

## ECONOMY CARS FOR 1925 <br> Full Details





WHEN a Daimler is run on oil suited to a Rover Eight - somebody's mistaken! And the mistake may bring a tidy repair bill later on.
When a Ford is filled up with an oil which would give correct results in a Rolls Royce-somehody'd mislaken! The Ford owner will not have to wait indefinitely to get his proof. The answer is likely to come in the form of unnecessary carbon, transmission troubles, fouled plugs and overheating.
No matter howmany oils "work all right" in your car, there can be only one oil whose body and character enables it to bring you all the benefits of scientific lubrication.

Have you found that oil?


Can you say that you haveand be certain?
The Chart at the right was originally prepared to put scientific certainty into automobile lubrication. This is exactly what it does.
In body and character, the grade of Gargoyle Mobiloil specified for your car is scientifically correct. To the motorist who uses an oil of different body and character we can only say-somebody's mistaken!
Only one oil is best for your car. The Chart at the right will tell you what oil that is. If your car is not listed in the partial Chart shown here, send for

BRANCH $\left.\begin{array}{l}\text { Belfat } \\ \text { OFFICES: } \\ \text { Birninglam }\end{array} \begin{array}{l}\text { Brotol } \\ \text { Cardiff }\end{array}\right)$

Chart of Recommendations
MOTOR CARS


Remember: Aok for Gargoyle Afobiloil by lbe full tille. It is not sufficient to say "Give me a gallon of " $A$ ' or ' $B B$ '." Demand Gargoyle Mobiloil "A" or Gargoyle Slubiloil"BB," or whicbever graje is specified for your car in lbe Chart of Recommendalions.


## VACUUM OIL COMPANY. ${ }^{\text {TD }}$



All Singer Cars can be purchased on Derred payments through any Singer Agent. Illustrated Catalogues and full particulars sent with pleasure.

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



FOR SATISFACTION


FOR SATISFACTION


FOR SATISFACTION


FOR SATISFACTION


FOR SATISFACTION

# OWN A SINGER AND BE SATISFIED 

「THE exfraordinary popularity of the SINGER amongst all types of motorists during 1924 resulted in a record year in the history of Singer \& Co., Ltd. Such popularity can only come from widespread satisfaction, and it may be argued that a car giving such a degree of reliability, economy in running costs, a development of power much above its rating, and, above all, representing a sound investment in first cost, requires no alteration for next Season. We realise, however, that motor car design and values mosi keep abreast of the times, and that the motoring public look to us as Pioneers to give a lead in the indusiry. Our 192 à models therefore incorporate many new features, which are calculated to improve the already well-established reputation of SINGER cars for efficiency, economy, comfort and durability.

## 1925 Models \& Prices

10 h.p."Popular" Four-Seater $\mathbf{E 1 9 5}$ Chassis specification same as supplied with "De Luxe" Model. 12 volt Starting and Lighting equipment with 5 Lamps, Balloon Tyres, Spare Wheel and Tyre, etc.

## 10 h.p. De Luxe Two-Seater - \&215

$10 \mathrm{~h} . \mathrm{p}$. De Luxe Four-Seater - $\mathbf{L} 225$
Both models have been re-designed and enlarged. Patent pneumatic upholstery, leather covered and full equipment.

## 10 h.p. Limousine Saloon <br> - £295

A light coach-built saloon of ample proportions, with four doors and six windows. Pile carpets, leather upholstery. Colour Maroon.
10 h.p. Saloon, Weymann Body $\mathbf{\$ 2 8 0}$ Greatly improved design, exceptionally light.

Catalosues mon apblication to: SINGER \& CO., LTD., COVENTRY.

FOR ECONOMY

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FOR ECONOMY

# OWN A SINGER AND BE SATISFIED. 



Economy-with Individuality.

When you examine the Clyno critically with an eye to comparative values you will understand why sales have risen in a single season by $300 \%$. When you find that it lives up to every virtue promised by attractive design, you will realise that it is the car that will give you the very last ounce of value for your money. Don't be content to waste money - the Clyno will give you $40-45$ miles to every gallon of spirit, and in its individuality there remains an attraction that grows with the miles. $\Lambda$ copy of the latest illustrated catalogue of all models awaits your name and address.

## New Reduced Prices :

| 1 H.P. (TAX £ı) | prices. | ${ }_{\text {NREV }}^{\text {PRICES. }}$ |
| :---: | :---: | :---: |
| The 2-Sealer | £198 | $\pm 175$ |
| The 4-Scater | £215 | £195 |
| The Occasional 4-Seater | $£ 205$ | $\pm 185$ |
| The De Luxe 2-Seater... | $£ 215$ | £195 |
| The De Luxe 4 Seater | 1225 | $\pm 210$ |
| The Clyno "Royal" 2-Sea |  | $\pm 225$ |
| The Clyno "Royal" 4-Seater |  | $\pm 235$ |
| Coupe (2-door) | £315 | 2285 |
| Saloon (4-door) |  | $\pm 345$ |

(These prices are effective from Sth Sebtember, 1021).

IMPROVED COACHWORK. RIGHT-HAND GEAR

CHANGE.
REAR WINDSCREENS TO ALL 4-SEATERS.
FULLY UPHOLSTERED SUNK DICKEY SEAT ON ALL 2-SEATERS. 40-45 M.P.G.

STANDARD SPECIFICATION
$11 \mathrm{~h} . \mathrm{p} .14$-cyl., water-cooled engine, 66 mm . bore. 100 mm . stroke; electric starting and lighting with five lamps; three forward speeds and reverse; single cantilever springs: yonnoating rear axle with differential: full all weather equipment and sloping double windscreen; spare wheel and five Michelin Comfort tyres; grease gun chassis lubrication

## STANDARD EQUIPMENT :

C.A.V. electric lighting and starting, etc. Smith's clock and speedometer, horn, petrol can and holder, special container of Wakefield Castrol, instrument board locker, hood envelope, and full kit ol tools.

Four-wheel brakes and four-speed gearbox at extra charge.

## CLYNO ENGINEERING CO. (1922), LTD., WOLVERHAMPTON.

# 2-Str. £150. Chummy £160. 4-Str. £170 

With Dickey £152. 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 dOWETT Service Station in London.

Telcphone Hop 5279.

GARAGE AND COMPANY

RSTMINSIE?
xoscitan ENGINEERING BRIDGE
Repairs to any make of Car.

5, Lambeth Palace Rd., LONDON, S.E.1.

## ? WHY CONSULT GORDON WATNEY \& Co. Because

THEY Will advise you the Best car to suit YOUR requirements.
THEY Will give you the HIGHEST ALLOWANCE on YOUR old car.
THEY Will arrange the balance to be paid by deferred payments.
THEY Supply any make of car.
THEY Give you SERVICE after SALE.
You will find our Representatives at Olympia Shicw on the following Stands:




You agree it is different, roomier, better. But then, all Jowett models are.

Why will you insist on calling it a "Chummy"? Heigho! have it your own way. 'Twas ever thus.

Anyway, the price is $£ 160$, not $£ 180$. You will allow us to insist on that, eh?

We also insist on building it better than any other light car.
'Twas ever thus, with us
Have you had our Light 4 (parcon) - chummy folder yet?

## JOWETT CARS, IDLE, BRADFORD.

I he small aduertisement columns of "The l.ight Car and Cyclecar" form a unique mart for the disposal of all goods of interest to small car usern.

## B.S. Marshall Lio

We are accredited Agents for and specialise in-

## STAND

ALVIS - . 220 BENTLEY - 221 BUGATTI - 142 CROUCH - 223 CROSSLEY - 99 LEA-FRANCIS 51 STANDARD - 211

GRAND PRIX de ROULOGNE, August 3tith, 1924. Winner:
R. S. MARSHALL On BUGATTI.

## AN INTRODUCTION

This buttonhole badge will serve to introduce our representatives, who during the Olympia Show will be on duty at the stands enumerated in the nargin.

BEHIND THAT BADGE is:
(1) 50 years' combined and continuous experience.
(2) Persinal attention and willing service always.
(3) A 24 hour all the year round never sleeping and centrally situated garage service.
(-) A reputalion, showroom and sales organisal:on that will dispose of your present car to the best advantage, tl us enabling us to make you the highesl possible allowance for it.
(j) Financial facilities for the essest of easy payment terms.
(6) An honourable repulation thet is known and appreciated th oughoul the British Empice.
(7) It is an insurance policy in ilself-a "safc " smooth road to sa isfaction and value.
B. S. MARSHALL LTD.,

17a, Hanover Square, W. 1. Moyfalr 5906/Z.


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

## Baylis 4 -seater.

4-cyl. water - cooled engine, three speed and reverse gearbox. central change, spiral bevel final drive. Five Dunlop Cord Balloon Tyres, $29 \times 4 \cdot 40$. Lucas electric starting and lighting set.

## Price $\mathbb{E} \mathbf{3 0 0}$

## 11-22 hip. Bayliss Thomas 2 -sealer.

4-cyl. water -cooled engine with overhead valves, three speed and reverse gearbox, neutral change. Five Comfort Tyres. Lucas electric starting and lighting set.

## Price $£ 259$

The above models, with the addition of a 4-seater 11-22 hap. model, will be displayed on Stand No 58 during the Motor Stand No 58 during

A word on Spooling the Ship for a Ha'porth of Tar:-
-in other words, a pound saved in first cost may mean many pounds lost in upkeep where cars are concerned When you buy a Bayliss Thomas, you buy a car that will last with faultless reliability, for quality bags not been sacrificed to price cutting in its manufacture. No single penny has been saved at the cost of efficiency or comfort. Nothing that can add to the satisfaction of ownership is omitted from its specification.

The Bayliss Thomas is a cheap car -in the sense in which the best is always cheapest. Olympia provides you with a splendid opportunity for comparison-don't neglect to visit

## STAND No 58

BAYLISS THOMAS \& Co, THE EXCELSIORICLORS: MOTOR Co., L.td., TYSELEY - - BIRMINGHAM
 LONDON: Distributor e

N.w.aficmaiAndis. To primes (Nor
 N. Wales tho sin Motor Co.. Led
scortaino i North Distich Machine Co. Lid.,
68. Gr. at Clyde Succor, Blazon.


We are makers of the "EXCELOPHONE." If interested in wireless, write for illustrated folder.
TO THE READER -By mentioning "The Light Car and Cyclecar", when replying to
advertisements, the progress of the small car movement will be assisted.


## BOEATII <br> The Penalty of Fame.

The Bugatiis renown for speed is apt to eclipse its suitability for touring purposes.
Such is the penalty of fame in one direction, yet the Bugatti at touring speeds is a real pleasure to drive.
On the open road or in traffic the ease of control and engine flexibility inspire confidence, whilst Bugatti economy appreciably lowers the cost of first-class road travelling.

MODELS and PRICES :

Modified Brescia Chassis, 4-cylinder Sports Model Brescia engine, $69 \times 100$, b.ll bearing crankshaft, la:est type sleering. shock absorber, dashboard, etc., etc. Complete with ligh ing and starting equipment, spare $\mathcal{E 3} \mathbf{3 0}$ Chassis, double magnelo ignilion, a vailable in cither of three lengiths wheelbase ... $\mathbf{\alpha} 35$

Modified Brescia Chassis, equipped with standard type two or three-sealed body, with speedometcr, | clectric horn and |
| :--- |
| side lamps $\ldots \$ 85$ |

# STAND No. 142 MAIN HALL, OLYMPIA. 

Telephone
Gerrard $553-$ (t lines).

CHAS. JARROTT \& LETTS. LTD., . 40-41, CONDUIT STREET, LONDON, W.I "

Telegrams : emidar, Piccy, London.

# You are Invited to visit Stand 296 <br> (MOTOR SHOW - OLYMPIA OCT.I7.-25) 

Here you will meet an old friend in Pratts Perfection Soirit and vou can also take a peep behi d the scenes into the mechanical intricacies of the famous Golden Punps-lamiliar landmarks to every motorist.

Five models and their equipment, including the Depth-o-meter, a simple but ingenious device which enables your dealer to gauge his stock of spirit at a glance, are on view
A representative of the Proprietors of Pratts Motor Spirit will gladly demonstrate the working and accuracy of the Golden I'urmp.
When out on the road buy Pratts, the uniform, reliable motor spirtt, from the Golden Pump or the Green Can.


Uniform everywhere Reliable always


ANCLO-AMERICAN OIL COMPANY. LTD. 36 QUEEN ANNE'S GATE.LONDON, S.W.I.


## Theres Music in an Engine

$W$
if its a
Coventry
Climax.

## Rhythm



HERE is no music withost rhythm-no harmony without "keeping lime." Rhythm is the pulae of music, and the dance is its physicalexpres ion. Through rhythm the dancers achieve iteir harmony of movement, their exhilaraling unity.
In fine molor car engires like the Covealry Climax there is the same inderslanding and harmony between every iant, each luned ard timed with patient care, producing smooth, effortess running and uncea ing poser. Theic's the rhythm of music and the music of rhytim in every Coveniry Climax Engine. Is YOUR car fitted with a Coventry Climax Engine?

$$
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& \text { Notor iar manlifacturers } \\
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 carbox unit construction.


Enoines for घvery type of Lioht Car (CO)VENTRRY CLIMAX ENGINES

## "Hemce"

Car
Polish avoids the cost of Renovation

Brilliant Coachwork is a thing of beauty. No matter how dull the paintwork on your car, it can be brightened with "Chemico" Car Polish. A little time and a little polish, and tar, grease and dullness disappear, and in their place you find a hard shining surface.
"Chemico" Car Polish is the most practical, the most effective and the most economical polish offered to the Motorist to-day.

Every Dcaler and Garage sells "Chemico" Car Polish and other "Chenico" moncy and labour-:aving specialilies.


## OLYMPIA

Stand No. 395

WEMBLEY
Stand No. 205 Cycle and Motor Section, Palace of Engineeriog.


READERS, NOTE.- Il assists the small car movement and the advertiscr, and ensures you prompt

## Stand No. 113 Olympia

Oct. 17-25, 1924
Meadows Engine. Clutch and Gearbox Units make successful Cars.


## Meadows Engines

Five Sizes

## Meadows Gearboxes

Four Speed and Three Speed

HENRY MEADOWS, LTD. Fallings Park, Wolverhampton. Tilephones ... ... 164i-1642 Wolverhampion. Telegrama... ... ... "Oulput, Wolverhampion."


## wheels

No other wheel is made like a Sankey Wheel-stamped from solid steel in two sections, then welded into one complete unit. Light, but what colossal strength!

JOSEPH SANKEY \& SONS, LTD., Hadley Castle Wks, WELLINGTON, SHROPSH. RE Vellingenhone
Wellingion Shropihire, $66 . \quad$ Sankey. Welliagton. Shropshire."
Mr. R. Jenkins, Ul.ter Chambers 168 :




> Apply for our new Illustrated Folder and Price List.

## See our demonstration at Stand No. 280,

 New Gallery, MOTOR Exhibition.
## Instant Spring Lubrication.

WEFCO Spring Covers are now fitted with the Allyne Zerk lubricator-a remarkable advance in lubricating methods and without doubt the easiest. cleanest. quickest and most simple way of lubricating yet invented
It's an instant, one-hand, arm's-length operation. Just a push of the gun and it develops a pressure of over 2.000 lbs.-positively ensuring the oil being

forced to every part of the spring. A felt atrip at each end of the cover and the insulating lining material combined with the ingeniousand exclusive Wefco fastening, effectively prevent any escape of oil.
All covers are made in an excellent quality leather specially blocked to the spring shape
No extra charge ie made for the gun. which is uppled witho chset of covera Thia meane

Palentees and Manufacturers
WILCOT (Parent) Co., Ltd., Faciory - - Fishonds. Bristol. London Office ffice 26 \& 27. Avenue
Southampton Row, Si-min ham Southampton Row: W. 1
Mancheit : $\quad 20$, Cannm Sirecs. Mancheit .
Glassow. $34 \& 36$. Bath Stieet


Equipment in every model (except the Grand Prix supplied without Starter), includes Starting, Lighting, Speedometer, Clock, Horn, five $710 \times 90$ Tyres, Tool Kit, etc.

Deferred Payment arranged for all models and any car or motorcycle taken in part exchange-balance on deferred.

## The Car that WON

The 200 Miles Race ( 1100 c...) Three Years in Succession

LONDON DISTRIBUTORS AND SHOWROOMS:

## THE PART EXCHANGE SPECIALISTS




READERS, NOTE.-Il assists the small car movement and the adverliser, and ensures you prompl allention, to mention "The Light Car and Cyclecar" in your enquiries.



TRADE BAR-KKNGMARK weather which causes so much radiator and engine trouble?
A BAR-KINS RADIATOR MUFF will eliminate the risk of a frozen radialor and cracked cylinders. All our Muffs are made Irem finest quality black waterpioof leather cloth, padded with thick felt, I ned ard quilted, in order to ensure the even distribution of the felt. The roll |ron!s can be adjusted to suit all weather conditions, and by controll ng the cooling sufface of your radiator will ke:p down your running costs. Why not send along and try one at our expense, you will be surprised at the differe nce it will make to the running of your engine and the ad earance of your car. IF YOU ARE NOI SATISFIEI), WE WILL KEFUND YUUR MONEY,
PRICES:-Up to 12 h.p. and Fords, 20 - Over 12 h.p., $24 /-$ "hen ordering state the make, jear and H.P. of your car.

## SEND FOR RECENT LIST

BIRMINGHAM
nelepsorze
MIDLAND 3053



Increased accommodation, equipment and comfort without sacrifice of

## ELEGANCE and ECONOMY.

The "Autocar" says:-
"The keynote is high quality of workmanship and finish. Neatness and simplicity, by the way, are very evident features of the whole design of the chassis that is in every, way a modern, up-to-date construction."
MODELS \& PRICES:
10 h.p. 2-Scater-3 Speeds
… ... $\underset{26250}{ }$
10 h.p. 2-Seater-4 Speeds
10 h.p. 4-Seater-4 Speeds ... ... ... ... ... £273 10 h.p. 2-Seater Coupe-4 speeds ... ... ... .... $\mathbf{2 2 5}$ $10 \mathrm{~h} . \mathrm{p} 4$-Seater Saloon-4 Speeds ... ... £3 j0
$10 \mathrm{~h} . \mathrm{p}$. 4 -Seater Saloon de Luxe
$\underset{ }{2} 375$
All models are supplied complete with clock, speedometer.
C.A.V. starting and lighuing, Dunlop balloon tyres, ece.

## AWARDED SPECIAL GOLD MEDAL

for consistent running, bill climbing and condition after trial in the 1,000-Mile R.A.C. Small Car

Trials.

LEA \& FRANCIS LTD., Lower Ford St., COVENTRY


OLYMPIA STAND 51

## LONDON SHOWROOMS :

118, Great Portland Street . . . . W. 1. TBLEPHONE - . . MUSEUM 8720.3, TELEPHONE
TELEGRAMS : RUSORNCY. WESDO. LONDON:"



# The Great French SuspensionTrials WON 

for 3rd year in succession


# BENETFINKS GREAT AUTUMN SALE 

It is generally conceded that, because a man owns a car, tradesmen charge what they like for their goods. Not so with Benetfinks! 40 years' reputation among motorists for genuine values and scrupulously honest dealings lends additional interest to this Gigantic ClearanceWrite for Bargain Sale List.
Waterproof car covers.
CHAMOIS LEATHERS.



 PETROL POURERS.

$x_{0}^{10}$ sion 4 () WINDSCREEN WIPERS.


BENETFINKS, CHEAPSIDE, LONDON, E.C.2.
The small advertisement columns of " The Light Car and Cyclecar" Sorm a unique mart for the


A Gear for Every Gradient.

## OLYMPIA

 충 37At the New Prices shown below

The G.W.K. Models hold their own with any cars to be displayed at Olympia. In the efficiency of the famous disc drive, in the roomy comfort provided, and in the attractive lines of every model-they lead the field. Judge for yourself by calling at STAND 37.

$$
\begin{aligned}
& 10.8 \mathrm{~h} . \mathrm{p} . \text { Standard 2-Scater }
\end{aligned} \cdots \begin{gathered}
£ 200 \\
10.8 \mathrm{~h} . \mathrm{p} . \text { Standard 4-Seater } \\
\text { * } 10.8 \mathrm{~h} . \mathrm{p.} \text { 2-Seater Coupe } \\
\text { * } 10.8 \mathrm{~h} \text {.p. 4-Seater De Luxe } \\
\text { Synchronised Four-Wheel Brakes, } £ 10 \text { extro. }
\end{gathered}
$$

* English " Bal-lon-etfe " lyres with standard rims. clectric horn, and * olock fitted as standard.


## G.W.K. Ltd., <br> Successors to G W.K. (1019) Lid.

Cordwalles Works - Maidenhead.
Telephone-MAIDENHEAD 624.
LONDON DISTRIBUTORS - W. G. NICHOL.L, LAd., so-st, WHITCOMB STREET. W.C.2.
AGENT..... Capt, Richard Twelvetrees, F. \& P. Vandervell, 199, Piccadilly, W.1.

## 

# Cummings \& Simpson 

 advise you on the following:-Singer 10 h p.<br>Ten Two-Seater £215<br>Four-Seater -£225<br>Coupe - - £280<br>Weyman Saloon £285<br>Saloon - £295<br>Citroen.<br>

Clyno $10 \mathrm{~h} . \mathrm{p}$.
Rover.

| ro-Seater | £1' | 8 |
| :---: | :---: | :---: |
| Chummy - | £185 |  |
| Four-Seater | - £195 | 185 |
| Coupe | £285 | 9 |
| Saloon | £345 | de Laxe £205 |

## DEFERRED TERMS from \&1-10-O per week.

When you decide on one of these popular Cars, come to us. and we will put to you a very tempting proposition. Liberal allowances for any make of second hand Cars or Motorcycles. Always a stock of good used Cars.

Write, 'Phone or Call
CUMMINGS \& SIMPSON, 5, Putney Bridge Road, Wandsworth.
'Phone: PUTNEY 2728.
Phone: PUTNEY 2728


## THREE SPECIAL SHOW NUMBERS.

The price of each of these special issues will be 3d.

FIRST SHOW NUMBER-Wednesday, Oct. 22.
The first published details of 1925 designs which will be found at the Show will appear in this issue.
SECOND SHOW NUMBER-Wednesday, Ocl. 29.
All about the Show, with advice on how to get to it and how to see it properly. Also a complete illustrated report of the Accessory and Tyre Exhibits.
THIRD SHOW NUMBER-Wednesday, Nov. 5. I-IRST OUT with a compete report, alphabetically arranged, of all the motorcycle, sidecar and engine exhibits, illustrated with hundreds of photographs and drawings.

## TEMPLE PRESS LIMITED.

7-15. Rosebery Avenue, London. E.C.I.


## These Cars may be seen on Stand 37 OLYMPIA



SLIDE VALVE ENGINE. Four Speed Gearbox.
60 m.p.h. on top; 45 m.p.h. on 3rd; 35 m.p.g.

Servo Four Wheel Brakes. $66 \times 80,10 \cdot 4$ R.A.C., 1,096 c.c., 24 b.h.p. at 2,500 revs.
Four Imperia rebound dampers.

The Imperia car was designed especially to meet the demand for a fast and easily controllable car, low in first and upkeep cost, but essentially a car of solidity and quality $\quad$ make a point of seeing one.


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See next week's and following issues for further chassis details.
```



## Your fellow motorists recommend

Specialloid Pistons. Following are a couple of extracts from the many enthusiastic letters we are constantly receiving:-

## Marvellous Satisfaction

alter fitting Specialloid Pistons. Mr. E. T. Somerset tells us this in a recent letter: "Also petrol consumption has increased from 16 to $18 \frac{1}{2} \mathrm{~m} . \mathrm{p} . \mathrm{g}$. The acceleration has most decidedly increased, in spite of smaller choke and jets."

## OLYMPIA, Stand 357.

Oil Consumption before 350 m.p.g.-now 900 m.p.g. with Specialloid Pistons. Mr. H. H:
Morice says: "Since fiting Specialloids to my - Mercedes' the acceleration is extraordinary. The pistons have only been decarbonised once in 54,000 miles. oil consumption is 900 to the gallon in place of 350 before . . . . I have never had pistons that gave such wonderful resulis.

You will hardly know your car when you fit Special!oid Pistons. They give you increased acceleration, big reduction in your petrol and oil consumption, and an all round improvement in your engine.
All the competition cracks use them.
SPECIALLOID LIMITED, Friern Park, North Finchley, N. 12.

# Specialloid <br> PISTONS 

## A Hampton owner's appreciation

"I wish to express a fow words of appreciation of the Hamplon Car.
"For the past 14 months it has been my pleasure to Arive one of these cars, and during that period I have teen free from any trouble apart from a few punctures. 1 have now covered over 10,000 miles, and although the engine has been decarbonised once only, it is going helter than ever. For hill-climbing, speed, comfort. cconomy, and endurance, it is the best car of similar horse-pouer I have ever driven. The lines and finish are excellent, the uorkmanship leaves nothing to be
desired, and the four-speed gearbor with its right-hand
change enables it to surmount stcep gradients with the greatest of ease.
"At the present time $I$ am doing 41 m.p.g., and can attain a speed of 55 m.p.h. The oil consumption is practically nil.
"I am not in any way connected with the manufacturers. and write this appreciation in the hope that it may guide others in their selection of a reliable. speedy. economical, and well-designed production."-W.H.H.
One word only we would add. YOUl can buy a Hampion Car to-d.y that will bring you exnctly the same plessure and satisfaction.Verb. sip.



THIS and many other unique advantages are included in our generous scheme of

## SERVICE after SALES

We are agents for all the leading makes of Light Cars.

## AUSTIN CITROEXN CLYN O JOWETT

Full range of 1925 Models actually in stock. Call in here and inspect them at your leisure
look for our representatives on the Stands at the Show. They will wear the Service Badge. Send for full particulars. Do not trouble to write-just attach your card mentioning make and model of the car in which you are interested, and quote this advi. We shall understand.
273-274, HIGH HOLBORN, LONDON, W.C. 1
'Phone: Holborn 666 ( 3 Ifnes). Grams: "Admittedly, London."


WHEN REPLYING to aducrisements. mention "The Light Cat and Cyclecar." II \}elps the


The Motor Show.
The Motor Show opens at Olympia on Friday next, Octover 17th, closing on Saturday night, October 25th.

## Admission Details.

The Show will be open each day from $10 \mathrm{a} . \mathrm{m}$. to $10 \mathrm{p} . \mathrm{m}$. On the Friday and Salurdny of each week tho admission charge will be 2s. 6d., all other diavs 5 s . Strangers to the metropolis should remember that it is necessary merely to inquire the best way to reach Olympia. No further address need be given

This Week.
of nutstanding interest and lasting nsefulness is the complete guide to, and detad spocifications of, oll the light cars and cyclecars on the British market. which will be found elsewhere in this issuc. The greatest care has been taken in the complation of this feature, but we cannot hold ourselves responsilie for inaceuracies which may have crept in.
No. 62 ). Vol. XXIV.

French Car Suspension.
As our report of the Paris Show indicates, novel suspension systems abound on Continental cars. It is noteworthy that a singlo transverse spring in front, with two half elliptics at the back, is a very common layout, but the 8 h.p. Penault reverses the arrangement, using a transverse at the back.

## LIGHTING-UP TIMES

 for Saturday, Oct 11 th, 1924$$
\begin{array}{cclll}
\text { London } & \ldots & 6.15 & \text { Edinburgh } & 621 \\
\text { Newcnstle } & 6.16 & \text { Liverpool } & \ldots & 621 \\
\text { Birmingham } 620 & \text { Bristol } & \ldots & 625 \\
& \text { Dublin } & \ldots & 6.37
\end{array}
$$

The above are the lighting-up times for rear lamps in England, Wales, Scotland and Ireland.
Moon-Full moon, October 12th.

## Most Novel Engine.

Nearly overy light car which will bo on view at Olympia, other than those with two-stroke engines, will have poppet valves. The Imperia is an exception, as it has a special slide-valve arrangement. This was recently fully described in The Liyht Car and Cyclecar.

## Next Week.

Published or the day that the Show opens, next week's issue of the Light Car and Cyclecar will contain a com. prehensive guide to all the sma!l car exhibits, details being given of the actual models which will be on view. Ever: risitor to Olympia should make a point of taking his or her cnpy of $7^{\prime}$ he fiimht Car and Cyclecar, which. in addition. will inclade a foor plan of both halls showing where the light car stands will be found. Copies of The Light Car and Cyclecar can be purchased inside Olympia at the joint sland occupicd by this journal and T'he Molor, No. 244.

Light Aeroplane Engines.
Carden and Blackburne engines wero nsed in somo of the machines competing in the light aeroplane trials; A.B.C. and Douglas units also figuring on other machines.

## Triumph's Triumph.

In the International Wiesbaden Tournament which was held on September 2ith under adverse conditions and over a difficult course of 11 kilometres, C. E. Howie, in a standard 10-20 h.p. sports Triumph, finshed first in Class if in the record time of 12 mins. 18 secs.

## Making Motoring Harder.

It is now a punishnble offence to disobey a constable's signals, whilst scant courtesy will probably be meted out to those who, in the opinion of a policemars, are causing obstruction. These and other equally rigorous amendments of the law form part of the new traflic Bill which is now in force.

## A.C.'s Successes.

At the Brighton Speed Trials, tho A.C. which was entered for three events, only one being limited to cars of 1,500 c.c.: the remaining two for sars unlimited, won each run, whilst in addition it mada the fastest run of the day, adding two silver cups and one gold medal to the long list of awards which bave been gained by this car.


MOTOR TERMS TRAVESTIED.
No. 33.-Quers: What is the Term?
We ofler a prize of ONE GUINEA for the most apt motor term received. No solution will be iudged before 11 a.m. on Tuesday next. Only postcards will week's picture is in "Around the Trade.")

Marseals with F.W. Brakes.
We are advised that in future all 12.40 h.p. Marseals will be supplied with front-wheel brakes and low-pressure tyres, if so desired, and at no additional cost.

Bargains in 1924 Models.
The present time of year is the most favourable for baying second-hand cars and new ones of an out-of-date type. Numerous bargains are offered in our small advertiscment pages.

Success of 200-Mile Racer.
The Darraç which beat all records for cars up to fivo litres at the Gaillon Hill-climb, which wo reported in last week's issue, was tho same car which Segrave drove in the 200 - Milo Race. Joyco's A.C. was two seconds slower than the Darracy.

Salmson in the " 200.
We are asked to emphasizo the fact that during the 200 Mile Race, 0 . Wilson Jones (Sa!mson) created a record for tha 200 milies :t 85.72 m p.h. His car was, therefore, several minufes faster instead of sweral minutes slower than last year's wimer.

## Hydraulic Brakes.

With four wheel braking systems now becoming so popular, there is every likelihood that the adention of hydraulic means of operation will soon be widespread. One hydraulic ssstem which is rapidly gaining favour is much mora simnle than the rods and links which it renlares. It is less enstly and ahsolutely reliable in action. whilo cath brake is applied with en exactly equal force.

## THE ESSEX BROOKLANDS MEETING.

THE Essex Motor Club held its closing race meeting at Brooklands on Saturdiy lest. The weather was fine and tho racing excellent
The first event was the Essex Threelap Senior Handicap, for which there were seven starters. \$liss H. Lister ( 1,487 c.c. Aston-Martin) led at the end
of the first lap, but was soon displaced by R. C. Morgan ( 1,487 c.c. AstonMartin), who, in turn, gave way to Dr. J. D. Benjafield ( 2,995 c.c. Bentley). G Duller (Thomas-Special) was third.

The Essex Junior Three-lap Handicap resulted in a surprise win for the limit man, H. S. Eaton ( 949 c.c. Gøynne),
who led throughout and won casily at 78.18 mp p.in. Second and third were G. F. Prettyman ( 1,496 c.c. G.N.) and If. G. Day ( 1,074 c.c. Talbol) respectively.
The 50 mile race was won by R. C Morgan, with N . Ward (Hillman) second and J. $\Lambda$. Mall (Aston-Martin) third.


## American Sixes.

In Amesica at the present time a number of car manlufacturers who a year ago were concentrating on cars with largo four-cylinder engines are now fitting smaller six-cylinder power units. Tho rverage size, however, is still above 20 h.p.

## A.-C.U. Agreement.

As the result of a recent agreement hetwoen the Auto-Cycle Union and the Royal Automotile Club, the latter institution, which is the governing body, will enrol motorcyclists direct. So far as yclecarists are concerned it should be noted that the A.-C.U. still controls Hree.whecler competitions.

## Generous Contributions.

Ove= $£ 5,500$ has been received by Sir Harold Bowden, president of the Motor and Cycle Trades Benevolent Fund, 10 wards the "five-figure list" which he contidently expects to present to the Prince of Wales at the F'und Banquet on November 12 th .

French 200-mile Race.
Already Lig things are anticipated in connection with tho new French Mont lhery motor-racing track near Paris. On Sunday next, October 12th, there will be a 200 -milo race, and it is interesting to note that Messrs. A. G. Miller and C. M. Harvey will be competing.


READY FOR THE WINTER.
A Martin detachable top fitted to a two-seater Jowett. Note the excellent window arca. Frameless glass windows are fitted, one on each side, being of the sliding type.

Midland Car Club's Trial
Thers were nearly 30 starters for what proved to be a very interesting half day reliability trial which was held by the Midliand Car Club, the premier light car awards, namely the Norman Cup and the Silver Cup for the fastest hill-climb loning won respectively by II. B. Denley Rhode) and T. A. McKicrizic (McKenzie). Thie following were class winners:'750 c.c.-Gold medal : J. G. Orford (Aus1 in Seven). 1,100 c.c. Gold medal: Alan Watson (Giwynne Eight). 1.100 c.c. -Silver medals: J. C. L. Bartleet (Jowell), IR. larsons (Ariel) and J. D. Barnes (Salnuson). 1,500 c.c.-Gold medala: C. E. Smith (Lea-Francis), B. II. Wyatt (Cluley). 1,500 c.c. Silver medal: G. Bell (Singer). Unlimited c.c. -Gold medal: F. S. Barnes (Alvis).

## TO secure a quick sale of a second-hand light car advertise it direct

 to small-car enthusiasts.-The Light Car and Cyclecar" is the only journal catering exclusively for small-car users. Its small advertisement columns form a live specialized market for the disposal of second-hand lighe cars. Adertise vour whicle throash the Soecial Scheme,
particulars of andich are fiven in the Small Adivertivement Section,

Grease in Tubes.
One of the neatest mothods of packing grease so that it ran be conveniently used a smadl amount at a time has been ariopted by Duckhams for their Adcol motor greases. The lubricant is supp'ied in a gigantic tube which looks like a very much overgrown lube of tooth paste. A key is fitled at the bottom of the lube so that it keens its proper shape until it is empty. The grease tube is clean and expeditious to handle.


## A new type of "rim" invented by Mr. Nuttall, of Goodmayes, has a 10 in . inner tube. It is held in position between two metal discs

 which form the wheel.
## Simplified Bearings.

Assemblies such as the crown wheol, bevel pinion and differential of a light car are very much simplified by the use of the latest type of S.K.F. ball bearings which, although only a single row of balls is used, will stand considerable nxial pressure in both directions, although they are, of course, primarily intended for radial loads. By their use weight, space and cost are saved.

## The Limit?

A dynamo weighing 62 tons has reorntly been transported from Birming ham to London by road. It was mounted on two special trucks and drawn by two traction engines, whilst a third engine and truck followed to be used for assisting the load up hills and for braking down hills. Needless to say the whole procession ran on steel wheels those on the tractors being of the barred type. The route followed was via Banbury, and it will be interesting to leara how the roads withstood the treatment.


PETROL OUSTS
WAIER.
The disused Campden Hill reservoir at Kensington is being converted into a garage for 1,000 cars.

Trial in North Wales.
About 110 miles in North Wales, in cluding many notorious hills and colonial sections, will be covered by competitors in the Liverpool Motor Club's "Reliance" Open Reliability Trial, which takes place on Saturday, October 25th. There are a number if valunble awards, including the "Reliance " fifty-guinca Challenge Cup for


In the Sutton Coldfield hall-day trial (deacribed elsewhere in this issue). J. S.
Orford (Austin) getting away success-
fully in the stopping and restarting test.
the best performance of the day. All inquiries should be directed to Mr. H. R Oaldwell, 14, Wood Street, Liverpool.

## Alvis Breaks Records.

An Alvis car, one of the 200 - Mile racers, entered by Capt. A. G. Miller and driven by him and C. M. Harvey alternately, broke the following records at Brooklands on October 2nd. 3 brs., $85.64 \mathrm{~m} . \mathrm{p} . \mathrm{h} . ; 5 \mathrm{hrs} .83 .16 \mathrm{~m} . \mathrm{p} . \mathrm{h} . ; 250$ miles, $85.43 \mathrm{mop.h}$; 300 miles, 86.33 m.p.h.; 400 kilams.. 137.42 k.p.h. The maximum lap speed was 95.23 . The equipment used on the car was the samo as that in the $200-\mathrm{Mi}$ e Race, namely, Englebert tyres, Solex carburetier, B.T.H. magneto, Lodge plugs, RudgeWhitworth wire wheels, Hartford shock absorbers, Shell spirit and Wakefield's Castrol oil.

## Malaya Hill-climb.

At the first hill-climb to be held in Malaja, which took place on September 7th, and was run off under the auspices of the Selangor Automobile Association, British light cars were. conspicuously successful. There were over 108 entries made up of motorcars and motorcycles. and an excellent hill with an average gradient of 1 in 10 with a Lricky lefthand bend near the top, was chosen for the event. The following were class winners:-Joko Yaik Foo (Austin Seven), Loko Yaik Foo (Grand Prix Morgan), W. H. Lindsay (10-15 h.p. Fiat), and betreen them they obtained the first places in no fewer than eight classes. In addition, a Gwynno Eight and a Mathis took part, the Gwymio making fastest time of the day for a four wheeled car.
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A Racer fo: Sale.
Tnoluded in our miscellaneous adverfisement columns this week is the an nouncement that one of the few twocylinder air-cooled Frazer-Nash cars-a replica of that driven by $\mathbf{F}$. Ringwood in the J.C.C.'s 200 -Milo Race is for sate.

## New Edition of " The Motor Manual.

The new and up-to-date edition of The Motor Manual ' is now axailable. It is the most poptlar handbook on motoring in general. The features of the new edition are that it has been largely re-written and re-illustrated, and embodies all the latest developments in car construction. There are 19 chapters and 218 pages, which include large sections on housing a car, adjustments and repairs, legal matters, touring, etc. Not prico 2s. $6 d$. , post free 2 s . 9 d .

## Larger Bodies.

One of the most important developmonts during the past year has been the lengthening of many small car chassis so that more roomy bodywork may be used. This development is directly due to the incrensed power now obtainable from light car engines as a result of the wide adoption of overhead valves, aluminium pistons, high compression ratios. and so forth. It is thus that racing leads to better touring cars.

## Ulster Grand Prix Accident

Although last Saturday was fixed for the Ulster Grand Prix, the eagerly anticipated race did not take pilace

The Level-crossing Nuisance.
Step have been taken by the R.A.C. to lessen the inconranience caused by the 13lack Dyke Crossing, near Arnside Station. Warning signs have been erected by the looal authoritios, and the question of obtaining greater facilities for ruad traffic bas been taken up with the railway company.

## Creasing Made Easy

On tho latost hig Rover greasing las been simplified by grouping a number of grease.gun nipples together under the lloorboards. Finm tho uipples pipes lead to the points ruguiring lubrication. A simitior scheme could bo easily carried out hy light cal owners who are fond of tinkering, while it substantially reduces the labour of maintenance.

## R.A.C. Test of Ariel Ten

Some remarlsable figures were obtained during a test if it 10 h.p. Ariel observed by the IR. A. C. and entered by Mr. D. M. liealey, of Perranporth, Cornwall. The route selerted war from Land's End to John U'(iroat's and back, whilst the trial concluded fittingly with an ascent of lBluchills Nine. Tho total distance covered was 1.788 ! miles, over which distance the fuel consumption worked out at $53.79 \mathrm{~m} . \mathrm{p} . \mathrm{g}$. ; oil consumption was at the surprisingly low rate of $6,4,3 \mathrm{~J}$ m.p.g. The total amount of waler consumed over the journey was 5 pints 6 oz. The only serinus breakage which occurred was the bottom leaf of the near front spring. This, however, was not replaced, and the car was driven in this condition without any trouble. No


## SKIDDING THE

 BEND.D. Bartlett (Gwynne) making the fastest four-wheeler ascent in the Malaya hill-climb.
coasting was iudulged in when descending hills, and the woather throughout was oxtromely bad. This car has a four-cylinder engine of 60 mm . hore by 97 mm . stroke, which givos an R.A.C. rating of $8.9 \mathrm{~h} . \mathrm{p}$. , the cubic caproity being under 1,100 c.c. The top geat ratio is $: 4.82$ to 1 . It is interesting to noto that the car was equipped with Dunlop low-pressure tyres and that the total running weight with passengers was $17 \frac{1}{1}$ cwt. Such tests as those aro deserving of the greatest oncouragemont. They demonstrale the atility and economy of the modern light car in a vory striking manner.
owing to the death of one of the competitors, H. S. Pyper, who met with a fatal accident whilst practising a day or two before. The late Mr. Pyper had entered a sports AJvis and was taking a tricky bend at Aldergrove at high speed when the car became out of control, crashed into the hedge and over turned. The driver was lillod instantly, but although his mechanic was thrown out on to the roadway, ho escaped with a shaking. It is anticipated that the race may bo run off to-morrow, Saturday, October 11th, in which case a rejoit will be a feature of next weck's issue of The Iight Car and Cyclecar.

## COACHWORK at the SALON.



## CONTINENTAL TYPES.

Striking sports, touring and saloon bodies at the Paris Motor Show. Many novelties and refinements are on view.

$T$
$T$ LIE bodywork on many of the light Lery at the Paris Motor Show is very novel and in many cases reveals entirely new ideas in hodv design and constriction. Sports bodies, in particujar, hase been much improved since Jnst year, while big strides have been anade in improving tho lines of coupe
and saloon typos. Some sports models are listed without windscreens or mudguards, and running boards ate omitted in nearly all cases.

Above (1) are seen a very fine Weymann ifour-door' saloon on an 11.4 h.p. Citroen chassis, and (2) the Weymann principle applied to a folding
head coupe on a Senechal, a sports model is dopicted (3).
A striking exhibit is the super sports La Perle (4). The 10-20 Berliet (5), which will be at Olympia, is exceptionally roomy for a light car. An E. H.P. with a concealed hood is depicted in the photograph (6).


OUTSIDE AND INSIDE THE
CRAND PALAIS.

The Grand Palais in the Champs Elysees is an ideal hall in which to hold a motor show. More roomy than Olympia, it is also light and well ventilated. In the heart of Paris, it is, nevertheless, seldom overcrowded. In the following pages the items of special interest at this year's Paris Motor Show to small car owners are dealt with at length, while current Continental small car practice is discussed and details with at length, while current Continental smalitea
are illustrated.


> THE EXHIBITION AS VIEWED BY A SMALL CAR ENTHUSIAST-MANY NOVELIIES IN THE DESIGN OF LIGHT CARS AND CYCLECARS-INTERESTING NEW MODELS AND DEVELOPMENTS.

TMHE Paris Show, which opened on Thursday, October 2nd, is of absorbing interest to small car enthusiasts. Originality of design is to be found on nearly every stand, and a very large proportion of the cars exhibited come within the 1,500 c.c. limit.

The number of cyclecars on view is certainly rather disnppointing, in view of the active interest which is taken in France in the cheapest types, but many manufacturers of most ingenious little vehicles have not yet got fully into production, and deemed it unwise to exhibit.
Chassis design, generally speaking, has made big strides during 1924, and the coachwork of the latesttypes is much hetter than it has been before, while onc soes British practice reflected on many of the stands. A most interesting feature of the Exhibition is the fact that several car manufacturers are listing models with chummy bodies, which were, of course, such a feature of Olympia last year. Since then tho oceasional four-seater has gone rather into disfavour in this country, but in France it is anticipated that $a$ big demand exists for cars with bodies of this type. Two-door chummies are favoured by many important makers, the two doors being both in front and portass to the rear seats being gained in tho conventional manner by tilting or tipping the front seats. In some cases the doors are so wide that when the front scats are not adjusted too far back it is possible to step either into the front or into the back of the car. Prominent among the exlibitors of chummy-
bodied cars are the makers of the La Perle, the Motobloc and the Sénechal; the last-named has only one door, while the Lafitte, which bears a resemblance to the early Gwynne Eights, has no doors at all. A chummy body figures on the Bedelia cyclecar exhibits.
Leather-covered bodies are to be found on several stands ; some of them are built on the Weymann principle, while others have metal panels, with leather cloth stretched over them. A Citroen is shown with $\{$ very roomy four-door Weymann saloon body, and although tho lines are square, it is undeniable that a more roomy or attractive closed light car it would bo difficult to conceive.
The Weymann principle allows a body to be built on very generous lines without it being too heavy, and its undoubted advantages for small cars are well appreciated in France. On the Senéchal stand at the Salon is an extremely attractive Weymann-type folding-head coupé. This represents an entirely new departure in body construction, and suggests that hefore long we may have two-senters with a skeleton beds, over which leather cloth is tightly stretehed.
Thin Sénchal car in question has very smart lines, its attractive appearance being well depicted in an illustration in this issue. No panels are used for the body, not cven for the scuttle or doors, and the resulting car is very much lighter than if it had an equally ronmy body built on any other principle. In addition to this very great advantage, the borly cannot possibly develop squeaks or rattles,

## AT THE PALIS SHOW (contd.)

while it is easily kept clean with a wet sponge and can be polished in a few minutes with ordinary brown boot polish. When the folding hood is lowered, the car presents the appearance of a semi-sports twoseater.

Determined efforts have been made during the last few months in France to devise concealed hoods, which are out of sight when lowered, yet which have none of the usual disadvantages commonly associated with them. In some cases the hood, with its sticks, is removable and may be folded up and stored in the tool box, but it is realized that this plan is not very successful, and schemes for allowing the hood to drop into a recess formed in the top panels of the body are more popular. A good layout figures on the E.H.P. which is exhibited, but in this case the hoops are exposed

On the same car an attempt has been made to overcome the unsightliness of the spare wheel by fitting it flush with the back of the body and slightly inclined so that the general body line is not spoiled. The resulting effect, however, is not so pleasing as one conld wish, but the wheel is, of course, accessible, and the broadside appearance of the car is much more trim than when the spare wheel is carried on the running boards.
On some of the French small cars the spare wheel is stored in the tail, as in the case of the Austin Seven sports model, but with the widespread adoption of low-pressure tyres the spare wheel needs so roomy a locker that its accommodation in the tail is impossible.

On many of the exhibits it is noteworthy that the facia board consists of an aluminium casting, supported by integral brackets which are secured to a further aluminium easting which forms the dashboard proper. A very good example of this construction will be seen in the illustrations showing chassis details of the new 90 c.c. Fiat. The bodybuilder usually provides a mahogany facia hoard, which surrounds the small aluminium instrument board, and, due to the compartness of the central casting, there is plenty of room for large cubly holes.
Dickey seats are slowly coming into vogue on the other side of the Channel, especially on sports models, where a cockpit similar to that adopted for the latost sports Crouch, Frazer Nash and G.N. cars is provided in the tail. In some cases a metal trap door, secured by a couple of wing nuts, is used as a cover, but buttoned leather pancls are more popular. These dickey seats can, of course, accommodate only one passenger, but it is surprising how much comfort they afford.
The typical French sports body lines, consisting of a horizontal top rail and an upswopt curve at the rear, seem to be going out of fashion in favour of a design similar to that adopted by the Inarrace and Alvis cars which competed in the 200 -Mile Race. Nearly all the latest Frencla sports models are build on this plan, which is, of course exactly the reverst of the conventional system-the " straight edge" at the back being vertical instead of horizontal, as on almost cvery British two-seater
All-weather equipment still remains sadly neglected, if one may go by the evidence collected during a long and careful survey of all the light cars at the


THE LATEST FIAT $\qquad$ The chassis and 902 c.c. engine of the latest Fiat is one of the most interesting exhibit LIGHT CAR. at the Paris Show. Note the frame cross member swept beneath the torque tube

## AZTHEL PALRLS SHOW (contd.).

Paris Show. Hoods are certainly better, but side curtains are very seldom provided. On the other hand, windscreens have been vastly improved, the pattern used on the Victory model I'alladium being in very common use. Where these fixed sloping. V screcens are not adopted, the usual plan is to provido a single pane of glass set at an angle and adjustable by two wing nuts, one on each side and slightly above the centre of the side posts
In many cases petrol tanks are now fitted between the rear dumb-irons, scuttle tanks being at present somewhat out of favour. It is rather difficult to see why this should be so, as, with a tank in the scuttle, gravity feed may be employed, while a rear tank calls for tho use of cither pressure or vacuum fect and very much more piping.
The most noteworthy development in chassis design is the rast improvement in suspension systems which


The cowied air-cooled engine of the novel four-cylinder S.A.R.A. This light car is becoming very popular in France.
is to be seen on wearly every stand. Springs, this year, on the light cars are wider, longer, and better mounted than they have been in the past. Two main layouts are being followed, the one consisting of very long half-elliptics at the rear, with shorter ones at the front, while the other embodies a single transverse spring at the front and utilizes cither long halfelliptics or quarter-elliptics at the rear

The Sucre car is perhaps the most original so far as its suspension is concerned. At the front there are very long half-elliptics, each of which is built up of only three very wide leaves. At the rear splayed quarter-elliptics are used, and these are more than 4 ft . long, while they each have seven leaves 2 d ins . wide. One would magine that shock absorbers would be absolutely necessary with this original but praclucal luoking design.

Some novel suspension systems are to be found among the cyclecars, but these will be separately described later.

The extensive adoption of transverse front springing on the same principle as that which has achieved considerable popularity on the Lagonda cars is very significant, and it does not seem improbable, in view of the excellent results which are said to have been


The latest Amilcar chassis Note the frame memiers beneath the propeller shaft- which has! a central bearing, and the steel-strip brake connections.
obtained with 1925 models of some of the French cars exhibited, that transverse springing will return to kngland. On the $8 \mathrm{~h} . \mathrm{p}$. Renault the usual order of things is reversed, for here one finds half-elliptics at the front aud a transverse spring at the rear, and this design gives admirable riding comfort.
Many of the light cars at the Show have shock absorbers, the friction type being particularly favoured. A common method of fixing them is to attach the portion carrying the friction discs to the frame, the single arm being attached to the axle or forked so that it partially surrounds it.
A development which appears to indicate the probability of wide adoption is the use of frame crossmembers, which are swept beneath the propeller shaft housing. This is a feature of the new Fiat, and it is to be found on a considerable number of sports models at the Salon. The illustration, showing the rear view of an $\Lambda$ milcar chassis, which appears above, gives a good impression of this important development.
Several frame layouts employ four cross-members, the front one being tubular and connecting the dumbirons, the second being slightly abaft the centre of the frame and swept beneath the propeller shaft, the third bridging the upswept part of the frame at the rear, and the fourth being tubular and connecting the rear dumb-irons.
By sweeping the centre cross-nember below the propeller shaft it has been found possible by many concerns to have the top of the chassis frame only 3 ins. or so higher than the rear axle casing, the very low build thus resulting giving stahility on the road and a very pleasing appearance Rather flat under-


THE LATEST SPORTING BODIES.

The Buchet with a dickey seat (left) and the staggered seating Maximag (right) give an excellent impression of the up-to-date development of sports bodies on the Continent. Who can deny the beauty of line and chamning appearance of these fascinating speed models?

## AT THE PARIS SHOU' (contd.).

slung half-clliptics are gencrally used for the rear suspension where this frame construction is used. One of the illustrations showing the details of the new Fiat gives a good impressinn of the frame construction.

Engines have not been substantially changed since last vear. They are all of the high-revving order, mostly with overhead valves and in many cases mith overhead camshafts. In order to accommodate the Ducellicr or Paris Rhone combination dynamo and starting motor, a number of crankeases have been redesigned. These combined electrical units are very massive. but they are also very efficient. They start the engine without a sound, and, being attached directly, in many cases, to the forward end of tho crankshaft, no chalin or belt gear is necessary.

Four-speed gears are few and far between, as also are gearboxes not liuilt up as a unit with the engine The Renault is an outstanding example of a car with a gearbox separate from the engine. In this case tho box is mounted on the forward end of the propeller shaft, and forms the forward extremity of the torque tube. Central control for the gears is almost universal, likewise a contrally placed brake lever. In many cases, despite the rule of the road being oppo site to olu own, right-hand steering is fitted, so that the central controls are operated by the left hand.

Before leaving the question of engines and gearboxes, it should be noted that in France there are still many designers who have not learned how necessary it is to provide oil fillers of reasonable size; there are engines and gearboxes to be seen in the Salon the oil fillers of which are barely large enough to accommodate the spout of even a small funnel.

## Supported Propeller Shafts.

Abnft the gearbox one notices many recent alterations in transmission design; the most important concerns the supporting of the centre of the propeller shaft by a bearing formed between the flanges of a two-piece torque tube. This plan of fitting a bearing in the centre of the propeller shaft has been adopted by many makers, and is to be found on such wellknown machines as the Amilcars. The raison d'être is to allow a reasonably long propeller shaft to be used without the fear of whipping and consequent vibration.
Already one hears of a number of manufacturers in


The special suspension of the Monet-Goyon cyclecar. The brake "bands" are made of strip coupled to the controls.

England who are considering the advisability of embodying this refinement on their productions, and it seems more than proliable that by next year's Olympia Show there will be as many centrally supported propeller shafts on British light cars as there are on French machines at this year's Salon.

Exposed propeller shafts suspended at each extremity on large fabric discs are, however, to be seen on many stands at the Paris Salon, cars employing this arrangement including the D.F.P., Donnet Zedel and Sénéchal; the last-named is. of course, a prominent sports car and has recently sprung into con-
siderable favour in France. It may be well at this point to interpolate a few details as to its design. A four-cylinder overhead-valve engine is employed, the gearbox being built up as a unit and the propeller shaft being, as alreadly described, exposed. At the rear two superimposed quarter-elliptics, bearing a resemblance to the rear suspension of a Citroên, are noticeable, while there is a transverse spring at the front. Hartford shock absorbers are fitted all round and a Ducellier starter-dymamo unit is mounted at the forward part of the crankcase.

The neat cable brake which is fitted to the front wheels of the new 900 c.c. Fiat. Cables for brake operation are gaining popularity.


A study of rear axle design at the Salon reveals nothing of a partucularly striking nature, if one excludes the delightful design employed on the new little Fiat. This car has a hanjo-shaped axde of extremeiy clean design. It is closed at the rear by a large domed plate, the forward part being attached to the torque tube, which is suitably swelled out and flanged. The springs are underslung and hung by U bolts suspended in grooved saddles, which surround the axle casing and on ton of which there are tall rubher buffers arranged so that they come in contact with the frame, limiting the axle's upward iravel and preventing spring fractures when the car is driven over bad roads when fully laden.

Axles which are split vertically, following the practice of many years ago, are still to be seen on many stands, in most cases the centre portion heing a casting and the axle shaft casings consisting of steel tubes round the inner ends of which the central casing is shrunk and riveted.

## Well Known at Home.

Among the cars at the Salon which are well known in England are the Citroen, Salmson, Berliet, Peugeot, Le Zebre, Renault, Amilear, I).F.P., Charron, and Derby. The Citroen stand is always a centre oi interest, and there is indeed a noble display. The popular 7 h.p. and $11.4 \mathrm{~h} . \mathrm{p}$. models are exhibited with many styles of coachwork, but their chassis show no change since last year. Fundreds of thousands of these cars have been sold, and their popularity is steadily increasing.

Among the Salmson exhibits is a racer similar to that which took part in the $20(1)$ Mile Race: A Grand Prix model, beautifully finished, is an exhibit around which there is always a crowd, while the chassis of the same model, revealing, as it does, a number of mechanical niceties, is seldom easy to approach. The springirig employed on this super-sports model of the Salmson for the rear axle consists really of quarterelliptics, but the two lower leaves in each case aro extended to form, in effect, half-elliptics.

The $10-20$ h.p. Berliet is exhibited with a very roomy four-seater open touring body, which should seat five in comfort. The car is very large, considering that its engine is under $1,500 \mathrm{c} . \mathrm{c}$., but it is lightly built, and, consequently, does not lack speed. Its general appearance is typically British, having a double windscreen, all-weather qquipment, and four doors to the body. This car will probably be seen at Olympia.

## AT LIE I'ARIS SHOW (conte.).

The Amilear chassis which is shown has halfeelliptic springs at the front and ciontilevers at the rear. The same springing arrangements figure on the Derly and the Octo. Four-wheel brakes are fitted, these being operated by flat stecl strip-au unusual arrangement, as cables are used in nearly every other ease. With the Aruilear, operation of cither the pedal or the lever applies all the brakes, but on many cars only the pedal works all brakes, the lever expanding shoes in a drum on the cransmission. In addition to the chassis exhibit, there is a number of complete cars on the Amilcar stand, including a very striking red two-seater.
Both the 1). F.P. and the Charron have four-wheel brakes, and they are both constructed on very robust lines. A very interesting car is the new Le Zebre, this model being different in many respects from carlier types. It has an engine of $1,100 \mathrm{c} . \mathrm{c}$, and is said to have performed woll during extended tests to which it has been subjected.

## A British Exhibit.

No mention of the light cars at the Paris Salon would be complete if the Austin were omitted, and tho interest which is attracted by the chassis, sports, and family models shown would merit a long description of their features if it were not for the fact that all readers of The Light Car and Cyclecar must be familiar with their clever design. The Austin is the only British light car in the Salon.

Coming now to the cyelecars, one cannot resist the temptation to slart with the Morgans, for, of all the cyclecars exhibited at the Salon, these solid little three-wheclers have endeared themselves to the hearts of the largest public. The four cars exhibited are of French manufacture, but closely follow the wellknown British design, the only noteworthy difference being that external exhaust pipes are used
Another three-whecler which has attracted very favolurale comment is the D'Yrsan, which has a tuhular frame, detachablo wheels, and a four-cylinder


> To accommodate the body, the frame members are extended on the G.A.R., weight being saved by cutting away needless material.
o.h.v. water-cooled Ruby engine with a three-speed-and-reverse gearbox bolted up behind it. A chassis figures on the stand, while a mottlod blue sports model completes the exhibit.

A very old friend is the Bedelia, a lightly-built fourwheeler, the manufacturers of which remain staunch to twin-belt drive. An attractive two-seater, a sports model, and a chummy are exhibited. A two-cylinder water-cooled V-twin engino is now used, a chain taking the drive to the countershaft, on which are mounted the pulleys for the belts which take the drive to the rear wheels.
The Sina is another interesting four-whecler, the outstanding details of which are shown in a "Rich Mixture" photograph. The engine is a horizontally opposed twin two-stroke, slung beneath a transverse spring, which forms the front suspension. The car is very light, but is built on quite robust.lines.

Another belt driver is the D'Aux, a full description of which was given in The Light C'ar and C'yclecar. recently.

The Lujac is an interesting miniature threewheeler providing seating accommodation for one. The drive is by friction dises, the friction gear being mounted at the rear of the chassis and the large disc on the end of the propeller shaft being drawn away by the clutch pedal from the friction wheel, which is slidably mounted on a transversc shaft connected by


Sports coachwork on the Continent is of very striking design, this threc-seater being a good example of the latest practice.
a chain to the single rear wheel. Like the D'Yrsan, this little car has its rear wheel fixed between two heavily-built supporting members, to which quarterelliptic springs aro shackled. These "forks" are of I-section steel in the case of the D'Yrsan, and they are of U-section steel on the Lujac. In each case they are secured at the forward ends to a transverse shaft mounted in massive bearings on the frame. They positively prevent the rear wheel from "lying over" when cornering.

## A £60 Three-wheeler.

The Villard is a threc-wheeler with two wheels behind and one in front. The car exhibited has been a centre of interest, principally, no doubt, because the front wheel is driven as well as steered and because the hody is very roomy, while the price is only about £60. A single-cylinder engine is used. The whecls are interchangeable and the drive is by chain.

The Monet-Goyon, a four-wheeled cyclecar, has a single-cylinder two-stroke engine, with one chain drivios to a motorcycle gearbox in the sentre of the frame and another chain driving the rear axle, which has no differential. In the centre of the axle a large drum is mounted, and on this the sprocket is formed integral.

At the side of the sprocket there is room for two brake bands side by side, and these take a very novel forn. They consist of two long strips of spring steel bolted to a dropped cross-member of the frame beneath and $\Omega$ foot or so ahead of the rear axle. From this anchorage the bands are carried backwards over the drum and forward to the pedal and lever respectively.

Before concluding mention of the cyclecars. a word must be said with regard toathe Lafitte. which. sith its three-cylinder air-cooled radial engine, still remains one of the most original four-wheelers in the world. With this car gear changes arc effected by altering the angle at which the engine is set in the frame. By so doing, the flywheel engages a different part of the conical friction "disc," which takes the drive to the bevel-driven rear axle.

One feels, on examining the cyclecars which are shown at the Salon thisivear, that it is a pity that their makers have not aimed at a higher selling price. The impression is gained that had they decided to market them at.- say s.om france (finni, thev enuld hare produced very much more workmanlik machines, which-at least. to the Britich mind-would be likely. to enjoy a more ready market than the existing very much cheaper models.

## ACCESSORIES TO LOOK FOR AT THE SHOW.

OLYMPIA PRESENTS A STRIKING RANGE FOR THE OWNER-DRIVER WHO DESIRES TO ADD USEFUL EQUIPMENT TO HIS CAR.

IT can truthoully be said that this year accessory dealers are endeavouring to surpass themselves iu the display which they are arranging to present at Olympia. Every conceivable type of additional fitment will be on view. The coming season will reveal the fact that the manufacturers of accessovies are very much alive to the need for providing really useful fitments, and in all cases the motorists' wants have been anticipated. We propose to touch on several outstanding lines which will give an indication of those which are arailable at the present time.

## Clothing for Motorists.

A section which should not be overlooked by the visitor is that which is devoted to motorists' clothing, both for women and men. Here will be seen all patterns of glove and waterproof overcoat, while the sporting driver will be able to examine a dozen difforent types of driving helmet. Incidentally, the


A representative group of Stadium accessories. They include several different types of windscreen wiper and step-mat.

Direct Trading Co., 30, Grove House Lane, Leeds, are offering a very useful type of motor coat known as the Stormgard. It is of the double-breasted type and is made of fawn gaberdine, with a "between" lining of oilskin, the actual lining being a "Teddy" fleece. It sells for 42s. 6d., with gaberdine collar or with high


The "Security" side mirror, showing the wide range of refected vision and (right) the popular Pyrene fire extinguisher.
fur'storm collar 10s. extra, and can bo obtained, if desired, direct from the concern mentioned.
Turning to the actual accoutrements of the car, the Stadium range of accessories calls for detail examination, and a few are illustrated on this page. They include several types of windscreen wiper, a large and small size car mirror, a battery tester, and three useful forms of step miat. The makers, Etienne et Cie, specialize in these goods, and it should be understood that those which we have named represent only a very small section of the large selection which they offer to the 018

Holdtite attach ments which are marketed by Holdtite Ltd., and which can be cxamined in the accessory section of the Exhibition. The nced for efficient engine cooling is attracting widespread interest, and for this reason radiators will come in for a big share of attention. The construction of radiators requires considerable skill, and in this connection the Serck radiators call for special mention. One of the illustrations on this page reveals, the secret of its efficiency and shows the ample tube area through which the cooling air can pass. It will be observed that the figure standing behind the radiator is clear and unbroken.
It is not sufficient, how-

The ingenious Auster "rip-up" fastener can be used for a variety of useful purposes. ever, for many ownerdrivers that their cars are equipped with an efficient radiator: they wish to have ocular evidence of the fact that the engine is rumning cool, and their attention is directed to the popular Boyce motometer, which tells at a glanee the cxact temperature of the engine and indicates that

ACCESSORILES (contcl.).
danger point which is reached only when the radiator is beginning to run dry or when, through some mechanical derangement, rapid overheating of the engine has begun.
'The importance of being able instantly to extinguish a small fire on a car cannot be over-estimated, and for 1925 there will he several popular mikes of fire extinguishers on the market. These melude the P'yrene, the Swift, and the Antifyre. The last-named takes the form of a pistol, and all that the operator has to do is to press the trigger, aiming the chargo at the source of the fire.

## Shock Absorbers.

Car comfort will be insisted upon by both present and potential motorists for the forthcoming year, r condition which has been appreciated by those manufacturers who have realized that ordinary springing systems have limitations and that even the best system is generally improved by the fitting of a shock alosorher: The Hartford enjoys a well-earned position

A security combined side mirror and spotlight. (Below) To make pedals "slip-proof."

of distinction from this point of vicw, and for $192 \bar{s}$ many manufacturers will be fitting it as standard.
Apart from the friction type, however, of which there will be several others at the Show, there are the helicalspring dampers, of which the J.M. and the Iickavant models are well known.

The bugbear of night driving in wet weather is not likely to trouble motorists who take the precaution of fitting even the most simple type of screen wiper, but of particular interest in this connection is the automatic type, which is operated either by electrical energy or by suction from the induction pine. The British Berk-shire is an excelient example of the former, whilst the Folberth may be quoted as representative of the latter

The electrically operated type is easily filted, and only necessitates coupling up the instrument to the switchboard or the accumulator box direct. The suction-operated type is also casily fitted, and although the average private owner-driver may not be able to do the job for himself, any repairer will undertake to drill the necessary hole in the induction pipe, and connection of the tubing is simple.

Low-pressure tyres are all the vogue, but this does not mean that cars will he immune from punctures. Owner-drivers will do well to examine the various vulcanizing outfits which will be on view and which cost anything from a few shillings to a matter of pounds On the other hand, there is the ordinary patch


The "Stormgard" motor coat with fur collar. It can be obtained with a plain collar.
which is certainly a convenient and handy way of repairing the roadside puncture. Several up-to-date examples of patches of proprietary manufacture will

be displayed in the accessory section. Reverting to night driving, the advantages of spotlights have to be experienced to be appreciated. They fulfil three useful functions, namely, as a long-distance narrow-beam

headlight, a means of reading signposts at night-time, atud last, but by no means least, an indispensable accessory for picking out the kerb when driving in fog. As a spotlight usually is fixed to the windscreen, it can be very easily incorporated with a side mirror, and the combination represents one of the most useful accessories with which any car can be equipped.

## Lightning Fastener.

Two years ago the rip-up type of fastener was examined with a good deal of curiosity by visitors to Olympia, and this year it appears in its latest and improved form amongst the many and varied Auster accessories. It can be used in a variety of ways, such as, for instance, on tool bags and all-wearher equipment.

Economical running-a feature which is dealt with in detail elsewhere in this issue-is greatly assisted by the fitting of an extraair inlet. Such a device needs intelligent handling, when it will give excellent service, not only cutting down the petrol consumption, but acting as a useful brake.

The P.A.S. system of steam and air injection will be an interesting exhibit. The device takes the form of a connection between the radiator head tank and the induction pipe, an interceptor, for trapping and disposing of water, being introduced in the pipe line. Decreased petrol consumption and increased efliciency are two of the claims put forward on its behalf by the inventor.

The Gazolex is a somewhat similar accessory, but vaporized water is drawn into the induction system from a special auxiliars tank.
Naturally, only the fringe of the accessory section of Olympia has been touched on in the foregoing. and it would be as well to warn readers that in order to examine the more useful accessorics at least two hours must be spent.


This is the First of a Series of Humorous Stories Depicting the Trials and Troubles of a Non-technical Motorist who is Endeavouring to Choose a New Light Car. Gcorge, his friend, is a type with whom every small car owner is familiar.

IALIWALS $a \cdot i=$ George's advice about technical matters and then follow my own inclination.
What do you think about the ten horse Bilge?" I asked, leaning on the bar and adopting an expression of earnest inquiry:

No go. old man!" said George decisively.
But why, George? I went for an excellent trial run the other day and I thought of getting one at the Show."
"You wouldn't see the technical side, of course," said George, "but jou can take it frem me they're a washout:
"Why?" I persisted.
George solemnly emptied bis glass and then leant towards me and said confidentially: "Back axle assembls. old man."
"Great Heaven, no!" I cried.
"Fact," said George, nodding solemnly. " Crocks up-crown wheel-teeth-bevel-chewed up-frightfui mess-no spares-finish."

At that moment a stout gentleman came and stood near me. He wore a diamond ring and a bilious expression. I thought he was either a car dealer or a retired stockbroker living at Brighton. He addressed me casily.

What are you getting at the Show?"
"Oh. I thought of geiting a-er-a Snoop," I replicd, for I had decided not to take a Bilge, owing to the inside information Gcorge had given me.

## His Horrified Amazement.

The fat man, upon hearing my decision, looked at me with every appearance of horrified amazement, his mouth slightly open and his head thrust forward.
"A what?" he said.
"A Snoop-you know, four-cylinder engine with-er-a dickey seat."
The fat man was affable, perhaps because 1 had never seen him before in my life. He called me "old man," like George always does: I think it must be a motoring term.
"You ask my advice on a Snoop, old man?" he said. I had done nothing of the sort, but I nodded with vague apprehension
The fat man banged his fist suddenly on the bar, and ejaculated, in trumpet voice, the words: 'SUET IULDING!
"I-I didn't quite catch," I said, somewhat alarmed at this extraordinary procedure. "I was speaking of the Snoop car."
cº

The fat man breathed down my collar, and, in a husky whisper, repeated, with sundry winks and, nods and screwings-up of the mouth: "Suet pudding."
"Ah-indecd you astound me!" I said, edging away.
"The engine is flabby; it has no pull," continued the fat man. "They've got the compression ratio hopelessly wrong.
""Surely" not!", I cried
Absolutely!"
I turned to George for help.
"I didn't know that, did you?" I said.
"Good lor! yes, old boy-compression-excessive -piston rises-spark-mixture-bang-cylinder head Hlown off.",
"Well," I said, "I shall have to get auother
Pendiebury-blathrwick like my present one."

## "The Pistons are Putty."

"No go!" said the fat man and George in a breath.
"Last year's models were good," said the fat man. "This year they're making the pisions of putty."
"Putty!"
"Dud material," remarked Gcorge. "Imperfect alloys-bought from Germany-pistols expand-red hot-oil burnt up-scize-con. ,"ods buckled-towed home in evening by cart-horse."
"What do you advise then?" I asked George after a pause.
"I'm getting a de Villacoublay-perfect design$90 \mathrm{~m} . \mathrm{p} . \mathrm{h}$.-roller main bearings and green leather upholstery."
"Don't do it, old man." I said, shaking my head. "The wheels, old boy-the wheels."
"What's up with the wheels?" inquired George in surprise.

I carefully tapped off the ash of $m y$ cizarette, looked elaborately to right and left, and whispered in his ear:
"Won't go round, old man."
He strode away; I think he was cross.
But there was still the fat man to keep me company.
"What's yours?" I asked.
"Double whiskey," be said without a moment's hesitation.
"Don't know the make," I replied like a flash.
"Oh-car-mine's a Wilson. They've got a spiendid road performance."
"A Wilson?" I queried, dropping my lighted

## AIE FRIEND GEORGE (contd.).

cigarette on the back of his hand and gaping at him with bulging eyes.
'Yes, a Wilson.'
I slamined my hand down on the bar, knocking over the plate of salted almonds and making everyone in the room jump. I roa walked from the room.

I hate nothing more than selling things, so I went to sec Gcorge at his flat a few days afterwards about getting rid of my old Pendlebury-Blatherwick before the Show.

George is one of thoso confident people. He can do everything, and usually does.
"I'm not frightfully skilful at selling things myself," I said, leaning back in my chair, "but I have got to try, Now if only old Brown would do it for me -if -
"Who's he?" asked George.
"Old Brown? Don't you know old Brown?" I started up and looked hard at Gicorge, registering surprise with my eyehrows. He preserved his usual Fксиum $A$ cxpression.
"Never heard of him."
"But Brown can sell you anything. He's got that monderful gift-he simply talks you round. If only I could get old Brown to sell the P.-B. I'd give him ten per cent. willingly."
" Dash it all-talk no good-hot air-no sensetalk. talk, talk."
"Ah, hut Brown knows a good deal. I don't mean

he has quite your technical knowledge-but you should hear him-why, he'd sell you the P.-B. in two minutes."
"I say-don't talk rot, old man," George remarked in his offensivo manner. I took no notice of the supercilious tone. I am generous to another's fault - especially when But you'll see in a moment.
"I'd give him ten per cent. if he'd sell the P. B .o: anyone, for that matter."
"Look here," said George, "I'll sell. the beastly car for you."
I hesitated; I did it rather well. "B-but Brown's really skilful, you know."
"I'll sell the beastly thing quicker. Good sales manship-no gas-difficult axi.'
"Well, it's jolly good of you, George, and, by jove! I'm sure you could do it. It takes a load off my mind I do so hate messing about-that is-I am so stupid at selling things."
"I say, old bean," said George, lighting a cigarette and simultancously looking sideways at me, "you'ro nut greasing out of the job, are you?"
"My dear George," I replied, "whatever are you thinking about-grensing out, indeed; what a disgusting expression!"

And wo left it at that.

George first drove the P.B. to a dealer. He explained that he must get to know her in order to be

able to "demonstrate." Demonstrating, it appears, has much to do with selling a car. According to Gicorge, I am incapable of demonstrating.
"You see you drive quite well in a stolid, ordinary sort of way." ho explained. " but these buyers are devilish cute-you must drive 'em like silk-drive 'em with inspiration, of course-but always like silk."
George let in the clutch, and, when I had recovered my hat, we were in Great Portland Street.

Outside a motor emporium (it was either an "emporium" or a "mart": it eertainly wasn't an ordinary shop), a car was standing by the kerb, and two men, one tall and faultlessly attired, the other short, with a tremendous expanse of waistcoat and a pained expression, were standing by the car, talking together.
George approached them, after giving me whispered instructions to "back him up."
" I've just dropped in to give you first ofter for my Pendlebury-Blatherwick," said George casually to the man with the pained expression.
The man looked at the P-B. without replying. The faultless!y attired youth looked at the P. B. . Then liey both looked at each other, and the man with the pained expression looked eren more pained.
"Do sixty," said George. "Fellow offered me £350, for her yesterday-simply langhed at him-' No, no,' I said, £З亏5 is my figure-take it or leave it'didn't $I$, old man?"' George turned to ine.
I went very red in the face. "Yes, George ; those wero your exact words."

## Mエ゙FRIEND GEORGE：（contl．）．

＂Of course，＂continued George，＂she＇s got all accessories－four valies per cylinder－lirautinsome balancing device，hasn t she，old min？＂

Oh，not the least doubt about it．I am quite positive that she has the－er－he device in ques－ tion．＂

I shouldn＇t be selling her，but my friend here is giving mo a new car aren＇t youl＇

No，not a new car，＂I remarked hurvedly．＂I distinctly said ten per cent．＂George gave me a nasty hack on the shin，and I stopped
The lwo men had stood quite still，looking at us during this conversation．
＂Understand，£3i5－rock－botitom figure，＂con－ cluded George．
The pained expression went up to the P ．－B．and gave one of the tyres a kick－an unnecessarily savage kick，I thought．The youth went up and hooted the electric horn in an abseut－minded way：They looked at each other again．
＂Tro，＂said the pained expression in a low，hollow voice，and they both turned and began walking into the shop．
＂What？－herc－I say，＂exclaimed George，going after them．＂Jolly good condition－you know－hi！ dash it all！£200－ridiculous－say £300 and I＇ll clinch－＂
＂Tro，＂said the pained expression，and he and his companion entered the shop and shat the glass door．

George turned to me．
＂You see what a mess you＇ve made of it，＂he cried inotly．＂Can＇t you do as I told you？＂
＂But，George＂
＂Oh！don＇t start an argument－get in－see other fellow．＂

## Enter the Professor．

Wre drove to a small house on top of a hill and pulled up in the roadway．The＂other fellow＂ appeared．and proved to have a face like a muffin， with high－powered glasses and a collar which acted as a nindscreen for his ears．His name was l＇ro－ fessor Blenkinsop．

Let me take you－demonstration run，＂said George．
＂I thank you，＂said the Professor in a smooth poice which suggested forced lubrication and side－ py－side valves．＂but I believe that．by a cursory examination of external portions，I shall be enabled to ascertain the precise degree of wear and．I may add．tear to which the vehicle has been subjected． and to arrive at a reasonably accurate judgment of its－present value．＂

The Professor turned his glasses on the P．－B．，
which，I thought，was much cowed by them．Then he said：＂I oliserve that the car does not possess a rery necessary adjunct；I refer to front－wheel brakes．

That was enough．
＂Front－wheel brakes！＂Gicorge said scornfully． ＂Fact that it has none puis valuc up threefold－ front－wheel brakes source of danger－skid－hit houso －changed face．＇

The braking power is increased in proportion to the cosine $\mathrm{N}^{2}$＂over 9 hy the itddition，＂said the Pro－ fessor，absently gazing at the horizon．＂I will go further，and state emphatically that＂－he suddenly turned his glasses full on George－＂front－wheel lrakes，sir，are cumulating in torsion and culminativo in retardation．＂

## George in Danger．

I could see George was out of his depth ：lut that never affects him．Why do people get excited about such triftes？

Excuse my saying so，but yout are talkitig non－ sense－car with ，front brakes－siving over 50 －ditch－ mud on clothes．

Four into seventy－seven won＇t go ；replace $\mathbf{x}$ in the equation，＂the l＇refessor droned．

George raised his voice and began waving his arms：＂I tell you－ridirulous theories－practical experience counts－this $\mathrm{P}^{\circ}$ ．－13．usiless with front－wheel brakes－the makers will never fit them－

They are fitting them this year，George，＂I inter－ rupted．After all，facts are facts．

What the devil do you know ahout it？If P．B． people are fools－is that my fault？＂George＇s face had gone crimson．It harmonized beautifully with his tic．
＂George，＂I said sternly，but keeping myself thoroughly under control，＂you＇re talking arrant drivel and behaving in a－in an idiotic manner．＂
Then George began shouting．He does．It＇s a vulgar hahit．I had to shout，too，to make myself heard．The argument was of a technical nature．
＂Rot！＂I yelled．
＂Piffle！＂George replied，grabbing the pieces of wood I had put under the whel of the P．－B．to pre－ vent it running down the hill．
A faint sound caught my ear－like running water－ followed by a crash．I thought it was the Professor， who had never ceased to talk；but it wasn＇t．It was the P．－B．and a brick wall．
As we turned and walked sadly away，words flonted to us from the hill－top on the gentlc cvening breeze： The speed will rary indirectly with the braking effect exercised and will be proportional to the equa－ tion x into y plus z squared．

Oliver Stemart．

## AUTUMN RELIABILITY TRIAL．

T1HE Sutton ColdGeld and North Bimmingham Automobile Club held their closed autumn relia－ bility trial for the Shell Cup on Saturday，October 4th．The course，which led from Birmingham to Cleobury Mortiner，the lunch stop，via Noah＇s Ark， Liveridge and Farlow Hills and back to Hagley， via Flagstaff Hill and the Hundred House，was in a very greasy condition，which made the use of chains almosi essential for the successful elimh of the prin－ cipal hills．

Serenteen light car entriss had been obtained．and with the exception of McNeile＇s A．C．，who was a non－starter，all completed the course．Noah＇s Ark Hill，in spite of the water－splash at the foot，caused little trouble．
Amongst the most creditable climbs were those of Smith（Lea－Francis），a newcomer in competition work．Barnes（Salmson）and Bromhead（Austin）． The stop－andrestart test was held on the lower c22
slopes of Flagstaff Hill，the surface being composed of grease and loose stones．

Quite the best performance was made by Tatlow （Lea－Francis），who drove off as though on a level road without the least fuss，while Brittain（B．S．A．）， Denley（Rhode）and Orford（Austin Seven）were also extremely good．

The final test was of a distinctly novel character， held on a hill with a gradient of about 1 in 12，the competitors being given a 5 －yd．flying start and then being timed between two tapes some distance apart． Between these was annther fape，and the drivers were required to cross this，stop，veverse until their front wheels were clear of it，then restart and com－ plete the climb．The fastest time was made by Inorton，other good performances being by Denley （Rhode），Morgan（Morgan），Orton（Morgan），Lav （Clyno），Brittain（B．S．A．）and Norris（Rhode）．J．H． Arthur（Lagonda）won the Shell Cup．


AST week wo published the first Dapictures of the Tatra light car, and now give a complete scrics of detail illustrations. The car is one of the nost original in existence ; it is made in Czecho-Slovakia and has performed well in Austrian ovents. The pictures show the gen?ral layout of the twocylinder two-stroke 1,100 c.c. engine,
complete access to which is gained by lifting the bonnet, to which the front winge are attached. Thes central tunnol shown in tho photomraph devicting the controls forms the backbone of the car, which is suspended back and front by transverse springs. The back-axle-shaft casings fit into the central casing with a large ball joint, the rear wheels beinh
thus independently sprung. The Tatra light car is capable of more than 50 m.p.h. and is fast and sure on hills. It is not proposed to market it in Great 13ritain, as the price wonld be too high for this market-about $£ 260$. The car gives convincing proof of the fact that unconrentionality does not necessarily letract from roadworthiness.


WHEN IT PAYS RO FIT L.OW IPRESSURE TYRES:
[HEIIR ADVANTAGES
ANI) IISAI)VANTAGES.

I$T$ is probable that many people when ordering a new car at the Show, will be undecided whether they should specify low-pressure tyres, and in this article it is proposed to set out the advantages and disadrantages which may be, expected to accrue from their use
The chief gain in the use of low-pressure tyres is the increased insulation from road shocks due to the larger air space in the tyre, and its greater Hexibility, so that it is able to deflect considerably and io absorb quite large shocks which would otherwise de transmitted to the car. Obviously, this increase of shock transmission means not only greater comfort for the occupants of the car, but also less strain on the chassis.

## Thin Walls Essential.

It would be of little use to build a low-pressure tyre with walls of the same thickness as those of a high-pressure tyre, because the advantages of the extra air space would be lost owing to the stiffness of the walls. It cannot be denied that in certain circumstances such as when travelling over worn tramlines or rutted lanes, there is a certain risk of punclures through the walls of a low-pressure tyre, but on stony or sandy roads the large tyres will often merely be depressed by an object which would puncture a high-pressure tyre.

Obviously, a low-pressure tyre will present a large area of contact to the road surface, and on some roads this is an advantage, in that it allows of a preater tractive and braking effort without slip, but it must be admitted that in gencral the low-pressure

tyre is at a disadvantage oll the greasy surface of a hard road, becanse the solt Iyre will, as it were, sit on the top of the grease instiad of biting its way through it to the hard surface underneath; the greater the area of contact the less will be the pressure per square inch.

The type of tread used on the fyre will, of course, have a considerable bearing on the question of skidding, and some low-pressure tyres are far less prone to skid on a greasy road surface than the high-pressure type.

The owner drime whe proposes 10 use low-pressure


These photographs show the increased area of contact obtained with a low-pressure tyre. The additional adhesion is an advantage.
tyres for the first time will wish to know how they stand up in use, and what elfect they have on speed and petrol consumption.

It may be said that the mileage to be obtained from low-pressure tyres will be at least as great as from normal ones of high-pressure, very often it is greater and, in any case, the lessened wear and tear on the chassis due to low-pressure tyres more than off-sets any additional cost of the tyres themselves.

A litulo more attention is required for their proper upkeep, becauso they aro liable to lose pressure more rapidly than the high-pressure variety, and a small decrease in pressure has, in proportion, a greater effect than it would have on a tyre of smaller section.

It is most important that the correct pressure, as recommended by the makers, should be maintained, and for this purpose a gauge ealibrated to read low pressures should be used, as the average tyre gauge is not sufficiently sensitive at low pressures.
With regard to spece, it is possible that low-pressure tyres on a given car would tend slightly fo reduce its maximum speed, but, on the other band, it is probable that the average speed would be in-

## STOPIING SIIOCKS AT THEIR SOURCE.(contd.)

creased because there is no neel to slow down over rough roads.
For these reasons, also, it may be taken that petrol consumption will not adversely be affected-that is, the average will remain about the same as when the car is fitted with high-pressure tyres.
Those drivers who are not in favour of low-pressure tyres usually give as their reasons that such tyres cause rolling, that the car to which they are fitted is not under full control at high speed, and also that a burst, especially in a front tyre, is almost certain to have disastrous results.
The answers to these questions are very simple.
It is admitted that low-pressure tyres can and do cause rolling, but only when fitted to it car which is not suited to their use. Long and very flexible springs used in conjunction with low-pressure tyres will in all probability cause the car to roll and pitch in a most uncomfortable manner, but by fitting suitable shock absorbers the suspension system can be adjusted exactly to suit the tyres.


Showing the difference in rim and tyre diameters. Owing to the greater deflection under load the effective diameter is the same, and the gear ratio is unaltered.

A car which has short, stiff springs will benefit greatly by the fitting of low-pressure tyres, and shock absorbers should, in this case, be unnecessary. It must be admitted, however, that the ideal combination is that which incorporates adjustable shock absorbers, because by taking a little trouble with the adjustment the exact amount of friction may be appiied to allow both the springs and the tyres to function at their maximum efliciency.
It has been proved that a burst in a low-pressure tyre does not of necessity lead to serious consequences any more than would a similar burst in a tyre of the high-pressire variety

Except, perhaps, at very low speeds, the steering of a car having low-pressure tyres is not affected greatly by the increase in surface contact area. At all ordinary road-speeds the steering is normal, but it is a little stifler than with high-pressure tyres.
It has licen suggested that low-pressure tyres are a cause of stecring wobble, and it may be that any slight lack of balance in the wheels or tyres will be


When a car is accelerated it weighe shifts, and an extra load is thrown on the rear wheels so that-
accentuated by the increased ficxibility of this type of tyre, but wheel wobble is a mechanical defect which should in any case be corrected, and it is just as liable to be set up on a car having high-pressure tyres.

There are two types of low-pressure tyres on the


A low-pressure tyre will deflect when passing over a large obstacle. It will be seen that the tyre is touching the road on each side of the stone.
market, the first type being made for fitting to specially designed rims, and the other, which 19 known as the interchangeable type, is made to fit existing high-pressure type rims without alteration. This type of low-pressure tyre has not quite so large a section as that of the first type, but it is of much larger section than the high-pressure tyre which it is intended to replace.

## Precautions in Fitting.

It is necessary, when fitting low-pressure tyres to an existing car, to make sure that there is sufficient clearance inside the mudguards satisfactorily to accommodate them.
In using the rinis which originally accommodated high-pressure tyres, the gear ratio will not appreciably be raised because the greater deflection under load compensates for the increase in overall diameter. The majority of low-pressure tyres for light cars are of the beadod-edge variety, but it is reasonable to suppose that before long straight-sided tyres will be available. This type possesses several advantages over the beaded-edge variety; but, of course. special rims are required. It is claimed for straight-sided tyres that they are very easily fitted, and that for a given size the air space is greater; also in the event of a burst they will not leave the rim.

-if the tyre and spring periods are equal. the car will pitch in an unpleasant manner.

Low-pressure tyres and tubes may be repaired in the usual way; that is, either by cold patching or hy vuleanizing.

Special jacks having a greater range of movement are available for use with low-pressure tyres, and a pump which will deliver a large volume of air on each stroke will be regarded as au ndrantage by all uscrs of them.


## Dangers of Buffers.

ICONFESS I am not in sympathy with the sug1 gestion now being put round that cars should be fitted with buffers. To start with, the beight of such contrivances would need to be standardized unless they were to become weapons as well as shields, and their use would make the inconsiderate driver more of a menace than ever.
One can foresee this type of driver fitting buffers which would render him safe no matter who suffered. At preseut he does have to think of possible damage to himself and vehicle. But, armour him against the consequences of his own folly, and who would be safe? "Buffers," too, has ominous rhyme with "duffers." We want no mechanical substitute for road-sense.

## Tears for the Chummy.

$T$IHE chummy, light four, occasional four, or whatever else you may care to call it, secms to be going very rapidly out of favour. Many manufacturers who were cxtremely keen about it at Olympia last year have since dropped it altogether, while quite a number are listing a full four-seater in addition to the churamy type and propose to withdraw the latter altogether in the near future.
Personally I always found the "occasional" type of four-seater to be a very successful compromise. For use as two-seaters to carry additional passengers only occasionally, I still maintain that they are every Wit as aticfactory as, and in many ways more so than, a full four-seater. The principal adrantage of a chummy body is that it is quite £〇n cheaper than an equally well-built three-door four-seater.

## At the Salon.

AFEature of the Paris Motor Show which always pleases me is that one seldom fails to find plenty of freaks-I mean among the exhibits. This year, as previously, there is any number of quaintly applied friction drive systems, while on nearly every stand one can find some mechanical unconventionality. It is, however, impossible to deny the fact that in France there axe some very clever men in 'the light car industry, and the merit of a considerable number of the exhibits cannot fail to be apparent to any practical-minded motorist. Strangely enough, however, one finds many of the biggest manufacturers deliberately apeing large car practice rather than icreloping individual designs, which one would suppose to be better suited for the smaller types of car.

The Salon this year is as well laid out as ever. The fine Lroad gangway: between the stands are covered with thick matting, which does not make a wholc day's exploration too tiring, while the system of overhead banners allows one to find any particular exhibit quite easily. This plan is much hetter in my opivion than the Olympia system of each exhibitor displaying his own banner. At the Salon everybody's name is the same size as those of his neighbour's' on the adjoining stauds, and the recult is that a floor plan is unnecessary, and that almost wherever you are standing, yoll can see exactly where any individual car exhibitor is to be found.

## Conflicting Principles.

FRONT-WHEEL brakes and low-pressure tyres have been taken up very strongly by the French manufacturers. The numerous ways and means for installing the former allow plenty of scope for ingenuity, and it is only natural, therefore, that from such an original race one should find any number of novel ideas embodicd in front-wheel-braking layouts. More than one manufacturer uses no brake drums on his rear whecls at all, contenting himself with front wheel drums, and a transmission brake. There seems no uniformity of thought with regard to whether the pedal should operate all brakes or only a pair, while much the same applies to the hand lever. I nust admit having a preference myself for a pedal which works all four brakes, and a hand lever which either operates a 1 ransmission brake or expands a pair of shoes of its own inside each rear wheel drum.

## Discouraging British Competitors.

ON behalf of my countrymen, I must lodge a protest against the methods which were adopted by tho officials at the Gaillon hill-climb, but, in fairness also to our French neighbours, I invite them to reply to the grievances which are voiced by Messrs. Sydney Cummings and J. A. Joy.ce.

In the case of the Frazer-Nash, I am informed that hefore it was oven unloaded from the lorry the officials gathered round, and, after a hasty conference, proclaimed that it could not run, giving as their reason the fact that it was a single-seater. It was pointed out instautly that there was no barring clause of this nature in the regulations, whereupon the second objection was raised, namely, that the car was over weight. Mr. Cummings, the entrant, at onoe suggested that the best way of settling this was to put it on the scales, a test which proved that agrin the objection

## IRICH MIXZURE (contd.)

was without foundation. But there was another difficulty to be overcome, for it was now stated emphatically that as the car had no reverse it was automatically disqualified. A request that it should be allowed an unofficial run was met with a firm refusal. Mr. Cummings, however, frankly admits that he managed to overcome this by a little judicious bakshecsh, and although the single run which the car made as a consequence was not recognized officially, it is more than interesting to note that Miss Ivy Cummings actually beat the Amilcar, which had lowered the record.

## A Load of Sand.

WITH regard to the A.C., this apparently conformed to all the regulations, but at the last moment the officials sprung a surprise on Joyce by insisting that the car was under weight and forciug him to carry sacks of sand to the amount of 220 lb . in addition to his mechanic. Joyce very sportingly oheyed the official decision, and, with the faithful Malkin perehed on top of the bags of sand, he did his best to uphold the prestige of Great Britain. I understand that he was handicapped considerably, because the bags of sand hindered his proper control of the car.
I have no reason to doubt the accuracy of the above statements, and, on the face of it, the whole situation suggests that there was an attempt to place difficulties in the way of British competitors.

## A Modest Reminder.

IWOULD ask the French officials to compare their attilude towards our competitors with that courtesy and welcome which we are in the habit of extending to Frenchmen To cite an actual instance; in the 200 Mile Race of 1922 M . Lombard actually set foot on the track in his excitement when one of the Salmsons pulled up at the pits. According to the strict regulations of the race, this was sufficient automatically to disqualify the car, but M. Lombard was merely reprimanded, and the incident overlooked.

I think that a reply from the Gaillon oficials is demanded, and I assure them that I shall be only too pleased to give as much $w^{2}$ ublicity to it as I have given these protests.


I$T$ is certain that at the forthcoming Olympia Show the majority of light cars will be fitted as standard with four-wheel brakes, or these will be awailable at an extra charge.
a few years ago four-wheel brakes were fitted only on high powered cars, and their use on light cars was considered unnecessary; but recently the views of owners and manufacturers have veered round until they regard these brakes almost as essential. It is unnecessary at the present time to dwell on the safety and relialility of front-wheel brakes, as these points have been aupliy demonstrated both on racing and touring cars.

In considering the adrantages to be obtained from four-wheel brakes they have, first of all, increased safety in diving, because not only can the car be stopped in a considerably less distance than when fitted only with rear-wheel brakes, but in addition there is little or no tendency for the car to skid when all four brakes arc equally applied.

## Greater Adhesion.

It will be understood that no matter what type of brakes are fitted to a car, or bow powerful they may be. the actual stopping effort depends entirely upon the amount of adhesion obtainable between the tyres and the road. If the retarding effort is to be applicd only through the rear whecls its effect will be about half as great as when it is applied through all four wheels.

Another point is that when a car is being stopped its weight is largely thrown forward on to the front axle, so that the front wheels are, as it were, pressing harder on the road surface than the back wheels. Therefore the arlhesion of the front tyres is momentarily greater, and if the front wheels are
fitted with brakes it is possible to take adrantage of this additional adhesion

On a greasy surface the sudden application of the brakes will lock the wheels and canse them to slide, so that the car may very casily get out of control. This tendency is not nearly so great when all four wheels are fraked together, as, in addition to stabilizing the braking eflort, this is distributed equally to all four wheels, and so for a given stopping distance each tyre is requined to provide only about half the adliesion which would otherwise be necessary

## Front Axle Design.

Another advantage of four-wheel brakes is that a very much larger braking area is available, and, therefore, wear on the brake shoes is considerably lessened.
In hilly districts four-whecl brakes have the advantage that when applied for long periods the heat generated in each individual brake-drum is not so great as when only two brakes are retarding the car
The design of an efficient four-wheel braking system calls for considerable knowledge and care. because the forces set up when the hrakes are applied may cause considerable strain in the chassis.
It is essential with front-wheel brakes that the stecring pivots should be as near the centre of the wheel as possible, and also that each pivot should be inclined in such a manner that its centre line, if extended, will intersect at the point of contact between the tyre and the rond. The hraking effort must, of course. be transmitted through the wheel to the car itself, and this transmission will take place along the axic arm and through the front springs.


The front-axde lay-out shown above indicates the alterations which are generally made when front-wheel brakes are fitted. On the right will be seen how the steering pivot is inclined so as to allow easy steering when the brakes are applied.

## MODERN FOUR-WMELLL BRAKLS (contd.

It is necessary, therefore, to take care that the axle is sulficiently strong to resist the twisting effort of the brakes, and also that the springs. which should preferably be flat, are also stiffened to withstand this additional load. It is usual to find that the front axles of four-wheel-braked cars are of oval section between the snring pad and the steering pivot, because the oval section is better able to withstand the twisting strain than one of ordinary H section

## Hydraulic Brakes.

Having arranged a swtable front axic and spring anchorage, it becomes necessary to fit control gear by which the lirakes may be operated, and a glance at the illustrations will show that this has been done in various ways, all of them being entirely satisfactory and dilfering only in minor points of design. The problem of arraneing for efficient control is not


The hydraulic system of four-wheel-brake control. The pedal operates a piston which forces oil from the cylinder through pipes to smaller cylinders which contract the brake bands -
casy, because arrangoments must be made to allow the full action of the springs and stecring to remain unrestricted, and there must be no risk of the brakes being automatically applied through either of these movements.

The usual method of operating the brakes is through a universally joirted shaft which has on it a lever connected to the compensating gear of the brake control
There is at least one proprictary make of frontwheel brakes which may be fitted to nny existing cat of good quality. We refer to the Whitehead frontwheel braking system. which is operated by means of Bowden fexible caljes. These brakes have been successfully fitted to racing cars.

A very interesting design of front-wheel brake is that fitted as standard to the new $10 \mathrm{~h} . \mathrm{p}$. Panhard. In this system, instead of the more usual twin shos. a single band is used which is expanded against the brake drum by a rack and pinion motion onerated through a spiral cam, and the makers claim that they are able to use 95 per cent. of tho available friction surface to full advantage.

There is a tendency nowadays amongst manufac turers to experiment with four-wheel brakes operated by hydraulic or pneumatic means, and it seems almost certain that in the future these systems will be so far periected as to become almost universally fitted, one of their chief features being the comparative ease with which they may be fitted, and the


The Whitehead front-wheel-brake system which may be fitted to most well-made cars. The Bowden cables are coupled up to the existing foot or handbrake controls. The system has the merit of simplicity.
fact that, owing to the even distribution of the power, each brake is applied with equal force. We illustrate a system of hydraulic braking which is already in use with considerable success.
The brake shoe in this case is a contracting band as opposed to the more orthodox expanding shoe type, but there is no reason to suppose that the contracting brake is not equally efficient and it has the merit of being very easily dismantled for renewal of tho lining.
Another interesting design of four-whecl braking system is the Westinghouse This system is paeumatically operated by engine suction, and it is in successful use on heavy lorries, so that its ultimate adaptation to light car purposes should be merely a matter of time. In conclusion, it may be interesting to observe that railway trains are exclusively braked by pneumatic means, and every wheel of a train has its own brake, which is applied with equal pressure from air-cylinders operated by the locomotive itself.


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# SKIDS ARE EASILY RECTIFIED <br> USEFUL HINTS ON HOW TO DRIVE SAFELY ON GREASY ROADS. 

THE writer is well aware that he is being rather bold in using the atove title, but he is presuming that readers will encounter skids ouly at reasonably safe speeds. An experienced driver can tell by a glance at nearly every form of road surface how slippery it is, and he will naturally keep the speed of his car down to a figure proportionate to the distance in which he knows he can stop it, bearing the condition of the surface in mind.

It should be understood that skids seldom or never occur except when they are provisked by the need for a violent swerve or heary application of the brakes. With the smallest and lightest cars bad skids are certainly set up sometimes by tramlines, and recently a fer stretches of highway in the country have been surfaced with a preparation which, when wet, is extremely slippers, and may cause a car to skid badly even when rounding quite a slight bend; but such occasions are the exception.

Front-wheel skids never occur when a car is being driven at a reasonable speed, unless, of course, the driver has been so unwise as to fit steel-studded tyres to both the front wheels.
For the bencfit of those who are not able to gauge whether a road is slippery or not, it may be well perhaps here to note that a slight deliberate swerve instantly indicates the degree of "greasiness" of a road. Even on deserted roads it is dangerous to exceed $25 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. if a very slight swerve at that speed causes a skid, while 12 n.p.h. should be the maximum for town driving under the same conditions.
To rectify a skid when it does occur, the car should
be stecred in the same direction as that in which it is skidding. On nu account should the wheel be violently wrenched over, as this may cause the front wheels also to skid, while it is almost certain to set up a back-wheel skid in the opposite direction, which might prove difficult to check. Immediately a skid is felt the steering, wheel should be held lightly, and thic car "edged" rather than swerved in the same direction. It is essential that the steering wheel should be held with a light grip, because by this means it is much easier to "feel "" the steering than when it is violently gripped, and "feel" rather than strength is required quickly to correct a skid.
To check a front-wheel shid is extremely difficult, especially as it occurs only when cornering or swerving. Gentle application of the brakes is the only means for countering it, while the front wheels should be set as straight as circumstances allow. If it is impossible by this means and by gently braking to check a front-wheel skid, it is often a better plan to brake hard and cause a deliherate rear wheel skid, and thus, in all probability, avoid a head-on collision.
It is an excellent plan for leginners to practise skidding on quiet stretches of slippery road, and by doing so they will learn much moro about correcting skids than can be explained to them in a brief article. Iractising will teach them not only how to rectify a skid when it occurs, but it will also show them that by skidding delıberately it is often possible to escape from an emergency which without deliberate skidding would be certain to cause a crash.

This Week's Hint.

## LUBRICATE THE SPIGOT BEARING.

$\mathrm{O}^{\mathrm{F}}$$F$ all the bearings in a light car there are few which receive less attention than that of the clutch spigot. This neglect is not entirely the fault of the owner-driver, as it must be confessed that on many cars little or no provision is made for the effective oiling of this important bearing.
The illustration shows a conventional clutch mechanism in section, and it will be seen that the spigoi bearing, besides taking the weight of the cluich and shaft has also to take the thrust of the clutch spring.
In some cars the thrust is taken on a ball-thrust race, and in that case no great supply of lubricant is necessary, but when the design incorporates a bronze washer it is important to arrange that this shall never run dry.
When the clutch is engaged and is driving the car, the spigot, bearing and spring are all revolving together, and so no wear will occur, but each time the clutch is withdrawn or slipped the spigot bearing and thrust washer have work to do, because there is then a difference in the speeds of the driving and driven parts of the clutch assembly.
The cause of a "juddering" or a stiffly working clutch may frequently be traced to a worn or partly seized spigot bearing, due, in nearly all c30
cases, to lack of lubrication. If the oil-hole for this bearing is absent, steps should be taken to have one drilled, or, falling this, copious supplies of oil should be poured, at intersals of a week or so, over the clutch mechanism as near to the hearing as possible, on the chance that some will find its way inside, but it is well to take care that the oil docs not get on to the clutch faces, or slipping may result.
In the case of an awkwardly placed oil-hole, it is sometimes possible to fit into it a small copper pipe having a scrers; down greaser on its other end and projecting so that it can be easily reached. As this pipe and greaser will revolve all the time the car is running, care must be taken to sec that it is securely fitted and that in revolving it does not foul any adjacent part.
Some clutches are arranged to run in oil, and in this case the lubrication of the spigot bearing is constant and automatic, and there are designs in which provision is made for the bearing to be lubricated by oil from the gearlox or the engine; but the humble oil hole is good enough, provided that it receives attention.
Any trouble taken to ensuro adequate lubrication of this unseen but very important part of the car will be amply iepaid.

In this sketch the clutch collar is cut away to show the spring. The oil hole is closed normally by a screw.


Conducted by Edmund Dangerfield. HEMPLE PRESS LIMITED prontictors of "the motor," "motor Cycling." 7-15, Rosebery Avenue, London, E.C.I. Telenhone-Clerkenwe 11 fooo (seven lines).
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## LIGHT CAR \& CYCLECAR

was founded in 1912 to cater for the needs of $u$ sers and potenlial purchasers of various new rypes of cyclecars and light cars, and it has consistently encouraged the development of this new motoring movement for nearly twelve years.
Only cars the engine capacity of which does not exceed 1,500 c.c. (1d litres) come within the scope of "The Light Car and Cyclecar," that cavacity being generally recognized and ac. ce ted as the limit for a light car engine.

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## Topics of the Day

## Small-car Developments.

WE gave it as our opinion last year that the three chief improvements effected to small cars during 1923 related to coachwork, brakes and the reduction of engine vibration. This year it must be recorded that brakes have been still further

> Tendency
> to Over- elaboration improved, thet coachwork is still more roomy and of a more sersiceable nature, while engines are not only more sweet running but they also develop more power. This time last year very few amall cars had front-wheel brakes and many of them had braking systems operating in anything but a satisfactory manner on the rear wheels. To-day there are very few small cars indeed not provided with brakes which are both powerful and reliable. Lowpressure tyres for light cars have been almost entirely a 1924 development, and so rapid has been their rise to popularity that at the Motor Show which opens next weck a very considerable number of small-car manufacturers are fitting them as part of the standard equipment.

It must be recorded that 1924 has witnessed the elaboration of a considerable number of well-known light cars. Some which, last year, had air-cooled two-cylinder engines have now the more elaborate four-cylinder water-cooled type. Transmission systems have become more complicated rather than more simple, and the general equipment supplied by the makers as standard will be much more complete in 1925 than it has been in the past. There is evidence that differential-less axles have gone completely out of favour, numerous makers who found this type of axle both popular and serviceable in the past having recently announced their intention to provide differentials on all their 1925 models

Another feature of design which was considered two years ago to be certain to achicve renewed popularity was coil ignition, but, although it showed signs of being widely adopted at that time, it figures to-day in the specification of very few of the better-known makes.

## All-weather Equipment.

SERIOUS attention by manufacturers was given to the subject of providing closed-car comfort on light cars only about three years ago. To-day nearly all small cars and even the cheapest models are provided with windscreens which are effective, hoods

Luxury<br>Means

Expense. which are both convenient and weatherproof, and side curtains or shields which convert, in effect, an open two-scater into $\Omega$ coupé and a four-seater into a saloon. As each year has gone by the various equipments have been improved, and to-day they are nearing perfection.
We think, however, that the time has come to issue a warning to manufacturers to the effect that they must be careful not to allow their all-weather equipment to become too elaborate and costly, and to bear in mind that the small-car owner is not a wealthy man. We hear of elaboration nearly every day, but advice of simplification seldom comes to hand.
The Light Car and Cyclecar has always preached the gospel of economy, and it seems necessary at the present time to remind those who build our cars that we are poor men and that superluxury should be offered to us as an extra and not as a part of the standard equipment. Luxury means cost, and we believe that wo voice the ricws of all our readers in asking for reasonable comfort, but with the major portion of the initial purchase money spent on a reliable, efficient engine and a sound, well-constructed chassis.

JHE lirht car is the chedpest type of four-whecled motor rehicle wheh cau be purchased nowadays, and it is very economical to run, but whereas the purchaser cannot go far wrong when he palys over his cheque to the agent or momufacturer, he may be disappointed with regard to his rumning expenses unless he takes a certain amount of care in aiming for economy.

It is so easy to take delivery of the car, fill "p with petrol and oil when necessury, and hope for the best, hut the condition is largely responsible for the complaints which we receive occasionally concerning the unaccountably bigh cost of rumoing such and such a rehicle.

An imvestigation of these complants ustally shows that the owners hare disregarded the first principles of ecomomical motoring, and had their choice been a car of far higher horse-power their ruuning costs probably would have been sufficient to ruin them!

## One Halfpenny per Mile per Person.

Generally speaking, 2d. to $2!$. is quoted as the average cost per mile of a 10 h.p. four-seater light car, and whereas it is simple to make the cost per mile far higher, it is equally simple to cut it down so that four people comforiably can motor for less than

Thére, are naturally innumerable factors which bear on the problem under discussion, and it will he possible within the compass of a short article to deal unly with those of a more prominent character.

Upon taking delivery of new car, it must he borne in mind that the mechanism is stiff, and no efiori, therefore, should be made to discover the maximum capabilities of the car. Although it would not be very disheartening to discover at the outset and under such conditions that both petrol and oil consumption were high, it would be distinctly alarming to find that irreparable harm had been done to both engine and transmission.

Such damage might necessitale an overhanl within the first fer months of the car's life, the resulting cost being perhaps more than $£ 20$.
Treat the new car gently, then, for at least 200 miles. Io not endeavour to attain $50 \mathrm{~m} . \mathrm{n} . \mathrm{h}$. until at least this distance has been covered, and fight shy instinctively of anything in the nature of freak hiliclimbing. Although bordering on exaggeration, the following adrice is certainly sound, and has been given to more than one new owner-driver who has expressed his thanks later on when the car has settled down and is properly run in. It is this: drive your car for the first trio months as though you were afraid of damaging it at any moment.

## A Few Oiling Tips.

Wilh regard to its actual upkeep during this period, it is an accepted fact that any faults resulting from over-oiling are far better than those which are caused by a lack of lubricatiou, and although no possible harm can be done to the chassis by filling up grease cups at almost daily intervals, there is not, in the wriler's opinion, any advantage in filling the engine sump above the maximum mark on the dipper rod. In cases, however, where the pressure of oil to the main bearings is controllable, it is certainly deemeit adrantagecus to keep this fairly high for the first few weeks, always taking the precation, however, of leiting tho engine warm up after being started on a cold morning, and before revving it in order to get away.
At the end of the first 1.000 miles it is an excellent pian to drain the sump, gearbox and axle. The joh should not be tackled when the parts are cold. but immediately after-a run, for then the oil will he in its nost liquid state, and it will be possible thoroughly to drain out adl the lubricant. After. c32

## RUNNING A LIGHT

THE MERIT OF THE IIGHT CAR IS SACRIFICEI) UNL.ESS I'l IS DRIVEN

"Little drops of petrol
if wasted, soon make a surps bazard methicd of filling up shown on the left. (Centre) Carry. once, whereas, in the tool locker, it might easily empty itse
filling up the engine with fresh wil, the pressure may be adjusted so that under mormat? running conditions, say, at $30 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. wh ton war, the oil gauge recisters in lb .
1)uring this period the owner is strongly adrised to force as much grease as humsilly can through the stecring connections. If grease cups are fitted they should be given two or thre complete turns every day, whilst if the system is of the grease-gun type, the same operation may hre performed, althongh it may take a few minutes longer.

It may be argued that such points as enassis mbitucation have hardly any hearing on the question of

## EVERY OWNER-DRIVER CAN -



A new set of tyres, sende up the cost per mile to a surpnsing ext (Centre) Another cause of, sometimes, unaccountable petrol maste I (Right) Do not overfill the sump but make a point of tran

## CAR ECONOMICALLY.

POINTS FOR THE OWNER-DRIVERIREAT THE NEW CAR GENTLY-HOW


1 g difference to the estimated m.p.g. of a car. Do not adopt the hapspare can on the running hoard. Should it leak you can see it at unobserved. (Right) Brake adjustment is often a vital factor.
meonomical frnning, but, as has been pointed out, the cost of repairs must antomatically be included in the expunses of the upkeep of a ear, and it is obvious that an item of, say, $\mathcal{L} 10$ or Elo for what should be unnecessary repairs adds very greally to the cost wey mile. Plenty of grease is a magnificent probection!

A hea:y item in the average motorist's bill is that of garage, nnything between 8 s . and 12 s . being charged nowadays for a four-seater light car. Nominally, then, the average charge for garage works out at about $f^{2} 25$ annually, and when it is realized that a sufficiently large temporary wooden garage


Remove flints and "stop" cuts and gashes directly they are noticed. Keep a sharp eye on all petrol unions and check the slightest leak. ig the oil up to the maximum level mark on the dipper rod.
can be purchased for a sum as low as $\mathbf{x} 30$, it will ho seen that the erection of such a building, although entailing a large initial outlay, soon pays for itself. Incidentally, the life of a wooden garage should be anything up to 30 years.

The owner-driver will do well to examine his premises from every point of view in order to scheme the erection of such a building, while, if he is in a locality where ground rents are cheap, lie may be able to erect his own garage on a small picce of land, the rent of which per annum will be very much below that which he would have to pay for garaging his car in a public building.

## Cutting Down Fuel Consumption.

With regard to the question of actual runuing costs, any siving that can be offected in the consumption of fucl is worth close attention. It is not suggested that the new owner should endeavour to re-adjust his carumretter right away with the object of obtaininf inceased econuiny ; in fact, it is more than prohable that if he endeavours to undertake any such super-tuning the last condition will be worse than the first; but he can sce that no unnecessary wasto takes place.

A leaking petrol conncction, for instance, will run away with quite a large amount of fuel in twelve months, besides being a potential source of danger: filling up the petrol tank in a carcless fashion will also account for wastage every time the operation is performed.

A golden rule to remember is always to turn off the petrol when the engine is not running, and this applies particularly when leaving the car on a steeply cambercd road for perhaps ten or fifteen minutes. Toder these conditions, it is quite possible that flood ing will commence, and a great deal of waste wifl occur quite unknown to the driver, who may actually be taking accurate measurements with a view to gaining some idea of his m.p.g.

It is surprising how the little economies effected in the ways suggested can add up until there is a material saving in petrol consumption, and the ownerdriver is adrised not only to follow the tips given but to exercise his ingenuity in other directions where possihle savings may be made.

It is now necessary to revert to a question which has already been touched on. namely, the maintenance of the chassis. Assuming that every part is recciving its proper quota of lubricant. there will remains an important consideration, which is the casy running or otherwise of the chassis as a whoic.

## If the Brakes are Binding.

Choosing a level surface. and with the gear lever in neutral, the driver should discover how much effort is required to push the car along singlehanded. Should it appear to be stiff, the brakes should at once be examined with a view to discover ing whether the shocs are binding even to a rery slight degree. It mar be mentioned that this is not an unusual cause of heary petrol consumption. the constant, if almost insignificant drag occasioned by a lightly touching shoe imposing an extra load on the engine which, over a hig mileage is reflected in increased petrol ennsumption. If the brakes are hinding the fact will be shown by the drums running hot.

Finally: the orner should practise the labit of asking himself whether he is doing everything possible to run his car in the most economical manner. The various phases of running and maintenance should be examined, individua! potential causes of waste being carefully eliminated. The old proverb "lool after the pence and the pounds will look after themselves" can be reconstructed rery faithfully by saying that if the owner-driver looks after the little economies, the bigger economies automatically will be accounted for.

## 1925 Models and Programmes.

## THE 10-20 h.p. BELSIZE.

# ENGINE BORE SLIGHTLY INCREASED-LONGER bodies and sloping screens-real leather UPHOLSTERY. 

THE four-cylinder liclsize car has not been greatly allered for the coming scason, but, owing to the increase of the bore by 3 mm . to 63 mm ., the capacity is :now raised to 1,265 c.c., while the tax is $£ 10$. Th engine is a particularly clean job, with a detachable head carrying the overhead valves, which are operated by enclosed push rods and rockers, which run on roller bearings. Aluminium pistons are used, and the crankshaft is supported by three large bearings and is dynamically balanced. The lubrication is effected by a gearwheel type of pump in the rear of the crankcase, all bearings, as well as the over-head-valve gear, being lubricated under pressure and an adjustable relief ralve und readily detachable filter being con-veniently- housed in the side of the crankcase and sealed by a quickly removable cap. which enables the gavere to be cleaned without the loss of oil. The cooling is thermo-siphou, an aluninium propeller-type belt driven fan being standardized.
The housing of the multiple-dise clutch, wheh is operated by a central spring, wnites the three-speed centrally controlled gearbox with the engine, the wear ratios being $5,8.7$ and 16.2 to 1 on the forward speeds and 21.5 to 1 ou the reverse. An open propeller shaft, equipped with a Hardy disc coupling, takes the power to a spiral-bevel-driven three-quarler floating rear axle of the steel banjo one-piece type, incorporating n large inspection door. Both sets of brakes are mounted at the rear. although front-wheel brakes of the Alford and Alder type can be fitted for an extra £20.
The rear suspension relies on underslung semi-elliptic springs, which are fitted with shock absorbers and enclosed in gaiters, while the front springs are also semi-elliptics, but are provided with special shackles to prevent rocking. Detachable steel wheels are shod with 730 mm . by 130 mm . low-pressure tyres, wl ile the equipment includes a C.A.V. dynamo, which is driven by an adjustable silent clain. a Bosch magneto operated by a flexible coupling from an extended dynamo shaft, five lamps in Flace of three which are fitted this year. and a Zenith carburetter, which is fed from 3 gallon capacity tank housed in the scuttle Grease-gun lubrication is standardized throughout the chassis, he principal dimensions of which are as follow: -Whee! base 8 ft .9 ins., track 4 !t 3 ins., : and weight 12 cwt. 1 qr.
The bodies which are available with this classis have been lengthened, the open tourer having four doors, the usual all-wealher side curtains pegging into the donrs, a sloping screen in which great care has been taken to eliminate 1he possibility of the entrance of water, a neat fold-uj rear footrest, and celluloid lights for the rear quarter. The fiont seat is adjustable and is easily ronirolled by the driver. the tonls bein! carried under this seat, while the C34

> The 10-20 h.p. Belsize with lowpressuretyres has a most imposing head-on appearance.

curtains are stored behind the rear squab. The body is made of 18 -gauge aluminium panelling and is trimmed in real leather, these features being common to all Belsize productions.
The two-seater is filted with a roomy dickey and an off-side door. the side curtains being stored behind the squab and the tools being carried in the fram ing under the eeat.

A two-door coupe is another model which should be very popular in 1925, the off-side window being of the sliding type, while the rear light is operated by a winder. This aryamement facilitates hand signalling, as as sliding window is very easily opened. A capacious double elicliey is also fitted on this car. The makers' address is ' Belsize Motors, Ltd., Clayton, Manchester.

## HAMPTON CARS FOR 1925

TYHE 10 h.p. Hampton for 1925 will 1 be available with a two or fourseater or coupe body, the specification of the chassis being similar in each respect and including a push-rod-operated detachable-headed engine with a bore and stroke of 63 mm . and 100 mm ., the tax being $£ 10$ per annum. The unit is a cleanly designed job, the B.L.I C. magneto being driven by skew gear and facing the off side, so that its contact breaker is easily reached. The Lucas dynamo, which is on the near side of the crankcase, is, like the camshaft, driven by helical gears, a Lucas starter and lamps being standardized, as is a Zenith carburetter
The clutch housing and four-speed
right-hand-controlled gearhox are built in one unit with the ongrine, the clutch being of the leather cone type and alternative ratios being available. The higher set are $4,6.45,9.28$, and 14.96 to 1 on the forwarl speeds and 20.4 to 1 on tho reverse, while the lower set are $4.5,7.25$, 10.44 , and 16.83 to 1 on the forward speeds and 22.35 to 1 on the reverse. The front end of the open propeller shaft is fitted with a fabric universal, while the rear end is similarly equinped and drives a spiral-bevel axle, a notable feature of which is the provision for the removal of the diferential and shafts without disturbing the axle casing. Both diepressed Ferodo lined brakos are fitted on


The Hampton coupe at $£ 350$ is a very attractive car. Two and four-seaters are also available.

1925 . WODEVLS (contd.).
the rear axle, and it is worlh noting that front-wheel brakes can be supplied at oxtra cost. The suspension relics on half-elliptics, the s!ecring column is ad justable for angle, and balloon tyres are available. Tho chassis is lubricated by Tecalemit mpples. its dimensions being: Wheelbase 8 fl .8 ins., track 4 ft ., and approxima:e weight with the addition of a four seater body $16!$ ewt.
The four-seater bodly is a particularly roomy job, the front seat, which is ad justable, being 42 ins. across, and the two doors, both of which are fitied on the near ide, being 2 ft . wide. Elbow rests are fitted in the back seat, behind which the side curtains are stored. These curtains are of the self-supporting type, the front pair being provided with hinged signalling ftips and every panel
incorporating a celluloid winduw, so that the intcrior lighting is very excellent. The leg-roons both in the front and back seat is considerable; a feature which will conmend itself to tall drivers.

The two-seater is $45 \frac{1}{2}$ ins. wide inside the body the side curtains being stored behind the squat, and the toolbox being located under the dickey seat, which is 32 ins. wide and hinges forward to disclose the tools.

Finally there is the fiwo-seater coupe. the body, the side curtains being stored so as to eliminate any drumming of the pancls. The door is 2 ft . wide and the front seat measures 43 ; ins. across. The equipment includes a three panel wind acreen, and the price is $£ 350$. The allweather two-senter costs $£ 295$, while the four-seator is listed at $£ 318$. The makers' address is: 'The Strond Motor Manufacturing Co., Ltd., Stroud, Glos.

## A NEW 10-15 h.p. CALCOTT.

A $1 \frac{1}{2}$-TITRE Calcott chassis, designed A to carry a fult four-seater body or a two-seatir with double dickey, the prices of which nre $£ 275$ and $£ 265$ respectively, has been developed from the $10.5 \mathrm{~h} . \mathrm{p}$. wodel which has been so successful ducing the past few years. The new and :mproved edition has been designed by Mr. L. J Shorter and in corporates in number of retinements and alterations that bring the car right up in date.
Perhaps the most important of these improvements is the fitting of a new cylinder block and detacliable head, which has increased the maximum power to the neighbourhood of $30 \mathrm{~h} . \mathrm{p}$ Other
alterations include the straightening ont of the line of transmission by canting the engine and gearbox, the strengthening of the rear axle and the redesigning of the brake-control gear so as to make it independent of the movement of the axle.

The engrine has a bore and stroke of 85 mm . by 110 mm . the capacity being 1,456 c.c. The valves are inclived, lightened and enlarged, the three-ring pistons are made of alnminium, the machined connecting rods are lightened and the combustion chamber bas been brought up to date with a semi-turbulent and compact head and machined taive cliests.


Hoth the camshaft and crankshaft run on three plain bearings, which are lubricated direct from an oil pump, which is submerged in the five-pint capacity sump. The camshaft is driven by the same silent chain that operates the matneto, the gearwheel that drives the latter beins carried in an adjustable housing to allow for the tensionng of the chain. On the other, or off side, of the unit is found the Lucas dynamotor, which is also drisen by silent chain, and the Zenith carburetter, the latter being boited up direct to the cylinder block and the charge being taken through the casting to the enclosed inlet valves on the near side.
'The engine is slightly sloped so as to reduce the anglo of the transmission, and a cone clutch, which is fitted with a long oilless bash and a ball-bearing withdrawal, is standardized. The cearbox, the ratios of which are 4.33, 8.6 and 14 to 1 on the forward speeds. and 16 to 1 on the reverse, is carried on a sub-frame supported from two crossmembers, a point of interest being the carrying of the gear change-speed lever to the extreme off side of the irame. where it cannot interfere with the conrenience of the drirer.

## Improved Brake Control.

The open propeller shaft carries a fexible joint at its front end, and an mproved sliding metal joint at its rear, where an enlarged and strengthened axie is another new feature. This incorporates an improved method of attachment ior the firal brake-control rods so as to make their action independent of the movement of the axle.
The chassis frame is upswept towards the rear, and the side members are strongly braced by a pressed-steel girder on which rests the rear of the body. A specially shaped cross-member, placed forward of the engine, is used to stifien the front of the frame. Song half-elliptic springs are fitted to both axles.
The frame has been lengthened to 8 ft . 6 ins., while the track remains at 3 ft .9 ins., the extra length making it possible for the chassis to carry a really comfortable four-seater body or even a four-seater three-door saloon, which is arailable for those who require it. The equipment corsists of a 12 -volt Lucas dynamo set, five lamps, 27 -in by $4.4-\mathrm{in}$. balloon tyres, speedometer, clock and bulb horn, the makers being Calcott Bros., Ltd., Coventry.

## The chassis and engine of the $10-15 \mathrm{~h}$. Calcott which figure in these photographs give a good imprestion of the sturdy build of the whole car.



## CYCLECARS-1925.

## LIGHT CARS AND Cy

In the following lists we give the mechanical details, prices and to secure accuracy, of ali the 1925 small cars. The greatest care has omissions. In every case the but we cannot be responsible for errors or our possession have been used. latest available information and pictures
A. B.C.
A.B.C. Motors, Ltd., Walton-on-Thames, Surrey. Pices. ThiB.c. Motors, L225. super sports, £275, Weight: Two


 ralves, air.cooling, lorced-fecd lobriention, Zcnilh earouretter. bureliers fitted to sports model, Lodge pings, Fellons magion, dry-plate clutch
lighting, extra for C.A.V. starter, $£ 15$. Transmission lishting. extra lor C.A.V, starter, fl5. Transmission, dry-pla 6.5, y.̄.
 brake rear wheels hand brake rear wheels. Suspension quarter-elipptics all round Artillery whecls on tro-seater, dise wheels on sports.
Tyres, ballon, 710 mm . by 90 . Dimensions: trooseater, length, $12 \mathrm{it}$. ; Tyres, balloon 710 mm . br 90 . Dimensions: two.seater, length, 12 , 1 .; Standard body colours: grey for twoseater, aluminjum for eports.
A.c.

## A.C. Cars, Ltd., Thames Ditton, Surrey

Prices: Two-seater, Cars, Lid., Thames Ditton, Surrey, £485. Weights. Twoseater, 1415 cwt., coupe, 151,6 cwt. Tax, £ 22 . Engine: Four cylinders, 69 mm . by $100 \mathrm{~mm} .41,496$ c.c., thermosiphon z.Ling, porced-iced Jubricalion, Solex or Clzudel-Aobson carbureller, R.L. Trangs, bigh-tension magneto. C.A. $\nabla$. electri: lighling and etartighthand cbange, 45 ingle-disc clutch. 1hrec-speed searbox on back axie, nand brake, dise on rear of wormshath Suspension, quarter-elliphe ali mand brake, dise on rear of wormshaft Suspension. quarter-elliphe all
round. Diso wheels, low-pressure tsres. Dimensions: Two-scater, lengih $11 \mathrm{it}, 5$ ins., bremdit 4 fl .7 ins. $\Lambda$ pproximate $\operatorname{mon} . \mathrm{B} .35$, tank bolds anven gollone, Body coleurs: Bluc, gyey and riolet. On the $£ 275$ woeater electric starting and lighting is by Lucas and 26 -in, by $\overline{3}$-ja. tyres aro fitted.


The Argyll claims attention by reason of its four-cylinder sleeve-valve engine and excellent general design.
ALVIS.
The Alvis Car and Engincering Co., Ltd, Holyhead Road, Coventry Prics. Two-seater, £550; 1orr-seater, £575; coupc, £650 103 nnm. 1.496 c. Tay, fl2. Engine: Four cslinders, 68 enmoscd fishting and Soler carburetter, B.T.T. Polar Inductor cooling, forced feed Kcarbok, right-band control foot bity cono cluctor magneto. Elicctric Wheels Suspension, senitelliplic all round whear hand brako rear two-seater sports, which has wiro wheeis. The Artillery wheels except on gallons. Immedioterin, tyres). Approximate m.p. Dunlop balloons (eports special colours. ARIEl.
Prices: Full Ariel Works, Lid., Selly Oak, Blermingham. Stand 1 0 cwrater, standard. £198; de luxe, £210 do Juxe. \&235. Occasional ders, 60 mam. by 97 meseater $111 /$ cwt. Tax Weights. Full four-seater forced feed lubrication, Smith 1,097 c.c., side ralves thermine: Four cylinbeto, Lucas lighting set. carburetter, K.L.G. plugs, bigh-iphon cooling, occasional four-seater, Transmission on full fourscater, 412 gighterion mab Tear wheel $82,8.67,1561$ to 1 , shait drive cluteb three-speed extra on Steel artilicry wheclso sear whel. Shatt drive to diferential. Foot brato seater 26 -in. by 3 -in pimes, full lour-seater quarter-clliptic all round breadth 4 ft . 11 ins. Dimensions: Fuli four-seater, leng occasional fourbreadth 4 ft. 10 ins, Approximal four-seater, lencth 10 il. 1 in, lake or dark blue four-seater, light mep.g. 50 ., tank holds ait 10 ins., ARGYLL.

Argylt Motor Co., Ltd., Argyil Works, Bridgat 31 four-seater, $£ 620$, seater, $£ 485$; fnur-senter, 2495 . coun, Glasgow. coupe, 1 ton; Weight: Two-seater, 24 ; coupe, 5575 . cyindere, 68 mm . by 103 m -seater, 22 cwt . cwi .; four-seater, enclosed Eiphon cociog, forerd-leed mm., 1.496 cwt. Tax, sl2 Esenter, I ton; bigh-tension magneto, Brole lubrication, Solex carburelter valyes, thermoC36 C36


One of the few remaining two-cylinder air-cooled cars-the A.B.C.


The A.C., which very rightly is regarded as one of the luxury light cars of 1925.


The Albatros will be exhibited in its latest form at Olympia next week.


Another luxury car with a highly efficient four-cylinder
water-cooled engine, the Alvis, here seen as a luxurious four-seater saloon.

[^1]LIGHT CARS AND CYCLECARS'-1925 (conld.).


The Bayliss - Thomas


## ASHTON EVANS.

Ashton Enginecring Co., Ltd., Floodgate Street, Birmingham.
Price: Two-seater 2285 Weight, $131 / 2 \mathrm{cnt}$. Tax 211 . Engine: four cylinders, 66 mm by 110 mm. 1,498 c.c. side valves, Enermossiphon cooling. forced lubricalion, Cox Atmos carburetler, Sphinx plugs, M.L.
magncto. Brolt starling and lightiog. Transmlesion, cone elutch to magneto Brolt starling and lightiog. Transmlasion, cone elnted to to 1. Open propeller shalt to difierential, foot brako rcar wheels. hand brako rear whecls. Suspension: transvorso $6 p r i n g s$ front and rear.
Artillery whecls, 26 in by $3-1 \pi$, tyres. Dimensions: length. 11 fi. Artillery whecls, 26 in by $3-1 \pi$, tyres. Dimensions: length. 11 fi.
6 ins.; breadth, 4 it. 8 ans. Approximate m.p.s. 40 , tank holds five 6 ins. ; breadth, ${ }^{4}$ it. 8 ans. Approximate m
gallons. Standard body colours: bluc or brey.

## ASTON MARTIN.

## Bomlord and Martin, Ltd., 53, Abingdon Rond, Kensington, W.B.

 Onls chassis is marketed by above conoern. Price, $£ 625$. Weight, 10 cwt. Tax, $f 11$. Engine: Four cylinders, 66.5 mm . by 107 nim., 1,487c.c., side vaives, water cas lighting and slarting. Transmission multiple-dise clutch lo four-speed separate gearbor with right-hand con-trol, $4,52,7.4$ and 14 to 1 . Enclosed 1 ropeller shaft. Lo spiral-bevel

## differential. Foot brako front wheels, hand brake rear wheels. Suspension, m.p.g. 37, tank holds nige Rudse Whitworth rire wheels. Approximsto

 aubea.Concessionmaires, 162, Grosvenor Road, London, S.W.1
Weights: Two-senter, 16 cwt ; four-seater, 17 cwt . Tax, . 211 . Engine: Four cylinders, 65 mm . by 110 mm, , 1,460 c.c., side valves, thermoand lighting. Transmission, four-spes dian-tension magacto. Starting unit construction, shaft to difiercntial. Artllery whecls, 710 mm - by 90 mm tyres. Dimenslons: Two-scater, length 11 it. 8 ins.; fourbeater, ongtu 11 ft .8 lns . Approximate m.p.g. $3 \mathrm{~S}_{3}$, tank holds eight gallons. has been compiled from the laceuracy of the abovo specafication, but it

## AUSTIN

Stand 141
The Austin Motor Co., Ltd., Longbridge Works, Northfield, Birmingham. Prices: Fimily model, £155; sports, £170. Weight, $71 / 2$ ewt. Tax. £8. Engine: Four cylinders, 56 mm by 76 mm , 747.5 cc., aide raves, magneto, C.AV. startiag and lighting. Transmisaion, dry, plate clutch, three-speced unit construction gearbox, $16,9,5$ to 1 , shait drive to pension, transwerso at front, quarter-elliptic at rear, wiro wheels, 26 -ing by b -in, tyres. Dimensions: Length 9 ft. 2 ins, breadth 3 it. 10 ins Approximate m-p.g. 47, tanki holds four gillons. Body colour, grey.

## AUTOCRAT.

Autocrat Light Gar Co., Spring Road, Hall Green, Blemingham
Pricos: Twoesater, 275 guincas: fonr-seater, 295 guineas; coupó,
 guineas, super sports model. 395 guineas. Weight: Two-seater, 16 Thx tiv, tngine: four cylinders, 69 mm. by 100 mm.. 1.496 c.c., ourater. Sphinx pluga, bightension magneto, CA.V. lighting and starting. Transmissfon, cone clutch to four-specd nnit constraction gearbox with right-hand control. 4, 6, 10 and 15 to 1 . Enclosed pro-
peller shaft to differential. foot brake back wheels, band brake back


The Berliet-a remarkable light car of French origin. Wheels. Suspension: by semielliptics all round Artillery or disc Wheels, balloon lyres, Dimensions: length, two-seater, 11 it. 6 ins. Approximate m.p.m. 57 tank holds $7 / 2$ gallona Standard body colour
blue. Delivery 7 to 14 days.
A.V.

## A.V. Motors, 1, Park Road, Teddington.

The A.V. is at present being manufactured to special order only. BAUGHAN.

Baughan Motors, Lower Street, Stroud, Glos.
Prices: Two-senter, £130: super sports, £190. Weight: 6 cwe. Tax £9. Engine: two cylinders, 85 mm. bs 88 mm. . 998 c.c. side valves on two-scater, o.h. valres on super sports, thermo-siphon cooliap, lubri no startor. Thansmission, dry-plate clutch to magneto, electencen ceparate gear box, final chain drive, no differential. foot brake rear axle, hand brake rear axlo. Suspension: quarter-elliplic all round, wire wheels, 700 mm . by $B O \mathrm{~mm}$, tyres. Dimensions: two-seater. length, 11 ft: breadth 4 ft. Guaranteed m.p.g. 60 , tank: holds four gallons. Standard body
finish: polished aluminium. Delivery one month. BAYLISS.THOMAS.

## Stand 58

Bayliss.Thomas and Co., King's Road, Tyseley, Blrmingham.
Prices: Two-senter, £259; four-seater, £259, Weight: Troscater, $141 / \mathrm{cwt}$ ci four-seater, $15 \mathrm{cwt}$. Tax, E11. Engine: Four cylinders, 66 mm . 6 extra), therno-siphon covling, lorced-leed lubrication, Zenith encino fiter, Lodge plugs, ligh-tension magneto. Lucas starting and fighting. Transmission, cone clutch to threc-speed unit-consiruction rear wox with contral control, 5,9 and 18.5 to 1 . Open propeller shaft to diferentinl, Foot round. Artillery wheels, 700 mm. wr 80 mome tyres. Dimensions: Two-sater, length 15 ft . breadth 5 ft . 2 ins.; four-scaler. length 13 ft., breadth 5 ft . 2 ins. Approximate m.p.r. 40 , tank holds 41, gallons. Staydard body colour, blue.

BELSIZE.

## Belsize Motors, Ltd., Clayton, Manchester.

Stand 101
Prices: Two stater, £280; jourseater, £290; couper, £380. Weight: Two-scater, 16 cwt.: Iour-seater and coupe. 17 cwi. Tax, 810 . Eugine: Four cylinders, 63 mm . by $100 \mathrm{~mm} ., 1,265 \mathrm{c} . \mathrm{c}$. orerhead ralves, thermosiphon cooling, forced-feed lubrication, Zenith carburetler, high-rension magneto, C,A.V, sharting and lighting. Transmission, multiplediso elateh 16.2 to 1 , propeller shaft to difierential. Foot brake rear wheels, hand brako rear whecls. Suspension, halfelliptic nll raund. Pressed-steel wherls corofort trres. Dimensions: Two-scater length 11 \&. 9 ins., breadth 4 th. 11 ins.: four-seater. length 11 it, 9 ins., breadth $4 \mathrm{fc}, 11$ ins. Approximato m.p.E. 35 , tank holds $5 \frac{1}{2}$ galloos. Body colours: Grey and blue.

Automoblles M . Berliet, 40, Sachvilie Strect, W.1.
Prices: Four-seater, $£ 305$; threc-loor salion, $£ 395$; cbassig, $£ 295$, Tnx. head ralves, thermo-siphon cooling, solex carburetlet, hisg elutch to unitnelo. Starting and lighting. Tranmiksion, simete-phat Foot brako four construction four-zpeed gearbox Suspension, semi-elliptic all round Dis wheels and comfort tyres, Approximate m.p.g. 40, tank holds six gallons Body colours to choice. Delivers one month.

## BIANCHI.

Stand 90
Bianchi Motors, Lid., 26, St. James's Street, London, S.W.1. Prices: Two-seater, £315; four-seater, £325. Tax, £11. Engine. Four cylinders, 64 mm . by $100 \mathrm{~mm}, 1,500$ c.o., overhead salres, thermo-jphon cooling. Iorad labrication, Zenith carburetter, Pognon plugs, Marelli ragageto. Marolli lighting and starting. Transmission, dryplato dutch, four speeds, right-hand conitol, spiral-berel axic. Erases, clliptic all rouad. Artillers wheels. Superfex balloon cord tyres. Approximate mp.g., 35 . Tank holds elght gallons. Standard body coloure, mole, clarel, grey, blue. Delivery commences Janvary, 1925


BRITISH.

## C. A. Weight, Willenhall Road, Wolverhampton.

Prices: Two-seater 2150 ; sports, 2150 ; chaeris, $£ 135$. Tax, $£ 10$ Encine: Four cylinders, 63 mm by $110 \mathrm{~mm}, 1,373$ c.c., side, valves, magneto, Brolt lighting and starting Transmission, dry-plat Fellows to threc-speed unit construction gearbox writh central control, 4.4 ह 82 , 12.2 to s, shaft to differential, foot brake on tranamission, hand brake rear wheels. Suspension, semp-elliptics alt round Steel spoke wheels
710 mm . by 90 mm . tyres. Dimensions:
 body colour: Bluc. B.S.A.
B.S.A. Co., Ltd., Small Heath, Birminghem.

Stand 207.
Prices;Classis, 2180; two-5eater, E240. Welaht, chassis $101 / 2 \mathrm{cwh}$ That elo. Engine: Twoeylinder 90 -degree, 8975 mm , by 85 mm carburetter, battery and coll ignition, Electriced lubrication, Daimer Transmisgion, two-place cork insert clutch, three.speed ung and lighling gearbox with central control. Foct brake rear hubs, band brakection hubs. Suspension, quarter-elliplic all round. Detachablo diso whe rear Approximate m.pg. 40 .
BUGATTI.
Ettore Bugattl, Molsheim, Alsace, France. Stand 142 Prices: Two or threescater, 2485 : four-searer, 5505 ; coupg, 2600 cylinders, 69 mm . by 100 mm ., 1,496 c.c, Tax, fle. Engine: Four cylinder, cooling ty pump circulation, forced-léed lubrication. Zenth par Jighting and starting. Iransmiesiong, inuliple-diechal and Vaucasson four-bpeed gearbox with right-hand cantrol, $3.4,4.5$, 65 ath to separato Open Ehaft ditierentinl. Foot brake propeller shatt bind 9.1 to 1.
 Two-seater, length $12 \% .4$ ins, beadth 5 mm. ty res. Dimensions
 seven gallons. Body colour to choice. Approximate m.p g. 35, lank holds CALCOTT.

## Calcott Bros., Letd, Coventry




C38


A wizard of high efficiency-the Bugatt1.


A car with a well-known name-the Calthorpe.


The New Carden is one of the cheapest small cars.


Andre Citroen's masterpiece, with English body.

[^2]LIGIT C'ALSS AND C'FCT,ECARS-1925 (contd.).


I o.ed for its sturdy $q$ ralities-the Cluley.


The Clyno is a popular car for all users.


A 60 m.p.h. sporting model-the Crouch.


A French car with a fine turn of speed-the Derby.


The D.F.P. is another lively French "Small four."

## CALTHORPE.

## Calthorpe Motor Co., Bordesley Green, Birmingham.

Prices: Two-seater, £235; four-seater, £235. Weight: Two-seater, 13 cwt ; four-seater, $101 / \mathrm{cwt}$. Tax, 211 . Eapine: Four cylinders. 65 mm . by 100 mm ., 1, 328 c.c., side valves, thermo-siphon cooling: iorced-lecd lubrication, Claudel-Hobson carl,aretter, Lodge plugs, battery to three-speed unit constractios and alarting. Transmission, cone clutcin and 15.5 to 1. Open propeller shaft to dilferential. Foot brake rear wheels, hand brake rear whecls. Suspension, quarter-eiliptics all round Sheel diso wheels. Balloon tyres. Dimensions: Two-seater, length 12 it ., $\mathrm{m} . \mathrm{p} . \mathrm{g} .40$, tank holds $51 / \mathrm{g}$ gillons. 13 ft ., breadth 5 ft . Approximate GEIRANO.

## Ceirano Fabbrlca Autamoblle, Turin, Italy.

Stand 24
Prices: Chassis, $£ 275$; lour-seater, £ 575 ; lour-seater sports, $£ 475$; enclosed tour-seater, f575; front-whee brahes s20 extra. Weight: Four-sealer, 12 cxt. Tax, f11. Engine: Four cylinders, 65 mm . by forcedfeed lubrication, overhead ralres, cooling by pump carculation, starting. Transmission, maltipledisc clutch to unit-construction fourspeed gearbox with central control (direct ratio 4.5 to 1 ) open shaft to dilfercatial Suspension, semi-elliptic all round. Rudge-Whitworth wire wheels. Balloon tyres. Wheclbase 9 ft, track 4 ft 3 ins. Approximat-s m.p.g. 37 , ,
ono month.

## CHARRON.

Charron, Ltd., 7, Rue Ampere, Puteaux, France.
Prices: Two-seater, $£ 210$; four-seater, $£ 225$ : cnclosed four-seater, £252 10 s. ; threeseater clummor, 2215 , Weights: Two-eater, 12 cwt , ;
 siphon cooling, lubrication by splash, Zenith carburecter, Sphinx puras,
high-tension magmeto, Ducelfier lighting, Westingbouse starter. Transmission, leather cone clutch to three-speed eeparate gearbox with central control. $12.66,8.59$ and 4.6 to 1 , shaft drive to aniral bevel differential, foot brake rear whecls, hand brake rear wheeis. Susjension, scmi-olliptio all round Michelin diss wheels and Comport tyres. Dlmen.
sions. Two-seater, lenath 11 ft. 6 ins, breadth 4 it, 5 ins. Inur-seatev, length 11 ft. 10 ins. breadth 4 ft. 4 ins. Approximate m.p.g. 40 , tank holde $41 /$ gallons. Standard body colours: Grey, dark green. dark blue and maroon

## GHARION.LAYGOCK.

W. S. Laycock, Ltd., Victoria Works, Milhouses, Sheffield.

Prices: Two-seater, $£ 425$; four-scater and coupe, $£ 525$; enclosed four£625. Woight: Two-seater, 15 cwt . four-seater, 17 cwt . : coune or 16 cm . enclosed four-geater, 18 cwt Tax e11. Engino: Four cylinders, 65 mm by 110 mm ., $1,460 \mathrm{c} . \mathrm{c}$., side valves, thermo-siphon cooling, forced-feed ubrication, Żenith carburetter, Sphinx plugs, Simma magneto, C.A.V. ighting and starting. Transmission, inverted cone clutch to separate sater ratios $5 \quad 7.611 .4$ igh Open propeller shaft co diferential Foot brake rear wheels, hand brake rear wheels. Suspension, scmi-elliptic all round. Sankey steel artiliery wheek, 710 mm . by 90 mm . tyres fon
 11 ft. 4 ins, breadth 4 ft. 7 ins.; lour seater, length 12 it. 2 ins., breadth 4 ft. 7 ins. Approximate
Standard bods colour: Grey or blue.

## ITROEN.

Citroen Cars, Ltd., Cltroen Building, Brook Green, Hammersmith, W.6.
$7.5 \mathrm{~h} . \mathrm{p}$. Citroen. Priocs: Two-seater, £145: threeseater, £155. counp, £170. Weight, ioprics. Tax, £8. Engine: Four'cylinders, 55 mm . bs $90 \mathrm{~mm}, 855 \mathrm{c} . \mathrm{c}$, side valves, thermo-siphon-cooling, forced-fect lubrication, Solex carburetter, R.B. magoeto, starting and ligbting. T'ransmission, siagle-disc clutch to threespeed centraky controlled unit construction gearbox, propeller shaft to differential. Foot brake tranasDimensions: Length 10 it .9 ins. : breadth 4 ft .5 ins. ipproxinate m.p.g. 40 .

## Stand 23.

11.4 h.p Citroen. Prices: With English body, two-seater, f240; fourseater, e250; coupe, 11 cut. Thx $£ 12$. Engine: Four cylinders, 68 mm. by 100 mm., 1,453 c.c, side ralres, thermo-siphon cooling, forced-iced lubricalion, high-tension magneto. Starting and lighting. Transmission, single dryfropeller shaft to difierential. Foot brake transmission, band hrake rear Propeller shaft to diticential. Foot brake transmission, hand hrake rear hubs. Michelin dise whecla with comiort tyres. 37 , tank holds $5 \%$ gallons.

## CLEMENT-TALBOT

stand 100.
Clement-Talbot, Ltd., Barlby Road, North Kensingtan, w. 10.
 £400; enclosed four-seater, 1465 . Neight: Two-seater, $16 \mathrm{cwL}:$ fourf9 Encinc. Four cvinders, 60 mm . by 95 mm . 1.073 c.c., overhead ralves, water circulation by pump, forced-feed lubrication, Claudel-Hobson valres, water circulationgs, Delco Remy battery and coil ignition. Rotax lighting and starting. Transmission, dry-plate clutch to three-speed unit anstruction gearbox with a centrifterential. Foot brake back wheels. hand brake back wheels. Suspension, quarterelliptic all round. Steel nrifilery wheels, balioon tyres. Dimensions: Two-seater, length 12 ft . 6 ins, breadth 4 ft .11 ins.: four-seatcr. length 15 ft. 4 ins. breadih 5 it 2 ins. Approximate m.p.g. $3 \mathrm{~S}_{1}$ tank holds $61 / \mathrm{L}$ gallons. Slandard body colours: Blut and grey. The $8-18 \mathrm{~h}$ p. moded bas an engine 57 mm ,
 14 cwt nim by 80 mm . Dimensions: L Lingth 11 tit 1 in, in breadth 4 ft. 10 ins. Approximate m.p.g. $\overline{5} 2$. Body colours: Blue and wine.
GLULEY.
Clarke, Gluley and Co., Gicbe Works, Well Street, Coventry.
 65 mm. by 110 rma., 1,460 c.c. side ralres, thermosiphon cooling. forcox med by iubrication. Solex carburctter, Lodge plugs, M.L. magacro forcoshelighting and starting. Transmission, Ferodo-lined cone ctureh to three-siced unit construction certraly controlled nearbox, 15,8 and hand brako rear whels. Suspension, front semi-elliplic, rear undersluns seml-elliptic. Steel wheels, balloou tires. Dimensions: Two-senter, length 11 it. 3 ins., breadth 4 ft. 8 las. Approximate m.p.g. 35 , tank holds 51/2́ gallons. Body colour: Blue or gres.


Speedy and comfortable-the $10-22$ h.p. Eric-Campbell.


The latest G.N with four-cylinder engine.


The only friction-driven four-cylinder car-the G.W.K.


The Gwynne Eight is a world-famous " small four."
 ballons, Body colours io chice Approximate m.p.g.: 35. Tank bolds 4
 ylinders, 60 mm by 95 mm ., 1.074 ct , 265 Tax, 29 . Fingine; Four olea carburetter, Suspension at ce, 45 . FIAT.

Prices: Two-seater Fiat, Turin, Italy.
 Four cylinders, 65 mm . by 110 mm ., $1,460 \mathrm{cmt}$. Tax, \&il. Engine:

"I am not going to Olympia this year."
I don't have to. But my colleagues will be there.
After you have seen-if you can gel through the crush - the Talbot Exhibit, drive to Bond Street and
 see it in comfort.
Come in your old car-there is a Parking Place and the Police wont shift you. We will make you an allowance-offer for it then and there, and you can proudly drive away in a new Talbot.
My Pay-as-you-Ride scheme is in full blast, and is at your disposal.
Make up your mind to have a real motor car for next season. You will find it an economy in the end.


Woruride Wnijftedted 150, NEW BOND STREET, LONDON. W.I. Telegrams:"Salsundar, Phone, London"
Telephone: Mayfair 2904
 small and lightefficient, dustproof, and waterproof.

THE BRITISH LIGHTING \& IGNition C0., LTD. CHESTON ROPrietors : Vickers Limited) London Deckmag, Phone, Birraioghanco" ASON, BIRMINGHAM.

EXHIBITING, Londog."
October 17 to 25 Motor Show, OLYMPIA STAND NO. $\mathbf{2 5 9}$

LIGIIT CARS $A N D$ CYCLLECARS-1925 (contd.). eirculation by pump for radtood labrication, Fint carburetere, tivh.tension






Built where hills abound-the Hampton.


The hands is a really ligh-class light car production


A popular three-wheeled runabout-the Harper.


The Hodgson has performed well in competition.


One of the pioneer light cars-the Horstman.
F.N. (England), Ltd., Kimberley Road, Willesden Land 94

Prices: Two-seater, 2375 . Kimberley Road, Willesden Lane, N.W. 6. Ergine: Four cylinders, 65 mm , by 100 mm ; 10 , 327 2480. TaI, 211, thermo-siphon cooling, forced-lecd labrication, Solex cerburetier, Cham, Dinn plugs, Bosch magneto, Bosch lighting and slarting Tragsmission Dry-plato clateh to three-specd nail-conslmuction searbor with ceniral controd. Top gear ratio, $41 /$ to 1 . Open propeller shaft to spiral-berc 760 mm . by 90 brake all four whecels, hand brake all four wheels, with
 red or Fionch grey.

## FRAZER-NASH.

Frazer-Nash, Ltd., 102, London Road, Kingston-on-Thames.
Prices: 'Pwo-seater, £275; Uhrec-lour-seater. $£ 290$; two-seater super 11 cw thax, £12 Engine: Four cylinders, 69 mm. by 100 min. 1,496 c.c., o.h. valves, thermo-siphon cooling. larced-fecd lubrication. Solex carburcter, K.L.G. plogs, B.L.1.C. magneto, C.A.V starting and bovel box threc-speed sliding dog lype change-speed mechanism, yatio 3.5. 5.4 and 11.6 to 1. Final drive by chains, no dificrontial Foot brake ofs-side rear hub, hand brake near side rear hull. Susponsion. Quarter-elliplic all roond. Rudge-Whilworth wira whecls with 26 -in by 2 ins.; lour-senter, length 11 it. 10 ins., breadth 4 it .2 ing. dpproxi mate m.p.g., 40 Tank holds 4 gallons. Standard iody finish, polished aluminium Delivery 10 dass from oider

## G.B. THREE-WHEELER.

Prices: Cearges bats, 6, Witon Mews, Sol 145 sealer, 550 ll . Tax, 44 Engine. Two cylinders, 75 mm , by 78 mm. 688 c.c., side ralves, air-cooling Cox-Atmos carbaretter, Lodge yugs, high-tension magneto, electric ligering handle start, Transmission, twotransmission, haud brake on rear wheels. Suspension, front Brampton, rear half-elliptice. Dimensions. Length 7 it. 6 ins., breadith 4 it. Ap proximate map. 55 , tank hoids $21 / 4$ gallons. Stíndard body colonr ohamois.

## GIBBONS.

E. R. Gibbons, Station Road, Chadwell Heath.
 Werght, 340 lb Tax, ${ }^{2} 7$. Engine. Two cylunders, 75 mm . by 78 mm . carburelter, Lodge plugs, ML magneto. band starler. gas lightiag Transmission by chain and bolt whi disc clatch. Suspension: Col springs Front and rear. Avon lyres, 26 ins. by $21 / 2$ ins. on wire wheels Tank holds $21 / 5$ gallons. Delipery in 14 days.
G.N
G.N., Ltd., East Hill, Wandsworth, London. S.W. 18 Prices: Standard two-seater, f250; four-seater, £268; sports twoTax, $£ 12$. Engine: Four cylinders, 69 mm by 100 mm .1 .496 c c... sido valves, thermo-siphon cooling, lorced lubrication, Zenith carburetter, magnoto ignition, Miller dsnamo lighling. Starter, $£ 15$ extra. Transmission: Single-plale clutch, Ehat bevel and inal chain, giring three 1. Brakes, foot and hand on back hinbs. Suspension- Quarter-elliptics all round. Wire wheels, 26 ins. by 3 ins. Dimensions: 11 it. 2 ins. by 4 ft .6 ing. ithe lour-seater is 6 ins. 0 gger. Approximste m.p.g., 40. Tank holds jiver fallons. Standar.

## G.W.K.

C.W.K, Ltd., Cardwaltes Works Maidenhead, Berks

Stand 37
 de luse, $£ 2055$; two-seater fil. Engine: Four cylinders, 66 mm. by 100 mun. 1,368 c.c., side valves, thermo-siphon cooling, lorced-leed lubrication, Zenith carbaretter, A.C. Sphinx plugg high-tension magneto, C.A.V. lighting and starting on
 specds. Final drive by reduction gear and differential Foot brako sear wheel, hand brake transmission Front-wheel brakes fil extra. Suspenion: Quarterelliptic all round Wire wheela with balloon tyres cin de Iuxe models. Dimensions. Two-seater, length 12 It. 1 in , breadth 4 it. 9 ins. : lour-senter, length 12 ft. 4 ins., breadih 4 ft. 9 ins. Ap-
proximate m.p.e., 37 . Tank holds 5 gallons. Standard body colour, grey.

## GWYNNE 8.

Gwynnes Engineering co., Ltd., Church Whart, Chiswick, London, W. A. Prices: Two-se3tor, $2225 \mathrm{i}_{\mathrm{i}}$ Iour-seater, £235; sports, f275. Weight: Fur-6eat 950 armend valpes, thermo-siphon conling forced labrication S.U. carburotter, K L_G plags, Fellowa magneto. C. A.V lighting and starting. Transmission: Cone clutch, cantral control gearbox on front of torque tube. spiral-bevel axle. Gear ratios, 4.83 .9 .15 and 14.25 to 1 :
 sions. Length, 10 ft. 3 ins: breadth, 4 ft .5 ins. clearance, $81 / 2$ ins. Approximate mp.g., 50 . Trant hold's 4 gallons. Choicz of six body calours. Immediata delivery.:
HAMPTON. Siand 61
Prices: Two-senter, £275; four-seater, £298; coupe, 330 . Weight.
 t10. Encine: Four cylinders, 63 mm by 100 mm , 1.247 e.c, oh. ralves, thermo-siphon cooling, forced-led iubricalion, Zonith earburetter, KL,G Dlugs, hightonsion magaeto, Lucas urhting and startigg rigsmand control Foot brake rear whel. hand brake rear wheel. Fourhand control Foot extra, Suspension: Half-elliptice all round. Pressedsteel artillery wheels with 710 mm , by 90 mm , tyres. Dimensions: Two-
seater, length 12 It , breadth 5 it ; Iour-seater, length 12 ft , breadth 5 it leaproximate m.p.g.; 35 . Iank holds 7 gallons. Standard body colours. red, blue or grey.

## HARPER THREE-WHEELER.

R. O. Harper, Ashbourne Grove, Higher Eroughton, Manchester Price, 77 guineas. Weight, 290 lb. Tax, E4 Eagine: Two-crlinder twostroke, 70 mm . by 70 mm .269 c.e., air cooling, petral hand siarter Transmission, Ferodo diso elutch, three forward specds. 4.2, 7.3. 12.04, gear lever on right, Ninal drivo by chain, no differential loot brake sicel diso and Ferodo, hand brake ditto. Suspension, quarter-ellinties all round Detachnble wheels Dimensionk hengwe palions Approximate mpg. 50 , tank holds two gallons. has been compiled from the latest information in ou: possession.


The Humber Eight with a most attractive saloon body. It is a very high-grade production.


One of England's sturdiest cars-and a two-cylinder at that -the famous Jowett in four-seater form. Weices: ino-seater, $£ 240$; chummy, $£ 240$; threc-scater saloon, 2290 , saloon $12^{11}$ ewt Tax $£ 8$. Engino: Four cylinders, 56 mom. by 100 mim., 985 c.c., orerhead inlet valves, thermo-siphon conling. forced leed lubrication Cos atmos carburetter, Hobson plugs, high-tengion manacto (battery by special order), lighting and starting by Lucas
 peller shaft to spiral bevel dalierential. Foot brake transmission. band brakn rear wheels. Suepension. Front, balf-elliptirs, rear. hall-elifptics. Artillery wheles with 700 man. by 80 mm . tyres. Dimenslons: Two and
 m.p.E. 40, tank

$$
\begin{aligned}
& \text { IMPERIA. G. Nicholl, Ltd., 50, Whitcomb Street, London, W.C. } \\
& \text { Prices: Chassis £295; two-seater, £ } \mathbf{f 7 5} \text {; four-door saloon, } £ 460 \text {; } \\
& \text { other models, thirec-quarter coupd and four-seater all-weather, prlces not } \\
& \text { thermo-siphon cooling, loreed-leed lubrication, 51, } 67,10,2 \text { and } 204 \\
& \text { to 1. Bosch magneto. Bosch lighting and starting. Trangmission, single } \\
& \text { disc clutch to unit constroction lour-sneed gearbox with central control, } \\
& \text { shaft to difterential. Foot brake actuates Serro motor bechnd gearbox, } \\
& \text { applying brakes to all lour wheels, hand brake rear wheels, Suspension, } \\
& \text { proximale m.p.b. 45, tank holds } 100 \text { gallons with Conifort tyres. Ap }
\end{aligned}
$$ JEWEL.

## John E. Wood, Bowland Street, Bradtord

Prices: Two-seater $£ 235$; iour-seater, $£ 245$; coupé, $£ 275$; onclosed f10. Eagine: Four cylinders, 63 mm , 100 cmt, and 18 owt. Tax Kalves, zermo-siphon cooling, loreed lubrication Zenith carburecter
 Sion: Inverted cone clutch, central contrul unit geal box, ratos 4.3, 8 and

 11 ins.. breadrh 4 ft .7 fos.; four-seater, length 12 seater, length 11 ft
 JOWETT.

Jowett Cars, Ltd., Bradiord Road, Idie, Bradtord.
Stand 40
 8,2 cwt. ifar-scater, 10 cwt.; light four-seater, $91 / \mathrm{cwt}$ Toseater, 907 c.a, Eido ralses, horizontally opposed 75.4 mm . by 101.5 mm . Zenith carburetter, A.C. Sphinx plugs, bating. forced iecd lubrication, or Brolt electrle lighting, starter sion battery and coil ignition, Lucas cono clutch to threespecd unst construction pearbox sispion, external luraze iransmission, band brake 7 , propeller shaft to differential. Foot elliptics all round, band brake rear wheel drumbs. Suspentian. Foot Dimensions: Two-senter, longth. 9 ft. 10 ing bithas. by 65 mm . tyres. seater, length 12 ft ., breadth 4 ft .5 ins.; light 10 ingth 4 it 5 ins. : four-
 ballons. Standard body colours: Blue or chummy 38, tank holdse six LAGONDA.

Lagonda, Led., 1, The Causeway, Staines Midedestand 87 1'rices: Two-stater, $\propto 295$. wrather Ealoon, £365: Ealoon, £370. Werghts: Two-seatpe, £330; all-
 thermosiphod cooling, with fomm. 1,420 c.c., overhead inlct Eggine:
 conission, dry plate clutrh to three-speed lighting and staring tial. Foot brake 8.8 and 165 to 1 . Shaft to spiran gearbox wilth iron transrerse, rear aunctereli, hand braku rear whiral bevel ditterenby 90 mma. tyres, Dimensions: Pressed steel wheels, Suspension, 12 it 3 it 9 ins.: salnon tourscaterater and coupe. Wenct 710 mm . 12 It. 3 ins. breadih 5 st. 1 in foucater and all-weather 32 long 12 ft., C46 Standard body colour: Fanb,


Light car comfort par excellence and a fine road performance are features of the Lagonda cars.


The car that made history in the R.A.C. Small Car Trials the Lea-Francis.


Fitted with a remarkably efficient "small four" engine, the McKenzie is a delightful car to drive.

# RECORDS BROKEN at Holme Moss 

"the classic northern hill climb"


27th September, 1924
Unlimited record for hili (beating old record by $5_{5}^{\frac{t}{5}}$ secs.) Mr. Raymond Mays on T.T. Vauxhall.

## Light Car record for hill (beating old unlimited record by

Mr. Raymond Mays on 1496 c.c. Bugatti.
Mr. Mays used Lodge plugs on both cars.


Mr. Raymond Mays skilfully corrects a skid on his record-braaking Bugatti. (The Motor"photograph)


## Thede TripleX Soggled sowed her sight



Triplex Goggles are supplied by all garages, opticians, stores, ctc. Prices: 8/6, 12/6, 15/-, 21/- and 25/-. Aviation Mask, 42/-. Anti-glare, anti-dazzle tints $1 /-$ per pairextra.

Miss Marjorie Coltle in her wonderful 3,404 miles round the coast of Britainon her Raleigh unfortunately met with an accident which but for Triplex Goggles would have been disastrous.
Miss Cottle was thrown over the handlebars on to her head and her goggles, which we reproduce herewith, uncoubtedly saved her sight. Miss Cotile asserts that she will never think of having any other than Triplex Goggles in future. Miss Cottle finallv won the premier a ward and Gold Medal.
Insnect TRIPLEX Gnghlex and klass at STAND
33, Motor Show 33, Motor Show, OLYMPIA Oct. 17-25. Demonitrations chewing sup riority of TRIPLEX
over wired and nlate ciss over wired and nlate gl.sss, at periods daily.

THE TRIPLEX SAFETY GLASS CO., LTD., 1, Albemarle Street, Piccadilly, LOVDON, W.1.

LIGHT CARS AND CYCLECARS-1925 (contd.).


The Marseal can now be obtained with four-wheel brakes.


Another popular " small four "-the Mathis.


## LEA-FRANCIS.

Stand 52
Lea-Francis, Ltd., Lower Ford Street, Coventry.
Prices: 'Two-seater, £270; tour-ecater, £285: coups, f325; encloeed four-sealer, £s65. Welght: Two-sealer and lour-scater, 15 cent. Tax, hend valves, fhermi cylinders, 63 mm . by $100 \mathrm{~mm} .1,247$ c.c., overbend valves, Chermo-siphon coolini.. loreed feed lubrication Zenith car starting. Transmission, inverted conc clutch to four-sped unit an struction gearbox with rizht-hand control. 4.7, 7.56, 1.2 and 18.8 to 1, open propeller shatt to differential. Suspenston, front semi-elliptics, rear sema-clliptics. Disc rheels, balloon lyres Dimensions: Two-gcaicr,
 standard bedy colours: Crionson-lake, saxe-blue, molengres. MoKENZIE.

## Stand 25

McKenzle Motors, Ltd, Bath Passage, Birmingham.
$9 \mathrm{h.p}$. model. Price: four-scater, £170. Weiaht, $151 \neq \mathrm{cwt}$. Tax, £9. Engine: Four cylinders, 60 mm . by 95 mm , 1 , 074 c.c., overhcad ralves, thermo-sinhon cooling, forced fed lubrication, Solex carbureter, A. ${ }^{\prime}$ '.
Sphinx plugs, high-tension manneto electric lighting, starting Sphinx plugs, high-tension maøneto electric lighting, starting elo extra, Lransmission, cone clutch to threc-speed unit construction gear-
box with central control, 4. $, 7.8,14.6$ to 1 . Open propelfer shaf, no differential. Foot brake rear wheels. hand brake pear whechs sus.
 tyres. 'Dimensions: Length 11 ft . 6 ins., breadth 4 ft. 8 ins. Approxiwato m.p.g. 45 , tank holds $41 \%$ gallons Sandard body colour: Blue. cJ50. Weight: Twoseater, $151 / 4 \mathrm{cwt}$. lour-scater, $16 \mathrm{cwt}$. ; coupe . 16 cwt . Tax $\mathcal{L} 11$. Enrinc: Four cylinders, 66 mm . by 109.5 mm ., 1,498 c.c., side valves thermo-sinhon cooling, forced feed lubrication, A. O. 日phinx plugs, high-tension magneto, lighting and starting. Trans. hand contral, 4.6.8, 15.5 tc 1 . Upen propeller shaft to differential. Foot brake rear wheel, hand brake rear wheel, Suspension, semi-elliptic all round. Artillery wheels with $28-i n$. $b_{7} 3 \nu$-in. trres. Dimensions: Two-senter, length 11 it. 6 ins., breadlh 5 tt. Four-seater, lergth

## MARSEAL

Marseal Motars, Led. At!antic Works, Coventry.
 sparts £250, coupe $£ 275$. Engine: 11-27 h.p. model: Four cylinders, 63 mm by 100 mm ., 1.246 c.c., side valves. thermo-siplion cooling, forced led

 cone clutch to threegseed gearbox. 4.5, 7.3 and 14 to 1 enclosed
 sions: Wheelbage, 8 ft. 6 ins., track, 4 ft. Approximate map.g. of
$11.27 \mathrm{~h} . \mathrm{p}$, model, 47 : $12-40 \mathrm{~h} . \mathrm{p}$. model, 45 Tank holds fire gallong.

## MATCHLESS.

H. Collier and Sons, Ltd., $4 \mathbf{A}_{1}$ S. Plumstead Road, Plamstead, London,
 Two cylinders (borizontall, 89 mm . by 102 min. 1.261 c.c., overhead Lucas lifheong, gearbox. contral control: ratios $5.25,8.92$ and 16.59 to 1 , reverse 21.79 19 1. Both brakes on all four whecls. Suspension: Front. transverse cantilever, rear, onarter-olliptic. Wire wheels. 29 ins by $31 / 2$ ins. Dimen-
 Tank holds 4 gallone. Body colour, Maichless grey.
MATHIS.
Mathis, 200, Route de Colmar, Strasbourg.
9 h.p. Chassis Engine: Four rylinders, 60 mm by 88 mm 995 . thermosshon cooling, forced leed lubrication, high-tension magneto electric lighting and starting. Transmission, four-speed anit construction gearbox with central control. Shaft drive to differential, brakes on reas Wheels Snspension. semi-elliptic all round. Michelin disc wheels and 11 h.p. type. Engine: Six cplinders, 55 mm . bs $80 \mathrm{~mm} ., 1.140 \mathrm{c} . \mathrm{c}$., $\mathfrak{a n d}$ similar specifention. Six cylinders, 60 mm . ig $70 \mathrm{~mm} .1,187$ e.c., with overbead valves and water circulation by pump.
MORGAN.

## The Morgan Motor Co., Ltd., Malvern Link.

Tax, £4. Engive: Eifher two-cylinder waler-cooled or twoeylinder airing. starler extra. Transmission, lealher cona clutch to bevel bux. thence by two-speed dog-change mechanism and two chains, right-hand control. Suspension, front helicil rear quartereeliptic. Wre wheels Dimensions: Two-seater, length Purblasers ar

## NEW CARDEN

Arnott and Harrison, Lid., 22, Hythe Road, Willesden, London, N.W.10.
Prices: Two-seater e90. four-scatc f120. Weights: Two-seact owt.: four-seater, 6 cwt. Tax, 27 Engine: Two cylinders, two-stroke. 75 mm . bs 80 mm. $707 \mathrm{c.c}$, air coolnge, petron lubrication, Zenith carburetter, K. G. plags, hightonsion mizgreto on two seater, Magdyno on tour-seater, electrio accessories on tro-seater, dynamo lighting on fourseater, mechanical starter. speed unit-construction gearbox brake rear wheels. Suspension: Frout. halical on two-seater, semi-clliplic on four-seater, rear quarterelfiptic on
hoth models. Wire mheels on two-seater. dise wheels on lour-sea both models. Wire wheels on two-scater, dise wheels on loar-ses!nr.
700 mm . br 80 mm . tyres. Dimensions: Two-senter, leggih 9 ft. 6 ins. 700 mm , br 80 mm. tyres. lengil 10 it., breadth $\frac{\mathrm{ft}}{\mathrm{j}} \mathrm{ft} 9$ ins. Approximate mn.g., 50. Tank holds 4 gallons. Body coloers: Two-seater, prmrose aod black: four-seater. saxu blue and black.

Stand 24
Newton and Bennett, Litd., 46, Knightsbridge, S.W.
Price: Two-seater coupe $£ 575$. Prices of addicional modela on application. Weight. 10 cnt Tax, E9. Engine: Four cylinders, 60 mm , by
 by overhead system, Cladel-hobson carburether, K. .ig. pluss, Marelt strmetion qearbox, with cencral concrol, 4.27, 6.2 .8 .97 and 14.1101 . shalt to diflerential, fool and band brake. Suspension, semi-clliptics all round. Rudge-Whitworth wire wheels, with 710 mm . by 90 mm . tyrej Dimensions: Lenglh, 12 ft .: breadth, it 4 in. 9 ins. Approrimate m.n.g.
45 . Tank holds 10 gallons. Delirery in one month.


The lates: model of the Sports Rhode.


Another example of the high-class sporing model. This is the well-known Riley.


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A prototype of the more familiar $8 \mathrm{~h} . \mathrm{p}$. Salmson-the $10-15 \mathrm{~h} . \mathrm{p}$. four-seater.


The Seabrook, with frontwheel brakes and Comfort tyres
 The Roper 8 , is simimhld in 5 gallons, Standard breadth 5 it. ApproxiWoon, $£ 214$. Wrices: Two-seater, 160 . ${ }^{\text {to }}$ the nivore, with tho follow Woynamm snloon 12 t T wo-scaler. 101 , lourseater, 2160 ; Weymann

 Dimensious: Four seater, leogth' 11 it extra. fyres, 26 ings. by 3 ing.
 Rates for any car filted with "RECTASKID," and all such insurances must be effected direct with the manufacturers of "RECTASKID" by application to their Registered Offices, and are subject to a satisfactory proposal form.

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C.S.T. 4 ,, , $59 \times 100$
(Overhead Valves)
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 9 cwi.: coupe, 10 cwt. Tax 40 . Engine: Four cylirders, 62 mis
An ultra-successful


The front-wheel driven Stanhope saloon.


The Surrey, a speedy and comfortable roadster.
by 90 mm ., 1,087 c.c. o.b. valres, thermo-aiphan couliag, purcet-leed lunrieation, Zenith carburetter. Indge plugs. Salmion magneto. Nacel
lier ligbting und starting. Transmissiou, cone clatch to three-apeai nnit conseruction goarbox with central control, 4. 8 nud 16 to 1 , sbats etrire no differential, fout brake rear whetlo, hand brake rear whecle. Sias:


 colours: Apryroun and buee.

## SCOTT SOCIABLE

Scott Autoear Co., Clayton Road, Lidget Grean, Bradtord, Yarks Price: Double-dickey model, $£ 120$. Weight, aproaximazely, 6 owt Tax, pump, petroil lubrication, hightension magneto, meckanical siarter. electric lighting. Transmasion, combincd cone nad expanding ring clutch to thrce-speod unit conatruction gearbox with righthand contrul. 4.8. 8.8 and 16.7 lo 1, "piral berci drive lo one rear ruad wheol. Fuot brake
band in rear hub, band brako dito. Suspension, front helical, rear band in rear hub band brako dirto. Suspension. front helical rear niots: Lenglh 8 th 9 ins, breadth 4 ft .7 ins. inpproximate miles per sellon 50, isnk boids $21 / 2$ gallons.
Wo cennut kuranter the accuracy of the nbove apecification, bat it
has been compiled from tho latest information in our possestion.
SEABROOK.
Stand 136
Prices: Twn-seater, £295; lour-seater, £325; collpe. \&398; enclonal four-scater with front-wheel brakes, 2415. Weight: Two-seater, 16 cwt . $100 \mathrm{~mm} .1,496$ c.c. o.h. valren thermosiphon cooling, iplash labrica tion, Zenth carbureticr, K.I.G. plugs. B.T.II. magnete. CA.V. lishting and starting. Transmiasion, internal cone clatrh to three-speed unil
constraction gearbox with right-hand control, $4 \frac{1}{2}, ~ 7 \%$ and 15 , 1. Fanclosed propeller shait to differential. foot brako rear wheels, baud
 $9 \mathrm{ins}$. breadth. 4 ft .10 ins . fuar-seater, length 13 ft .4 ins., breadth
 Addtcionni model ocramional four-seater, engive. 63 mm bs 100 mm .
Tax $£ 10$. Price $£ 250$.

## SENECHAL.

Chenard and Walcker, Gennevilliers, near Pards Stand 48
Prices: Threcsenter, 2185 : super sports, f195. Weight: ehreo
 57 min. bv 95 mam. 972 c.c. o.h. valves thermo-siphon cooling. forcedfeed lubrication, Zenith carburetler. high-tension magneto. Dacelline
lighting and starting. Trassmissioa, singledise clurth ruisning in' ui to tharcesped mit constrmction gcarbax with central control shaft drive, no differential, foot brake rear wheels, hand brake rear wheek. Suspeasion. frone tranaverac, rear, doubla quarter-elliptic, Wiro whecls Vimensions three-senter. length 10 ft., brearth 4 ft. 3 ing. Approxi mate mp-a 45 . cank bolda five gallons. Standard body coiouss ined SHERET
Arnott and Harrison, Ltd., 22 Hythe Raad. Willesden, Landon, N.W. 10

 and lighting, kick-starter. Transmission. Eingle-plate. dry-clutch onontershaft, three-speed dogtype gear change mechanismi. $4 y, 7$ and 13 to 1. ©nal drive by chaina, No dillerential Both biakes on rear Whecs. Suspension: quarier-elliptic all round. Disc whecls, 700 mm by 80 mm . tsres. Dimenrions length. 10 ft .6 ing hreadth. 4 it SINGER. Stand 209
Pricas not set Oinger and Ca.. Litd., Coventry. Wight: four-aeater, 16 crit. Tax fio. Engine: fonr cytindera, 63 mm by 105 mm . 1 , 308 c c.c. oh. ralres, plugs. H.s.if. magneto, Rotax lighting and starting. Tranamission. ary-plato clutch to thraespeed unit construction gearbox, with right hand control. 4.54 .9 .44 and 15.6 ta 1 Open propeller shalt is differcntial. loat brake rear whecla, band brake rear wheels. Suspen-
Glon front, quarterelliptica all round. Disca wheela, balloon tyres. Gion. front, quarterelliptica all round. Disca wheela, balleon tyres. mato $\mathrm{mp.g} 40$. tank holda $6 \frac{1}{1}$ gallons. Standsrd body coloura: ixoceater. dark grey; four-acater. popular dart gres; coups. Light blue; aloon, maroon; four-seater de luxe, smoked biue.
STANDARD.
Stand 211
Prices: Two-seater 2235. lour-grater $£ 335$. enclest iouracater 275. Weight: two-seater. $141 / 3 \mathrm{cwi}$.: four-seater. 15 cwi .: euclome on-acater. 16 cwt. Tax $e 12$. Fingine: four cylinders, 68 mm . by
 splash ZEnith carbirettrr. Lodge plugs, higb-tension anagneto, Lucan gearbox on torque tube with right-hand control, 4.6 .8 .7 and 20 ta 1 ginal drive to difierential by noderslung warm. toot brake rear wheela hand brake rear sheela. - Suspension: quarterelliptira all ruund Artillers wheels. Donlop low-pressure tyrea. Approxi:nate m.p.g. 35 ,
tank bolda tive gallons. Standard body coloar: fatin.

## STANHOPE

Stanhepe Bras., 119, Burley Road, Leads
Prices: Two-seater, s200; four-seater, 2235 ; sporis. 5235 . Weight Two-seater, $10 \mathrm{cwt}$. four-heatcr. Il cwt . Tax, 29 Engine: Two cylin ders, $85 \mathrm{ram}$. by $97 \mathrm{~mm}, 1.098$ c.c., oh Falves thermo-sphon cooling. lubrieation Transplesh. Solex carboretter, dry-piate cintch to threespied unit construction earbor with right-band control, 46. 6 and 21.5 wo 1 , grontwheel dite by chains. loot banke reat whecls, haad bake iront whees. Suspension. iront taniverse, rea- aplaycd cantilever. Diso theels 710 mm by
 seater-length, 11 it: breadet, 5 it. 6 ins. Approsimate m.p.g. ${ }^{47}$.
Tank ho!da four ga!!ons. Body coloui to chsice. Wellrery, three monibs.
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## LIGMT CARS AND CYC'LEC'ARS—1925 (contd.)

## sTRAKER-SQUIRE.

 Stand 126Straker-Squire, Ltd., Angel Road Works, Edmonton, London, N. 18. गrices: Two acater, £330; four-geater, £350; coupo, s430. Weight:
 Thermo-siphon cooling. forced-feeri lubrication. Solex" carburetter, Aon, inverted cone clutch wo four-sperd unitognstruckion gearbox with sion, inverted cone clutch to fur-specd unit-mnstruction gearbox with tial, loot brake rear whicla, hand brake rear whecle. Suspenaion acmidilptics au round Artillery whecls. 760 mm . by 90 mm . Wires. inimen
 lirndth, 5 ft . Approwmate mpg. 34. Tank holds six gallons. Standard
lods colour, blue.

## EURREY.

Tho Surrey Service, Ltd, Premier Place, High St., Putney, London, S W
 Fingine: Four cylindora, 66 mm by 100 mm . sule valves. thermensiphon eonling, lorecd-feed lubrication, Zenith carburetter, K.L.G. plugs, B.T. $\mathbf{H}$ makncio. Lucea or C.A.V. atarting and lighting. Tranamiasion, cono control, 4, $7.8,8.7,15.5$ to 1, shaft to diterential. Foot bralio rear Wherls, band brako rear wheels. Susneasion, quarier-elliptica all round. Mithelin diso whoplu, 700 mm by 80 mm tyros. Dimensions. Two eeater, length 11 fl., breadth $4 \mathrm{ft} .8 \mathrm{ins}$. Agproximate mpg. 38 , Lank SWIFT.

Stand 211
Fices: Two-ecater and four-acatcr, £235. Tax f9. Engine: four cylinderi, 60 mm. by 97 mm 1.097 c.c. eide valves, thermo-iphou roaing, orced-fead lubrication. Solez carburctler. blab-tension magneto. ecparate kearbox with right-band control. 5. 8.6 and 18 to 1. open cardan shatt tn differential, Ion brate rear whecl, hand brake rear whel. Suapenaion: quarter-clhptica all round, diao whech, batioos
tyrea. Approximate m.p.g. 43 , Lank holda fire gallona.
TALEOT-SIMMINS.
Simming Garages (Winchcseer), Led., Winchester.
Price: Two-acater, 8350 Waight: $91 / 2 \mathrm{cwt}$. Tax, ع8. Engine Four cy nump foroed-feed lubrication, 987 c.c. oh. Malvea, waler circulation plugs, Delco batiery and coll ignition, Rotax lighLing. no starter Transmiesion, dry-plate clutch to threespecd unithoontruction gearbor with coniral or ilde conirol, 15.75 , 8.5 . 4.5 to 1 . bind drire, no differential,
 chins.; breadoh. 4 fl. $21 / 2$ ins Appromimato $m-p . g$. 35 . Tangholds lour gallone. Standard bedy finith, polished aluminium. Delísery, aî weeka.


A speed model with a very fine road performance, coupled with touring comfort - the four-seater Palladium.

## TAMPLIN

## Tamplin Motors, Malcen Road Cheam


 R8 Disine: Sporta, 85 mm by $88 \mathrm{~mm} .1,000$ c.c. ; Lourer, 85 mm . Bs 85 mm m. 980 c.c., side ralves, air cooling, Amac carburelier, Lodgo pluge. Fellows magneto, electric lighting, kick-atarter. Trademísion,
 external contracting, hand brake internal expanding on rear axlo brako punalon, quarter-cllipucall round. Wire whrals, $26-1 \mathrm{n}$. by $21 /$-in. tyres. Yimenions: Length-sports, 10 fi.; tourer, 9 fic. 6 ins. byeadth-aporta nod tourer, $4 \mathrm{ft}, 1 \mathrm{in}$. Approxmaio m.p. 8 . 70 . Tank holds $41 / 2$ gallons. Body colour, lonrlag model, grey

## TRIUMPH.

ع10. En gine: Four cylindera. 63 Wedght: Two-scater, 15 cwl . Tax, eido. En 110 mm ., $1,39 \mathrm{c}$ c., sido valvea, thermosiphor cooling. forced-ined ubrication, Zanilh carburetter, highLozalon, magneto, Lucas lighing and starling Trapamission, cone clutch to four-pped exparate gearion with righthand control, $15.8,103.6 .8$, 4.75 to 1 open shalt 10 diderential, foot brake back wheels, hand brakn ly J1/2la. isics, Dimensiona: Length. 11 ll .8 ins ; breadth, 4 ft . 6 ins. Tank holds cight gallona. Standard body colour, dark blue.
TURNER.
Turner's Motar Mig. Co., Ltd, Wultruna Works, Lover Street.
Prices: Two-scater. e357; four-seater, £357; coupe, s395; enclosed 1our-acater, E450: all- Wether model whth glase windowa, e450. Welight: Twoscater, 17 cwt ; lour-acater. 18 cwl ; coupd $17 \mathrm{y} / \mathrm{cmy}$.; cnclosed lour aisle valves, thermo-siphon cooling, forced-faxt lubrication, Zenith carburottow, K.L.G. pluga, bigh-ienaion magneto, Smith lighting and alarting. Transmission, dry-plate clukib to threc-specd unithonatruction gearbox with central or right hand control, 4.36, 703.14 .96 Lo 1 , opon cardan baft to differential, Joot brake rear whecls hand brako rear wheche. Sus jormal or balloon tyres Dimensions: Length, 12 fl . 3 ing.; breadth, Eft. Approximate w.pg., 38. Tank holda aix gallora. Siandard body colour. blue.

C5- 1


The 10-23 h.p. Talbot. See also Clement-Talbot specification.


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Rear Mat ... Morris-Orford, 1924,2 - Seater Morris-Oxford, 1924, 2-Seater,
Front Mat Mnris-()xford, 1924. 4-Seater, Front M1at … Morris-Onford, 1924. 4-Seater
theo guotallone civenformaserofitany make of car at the per manari fool. Sind far a copy of our Nirw Glose


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SIX
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Of graceful and convincing outline-the Windsor.


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## light Gor Colecar

## SPECIAL SHOW NUMBERS.

Place a definitc order with a newsagent for next weck's issuc-The Second Show Number

VOISIN
Concestannaires: Maxwell Monson, Ltd. 2 Halhin Place, Belgrave Square, London, 8 W .1.
Prices not stated Chasula, 25,960 Ira Tax, 210 . Engino: Fonr coolinge Ze日ith carburetter. Champion pluga, Bicriot lighting and start ing. Tranimission: Cone clatch to three-*ped nat-conatriction gearbox. Het central control, shaft drive to diderential. Foot brake all wheelg hand brake nll whecls. Suspension: Scmielliptic all round. Wire whecis

## VULCAN. <br> Stand 177

The Vulcan Motor and Engineering Co. (1906), Ltd., Crossens, Southport.
Prices: Two-sczter, £295; four-waztel, 2295: aloon 2455 Wight


 gearbor with right-hand control, 4.8, 7.6, 11.4 .19 .2 to 1 , enclosed pro peller shaft to differential. Foot braka rear wheclu. hand brike reap wheols Susponaion: Front, semi-elliptic; rear, quarier-elliptle. Artillery
 mato m.pg.i 38. Tant holda 6 gallone. Slandard bods colours, blue, maroona nuitia

## WAYERLEY.

Stand 29
Waveriey Cars, Lid., Trenmar Cardens, Harrow Road, Londan, N.W. 10 Pricea: Two-seater, 2385 ; forr-scater, 2395: coupe. 8425 : Weymann
 mm . by $100 \mathrm{~mm} 1,496$ c.c. side valves, thermo-iphon cooling. forced lecd lubrication Zenith carburetter, Sphinx plugu, bigh-tcnaion magneto Smith dsnamo lighting and starting. Transmission: Dry-plate clutch to 6.8 .48 to 1 , apiral bevel and differentinl. Foot brake all foor wheels, hand brake róar wheela. Sospension: Semi-olliptic all round. Disc whecls. Low-presqurs tyres. Dimonsions: Two-mealep, Length 12 ft. 66 ins. breadth 5 it. 3 ins.: forr-seator. ditto. Approximata m.p. E. 35. Taniz In addition. Waverley Cars, Led., maka a leere-ralro model which -grees with tho above fish the tollowing axception :-Prices: Two-seater
 Englno: Four cylinders, 68 mm . by $103 \mathrm{~mm} . \mathrm{m}^{2} 1.496$ n.c., annle sleeve ight-hand control $15.5,8.2,4.8$ to i . Dimeraions: Length, 12 fl . bigcadth, 5 it $\frac{5}{5}$ ins.

## WESTCAR.

Stand 204
The Strode Engineering Works, Herne, Kent.
Prico: Four-seater, $£ 385$. Weight, 18 cwt Tax, el2, Eogine, four cylindera, $69 \mathrm{mm}$. . by $100 \mathrm{mm}$.1.496 c.c.. side valvea, thermo-sipbon plaga, high-tengion magacto. C.A.V. Itghtingand atarting. Transmiagion dry plate clutch to four-speed onit construction gearbor with centra control, $4.33,6.3,9.1,13.8$ to 1 . Shalt drire to dillerential. Font brako rear wheela, hand brake rear whecls, front-meel brakes faU extra. Suspension, halielliptic all ruand. Arlitlery vibeels, balloon tyra
mato meng. 38 , tank holda 10 gallona . Body colour to choice

## WHITLOCK.

Stand 213
Lawton-Goodman, Lfd., 28, Brook Street. London, W. 1
Pricen: Two-neater, $£ 375$ : tour-seater, $4425 ;$ coup6 8550 Weight Twoseater, $17 \%$ cwt. Tax, 212 Engine: Four cylladers, 69 mm , by 100 mam, 1,496 c.c. side ralves, thermo-sinhon cooling forced-fed inbrication, Zonith, carburcticr, hiph-tension magaeto ingric cone clutch, long chasis singleplate clatch to toreespeed separate earbox with right band control, $4.3,7.3$ and 144 to 1 On long chasase four-ipeed gearbox nnit construction, shalt to differential, loot brake on rear wheels, hand balfelliptic, rear threchuarter clliptic. Iong chasela, quarter elliptic Stoel apoke wheela. 710 mm . by 90 mm . or balloon tyres optional. Dimensions: Twoscater iength 12 ft. 7 ins, breadth 5 ft . 3 ins.: lour aenter, leagth $13 \mathrm{ft}, 7$ ina.. breadth 5 ft . 3 ins. Approximate m.p.s. 30 ank bolds six gallons, long chassia eight gallons. standard colours blue or grey.

WINDSOR.

## Stand 2

James Bartle and Co., Lid., Lancaster Road, Notting Hill, Landon
Prices: Troncater, £360; four-seater. £375; coupes, $\mathbf{£ 4 6 5}$ and $\mathbf{~ £ 5 2 5 ; ~}$ enclored four-seater, £550; caloon, 2550 : coupe do ville, $£ 625$. Weighta Two-seater, $171 / 2 \mathrm{cwt}$ : four-senter, 18 cwt : couph, $181 / 2 \mathrm{cwt}$ : enclosed $102 \mathrm{~mm}, 1,352 \mathrm{c} . \mathrm{c}$. overhead mives, thermo-siphen cooling. forced-fced lobrication, Zasith carburetter. Champion plugs, high-tenanon magneto C.A.V. lighting and starting. Transmission, dry plate cloteb to four speed nnit constraction gearbox with righthand ecrtrol 17.7, 10.4 7.5, 44 to 1 . Open ahafe to apiral berel and dillerential, foot brate al four wheels, band brako rear whecla. Suspension, semi-elliptic all round. Steel artillery wheels, 710 mom. by 90 mm. tyret. Dimensions: Two seater, length 12 ft .4 ina , breadth 5 ft . four-scater, leagth 12 ft .4 ias. breadih 5 ft Approximeto m.p.g. 35, Lank holds six gallons. Hody coloura 12 differcat ehader

WOLSELEY
Stand 168
Wolseley Motors, Ltd, Adderley Park, Birmingham.
Prices: Two-scater, £275: four-seater, £285: two-seater de luxe. 2325: lour-seaber do luxe, $\mathbf{e 3 3 0}$ : light saloon, $85 \overline{5} 5$. Weights: Two
 Ehar tosi plug D. 35.95 to 1 arion aheels bud brate wheela, band brako rear
 lerth 12 th 5 tos breadt 5 it 2 ins 10 tenk leale holds fre gat

# TWO INTERESTING BODY REFINEMENTS. 

A COMFORTABLE ALIL..WEATHER DICKEY SEAT-AND A CONCEALED HOOD FOR A SPORTS CAR.

TपHE MIDLAND MOTOR BODY Co., Aldbourne Works, Coventry, have recently perfected two ingenious jefinements which will figure at Olympia. The first aims at fully protecting the passenger in the dickey seat, and also affording him much easier access than is usually provided.
YThe dickey seat is of the double-lid type, and when folded up is indistinguishable from an ordinary seat. When the rear lid is opened to the vertical position, however, it can be slid bodily to the off sicle of the car along a patent T-section groove for a distance of about a foot, leaving the cushion flush with the back of the car, and easily reached by means of two steps on the near side of the body: The passenger can thus step into his seat without damaging the paintwork on the wing or body, and then, by sliding the lid in the opposite direction, can again seal the back of the dickey.


The weight of the passenger is taken on two pivoted posts, that on the near side sliding with the back while the off-side one is locked to the lid by a peg working in a slot. This post, when uncoupled, rogether with the sliding post on the other, or near, side, folds forward with the lid.
: Mounted on the sides of the dickey and carried on 1 wo pegs engaging with holes are the side curtains, the rear halves of which can be folded outwards and forward should the dickey seat passenger desire more ventilation. The dickey hood is supported on a superstructure, the two split cross-members of which fold inwards and downwards in order to allow ihe framework to collapse, and the hood to be stored athwart the ton of the front seat with its supporting legs and folded cross-members located in receptacles on each side of the seat.

When erected the two legs are pegged into the top of the raised lid of the dickey. while the leading cross-menher is held by two spring catches to tho framing of the front hood. The dickey seat hood overlaps the side panels, but the overlap is not sufficient to prevent the whole hood and its supporting framework from being moved bodily sideways with the lid or back of the dickey, so as to facilitate access to the seat.

It is ponsible to store the dickey seat hood and side patue's in the dickey itself as well as in the special receptacle across and at the sides of the front seat, and when this is done. and the lid folded down, the appearanco of the body is absolutely normal in all resnects.


The second innoration is a concealed hood for sports bodies, the hood being accommodated luhind the squab, which must be hinged forward to allow it to be crected. The hood framing is first of all pulled up en bloc on two sloping slides mounted on the inside of the body, thus bringing the bottom of the sticks almost level with the top of the body rail.

The superstructure is then hinged forward and over from the sticks, the last movement being the expanding of the superstructure, and the andoubling outwards of the horizontal arms. When erected. the hood is secured by straps to the front of the body, and when folded away leaves the tail and its dickey perfectly clear and free from obstructions. Neat carved aluminium angle pieces hinging downwards and inwards complete the licl of the hood holder.

Concealed hoods for sports models are, of course, common on the Continent, but they are never of so neat and serviceable a design as the example just described.
 across to the off side of the car to allow easy entry to the dickey seat.


## MILES A MINUTE!

The fastest mile ever officially timed -23.9 seconds, representing $2^{\frac{1}{2}}$ miles a minute-was made under R.A.C. official observation, at Pendine Sands, on September 25th, by Mr. Malcolm Campbell, who used Shell Spirit, Dunlop Tyres, and the world's fastest Motor Lubricating Oil-SHELL OIL.

## Why Mr. Campbell selected Shell Motor Oil

Mr. Malcolm Campbell selected Shell Motor Oil on account of its absolute reliability under the most terrific engine strain conceivable. Have you yourself tried Shell Motor Oil? You will find it to stand up to any conceivable engine strain. It will give you a faster, livelier engine, and easier starting, as well as a better petrol consumption performance.

# SHELL MOTOR LUBRICATING 



[^4]200 Mile Race Brooklands, Sept. 20 The three winning Darracqs, driven by K. Lee Guinness, G. Duller, H.O.D.Segrave, were fitted with
 Floatonalig (PATENT) UPHOLSTERY
Float-on-Air in racing saves the driver from jolts, enabling him to keep perfect control.
Do not miss these wonderful cushions at Olympia STAND 505 in the Gallery. DAVID MOSELEY \& SONS.LTD. Chapel Field Works, Ardwick, MANCHESTER.

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GL SGOW-126 Insram Strect. GL+SGOW-126 Insram strect.
NEWCASTLE-ON-TYNE-44 6, High Bridge LIVEHPOOL-9. Conmutation Row.


C6o DU NOT HESITATE so send your enquiries to "The Light Car and Cyclecar."



#### Abstract

He wolcome at all times letters sent us by readers for publication in these columns, and, while laking no responsibility for the opinions expressed therein, सive preference to those letters suhich deal with subjects of дencical interest. No anomymous communications will be accepted. but the writer may use a nomi de plunic if desircil. Letters shoult be as bricf as possible, but not abbreviatcd. We rescrue the right lo make any alterations or deletions which we deem necessary.


# VARIOUS INTERESTING SUGGESTIONS. 

## Sports News - Car Lights -- Trial Runs - Springs.

## Sports News Wanted

Kegarding the lolters of opinion on your sporting news, I would like to add my plea that you do not in any way cut the news.
It is hard enough now to find out winners, ctc., of important events; tho daily Press generally ignores them contirely, and it is to our motor paners that we turn for results and reports S.H.E.

## What the Amateur Wants.

I an entirely in agrement with the letter from "XO 2258 " in your issue of Scptember 26th, referreding to the nuniber of pages taken up with sporting ovents. As he suggesls, more

## Hints and Advice.

 space should be devoted to the real amateurengmes, hints and tips for ecouomical runming, tours, routes, hotels and all the other little details in connection with motoring

I would suggest cutling out the "Motor 'I'erms Travestied "guinoa competition and award it for the best hint or Lip for the week from readers.
If I remember thetly, you used to give several such pages bofore the war.

However, I think you are very sporting to invite suggestions and criticisms.
J. Thomas.

## Navigation Lights For Cors.

With reference to a letter recently published in your correspondence pages suggesting that ex-Service mon should be trained as traffic controllers, it occurs to mo that there would be some difficulty in doing this, and

## Amateur

Traffic Control. especially in overcoming tho apparent prejudice of the police in having any other organizations interfering with their duties. I live near the eastern entrance into Darlington from Stockton-on-Tees. At this point there are four cross-roads, and on cach of these there are tram and bus services, so that tho traffic and congestion are at tines acute more especially at week ends, owing to the number of private motorcars.

I once acted as an amateur pointsman at this spot and was warned by the police not to do so as in the event of my amateur signals causing an accident I might be summoned for aoting without authority.
It was ansy to toll in daylight which way a car was turning, hut at night ibis was impossible. I suggest that all cars should carry a red and green light. in the same manner as those on ships, and that when the driver is about to furn a corner he should switch off the lamp on that side towards which he intends to turn

Darlington.

Coster.

## Choosing a Car by Trial

Is the suggestion that motorcar manufacturers should afford good trial trips at a reasonable fee, say a guinea, without any obligation to purchase, practicable! Many prospecHow it Could and hesitate to try half a dozen cars for Be Done. nothing. What I have in mind is the difficulty of knowing whether an entirely different type of car from one's present possession would be an improvernent.
I drive a Belsize-Bradshaw open two-seater, with which I am perfectly satisfied, but I wish to try two or three watercooled four-cylinder cars which I fancy, including a light four-seater, and especially a Weymann saloon

I think that if I ant to spend up to $£ 500$ for something which I shall keep at least two years it is worth paying an additional $£ 5$ to get the car which, by trial, I like best.
If a guinea is too much, even a 5 s . ride from Olympia during Show week, round Richmond Park, would prove to be invaluable.
F. Poste.

Spring Lubrication
In reading an article on spring lubrication in a contemporary of yours of September 23rd, I notice it is stated that. the idest condition for springs is that they "should run in a bath of oil," but I doubt whether the spring manufacturers in the country will support the

Grease or
Oil. writer in his contention. It is common knowledge that over-lubrication of leaf springs produces " flabbiness," which is a very different thing from "flexibility" and "suppleness." As the spring manufacturers ase grease when assembling their springs, is it not wiser to follow their lead?

Personally, I prefer grease gaiters, of which wy experience, after running with a set on my Humber car for 22.000 miles. is most satisfactory, my car springs still being noiseless and flexible, and since I fitted them they have only received attention once, which was last week, when I remored one of the gaiters to see if a further supply of grease was required. and I am pleased to say that there was still an ample supply of grease in the gaiter, so it was therefore not necessary for me to remove the other seven.
This seems to me a very much better method of sprill: lubrication than the typo with which you have to be fiddiling around constantly with an oil or grease gun.

It would be interesting to hear what the spring manufacturers have to say regarding the suggestion of the sprines running in a bath of oil, and whether the working of leaf springs, one over the other, is in any way to be compared with the working of a "big-end" on a crankabaft, as suggested in the article.
N. 417 .

## OUR READERS OPMNGNS (contd.).

## The Simple Cyclecar-Winter Lubricants.

## Resurrect the Cyclecar.

The writer has been a motoreyclist since 1903 and a car driver since 1910. He has handled and owned all types of motorcjcle, from the baby two-stroko to the 7.9 it.p twin, whilst with regard to cars his ex

## By One Who <br> Wants une.

 perience extends from light ears, of which he owns ono at tho present lime, but Vauxhalls and Wolseleys. In fact his dally biead is earned by means of the large car and catering for its ownersNevertloeless, being married and possessing a large family, on the sco:e of economy he lives in the country and journeys backwards and forwnrds daily on the cheapest form of mechanica! tran pport-namely, the motorcycle.

The cost of running a car regularly as a means of conrevance puts it out of court, and the motorcycle is far from a pleafant convevance during the winter months when the oands are covered in mud and often snow. lt is n difficuls feat to appear at the office in presentable condition during at least five months of the year, and the longing for a cycleca: cheap to run and easy to maintan is shared by others in our villago beside myself.

There is an even bigger market for the mechanically
sound cyclecar retailing at a reasonable price to-day
than there was three years ago.
Simplicity is the main essential for cheapness, and by th s is meant simplicity is every sense-namely, coachwork, engine, transmission, otc. No frills are required. Adequato mudguards are very necessary, but running boards, doors, etc., may be ruled ont at once. No complicated screens are required, just a plain, single-pane sloping typo with a cheap: form of windscreen wiper is amply sufficient.
Whatever its design may be, the following factors are absolute essentials to its success :-
(1) It must be cheap to run; that is, not more than 25 per cent. above motorcycle cost.
(2) It must look externally like a car in miniature and not a freak.
(3) It must be quiet mechanically.
(4) What there is of it must be soundly constructed to give real eervice.
'The D'Aux cyclecirl which you recently described appears to be well on the way to mecting these requirements, and certanly the belt drive is no bar. The crus of the whole matter appears to lio in tho belt itself, and it seems that the M.'T.S. belting utilized opens up entuely new possibilatics in this direction.

Take the simplest possible design, then hold a postmortem examination upon it. Where one mut and bolt could do instead of two, scrap one of hem. Carry the process of elimination to the farthest limiss, and with a little of the energy and brains that have been expended on the productiou of the wonderiul 1,100 c.c. and 1,500 c.c. light cars of to-day the real cyclecar should be a certain possibility, and not a paper probability as it is at present.
Wake up, manufacturers, and come forward with the production for which the multitude is still waiturg.

E Y W
Winter Lubricants.
Under the heading of "Rich Mixture," in your issuc of the 3rd inst., we notice in a paragraph below "Winter Lubricants" your correspondent makes cemarks detrimental to the summer grade of Castrol " IR " 112

Cold-weather Castrol. thons that he gets better results from
several other makes of motor lubricants. We wish to protest aganst general statements of this nature. $\dot{C}$ our informant does not state the name of the car he is running nor has ne seemingly made a trial of the wiuter grade of Castrol " $R$," when doubtless the trouble he mendons would not have been experienced.
It should be noted that we mannfacture winter grades of most of our motor lubricants, as stated in our retail price list. C. C. Wakefietr and Co., Ltd.

* Onr contributor " S S. 'remarked iast weer, in advising small car owners to dra.n off summer grade oil and replace it with a winter gradr, that "It is not necessary, of course, to change foum me brand of oul to another, but it is certamly mest ady saole to choose the correct grade of the particular brand which is favoured." -Ed.


# Driving Examinations-Physical Fitness 

## Driving Proficiency

Considering the numbers of divers now on the road, many of them totally inexperienced, a system of examining the corr. petency of would-be drivers before granting them licences seems more called for than ever Such ex-

## Teaching Road aminution should include not only control

Sense. of the car when at the stecring wheel, but the even more important necessity of teaching rond sense. For instance, the habit of cutting corners and overtaking at the wrong moment are two very glaring faults that one sees every day. We are toid that such a bystem of examination is impracticable on account of the difficultes of supervising and organizing it.

Would it not be possible, however, to do this through the leading garages that exist in every town? Garages of over "certain size might be required to take out a "licence to oxamine" and to issue certificates of driving competency. They would, of course, be allowed to charge a small fee to the would-be holder of same.
In order to be in a position to issue such certificates, they would be required to have a qualified examiner on their premises, who would only sign such certificate after he had satisfied himself that the holder was in every way a fit and capable person, qualified to drive a car and observe road rules in all ordinary circumstances.

Standard lests would, of course, be laid down by the Ministry of Transport or other authority.

Any would-be driver, having obtained such a certificate, unuld then be allowed to apply for a licence in the ordinary Way' We cannot agree with our correspondent's suggestions.

There is more in road sense than he is apparently aware, and the control of a car is largely instinctive; experience is the only real teacher. Any workable scheme for teaching and enforcing the rourtesies of tho road would merit the approval of all motorists. -ED.
c62

## Disabled Drivers.

The letter from Mr L. A. Walkloy is simply silly. According to his viow, every driver of a high-powered car and every speed faratic is a disabled man. Why he should connect the two, goudness only knows. If

## Nerves-Not <br> Limbs.

 I recollect rightly. the llournemouth case was a refusal to grant a licence to a motorcyclist who had one arm only This may be, and doublless is, a very rare case, but the point is that this man may handle his motorcycle better than Mr. L. A. Walkley handles his car.If Mr. Walkley ever has the bad luck to be run into by someone else, he will no doubt have a grievance should the driver of the other car turn out to be - "physically perfect" man. I hope he will never have the bad luck, like myself, to be amashed up and have a limb taken off by a driver with all his limbs but no nerve, and who will doubtless do to others the samo as he has done to me.

If wo are going to have tests for physical fitness, what about the short-sighted drivers, and, above all, what nbout the driver with all his limbs whose nerve fals him everv time ho gets in a tight corner? At the first sign of trouble he hegins blindly to "tread on things" : he is quite likely to use his accelerator in mistake for his font brake. and his efforts are usually accompanied by wild blasts upon his horn. Tlis is the man who is the real danger on the road. Nerves, not limbs, are the best.

What about the flat-footed man, the hump-backed man. the knock kneed man and the man with the squint, or tho bow-legged man? Aro not these physically fit to drive a motorcar on the public roads?

Lasily, what about the injustice to our "ivounded heroes"? Are they to be debarred for ever from the joys of the open road because on the rare nccasione when a disabled man does have an accident the headlines in the scare newspapers are a foot long.
D.S.

## AROUND THE TRADE

The La Licorne car driven by R. Testienne, whirh won the four-seater class for ears under 1.5c0 c.c. in Whe Circuit des Routes Pavees, was fitted with Englebert balloon tytes.
-0.0-
The winter months make riding in the renr seats of a car anything but comfortable, unless a good rear screen is used. The Auster is an excellent example, which uses framed glass panels and costs $£ 5$, while, if celluloid is preferred, tho Fasting rea: screens aro now a a ailable at equally reasonable prices.

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                    -0.0-
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Short and Glass, J.dd., motor engineers, 362, 487, 489, 491 and 493, Upper Richmond Road. East Sheen, London, S.W.14, guaranteo to sell a car and buy it back after a set period at a slated price, also guaranteeing that this price would be more advantageous to the user than if he had hired a car for the same period.

Such is the demand which has loen experienced for the Amplion loud-speakers in the United States that the makers have now startad a subsidiary company in the U.S.A. under the name of the Amplion Corporation of America, 280, Madison Avenuc. New Iork. N. I': 11 is controlled by Alfred Graham and Co., St. Andrew's Works, Crofton Park, London, S.E. 4.

Capt. Malcolm Campbell's Sunbeam car, which has just hroken so many records, underwent stringent tests in a special apparatus knowr as the wind channel, in winich Messrs. Bolton and Paul, Ltd., test acroplanes, with a view to reducing wind resistance. Messrs. Boulton and Paul aro well known as manufacturers of light, portable garages, their well known as manufacturers of

Mr. C. H. Humphrevs has taken over the spares for the Meteorito car, and a full range can bo obtained from him al Ye Blacke Knyght Garage, St. Mary's, Bedford.
Lambs, Jttl, Walthamstow, London, E.17, are one of the roncerns which, on the strength of readers' reports, we are able to recommend as giving good service and straight deals.

A new pictorial poster has just been brought out by the Clyno Engineering Co., Letd., Wolverhampton, and supplics of this poster, which is extremely st "iking and well executed. can be obtained from the nddress given.
The detail photographs which illustrate tho articlo in onr centre pages this week were taken on an Ariel Ten, which was very courtoously placed at our disposal for the purpose by Black and liinch, L.td., the Ariel agents, of Great Port land Street, London.


An Efficient Silencer. Silenced " and "The Silencer" aro a few examples. References to worms were also quite frequent, "Worm-driven," " A Staggered Worm" and "A Stripped Worm" being received, although with reference to the lastmentioned wo saw nothing in the drawing which suggested that the gentlem?n in quostion had just firished bathing or taking part in any other form of exercise which had caused lim to disrobe! Originality was shown by the reader who suggested " A Strained Torque.

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Special Consolation Award Value 25
 20 Consolation Awards Value $£ 1$ each Norman W. Anderion, Era., 39. Gledhow Wood Avenue. Round. R. H. Briges, Esa. High Bink, Rawtensiall. E. Fiwastt. Faq., Rid $n$ Mill, Naithumberland W. Hictt. Giner. Esa. "Melrose." Ha e Striel, Staines Middlerex. Mrs. Margaret A. Howarih, "Lynroyd," Bradlord Road, Wakefield, O. 1. Hughes, Esa., "The Bungalow," Dolgelly, Merioneth, 1 ieut..Co $\mathrm{T}^{2}$ A Monckton, R. A.F.. Juninr Conatilutional Club. W. John C. Nusn'c, Esi, 2 , eopold Road. Wimbledon Park, S.W.19, J. S. Reev 1, Eso., 5, Nunroy, Rond, Harrogate Road, Leed
 Suriev Misa Bella Smilh, 5. Nunoyd Road, Harrogale Ra d. Leed. E. W. labh. sq. 46, Le Terice Blackh..ath, S.E.3. Parick Archibili Siewarl, Esq.، MI.A.E.FRS.A.. F.I.M.T., c/o Mesmr. T ylor amal Sons, Molor Fingincer Kettering. G. Vauphan. E q.ä. Gunterstone Rod, Weat Kensington. W. 14. J. Vigour. Esa. Hish Vic : Cavergham, Reading.

Sianle Whicie d. Fsi.. 17 I ahs rnum Cirdens. North Ruad, Kew. W. D. Wightman, Eig., Church Street. Coleraine.

FHE original entries subm tied by the winning compelit ris logether with the photograchs received
wil be on view at the Mot Show on our STAND 440, Gallery, Olympia.
We extend a heariv invitation to all our fiends 'o call and inspect our ex ibi.. He sure you obiain a copy of
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THE NO-TROUBLE CARBURETTOR

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=at SOUTHPORT= M.C. Race Meeting on Saturday, Sept. 27, thus adding still more to the already large number of its successes-and demonstrating once again the merit in performance for which CROUCH cars are noted.

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## SECO.VD.HAND

## LIGHT CARS AND CYCLECARऽ FOR SALE

A.B.C. Gordon Watney and Co., Ltd. 31 Brook St. W 1 iPhone. May. fair 2966 , London agenta Beveral aecond-hand, ald modela in stock
guaranceed, from \& 100 i delerred pagmenta and part exchange. zzz-164 A.s.c. cara. Repairs of every deacription and apecial cuning by experiR S. Inglia. A.BC. Speciellit. Head ilfice $28-29$ Upper Marylebone St.
 A.B.C., 1924 , 4 -neater. C. A.V starter, lighting. iax to Necember. mileage 4.000 ody excellont condition. 150 guineas. Jafferiea, Flamatead.
Part Avenu. Polven Bar. A.B.C. 285, 2-seator, large dickey, Burbiton model, newly ovartauled ho maters, Al condition, liconsed, tasured till May. Green, 4 Cambridgo
Mansions, Waltonon-Thames. A.B.C. 1922 , Surbiton modet, 2 doors, dickey ovorhanded, guaranteed, cood tyras, dgnamo, specdometer, spara wheel, 94 gularas, including 12

 A.B.C. F U.C.H., Led., otter acveral A.B.C. cara; all in excellent condi-
tion, bargaine. 5 Hesin ge, Hampstead (near Tubol. A. B. C., 1922 3, porta, self-starter, large dickey, repaloed red and alu-

 A.B.C.a. We havo coveral to chonse from. Rallion Cobbam and Co.i
Lid., 5 Cumberland 8L. Deansgato, Manchester.
$620-187$ A.B.C. 1922, aports, apecdometcr, windscreon wiper, hood covor, apring gaiters, luggage grid. new accumulator, electric Klanon, engine over-
 A.B.C., 1922 , 3-ceator, dynamo lighting, beavtifal condition throughout,


 A.B.C. 4 super sports 2-aeater, 1922 model, Gited with Ilhp Gicorga England engloe, palished sluminium body, red wings end wheela. ex Deferred terme erranged. 7 Sylran Hill, Crgstal Palace. PhonegsydenDeferred te
ham 223.
A.B.C. 1923 pporta 2 scater. dynamo lightlag. aelf-starter, apeedumeter. plendid condition. 115 gulnem. Below.
A.日.C., 1922 , Regent 2 -scater, dickey, dynamo, equipped licensed. ex-
 A.B.C., 1923. a uper-sports, 2-seater, special luminiom body, dsnamo, exchango Morgan, combination, ote. Parsong, I Acton Líne. Chiswick
 A.C., 1920, 2-aeater, repainted Ocrober, 1923 , examination, trisi, eaxed A.c 1924 an fith man A.C. 1924, 2 feater with dickeg. In new condition. fited with many
 A.C. Wanted, A.C. cars in exchange fur new models; highest market
 A.C. 1920, standard model, O.A.V dsnamo lizhting. fully cquipped, ancludins spcedometer, clock, lax paid. 2165 . Nader. $620-181$ A.C., new, showroom soiled, 1924, 12 b p, 4-cylinder, Foyal 2-seater. groaly reduced prica Egertons (Ipswheh). Led., Northgato, Ipswich, $620-159$
 A.C., Royal, 11.8 hp . 1924, 2-scater, dickey, Marlez steering, tax, etc., new condilion throughout, 8235 . Vivian, 33 Spenser SL, Victoria St. 620.197
 A.C. Cass's Motor Mart. Lid. 1919 3-atater, palated blue, dynamo, clock, apeedometer, taxed December, esceptionaly ine condition. deferred
 A.O., 1924 , any-weathcr. 2 -eater, run few miles as demonstrator bnt an now, 2285 list price 2310 also 1923 4-seater. 2275 : 1923 Erapira 2
 A.C. 1924, 2-scator, any-weather, specially finished, Marles acering. practically new. tax and insurance. ${ }^{2}$
A.C., late 1921, 2-seater and dickey seat, liftitiog and starting, leacher aphoistery and speclal an-weather equipment the condition of this car paid. £ 156 . Delerred terma ean be arranged. 7 Sylsan Hill. Crisial
Halice. Phone. Sydenbam 223 . A.C. 1916 , 10 hp . 2 seater, dsnamo lighting. Inst repainted, exceptional
condition. 50 : exchangen, terms. 63 Solon Rd. Briston. 620 gg9 A.C., 1921, Nll-wenther 2-scater, dickey, set-starter, tallest possible cquipment beautiful condition. £140; exchange Morgan. 284 Sousn
Lambeth Rd., S.W. 8.

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




 A.c. 1922, aluminum, sports, atarter conper exhaser. Tev counter.
 Alvis. Now or acecndihand. Try Henig's, The Sole London Distribu-
 Maylair 4203 . $22 z$-304
 Manchenter.
 AMILCAR, 1923 , blue. nerfect. new trres, shoedomoter, wido curaing, ARIEL, 102 , 621.5543


 ARIEL ${ }^{9,} 1923$ Rexed. Gnurd, excollent order. 100 suincas. Wood ARIEL S, chummy. late 1923 , run 4,000 nilep, an new, hny trial.
 ARIEL 10, 1924, do lase model, all-weather eynjpment, dash lamps, apcedumetcer.elertric born milcage 2,400 absolutely laulcless condition. Phone, Museum 2271. AUSTINS. Try Ifenly's Fou cannot beat their terms. 91 and 155
Git. Portand St., W. Maylair 4201 AUSTIN 7. Gordon England Brooklands model, complete with hood. windscrecn, eings speedometer, rer. counter, spotighis, licensed to end milesi sould return $L^{2}$ Gordon England for tuning belore sale; ioday"s
 AUSTIN 7, 1924 . Euarantecd perfect order, practlcally new, licensed,
accessories, $\mathcal{L} 125$. Trascott, Architect, Pensilra, Liskeard. $620-g 404$ AUSTIN 7, 1924, perlect. Insured, otc, £135. Romsdal, Dunollie Rd, $620-\mathrm{g} 867$ AUSTIN 7, 1924, privately oxned, neareat £125. Box No. 6910, c.o.
AThe Light Car and Cyclecar." AUSTIN 7, 1923. Epeedometor, practically mow condition, 2110 Hughes. 4 Beechwood Arenuc, Darlingion 620-g869 AUSTIN 7, 1924, latest chummy modet. With improved body, thop Eoiled only. ‘145. Below.
AUSTIN, 1924. 4-door maloon, new and andicensed, absolvely anscratchod. $\mathbf{S t}$. 45 . our prico 2450 . Smith and liuntor, 90 Ge. Poriland
$620-326$
 AUSTIN 7, new March, 1924, tax paid, insurance natil March, 1925, AUSTIN 7, 1924 . used lor dormonstration only, rare opportunity, $£ 120$. AUSTIN 7, 1924, practically new. $£ 115$; also sovoral 1923, from $\mathbf{x} 100$. AUSTIN 7, 1924 620-236 exollene condition, texed, 1117 10. Fico. Led, 11-15 Blshopsgato AUSTIN 7, 1924, sporis, etarter, Martiords. speedometer, clock, hood,
 AUSTIN 7, 1924, new bo Julg, mileage 180 only, Eqaranteed in pericet order. Intext chummy moded, with specdometer, E135. Reerem Garage,
Chichesfer.
$621-\mathrm{h} 2$
 AUSTIN 7, chummy. 1924, nearly new, tazod, as per makers" specifica-

 AUSTIN 7, 1924, mileage 2.000, pericet order, licensed December 31st, insured July, 1925 , £125: noar olfor for guick malc. Gadsden. Lililo
Manor Fartu, Ruislip.
AUSTIN 7. 1923, shock absorbera, sido curtaina, electric and Klaron horns, apare whel and tyre, excellent condition, tay paid, bargana,
 AUSTIN. For Austing Serens go to tho specialist. W. L. Overend, Grafton A.V. monocar. first registered 1922 dises, speedometer, fast, taxed De-
Ceyuber, $\mathbf{~} 25$. Cheadle, 18 Sherfield Rd. Grays, Essex. A.V., 1022 2-seater, 3 -speed, reverso, dynamb, taxed, repainted, over-


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

A.V.s. A.V.s. A.D. Ancirows Motor Mntt por monocars or un:todate


 belsize.bradshaw. Gordon Wainey and Co. Lid., 31 Brook St.
 stock. guaranteed from £100: delerred payments and part exchancen BELSIZEBRADSHAW, 1923, 4-scater lighiligg, sifrting, nilweather
 BELSIZE-BRADSHAW, 1922 iNool, 4 seater, starter, dynamo alt-
 belsize.bradshaw, 1922. 9bp, 2-eanter and dickey drmamo liche

 $\Varangle 95$ Sce below
BELSIZE-BRADSHAW 1923 2-gerter, dynamn ligheing and fllefarter;

 BLERIOT-WHIPPET, 1920-21, fino 2-seater. Blnckburne enfine 5 do




BLERIOT WMIPPET, 1923, 8hp, 2-scater (brand nrw), cinclrin lighlinge.

 BUCATT 1922 620-312
 fif-sprang opholstery. windsereen, rikid transparent nide carrains, black bood, electric lamps, horn and atarier, ideal lat touring car, do-

BUGATTI, 1914 Brescla model, sporte, 2 -seater, ${ }^{2}$ rechtionally tast,
 CALCott, 1921. 2-enater dickey, Tucas lighting and starter. apeedo-
 CALCOTT. 1919, atandard model, denamo lichting 2 a mater, and nickey specdometer, 2 horna, 2 spare wheds. bargain. 270. Mandes': Walsaly
Garage. Walsall. CALCOTT, 1924, 10.5 hn , 2-meater, dickoy, all-weather curning, lighting
 CALCOTT, 1914, 10hp, 2-scater and dickog, in good rmining orver, eide 3161. . CALCOTT, £125. 2-scatcr, 1922, starter, lighting, taxed, exceptional

 CALCOTT, e48. oxchanges and defcrred paymenta 1914. 2-icatcr, dlokey, new all.weathry hood sido screensla delachable whicela. electrio CALCOTT, $1919,10.5 \mathrm{hp}$. coupe, dynamo lighting. olcetrla booter, 2 aparo whoels. iuat renainted, magnificunt conditlon, 270; oxrhaners
torms. 63 Solon Rd. Brixton.
620 .g993
CALCOTT, 1924; 10.5 hp . 4-scator, brand new, but sery slightly sliowroom soiled, Inlly oguipped as per mnkera speciflcation ond carrying or casy payment. Willyins, Simpson, opposite Olympia, London. 600 -h27
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CALTHORPE, Moores Presto. Crogdon asents Calthorpo cart. Promptest
 SALTHORPE, lato 1925 , 2 soater, scml-coupe. starting and Highting,
 CALTHORPE, $1922,10 \mathrm{hp}$. 2 -scator and dickey, dynamo and sarter,


 -Roone 50 I.
 CALTHORPE, 1922 . 1 Ohp, de luxo. 2-seater. eunk dicke dighlag,

CALTHORPE, 1921, IOhP, 4seator Mghting. Atarting, leather apluik



 Mountricm 4394. 620-336




 CHARRON, couno 3.31in dickey, CAV dymame ligbling. Boach ZEA.





 CITROEN, $1924,11.4 \mathrm{hp}$, English 4 seator body doluro, new condition,


 CITROEN, 1923, 114 hp, 2-senter, Finglish body, double dickey. a-m.
 CITROEN, 10hp, late 1921 , 4-scator, taxed, marting nnd ligbting, new

 CLULEY, de luxo model, 2 -seater, brand new, 1924 engine, fully guarantoed. thop soiled, hist prico thia model 2350 roduced lor quick salo 10 lampı; cash or casy terms. Bablako Garago. Qucon Victoria Rd., Coron-
try.
zzz-905 CLULEY, 1924. 2-seater, shop solled, fullest equipmont. £205. Bolow. ClULEY, 1923 coupc, doublo dickey seat, licensed for year, an now
£250. Smith and lfunior, 90 G . Portiand St. CLYNO, 1924 , 4 -seatcr models, standard speciffeation, dynamo lightigg \&165, or cxehange. Maudos', 100 Gt . Portland St., London: Wolvorhampion St., Walsail; Paria St., Exctor: and 40 City Id., Cardiff. 620.178 CLYNO, 11 hp . 1924, occasional 4-seater, Royal blac, dynamo lighting and acifitarter, speedometer, clock, aparo petral can and carrier, excellent
CLYNO. Mebea nod Mches (Est. 1893). Clypo specialista and distribtcarrying makers guaranteo Che Popular $2-$ genter. list price f201, re


COVENTRY-PREMIER, 3-wheclor, Bhp. Juls. 1921. under 5,000 miles, 2-scater with dickey, waler-cooled lirolt dynamo lighting, hood, acreen, horn and Klaxan, Wattord enecdometor pipare wheel, axcellent. ordef
and condition, £80. Reod, 14 Iurley Rise. Purles.
COVENTRY-PREMIER, 1922 dynamo lighting, 5 diso Flierls, speedometor, sido chrtana, cood conditlon, $£ 70$ or near ofter. 79 Shrewahnry
nd. Forosi Gato, E.

## SECOND-HAND LIGHT CARS AND CYCLECARS FOR SALE (con'inued)




 COVENTRYPREMIER, ${ }^{1922}$ A Wheclcr. 870 or near offer Raillon COVENTAY-PREMIER, 260 , 1922 8tn 2 -seater dicky $620-189$

 Junction s.E.

6228969 coventry-phemier, lato 192e, laxed and ingored, leather uphol-

COVENTRY-PREMIER, 1923 4-sester, all.wenther, dynamo, Platier,
 COVENTRY-PREMIER, 1923, 10hp. 4-seater. dynamo lighting, leather
 CROUCH, 1923, counoe witb sella arart, peodamoter, etc, reupholand Finch. 222 Gl. Porliad BL.' W.1. Phono. Mascum 2271
 5 detachable wheels, etc. excelleni condition: 268 or exchange. $88 \%$ DOUGLAS, 1920, 2. geator, dynamo and tuartor, ercellent condilion. E 75; exclanges or bire purchase. The Llght Car Co., 331, 410.414
620.267
Eusion Ihd. London.

 terms. 63 Solon kld., Brision.
ERIC-CAMPBELL 1921 11bp 2 -cater. eiectro Ughting, detachable

 ERIC.LONG DEN ADorth 2-2eater. polithed alumplonm, dark red anholitery

FRAZER-NASH, Akela model. Unlaue opportunity of nossening an FRAZER-NASH, Akela model. Unqua opportunty or nossening an FrazerdAsh which was second in the 20U-sule Race (1.100 clasel) with



FRARER-NASH. One 1924 model. Stled Fth mart 2-sezter body

FRAZER-NASH. Spocial model ated $\mathbf{z l}$ tb 10 hD Roby 4 -cylinder enEline, ${ }^{2 \cdot \text { sesater }}$ sporte aluminium body completo with equipment 1 nlads at nearly 80 m.p.h. price E175. All inguirles tor triat rune on aboro cart to Frazer Nat. Lid., 102 London Rd.. Kingstonon-Yhames. OALLOWAY coupe, 1921, double dickoy, electrio light atarter, 4 new Tho Brya., Gold Topm Nowperi, Mon
C. N. . Wo have seceral sood secood-hand cary for ralo: reasonable prices.
 G.N. opectalisti Repaizs: spares of crefy description in stock: Jargest
 c.N., 1921, electrio lighting, sood condition, good tyres. 245. Below. C. . . 1922 2-teater, sunken dickey, dynamo ligbting. very fino condition,

C.N. concoslonnaires. Black and Finch, 222 Gt Porland St: W 1 ,
 G.N., E65; exchanges, deferred paymonts, really extra posh; 1922 G.N., C.N.e. E65; exchagise, delace pllweather hood, double screen. dynamo: mindent melor, specdometer. 6 delachabies, painted sarc-bluo. hack domed
 G.N., 1921 model, dynamo lighting. e:c., In splendid order and condilon, f.W.
don.
S. C.N., $E 55: 1922$ tared, dynamo, spare micel. athart appearance, many
 G.N. exceptionally smart Vitease G.N. Frazer-Nash o.h.Y. enfinc, 1922, and bulb borus. nolished aluminium dasb with speadometer, 8-day clock, ammeter, dashiamp, cto., sluminfum coml acutele ventilators, shock aborbers, snare wheal, pecial bonnet and fings, body painted pewderblue with crimson chassis. Wheels and wings, new tabric leather hood,
with enselow, corded stcering wheel, full yit of tools. jack, pump and with envelolw, corded steeríns wheel, full tit of tools, jack, pump and
soveral spares. This car has been privately owned since nev, is fist. conomical and in perfect condition, taxed and fully fneured for sear.
abolutely the martest $G . N$. on the mad. $A$ genuine bargain, 890 or ofler: acen by appointment. Vitesse, 43 Wicktam Rd., Becterninm,
Kint

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

G.N., 1922, 2-seater and dickey, Frazer-Nash oh. ©. expine, dynamo, G.N., 1923 , 2-seator, dickey, fully equipped, excellont condition, 85 Guiacas. Bow
G.N., 1921 , fited with 1922 2-scater body, sunk dickes. dsamoo'light ing, equipped. good order. 58 guiveas. Below.
C.N., 1922, all-weather coupe, 2-senter, dickey, dynamo entipped 175 Gc . Portland St.. W. Meylair 4n27.
 GREGOIRE, 1922 sports, 9.5 , 2 -scatcr, dirkey, dynamo lighting, aparo Whicel. just thoroushly orcrhanled, taxod, $£ 88$ or near. 3 Thg iqnare, C W.K. cars W'o havo sowern! good scoond-hand cara from c35 upwards. Kixhanges and deferred terma arranged. Your Inguirica invited. North
Kiskex Motor Co., Satiron Walden. Phone 16. C. W.K. 1922 2-aester, dickey, complesely orerhanled, renorated, perfect conclition. trial, $£ 75$. Auguth, 12 Exchango, London Rd. Thornion
İenth, Croydon.
G.w.K., 1920, 10hr dynamo lighting, pecial 4-dnor 4-acater body,

 G.W.K., zeB5; exchanzea, deferred payments; 1922 G.W.K., 4-enter, lohp, dynamo lighting, all-weather hood, side sereens, openlag "ith

G.W.K., $550 ; 1921$. 2-selicr, with doublo dickey. fully equipred, dynanuo lighting, 5 whecle, all trres good, taxed December. in frst-class Bireatham 3055. 620-б976 C.W.K. $1920-21,10.8 \mathrm{hp}, 4$-soater, tnxed, splendid oondlion, all-weatber,
 CWYNNE 8, 1924-1925, special model, preriously owned by Mr. Gwynno himselt. special clover-loal bodg. upholsterod in real leather, all-weathor car as new, taxed and insured. 168 guinoas Furtber particulars on roquest. Jan MaoLaren, Hampdan Cownt. Eastbourne Darticulars $620-$ g414
GWYNNE Eight 1924 Olsmpie rparte model
A rperially tuned and wellecquipped car with a guarantecd epeed of Epecial display
Gwrnne cars,
Immediately.
mmeriately outside
Chiner, G Frino Spectallst,
1 Hammersunith Rd Kensiogton.
GWYNNE 8, 1924 , letert inpe 4-seater, shop-oinled, with guarantec, c185: nlso 1923 chummp nth starter, apecdometcr. iree inanrance and Agenes. 4 Denman Pl., Piccadnly Circuan Regent 986. Deuman Motor
CWYNNE, 1923, 8hp, chumms, side curtains, utartor, \&115. Barticte's. GWYNNE 8. 1923, chommy, starler, clutch, apeedomoter, side curtains. laxed. ©115: exchange. 22a Spring Grore, Chlewick 620.289 CWYNNE, 1923 , 8ip, chummy, 2-4-reater. dgnamo, ecls-ntaricr, fully equipped. oxoeltent condition 130 gungas: cxchangea or deforred. Ed-
Wards. 175 Gt . Portland St. W. Mayfair 4027 . $620-422$
GWYNNE 8 luxurioue 4 -seater bodg. by Albany Cartago Co., anitque lamp sec and suater, tank it rear, Autovac feed, Dunlop cord trros, ntmerous accessories. including IIartiorda, clutch stop. 2 dash Immps, A.T. 80 m.n.h. specdomoler, mileace only 4.000 , thia car if in fandiless condition throughout, has been secislly tuncd and will easily oxceed 60 ment. Redoot, Harponden, Llarta Tel. 56.

HAMPTON, 1924, brand now, thop soiled, 9.21 hp , 2-sealer, dickey
 HANDS, 1924, 2 selecr, double dickey, periect ehrourhout, dynamo Iiphting and starter, only dono 7.000 miles. $\mathbf{X} 135$. Ifabert IInasall.
G22-176 HILLMAN cara. Oficial repairers, London district, J. C. Brodie, Lid. 94 n Cheyne Walk, Chelsca, London. S.W. 10. Telephono. Kensington HILLMAN racing car, run onnsistently at Brooklands, eitreamlined, dapted for fast rond use, dyname, scrcon, madguards, splendid condition f195: extended terma. A. P. Rey, 378 -384 Euston Rd. Muscum 7600 . HILLMAN, sports, 1921, 2goater alaminjum body, exceptlonally fast srant appearance, bargain, 2145 . Visian 33 Sponscr St., Victoria St. $620-196$
S. Wic. 8677. HORSTMAN coupe 9hp in nice condition; exchankes and deferred terms HORSTMAN, 1921, $11 \mathrm{hp}, 4$-seater, sfarter, tax paid, cxcellent onder C 120 Barlett 93 Gi Portland St 620-389 HUMEER, 1923, 8hs, chummy, excellent condition, juat orerhated
 MUMBERETTE, s32, exchanges. deferred pasmenta, 2-Ecater, Ghp,


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



620.292


 JoWETT, 4-seater, shop-silicd only cash ollers manted. or will tako motorcyctes in part exchanga Ratclitio Broe, 200 Gt. y'ortland 620.324 Jow
 Jow ITr, $^{2}$-seater and dickey, lato 1922 modol, broweht up to date at
 JOWETT, Jone. 1923, 2-scatcr and dickey, examptionel condill on through
 JowETT, 1925 Thn, 2 -senter, atarter, dilkoy, all-rimathor equincent,


 JoweTT, March, 1924, 4-seator, owner.drison, elcetrio hors




 LAEONDA, 11hp. 1922 madel 2-senter ceap. djekecy starter, cle.,

 LAGONDA 12 hp conpe. donblo deker, dynamo 1 ighting and atarting.
 LAGONDA EnUpo, 2 ceater, electric llghting., detnchnblo wheels, really
 LEA.FRANCIS, 1923 , ehumm model, Relf.narter. dynamo 11 gheing, all
 Saymont W. . . Dunn, Led., 326 Euston Ra.. N.W. 620.170 MARSEAL, 1924 medel, 1127 hp . do luxo 2 -scater, doullo dlexey. dynamo stanter, all-weather eqnipment, doutho windscrect. clock, snecdounkter, gnd urdor throughcuh. 115 gminces. Below.
MARSEAL 19231127 hp 4 schter, dynamo, starter, all-weather cantp-



 MifTCHLESS, 1924 20hp. 4 -scater, dsmamo. all-wealucr equipment,
 MATCHLESS, 1924: 10hp, 4-scater, dymamo, equipped faxed, qew con
 MATCHLESS 4 -5-seater light car, our own mpecial demonstration modecl,

MATHIS, 7 hp. 4 rylinder zaloon, dynamo lighting and atarter, opholc125. Maudet, 100 GL. Fortand BL., London,

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 Railon Cobham and Cu. Lid. 5 C Cumberlaud Si, Deinsgate, Mantherer $620-191$


 Morgan. Jomes and Co. (zil. (Ginl4), Lid, 261-267 Feclosall Rd., Sluct
 alwags in slock. MORGAN Servico Denot OMrial appointed repairori by the Morgan










 MORGAN, 1923 Grand Prix, Anzani, Lacas dynamo, diao whecis.
 MORGAN, 1923. Flackhurne, dynamo lightisg, pood condition, nem


 MORGAN, Bhp, JI. P. cnsinc, water-ceoled. de luxo, 1921 , absolutely as
 MORGAN, 1921, 10hn, MAG, do luxe. water-cooled, 700 by 80 tyread

 MORGAN, 1923, Acro, 8hp Anzant, water-coolcd, 700 bs 80 Dunlop


morgan 1924 Girand Prik ohv. Blackburne, dynamo lighting Cowey




 MORGAN 1922, G.P., M^G. englun, tully cquipped licenged. ©uperb

 620-h8 MORGAN, 1921 (but infinitelo letter condition than age denotes), Grand


MORCAN, Grand Priz, 1923 milcage 3.000 , excellent condition througb.
 MORGAN, Grand Prix, 8tp J.A.P.a new oversize hark tyre. Whifrol
 MORGAN, 1922, Grand Prix (J.A.P), in first-class condition, fitted

MORGAN, aero, B-valvo Anzani, w.e., electrio nud bulb horn, 1924.




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

MORGAN, 1924 (June), G.P, Blackburne, primrase and black, frontwheel brakes, discs, Honalken, 2 running baards, petrol-can carrier,
 MORGAN, 1922, standsrd, 8hp a.-c. J.A.P., Binks, apedatncter, hood,

MORGAN, 1923, atandard model. sldescreeni. Bhp I.A.P xpecdrimeter. taxel, as new. exchange combinatinn, cle. Allber Garage, Thornsflí Rd,
Earlafid, $8 . W$. Latchmero 4388 .

MORGAN runabouts. Write for our special list. All models in stock. irgm fin to si40, sccond-hand. Overhauled and guaranteel Exchanges
 MORGAN. Fomacis bave the following Morgans for ale. Alf fuly 1920 Grand Prix, 8hp w.e. J.A.P.. dickey seat at rear, tax naid. 565. 1924 De Luxe, 8hp w.o.J.A.P.. dynamo, fully cquapped. 1 ax paid e125. paid. 1922 family 10 iohp w.e. M.A.G., Esecdometer. tgres excellent, tax pald, 1924 standard model. 8hy
standard model. 8hp a.c. J.A.P., fully equipped, grey. brand new. pplied on deferred terme. Your prescnt machina accepted in part payment. Cladon Rd., N.E. Thone. Homac'm Morgan Service Depot, 243 Lower Cladon Rd., N.E. $620.435{ }^{2}$.
Olissold 2408. Mongan, G.P., 1923. Anzan! water-cooled, outside band brake, Zenith carburelter, in splepdid condition, 878 . Earls, Lid., The Vale. IInmn MORRIS-OXFORD. Two 1914 2-seatcrs and dickey, good ennditian
 MORRIS OXFORD, 2-seater and dickey, dynamo lightiog and spare wheel. taxed and ready for road. £48. $31 a$ Wrdethorpe Rd., Balham. 'rinanr.
Gtreatharn 3440 . MORRIS-OXFORD 4 Ecater chummp. 9bp, $\delta$ Sankey detachabie wheels, extremely smart appearance, nerfect ronaigg order. S0.miles gallon, or Enfield comhination, 248 . 56 Lordship Lane, Bruce Grove. $\times 17$. Tottenham 2067.
MORRIS-OXFORD, 5 -scater, 5 detachable whecls, tared December, peroct, any trial. E35. Drapers, 114 Philip Lane. Tottenham, N. $15.620-\mathrm{h} 12$
 and insured, elcctric light, starter, same wheel etc., $£ 50.380$ North NEW CARDEN, 1924. Thp, chummy. 4-seater elcotrio lighting. full
 NEW CARDENS, 1923 and 1924 models, 2 -sesters and family models


PALLADIUM, 1923, 4 -seater, all-weather de luxe, dynamo lighting, selfstarler, clock, specdometer, spring giters, electric hora. mirror, petro carricr and can, aluminim plate. hood cover. luesabacarrier. cools etc. tar paid. very epecial offer. $\mathbf{~} 17915 \mathrm{~s}$, cash or cass payments. Wakins.
Gimpan, opposite Olympla, London. PALMERSTON, genulne 1920-21, smart 2-seater, Corentry-Victor water cooled enginc. 5 specds, reverse. Glasit drirc, nearly nem tyres, brant
 PERRY, small 8 hnn 2 -seater, 5 Sankey wheels, good running.nrder arcent PERRY, 1917. 2-senter and double sunken dickey. 4-cylinder, dynama lighting, laxed to December, exceedingly smart car, excelient mechanical condition. S50. Waldron Motor Mart, 645 Garratt Lane, Earislietd
S. Whone Wimbledon 607. RENAULT, 8. Shn, 1924 model, left-hand drise. 3-seater, with sisel exiras, completc, £20U. Apply. Perfect, Manor Hotel, 52 Westbournt RHODE, 1922, 9.5lip. chummy bodg, dynamo llöhting. Tpare wheet. in
 RHODE, 1923, occasional 4, lighting, starting, 6 whecls, all Rapsons. Baxer, Rosars: Achlord. Kent. RHODE, latc 1923, only 6 months' running, as new, mist sell awing Rutter, 20 Hall Coscent. Cambridge.
RHODE, 95 hp . 1923 , all-weather saloan, light blue, black wings dyanmoghing. spring gaiters ereaserua lnbrication Michelin Cumfort types.
RHDDE. 9.5kp, eparts, 2-seater, mauvo, alnminium wings, dynamo lighting. spredometer, clock, spotlisht and other extras. taxed. very smart
and appearance as new, 190 . Alebers and Nebes. (Established 1890). The Oryinal Light Car Specialistas. 144 GL . Portlaud St. W.1. Phnne.
G20. RILEYS. Guarantecd second-hand Rileys, overhauled by Riley specialists. May wa send you montlily lists? Lewe Motor Works, 628.420
Susiex.


ROVER $8,1924,4$ seater, sll-wuather electric starter, dynamo lighting. sured and taxed. as now. 5150 . 26 Grance itd. Gravesend. $621-515$ ROVER coupe, new, shop-soiled, 8hp, fitted with selt-starter, never yet regiatered, carries guarantee price f175: terms, exchanges, arranged
Warwickhira Motors. $148-150$ Gt. Portland St., W.1. Phove, Musum
g964.

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

nOVEA 8, pertect ranning order. apire whel and aperilometer, bought

 Arenue, Unises. Middx.
 ROVER, 1922, 8 hp, 2 wenalcr and dickes. specdomnter, anare whect

 eliy nice condition, cilu. Below.
ROVER, 8hp, 1921, dynamo lighting, aparo whecl, rery afee mechanical ROVEA, 8hp, 1922. 2-geater, dynamon lighzig. epare whecl, speedometer Very nice condition, عós: exchangea and lermararranged. 1 hone or ROVER, 1924 Bhp chummy model, rery little ascd, all-wather equipment dynmollghting, only done 3,000 miles, many extra, including apedometcr, clock, Eyring caitera, acreen wiper, njecial large C.A.V.

ROVER 8, 1923, 2-acater da luxe, all-woather equinment, cood tyses, elock, sperdometcr, real leather upholatery, good condition throughout,
anpuarance as nev. 80 guincas. or oxchango motorcscla and cash. anpuarance ms new. 80 Ruincas. or oxchango motorcscla and cash.
El Upper Richmond Rd. East Putnes.
$620 . g \zeta^{2} 2$ Roven, ${ }^{\text {1 }} 925-24$, chumms. bas been thoronghly overhanled at works,

 ance, good mechan 620-355 ROVER, 1922 de Inxe 8hp, fally equipped, clock. specdometer, tax R.W.1幺 apparanco as ncw. E78. Niaylor', 406 Garratt Lanc, Earlsfield, RuvER, 1923 , 8hp de laxe chommy model, aclf-starter, faxed, 2 spara Fhecls, C110. Imarker's, Lid. Bradshawgatc. Bollon: alio 246.52 DcansROVER, 1921, 811p, 2-acatce, dickes, finimhed bluc, c70. Parkeria, 620-365 out, \&70, no otera. 395 Keddinga Lino, Sjarkhal, Bırminyham. Hover, 8 hr, chammy, tate 1923, sell-starter, taxed to Decemher, as Dew, Guaranteed, £115. Ratclitio Bros., 200 Gt. Portland 620-322
 ROVER, Bhp, 1924, 2 and 4 -smperi, new and anased (silightly shopCound), Gath ifartera. listed E172, ©160 cach lor guick anle. 17 . ROVER

 ROVEA 8, 1924, 4-semter do luxe model, self-starter, elock, speerometer

ROVER, 1924, 9hp. A-cylinder, Aseatar, water-cooled, brand new bat rery slightly ihowrom moiled, ecl atarter, all-weather equipment, elc. or eany payments. Wilkins, Sompson, oppositc Olympia, London. G20-hड0
ROVER, 8hp, 1921 (tale), dynamo, "paro whoel, oord tyres, periect Chispuris
ROVER 19248 hp -senter, aide curtaise, otc., Lcensed, very good ROVER 1925 8hn de laxe chamme model, lighting, starter, clock, apedo metcr, real kather uphoistarg, all-weather equipunent, licenced, crectlen
-rder.
Rov 1924 8hp 2-Heater, dickey, all-weather equipment, zpedometer
ROVER 192381 p 2-seater, all-weathar equipment, cle., excellent order BJ suiace. Below.
ROVER 1922 8hp 2 -seater, lange dizkes spectomemer, atl-weather aido
 ROVER 8 2-scater, 1923, new Mar, 1924, £80; another, uthity model,
£55. 102 Westwood Rd., Earlsdon, Coventry.
 ROVER 8hp, 1923. chummy model, spredometer, otc. taxed and in ©ured, many extras, pracheally new, s.j0. 41 Wray Crei., 620.8964 AnVER 8, chlmmy, מew Augnst. 1923 , splendid condition, ancedometer, ROVEA 8, 1923, chummy, perfect, every necenmary, mileage 6,800, £lou, or exchange Morgan and cash Mayvilla, Lower Inm Kf. Kingiloo
 ROVER 8, 1922 sikle carialns. epectamefer, perfect order, gond appear dish Bridge, near Castlo Loninglon, Loicestershiro.

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


 nover 8 hp models in stock.
19244 seater do luxe, in practically new conditinn. $£ 130$. 1924 chummy model. run nbut 2,000 miles, $\Sigma 110$.
1923
2 -icator with sell-startor, 890 . 19222 suntcr, dj namo lighting. cle, E 78 nnct E 68

 ROVER 8, 1922. 2.seater and double sunken diekey, tyres almote new.
 ROVER 8, 1923, chummy. black all-weather craipmery, as new throagh



 ROVER B, 1923 (late) chnmmy 4 sealer de luxe. s. ll-tarter, all-weather

 Phonc, Muscum 2271. Win

 SALMSON. Mann and Handover, Lld, nothorized afents for Salmson

 SALMSON, 1923 chassif. fited with sery smart 3 smater floverinat Lody



 SALMSON, 1922, 10 hp . 2-scater, dickery dinnmo, aplendly condifton,
 SALMSON sports. 1924, elover. lea! londy. fiow, annedomeler. nlectrio St. St. Albana.
 SINGER. 1922. 10 hp . 2 seater, dickey, dynnmo lightine ntarter, sido
 SINGEH, 1Olp. 1920-21, ooupe. dynamo. starter, apeculomecer, dickey
 SINGER, 1919, 2 -senecr do luxo, ell-starter, ect renainted good tyres



 SINGER, 1924. 4-scater. taxed, pericct throushout, $\kappa 155$. Smilh. and
 SIOCER, 1921 9.8bp, 2 -scator and dickey, dynamo lifhetng, stnrter,
 SINGER 1924 10hp 4-sontor de luxe, in very good order C135: alion

 Sinaer. £95: exchanger. delerred paymenta, very rice 1919-2020-233

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 Singen, 1923. 4 -scater. do 1 uro model, alt-weather cgulpment teather

 $\mathrm{La}_{\mathrm{ob} \text { ham }}^{2983}$. SINGER. 168 guincas. nolv, unregisterced, alishtly shop-zoiled, do luxo
 Wandswurlh, s.w. 18 Putney 2728, 620.291 SINGER (speocinl ollcr). brand-nciv 1924 10hp 1 -seater model de luxo
 bimpton, oppositio Olympa3, Londun. Casi or casy payments. 620 b - 26 SINGER 1920-21, 10 hp , 2-scater, dickes, elcectrically caulpped. granter.
 SINGER, E47 10s. 1917-18, 2-sentcr, dickey, dynamo, |uatt repainted
 GINGER, 272 10e 1921 . 10 hp . 2 -seater. dickey dmamo. suarar
 Standard. Moore Prtaio Croydon agent Standard carb. Prompteal denvers new moteli


 Rnecdumelrp
Richarda, 12 Spring st. inatingion
 STANDARD, 1924, Kcmilyorlb 4-acater, used for demonstration oolg
 STANDARD, 2-seatcr, 1923 , dvnamo $11 g h t i n g$ and gtarting, double dickey, taxed for , pirst-clasa car, side curtalna and doable screen SiANDARD, 1920, G.Shf, 2-scater nod dickey, starter and lighting





STANDARD, E55: 9 hhy 2 seater. dickev. 5 derarhabla whpals. Iamna excellent condition, real buthin, \&55. Ashby, 162 Groaronar Rd. Vaux-
hall brigc. $\$$ W. Victoria 3430.229
 STELLITE, 1919 No. 1,369 . 2-senter, overhanled and repainted green Tanbridge Welts. Tcl. electric lighting. £100. Stevenson'c Garago STELLITE, 1920. No. 1,803 , 2-scator and dickey, 3 speeda and reverse
 STELLITE, CAS, exchanges, deterrod payments, 1914, 2-acaler, dickey

 STONELEICH, 555,1923 , 3 -scater AArmatrong-Siddeley productionl apedometer, ide curtalns, etc., dynamo lightigg, detaehatla wheph, Yard, Richmond. 'Phono 1326 SWIFYS. Try IIenly'a. Youn cannot beat thalr terms. 91 and 155
Qt Portiand St., W. Mnyfaír 4201 . 301. SWIFT. Moores Presto. Croydon agenta Switt cars. Promptest dolivery ta aclect lrom Deferrcd payments and exchangea arranged. North End Crosdon. 'Phone 2624.
SWIFT, $192 J, J u l y, 10 h p$, chnmmy. Fnrtfords, dynamo lighting. Gtartor apeadometer etc, engine recently orerhnaled, $53 \mathrm{~m} . \mathrm{p} . \mathrm{h} .42 \mathrm{~m} . \mathrm{p}$. perlect condition 2150 or nearest nifer, can be seen London if regnired.
Blafold. R.A.F. Duxlord, Cumbridgo.
$620-8422$
SWIFT, IOhn, 2-sontor, wilh dickoy, electrio liehting and sinter, 6

SWIFT, 1922 , 2-acneer and dickey, dynamo and starter, tully equipped and licenacd, with Eunranice, El10: exchanges or bire purchase. The
LIght Car Co., $331,410-414$ Euston Rd., London.
$\mathbf{6 2 0}-271$
 SWift, 1920, 1 Ohp, fully licensed, as new, $s t 00$ or near ofler. hall-

TALBOTS. Try ficnly. You cannot beat their terma. 91 02U-188 GL. Porlinnd St. W. Maytuír 4201 .


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TALBOT, e320, 10-23, hatest 1924 modal, 4-seater tonitaf. 1.000 miles, ben otifully equipped, Lax paid, privalecy owncd, viowed wosimincar.

TALBot, conpe, 1923, 8-18, many oxtma, 2 siare theels, methauazat crecn wipor, tax paid. practically new. 200 guincas Lionel EL
TALBOT, 1923, 10-23, 4-seater, atarting, Lghting, fantices condition throughout, tar paid, 200 guincas; oxchagges, extended payments. Miars
and Bighop, 225 Hammersmith Rd. W. 6 . Rireaido $2230.620-252$ TALBOT, 8-18. 1923, in 5cry good condition and a very last car, $\boldsymbol{e} 146$ 4792 .

TALBOT. Grimea lor second-hand Talbote gereral second-hand 8-18 and $10-23$ models in atuck. Call and laspect. Fxchanges and delerred.
Grimes. 24 Bruton Place. Bond St. Maylalr 4792 . TALBOT bargatna, 1924 three-quarter coupe, abwalntely ai new. s335; 1923 ditto, special magneto model, 2 sfare whoels and extras. £290 or delerred. all kuarintioed and Laxed. James. over Alexander. 482
Harrom Rd., Paddington. 620.316 TALBOT, 1924, 8-18 magneto ignition, Farthorda all roand beautigil
 TAMPLiN, 1921 tandem, slaminlam winga, speedometer, diaca, excep-$660-8875$


2 lraide
starter. daih Booder. Breen wiper, hood, juck purgh 2 horma 65 milea per gallon, regularly ured 200 -mile weekend tripa, only done 10,000 , 621-952


 65 High SL. Eoundow.
VIOLET.BOCEY, 7 hp , porting, detaohable wheels balboug back, perlect. 228 , photo, exchengca. Whisle Worko, Orphanage Ba. 620 g 962 WESTWOOD 8PORTS, 1921, overhead Dorman outaide copper exhaust.

 WOLSELEY, 1923, Z-iester, dectrio starting, speedometer, spring
 WOLSELEY de luxa Cass's Motor Mart. Lid 1921 10bp 2-scater,
 WOLSELEY, e125. 10 hp . 2-seater, 1922, dickey. 5 detachable wheels.
 WOLSELEY 1921. 10by, de laxe. anperb V-fronied 4-eeater, all-reather coupe body, lighting, atarting ficonsed, excellent order 180 guineas; exchanges or doferred. Edwisery. 175 Gt . Portand Et., W. Mayfair 4027.
$\mathbf{l i c o n g}$. $620-426$
WOLSELEY8, 1924,250 and gou are on the road with any iOhp model. $18 x$ and insurance paid aecond-hand car. give this propositlon your
 WOLSELEY, 1920, 10hp, 2 sesur and dickey, fully equjped and licensed, with guaraniec, E125: exchanges or hiro-purchaso. The Light
Car Co., 331,410414 Euston Rd., London. $620-273$ WOLSELEY 71923 2-seater, dynamo, starter, eta, spare wheel, excel-

WOLSELEY, stiper sport, 10hp, exocllent condition, wery last. trial ay reasorable distance. Eivo. Ras, Ebberles Liwn, Barnstaple. WOLSELEY 7, 1923, 2-scator, dynamo, starter, taxed, e95. uarage, 13 Corawall Terrace
Langham 2933.
WOLSELEY, 1924 10hp, 2-geater, model de inxa nem, bue slightiv
 LE ZEBRE, 1923. 2-sester. dickey, electrlc IIghting and atarting nearly

LE zEBRE, SO per cont, ander list. Brand net. 8hp. chummy 4 aeaters. dilfercntia, cantilever springing. lighiogg and starting, detach-
able
tall equipment complete for
 terma; all sparea itocked Boon and Porter. Lid. $159-161$ Camelnau.
Barnes. S. F (adjoining Hammorsuith Bridge).
LE ZEBRE, 1922 , brand new (shop-soaled), 2-seater Fith dickey, dynamo and starter, ello, exchanges or bire-purchaso. The Light Cer Co
$410-414$ Enston Rd. Inedgn.
$620-268$,

$$
\begin{aligned}
& \text { MAP OF ENGLAND AND WALES. Cloth-4s. net, 4s. 2d. post free. Paper-2s. nel, }
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yequiremente. Prompt atention given. Phone. Steverage 53 . zaz-599 morgan, Mrertipollian Area Scrice Depot. Etoop Lid.i oldest and

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Gbificld (late manaEcr). ZEBRE. AU sparca can to obtained from Knisht. 63 Regent ${ }^{\text {3t. }}$.
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LONDON Morgan Serrice Depot. Tho only Grm oflchally appolnted as

Ciccold 2408.

## NEW LIGHT CARS AND CYCLECARS


#### Abstract

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