, it was not possiblo to prablish the name of the winner of this award on account of the fact that the best car performance was made by a


## A MIDLAND BRIDGE WIDENING

Work in progress at the Derbyshire end of the Burton-an.Trent Bridge. When finished it will be a very fine structure.
sence of overtaking itraffic. Apparently, however, the Mrinistry of Transpurt thinks that a matter of this nature should the dealt with, if at all, by means of a general measure, and not by local by laws. As no by-law apparently can be made, the general purposes commit tee recommends that the council should urge for prompt legislation.

Palladium which was fitted normally with four-wheel brakes. The matter was therefore discussod by tho oormmittoc and referred back to the donor, after which it was decided to present the award to tho driver of the car which put up the secoud best performunce. This mroved to be Ray Abbott (10.8 h.p. Clyno).


ALTHOUGH the Junior C'ar Club's 200-Mile Race will be held a fortmight to-moraow (Saturday), rery few of the competing cats are ready. Since giving last week, the first complete details of the very interesting Vagova and Gordon England's Special Austin Seven, which are rumning in the $750 \mathrm{c} . \mathrm{c}$. class. we have heen able to asecreain details of several of the racers and these are given below.
Meantime, it should be noted that the Vagora, as Gur picture last week clearly showed, has-contrary to : belief which has been circulated-- no brakes operating on the rear whecls, the braking equipment consisting of brakes operating directly on each front wheel and a transmission brake, which is fitted bet.ween the cluth and the gearbox.

The race has been robbed of some of its interest onl account of the experiments which Mr. F. M. Pickett has been making with a Gi.N. engine havirus come to an untimely end. The engine which it was at first proposed to use was an overhead valve special on degree twir air-cooled $G$. N. of the type with which :all oner readers are familiar, but a supercharger of the centrifugal hlower tyme was employed. This supercharger, which was of German make, sastead of being placed between the carbaretter and the induction
pipe, as on the racing Darracgs, was fitted so that it delivered compressed air to the carburetter air intake, a balance pipe being taken to the float chamber.

On the test hench this engine proved to be capable of developing a comfortable $45 \mathrm{~b} . \mathrm{h} . \mathrm{p}$. . which wouk have been sufficient to make the ear a serious rival to the Salmsons, Morgans, Frazer-Nash and the Newton, which are running in the 1,00 c.c. class.

Before the supercharging experiments had been concluded, however, and while the engine was run ning at full throttle, the gudgeon-pin bosses of ono of the pistons broke away. the upper portion of the piston smashed through the cylinder head, and the engine was irreparably damaged.

We understand from Mr. Pickett that, despite the accident, his G.N. entry, driven by E. Ringwood, will face the starter. The car will we almost identical with the one which was entered last year, the only modification being to the hevel gearing.

Last week in commenting on and describing the Darracg entries, we remarked that the engines were said to have developed considerably over 100 b.h.f. on the bench. We hive since learned from a reliahle source that these angines have actually given


The Warwick, Newton and Aston Martin "Bunny" are three of this year's interestingentries. The firat two were entered last year but were unab!e to start whilst "Bunny" will long beremembered as a result of its excellent performance in 1922. G. C. Stead, itsdriver on that ocession, is seen "all out "on the banking in the oval photograph

THE ? $\because 00-1 / L L E$ R.ACE (contd.).
los b.h.p.. and that they have maintained that output continuously for a periud of an hour.
J. G. 1'. Thomas, who has wori such fame at the wheel of his Jeyland-Thomas, tells us that the two Thomas-Special entries in the 1,500 c.e. class, ove of which he is driving himself, and the other of which will be driven by $G$. Duller, a prominent figure on the turf as well as on the track, should lap at $100 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. Thomas says that he is guite satisfied with the cars, and seems confident that they will give a good account of themselves.

It is just possible that G. E. T. Eyston's AstonMartin will not be able to run, owing to its mishar in the Grand Prix de Boulogne Race, which is fully described elsewhere in this issue. The front axle of the car was bent in a collision with a telegraph post.


Three sketches of England's Auslin. (Left) the aulomalic oil supply, and (below) the cockpit showing the three point suspended petroltank.
presents many features of interest, not the least of which is the fact that an Alfa-liomeo supercharger is being fitted to the special British Anzani engme which will be fed by ancmini carburetter, and we understand that the designer of thisbinstrument is conducting the bench tests of the engine, from which over 80 h .p. at $4,500 \mathrm{r} . \mathrm{p} \mathrm{m}$. has been already obtained.

The probable maximum b.h.p. of the eagine is about 87 , which must be regarded as extiaordinarily satisfactory in view of the fact that it is a practically slandard high-efficiency Anzaui unit which, of course, has not overhead valves.

## Strains of Forced Induction.

It has been realized that the terrific bearing loads imposed by forced induction are too much for plain bearings to withstand, and a built-up crankshaft permitting the use of roller bearings has heen consequently embodied. This is the only material deviation from the standard design.

With the gear ratio cmployed it is expected that the car will be capaisle of lapping at $106 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. It is possible that there will lje another supercharged Horstman in the race. The threc remaining Horstman cars will be standard super-sports models, specially tuned.

The supercharged car is to be driven by C. G. Coe, a well-known driver of Vauxhalls who has scored many notable successes on the raad and on the track. He is optimistic with regard to the chances of the car,

the steering was also damaged, and it is likely that the chassis frame may be twisted. Mrs. M. Agnew has mot yet announced what car her nominee, R. C. Morgan, will drive.

The Aston-Nartin entered by Mr. Lionel Dartin, is one of the standard long chassis models with front wheel brakes and a four-cylinder o.h.v. engine of new design, having a bore and stroke of 65 mm . and 112 man. respectively. There will be one exhaust valve and one inlet valve to each cylinder, and no supercharger will be used. The Hon. John Benson is responsible for the engine design, and experiments are being made with various carburetters and magnetos. At present the choice is in favour of Memini and B.T.II. respectively.

## Four Speed Gearbox.

A four-speed gearbox will be used, and the back axle ratio will be slightly higher than standard. liudge. Whitworth whecls, with नapson 710 mm . by 90 rim. trres, are fitted. Discol fuel and K.L.G. plugs will be used. A body of new outline, also designed by Mr. Benson, is being built, and it is hoped that the streamlining will prove exceptionally effective.

Mr. Lionel Martin is also responstole for the preparation of the well-knnwn Aston-Martin "Bunny," which has been fitted with an o.h.r. engine, and streamlining under the chassis. It will be remembered that this car has always given a good account of itself in previous "200's." 'Two yeara ago " Junny" ran second in the $1 \frac{2}{2}$-litre class, and it his had meny wins in hill-climbs.

Iorstman Ko. I, entered by Mr. T. I. Edwards, 1320

The radiator block, without a shell, is sloped to bring it inside the streamlined cowl Thermosyphon cooling is used and there is no fan.

and fears none of the other cars in the ll litre class save those which are supercharged.

In connection with Mr. V. C. G. England's Austin, noteworthy details are the supplementary oil supply and the radiator mounting. The oil tank, holding about one gallon, is supported irom the front of the petrol tank, and has two pipes fitted in its base; one of these pipes rises vertically in the lank to about $\ddagger \mathrm{in}$. of the top, and its lower end dips about $\frac{3}{3}$ in. below the normal level of the oil in the sump. The other pipe leads from the hottom of the tank, its lower end projecting downwards just through the sump filler-cap. it tap is fitted to shut off the oil if required, and each pine has its centre portion composed of rubher tube, the flexibility of which enables the dip tube to be withdrawn from the sump without undoing any serewed joints.

The supply of fresh nil from the tank is controlled on the bird-feed principle; normally a vacuum will exist in the tank, but when the oil level in the sump, becomes lowered so as to expose the open end of the dip tuhe, air will enter the tank, and by


## ANOTHER FAVOURITE

A HORSTMAN DRIVER.
George Newman, a one lime exponent of racing Wolseleys, will be seen at the wheel of a Horstman
in the " 200.

relieving the vacuum, will allow oil to flow down the supply pipe into the sump until the dip tube is again subincrged, and so, because no more air can enter the tank, the oil flow will cease

The correct oil level is thus automatically maintained, but. from previous experience in 200 -Mile liaces it is not expected that any additional oil will be required by the engine, and the arrangements descrilied are fitted merely as a precaution

The nther illustration depiets the bracket on which the radiator is carried, and it will be seen that this is sloped backwards in order ${ }^{10}$ bring it inside a cowl shaped to conform to the body streamlining. The radiator is without a shell, and consists only of a tube block and healer tank, in which is fitted the union for the dash thermometer. Tho circuladion is thermo siphon. Under the radiator bracket will be noticed nart of the transwersely fitted Hartford sliock-absorbers.

There are sereral points of interest in the illustration of the controls, and it will be seen that the stecring column, besides being considerably raked, has bect set over of the left to bring the steering wheel inside the narrow body. The rear end of the petrol tank is supported on a bridge, bv means of the singlo bolt in the centre. This bolt does not clamp the tank flange, but is left free enough to allow of a slight rocking movement which will prevent the tank from being strained in the event of anv chassis whip. The ratchetless brake lever on the left of the propeller shaft will be noted, and also the almost horizoatal gear lever, which has been set and lengthensd to clear the large petrol tank.

## Capt. Waite's Austin Seven.

The Austin Seven to be driven by Capt. Arthur Waite in the 200 -Mile Race has already been down to the track, and in general design is very similar to the modicls raced last year.

The hody is very completely streamlined, a celluloid shield being fitted abaft the scuttle so as to close in the space uetween it and the stecring wheel, the column of which has been lengthened to enable the driver to obtain a lower position and thus to reduce wind resistance. The celluloid shield also enables the mechanic to sec his gadgets, which would otherwise be darkened by the overhang of the shield.
On the mechanic's left are an extra oil tank and o double barrel hand-operated oil pump. Each barrel contains one-sixth of a pint, the forward movement of the lever filling one and discharging the other into the crankease from the extra tank. The petrol tank contains $9 \frac{1}{2}$ gallons of fuel, so that all being well
the car should make a non-stop run so far as petrol and oil are concerned.
The weight of the car has been somewhat reduced by thic employment of a fabric covering to the body, so that even when completely ready for the race and laden with driver and mechanic the total weight is but half a ton. Unladen the car scales 6 cwt .
'rls cquipment includes pneumatic upholstery, Hartiord shock absorbers, 700 mm . by 75 mm . Palmer tyres, Zenith carburetter and B.L.I.C. magneto, while the petrol and oil used are supplied by Shell and Speedwell.

## Engine Details.

The performance of the engine has iceen improved in tarious small respects. The valves are rather langer than before and are returned to their seats by duplex springs. Single-ring aluminimm pistons are used, and the compression ratio has been fixed at 6.8 to 1. Forced-feed lubrication is now standard on all racing models, which are geared at $4 \frac{1}{2}$ to 1 on top, and at $5,000 \mathrm{r} . \mathrm{p} . \mathrm{m}$. attain a speed of over $80 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. On the track a standard radiator is used, the cooling being arranged on the thermo-siphon !rinciple. In roau races, however, a larger radialor is fitted to this car.

Capt. Waite is a firm believer in light tyres, as he finds that if heavy tyres are used they have a tendency to cause wheel wobble.

The Eugatti which B. S. Marsinall will run. and which is illusirated on this page, is more likely- to average a good speed and to run wilh remarkable consistency than to attempt anything of a sensational nature. It is the same car ahich Marshall handled last week when he won the Grand Prix of Boulogne, and, as will be secn, it is not specially streamlined, and might be termed a sports model rather than a racer. It Boulogne Marshall averaged $54 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. for 10 laps of a very difficult 22-mile circuit, and his lap speeds varied by less than two minutes each way.

The car does not differ in any nuterial respect from standard Filgatti practice, and will probably be about $20 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. Slower than some of the specially built supercharged racers against which it will compete in the 1.50 n c.c. class.
E. B. Ware's Morgan is -apidly nearing compietion. hut it is not yet sufficiently far advanced for testing. So far as we can qather, if will be built on lines very similar to those of Ware's previous ? Non- Wilo machine, the specification embodying a J.A.P. engine and the standard laycut of Morgan transmission. Ware has a deautation for making the pace hot, and undoubtedly he wili be well to the fore in the 1,100 c.c. class.

## THE ENGINE REV COUNTER.

A FASCINATING INSTRUMENT FROM WHICH VITALLY IN TERESTING DATA CAN BE OBTAINED.


AS AN "AFTER" FITMENT
The photographs show the neat method by which a $10 \mathrm{~h} . \mathrm{p}$. Eric-Campbell was equipped by S Smith and Sons IM A. Lid., with one of the latest type Smith rev counters. (Above) The instrument is fixed just below the dashboard where it can be easily ob served by the driver. (Left) The ingenious mounting of the driving mechanism.

Usually found onty on the dashtoard of the racing or super-sporting car, the enginc revolrefon counfer is, nemerfheless, an equally informafive insframent when foled fo an oidinary standard fonring moact As a general rale if can be added with very liftle complication, and besides being an ornament to the dash pravides the driver with a icealth of inferesfing data.

ANY instrument, by means of which data as to the functioning of the various mechanical parts of a car can be obtained, is not only fascinating, but imvaluable to the man who is sufliciently keen to be curious about such matters. The speedometer is a case in point, and the majority of owner-drivers will cheerfully spend $£ 6$ or $£ 7$ in adding this instru ment to a car which is not so generously equipped. Yet it must be admitted that the sphere of the speedometer is limited; that it does not provide a key to the mechanical working of the car, but rather serves merely as an indication of the miles which are covered in an hour and the miles which have been covered in a certain time.
In contrast, the engine revolution counter is decidedly more interesting and valuable, for it can be made to perform the functions of a speedometer, whilst, at the same time permitting the driver to gain some insight into the inner norkings of the most important part of the vehicle, namely, the engine.

## Simple Driving Mechanism.

lagine revoiution counters are seldom fitted except on sporting and racing cars, and the question may arise as to whether they can be added to a stindard vehicle without expensive alterations. The answer depends upon the particular design under consideration, but it may be said that, as a general rule, no serious difticulties are experienced, for the driving mechanism can be added to any part which is conventent for the purpose.

B $\because 2$

Two photographs on this page show the extremely neat arrangement extemporized by S . Smith and Sons (3.A.), Lid., 179-185, Great Portland Sirect, London, W.l, so that one of their latest model rev. counters could be fitted to one of our stafi cars, in Eric-Campbell, and a description of the method adopted may not be without interest to those who are contemplating a similar addition.

## An Ingenious Arrangement.

The Coventry Simplex engine lends itself adntiratbly to the purpose, owing to the fact that the dynamo is driven from a pulley mounted ontside the timing case on an extension of the crankshaft. Over the face of this pulley was supierimposed a second pulley of smaller diameter, held in place by three short set-screws. The drive was then taken by a seltadjusting spring belt to the driven pulley and here pasticular ingenuity was exercised in obtaining the necessary rigidity for the mounting.

As will be seen this takes the form of a calile-end bracket passed over a rod which is threaded through two L-shaped clips, the last-named being held in place by two of the induction pipe nuts. The cable itself runs along between the sparking plugs and the top water manifold and is carried by the shortest path to the rev. counter itself which, as will be noticed, is very neatly mounted below the bottom edge of the facia board and in such a position that it can be easily observed by the driver. This work was carriea out at the Great Portland Strect depot

## THE ENGLNEREV. COUVTER (contd.).

of the concern named, and althongh it was necessary to remove the radiator the whole job was completed in one day, between 10.30 ar m. and $4 \mathrm{p} . \mathrm{m}$.
One of the most interesting uses of the revolution counter is that it may be utilized as a check against the speedometer. It may be argued with equal force that the speedometer may be used to check the rev. counter, which is true. Perhaps, thercfore, it would be more correct to say that the one instrument may bo used as a means of checking the other; but, in so far as the specdometer is concerned, it must bo borno in mind that minor inaccuracies are liable to creep into the reading, owing to varying tyre pressures, so that the writer prefers to regard the revolution counter as the master instrument.

## Checking the Gear Ratio.

Before any calculations may be made the gear ratios of the car must be ascertained and very care fully checked. This can be done on a level road with a good surface in the following manner.
The car is pushed along gently until the tyre valvo of one of the rear whecls is at its lowest point, a chalk mark then being made on the road. With the lever in the top gear notch and the engine switched olf, the car is now propelled by the starting handle, carcful note being taken of the number of turns required before the road wheel completes one revo lution. Assuming that the results prove accuracy in all gears, a second chalk mark is made on the road surface, and the object of these marks now becomes apparent, for a careful measurement to the nearest righth of an inch between the two marks will give the actual distance covered by one revolution of the rund whel.
From the figures obtained simple calculations will show exactly at what r.p.m. the engine should be running for fixed speeds of $5,10,15,20 \mathrm{~m} . \mathrm{p} . \mathrm{I}$. and so on.

It now becomes necessary to mark the dial of the rev. counter so that m.p.h. may be made to coincide with r.p.m., and the best method is to use stamp paper, which can be cut into tiny triangles, the apex of each pointing to the correct figure. If the car is
now taken for a run, durine which varying speeds can be maintained for a short reriod, a carcful comparison between the readings of the specdometer and rev. counter can be made, and if it be found that, so far as the eye can sce, they agree, then the ownerdriver is in the fortunate position of knowing that, unless by some extraordinary coincidence degrees of error in each instrument are automatically balaluced, the two instruments are absolutely correct.

So far as the data to be derived from engine performance are concerned, it is extremely useful to be able to sec at a glance that the engine is working well within its !imits; thus the average maximum r.p.m. For a touring engine is probably 3,000 , this being a popular figure for bench tests, but few ownerdrivers care to stress their power units to this extent on the road.

The careful owner-driver whose ideal is to idle along at between $25 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. and $35 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. in top, might be surprised to learn from his rev. counter that he was speeding his engine up occasionally far more in second gear than in top, thus 2,401 up a moderately stiff incline in second gear would not be out of the way and would correspond to a speed nt
 ratio, but if he were to be guided by his rev. counter in top gear and pushed the needle round to the same 1.j.m. figure, he would no doubt be astonished to see that his speed was somewhere in the reeighbourhood of $42 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. to $45 \mathrm{~m} . \mathrm{p} . \mathrm{h}$.
There remains for discussion one of the most important aspects of the engine rev. counter, that 1 s , as an aid to easy gear changing. Again, by calculations, it can be discovered exactly what difference in r.p.m. exists at pre-determined road speeds by variation of gear ratios, so that when it becomes necessary to change from, say, top to second, the engine can be revved up exactly to the required r.p.m. before the lower gear is engaged. Actually, however, this seldom works out in practice, for so much depends on the quickness of the operator. It is far better to put the cart before the horse, as it were, by practising quiet gear changing and noticing the exact position of the indicating needle at the moment that the clutch is depressed and the lever snicked isto the lewer notch.

## FOR ACCURATE CALCULATIONS.

The distance "A" represents one complete turn of the road whels and is thus the actual distance covered in a single revolution. If the car be propelled by the


## INVITING DISASTER on the "30-MILE SKID.

 right.

FOR some time past well-merited and pointed references have been made to a section of the North lioad which. ideal in dry weather, has proved to be a veritable death trap when wet. We refer, of course, to the magnificent stretch betreen Eaton Socon and Wansford ir:dge. ive have, ourselves, driven several makes oi light car over this surface under both $\mathrm{d} r \mathrm{y}$ and vet conditions, but on the latter oceasions we can truthfuily say that not a single rehicle has been proof against the tendency 10 skid, whilst harsh application of the brakes at speed would have been nothing short of suicidal. None of these vehicles. be it said, was equipped with anything beyond small section tyres and ordinary braking systems. En passint, it is interesting to note that experiments are being carried out with a view to making this road far more skidproof, but we came across no stretch that had been so treated.

## An Interesting Objective.

With the object of ascertaining exactly how fourwheel brakes in collaboration with low-pressure tyres would behave, we recently availed ourselves of the opportunity of trying one of the latest model G.W.K.s thus equipped, and, incidentally, we were also able to obtain an excellent impression of a type which will be the standard model for 1925.
Before describing the results of our test, a word or two may be said with regard to the snecification of the car. It is refreshing to find that year after year G.W.K.. Lid.. Cordwalles Works, Maidenhead, holdly announce their intention of adhering to a system of drive against which much prejudice has bena exercised but which undoubtedly has advantaiges over the conventional gearbox.

It would appear that during the lasi two or three years this type of dise drive has approached as olosely to perfection as we may reasonably expect, for in the latest models, the layout from the four cylinder water-cooled engine at the front to the helical bevel final drive af the rear employing inter mediate friction dises, remains practically unaltered. 13:1

Detail attention, however, has been given to other parts of the chassis, and also to the general appearauce of the car with the result that mechanicully it has been greatly improved, whilst in appearance it undoubtedly ranks as one of thic most attractive light cars on the road.

Amplifications have been introduced in the system of four-wheeled brakes, the levers operating the shoes on the front wheels having been lengthened and a far more satisfactory inethod or inter-connecting the cable controls adopted. This takes the form of a system of compound levers so that much greater pressure can be brought to bear on the shoes, resulting in much lighier pressure being necessary on the brake pedal itself.

We took over this four-seaicr G.W.K. under weather conditions which augured well for our tests, and, snug behind the protection of all-weather equipment and a substantial hood, we set out in a slight drizzle for Eaton Socon. En route, we discovered that even with the all-weather squipment in place there was only a very slight drummitig within the car, a condition to which we rapidly became accustomed, and which very soon rassed unnoticed. For the rest, a comfortable touring speed of $37 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. could be maintained up hill and down dale; the gear lever did not require removing from top gear notch once we had left the traftic behind, the seating accommodation proved to be extremely comfortable, the visibility was good, and the only possible criticism which we could advance with regard to the handling of the car was the slightly hearier steering control, aue perhaps to the low-pressure tyres.

## Ditched!

Conditions, even on such a notoriouslv treacherous stretch as that under discussion, vary considerahly and we wondered by what indication we could judge whether the road was in a really bad state or such as to necessitate only reasonable care being taken. The answer was supplied within a few miles of Eaton Socon, however, where we came across a small crowd

## JWVATLEG DISASTVR (contd.).

surrounding a $10 \mathrm{~h} . \mathrm{p}$. light car, the tail of which was mactically cut of vew in the ditch, and the radiator pointing skywards: So far as we could judge, the accident had only just happened; the cause was obvious, and we congratulat d ourseles-not without a certain degree of misgiving, be it said-on the chance which had led us in embark on our tests on such a favourable occasion.
Self prescration is the furse law of nature, which accounted for the fact that we made sirall beginnings. somewhat gingerly applying the brakes at low road speeds, but we gained a great deal of confidence from the fact that ip to about $8 \mathrm{~m} . \mathrm{p}$.h. both foot and hand brake could le harshly applied even to the extent of locking the wheels without the faintest trace of a side slip).
So the car was speeded up to $30 \mathrm{~m} . \mathrm{p}$.h., and hoping for the hest, the foot brake was applied with what may be termed a reasonable pressure, that is, with such power as would have been necessary in an ordinary emergency. The deceleration was smooth, rapil and not marked by any trace of sideslip. it $25 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. . thereiore, far heavier pressure sas applical to the foot irrake, and the car was brought to a kead stop, the back wheels having deriated from the straight no more tian an inch or two.

## An Alarming Sideslip.

Again the vehicle was speeded up to over $30 \mathrm{~m} . \mathrm{p} . \mathrm{h}$., and on this necasion both loot and hand brake were applicel progressively, the pessure on pedal and lever being increased until it was at its maximum when the car wias travelling at some $23-2 \mathrm{~m}$ p.h. The eficet. to begin with, was somewhat remarkable, for the deccleralion was as smooth and easy as though the road was tone dry, but at $10-12$ m.p.h. the tail came round in atn alarming sides!ip which, however. was easily corrected, so that the vehacle ended up farillel with and just touching the extreme edge of the road.

The procedure was reneated, but no attempt was made towards the conclusion to correct the sideslip. The car appeared to pivot round the front wheels, the rear wheels lieing brought up short by the grass cllging into which They had just skidded. tha angle of the G. W. K. being by no means obtuse.
(jur final test consisted of one calculated to try out the Micinelin Comfort tyres alone. Again, at $30 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. the stecring wheel $\because$ as swang violently from one side to the other, so that the car began to procecd in a series of sharp swerves, the tail at one fime swinging towards the near side, then to wards the off side. ile were delighted to find that even under these conditions the vehicle still remained under alsolute control, and could be


Considerable improvernents have beeneffectedintie design and operation of the fourwheel brakes. The operating levers for the shoes at the front are of grea'er lenglh, and compound leverase is emp'oyed for the application of all the shoes.
straightened up without difficulty at the will of the drivis

Satisfied that it was indeed safe to drive the G. W.K. over one of England's worst stretches, we carried on at an ordinary touring speed of $34-37$ m.p.h., slowing down as one would do under ordinary conditions for fairly sharp corners, lut disregarding the dangerous nature of tice road surface on the straight, and applying the brakes in the ordinary way when necessary, Again the resuit was gratifying, [or the car held to the road without any trace of side-slip, and there was a feeling about the stecring which amplified the sensation of security, the front wheels instantiy responding at any time to the slightest movement which was given to the stecring wheel.

It must be admitted that on other makes of cars our experiences have not been so forturate, and that even with low-pressure tyres, skidding often was pronounced. It constitutes one of those inexplicable factors of which there are many in the study of skids, and we can only write of this particular model as we found it during a 350 mile test.


A strip of the hood at the rear folds back as shown to assist in the provision of adequate ventilation.


An engine detail shaning how the dynamo is neally mounted above hetiming case.


## A Champion of France.

IAM able to give this weck an exclusive drawing of M. Senechal, the promirent French racins driver and manufacturer of the Sénechal cars. M. Senechal was afforded recently the opportunity of being the first to drive a car round the new Montlhery track-an invitation he

M. Seriechal, by Lecoq. was pleased to accept. One of the most prominent figures in the Boulogne meeting, M. Senechal is a masterly driver in $r$ o a d races, and handled the car with which he won his class in the Grand Prix de Boulogne in truly wonderíul style.
It would seem that he is proud of his trim and very neat little beard, for, to protect it from the mud thrown by his front wheels, he wore a voluminous real silk handkerchief carefully folded and tied behind his head. I learn from him that he is very enthusiastic about the Montlhery track, which is a few miles from Paris, and which will be opened on October leth.

## A British Triumph.

BS. MARSHALL'S win in the Grand Prix de Boulogne last week, after the remarkable successes by British drivers in the speed trials and hillclimbs held two days before, created a considerable stir on the cother side of the Channel, especially as Eyston, another British driver, made the fastest lap with his Aston-Martin in the same race.
Marshall has a reputation for driving with his head. and he did not disappoint his many admirers at Boulogne. He clearly realized that one bad skid ois the treacherous sirface might put him out of the race, and he contented himself, therefore, with merely keep, ing a comfortable lead; as a consequence, he enjoyerl a no-trouble rum. One of his greatest difficulties, he told me, was keeping his goggles clean, his mechanic having to change them no fewer than four times a lap, and having almost to scrape the mud off them.

After the race Marshall was presented with a huge bouquet of flowers, and, in accordance with local custom a gigantic fish. The latter he gave to the hospital and the former he placed on the War Memorial-a diplomatic and very sporting action, which has endeared him for all time to the hearts of local residents.

## The Hidden Hand.

FOLLOOVING a motor coach along a busy main road the other day, I was surprised to see it suddeniy swerve to the off side without any signal from the driver. Later I perceived that the driver's warning hand was entirely obscured by passengers' coats and other impedimenta hanging over the side. The same also obstructed his rear view through tho mirror.
Cleariy it should be the duty of motor-coach proprietors to prohibit this sort of thing, for it might easily lead to a smash. Even without obstruction a char-it-bancs driver's signal is not always easy to see, for frequently only half a hand comes ont a fraction of a second before the vehicle changes direction.

## Light Car Comfort.

IT is a common criticisme against light cars that Lone cannot pack into or on to them the same number of people for which accommodation can be found on a high-powered sidecar combination. 1 very much doubt, however, whether passengers would accept car accommodation of the kind prolicered by the sidecar. Convention accounts for much. It would he possible to devise "perches" of the pillion variety at the back of a car especially if passengers sat vis-a-vis with their legs cramped as on the average carrier, and the method of providing an extra seat as in a sidecar might also be adopted; but would such an arrangement be popular? I trow not.

The virtues of a light ear are its comfort and weather protection, both of which would be lost in any atiempt to give it char-a-bancs properties. After ali, the man who wants to take three adults beside himself can always invest in a four-seater body, and he usually knows his requirements before purchasing.

## Gears and Gears.

CHATTINE with Mr. Constantinesco. the Roumanian inventor of the autumatic variable transmission, I learnt that he expects that, when his gear becomes generally adopted, an all-round reduction in engine powers will take place. Light cars and cyclecars will be produced which wiil perform as well as those at present in use, although they will he fitted with much smaller engines, he says.
I belicve one of the most serious obstacles in the way of the adoption of Mr. Constantinesco's invention for cars will be an unacknowledged prejudice on the

## RIC'II IULXTU゙RE (contd.).

part of motorists themselves. We all know that gears are wrong; we all have heard of Panhard's remark when he had completed his gearbox, "It is brutal, but it works"; we all know that gear-changing is a waste of time. But we are all aware that there is joy in the gentle snick with which the gears engage when the pause in changing up has lueen correctly timed, and we all appreciate the delightful manner in which the lever moves home into a lowr gear position when the layshaft has been speeded up exactly the sight amount. Motorists are jealous of their driving pleasures, and I prophesy that there will be a long hattle between the automatic infinitcly variable transmission and the ordinary gearhox.

## Warning Devices.

WITll reference to my recent paragraph with regard to sirens driven off the flywheel, a correspondent now writes to inform me that he has made a siren, on the lines of those used on destroyers and nperated ly pressure from one of the cylinders. The apparatus seems to consist of two metal discs about $2 \frac{1}{2}$ ins. in diameter and $\frac{1}{4}$ in. thick, drilled with a ring of holes, equally pitched hut at an angle to the vertical and "handed"; that is, the angles of the holes in the two dises are opposed.

One dise is fixed and the other revolves on a spindle so arranged that the faces of the two discs are almost touching. The whole is mounted in a suitable casing. The action is that gas pressure massing through the holes causes the free dise to revolve at a high speed and set up that well-known and delightful wailing shriek. I am not sure that the arrangement my correspondent outlines is very good, as the dises would be even more liable to
fouling by oily gases than the more usual exhaust whistle, and would also require far more attention. It occurs to me, though, that some such principle might be used in the construction of a bulb-horn and might be expected to emit a short, piercing shriek and give no more touble than an ordinary reed. Accessory manufacturers seeking a new "line " might give a thought to the matter.

## Helpful Pedestrians.

$1 s$$S$ the time coming when the pedestrian will look upoir us as human beings: It seems hardly possible, but there are distinct signs of a tendency in the right direction. Several light car owners have told me that, at blind corners where no policemen :uce placed, they have often been given the signal to move on or to slew down by passing pedestrians, and only last week I had a similar experience myself. It is little matters of this kind that go a long way to remove that misunderstanding which undoubtedly still exists between motorists and pedestrians.

## Scope for Inventors.

M$Y$ dictionary tells me that a cylinder is a long roller-like body, solid or hollow, and of uniform circuinference, but recently we have heard of oval "cylinders," while I see that a writer in a daily paper is convinced that they not only should be, but actually are, tnpered.

When an ergine is labouring the explosions catch the pistons napping at the top of their stroke and knock them sideways it seems, but "when the explosion takes place with the piston lower down the cylinder there is less room for side play and the tapping disappears." The remedy seems clear to me, Professor Low must invent a rubber piston:
s.s.


PROMINENT FRENCH ACES. Senechal and Dely who finished first together in the $1,100 \mathrm{c}$ c. ciass in the Grand Prix de Boulogne. They drove in hand in hand and, jumping out of their cars, kissed one acother rapturously.

# The IMPORTANCE of CHASSIS LUBRICATION. 



A sure indication of lack of oil is given by squeaking parts when a car is moved by hand.

T$\dagger$ HERE is no better way for making a new car into an old one than by neglecting to pay frequent attention to the various parts of the chassis where lubrication is necessary. Too many drivers give all the attention for which they can find time to the engine, neglecting to look after other equally important parts of the chassis. This is rather a peculiar fact, as nearly every modern small-car engine is self-lubricating, and, providing that the oil in the sumn is kept in good condition and at the correct level, the need for lifting the bonnet seldom arises. Many engines, in fact, may be neglected for weeks at a time without coming to any harm, but this most cmphatically cannot be said with regard to the fronta.je assembly and many transmission systems.

## Scientific Greasing.

In recent years scientifically designed greasing systems have done much to remove the unpleasantness of attending to the needs of the various working parts about a small-car chassis, and it may be fairly said that it is either a very busy or a very lazy man who cannot find time to attend at least to the most important points. Principal among these are the steering connections and the stub axles. The latter, it must be remembered, embody some form of thrust washer, which has to take a substantial proportion of the weight of tho front part of the car-yet they must operate smoothly, or the steering will be stifi.


[^1]The various steering connections tend to wear not cnly by reason of the fact that while the car is in motion the steering wheel is seldom, if ever, at rest, but also because inequalities in the roud surface tend continually to make the front wheels wobble, and this tendency must be largely checked through the medium of the connections.
The steering box, of course, is generaily so arranged that it may be partly filled with oil or


There are obvious points in the steering layout where lubricant is required at regular intervals, two of the most import ant being shown by the positions of the greasers in thia sketch.
grease, and it is thus self-lubricating for long periods, but the stub axles and other steering connections are not so fortunately placed.

With some of the cheaper light cars no provision is rade for oiling the pins which secure the extremities of the track rod and the ball joints of the drag link, the manufacturers' intention being that users should merely squirt oil at the exposed portions of these parts of the mechanism in the hope that some of the lubricant will reach the bearing surfaces. Clearly this is not as it should be, and wise owners of ears so produced should provide the joints with leather covers which may be packed with grease, thus preventing mud and grit from causing wear while keeping the moving parts perpetually luliricated.

In the case of one well-known light car provision - for oiling the various steering joints is made by litilizing the hollow rods as oil reservoirs. from which the lubricant is fed to the working surfacns. Witin this alrangement the owner-driver has merely to

## CIIASSIS LUBRICATION (contd.).

replenish the hollow rods with oil at intervals of six months or so in order to ensure that the joints aro adequately lubricated. This plan is not, of course, recessarily too costly for incorporation in the design of a reasonably priced light car, and it is surprising that it has not been more widely adopted
$\Lambda \mathrm{s}$ an alternative, ball joints can always be drilled, tapped and fitted with screw-down greasers or oilers, but it is almost impossible, apart from the use of leather covers, to provide suitable lubrication for the fins of track-rod yokes without fitting new pins which are suitably drilled to allow greasers or oilcrs to he used.

## Home-made Covers.

While on the subject of leather covers, it should be mentioned that these can easily be made at home, while for some joints a canvas putlee will form an excellent substitute.
It has been said already that stub-axle pivot pins need a good supply of lubricant, and, although it is the invariable custom of manufacturers to provide cither screw-down greasers, oilers or nipples for a frease gun at these points, the actual fitments are not always ideal for the purpose. An excellent plan where screw-down greasers are used is to scrap the (xisting ones and fit very large ones in their place.

Into the top of the large grease caps grease gun nipples can be screwed or soldered, so that the advantages of the high-pressure system are available, while the screw-down can permits a half-turn to be given at frequent intervals, and without the need for extricating the grease gun from the tool locker.
It is often an advantage to drill the upper portion of a stub axle and to fit an additional oiler or greaser in the manner shown in the accompanying illustration. The object of this lubricator is to supply oil nr grease to that portion of the bearing which carries the weight of the car: and the importance of sufficient lubrieation at this point cannot be overestimated.
(Right) A special greaser to feed the thrust washer in the steering pivat pin assembly is a very desrable feature.


Screw-down greasers for keeping ball joints well-supplied are also advantageaus but seldom fitted.

The mere fitting of a screw-down greaser is not necessarily sufficient to ensure perfect lubrication, however, and if the parts, when dismantled, are examined with a view to ascertaining where the principal loads are bornc and grease grooves are cut to ensure a supply to them, the result will well repay the trouble taken
In addition to the stub axles, the steering box and the joints, it is important to remember that there is generally a bearing at the top end of the steering column which requires oiling at intervals, while with scme designs it is necessary occasionally to oil a second bearing near the base of the columan.

The small joints" at the ends of the various links which operate the throttle and the ignition timing will soon set up minor rattles if they are not occasionally oiled, while the accelerator-pedal guide or bearing should be oiled about once a week.
The shaft which supports the clutch and brake pedals is generally provided with oil-holes or greasers, but being under the floorboards, they are often neglected. When the boards are lifted to gain accesa to them, there is n number of points which also call for attention with an oilcan. These include the brake rod or cable-yoke cads, the clutch-6pigot bearing and withdrawal mechanism and sometimes the speedometer drise
The flexible shaft which drives the specdometer may be removed with advantage from the car at intervals of six months and filled with giease which has been warmed to make it fluid. The job is rather

messy: but it must not be forgotten that specdometer cable is expensive, and soon gives out if not properly oiled.
At the rear of almost every light car there are several points which should be oiled or greased at regular intervals. The brake-rod ends, the brakecam spindles and the spring saddles and shachles work almost continually while the car is in motion, and should not be overlooked. Many cars with quarter-ellintic rear springs are made much more comfortable if the spring ends where they bear on the top of the axle casing are oiled before every long run.

## To Resist Rust.

The springs themselves respond to any iorm of lubricant, the most important matter being to ensure that they are sufficiently oily to prevent the formation of rust. If the expense of spring gaiters is not considered justiñable, the best plan is probably to clean the springs from time to time with paraffin and a stiff brush, subsequently painting them with this oil.

A number of appliances is on the market for opening the leaves of springs and forcing grease on to the working surfaces, and these naturally commend themselves as a practical means for making an awkward job much more easy than the old method of jacking up the car and prising the spring leaves apart with a screwdriver.

Rear-wheel hub bearings are nearly always lubricated automatically from the axle casing, but frontwheel hubs must be greased about once a month. A thick grease whould be wed for the purpose, and, if possible, it should be forced in until some of the old grease is seen exuding from the far side of the bearing.
Fonnet and door hinges, the starting-handle bearing, the door latches and any number of other comparatively unimportant parts of a car, which are generally left dry throughout the life of a car, should be niled from time to time if rattles are to be avoided and satisfaction obtained.

# Every Motorist Should Know ThatINSURANCE IS NOT FOR PROFIT 

THE majority of people, including light car owners, are inclined to expect too much from their insurance companies, so that the mere settlement of a claim fails to satisfy them. They often want something for nothing and lose sight of the fact that they insure for safety and not for profit.

It is proposed to deal with an aspect of insurance which does not seem to be fully. understood or appreciated by the average owner-driver, and this is the question of the settlement of claims arising out of damage caused to the car, excluding mechanical breakdown, which, generally, is not insurable.

Having suffered a smash, the owner is usually at liberty, under the terms of his policy, to have his car removed to a garage and to obtain an estimate for the repairs, and if there is only minor damage, so that the cost of repair does not exceed about $£ 10$, the work may be put in hand at once, provided always that a duly completed claim form, together with the cstimate be submitted to the insurance company without delay:
in the crent of more extensive damage and, setting aside the possibic question of third-party claims or the Tike, most companies require that the repairs estimate be submitted to them before any work is done, other than that required to remove the car from the scene of the accident. The company will then, at their discretion, send a competent engineer to inspect the car and assess the damage. He will have with him the repairer's estimate and he will agree or query each item with the repairer. Haring arrived at a satisfactory price the assessor wil! give instructions for the work to proceed.

It is this vexed question of damage assessment which is so little understood by many car owners, and which leads them to regard their insurance companics as not altogether honest concerns.
This view is most unjust-at least, in the case of the weil-known companies, and is brought about by the fact that the insured is apt to try to make a profit out of any claim he may have, and cannot understand that he is only entitled to have his car put back into the condition in which it was immediately prior to the accident.
Let us take as an example a badly dented bodypanel. Under the terms of his policy the owner is entitled to have the dents taken out and the panel repainted to match the rest of the car. He is not entitled to have the whole body repainted, but, where the new paint will not match up well with the old, most companies are prepared to meet the owner in bearing some portion of the cost of a complete repaint.
The companies are under no obligation to pay for new parts where the damaged ones can be satisfactorily repaired; neither aro they compelled to agree to new parts when second-hand ones in keeping with the car can be used. In generial, new parts are supplied, but this is in the nature of an act of grace.
In the event of total loss of the car by fire or theft, the owner usually expects to be paid the full amount for which he has insured, regardless of the fact that the market value of the car will have depreciated since he bought it, and, unless specially stated, prescnt market value is understood in all claims setticments.

## SOME NOVEL USES FOR A PENNY.

APART from its legitimate function as a coin of A the realm the penny can be of great service to the liglit car owner in several other ways. The illustration shows it being employed as a screwdriver for removing the lid of the accumulator box.

In spite of tool kits, it often happens that the motorist finds himself stranded without a screw. driver and in urgent need of one. Usually the first substitute to be pressed into service is a penknife blade, which will seldom do anything but break or shut back on its owner's tingers.
Having failed with a penknife, a futile search is made for some other tool thin enough to fit the screw slot, and a pemmy, at least one of which even the tax-burdened light carist may be expected to carry with him, is seldom thought of as a suitable tool.

A worn penny forms a very good screwdriver with which a reasonable amount of leverage can be exerted and which will not bend or break easily.
So well will a penny serve as a screwdriver, in fact, that it is not always worth while to get out the proper tool, even when it is known to be available. This, of course, applies only in the case of screws -30
which do not perform any very important duties and which need be only reasonably tight, as in the case of those which secure a battery box lid.
Some water-joint clips are secured with a slotted scren, and a slight leak may be cured by a half-turn of the screw; enough force can be applied with a penny and recourse to the tool roll is ihereby avoided.

Apart from its uses as a tool, the penny can be made to serve other purposes. It tins" very well, and so can be used as a patch for soldering over a hole in a leaky tank. The tip of using a penny as a distance-piece between the exhaust-valve stem and the tappet to relieve the compression in an engine for starting is almost as old as motoring itself, and small change was much in demand in the days before self-starters amongst owners of high-power engines. Doubtless they are still often used by owners of cyclecars with two-cylinder engines.
It is perhaps to be regretted that our bronze coins have not a hole through the centre, as in the case of some foreign ones, as they would then form ideal washers. As it is. the law prohihits the defacing of coins of the realm.

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## Topics of the Day

## That " 30 -mile Skid."

ORE and more attention is being focused on that dangerous stretch of the North Road which begins at Eaton Socon and extends to Waasford Bridge, with a branch from Norman Cross to Peterborough. It has been very rightly described as "a 30 -mile skid" in wet weather, and undoubtedly it A Gigantic stands out as a monument to offecial stupidity. Blunder. When its construction was mooted, we heard rumours of it being a "concrete road," and its completion was eagerly anticipated. During its construction, however, we discovered that an asphalt foundation was being userl for the road surface, and we were iuclined to cast grave doubts on its safety in wet weather. It remained, however, to ascertain what effect the deep anti-shid indentations would have, and, as zesults prove, they are practically useless.

The folly of the whole scheme is rellected strongly by an cxamination of road conditions existing in big centres, such as London. Every motorist is aware-or should be aware-that the majority of smooth asphalt surfaces are extremely treacherous in wet weather; in fact, there are certain roads in London which are, more or less, tabon to motorists on this account during rait. One might presume that the road authorities are as alive to this fact as motorists, and that before embarking on such a big scheme as remaking 30 miles or more of the North Road wit: this same surface, diligent inquiries would have been pursued hy those responsible loca!ly. Such, however, could not have been the case, and the engineers went ahead with their task. cvidently feeling satisfied that they were chgaged in producing one of the finest roads in the country.
They have now ralized their mistake, and it remains to be seen what action will be taken. They have provided us, certainly, with one of the most magnificent main-road surfaces in the country during dry weather, but it should be emphasized that even after a short shower, and until the surface has thoroughly dried, this 30 -mile stretch is a veritable deathtrap.

## Road Racing in England.

ONE of the principal topics of discussion among the many English visitors to Boulogne for the four-day automobile mecting which was held there last week was the possibility of road races ever being held in England. The very large crowds which gathered to watch the Boulogne races, not

Public Enthusiasm Essential. only at the grand-stands, but along practically the whole of the route, indicated that, even when the weather is at its worst, an enormous crowd can be attracted to a road race.
The Boulogne meeting, like many other important French erente, has shown that a properly organized road race can make a race driver a popular idol, whereas in England he is regarded as a congenital idiot. Why this should be so it is difficult to explain; probably the reason is to be found in the fact that so very few people become acquainted with him. I footballer, it must be rememiered. displays his prowess before millions, whilst a racing motorist in England is known only to a select coterie of comparatively few thousands.
We believe that before sanction can be obtained for holding road races in England the public sympathy must first be aroused, and that can be done only by pandering to its inborn love of a brilliant exponent of a very difficult and arduous sport. If 100,000 Londoners could be attracted to witness a motorcar road race such as the Grard Prix the nublic demand for such events would he so great that permission to close roads for them to be rum wif could not possibly be withheld.

TTIE morning was bright and sumny for the oppening day of the loulogne motor mecting organized by the Auto mobile Club du Nord. The meening, which started on Thursday, August 28th, and concluded on Sunday, August 31st, attracted a large entry, the performances of the motorcycles and cars exciting considerable enthusiasm among residenis in the neighbourhood of Boulogne.
Unfortunately, the fine weather which marked the opening day did not continue, and the Concours d'Flegailice (Triday), the Grayd Prix de Böllogne (Saturday), and the Georges Buitlot.Cup race (Sundoy) were held in ponting torrents of rain. Speeds Thitlio Livo roast races wero taturally low oning to the areacherons nature of the colirse and the difficulty of driving through blinding rain, but very creditable performances were, neverthcless, put up
British drivers who took part in the speed and acceleration trials and the hill-climb on the opening day included J. A. Joyce (A.C.) Eaton (Aston-Miar tin), and l3arnett (Marscal). Havey had entered his Mwis but did not ar rive, B. S. Marshall (Bugatti) being another non-starter
There were numbers of Senechal en tries, a Salmson, a Deljosse, an Ell ll' and a La leerle, the last-rameḍ had very fine performance. This oar was 21 socs. faster than the Aston-Martin for the total time for the three events.
The 3 -kilometre flying-start speed trial was the first event to be run of, a stretels of fairly straight lut undulating road being selected for the purpose. At the end of the first kilometre there was a hali-kilometre descent with a gradient of perhaps 1 in 14, and this allowed very high speeds to be gained. The surface was iairly good in the centre of the road, but rough on the steceply cambered sides

## British Car Fastest

Senechal, at the wheel of a $750 \mathrm{c.c}$ Senechal. covered the 3 kilometres in 1 min. 38 secs., Deré, in a 1,100 c.c. Senechal, taking $1 \mathrm{~min} .21 z \mathrm{zecs}$, and Joyce (A.C.) 1 min . 15 \% secs. This was the best time recorded by a light car, the La Perle being the only light car, other than the Sencehal, to approach it with 1 min. 23 secs.
Joyce was handling the A.C. racer with which he has made lest time of the day at several speed events
The 1 -kilometre sprint from a stand ing stark, which was also run off in the forenoon, was covered by the A.C. and the Aston Martin in 35! secs., Dore's Senechal puttang up the next best time with 37 ? seecs. The litele 750 c.c. Sene chal clocked 42 secs.
Thromhout the morning no thrills were afforded by the light cars, it remaining for J. G. P'. Thomas, at the wheel of his world-famous raciug eight cylinder Leyland, to scare the somewhat timid spectators with the lurid speed of nearly $130 \mathrm{~m} . \mathrm{p} . \mathrm{h}$.
The hill-climb in the afternoon was held ou the outskints of bunlogne up a hill bordered on earch side ly houses and Hanked on the off side liy tramlines. The gradient was about i in 12, the length half a kilometre, and there was as gradual left-hand bend near the finish.
Péan, on a solo l'eugent molorcycle, made the first really fay ascent, clocking the astunishing time of 21 secs.B32

## STRIKING SUCCESSES of BRITISH

JCYCE, WITH THE RACING A.C., WINS SPEEDI.T FIRST IN THE GRAND PRIX OF BOULOGNE-E


SPEED PICTURES TAKEN AT(1 and 2) J. A. Joyce in the A.C. making fastest time in the speed trials and hill-climb. 3) An Aston-Martin covering the flying three kilometres. (4) The La Per'e which did the three kilometres in 1 min. 23 secs. (5) B. S. Marshall (Bugatti) negotiating the difficult $S$ bend in the Boulogne Grand Prix. (6) An Amilcar at speed on the three kilometre

## CARS and DRIVERS at BOULOGNE.

## RIALS AND HILL-CLIME-_MARSHALLS BUGATT, YSTON'S ASTON-MARTIN MAKES FASTEST LAP


--THE BOULOGNE MOTOR MEETING
course; its time was 1 min. 38 secs. (7) Senechal, the winner of the 1,100 c.c. class. and (9) Marshall, winner of the 1,500 c.c. class in the Boulogne Grand Prix, at the end of their 220 -mile race. (8) Joyce at speed in the A.C., and (above) a French Morgan, and (right) a 750 c.c. Senechal taking part in the hill-climb.
the fastest of the day and ? sec. faster than the Leyland Thomas

Joyce, in the A.C., had a second run, as, on his firnt attempt, he was baulked loy a doy which was prowling about in the road near the start, and lyy another near the finish. Joyce's time was 22 secs., Senechal being 5 secs. slower, and the Lai Perle 6: slower
I: was tho first time an A.C. had taken part in any French event, and in making fastest light car time for the speed, acceleration and hill limbing tests, and, of course, winning his class, Joyce is to be heartily congratulated.
Tho following are the total times taken by the light car class winners to cover the 3 -kilometre speed trial, the 1 kilometre acceleration lest, and the halfkilumetre hill-climb:-
Cyclecars up to 750 e.c. -1 . Sénēchal (Senê. Cyctecars un 10 1,100 c.c. (two-seaters). -1 . nor sendiall. 3 mins 314.5 .ecs. 2. De3 Cyctecars up to 1,100 c.c. (single-seaters)-1. Tauring ${ }_{2}^{1}$ Amilcarl ${ }^{2}$ mina. 56 secs.; 2, Rigal (Artesh). Touring Cars un to 1.500 ec - Leferro (T-a Periel, Martial. 2 mins 524.5 secs
Racing Cars un to 1,100 c.c.- ${ }^{1}$. Sénérlaal
 Rucine : mans. 42 3-5 secs.
2 Racing Cars up to 1.500 e.c. - 1 , Joyra (A.C.), ${ }_{\text {lossol }}^{2}$ mins 3 mins. 302.5 secs

Display of Coachwork.
The Concours d'Elegance, which was held on Friday afternoon on the front at Boulogne, consisted of a display of coachwork, prizes being awarded to entrants whose cars were considered to he the most elegant. The committee of juclges, by the way, was composed of representatives of prominent Erench cartiage builders.
Light car entries were conspicuously few, and, although there were six chasses in which they were allowed to enter, only two prizes were secured; one of these fell to M. Senechal, who entored a two-seater racing car fitted with flared wings on the front and none at the rear. It was the identical car wheh he ran in the Grand Prix de Boulorae road race which was held on the follow. ing day.

A Salmson won the first prize in the class for touring light cars, but there were only two entries, and the winner revealed nothing of a particularly original mature. A feature of the exhi-bition-which was held, by the way, in torrents of rain-was the large number of bodies which were covered with leather tightly stretched-and in some cases glued-over aluminium or stel panels.
The great advantage of the leather covering is that the car can be wiped down with a wet sponge at any tine, there heing no varmish to scratch and no need to hose the car down on return. ing from a muddy trip. Ordinary bont polish serves to keep the leather in yond condition, and a car we examined, which had been in use for ten momhs and had covered 12.000 miles with its leather. covered body, certainly bore out the makers' claim that the finish is extremely durable

On the following day, Saturday, August 30th, the Grand Prix of Boulogne was run off over n 22 -mile arcuit, the same course being used for tho Geotges Boillot Cup raca. which ws:

arranged for Sunda: The course was triangular, with the apea at loulogne, and consisted of two long and raasunably straight lege along main roads, and conirected at the extrmities farthest from Bnulogne by a narrow, winding and hilly secondary road, which was about seven miles in length.
I.eaving the starting-point, there was a mile and a half of main road which led to a hair-pin bend (the apex) in St. Martin. There followed about eight miles of the main road. the last four of which were absolutely straight, and which had been used, incidentally, for Thursday's speed trials At Le Wast ath ahrupi turning to the right was taken. the corner calling for a reduction of speed to about $15 \mathrm{~m} . \mathrm{n}, \mathrm{h}$. or $20 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. Then came a seven-mile cross-country streteh (the base of the triangle), which led to Desvies

## The Start.

The race, which was for light ears and cyclecars only. attracted 15 entrants, three of which-the Le Jucsdid not start. An hour before the start rain was falling very heavil: and, as this showed no signs of abating, it was decided to delay the start an hour. and to reduce the number of laps from 12 1010.

The cars were started at one-minute intervals, the cyclecar class. ennsisting of two single erlinder water-cooled French-built Morgans, were sent away first. Three 1.100 c.c. Senechals formed a special class of their own. They started simultaneously, the first two drivers deliberately sacrificing two minutes and one minute respectively in order that the team might get array torether. The 1.500 c.c. class was headed hy G. E. T. Evston in the AstnuMirtin "Green Pea." which was folInwed by Morgan's Aston Martin, carrying Mrs. Acnew as a mechanic B. S. Marshall followed in the Bugatti which he will rum in the 200-Mile Race, the class being concluded by a La Licorne. a Delfosse and two Antonys.
The Jorgans got away extremely well. their 500 e.c. engines evidently having nlenty of power. Senechal streaked nway from his tso team-mates and Eyston's Astor:-Martin was much faster of

pected, but he did not appear, and it was subsequently announced that, on the fastest stretch of the course, he had heen about to pass the Delfosse when the latter, drawing in too close in order to allow the Aston Martin to get by, st mock a heap of stones by the wayside and, bouncing into the centre of the road, made Eyston swerve violently, which culminated in his hitting a telegraph pole and severely damagiter his front axle and steering.
While Eyston and his mechanic were gazing ruefully at the machine, Mow, y came along in the other Aston- Martin, which was still misfiring on account-it transpired later-of an elusive magneto trouble, and it was then so late that Morgan decided to relire and give EysIon and his mechanic a lift back to the pits.

## Consistent Running

B. S. Marshall, meantime, had lieen lapping very consistently and taking 25 mins. or 26 mins. a lap. He was much faster than the Delfosse, the Antonys and the Senechals, and retained a useful lead to the finish. Throughout the race he lad no trouble whatever; on the corners he was not observed once to get intn a serious skid, and, by taking full advantage of the front-wheel brakes and the terrific acceleration of his Bugatti, he drove probably the best race of the meeting.

Uur olservations on the course slowed that the difficulties of cornering on the undulating and winding section hetween Le Wast and Desvres were-added to by a varying and treacherous surface, while mud bespattered goggles made matters still worse.
Sénechal, usually a very dashing and sensational driver, took the worst corners at suceds as low as $15 \mathrm{~m} . \mathrm{p} . \mathrm{h}$., and all the drivers deemed it prudent to go very warily. Antony was, perhaps, tho most cautious, although his Antony appeared very steady.

Midway along the winding section was a steen degcent with o difficult $S$ bend

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- Knutsford.
inth August, 1924
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May we send you a budget of testimonials dealing with

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HORSTMAN CARS LTD., BATH

> "The Beauty of Bath"
bOULOGNE METLING (con.). near the foot. This was fullowed by an almost straight incline of nearly a ghatter of at mile. The ascent of this called for smart work with the gear lever, at which Marshall and the Senechal drivers excelled. The Morgins, con sidering that their single-cylinder engines: were of less than 500 c.c., accelerated extraordinarily well after the S hend.
Dhtme's Morgan had an oil tank fitted under the scutile directly over the driver's and passengers' legs, the filler being arranged for easy replenishment at speed. Unfortunateli, however, the filler cap was lost and the enckpit was consequent!'y flonded with oil, which made it ninst difficult for Dhome to operate the pedals.
fargely on this account, no doubt, Dhômo completed only four out of his eight laps. the other Morgan finishing the 176 mile course (eight lups) in 4 hrs. 48 mins. 5 sees.
One of the senechals retired on the sisth lap with various tinubles. but the other two finished each in 4 hrs. 29 mins. 7 secs. The drivers of these two cars hadd decided to make a dead lieat of it. sn far as their class was concerned, and the two cars ran in at the end of their last lap with the driver of one car holdine the hant of the mechanic of the nther. They were awarded the Pickett Cup for consistent running.

## Only Three Finishers.

Tho I, La Lanrne covered ouly three laps before retiring: the Ielfosse gave up as the result of the accident which calusell Eyston to retire ; one of the An(1mys did six laps, and the ollher four. There were thus only three cars to finish the coinse, bint that does not detract from Marshal!'s performance in the Bugatti, for lie areraged $54 \mathrm{~m} . \mathrm{ph}$ unden dreadful weather conditions. which is a feat of which any driver might be proud In addition in his prize for wimning the race, Marshall was also awarded a cup for the most consistently gond performance.
Englebert tyres infated to only 36 Jb . par square inch, and prevented from crecping by five security bolts on each wheel. Tratford shock absorbers. Zenith carburetter. 13osch magneto, Lodge plugs and Rudpe Whitworth wheels were used. The fuel was Pratt's and the oil Castrol.
The Sénéchals. which won the 1,100 c.c. class and took nearly 12 mine Innger


## A THRILL FOR THE CROWD <br> An impression of Eyston's alarming skid within sight of the grandstands when he had to swerve to pass his team mate.

to complete the course than Marshall, were fitted with Ruly engines. Dunlop tyres, Rudge. Whitworth wheels, Solex carburetters, Champion plugs and Hartford shock absorbers.
Those who were present at the race thought it irrpossibie That Sunday's event-The Georges Boillot Cup Racecould be held under worse conditions, but as the spectators began to arrive at 7 o'clock on Sunday morning, rain was again falling heavily
The race was for four-seater cars, but in exercising their judgment with regard to eligibility to compete, the organizing club allowed considerable Intitude. Thirty-one entries were on the proginmme; of these there were 26 starters. A Marseal, an Alvis and one Aries wero among the light cars which did not start. Entrams up to 1,500 c.c. consisted of two Aries, one E.H.P., one Aston.Martin, one F.D. and one La Perle. The race was a handicap. the Aries team heing the limit men to whum the EIIP. gave 4 mins. the Aston Martin 13 mins., and the F.D and La Perle 14 mins. Bignans. CAP.s, ChenardWalckers. Ballots, two-litre Bugattis, and a Yaushall completed the over1.500 c.c. starters.

The race was due to start at 9 o'cluck. but rain was falling so heavily and the visibility was so low that the start was relayed for half an hour. Faton's


SUCCESSFUL BELGIAN LIGHT CAR.

The car shown to the left is the F.D. which was the first light car home in the Gearges Baillot Cup race.

Aston-Martin was the only British light car to start, and it was anticipated that it would give a very good account of itself. It was in the leading position at the end of the first lop and continued to retain the fead for six laps, which it completed in 2 hrs. 46 min. 35 secs.10 mins. 25 secs. longer than B. S. Marshall had taken in his Bugatti for the same distance on the preceding day.
For some unaccountable reason, the petrol consumption of tlie Aston-Martin during the first few laps had been considerly more than the drwer anticipated, and on the seventh lap, when still some four miles from home. the engine dried up and it was found that the tank was empty. A small amount of tuel was in the Autovac, however, and switching over to this. Eaton hoped to make the pits, but it lasted for only two miles and, as further supplies could be obtained only frorr, the pits, Eatnn was compelled to retire, and thus ended the only British light car hope.

## A Belgian Winner.

Meantime, the E.H.P driven by M. Benoist, a brother of the Benoist who has driven Salmsons in the 200-Mile Race, did his first six laps in 3 hrs. 6 mins. 44 secs., and the F.D. took 3 hrs. 7 mins. 13 secs. for the same distance This car, which proved to be the first light car home, made an extraordinarily good performance. With its 1,496 act engine pulling a distinctly heavily built car with a large four seater body, it covered the 14 laps- -308 miles -in 6 his. 59 mins 12 secs. The F.D. cars are made in Belgium, and with their four wheel brakes and striking appearance are distinctly attractive.

The two little Aries, with engines of only 1.085 c.c. and four-seater bodies, each covered their first lap in just over 32 mins.. but they were unable, apparently, to stand the speed ard hoth retired on their second lan. The Ia Perlo was noted to be sluggish and to be misfixing early in the race and, after taking 46 mins. for its first lap and 1 br 9 mins. for its second, the driver decided to retire. The race was won by a Chennad Walcker, a similar make of car heing second. They h.dd hodies which could be described only as of a burely racing type and they recejved 53 mins. start from Major Cne's standard fourseater Vauxhall, which was at scratch!


The services of the staff of "The Light Car and Cyclecar" are alvays at the disposal of readers. Queries of general interest will oflen be answered under this heading, but a sfamped addressed envelope should aluay's be enclosed. Correspondents are requested to writc upon one side of the paper only

## Ask the Reason

C.L. (lork)-Why grumble if an A.A. scout faited to saluto you? The Association distinctly asks members to stop and inquire the reason if it is not sufticiently obvious.

## Friction Driving Disc

N.K. (Cambridge).-Cast-iron is a most unsuitable metal for a driving disc, which should be made of the finest steel and carefully trued up-preferably by an expert.

## Licensing Fees.

L.Y. (Notlingham).-If the secondhand car which you have bought is ficensed until December 31st you will diave no more licensing fees to pay until next year, as this is the only outlay necessary on the score of taxation. You are probably confusing your own caso with that in which a car is licensed for a short period, such as a quarter.

## Spring Selting.

P.II. (Liverpool).-Several light car manufacturers purposely set the off-side springs of a car so that the body is slighty higher, acting on the assumption that solo driving will result in a slighty feater settlement on that side of the velicle, and thus will soon restore an even keel. In cases where this is not dnue one frequently sees the driver's side of the car slightly lower than that of the passenger's.

## G. N. Push Rods

F.IIR. (Hunstanton).-The reason why the inlet-value push rods of your G.N. sometimes fall clear of the engine is probably because the short push rods which operate on the value stems are an unduly tight fit in their guides. This would canse the popping back of which you complain, while it would maturally momentarily relievo the push rod of the value-spring pressure, allowing it to fall clear.

## Windscreen Wipers

1R.G. L. (Bradford).-There are several well-known concerns marketing windfereen wipers of the suction-operated type. any one of which will suit your requirements. Some of the better known are C. G. Vokes, Ltd., Conduit Street, Iondon, W.1. who praduce the Folberth windscreen wiper; Shaw and Kilburn, of Wardour Street, marketing the Everready, and Auster. L.td., 133, Long Acre. London, W.C.2, who mannfacture the Waycross.

в36

## Cantilever Springs.

E.I. (Balham).-You are correct in believing that a spring of the type popularly termed a cantilever resembles an inverted half-elliptic.

## Wiri-g an Outside Light.

A.J. (Brighton).-There is no necessity to obtain the permission of the local council before erecting an outside electrio hight, but as the work involves the running of wiring which will be exposed to the weather, we advise you to instruct the electric-light company to do the job, so that the system can be properly insulated.

## The Sump.

H.S. (Truro).- $A$ conventional sump is shown in the accompanying sketch. The bigends dip into the troughs, which are kept full of oil by means of a pump, which draws the oil through the filter and distributes it through pipes to various points on the engine. Two oil


## Atypicalsump, showing big end ail troughs and detachable o:l filter.

troughs aro left out in our eketch, in order to show the filter, which is, of course, submerged in oil when the engine is 111 running order
A small drain tap is fitted outside the sump. and the filter may be withdrawn for cleaning by undoing the two nuts on the llange and pulling out the wire-gauze cylinder.

Inaccurate Speedometer.
R.A.S. (Tonbridge), -If your spedometer records mileage accurately, you can depend upon it that the inaccurate speed reading is not due to drising pallevs of the wrong size, nor to unsuitable wheel or tyre size. Your best plan in the circumstances would be to send the instrument to the makers to bo tested. It is possible to correct a speedometer error yourself, but it would be a tedious business, and the ultimate accuracy would be ruestionable.

## Cyclecar Reverse

C. M (Purley) - So long as the cyclecar you are building does not weigh more than 5 cwt. there is no need to fit a reverso gear.

## Home-built Garage

J. A. W. (Bradford).-We do not know of any volume devoted exclusively to the building of a garage for a light car, but you could, no doubt, extract some useful information from any handlook on carpentry and joincry. In so far as the general design is concerned, wo recommend weather-boarding outside, mateliboarding inside, and at well-t ried covering for the roof, such as liuberoid. The foundations, of course, should be of concrete.

## G.N Chain Adjustment.

B.B. (Exeter).-There is no harm driving your G.N. with the chains slightly on the slack side and, provided the sprockets are in proper aliynment there is very little fear of a cliait jump: ing of its sprockef. What you must guard against, however, is tho slight. tendency for the chan to override flic teet! at any point in the circumference, for this would set up a foreign strain and might result in a broken link. Adjustment for the chains is provided at the forward end of the torque stayk, and is effected by rotating the tuhular collars by means of a tommy-bar, having list of all slacked off the lock-nuts.

## Accumulators.

H.P. (Worcester). There is another type of accumulator besides the lead-sul-phuric-acid type, and this is the nickel iron accumulator. It has somo advamtages over the more usual kind. The case is made of stect in place of the usual cellulod, vulcanite or glass, it is lighter in weight, and it can bo charged at a higher rate without injurs, but the voltage of each cell is only about 1.5, and this drops to 1.2 on discharge. The electrolyte used in this accumulator is a solution of caustic potash, which is not harmful to metals, and, therefore, the lerminals and connections do not enffer from corrosion. The positive plato ${ }^{13}$ composed of oxyhydrate of nickel, with a certain proportion of graphite, and the negative of cadnium and iron alloy.

## Case-hardening.

H.S. (Woking).-Case-liardening is a process wheh imparts a glass-hard surface or "case" to the stecl article being treated. For good results a mufle furnace is required, and the articles are packed in an airtight "put." together with the hardening compound, which may consist of leather cuttings and bone dust. The "pot" is placed in the furnace and the temperature is raised to about 950 deg. C. and maintained for about eight hours. The "pot" is then withdrawn, and the articles are either quenched direct in oil or water or else they are allowed to cool down and are afterwards reheated for guenching, the actual process adopted varying with the nature of the steel being trealed. The depth of the case will depend upon various controllable factors, but it is usually about 1-16 in. F'airly good results may be obtained on small parts by the openhearth process, in which the part is heated to a bright red and dipped in yellow prussiate of jotash or one of the proprictary compounds leing afterwards reherited and quenched in water.


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[^2]
# "Yes, that's the bargain I picked up thanks to the A.A." 

You remember our chat about my being offered a second-hand Saloon and I expressed a doubt about it having a snag somewhere?

Well, I took your advice and the advantage of A.A. membership io write to the A.A. Technical Deparlment.

They fairly put the rule over her, furnished me with the written repost, tested her, and it was so thorough that I bought the car.

I am sure the small fee charged by the A.A. for the inspection is more than repaid.

In fact, the bargain I picked up will pay my A.A. Subscription for many a year and a good bit over.


We welcome at all times letters sent us by readers for publication in these colsomin, and, while taking wo responsibility for the opinions expressed therein, give preference to those letters which deal with subjects of wencral interest. Na anonymous commmonications will be accepted. but the writer may use a nom de plume if desired. Letfers should be as brief as possiblc, but not abbrcviatch. We rescrue the right to make any alferations or deletions which we decm necessary.

# CYCLECAR OWNERS ON THEIR METILE. <br> Further Opinions and a Reply from "Fair Play." 

High Average Speeds.
I real with no small amount of amusement the "extreme disgust " your correspondent, " Fair Play," expresses in his letter regarding a fast run from Edinburgh to Malvern by a Price admits he has made "many altompts at NoCriterion. racing these beastly threc-wheelers when out on his $40-50$ h.p. Mercedes." This statement is in itself fairly conclusive as to which was the faster machine.
Apropos the price of a Morgan, surely this camot materially affect its speed, as your correspondent would appear to suggest

Morgaitite.
Nottingham.

## Driving Ability Required-

I did not expect to be so severely slated as I appear to have been when I wrote you regarding my tilts with Morgrans, and, in justification, I must reply to the several correspoudents.
-In a Big Car.
I congratulate Mr. John Beach on his splendid balance in not becoming angry when he is boaten by the smaller fry ; but I would point out that my machine, although German, is a good one and not ponderous.
"Antj Road Hog" calls me and mine some horrible things; he is annoyed because I called the Morgan a "beastly three-wheeler." Ii he were beaten by, say, a GrahameWhite Buckboard would he describe it afterwards as a " ducky little motorcar"' He also says that $X$ am ignorant of motor matters and endanger other mad users' necks. I would point out that I am a very careful driver and take no risks on corners.
It should be realized by the light vehicle driver that a big cartakes some handling. My machinn weighs nearly 2 tons and has four speeds. The giars need double clutching. The weight takes some slowing down and speeding up. It would make "Anti Road Hog" wake up to have to pull my car about. It is a big-man's machine, and calls for far more skill and intelligence than one weighing less than half a ton. To corner at speed means big expense on tyres: to open the throttle fully for long distances quickly empties the petrol tank.
No, Mr. "Anti Road Hog," I should not be surprised to learn that the Morgan is one of the fastest vehicles on the rond; I have found it out. I have now taken the opportunity of examining a Morgan, and it seems to have an extremely
simple control, and needs no intelligent handling of the Anti Road Liog " order.
I appreciate the frank and open comment from the Editor of The Light Car'and C'yrlecar. To "V. 11.F.," thank you, brother. Who'knows? To Mr. J. R. Sylvester, I need no lessons in driving, thank you.

Fiur Play.

## Another Champion for "Fair Play."

I confess I was much surprised and amused at the heated criticisms of "Fair Play"s" letter, which I read, with much enjoyment, as being a chaffing testimonial to the efficiency oi
the small car. I am glad to see that
Humour -VV.M.F." also regards "Fair Play" as
Appreciated.
a humorist. I should imagine he is chuckling heartily at his letter, and Morgan owners will probably find that they have risen quite unnecessarily in defence of their favourite vehicle.
Were "Fair Play" the hopeless outsider "Anti Road Hog'" supposes, he would be hardly likely to read or contribute to your excellent journal.
E.M.S.

## Mercedes, Morgan or Mania?

Anent tho Mercedes and the Morgan-why is it that we are constautly hankering after "speed, speed, and yet more speed "? Without going into details too closely, I should suggest that the undoubted "liveliness" Are High Road of the Morgan is greatly due to its ex. speeds Desirable? trene "tractability." But, admitting this concession, who is there who wants to approach ansthing like the " 90 miles per hour," as indicated by one of your correspondents?
Again, what is the use of a spered limit, if it is going to be so openly ignored? My own car is only 750 c.c., "chummy" body and four wheels, yet I have never induced the speedometer to register more than 43 miles per hour; but what I wish to emphasize is the lack of opportunity to attain even this inexcessive speed under existing road conditions.
I have seen recently remarkable "nverage" figures as to speed, but the best I have been able to do is 25 miles in a single hour-that is, in spite of hills, towns, speed limits and big villages-and withun 25 miles of London. Of course. I know that the same nake of car has accomplished phenomenal speeds on the track, but for ordinary use one is driven to the conclusion that the craze for high speed is mnnecessary.

A few months ago there were letters from several correspondents indicaling the high speeds of their cars, and signing themselves "Fussless Forty" and "Fussless Fifty," but I prefe: my signature to be

Thlesty Thirty.

## Morgans and Other Three-wheelers.

## Mercedes and Morgan.

I am more than grateful to the gentlemen who have come forward in your columns to defend the Morgan from tho attack" of "Fair Play," but I agree with "V.M.F." that Fall Pay did not at all intend to be A Voice from taken seriously. Reversing the part of Malvern. Mare Antony, he "came to praise the Morgan, not to bury it," under a load of ohloquy. May I mako my meaning plainer?

I have not tho pleasure of knowing who "Fair Play" may be, but, unless 1 am very much mistaken, he presents the point of view-not his own-of an imaginary road-hog-which he is not-owning a powerful and expensive Mercedes-which lie does not-who is fed-up with the superior performance of the insignificant-from that point of vew-and inexpensive Morgan.

So far from being offended by his letter, I regarded it as a valuable-modesty prevents me from adding well-deserved -tribute to the good points of the little three-whecler. By the way, I had nothing to do with the publication of the Edinburgh. Malvern run.

Malvern Link.

## Morgan versus Mercedes.

Your correspondent, "Fair Play," must be a littlo astounded whth the "buzz" he has brouglat around his cars. As a "three-wheeler" owner myself, I always take particular interest in this type of vehicle; but if the Lurther Morgan majority of its enthusiasts ware of the type

Praise. of "Anti-Road-hog" I should feel bound to sport an extra wheel and sny good-byo to such hot-headed enthusiasm, for a more perverted sense of gustifiahle criticism I never saw. To call a letter by another correspondent, not holding one's own views, an "offensive cfitusion" when replying in the manner of "Anti-Rond-hog " is the very limit, and to attempt to censure the discretion of tho editor of what appeals to so many of us as a sporting
journal, is yet again liable to cause one to think that this correspondent has a great fancy for secing his own efforts in print.

Your other correspondents treat the mattor as a joke, and sensibly so; and nerhaps when "Anti-Road-hog" has had time to cool down he will re-read the "offensive effusion" and realize that, far from running tho Morgan down, it is more in the light of a good advertisement for Morgans.
From a purely mechanical point of view might one ask, Did your correspondent realize the relativo values of the cars in question? One must still admit that comfort and convenierico play a bigger part with the majority of druvers than nere speed, and that the designer of the Morgan has a lot to learn on both these points. Ono can buy speed. I believe, more easily than comfort, and tho Morgan is still crude in some detarls.
I have passed many cars on hills myself, but that does not imply that those I pass are incapablo of passing me, or that they were going "all out" at tho timo.

It seems that enthusiasm needs to be tempered with moderafion, an appreciation of "the other fellow," and a realization that ono is not wise to assume too much "amongst people who know anything about motoring," to quoto your corrospondent's own words.

Scott Socinble 270.
Bio Car or Three-wheeler? As one who has driven samples of each type of vehicle concerned, it seems to me that both call for a certain amount of driving skill. Any three-wheeled cyclecar is under full control of the driver under ordinary road

## Safety in

## Driving.

 conditions, but, given a greasy surface or tramlines, especially the conduit system, it has been my experience that a three wheeled vehicle is more prone to skidding than one having four wheels, and this will tend to reduce the average speed. One can comer on a big car as fast as on a three-wheeler, but not, I think, with the same degree of safety. D.E.R.
## The French Cyc'ecar Controversy.

## The French Cyclecar in France.

As a resident in France and a keen cyclecarist, I cannot let Mr. J. R. Sylvester's letter pass without comment. In the matter of the price trouble, he is quite right. The high
Good Service prices asked by English manufacturers are
under bad to the buyers themselves, who demand
Conditions. far higher standard of luxury than that
required by the average French buyer.

With regard to the rest of his letter, however, your corre spondent is entirely in the wrong, and I cannot imagine where he obtained his information.

The French cyclecar has to put up with the most frightful road conditions, far worso than anything to be found in England. Moreover, the average French driver is much harder on his machine than the Enclishman. The French cyclecar is driven all out during most of its existence, and " all out" means a considerable speed, for theso little machines are very fast indeed. There are only one or two British makes which could hope to compete with them in the matter of speed so far as standard models are concerned.

Another thing which the French machine has to put up with is the deliberate racing of engines. When " warming up " his engine in the morning the French driver will push bis throttle wide open and leave it in this position for a cotiple of minutes or so whilst the unfortunate engine howls round at twice its normal r.p.m.
The "sporting boyee" type of young Frenchman will freQuently also fit an open exhaust and delight in racing his engine on every possible occasion, so that all and sundry may Le impressed by the lovely noise.
In spite of all these rough conditions, the lirench cyclecar "sticks it" in the most wonderful way, and is often in enlendid condition after 9,000 miles or 10,000 miles of hard driving. The suspension is almost invariably excellent; indeed, it has to be, on account of the roads. Steering pins, shacklo bolts and so on are not weak, for obvious reasons, whilst, as to wheels breaking up, I have never heard of such a thing.
The light French cyclecar is certainly a lesson to the English manufacturer, but be is quite capable of turning out
something as good or even better. One English maker, at least, has already done so.

As there are some 60 or more makes of light car and cyclecars on the market in France, I hardly think that your corro sp. ondent can have sludied his subject very carefully

Fendie.

## French and English Cyclecars.

As a reply to Mr. Sylvester's letter on "Cheap French Cyclecars," my experience over 8,000 miles on a sports Salmson may be of interest. My first point is that there are practically no 1,100 c.c. four-cylinder cyclecars manufactured

## Salmson

Superiority. in England with which to compare Salmson, favourably or unfavourably. It is, therofore, unfair to compare it with light cars of 1,500 c.c: and one-ton 1 n weight. In spite of this, in design and performance, I contend that the Salmson is unique
I have just completed 1,200 miles of fast touring in Firance, aver roads which would have smashed the springs of mary English light cars. Tho " cheap French cyclecar" is built for French roads and French drivers, the worst combination of tests any car could be called upon to withstand. Contrary to Mr. Sylvester's belief, the roads were not littered with cars having broken wheels, and so on. If these cars do not last. how can the amazing popularity of Amilcars, Salmsons and Citreens bo explained? The top and second gear ratios of the Salmson ara 4 to 1 and $6 \frac{1}{2}$ to 1 , which certainly cannot cause a "screaming engine." The oil consumption of my engine is practically negligible. Emptying the sump at 2,000 miles is the only extravagance. Up to the present replacements havo cost under $£ 1$, and nfter a searching examination, when the mileago was over 8,000 , the sole sign of wear in the wholo chassis is a slight shake in the front-wheel bearings.
The competition performance of the Salmson is well known. I am mevely trying to prove that it has not been achieved at the expense of durability. Perhaps owners of Amilcars and other "cheap French cyclecars" will give their experinces.
H. M. Sanuelson.


Sternol W.W. suits nearly every make of car.

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FACILIT A TE BUSINESS, and ensure prompt attention to your enquiries, by mentioning

## Road Surfaces-Magneto Tioubles-Honour Where Due.

## Signposts to Brooklands.

It occurs to me to suggest that the number of signposts directing one to Brooklands is inadequate.

The popularity of the track would increase if it conld more easily be found by strangers to the district. J.B.M.

## Flints as Road-dressing.

Cannot some action bo taken by tho motoring associations that will induce the highway authorities to stop the pernicious practice of strewing the main roads with small sen-

> An Annoying Practice. Recently I had two nearly new cord covers destroyed by small, arrow-headed flints that penetrated the canvas in several places. Considering the large sums of money paid by motorists for road maintenance, it is maddening to think that part of this money is being used for the purchaso of the very flints which ruin our tyres. I am surprised that the motoring fraternity and associationis have not raised an outcry against this practice. Granite chips aro not nearly so destructive. Incensed.

## Petrol Gauge for a Jowett Car.

No doubt many of your readers who are owners of Jowett cars will he interested to see a method of fitting a gauge which is visible to the diver, but does not interfere with the

A Convenient leg room.
and Simple The clips for fixing were made from $\frac{1}{2}$ in. Fitting. brass tube, flattened out, bent, drilled, and lips were also made the the 6 -ft couple of smal necting pipe. The gange, as supplied, had a $z^{3}$ ing. threaded brass tee-piece for the petrol-tank connection, this the makers readily exchanged for a the size required

* Wo suggest that a tap at the base of the gauge to shut off petrol would be an advantage.-ED.


## Overdoing "Safety First."

Having read frequently in the columns of your interesting journal it number of "Safety First" hints, "I am prompted to draw attention to an item of the utmost importance, to

## A Dangerous Practice.

 which, I think, no rojerence has as yet been made. I refer to the well-meant but ill-advised pratice of rear-seat passengers giving the signals for what they presumoto bo their driver's intentions.
Recently, on the Bath Road, I followed a small four-seater for some miles at a fair speed. On reaching a garage situated on the off side of the road the car suddenly pulled in to the near-side kerb and slowed down, evidently with the intention of calling at the garage. Then an arm-apparently the driver's-signalled mo to come on. I accelerated to over, take, when tho car in front immediately pulled over to entor the garage. At the frantic shrick of my horn another armthis time the actual driver's-came out straight to stop me. By sheer luck-or will someono plense say by skilful driving? -I managed to swerve between his front wheels and the garage doors, when $I$ was able to slow up and do some deep breathine.
I think that all motorists should impress upon their overenthusiastic passengers the importance of leaving the signals to tho driver. Fialure to give signals is dangerous, but signals to which the driver does not conform-or two conflicting signals-spell disaster.
H. Francis Kingston.

## Unusual Magneto Complaint

Referring to "A.O.C.'s" magneto trouble, mentioned in n recent issua, wheroin he finds his distributor burned on the leading end of the brass segments, I suggest that the

## A Possible <br> Solution.

 trouble has less connection with the type or age of engine than with the timing of his rotary brush in relation to the magneto armature.It must be remembered that the time of the spark is determined by the break of the primary circuit, and not by the position of the distributor brush, so that if " A.O.C.') will time the rotary brush to be well on the segment as the
contact points break, his trouble will probably cease. The some result would be caused by the make-and-break platiorm having been replaced on the magneto armature after some previous adjustment in such a manner that the key and kevway did not truly coincide, but this is, of course, very improbablo in the case of the new magneto.

It is possible to account for Nos. 2 and 3 segments-the same cains-being the more affected by a fraction of eccentricity in the rocker-arm platform, and the advancing of the rotary brush by a tooth might give the neceseary margin requisito to prevent sparking
1 have noticed that there is a very appreciable amount of bagklash in the rotary brush gear in some well-known makes of magnetos, and this would tend to emphasize the trouble.

Oliver Jones.

## Honour Where Due.

I have read with great interest the description of the cars in preparation for the 200 Mile Race at Brooklands, but there is one phrase used in connection with your description of the
A.C. cars which is apt to give a totally

Fastest Time at Blackpool. erroneous idea to the reader. You refer to the prospective A.C. entry as being similar in type to the car which made best time at Blackpool Speed Trials. As a motter of fact, whilst giving every credit to Mr. Joyce for his driving, the fact remains

that the AC. did not achieve a better performance on that occasion than a fourth place in Class 2, a third place in Class 3, and second place in Class 5, fastest time of the day being accomplished by the Beardmore.

I am not interested in the latter car financially or otherwise to the slightest degree, save that it has always appeared as a most excellent and sound performer at all the events I have attended, or in which $I$ have competed, and is driven in'a most successful and sportsmanlike manner by the evercheerful Mr. Cyril Paul.

I trust that, in justice to the Beardmore and its driver, you will make this perfectly plain.

Trubie Moore (Capt.).
The Southampton Toll Gates.
During a recent motor tour, part of my journey was to Portsmouth via Salisbury and Southampton. At the latter city I passed over the Northam Bridge and through a Advice toll gate for which I paid eightpence. Tho Wanted. ticket received cleared me through two other gates.
On the return journey I paid one shilling to pass through a gate and another sevenpence to get over the bridge. The other alternative being to cross the ferry and pay toll.

I cannot understand the reason for the difference in these tolls and would be much obliged if one of your readers, conversant with the locality, would explain and possibly suggest a route from Salisbury to Purtsmouth so as to avoid these tolls, and, incidentally, the rough roads experienced within the toll gates.
h. C. Leat.
()UR READERS' OPINLONS (contd.).

## J. C. C. Address Wanted.

With reference to your recent reply to "F.R." (Dulwich), I, ton. should like to join the J.C.C., but have not the faintest idea where their headquarters are situated. Will you oblige $m$ m by sending the address to which I should npply? I expect there are other light car owners in the same boat who would welcome the publication of particulars.

I am a Rover Fight owner, and am always very eager to tet my copy oi The Light Car and Cyclecar on Friday mornings.

> Cosham, Hants.

## A Useful Haven

Having been a reader of your paper for some years and knowing that you take an interest. in snapshots obtained whilst on tour, I am enclosing one I took of the "Old Toll House" sifuaied outside Hornby on the

## Encouraging <br> Enterprise.

 main road between Kirkby Lonsdale and Norecambe. This house is, I believe, well over 100 vears old, and is now kept by a very enterprising motor dealer. Petrol, oil, tyres, etc, can be oblained at any time of the day or night, and I understand t fire is always burning in the house with a kettle boiling ready for the use of travellers. In addition the proprietor keeps a " first-aid" station for accidents.I advise any of your readers who may bo touring in the district to vay this old house a call. as in addition to the


This picturesque garage formsthe subject of a letter from a correspondent on this page. It will be obvious that there is no need for a garage to be an ugly building.
fine scenery of the surrounding country, the district is very historical. Guy Fawkes arranged his plot at Hornby Castle, a very fine mansion close by, which is still occupied.

1 am in no way connected with this business, being only an admirer of the enterprise shown by Mr. Willacy, who is the ploprietor.

Wellwisher.

## INFORMATION WANTED.

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

## Hartford Shock Absorbers.

Can any reader supply experiences of Hartford or any other shock absorber on a ihee-wheeler Morgan, 1.B., or New Hudson:
S. Stuart.

Highgate House, Wialsall, Staffs.

## A.V. Monocar.

Could any reader give me information regarding the present reliability, speed, and other details of the 1920-22 A.V. monocar, 6 h.p. or 8 h.p. J.A.1. engine?
48, Whippendell Road.
J. E. IV. Ginger.
lialford, Herts.

## Coventry-Premier.

I shall be grateful if any reader would be gnod enough to lend or sell me an instruction buok for the 1922 four-wheel Coventry-Jremier.
R. W. Flook.
85. Kingsdown Parade, Cuttam, Bristol.

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I should like readers' experiences of shock absorbers when fitted to an Austin 7 car.
S. Theeman

14, Hawarden Avenue,
Manloy Park, Whalley Range.

## Rover Eight.

I should be glad of opinions on the performance of a 192 J Rover Eight, especially with regard to hills and ease or otherwise of gear change. E. R. l3nown.
87-89, Nortmer Street, Oxford Circus, London, IV.1.

## CONDENSED CORRESPONDENCE.

"H.II." (Manchester) writes to record his appreciation of the service given by H. R. Ciodfrey Motors, who spectalize in G.N. repairs.
W. A., Northumberland, in asking us to recommend him a new car, informs us that he has been a Morgan nwner since 1914, and during the past ten years has owned no fewer than eight different examples of this popular make.
C.S., Devon, remarks, in the course of a letter, that he considers our reports of races, speed trials and so forth form the most interesting features of The Light Car and Ciyclecar. It would bo interesting to have other readers' views on the question.
G.IY. (Derby) informs us that he received excellent treat ment at the hands of the Rover Co.. Lid.. when some replace ments were mitde on his Rover Eight. Although he had no claims upon the makers, he was called upun to pay only for the mechanic's time.
L.H.W. (Weybridge) recommends the battery service department of George Eugland, Ltd., Walton-on Thames, who recently fitted 42 new plates to his battery and returned it, fully charged, within 36 hours. A special type of chargiag plant made this quick repair possible.
T.S. (Cardiff) writes in appreciation of the service he received from Messrs. Stretten's, Gloucester. When he arrived there at 5 o'clock in the afternoon with a badly cracked offside stub axie, they immediately obtained a new one and filted it for him, the job being completed in a couple of hours.

Miss L.C.H., l3oscombe, Hants., informs us that she has been using Sublima car polish for some time, and has found it extremely satisfactory. Introduced to the preparation by an advertisement in our columns, she was sent a generous sample in reply to her first inquiry, and has since ordered a further supply.
A.O.C. (Deccan, India) writes in appreciation of the genercus treatment he has received from North and Sons, I.td., who are the makers of the Watford Magnetos. A.O.C. wrote to them regarding a slight defect in his magneto, and received by return mati, free of any charge, a new instrument and a letter asking him to retuin the old one.
W.G.S. (Liverpool) wishes to supplement H.C.A. (BarnsIcy's) praise of the services of Messrs. Williams and Sons, Bala, North Wales. When he met with magneto trouble, he received prompte attention and helpful advice, whilst the charge was very moderate. The experience was particularly gratifying, as it came directly after one of an opposite nature.
G.S. (Guildford) writes that Citroun Cars, Ltd., have just issued a spare parta list, costing 5 s . a price which "G.S." considers excessiva. He is extremely satisfied with tho service given the Citroen Company, and has always received courtcous treatmer.t, but he thinks that the company should inchede a comprehensive list of spares in the equipment, adding the cost of it to the price of the car, and thus eliminating urnecessary bother.
B.H (Famham) writes in praise of his Jowett light car, which has been in use every day since he took delivery in July last. During a 2.500 -mile tour the car was driven over fields and cart-tracks, and it withstnod admirnbly this rough treatment. It is possible to mnintain an average road-specd of $30 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. and the petrol consumption varies botween 36 m.p.g. and 40 m.p.g., according to the road conditions. "B.H." suggests thnt the steering lock might be improv


## AROUND THE TRADE

Details are to hand of a radiator thermometer with in dial for attachment to the dashboard. Particulars may be obtained from the Cambridge Instrument Co., Ltd., 45, Grosve nor Place, London, S.IF. 1.
$\qquad$
The Motor Teclnical Records, Lid., of Kingsway House, Kingsway, London, W.C.2, have issucd two folders, one describing the advantages of M.T.R. membership, the other outlining the uses of M.T.R. cards.

Mann, Egerton and Co., Lid.. of Norwich and London, who Fere recently invested with the Royal Warrant by H.R.H. Princess Beatrice, have now been appointed coachbuilders to their Majesties the King and Queen of Spain.

In addition to scientific welding processes, Barimar, Jtd., If 14-18, Lamb's Conduit Street, T'heohald's Road, Londun, W.C.1, operate various "cold " and low-temperature processes which are suitable for the reclification of small spoilt parts.

The A.S.C., Great Portland Street, London, IV.1, have neen appointed sole concessionnnires for Senechal cars in Erigland and Wiales. Two models will be marketed-a superports and a standard three-seater-the prices being £195 and $\AA 185$ respectively.

A neve concern, Shale and Woodrow, Ltd. (handling Austin ars), have opened spacious showrooms in St. Giles Square, Forthampton. Mr. Shale, managing director of the concern has been on the sales organization of the Austin Motor Co. at Birmingham for several years.

We are informed that the Caxton Namo Plate Manufacturing Co. have recently changed their address from Caxton House, Weslminster, to 11, 13̄, 15, Rochester Row, Westminster, London, S. W. 1.
$\qquad$
We hear that Eural horn operators, made by Eural Patents, Ltd., of 1-3, Queensberry News East, Harrington Road. S.W.7, are to be filted to His Majesty's 5-7 h.p. Daimler cars. This accessory is now filted to cars used by each member of the Royal Family.

Mofor N゙ccessities, Ltd., the proprietors of J. If shock absorbers and other J.M. specialities, have now removed to their new works, 45 . Horseferry Road, Westminster, S.IV.1. Telephono No., Victoria 1364.

## MOTOR TERMS TRAVESTIED

## Solution to No. 27



An Unsuitable Mixture.'

Although last week's travesty brought in a large number of suggestions, none of them was very striking. The selection was rather difficult. as many suggestions secmed of equal merit, but it was decided that the best was "An Cnsuitable Minture." submilled by Mr. F. Walmsley, 20, Usborme Road, Winton, Bournemouth, to whom the prize of one guinea has there fore been awarded. Two other gond solutions were "Geared for Anything " and "A Loose Knut." The allusions to " mixture" w or e mumerons, although none so aplly suited the draw-
ing as the winner's. Several readers sent in "Rich Mixture "and "Bad Misture," many favoured "All-weather Equipment." "A Super-sports Bndy " and like suggestions, while "Sales After Service" and " The Part Exchange Specialist" seem to us to bo more trade terms than motoring terms.

# SMITH \& HUNTER so \& 92, Gt. Portiand Street, w. 1. 

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cluded. we forward to the seller the amount agreed apon 11
no salo is made. We return the amonni deponited. In either case wa deduct a com. mission of $11 / 4$ pcr cent 13 d in the $f$. 2 s . 6 d . minimum), on amounts de-
 cent. on amounta exceeding flo to coser our expenses of booking, postages. pary paya one was. The rial ol damago in transit is the seller s by arrangement between the rartiea All diaputes to be settled by the arbitration of the Editor of THE LIGIT CAR ANO CYCLECAR." WARNING-Acknowledsments of deposita or Inatructions 10 forward Gooris facsimile of the tite of this journal pectar prevent lraud. the wicer tiser bhould ACKNOWLEDGE IMMEDIATELY any iuch leller appar ently coming from us, and deley forwarding the goods for a day or so Should we. on receiving auch an ackoowledgment. find that no letter has beconent

## CLOSING TIME

 THE LIGHI CAM AND CYCLECAR. 7.15, ROSERERY AVENUE cong should be formarded in sufficient time to allow of it beingured mitted and returned
Head omces:-7-15, Rosebery Avenue London. E.C. 1. Telephone

## notice.

Owing to pasial delaga and Irregularities, it is adviable to far an possible, that they reach us by the FIRST POST on aa faraa possible, that they reach us by the Firss posi on uesday. Lately everal adrertiaementa hase been rece

## SECOND-HAND <br> LIGHT CARS AND CYCLECARS FOR SALE


 A.E.C. Gcorgo England, Ltd, 28 South Molton St. (Mayfaur 6378), the

 A.B.c. cars. Repaira of erery deseription and special tnning by experi-
enced AB.C. mechanion Write for list of special fitlings, fiost free


 A.B.C., 1922. Specinl Sports 2-seater dsnamo lichting delachally etery, paint and hood very good, iu excerptionally good mechanical con


 A.B.C. Ohoice of 4: 1921 £80, another $£ 85$; 1922 auper spmis E 110 . L.tit. 5 Cumberland se., Manchester. Central 2681. A.8.c., Pree insurance included, 1922 , 12 hp Regent. 2 -seater nnel dickes,
dynamo lighting, fully eqnipped, Ileensed, exiceptional condition, 110 gns A B C., freo insurance included, 1923 norts 2-seater, dyname lighting A.B.C., frce insurance included, 19222 -seater, sunk dickey, dynamo.

 A.B.C., f90: 1921, Surbiton model. 2 doors, dickey dynamo lighting,

 A.c. Wanted, second-hnnd A.C.s for cnsh or in part exchange for nen

 A.C., 4 -senter, $192 \%$, gres, tax paidi, nll-weather equipment, starter,
 A.C. 1924, Empire, 2-sester, bluc, branil nem, £316, accent e270: clack, speedomete
 A C., 1921-22 eporth, nluminium boly, self-siarter, clock, epcectoraceer.



 A.C., 1916, 10 hp , 2 -scator dickey, d5namo lighting, detaclable whels, and hood perfect in first-clase mechanical condition throughout, pxect-

 A C. sports, 95, inx September, 1919. perfect mechanical condition, all brand-new bunlup tyres, Senkey delachable whecls $\delta$ lamps, $\mathrm{C} \wedge \mathrm{V}$, ds. namo lighting, new battery tools, bood, screen, pollinhed aluminum body.
 A.C., beautiful rogal bluo 2-scator, with dickos, $10 h p$, $4-$-cylindler, monoclass car, only 65 enne: exchango motorcyele; casy terman. Wandwworth Molor Excliange, Ebner St., Wandsworth ('Town Station). 615-291

 A.C. Royal, 1922, 2-seater, donblo dickey, lully equiped, etcii excellent rondition, 8677 . Vivian, 33 Spenser St. Victoria St., S.W. ${ }_{615-228}^{1 .}$ Vict. A.C., 1923.11 .9 bp , apecial 3-1cater sports, ع255. Bartlett's. 93 Gt. A.C. I3lack nnd Finch, 222 Gt. Portland St., W. 1 , have 1921 sports model A.C. with nolished aluminum body, clock anecdometer, conceated
hood, otc., cte., 165 guineas. Phonc, Muncum 2271 . 368
ALBATROS, 8hp, 1924 chummy, dynamo and starter, taxed, used for ALBATROS, 8hp,
ALBATROS, $10 h p$, 1923. 2.seater and dickey, dynamo nnd etarter, 1axed perfect, f90 cash, deferred
Co. Ltd. 139 Finchicy Ril. N.W.

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

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

ALBERT, $1922,11.9$, A-acator, servico in all-weather, Jnst overhaulect

 ALLDAYS, 1915, 2-ecatcr, dynamo nad atartor, excellent condition $410-414$ Luston Rd. Loudon. ALVIS. New or secondhand Try Henlyis. The Sole London Distribu
 Mayfair 4203. $22 z$-304
 ALVIS, 12-40. special spoils madel, 2 -seater and dickey, ali aluminium Nereampined body, muleage 5,000, condition as new. tax paid to
 ALVIS 1922 all.wrathor A-4eatur, glase vindowe, leather ton. £225. great
bargan. AMILCAR. Moon and Porter, Lid., Amilcar specialists, olfer:-
 Now models for immedine dolivery
3 -soater sports, long chassis, with alartor, $£ 240$.


Bnar. S.W. 13. 615-278
 ARIEL 9, Ancater 1924 model to luxe, all-weather, completo with
 similar momel, with starter, 2145 . Aric! Mutors. 320 Camberwell New
Rd. S.E5
$615-191$
 ARIEL 10, 1924, 4 seater model, brand new, de fuxo type, all-weathe
 Austins. Try Meals's. You cannot beat their terms. $91 \begin{gathered}\text { and } \\ \text { zzz- } 295 \\ \text { Gt }\end{gathered}$
 AUSTIN, 1923 (Decemberl, 7 hp , 2 -acater. Rnpson tyros, ehock abAUSTIN 7. Btartor mofel coniplete as maker's list, alightly showroom AUSTIN 7, 1923 . Harthords rear. specdomotor. 2 new Dunlop conds or dear offer. Bowser, Norlh St., Midhurst. 615-d597
 AUSTIN 7, $1925-4$ incodometcr, tar fear. full Sasuranco, milcage ${ }^{1.700}$ AUSTIN 7, October, 1923, mileage under 5,000. Boyce motoneter.
 AUSTINS. Wilking, Simpson. 1924, latost models, 7 hp, nith olcctric atarter, $£ 165$, Immediato denny car or motorscle in pert exchango arrangements made anywhere.
Wilkins. Sinpson. opposito Olympia, London. Phono, Hammersmith

AUSTIN 7 , 923 , borns, sparo wheel and tyre, excellent condition, tax paid, bargain

 maycs, Lssce.
 AUSTIN ${ }^{7}$. Severnl ${ }^{1923}$ and ${ }^{1924}$ mornols. prices from fill 110 . PickA.V. bicar. 8.9bp J A P engine, bood, screes, lamps, speedometcr, Common, Middlesos. A.V. cares suppliced by Andrew's Motor Mart againet 10 per cant. deposit. Balance over loag period
A.V. monocars, $£ 25$ to $£ 35$; 1922 modal 2 -rentene dynamo lighting. 3 inpedis. reversc, spedometer, $£ 55$; 1921 model 2 -seatera, dynamo. Hght

 East Dulwich. Sydonham 2452 . BAYLISS-THOMAS, 9hp, April, 1924, 2-scater, dichey, Mlà eiín Cor-
 Batrow.
 EELSIZE-BRADSHAW, Gordon Watney and Do., Ltd. 31 Hrook St stock, guaranteed, from $\mathcal{E} 100$; dutcred payments and part oxchangea. $\begin{gathered}\text { 2zz-165 }\end{gathered}$

## SECOND-HAND <br> LIGHT CARS AND CYCLECARS FOR SALE (continued).

GELSIZESRADSHAW, 4 -acater (November, 1922), electric lighting and ficricct condition, lust overbauled, any trial. \&110. 1Hges. The High BELSIZE.BRADSHAW, 1922 2-neat metiu. step mat, all-weather curtains. Michelin ocrd tyres, fully equipped EELSIZE.BRADSHAW, 1923, 2-seatcr, dsnamo Hehting and ectietarter apecdometer, raxed, Iully equipped. excellent condition, til25. Mebcs and Mebrg (Established 1893). The Original Licht Car Specralista, 149
Git . Portland St., W.2. Phono, Langham 2230.
615-15a BELSIZE-BRADSHAW, 1922. 9hp, 2-scater and dickey, dynamo light ingistarter, Mapeds and reverse, rneedometor, wide curtaina, hax paid, BELSIZE.BRADSHAW, 1923 model, equal to new, only done 2,400 milcs, speedormeter, electric lighting, ph-rfect, s90, will rike ightwelght
motorcycle and cash adjustment 'Scddon. 27 Belvoir St., Hall. 615-d592 GELSIZE.BRADSHAW, free inspranco included, 1923 2-seater, fally cquipped, dicensed, excoltent condition, 102 gumean. Bolow.
BELSIZE.BRADSHAW, free inguranco included, 1922, 9hp (1923 englo tad icensed, angos ar deferred. Edward, 175 Gt. Portland St. W. Mayfair 4027
GLERIOT.WHIPPET, 1923, 8hp. 2-scater, perfect order tyromezcellent luggage grid and other extras, done about 1,000, 240 or neareal
JO Bcacon Hill. Camden Rd., N.7. BLEAIOT-WHIIPET. FOCII, Itd., olter $\begin{gathered}\text { Blerint Whippet, fully } \\ \text { equippet, cxcellont condition, barzain, } £ 30 \text {. } 5 \text { Heath Sc. PIampanar }\end{gathered}$ (ncar Tube)

BLERIOT.WHIPPETS, s30 and s35 cach, 1 Q per cent. deposit for easy laded, 1923 2-scater, bran on elctiflper, freora whed, mechanical starter, etc., maker' guarantco ${ }^{79}$ Ruincas: exchangea or delerred. Edwards. 175 Gt PortBLERIOT.WHIPPET, 2 Bieriot hippets, one green, one alumiaium ody. both jut cnmpletely overbauled and fited with new iyrca, hoods. and new upholstery, 60 mp.g. and 50 m.p.h. in poriect conditia throughout, owncr botight larger car. Frant A. Smith 90 High St.
615 -d 629 BLERIOT-WHIPPET, 1923, scarcely used, unacratched. like new, drivon by engineoz, special medel, toot accelerator, fre wheeli, full equipment, BLERIOT-WHIPPET, 1922, Blackburac, porlect ranoing order, spare Wheel, new rear tyrea, £2S; Saturday. aftor 3 p.m., electric bell. 18
South Vills. Camden Square, N.W.1.
$615-\mathrm{d} 611$ BUCKINGHAM, 1922, 8hp, 3-scater, dynamo liphting, 3-apced exceed11:gly smart and mecharically sound. 858 ; cash or delerred. Naylor's
406 Garratt Lane. Earlsficld. S.W.i8.
$615-194$ BUCKINGHAM, frea insurance included. 1923, 10hp. 2-seater. dickey dynamo lighting, all-weather equipment, 89 guineas: exchangeb or de BUGATT1, 1914. Brescia model, 6ports 2-seater body very fast, £125 cash, deferred, oxchanger. Railton. Cobham and Co., Led, 5 Cumberland St., Deansgate, Manchoster. . Central 2681.
BUGATTI, 1922, 16-ralve, tery handsome aiuminium sportiog 4-6este body, dynamo, atarter, new hood, side cortains, 6 wheels, perfect
mechanically and very fast, $£ 280$. M useum 6283 . BUGATII 1923 cloverleaf, exceptionally smart car in periect order \&325. Newnham Notor Co., 245 Hammersmith Rd., W. $6 .{ }^{\text {EPhone }}$ BUCATTI, sports, fitted 1924 हporty 2-seated body, dynamo lighing fast, rery smart and ready immediate use, $£ 100.5$ Putncy Bringe Rd.
Windsworth. Putney 2708. CALCOTT 192 5, lObp, chummy 4 -seator, dark bluo, det February not done 4,000 . as new. carciully run in, electrio horn. fully incensed

CALCOTT coupe. 1919. dramo lighting, recontly painted daik blao and completely arcrhaned. aphomed
 CALCOTT, $1920-21$. 2-aeater. in excellent condition, starter, dynamo
\&130, cxiended terms. A. P. Rey, $378-384$ Euston Rd. Yusiom 7600 - 615-16 CALCOTT. 1921, 2-reater, dickey. Lucas lighting and starfer. speedopald December, £130. Maudes', 100 Gt. Portland St. London. WW. 1. CALCOTT, 2 -seater, 1922 model, dichey, atarter. hovely condition, eaxed slua: exchangoa, instalmonta Ashbys. 162 Grosvenor Rd. Vauxhal
Bridge, S.W. Phone. Victoria 3433 . CALCOTT 19212 sealed collpo, with dickey, dynamo and starter, excelohaso. The Light Car Co., SS1. 410-414 Euston Rd., London, 615-509 CALTHORPE. Moorea Presto, Croydon agents Calthorpe cars. Promptest delirers new models with cmeicnt crvice to follow. Largo block ancond North End, Crosdon. 'Phone 2624. Dayments and exchangea arrane zze754
 CALTHORPE, 1922. 1Ohp, 2-eater. in superb condition, many accespayments of $\dot{f} 10$ 3s. 6 d., mith option of a special rebate. Lambs. Ltd. Station. Wallibamstow.
CALTHORPE, 1921, 2eeater alarting lighting, Hcensed. £80. Thmp lin Motore, Malden Rd., Cteam. Sutton 21 . 615-d515 CALTHORPE, e38, 2-acater, 10hp, 4-cylinder, drmamo Ughting. 5 de-
tachablos, runs well. King. New Rd., Oxford.
$615-\mathrm{d} 53 \mathrm{I}$ CALTHORPE Coupo, 1923, 4-speed model. Bedford cord, good order, \&175. Staith and Hunter. 90 Gt. Portland St., W. Phonc. Muspum
$\mathbf{8 1 3 6}$.

## SECOND-HAND LJGHT CARS AND CYCLECARS FOR SALE (conlinued)


#### Abstract

CALTHORPE, 1921. 4-seater, dynamo lighting nnd startinc speedoneter, tax paid, good wres, in very nice condlison, fy5. Whone or nire. Paddington 0049 , or call at kirk nod Co., 22 Praed St Pad- dington, W.2.  exkended tcrms. A. Mes. S78-584 Enston Rd Muscum 615.165 CALTHORPE, 1922, 2-scater, dsघamo lighting, dickey seat, hood, sparo wheel, specdometer, lurgage grid, horn, in excellent condition, f89; cash or deferred. Naslor's. 406 Garratt Lane, Earlsfield. S.W. 18 . CALTHORPE, 1922. 10hp. sports model, slarter nnd liphting. 6pare wbel, specially tuned engine and in exceptionally good condilion fi20, CALTHORPE, 1922, 4 -scater, Mulliner budy, self-startcr, 5 inmps, must  CALTHORPE, 1922 , 2-seater, with dirkey, dynamo lighting, excellent anditicn e96; exchenges or hirc purehaso. The Light Car Co.i 351, CALTHORPE, E125; 1921 super-sports 2 -scater, polished aluminium  fast and rers altractivo: oxchanges and delerred. 325 Mish Rd. Chiswick, $\mathbf{W} .4$. $615-\mathrm{d} 686$ CALTHORPE. A selection Calthorpo cars in stock irom filo deferred terms and axchanges. Cummings and Simpson, 5 Putnes Bridgo ld. Wis-281 CARDEN official repair depot.


Alt sparet for Carden ears stocked; completo orerhauls undertaken. Send
 CARDENS. Cardens. Cordens Alwasa a fow in stock at prices from

E25 to $\mathcal{S} 55$. Delerred terms: 10 per cont. deposit. Andrew's Motor Mart, 151 Whito Hart Lane, Barace. per cent. deposit. Andrew's Motor Mart, CARDEN 1921. Thp. 2-seater, electric and gas lamps, taxed, complete | with usual eqnipment, gaod tres, s25, or oxchange. Teddington Garage, |
| :--- |
| 160 lligh St., Teddington. Kingaton 2562 . |
| $15 \cdot d 650$ | CARDEN, 1921, splendid 2-seater, 7 hp, starter, hood, screen, 5 lamps, Klnzon, specdometer. clock, taxed, runs well, offers, exchangos, casy

terma. Wandsworth Motor Exchange, Ebner St., Wandsworth. $615-292$ CARDEN, late 1923, 2-3-scater, chummy model, electric light, bought for clicnt unablo to tako delirery. practically peri, 265 ; open to any trial, examination. Ormand Nator Co., York St., Jormyn St., Piccadilly,
S.W.
Regent 4164 .
 615 -d608
 CTRROEN, 7.5 hp , yellow touring, 1923 model, usual accessorics, spare Ho mph., electric lighting. self-starter, fox paid, excelient condition because aiways well looked after, price filo. Apply for appointment,
Mr. S. White. Frinniggham Lodge, Maidstone. Telephone, Bearated 18 . CITROEN, 1924. 7hp, balloon tyres, taxed. quite new. double dickey. owner unablo tako deliters. 135 guincas. 51 Upper Richmond Rd.. Fast Putincy. GITROEN 10.4 A-seater, 1921 , elarer, curtains, spedometer, very smart CITROEN, 192J. A-arater, dynamo and starter, fully equipped and licenzed until end of ycar, E125; exchanges or hirc-purchase. Tho Likht
Car Co., $331,410-414$ Euston Rd. london
$615-51 〕$ CITROEN, 1922, Thp, 2 -scator, in very nice condition, taxed, ppecdo6in $615-334$ CITROEN, 1923 , 11.4 bp, 2-sealcr, English bodg. double dickes. 3..W.

 CLULEY TObp 2-3-zater and doublo dickey, dynamo 615-146 CLULEY, lobp. $2-3$-scater and doublo dickey, dynamo, clock, specdo-
meter, in perlect, condition, Ralson tyres, £i55. May, 2 ingh St.


CLULEY, 1921,2 -seater, dynamo lighting, excellent condition, E85; exchasges or hire Furbasc. The light Car Co., $331,410-414$ Euston
Rdis
615 CLYNO, 1924. 2-sealer, dynamo, atarter, practically new, 5135 ; exLYNO, 1924, 10.8 1 p $d \rightarrow$ luxe 4-scater used 615-167 Cinn rons, guarantned as new, £198. Simister, Jordangate, Macclesfield. CLYNO, frec insurance included, 1924, 1Ohp, de luxe 4-seater, dynamo windscrien, etc. yearis Hoence, new condition 159 equineas ent. doubls or deferred. Edwards, 175 Gt . Portlond St. Afayair 4027 . exinges $615-347$ COVENTRY-PREMIER, 1922, 2-seater, with dickey tax paid, and Chinery, 1 IIammersmith IRd., Kensington. 'Phone, Western 4140 and
3568 . COVENTRYPREMIER, 1922. 2ecater and dlekey, eplendid condition, be=land St., Mancbostar. Central 2681. Coljbam and. Li6-3ラ9 CROUCH, all-weather, 8-18hp, water-woled, latest model struamline $2-$ certer and doulac dickey, dark biuc, dynamo lighting. absolutely as new, mondition, dynamo, sheedumeler. tyres new, \&85: also others from $£ 50$ May, 2 IIjgh St., Fareham, IJants. $615-285$
DARRACQ, 1923. 8 hp , 2-scater starting and lighting, einall mileage,
c175. Below
DARRACQ, 1922 na above, both like new, f160. Allen Simpson,

SECOND-HAND

## LIGHT CARS AND CYCLECARS FOR SALE

## (continued).



 DOUGLAS, 2 -seater, C.A.F., lighting and starter, new turcs bisiv
 EMSCOTE, 1921, 2 -scater and dickes, ghp, water-cooled J.A.P. engine

 sater, tully equipipd, sear's licence, eppecdometer, excecllent condition, ERIC-CAinpBELL Ireo jnsurance includes. 192, 1 Chp, 2 -seater, dys

 ERIC LONGDEN, free insurance inclued, 1923, 10hp sports. 2 eater
 ERIC LONGDEN 1924, 10hp Eports 2 senter. dynamo and starter

 ighting, 500 miles, 6 ell, or exchange
Rdseat Wood Green.

 C.N., 1921 pertect condition, snecdometer, electric 11 ght, nıs, frin).



 C.N. Kirk and Co. 1922 . Popular model, dynnmo lighting, spectloneter, C.N. Kirk and Co havo soveral G.N.s and a largo number ol other light
cars in stock. Phone or wirc. Paditnglon 6049 or call at 22 Pract cars in stock. Phone or wirc. Paddington 6049, or call at 22 Praed $615-140$
St., Paddington, W. W. C.N., 1921 dy nmo lifhting, spare whece speciometer, etc. R55. Rey's, days. Phonc, Ianghzm 1257. c. N. 1921. 8hp. Luces dynamo lifhting. sparo whect gool tyres.


 C.N., 1921 , excellent condition, tax paid, dynamo, apecomoter. 5 dito
 G.N., 1921 de luxe practically new condition, dypamo, many extras,



 Cent doncsit lor ensy terms; £48. $\Delta$ ndrew's Motor Man, $\quad 615-254$ G.N. 1920.21 , improved body, all-weather equipment, ds nimo lighting.
 c. N., 70 m.11.h. bporls, British Anzani-ngined, 1924, only done 4,500
 C.N. 1922,2 .seater and dickey, Miller dynamo lighting, spare whel,
 C.N., $1922,8 \mathrm{hn}$, 2 -seater and dickes, dynamo 11 shting, spare whecl.


C. N., Ireo jnsurance included. $1922,8 \mathrm{hp}, 2$-seater, Jlckey. Frazer-Nash
 G.N.
 G.N., 1922. Show model, all-alumnium body, bluo wngs. new hood, hargain.e.e. 1921 Lesore or Morgan nart pasment. Below, Gilc, 1 Irapipstead. Hampstecad 3287 .

615-8745 G.N., 1922.23. exceptional condition, Iront handle atart, deckey $\begin{gathered}\text { tat } \\ 59 \\ 59\end{gathered}$
 G.N., 1922, 2 -sceater, dynamo lighting, 1ate model, spedometer, electric horn, tax paid, exceedingly smart, for, 2041.
" THE PETROL ENGINE

## SECOND-HAND <br> LIGHT CARS AND CYCLECARS FOR SALE (continued)

G.N., f48, exchanges, deforred payments. 1921 G.N.。 2-scaler, Lood,
 C.N.: spocial long-stroks enginc, roller big-end, 4-seater ( 1923 Show body), dynamo, complate, SG8: body only (hood, screen). E17. Saen
Wandsworth. Wrate, 30 London St., Ohertscy. G.N. Mlack and Finch, 222 Gt Portlands. Wt, $\mathbf{1}$, concossionnaires G.N. Cars, hato 190 colel, ovcricad model, Eamalt, dyaamo lighting speed 75 mph.. pelished nlumininm body. © 175 . Others in stock from $£ 40$ upwards. G.W.K., CJ5 Wo havo several G.W.K. Cars in atock trom $£ \leq 5$ upwards: hny trial run given; inquiries invited. North Essex Motor Co.. Saltron
Walden Phone, 16 . C.W.K., $1920,10 \mathrm{hp}, 2$-seater. donble dickey, dynamo lighling. just been coach painted and overhauled, guarantecd. ©59; cash or deferred. NayC.W.K., 1921, 2-3ecatcr, dynamo lighting, ncw tyres all round taxed.
in good condition, 80 guineas. 51 Upper Richmond Rd., East putney. G.W.K. 1919 recrutly overbauled, taxed, 540 ; privato. Mose 129
$615-d 628$
 G.WK., 8lap, 4 speeds, speedometer, £45. Maudes', 100 Gt. Portland G.W.K, 1920,2 scater, large dickes, dynamo, very smart car, £68;
 G.W.K., 108,1921 , smart, roomy 2 -seater with dorble dickey, 4 new
 GWYNNE 8, demonstration car, tax paid, full equipmont makera reaua, Surbiton. $615-507$
 Motur Aboli: 4 Desiman Place, Piccadilly Circus. Regent 986. $615-269$ GWYNNE 8, 1923 , fully equipped, eppedometer, first owner-driven only,

CWYNNE, Ire insurnaco included, 1923, 8hp, chummy model, dynnma lighting, if iniler, clock, specdometer, luggage grid, licensnd, cxcellent condinon, 149 giuncas; exchanges or deferred. 175 Gt . Portland St., W.
Maylair 4027 .
$615-348$ HILLMAN cars OMiclal repalrers, Londan distrtct, J. Brodie, Ltd.
 HILLMAN , wing car, run consistently at Brooklands, otreamlined, hlanted fir fani road hise, dynampo, screen, mudguards, splendid condí Lion, £195, extended terms. A. P. Rey. 378-384 Euston Rd. Museum
7600 HILLMAN, sports mordel, polishod alaminlum body, dynamo lighting, other extras. laxel 111 Ueccinlier, very smart and fast, $£ 145$, cash. exchanger, deferred payments. W. T Dund, Ltd., 326 Euston Rd. N.W. ${ }^{1}{ }^{1} 15 \cdot 244$
'Phone, Museum 5391. HORSTMAN 1924, 12-30hp Anzani engino, 4-seater, touring model. clock, electric horn dash lamp, Inggago grid; this car has not done
 HUMBER, 1923 , 8hp, chummy, excellent condition. Jnst orerbauled, Clock, hool, cover. etc., 8,000 males. any trials, 2160 . Iolmes, 11
 HUMBEREITE, e32, exchanges, deferred payments, 2-seatcr, 8hp. walcr-cooled, Hood tyres, hood, sido curtaina, lawps, smart. Saabridgo,
35 IIansler Rd. East Dulwich. Sydenham 2452 .
$615-223$ JOWETY 19242 -scater, doublo dickey, speedometer, dynnmo lighting, sido curtains, full tool kit, etc., licensed end of gear, all in excellent dene, Park Ru., Newton-le-Willows, Lancs.
JOWETT, 4 -seater, fiarter model, 1924 demonstration car. portect icen. specially tuncd, delivered in mirch, oversize tyros, oxtra fements. Noel, tho Jowett $\Lambda$ gents, Ripley. Surrey. sale. Howard, Davidson, and JOWETY, 1921, Just orerhauled, splendid coddition, separato magnelo miles to gallon. Box No. 6621 , c.o. "Tho Light Car and Cyelecar .. OWETT, 1923. 7 hp , 2-seatcr, dickey, side curtains, clock, ctc.. $£ 120$ Bartacts, 95 Gt. Portland St. 615-388
 LAGONDA coupe, 1921 , complele, fully equipped, tax pald, bargain.
26 JIIgh St. Sallron Walden. Phone. 16. LAGONDA coupe, $1914-15$, electrio lighting, good trras, eound condiLAGONDA coupe, 1922, paiuted dark blue. licensed for 1924 prico f150. Iagonda Let.. 195 Hammensmith Rd.. W.6. 6i5-123
 LACONDA coupo, 1922 model, in perfect mondition, dynamn starler, Flock, mperdometer, very littlo used, bargain, $£ 145$. Mas, $2 \underset{\text { Hish }}{615-287}$ LACONDA, 1922 model, 11 . Hip, 2 seater mounc. double dickey, starter.

LACONDA coupe, vory low milenge, as now, $\mathcal{E 1 4 5}$. Grimes, 24 Bruton

## SECOND-HAND <br> LIGHT CARS AND CYCLECARS FOR SALE (continued).

LAGONDA coupe, 1923 model, repainted and orerhauleld, $£ 165$

LAGONDA roupo, 1921 , oxceptional condition thronghout, $£ 110$. Stretton and Smith. 12 Woodstock St. Oriord St., London. 615-21 LEA.FAANGIS, $10 h p$. 2-scater saloor coupo, 4-cylinder oserhead valves, sliding glasa windows, mechanical scroen wiper, fally equipped, just new, dono under 300 miles, licensed end year. must seli, tako s2A0. Sas

LEA-FAANCIS, $92=$ chummg medel stios throughout, haxed, any trial or examination, 115 guineas; exchanges, ex tended pryments. Mears and Bishop, 225 a Bammersmilh Rd. Itammer-
smith 2230 .
dickey
LITTLE MIDLAND, 1922, only dono 3,000 miles, 2-seater and dickey 8 bp water-ooled, apara wheel, electric lights, side curtains, crecllent
condition, E55. 8 Eiffa Parade, Brixton.
L.S.D. cyclecar, 1922, 8hp, M A.G. engine, 2 specds and reporse, spar
 L.S.D., iate 1922, 8hp, 3 -whecler, repainted, perfect condition, drive 100 miles genuino Durchaser, photo., $\Omega 80$. Ritchie, Plon Arzel, Flect MARLBOROUGH. Cassia Motor Mart, Lid. 1914 4-cylinder, 2 -scater dickey, 5 whecls and tyres, olock, speedometer, Jast repainted blue. ex
MARSEAL, 1923, all alaminium, 2-scater, double dickey, like new dynamo lighting detachable whoels, bulb and clectric horn mileage
3,000. price $f 140$. Tho Marsen Motor Depot, 31 Bath St. Brighton. MARSEAL, $11-27 \mathrm{hn}$ just delivered, unased, 2-scater. donble dis MARSEAL, $11-27 \mathrm{hp}$, just delivered, unused, 2-scater. donble dickey 8 Baden Rd. Lecicester. MATCHLESS 4-5-acater light car, our own special demonstration model, bargain at elJ5. Sam. E. Clapham. 27 Stockwell St.. Grcenwich MATCHLESS, free insuranco included, 1924, 10hp. 4-seater, dynamo lighting. speedometer, licensed, mileaga 1,300 , indistingrishable frora new, cost s185, our price 128 gutineas: exchanges or delerred. Edwarda.
175 Gt. Portland St. Majfalr 4027. MATCHLESS, 1924, 10hp, 4-seater, dynama, epecdameter, all-weather side screcns. 4 whecl brakos, low maleage, new conditiong ycar'a tax
 MATHIS, 8hp, 1920, 2-seater and dickey, dynamo and starter, perfect throughout, tared: cash. delerred or exchanges. E. T. Morriss and Co
Ltd. 139 Finchley Rd. N.W.3.
MATHIS, 1921. 9hp, chummy 4-acater, dynamo lighting, starter, do tachable disc wheels, spare, tyres vory good, all accessories, upholitery. paint and hood periect. whole in exceptionals good condition through
 MATHIS, 1923, J-scater, electio lighting, starting speedameler, sparo
whecl, tax, insurance, genuine bargain, \&95. 34 Kinge Avenue, New
Malden. MERRALL-BROWN, 1921, 4-cylinder Corentry-Climax detachable
 MORGAN. James and Co. (Sheffeld). Letd, 261-267 Ecclesall Rd. Shef fedficulty wire "Tact, Sheffield." New and second-hand machines nearl alwass in stock. MORGAN Servico Depot. Official appotatod repairers by the Morgan
Motor Co. lor London. Fall ranke of spares carried. New and socond hand machinea always in stock. Trade supplised. Official agonts, Homac's.
243 Lower Clanton RTd. E. E. Dalston 2408 . MOAGAN, 1922 Popular, in splendid condilion, caredully driven by private owner, done 7,000 miles only, a real bargain, liconsed, 60 mps Scbrciber. Iymato. Hapts.

MORGAN, 1924 IOhp, M.A.G.. clectrio light and horn. specdometer trial. cost $£ 160$, accent first reasonable oter Letters. a Warren Rrd

MORGAN, late 1922, famils, magneto, electrio light, horn speedo metcr, diso wheels, excellent condikion. 80 grs. Raymond Best. The Crossways, Peterchurch. Mereford.
MORGAN de Inre, 1924, water-cooled J.A.P. dynamo lighting. 110 Merry, ILigh St., Tibshelf, Alliolon, Derbyshire.
MORGAN, 1923, Grand Prix, watersooled An2ani, 6 peedometcr hood, cover, ruaning basrds, band control, very lase, excellent condition Yax paid, f90. Ariel Motors, 320 Camberwell New Rd., S.E.5. 615-190
MORGAN, 1922 de luxe model, 8hp J.A.P. horn, speedometer, new.
 MORGANS. Aero model, 1920. J.A.P., many extras, splendid condi tion, $f 72$ 10s.: Grand Prix models in stock, second-hand, from 50 Ens to $£ 120$. Write lor special list. free. Elce, Ltd. $11-15$ Bishopsgate
Avennc, Cumomile St.. E.C.J. Phone. Arenue 5548 . $615-264$ MORGAN, 1924 Acro model, o.b. Blackburne, speedometer. clack
 MORGAN, 1922 G.P. bluo, M...G. encine, front bandle startinf. dynamio lighting. speedometer, exceptionally smart. guaranteed, e90.
Daw, 114 Brixton Hill.
MORGAN, Family, 1923. 8hp. T.AP., w.-c. dsnamo lighting. discg. elcetric horn, fully equipper, s110; axchange for 7.5 Citroon, $6153-2555$
Moseley, St. Apn's Rd., Marrow. MORGAN, 1920, GP.w.e. MAG in nice nondition throughout. 865.
Apply owner. 11 Acland Rd. Willesien Greca.

## SECOND-HAND <br> LIGHT CARS AND CYCLECARS FOR SALE (continued)

MORGAN, 1923. rery lata Grand H'rix 1924 improvements, dynamo lighting. Iaxell condition as tuew. ©95. 31a Mydethorye Rd. Balharn $615-094$ MORGAN, frer inEurance included, 1923 Fnmily model Blackburne Chigine
Below
MORGAN, Iree insurance included, 1923, G. 3 waler-cooled ohv. Anzan
MORGAN, frce insurance inclucied, 1925, G.P. dynamo ligheing, electrio
MORGAN, frec insurance included, 1924, G.P. o.h.w. Anzani engine dynamo lighling, spedometer. etc. licensed, superh condition through
nat. 128 gulneas: exchanges or delered. 175 Gi Portand St if Majtair 4027 .
MORGAN, 1924. Blackburne, aluminium pislon=, new tyren, 2 apare eyres, electrac, acetylene lichting. year tax, excellent condition, e85
Norchen, 4 jiastcoto Terrace, Stockwell.
 MORCAN, 269, axchances, deferred pasmeali, 1921, do luxe, 2-scater
 MORGAN, £75; 1921, 4-speed, MA.G, Grand Prix, dymamo lifhting
 MORGAN, 1922. Gracd Prix, w.-c. M A G Lucas dynamo, specdometer 1921 Grand Prix. ©.ec. M. A.G, dynamo lighting, full equipment. 880 1920 Grand Prix. $\boldsymbol{F}$.-c. J. A P. fully equipped nith extra dickey seat 1924 Famils morlel. at-c. Anzani. Lucas gell-starter and dsnamo light ing, pecdometer. firteked dore grev, tax paid, 5130 .

MORRIS OXFORD, 1914 , de luxo 2 -seater and dickey, acetylene light inc, néarly wew tyres, fine order, 255. Groves. Dunstable. 'Phone
146 . MORRIS.OXFORD, A40, de lixe
lax paid. King. New Rd. Oxlord. MORRIS OXFORD, 1914, 2 -seater, paint hond and screen in good con-

 NEW CANDENS. Family models of 1923 manulacture, $£ 5$ : brand hew morle at $x 85$ (list price 4110 Ten jer cent. deporit iecure
 NEW HUDSON, 1922, 3 wheeler, fully equipped, dsnamo lighing, spare whecl. f90, or exchange 1923, 1924 chummy or 4 -siater light car, 615-d630
 PEUGEOT, late $192 \overline{3}, 8$-10hp, do luxe 2 -acater with dickes acat, dy namo, elc., car fully equinped and little used harmain,

RHODE, 1924 (April), light Foar, fax and insurance paid, excellent
 RHODE, 9.5 hp . late 1922, excellent conditlan, fall equipment, first hand prirnte owner, fle appointment. Tate, Camden Garage, 2 E
RHODE, S Shp, 2923, all-wealher saloon light blue, black wings, dy namo lighting, gellstarter, speedometer, clock, mirror, electric and ordín ury borns epring galters, greascgan lubrication, Ahchelin Confort tyres
RHODE, 9.5hp. 1923 , sporls 2-seater, mause, alominium wings, ds-


RHODE, 9 5hp, 1323 . ccensional A-seater, grev, blark wings, dynamn lighlias, self-sta-ter, epcedometer, daynlamp. ${ }^{2}$ toolboxes on rumaing beards, onare perrol can fund carrine, nil-urather side curtains opening
below.
UHODE, 9.5 bp . 1922, Occasional 4 -seater, grey black vings, dyname hghting. specdometer, clock iashlsmp. cocoanut wsia, Mully Gquipped
 THODE, 1923. aclfatarter, gond condition. s140. IIarris, 7 Willow RICHARDSON light care. Spare parta in stock. Richardson's, MillRILEYS. Guarantecd by the Rlley specialiats Exchanges Lewea Molor RILEY, $11.40 h p$. 4-kater, all-weather equipment, lighting. starter
 RILEY, 1922. $11 \mathrm{hp}, 4$ Erater, with all-wnther equipment, rery nice
 HOVER, chumny, 1923, in excellent onndition, $£ 110$. Iaulton's Gar.
zzz-794 GOVFR 8, 1923. dickey. warter, encedometer, gauge, electric horn, tirie rurtaink, carrisr, gpare ran, mirror, wipmr, complele twa, 6,000, excel-


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

ROVER Eifhe. 1922, dynamo, many extras, Including dickes, epeedo
 ROVER ${ }^{1923}$, 8hp de luxe chummy model. sellstarter, invel| 2 sparc

ROVER Eights. Kirk nnd Co. for Rover Eights. Below ROVER, 8 hp , Kirk and Co 1925 Churumy model de Juxe, finisho ad
 noven. Bhp hirk and Co. 1923 Chumpy model do ioxe allwerticr

nover, 8hp. Kirk and Cood 1922 2-seater, dsnamo 1 IIghting: sparc fino me hanical orcer, r85 Below


 Ruthmond Rd, Enst Pulney.

Sis.
ROVER Thu, Manmpon Cave Co. have laken in part exchange an exat

 ROVER 8, 1924 . 2 ceater, double dickes. Fong ebassif, molel de luxe


 Phone, Itammersmith 80
ROVER, Bhp, 1923 , chummy model de luxe, taxed nnd insnred, many
extras, is new, $£ 115$. 112 Stroud Green Ral. Finsbury Park, ${ }_{4} 48$

 phone, fusoum 6594
ROVER, 8 hp, 1922 dvnamo lighting, de luxe moricl, clock, spectometer
 ROVER 8, 1924, 4-seater, Llue, shall mileage, sparo wheel unised, Eelf fiarler, new hood, sear's tax, s] 45. Coryn, Hornchurch, Essex. 615 - 1664 RoVER 8, tree insuranca included, 1923. chummy de luxe, starler, elock
 ROVER gs. We usuably have several 2 and 4 -waters to choosr from,

 ROVER 8, 1921 flatel. recently coach-painted grey dynnmo lighting new sparc, carsuly used and in excellent condition throughout
Sulicitor, c.o. Nuttin Garage, Eust Grinstead.
615
 Rd.. Streatham.

 HOVER B, probably bandaomest on road, running topplag, suit doctor, new hood, elock, sjeedometer, petrul gnuge, mals, real claznce. Gerrari
2385 .
G1601 RUVER, 1922, 2-seater, fymamo lizhting, clock, specdometer, taxed,
 HUVER, 62 guincal, late 1921. 8hp, specdometer, good condition, just

 ROVER, 8hp, 1924 , 2-seatcr, dickeg, clock, specdometer, a -w curtaing, small mileage practically, new. Jears tax. $£ 140$. Pickworth and Ifull
107 Gt . Portland St. W. 1. Langhan 1998. ROVER, 1921 , 8hp, 2 -seator and dickoy, just been orerhanled and rn.
painted, as new, \&70. 58 Semrlo St., Cambridge.
$615-\mathrm{d} 613$

SALMSON. Apply to tho London distributors, Gordon Watnoy and Co. Lid., for aecond-hand Salman cars. Sercral alwaya in stock. Part ex
changes and special delerred lerma arranged. 31 Brook St. London ir. 1. 'Phone, Mayfajr $2966 . \quad$ zzz-283
SALMSON. Mann and Handover, Lid.. enthorized ngente for salmson cara. always have a selection oort exchange. 116 Gt. Portiand St. Museum 2878. derien termm
or paz-743 SALMSON, 1922, de luxe, 2-seater, hood, dickey, dyname, specdometer, arrlect order, vriginal enamel, tax mad, 293.187 Eln Mrl. New 615 d599
lalden. SALMSON, 1922, de luxe, all-weather, dickey, dynamo, npecdometer, S $\triangle \times O N, 111,2$-zenter, 4 cyliaters, lampa, in gocd conditlon anil running


## SECO:ND-HAND <br> LIGHT CARS AND CYCLECARS FOR SALE <br> (conlinued).

 SING:R, 192. Johy. 4 -enter do luxe, practically nus. e205. 24 SINGER, 1923. 4.seater, in superb condition. cumplet with many anarcs, $\varepsilon^{1} 190$ cosh or $\mathfrak{c 4 5}$ down and 12 maymenis of $E 1116 \mathrm{n}$. 3 d . with



 SINGER, 1917. 2-3̈seater, dickey, repainted yellow and black, dy-169 ligbuns, Erd is res Inlly indic), recurily orechaulcd, 50 guineas 51 SINGER 10, 1917, 2-matcr, flickey, dynamo lighting. delachabla whecla,位, oicrsizo upholstary. paint and hood very good


SINGER 10, 1917 coupe, fickey, dsnamo lighting, detachnble whecle, tyres very good, just completely repanted, leather upholatcry, in very
 SINGER, 1924 de luxo 4 seater, all-weather model, elcetric starter,
 SINGER, 1921, 2scatct, startcr, taxed, enlendid tyres, very beautiful condition, $£ 80 ;$ exchange Morgan. 307 Goldhawk Rad., Shepherd's Bush SINGER, 1924 (Aughe 1 ), $10 \mathrm{hn}, 4$-seator de luxe, only run fow hundred
 SINGER, 1921. dro amo and sarter, thoroughly overhauled, e80; Mor can ne Legerng.N. Hart prisment. Larls, Lid. The Vale. Hampstead.
 604. SINGER 1924, do lixe, 2-scalcr, doulala dickey, mileage under 2,000 an brand new. fully misured, tixed, e198, or part exchange modern
combination. Goldsmith, Lissoy, Withern, Brighton. $615-d 595$ SINGER, 2-scater famous $10 h \mathrm{p}$ 4-rglind.r. gond igies apara whecl, hamps, hoorl. Screcn, only, Wants secing. 39 Ens. exchage motorcycle, 8INGER, s85: nxchanges, defered payments, rery nice 1919-20 Singer
 SINGEP, 1921. 2-scatrr, Spcrialloid pistons, balanced crankshaft, apot light, dash lamp, specdometer, balloon tyres, repainted, witten guaran STANDARD. Moorcs Presto, Croydon agents Standard cars. Promptest hand cars io sclect Irron. Deferred pasmeats and exchanges arranged.
North End. Croydon. 'Pbone 2624 . STANDARDS. 'Try Menly's Mou cnanot beat thelr terms. 91 and 155
G2z-300 STANDARD. Kirk nnd Co, 95 hp, 1923 , ohw, engine, dynamolighting nydes, large doubla sunken sickwy, really fino car, ifit5. Below
STANDARD. Kirk and Co havo Sisndirds and a largo number of ather light als 1a gtosk. Phomo or wire, 1'addington 6049 . or call 2 L 22
Pracd St. Paddingion, W'1. 615.139
 8136. 615-149 STANDARD 95 2-sezter, dickey, $191 \Delta$, littlo used, excellent condition,
 carin.

615-d584
STANDARD, £55: 2-scatir, dickcy, 9.5hp, 5 detrehable whecls, good
 STANDARD, 9.5 hp , 2-seater, dickes seat, in excellent mevhanical condi-
 STELLITE, 1919. No. 1.369, 2-scater, overhauled and repalnted sreca, licensed lo end of soar, electric lighting, $\mathcal{L 1 0 0 .}$ Stevenson's Garage. STELLITE, .445 , exchanges, deterred payments, 1914 , 2-seater, dickey. 5, dolachables, hood, screen, oleclric, lamps, taxed. Seabridge, 55 Mamsler
Idd. East Dulwich. Sydenham 2452 .

## la. East

 SWIFTS. Try Ilenly's. You cannot beat their terms. 91 and $\begin{aligned} & 155 \\ & \text { Gt. Portinnd } 301\end{aligned}$
SWIFT. Moorcs Presto, Croydon ngonts Swife cars. Promptest delirery now models with efficient service to follow. Largo stock second-hand cars oroydon Plion Dererred payments and axehaaces arransed zzz-755 SWIFT, $1921,10 h p, 2$-senter, dickey, mellatarter, dsnamo lightigg, allweather equipment, excellert condition, $£ 105$. Address, Stibbat $615-\mathrm{d} 534$ SWIFT 7 -Ghp 2-scater, dynimo, good conditina and appearance, insured Juno 1925, trlal, \&49. Bemel, Box No. 6619, c.o. "The Ioght Chrand

## SECOND-HAND

LIGHT CARS AND CYCLECARS FOR SALE (continued).
SWIFT, 1923, 10 hn, 2 seater, with dickey, dynamo and stapter, excel-





 TALSOT. 1924, : $0-23$, 4 -seater, acnrcely uasd, $£ 265$ cash or $£ 6653$

TALBOTS. 1924 10.23 threc-nuarter coope. this car is practically

 changes or doferred Jancs, orer Micxanider 's. 482 Harrow lid Pax dington. Willesten 1744.
TALBOT, late 1923, 10-23hp, 4-acatcr, do loxe, in rery nice order, any trad, examination, 200 guncens, exchanges, extended payments. Yrearm TALBOT, 1924, 10-23hp, 2-seater, dickey, ztarting, lighting, numeroul extras, rechaskids, taxed, Largain, 225 guincas exchanges, extender payTALBOT, 1924, IObp, throoquater coupe, tased, IIartiord, Waper, lug. Wago carrier, soiled only. £350. Grimea, 24 Bruton [lace. Bond St.
 TAMPLIN, 2-seater (sido-by-side), 1923. Augast, 8hp, 3 opecds, ro$\begin{aligned} & \text { ally sound tyres good, taxed, any irial, cost } \\ & \text { \&150, } 250 \text {. } 153 \text { Abbey } \\ & 615-791\end{aligned}$ Rd, Barrow, Lanos.
TAMPLIN, freo insuranco included, 1922, slde-by-side, 2-sealer, 3-specd
 TAMPLIN, 1920, overhauled and repainted, guarankod 50 miles per

 TA. runabout 1922, 8np water-coold J.A.P. 3 aneeds and ieverac, taxed, lighting, srarm uheel, spectometer. cood throthout, £52, or 2562 ge. Teddirgton Garage, 160 Migh St., Teddington. Kingsucn WESTWOOD sporta, 1921, ery la3t, ti25; cash, deferred, exchanges, 2681. WOLSELEYS. Try Henly'a You cannot boat their terms. 91 and 155 WOLSELEY 10, 4 -scater, painted blue, 1925 model. de luxe, perfect aga), Lid., London lid., Tonbridgo Wells. 'Phona 425.

WOLSELEY, 1921, 2-scater, 10hp, maroon finisb, extremely gool mecharical condition, exly $£ 150$ cash or .2 .37 10s, down and 12 payments of 59 16s. 11 d. . Whth option of anecial rebate. Lamb's. Ltd. 50 Iich Rd.. Wood G:cen: 387 Euston Rd, N W. : opposite Hoe St. Statinn. WOLSELEY, $1 כ 22,10,2$-scater, repainted, fully taxed, small mileage, an now, di65 Smith and Hunter, 90 Gt. Portand st., W. 615-145
WOLSELEY 10, 1 922, 2 seater, doable sunken dickey, leather upholster.

VOLSELEY, 1922 model, 2-seater winh dickey, dynamo and alartex, excellent condition, fully equipped, $\boldsymbol{e} 150$ i exchanges or bire-purchase
The Light Chr Co., $331,410-414$ Euston Rd. London. $615-312$ WOLSELEYS. 1924,550 and you are on the road with 3 ay 10 hp model, lax and insurance paid for ane year, balance mo 12 or ay madion sour erious consideration Full detaila. Kingswav Motor Co , Waldorf House. WOLSELEY, $19 \% 4$. 10hp, 2-3eater. diekev, starter, 5 lamps, Aperinllo tuned car, as new. f195. Bartletts, 93 Gt . Portland St. 615-590 WOLSELEY, $10 h p$, 2 -seater, 1922-23, dictey, 5 detachable wheels,

WOLSELEYSTELLITE, IObp. aports model, fited with brand-new 2cate: slurnintum boily. new leathor urbolstely and black bonn new rery porsbla beatiug rebughed. no sign of wear nnywhere, radiator and all ftetiage replated, many extras, layed till December, any trial welenmel, 617-d532
WOLSELEY-STELLITE, 1919, 2-seater, IOhp, arecial bory, dramoo

WOLSELEY STELLITE, 9hp, 1914. 2aeatcr. dickey, detachable whecls, pare. tyres all new. oversize, taxed until December, ophnistery hamh.
 WOLSELEV-STELLITE, 1919,3 speeds and reverse, drnamo, aperial Puincasi ronsider oxchange. Eweri, Newton Rd., Burtonon.Treat.

## SECOND-HAND <br> LIGHT CARS AND CYCLECARS FOR SALE (conlinucd).

LEZEBAE, 1922 brand mew. shop solled, 2-icator, with dickes, dy
 Hexhanges or hondon. 615-505 LEZEBRE, 1922, 8hn, 2-acater, dymmo lighting, starter, detachablo upholsicry, paint and hood Brat class. cxceptionally good mechanlcally very fast, smart and rellable s8 10 s. down and 10 equal payments or cash $\ddagger 85$. Bennolore, $30-32$ Migh St. Wandsworth, SW. $18 .{ }_{6}$ Batter eca 1509.

 Grcen: 087 Eusion Rd. N.W.: oppasito Iloo St. Sialion, Wallbamatow. LEZEBRE, 50 per cent, unace Hst. Brand now, 8hp, chummy 4 seaters, difterential, cantlover springing, bighting and startíg, dotach able whecis: wire, $710-90 \mathrm{~mm}$. cond tyres


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LOAdon, LONDON MOACAN SERVICE DEPOT The only firm offially app spare part in atock. Oveihauls a speciality. IIomacs, 243 Lower Clapton
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Gorinn Watner and Co., Ital. (Autborized Agenta).
We sneclalizo in part exphances ard delerred corin
31 Brook St., London. W. J. Jhone. Majlalr 2965-2966
zzz-660

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AUSTINS, 7hp, bicst mollels, all-wenther. © 165 ; ou extended payments: prompe delireries. Taylor's, id., 49.53 Suscex Pl. South Kensingto AUSTIN 7. Inmediate delirery can be given of this wonderful litue car
 Ciccardilly. W. 'Phones, Grosvenor 1620. Musenm 2000. Regent 2612 AUSTIN. Weytrianc Automobiles, Ltd, Alstith specinlista, cana five im

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 AuSTin cars, 7hn Eurlicsi dellsery of all models Exchange, cash or AUSTIN 7. Imracdinto delivery of 1924 models Gradual pavments




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 CALTHORPE. Moorce Presto. Croydonagonts Callhorpo cara Promptest
 cItROLN for yeliabllits.
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