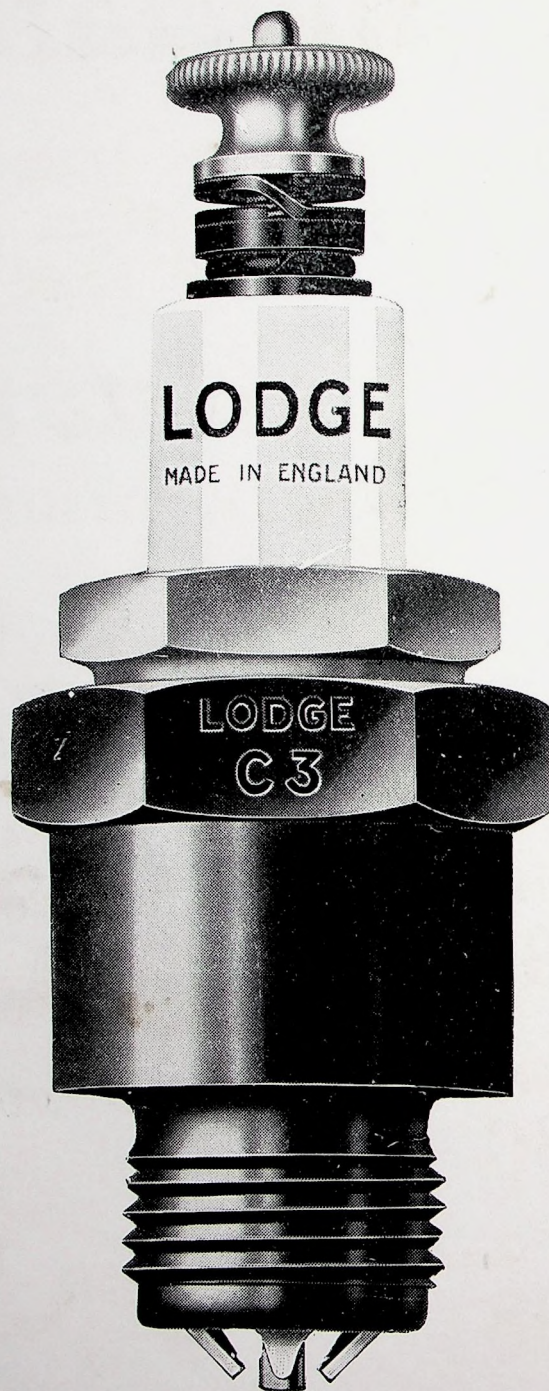


The only Small Car Journal

ON A 416-MILE
JOURNEY.

To-night 331 vehicles leave London for Edinburgh. There are 15 cyclecars and 74 light cars amongst them and Edinburgh will be reached after a 24-hours' trek which takes in well-known Wharfedale test hills, one of which is depicted. A full programme of the run, which is held annually by the Motor Cycling Club, is given in



Unrivalled

for the modern
high-efficiency engine.

LODGE PLUGS LTD.,
RUGBY.

Immediate

CITROEN

Price Reduction

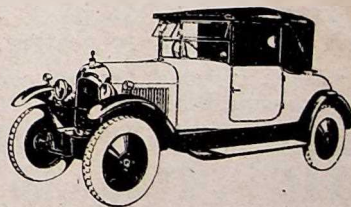
in time for Whitsun!

GREATER value than ever at the reduced prices! The famous 11.4 h.p. models, as now being delivered from the British Citroen Works at Slough, unquestionably represent "Supreme Closed Car Value." The strength of the chassis, the beauty of the body, the quality of the finish, and the completeness of the equipment, place them beyond competition at the new prices, which have come just in time for Whitsun!

ORDERS EXECUTED IN STRICT ROTATION.

11.4 h.p. 3-SEATER COUPÉ.

£190



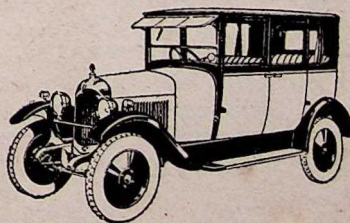
11.4 h.p. 3-SEATER COUPÉ.

11.4 h.p. SALOON, 4 Doors.

£180

11.4 h.p. SALOON, 4 Doors, with F.W.B.

£198



11.4 h.p. SALOON, 4 doors, F.W.B.

Send for the Citroen Book 18.

CITROEN CARS, LTD.,

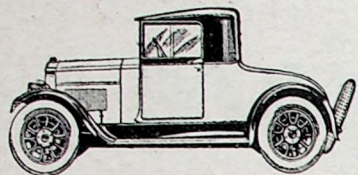
CITROEN BUILDING, HAMMERSMITH, LONDON, W.6.

Showrooms: Devonshire House, Piccadilly, W.1.

**DELIVERY NOW
FOR WHITSUN.**

BCM/MC70

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



Be fair to Yourself

See that you buy your car from a well-known established firm.

TAYLORS OF KENSINGTON

have been selling cars for the past 16 years and supply all makes. This long experience should be of the utmost value to you—then again

Taylor "Service" is Free

with every new car sold—it is a very real and valuable service and far too comprehensive to be dealt with here. Our 44 page "Buyers' Guide" tells you all about our Free Service. May we send you a copy?

ALL MAKES SUPPLIED
for CASH—EXCHANGE
or by PAYMENTS
from 1 to 24 Months.

Amongst the range we handle the following give excellent and economical results:—

JOWETT from £139 to £185

AUSTIN from £145 to £650

ROVER from £220 to £625

MORGAN from £89 to £127

May we send you an Illustrated Catalogue describing the car which interests you particularly?

To ensure satisfaction Taylors supply
Second-hand Cars upon 7 days' Trial.

THIS WEEK'S SECOND-HAND SNIPS.

ROVER, 1920, 8 h.p., 2-Seater	£25
AUSTIN, 1925, 7 h.p., 2/3-Seater	£95
CITROEN, 1924, 11 h.p., Coupe	£87 . 10
AERO MORGAN, 1927, 10 h.p., J.A.P.	£115
PEUGEOT, 1922, 10 h.p., 2-Seater	£48 . 10
F.I.A.T., 1922, 2-Seater	£85
ROVER, 1926, 9 h.p., 4-Seater De Luxe	£147 . 10

Full list gladly sent upon application.

HOURS OF BUSINESS:—

Saturdays 9 a.m. to 1 p.m. All other days 9 a.m. to 7 p.m.

H. TAYLOR & Co., Ltd.

49, 50, 52 & 53, SUSSEX PLACE, SOUTH KENSINGTON, S.W.7.
Phone: Kensington 8558/9 and 5540. Grams: "Dynametro, Southkens."

See how they Run!



And these Car-
Owners never
realised how their
Car COULD Run
until we proved it
to them.

The Carburetter that makes ALL the difference.

What an advertisement says and what the advertised product does are often two different matters. Here's an exception, for in many instances where Car owners have fitted a



performance has exceeded our claims. In any case we prefer you to

PROVE for yourself
without obligation.

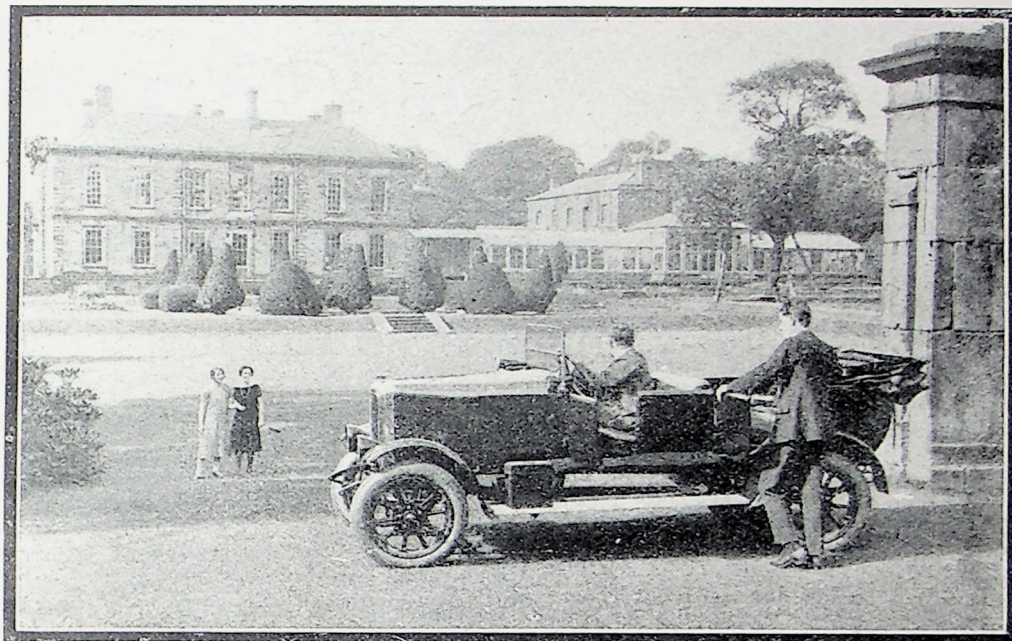
Under our special 30 Days' money-back-guarantee, we will send you a B & B for your Car.

Doesn't it stand to reason that we couldn't make such an offer if we were not certain of your satisfaction?

Prices from
£3 - 10 - 0
Models to suit all
Cars.

BROWN & BARLOW LTD.,
Carburetor Works, Witton, Birmingham.
London Service Agents: Dartford Eng. & Carriage
Co., Ltd., 23/24, Hythe Road, Willesden, N.W. 10.

There's no hurry!



These happy Jowett owners know their car will take them to the appointed place at the appointed time. That's one of the many happy characteristics of this wonderful car. Its ability to perform all tasks with an entire lack of fuss that makes the most difficult job look (and feel) simple. Its wonderful acceleration which enables it to get round the corner, or through the traffic, and away again while the other car is thinking about it. Of course, everything about the Jowett is just a little better. Even our literature, which a p.c. will bring to you.

"The little engine with the big pull."

Short two, £139. Long two, £150. Chummy, £145.
Full four, £150. Saloon, £185.

Dunlop Balloons and Stewart Speedometers standard.

JOWETT CARS LTD., IDLE, BRADFORD

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

Special Features of this week's issue

The Motor

Tues., May 31st.

* NEXT WEEK!

Published on Wednesday
instead of Tuesday.

THE LONDON-EDINBURGH
RUN.

Fully Illustrated Report.

THE WHITSUN BROOK-
LANDS MEETING.

And other Holiday Sporting
Events Described and
Illustrated.

MISUSE OF THE WHITE LINE.

How a Useful Factor in Safer Motoring is Being Abused.

HOW TO GET TO THE ECLIPSE AREA.

North Wales View Points.

THE GREAT GARDENS OF ENGLAND.

When and How to See Them in the Provinces.

MOTORING IN MOROCCO.

By the Hon. Mrs. Victor Bruce.

TWO NOVEL SERVO BRAKES.

AN INTERESTING SPRING WHEEL.

New Design which May Render Road Springs Unnecessary.

SOME NOTABLE MOTOR BOAT OWNERS.

How the Unique Thrill of High Speed on the Water is
Attracting Motorists to a New Pastime.

HAVE MOTORISTS THE HERDING IN- STINCT.

Look out for Drove of Motorists at Whitsun.

A NEW "LIGHT SIX" BERLIET.

First Description of an Entirely New 1,812 c.c. Car.

A NEW FORD CAR.

Henry Ford Sets the World Guessing.

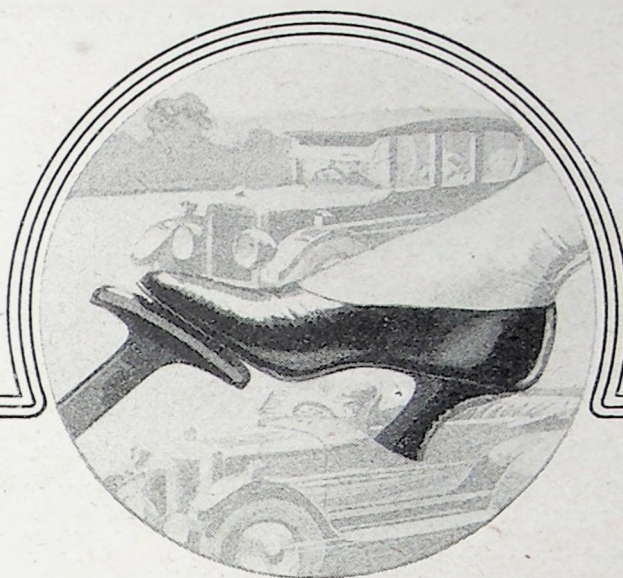
TREASURE HUNTING BY CAR.

An Amusing Way of Getting to Know London.

**EVERY
TUESDAY**

4^d.

Offices : 7-15,
Rosebery Ave.,
London, E.C.1.



A touch of the Toe

brings your brakes into immediate progressive action, giving you perfect, effortless Control over your Car—Supremely important to-day.

This is accomplished by the Dewandre Vacuum Servo—a neat, simple and self-contained unit, which fits into any Four-wheel braking system.

40 Leading Car Makers already fit the Dewandre mechanism as standard equipment.

No car is absolutely safe without it and you should have it on your Car.

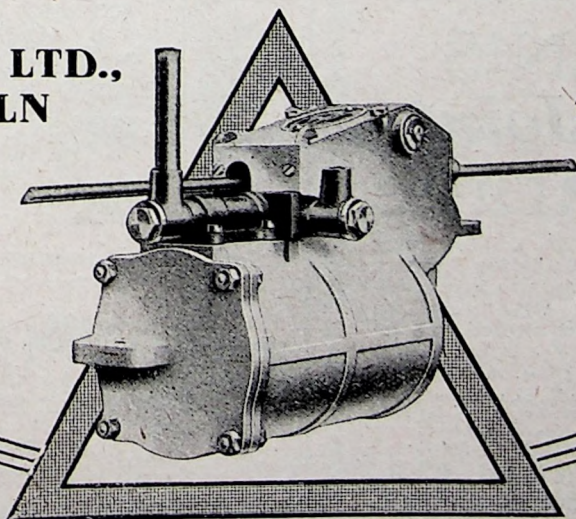
DEWANDRE VACUUM SERVO SYSTEM

Sole Licensees & Manufacturers:

Clayton
WAGONS LTD.,
LINCOLN

Telegrams:—
"ABBEY, LINCOLN."
Telephone:
LINCOLN 950.

**BRITISH
MADE
THROUGHOUT**



Write for
Illustrated
Catalogue.

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

TOBACCO

COUNTRY LIFE $1/0\frac{1}{2}$ per
(Mild and Medium) oz.

COUNTRY LIFE 11^{D.} per
(White Label) oz.

Smokers who come to "Country Life
after a painstaking trial of other tobaccos
are impressed by its remarkable freshness.

"As Fresh and Sweet as the Country Air."



F. PRATTEN & CO. LTD. BUILDERS, MIDSOMER NORTON N^o BATH

PRATTEN'S Duple-Joint Garage

PRATTEN'S
Duple - Joint
Patent No.
237460/24
"The more it
rains the
tighter the
grips."

PRATTEN'S Duple - Joint
Garage is built for security
and long life, and made in com-
plete sections which can be
erected without skilled labour
in 1½ hours. 14' x 8' 6" £15 5 0
16' x 8' 6" £16 10 0. Carriage paid.

Write for Catalogue No. 35, which contains
illustrations and prices of other garages.
We insure garages supplied
by us against fire—free.

F. PRATTEN & CO., LTD.,
12, Midsomer Norton, near Bath.

Light Car Co Way

OUR USED CARS ARE GUARANTEED

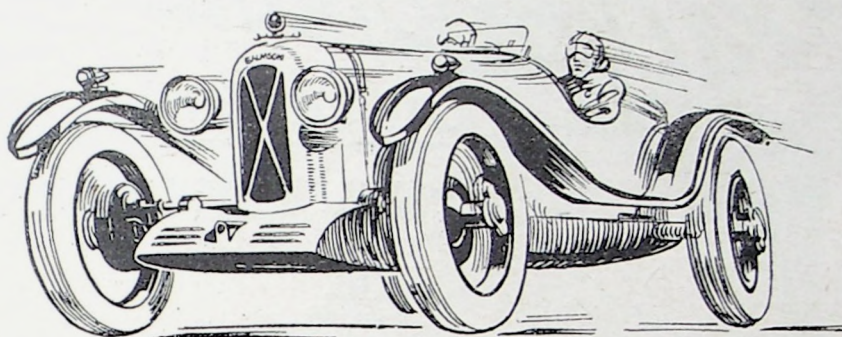
AUSTIN, 1927, 7 h.p. Chummy, immediate delivery ..	£145
" 1926, 7 h.p. Chummy model, excellent condition ..	£110
" 1925, 7 h.p. Chummy model ..	£98
A-C, 1925, all aluminium sports 2-seater ..	£185
" 1924, 2-seater with dickey ..	£110
CITROEN, 1925, 7 h.p. 2 and 3-seaters, also Coupes, from ..	£60
" 1925, 11'4 h.p. English Body 4-seater ..	£95
CLYNO, 1925, 2 and 4-seaters from ..	£85
FIAT, 1927, 12 h.p. 4-seated Saloon, F.W.B. as new ..	£295
" 1925, 10/15 h.p. 4-seated Saloon ..	£185
" 1926, 9 h.p. 2-seater and dickey, as new ..	£150
ROVER, 1925, 9/20 h.p. 2 and 4-seaters from ..	£95
STANDARD, 11'4 h.p. 4-seaters from ..	£85
WOLSELEY, 1925, 11/22 h.p. 2 and 4-seaters from ..	£85

100 OTHER BARGAINS from £25 to £250.
Easiest Deferred Terms on any make of New or Used Car.

404, 410-414, EUSTON ROAD,
LONDON, N.W.1.

'Phones - - Museum 3081, 2122 and 0140.

Don't waste time—



looking for another car to compare with the SALMSON—there isn't one. In any case comparisons are odious we are told. So all you have to do is to choose which SALMSON, and as there is a type of coachwork to suit every need, it is only necessary to call at the Showrooms or Service Depot, inspect the range of Models, decide—and your Whitsun Holiday is an assured success.



Sole London Distributors:

GORDON WATNEY & CO., LTD., 31, BROOK ST., W.1.

SOLE CONCESSIONAIRES FOR UNITED KINGDOM AND BRITISH DOMINIONS:

S.M.S. Ltd., Church Wharf, Chiswick Mall, W.4

THE WISE-MAN OF THE ROAD

The STOTT ANTIBOUNCE CLIPS fitted to the springs of your car will make the suspension as near perfect as possible.

THE STOTT ANTIBOUNCE CLIPS

are the cheapest and most efficient method of spring control.

do not harden the suspension at slow speeds, give all the advantages of rebound plates without the added weight and expense.

never require adjustment or renewal.

give really "dead bent" suspension.

are suitable for all types of cars.

attach to the springs themselves and not the bodywork.

are the best shock absorber on the market.

THEREFORE FIT STOTT ANTIBOUNCE CLIPS AND RIDE IN COMFORT
PRICES from 11/6 per pair.

A postcard to the makers will bring their booklet on Car Suspension.

RICHARD BERRY & SON,
Mafeking Road (Dept. "A"), SMETHWICK.
Phone—631 West Bromwich. Grams—"Springs, West Bromwich."

"WELLINGTON" LIQUID METAL POLISH

POLISH
THAT,
with a
minimum
of labour,
GIVES A
REAL
BURNISH
THAT
LASTS.

CLEANS
and
POLISHES
ALL
METALS
(including
Silver)
and
GLASS
(Windows,
Mirrors),
Motor-Screens
(Glass or
Celluloid).

TRY IT
and
PROVE IT.

In TINS, 3d., 4½d., 7½d. & 1/3; also in ½, 1 & 1 Gallon Cans.

JOHN OAKEY & SONS, LTD.,
WELLINGTON MILLS, LONDON, S.E.1.

26,000 MILES on STEPNEY TYRES AND STILL RUNNING

Llanelly, 2nd April, 1927.

Dear Sirs,

You may be interested to have the record of the five Stepney Balloons I bought for my 11'6 Standard when I converted from high pressure tyres.

My agents, Clifford Davies & Co., Lloyd Street Garage, fitted them in July, 1924, and up to date they have run over 26,000 miles, mostly on the so-called roads in this district. I have

had a few punctures recently, owing to picking up nails and the tread being rather thin, but I am sure they will clear the 30,000 mark easily.

I have just replaced two tubes which had deteriorated through rusty rims, otherwise they have never caused me a moment's anxiety. Yours truly,

(Sgd.) T. R. D.

**BUY "STEPNEYS"
NEXT.**

Two British Grippers.

**STEPNEY TYRES, Ltd., LLANELLY,
and WALTHAMSTOW, LONDON, E.17**

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

A TRIBUTE TO BRITISH DESIGNERS

Over 95%

OF THE CARS MADE IN THIS COUNTRY
HAVE MAGNETO IGNITION.

THE action of the vast majority of British manufacturers in refusing to offer the motoring public anything less efficient than magneto ignition deserves the applause of the motoring public.

The magneto remains as superior to any other means of ignition as it did when it first superseded the troublesome coil and battery method. It is the only system which is independent of the accumulator.

Faulty acid, short circuits, battery leakage and other troubles in the electrical equipment of a car completely paralyse any engine which does not get its spark from a magneto. Coil ignition systems are impracticable in any country which has not an elaborate service station system like that of America.

British cars admittedly lead the world for reliability.

It is for reliability that you should insist on seeing that the specification of your car says "Magneto Ignition."

BRITISH MAGNETOS

"The Best in the World"

—vide "The Times."

BUY A BRITISH CAR WITH A BRITISH MAGNETO

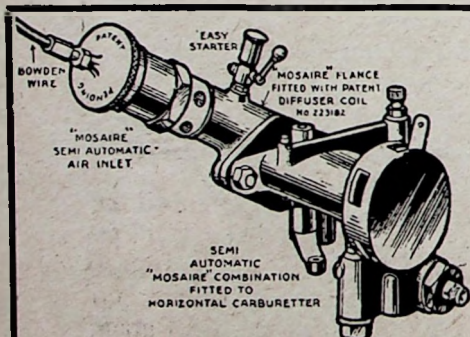


TO THE READER.—By mentioning "The Light Car and Cyclecar" when replying to advertisements, the progress of the small car movement will be assisted.

16/Postage
9d. extra.

only is the price of this Remy Model 8C Electric Horn as illustrated above. Length 10 $\frac{3}{4}$ " overall. When ordering state whether 6 or 12 volt.

There is a Remy Electric or Hand operated Horn for every car—for every purse—for every person. From the 16/- model 8C Electric Horn to the 75/- model 25—each is perfect in its class. In style, in finish, in usefulness, in reliability they cannot be excelled. Ask your dealer to demonstrate or write us direct.

**REMY
HORNS****DELCO-REMY & HYATT LTD., 111, Grosvenor Road, London, S.W.1**

THE SEMI-AUTOMATIC
Price 35/- Complete.

Fit The "Master" Extra Air Valve and obtain—

- 1.—More miles per gallon.
- 2.—Increased power, due to the admission of a larger volume of more intimately mixed gaseous fuel into the cylinders. A super charger in simple form.
- 3.—A sweeter running engine.
- 4.—Freedom from oily plugs and less oil consumption.
- 5.—The Semi-Automatic and Hand Operated are very efficient air brakes.

Send for our 54-page Booklet giving the Opinions of Owner-Drivers under all sorts of conditions.

ALDAM & CO.
(M Dept.), MISTERTON, DONCASTER.

Distributors for Birmingham and District:
Ashdon Engineering Co., Ltd., Floodgate St., Birmingham.



PRICE: Hand Operated,
30/- Complete.

A "1927" MORGAN

and a
square deal at

HOMAC'S
MOTOR AGENTS

243/7, LOWER CLAPTON ROAD.

STANDARD model now fitted with double windscreen, black leather cloth hood, electric horn and celluloid covered steering wheel.

DE LUXE FAMILY and AERO Models now 3" wider and longer; 7" front wheel brakes now standard.

Repairs and Overhauls by Morgan experts.

CURRENT PRICES!

STANDARD Model ..	£89
DE LUXE air-cooled ..	£110
DE LUXE water-cooled ..	£120
FAMILY air-cooled ..	£111
FAMILY water-cooled ..	£121
AERO water-cooled ..	£127
AERO 10/40 h.p. Racing ..	£140
SELF-STARTER ..	£10 extra.

DEFERRED TERMS ARRANGED.

TRADE
SUPPLIED

Works:
46, LONDON ROAD,
CLAPTON - E.5.

WRITE FOR CATALOGUE.

Phone: CLISSOLD 2408.



What oil do you use? Why? Ever experienced the difference the right grade of the right oil makes? If you know what it's like to have her stuck solid cold mornings, or know how she gets hot with temper when the sun (*when the sun, mark you*) gets warm—try the right grade of MOTORINE. My, but what a world of difference.

To learn why, send a p.c. for the free book "The Car" (or, if you're a motor-cyclist, "The Motor Cycle").

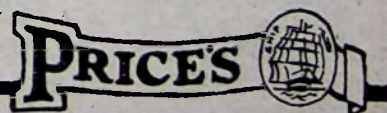
Price's, the Oil People (Dept. EE8) London, S.W.11

You are offered free the advice of Price's Technical Bureau. Send your oil problems to Price's.

MOTORINE

very special oil

Price's Patent Candle Company Limited, London, S.W.11



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

Decide now on an

OMEGA

PRICES.

POPULAR MODEL ..	£95
DE LUXE ..	£110
FAMILY ..	£115
SPORTS, as illustrated	£125

*"The Three-wheeler
that runs like a four."***Speedy & Sporty**

And with a track performance second to none. The Omega Sports incorporates all that one could desire in a really racy design. While providing a low driving position, with absolute stability at high speeds, the car is roomy, wellsprung and comfortable.

Fitted with 8 h.p. J.A.P. water-cooled Engine, 27 x 4 Dunlop tyres, butterfly windscreens, electric dynamo lighting by 5 lamps, and finished handsomely in tangerine, running 50-55 miles to the gallon. Tax only £4. Fix up to-day for a demonstration, we shall be happy to arrange.

WRITE TO-DAY FOR OUR
CATALOGUE OF ALL MODELS.

W. J. GREEN, LTD., Omega Wks., Coventry.

"BEST" Accessories**Best for your Car!**

Best for utility and finish. Obtainable from your local dealer, or post free from the manufacturers.

**The "CONCENTRIC" PETROL TAP.**

The simplest, soundest valve on the market. Can't stick or leak like the old metal to metal taper plug variety. Any wear can be taken up automatically, and in the event of obstruction you only require to push a bit of wire through the tap's length. Prices:—

$\frac{1}{2}$ gas No. 5157 .. 2/-

$\frac{1}{4}$,, No. 5414 .. 2/6

"BEST" Dashboard Petrol Gauge

A reliable and accurate gauge. Can be fitted in any convenient position on the dash, irrespective of the position of the petrol tap. Model illustrated is supplied heavily nickel-plated at 8/- post free, including tube and fixing screws. If more than 2 feet of tube required—6d. per foot extra.

BEST & LLOYD
Cambray Works, BIRMINGHAM
Monogram: BCM/BESTLLOYD.

London: 11, Bartlett's Buildings, Holborn Circus, E.C.4.

**LAYSTALL
DEPARTMENTS**

Cylinder Grinding
and

De Luxe Pistons
Lightweight Cast Iron

Crankshaft Grinding
and Bearings Remettal

New Crankshafts
Replacements

New Camshafts
and Camshaft Grinding

Helical Bevels
for Quiet Running

Welding
that is Guaranteed

Engine Overhauling
with Highest Efficiency

QUALITY
and
ACCURACY
in
**Special
Motor
Repairs**

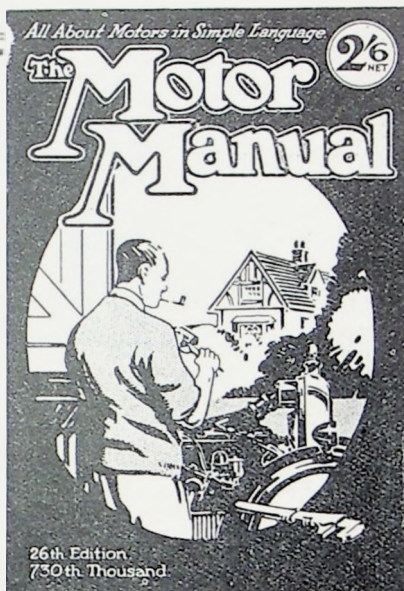
ILLUSTRATED
BOOKLET
with full
particulars
and prices
FREE

L A STALL
OR REPAIRS
EWER ST., SOUTHWARK, LONDON, S.E.1.
Telephone: HOP 6140 (9 lines)
and at 55, FONTENOY ST., LIVERPOOL. Telephone CENTRAL 5306

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

Can you answer these questions

about the Motor Car?



"The Motor Manual"

omits no item of information likely to be of interest or service to the motor vehicle user. A detailed diagram illustrating a typical modern chassis is included as frontispiece. The volume deals fully and clearly with engine types, construction and operation, valves, etc.—carburation, cooling and silencing—transmission system, from clutch to final drive—braking systems—ignition, starting, lighting—bodywork and equipment, wheels, tyres, accessories—choosing, housing and maintaining a car—repairs and renewals—touring—legal matters, etc., etc. It also gives at length much practical motoring data and information, including an extensive glossary of motoring technical terms.

How does the differential work?

What's inside the gearbox?

What is the 'working cycle' of operations in a cylinder?

What is the principle of the timing gear?

Of what does electrical equipment consist?

Why does an engine 'knock'?

How does a two-stroke engine work?

What is the operation of a sleeve-valve engine?

THESE are a few of the hundreds of matters fully dealt with in the twenty-sixth edition of "The Motor Manual." In its 206 well-illustrated pages it contains more practical, understandable information about motors and motoring than does any other single book. A glance at the list alongside will reveal its comprehensive scope.

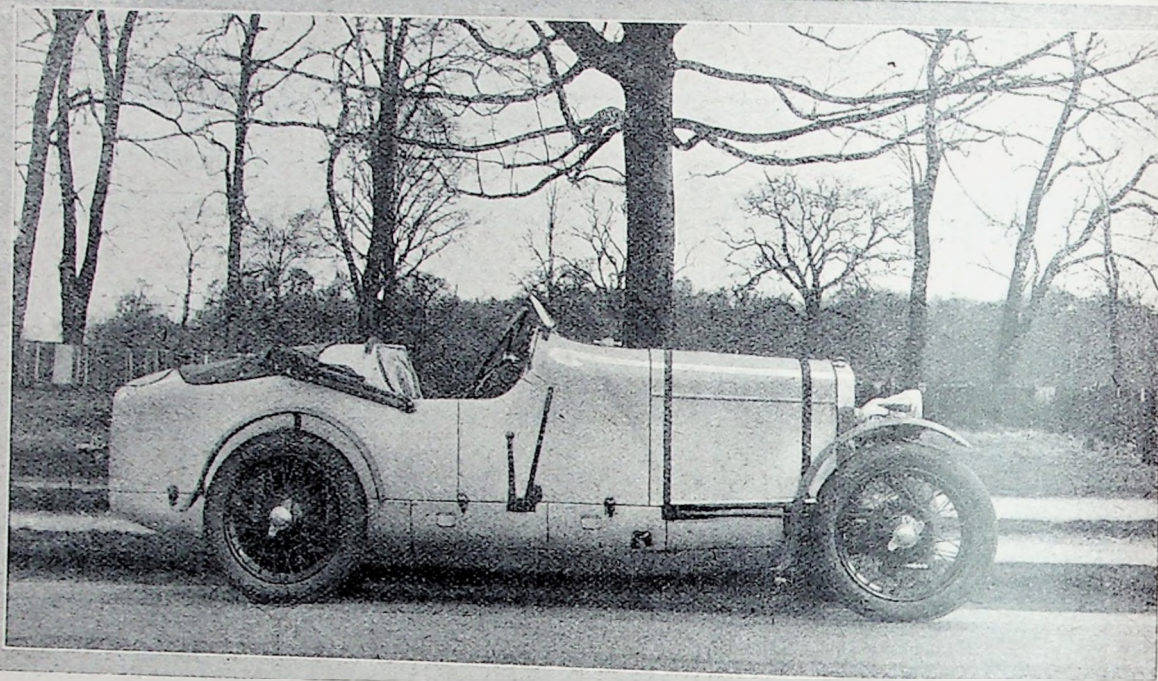
You get twice the pleasure from motoring, and save money too, if you thoroughly understand your car. Let "The Motor Manual" tell you what you want to know!

The Motor Manual

PRICE 2/6 NET

From all Bookstalls and Booksellers, or
direct from the Publishers 2/10 post free.

Temple Press Ltd., 7-15, Rosebery Avenue, London, E.C.1
Wholesale Agents: E. J. Larby, Ltd., 30, Paternoster Row, E.C.4.



SPEEDS FROM 70 to 115 m.p.h. PRICES FROM £340

FRAZER NASH CARS (A.F.N. Ltd.),
 London Road Works, Kingston-on-Thames. Telephone: Kingston 3612.

HARDING'S

HAND PROPELLED AND MOTOR DRIVEN
INVALID CHAIRS

**SCIENTIFIC
 DESIGNS—
 DEPENDABLE!**

Hundreds of grateful testimonials. Special machines to order. All prices show exact cost, delivered. From £12.

BATH CHAIRS, from 60/-

∴ MERLIN CHAIRS, etc. ∴
 66 page illustrated catalogue free.

R. A. HARDING, 1, Manvers St., Bath.
 (Offices and Showrooms.)

**TRADE
 ENQUIRIES
 INVITED.**



*Cash
 or
 Terms*



**A Guide
 to
 Safe and
 Efficient
 Driving.**

Obtainable from all
 principal booksellers and
 bookstalls, or direct from
 the publishers 2/9 post
 free.

**NINTH
 EDITION
 2/6
 NET.**

**TEMPLE PRESS
 LTD.**

7-15, Rosebery Ave.,
 London, E.C.1.
 Wholesale Agents:
 E. J. Luby, Ltd., 30,
 Paternoster Row, E.C.4.

The instructions are carefully graded, so that the learner progresses step by step in the art of driving.

Several chapters are devoted to the attainment of "road sense" and how to deal with the numerous road problems which demand quick decision and correct judgment.

Driving for avoiding waste and undue wear and tear of the car is also dealt with.



The Sternol Flag Day

Organised in aid of tens of thousands of cars which are in dire need of better lubrication!

Call at the first garage you see displaying the Sternol flag—or for that matter, *any* good garage. Ask for a five gallon drum of Sternol WW—with free brass tap. Then start running on this incomparably fine lubricant.

You will find a difference, a *marked* difference in the behaviour of your car. It will have a greater liveliness on hills, *consequent upon the special voltolising process through which every drop of Sternol WW passes*, you will need less gear changing, and you will find that starting up is easier. And, after many thousands of miles, you will find negligible carbon deposit.

Sternol WW—as obtainable at any good garage—is guaranteed to be of the same quality as that on which 50 World's Records were recently broken at Brooklands.

If you have any difficulty in obtaining supplies write to the makers.

ABRIDGED RECOMMENDATION CHART.

A complete chart for all makes of cars will be found in "FIRST AID FOR THE CAR," a copy of which we will gladly send on application.

WWI means Sternol WW Light
WWm means Sternol
WW Medium

WWh means Sternol WW Heavy
WWeh means Sternol
WW EXTRA HEAVY.

A.C. 4-cyl.	WWh
A.C. 6-cyl.	WWm
Alvis	WWh
Armstrong-Siddeley	WWh
Austin (all models)	WWh
Bean	WWm
Bentley	WWh
Buick	WWm
Citroen 7.5 h.p.	WWm
Citroen (other models)	WWh
Clyno	WWh
Crossley	WWh
Daimler	WWm
Dodge Bros	WWm
Essex	WWm
Fiat	WWh
Ford	WWI
Humber 8 h.p.	WWm
Humber (other models)	WWh
Lagonda	WWm
Lanchester	WWm
Lancia (Lambia)	WWm
Lancia (other models)	WWh
Minerva	WWm
Morris	WWm
Renault 8 h.p.	WWm
Rolls-Royce	WWh
Rover 8 h.p.	WWeh
Rover 9/20 h.p.	WWm
Rover (other models)	WWh
Singer	WWm
Standard 11 h.p.	WWm
Standard 14 h.p.	WWh
Sunbeam	WWm
Swift	WWm
Vauxhall 23.60 h.p.	WWm
Vauxhall (other models)	WWh
Vulcan	WWh
Wolsley	WWh

Sternol WW

MOTOR OIL

IN FOUR GRADES: LIGHT—MEDIUM—HEAVY—EXTRA HEAVY

Makes Engines Purr Like Pussies

STERNS LTD., 46, ROYAL LONDON HOUSE, FINSBURY SQUARE, E.C.2

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

**PRICE 3/6 NET**

Of bookstalls and booksellers,
or 3/10 post free direct from
TEMPLE PRESS LTD.,
7-15, Rosebery Avenue,
London, E.C.1.

Wholesale: E. J. Larby Ltd.,
30, Paternoster Row, E.C.4

The Spirit of the Age

is petrol! An entirely new T.P. manual dealing with the progress and modern application of the Petrol Engine in all its spheres

now on sale

Imagine the world without the petrol engine and you will gain some idea of what it means to modern life!

Here is a new T.P. Manual, "The Petrol Engine," which deals vividly and fully with the petrol engine in all its manifold modern applications.

Every page teems with vivid interest. The story of the development and modern application of the petrol engine as

applied to cars, motorcycles, commercial vehicles, motor boats and aircraft is told fully in simple but fascinating language, supported by a host of splendid illustrations.

This is a book not to be missed! Get your copy now.

Written by the staffs of "The Motor," "The Commercial Motor," "Motor Cycling," and "The Motor Boat."

"THE PETROL ENGINE"

A NIPPY AUSTIN 7—

30/-

A BODELO BRAKE ATTACHMENT fitted to your Austin 7 will make driving in traffic much easier. You will be able to pull up or get away much quicker and it will leave you a free hand for signalling.

THE BODELO BRAKE ATTACHMENT enables all four brakes to be worked by the foot pedal only, but at the same time does not interfere with the operating of the front brakes by means of the hand lever.

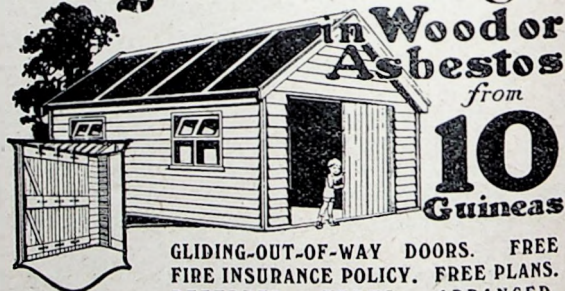
The BODELO ATTACHMENT can be fitted in a few minutes.

Let us send you our illustrated leaflet giving full instructions.

LLOYD & DEELEY,
177, BROAD STREET,
BIRMINGHAM.

Wholesale Stockists:—
BROWN BROTHERS,
LIMITED.
London and Branches.

Ready-to-Erect Garages



GLIDING-OUT-OF-WAY DOORS. FREE
FIRE INSURANCE POLICY. FREE PLANS.
DEFERRED TERMS ARRANGED.

Anyone can erect a Thornber Garage.

All the work is done for you. Sections are sent fully framed and complete. No loose timber. You bolt section to section. The holes are bored, the bolts are supplied. The job can be finished in one afternoon. Built to last and to please.
EVERY GARAGE COMPLETELY ERECTED BEFORE DESPATCHED IN SECTIONS. THIS ENSURES PERFECTION.

A Thornber Garage Saves you Pounds.

You save on first cost, because Thornbers' modern machinery cuts out expensive hand labour. You get a better garage for your money. It repays cost within 9 months. You have no additional expense—all fittings are supplied.

Gliding-out-of-way doors that move at a child's push, occupy no room and obviate hinged door weakness. Free Fire Insurance Policy. Free plans for submitting to Council. Sizes for all popular makes of cars. Deferred Terms arranged. Quick Deliveries. Garages can be inspected at works.

SEND FOR FREE FOLDER AND STATE REQUIREMENTS.

THORNBERS
for EVERYTHING IN WOOD

9, MYTHOLMROYD, YORKS.
London Office: 47, Victoria Street, S.W.1.
(where models may be inspected).

ALL CARS OPEN
TO A.A. & R.A.C.
EXAMINATION
WILLINGLY.

TO-DAY

starts a Special
Whitsun Week
CLEARANCE

OF SMALL CARS

ALL

UNDER

£100

AT

Benmotors

THE CLEARING HOUSE FOR SMALL CARS

A good Used Car is better than a cheaply made new one. As an example:

EXCHANGES—Send us full particulars of your present car or motorcycle and we will quote you a definite allowance per return, this can act as a deposit, balance to suit yourself.

DELIVERY—Distance is no object as we will deliver (and collect if part exchange) anywhere in England, Scotland or Ireland for £2-10-0 extra.

Here are a few examples from to-day's stock:

TWO-SEATERS.

A-C, 1924, Anyweather de luxe, 2-str., clock, speedo, excellent tyres, fullest equipment. Choice of 3 as illustrated £398
A-C, 1922, Royal, 11-9, 2-str., sunk dickey, taxed, 4 new tyres, antique leather, all extras £278
A.B.C., 1921 1/2, de luxe, 2-str., sunk dickey, 2-door body, new hood, excellent tyres, just overhauled. Choice of 4 £445
BELSIZE-BRADSHAW, 1922/3, de luxe, 2-str., sunk dickey, dynamo, good hood, speedo, 3 tyres as new, very sound £445
CALTHORPE, 1924, super sports, 2-str., wire wheels, excellent tyres, double screen, cream with red wings, 4-speed close ratio, clock, speedo, screen-wiper, countless extras, exceptionally fast, distinctive £395
CITROEN 7, 1925, drop-head Coupe, balloon, 3 as new, leather upholstery, clock, speedo, double screen, frameless windows, taxed, very smart, economical £85
CITROEN 7, 1925, 3-str., balloons, fullest equipment, paint and plating as new. Choice of 4 £275
CITROEN 7, 1922/3, 2-str., specially tuned engine, many extra fittings. Choice of 2 £248
CALCOTT, 1924, 10-4, de luxe, 2-str., special all-weather hood, full equipment, speedo, paint and plating original, very sound throughout. Choice of 2 £278
CALTHORPE, 1924, 10-4, all-weather 2-str., concealed dickey, good tyres, speedo, double screen, rigid equipment, all extras. Choice of 3 £268
CALTHORPE, 1922, 2-str., 10-4, 4-speed, sunk dickey, new hood, bodywork, etc. very sound, smart and reliable £258
FIAT, 10-15, 1923, English de luxe, 2-str., sunk dickey, 2 doors, double screen, all extras, taxed £295
HILLMAN, 1923 model, 10-4, special all aluminium 2-str., sunk dickey, good tyres, leather upholstery, speedo, screen-wiper. Choice of 2 £278
HANDS, 1924, 10-4, 2-str., sunk dickey, balloon tyres, Triplex screen, speedo, clock, starter, rigid sidescreens, leather upholstery, tip-top throughout £275
JOWETT 7, 1924, 2-str., sunk dickey, dynamo, 4 tyres, good upholstery, paint and hood, sound little car £208
LAGONDA, 1923, 11-9, 2-str., sunk dickey, double screen, good tyres, paint and plating excellent, new hood, tip-top throughout. Choice of 2 £208
LAGONDA, 1924, 11-9, de luxe, 2-str., as above, with pneumatic upholstery, just re-coachpainted. Choice of 2 £258
ROYER 9, 1925, 2-str., sunk dickey, balloons excellent, 2-door body, speedo, clock, starter, all extras £269
ROYER 8, 1924, 2-str., big body model, sunk dickey, good hood, fullest equipment £258
RENAULT 8/3, 1925, English 2-str., concealed dickey, balloons, F.W.H., double screen, all extras £295
STANDARD, 1924, Canley 2-str., sunk dickey, speedo, good tyres, rigid equipment, paint and plating excellent. Choice of 4 £285
STANDARD, 1922, Canley 2-str., as above, only with disc wheels, 3 new tyres £278

SINGER, 1923, 10, 2-str., dynamo, starter, double screen, good tyres, all-weather equipment. Choice of 2 £258
SALMON, 1924, special sports cloverleaf 3-8 r., dynamo, starter, tyres almost new, all extras, concealed hood, paint and upholstery excellent, fullest equipment, exceptionally fast. Choice of 4 £285
SALMON, 1925, special sports streamline 2-str., dynamo, starter, excellent tyres, wire wheels, detachable hood, all extras, tip-top throughout £295
SALMON, 1924, special English 2-str., tyres as new, cream body, brown wings, recently overhauled. Choice of 2 £275
SWIFT 9, 1923, 2-str., sunk dickey, dynamo, starter, mirror, new hood, full equipment £275
TALBOT, 8/18, 1922, 2-str., sunk dickey, good tyres, just re-coachpainted, very smart and economical. Choice of 2 £268
TALBOT, 8/18, 1923, as above, with double screen and starter. Choice of 3 £278
WOLSELEY 10, 1923, 2-str., sunk dickey, excellent tyres, all-weather hood, double screen, paint and plating excellent. Choice of 2 £268

FOUR-SEATERS.

A-C, 1922/3 Royal, 11-9, 4-str., morocco upholstery, Triplex screen, starter, special leather cloth hood, countless extras £388
AUSTIN 7, 1925, chummy 4-str., full equipment, excellent tyres, first-class throughout £289
CITROEN, 1925, English, 11-4, 4-str., starter, balloons, 3 as new, rear screen, mechanical screen-wiper, speedo, good hood, fullest equipment. Choice of 3 £258
CITROEN, 1923, 11-4, 3-door saloon, good tyres, Bedford cord, all interior fittings, excellent paintwork, all extras £238
GWYNNE 8, chummy, 1923, dynamo, starter, good hood, special engine, speedo, all-weather equipment. Choice of 2 £278
ROYER 8, 1924, 4-str., dynamo, excellent tyres, original paintwork excellent, just overhauled, rigid sidescreens, good hood, £265
RHODE, 1924, 10-4, 4-str., 5 tyres as new, starter, speedo, adjustable front seats, double screen, rigid all-weather equipment, perfect throughout £288
STANDARD, 1924, 11-4, Kenilworth 4-str., dynamo, starter, fullest equipment, Triplex screen, rigid sidescreens. Choice of 2 £285
SINGER 10, 1923, 4-str., leather upholstery, starter, excellent tyres, double screen, speedo, taxed, rigid equipment. Choice of 2 £258
SINGER 10, 1924, de luxe, 4-str., as above, adjustable front seats, all extras, taxed £255
SWIFT 9, 1924, 4-str., dynamo, starter, 3 new tyres, rigid sidescreens, leather upholstery, speedo, double screen, smart and economical £258
TALBOT, 8/18, 1924, chummy, 4-str., dynamo, starter, automatic screen-wiper, full equipment, good extras, taxed. £288
TALBOT, 10-23, 1923, 4-str., 3-door body, starter, good tyres, 3-piece screen, (partially speedo, mirror, etc. Choice of 2 £200
WOLSELEY, 11-23, 1923/6, full 4-str., 4-door body, starter, speedo, balloons, tip-top throughout £299

1924 A-C Anyweather 2-str., £99, or £9 18 0 down and 10 equal payments.

Every Car carries our Full Guarantee, and you can
CHOOSE YOUR OWN TERMS

whether you wish to pay no more down than £15, including Insurance, or any larger first payment. Let us forward our Brochure, "Ways & Means."

IT WILL HELP YOU.

JUST

WALK IN WALK OUT

and examine this remarkable selection of over 100 Small Cars, under £100. Nobody will worry you to buy. If you see nothing of immediate interest just

But come again to-morrow, our stock changes daily. If it's too far, write or 'phone for our daily lists, there is not the slightest obligation.

Whatever your proposition, and wherever you are, let us have it.

**THIS IS YOUR OPPORTUNITY
DON'T MISS IT.**

30-32, High St., Wandsworth, S.W.18
NEXT THE NEW TOWN HALL.

'Phone: Battersea 2425, 2426.

Nearest Station: Clapham Junction.
All Buses and Trams pass the door.

Telegrams: "Benmotas, Wands, London."

Hours: 8.30 to 8
except Sundays.

There are many more, so do not fail to get full detailed lists.

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

MOTOR CYCLING

SPECIAL TOURIST TROPHY NUMBERS

1st T.T. SPECIAL Wednesday, June 15th.

This issue will contain the first illustrated descriptive report of the JUNIOR RACE, complete and accurate as are all "Motor Cycling's" reports. It will also give the latest news of importance regarding the LIGHTWEIGHT and SENIOR RACES.

ENLARGED
ISSUES
3d.
EACH

2nd T.T. SPECIAL Wednesday, June 22nd.

First out as usual with a complete report of the LIGHTWEIGHT and SENIOR RACES. This will be profusely illustrated with exclusive photographs, and will tell the story of these events vividly and authoritatively.

Offices: 7-15, Rosebery Avenue,
London, E.C.1



"Change" for the better!

Unique and vitally essential to safe and easy gear changing, the "Stadium Easy Reach Gear Lever Extension" fills the need realised by every Austin Seven owner. The extension instantly fitted to the gear change lever by a clip and two bolts, no drilling or cutting necessary, may be placed to exactly suit the height and reach of the driver, who can then effect a "change" into any gear without bending awkwardly forward and fumbling for the knob.

'Stadium'

"EASYREACH"

Regn.
Pend.

Gear Lever Extension.

Model 999. For "Austin Seven" Cars.
Neatly and strongly made of solid aluminium and
exceedingly well polished and finished. Length of Lever 8".

7/6
EACH.

An awkward gear change.

ETIENNE & CIE, 61-63, Great Eastern Street, London, E.C.2.

Obtainable wherever accessories are sold.

A change of gear, easy and dignified.

The Watchword of To-day Economy!

BEGIN BY FITTING YOUR CAR
WITH A

THE NO-TROUBLE CARBURETTOR



The certain means of
Reducing Petrol Consumption
and saving money on any
make of car or vehicle

FREE TRIAL OFFER.

Ask at your local garage
or write Dept. L.C. to-
day, sending particulars of
your engine, no matter
what type it is, and we
will send you details of
our 30 days' FREE Trial
Scheme. There is no
obligation to purchase and
no charge for renovation.

Director GORDON RICHARDS.

SOLEX WORKS,

223-231, Marylebone Rd., London, N.W.1

Telephones: Paddington 8621, 8622, 8623, 8624, 8625, and
Telegrams: "Solexcarb, Baker, London." 8626.

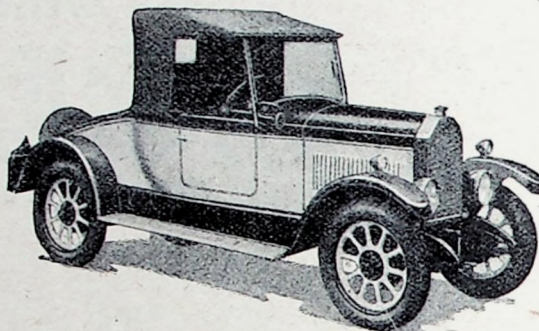
'fit Solex - and note the difference'

Goodall Ltd.

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

IMMEDIATE DELIVERY

SWIFT



LEA-FRANCIS.

10 h.p. 2- or 4-seater in special finish,	
as above	£215
10 h.p. 2- or 4-seater in standard finish	£210
10 h.p. Four-door SALOON	£275

SINGER



12 h.p. 4-seater, as illustrated	£285
12/40 h.p. Sports-Tourer 2-seater ..	£325
12 h.p. SALOON, Gordon England type	£325

10 h.p. Senior 4-seater ..	£220
10 h.p. Senior 2-seater ..	£220
10 h.p. Senior Saloon ..	£260
8 h.p. Junior 4-seater ..	£148/10

NEW CARS.

WE can offer immediate delivery from stock of many of the cars for which we are Agents and which are not obtainable elsewhere. If you have a car to exchange, simply write us particulars and we will make you a DEFINITE proposition by return post to include delivery and collection to your address.

USED CARS.

OUR stock of "Used Cars," all of which are covered by our 3 months' Printed and Signed Guarantee, contains a number of most exceptional bargains. May we send you our current list giving particulars of 130 recent models embracing all the most popular types.

Generous Exchange and Deferred Payment Facilities Operative Anywhere in Great Britain.

All USED CARS sold
with a SIGNED
GUARANTEE
(full list sent on request)

Established over 30 years

(It makes such a difference, you know.)

150 CARS ALWAYS IN STOCK.

NEWNHAM
MOTOR COMPANY
237-243-245, HAMMERSMITH ROAD,
LONDON, W.6.

Special repurchase facilities for OVERSEAS VISITORS.

Free copy of our brochure
"Cars of Beauty," gladly sent on request.

Telephone—RIVERSIDE 46.6 (Private Exchange).

The Light Car & Cyclecar



AN INTERESTING
SURVIVAL.

The quaint old custom of beating the bounds is still carried on in many parts of the country, but nowadays the ceremony is performed with the aid of a light car in which the parish councillors are carried.

NOTES, NEWS & GOSSIP *of the* WEEK

ON OTHER PAGES

Light Cars in the Making:	
How Die-castings are Made ..	4
New 9.5 h.p. Horstman ..	6
Light Cars for India ..	7
Rich Mixture ..	10
Topics of the Day ..	13
Keeping the 7-12 h.p. Peugeot in Tune ..	14
Cyclecar Comments ..	17
To Edinburgh To-night ! ..	20
Interesting Accessories ..	24
Our Readers' Opinions ..	26

LIGHTING-UP TIMES (Rear Lamps) for Saturday, June 4th.

London ..	9.38	Birmingham	9.51
Newcastle ..	10.6	Liverpool ..	10.2
Edinburgh ..	10.18	Bristol ..	9.48

Moon—First quarter, June 7th.

Traffic Control at Leatherhead.

A number of special constables at Leatherhead, Surrey, have threatened to resign as a protest against being employed on traffic control duty.

H.R.H. to Open Scottish Show.

We are authorized to state that His Royal Highness The Prince of Wales has consented to open the Scottish Motor Exhibition in the Kelvin Hall, Glasgow, on the afternoon of Friday, November 4th, and to attend the dinner of the Royal Scottish Automobile Club on the evening of the same day.

This Week.

In this issue we continue our "Light Cars in the Making" series with an article which explains the methods adopted in die-casting. London-Edinburgh enthusiasts, competitors and spectators alike, will find much to interest them on our centre pages, whilst an article dealing with the maintenance of the 7-12 h.p. Peugeot will appeal to all owners of these popular cars. We also publish the first illustrated description of a new 9.5 h.p. Horstman.

No. 756. VOL. XXX.

A.A. Scout Complimented.

"You have been of great assistance to the police, not only on this, but on other occasions, and we wish to express our gratitude," said the chairman of the Loughborough Bench recently to Geoffrey Harrison, an A.A. scout, who had assisted in the capture of an army deserter.

Cheaper and Cheaper.

Following reports of over-production of motor fuel in America, there is a possibility that a reduction of a further 1d. per gallon is imminent. This will bring the price of standard grades of fuel to 1s. 11d. per gallon. Immediately prior to the war the price was 1s. 8d. per gallon.

Next Week.

A complete illustrated report of the London-Edinburgh run will be a feature of next week's issue, which will also contain a full description of the B.A.R.C. Whit-Monday meeting. Readers taking delivery of a new car will find interest and sound advice contained in an article entitled "Looking After the Essentials."

Interesting Friction Gear.

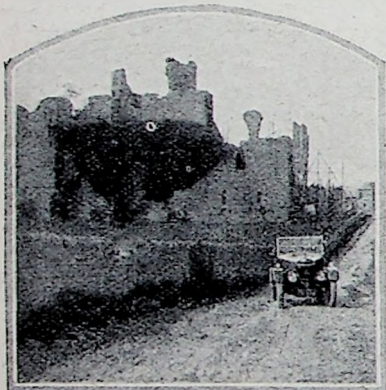
We hope shortly to publish the description of a novel type of infinitely variable friction gear which forms the subject of a patent. A differential forms part of the assembly and there are two friction wheels which rotate in opposite directions on a common disc.

Leeds Road Scheme.

The extensive Leeds and district road improvement scheme, details of which were given in these pages some time ago, is going ahead in a very satisfactory manner, and already several sections are completed and open to traffic. It is interesting to learn that special attention is being paid to the tramway problem and wherever possible the tracks are being enclosed.

Austins in Australia.

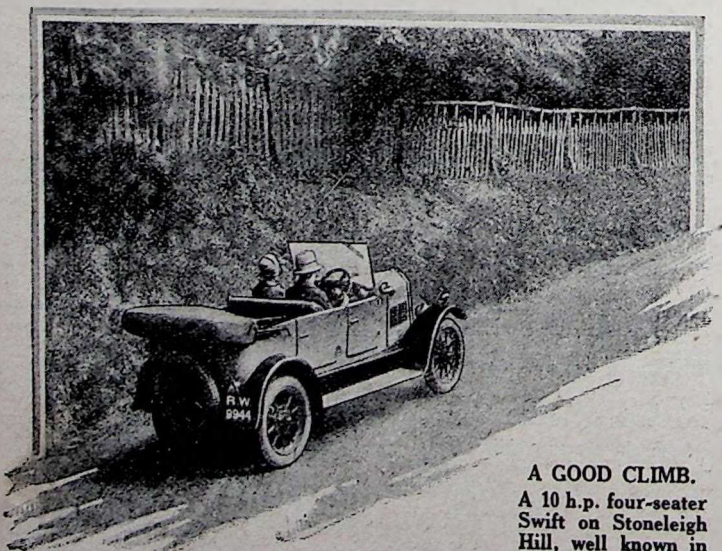
According to the *Melbourne Herald*, the Motor Users Association is placing a number of Austin Seven vans on the road for patrol purposes. Each van will be in charge of an experienced mechanic, whose services, and the use of spares and equipment carried by each van, will be free to any motorist whether a member of the association or not. If sufficient use is made of this new service further Austin vans will be placed on the road by the M.U.A.



Warwick Castle, one of the oldest and most historic in this country, is now being restored.

The London-Lugano Run.

Members of the Motor Cycling Club who wish to take part in the annual London to Lugano run which starts from Harwich on August 20th should forward their entries at once to Mr. J. Van Hooydonk, Oakengates, Broadway, Letchworth, Herts.



A GOOD CLIMB.
A 10 h.p. four-seater
Swift on Stoneleigh
Hill, well known in
the Midlands.

A Gratifying Tribute.

His many admirers will be glad to hear that a perpetual endowment of the "Babs" cot at the Great Ormond Street Hospital for Sick Children has been secured in memory of the late J. G. Parry Thomas.

9 h.p. Fiat Modifications.

Latest models of the 9 h.p. Fiat are now being fitted with an improved type of carburettor and a redesigned induction pipe, with the result that petrol consumption has been improved and the maximum speed of the car increased. A further improvement consists of a priming device operated from the fascia board.

Safety on the Roads.

In continuation of its efforts to educate the general public in safety-first principles, the National Safety First Association has embarked upon a scheme for displaying "Safety First" films and posters throughout the country, and although substantial donations have already been received as the result of an appeal for funds made by the patron of the association, H.R.H. The Duke of York, additional sums are required to carry out this essential work in an effective manner.

Floating Garages.

Owing to the increasing number of cars which have to be transported between Plymouth and New York, the Compagnie Generale Transatlantique, Ltd., have had their new ship "Ile de France" fitted with a permanent garage which will take 60 cars. The garage is in charge of expert motor engineers and is claimed to be more complete than many found on shore. The cars are not packed for shipment, but special fittings are arranged so that once they are driven into position they are secured in a manner which prevents them from being damaged in heavy seas. They are readily accessible for repairs and overhauls, which are undertaken by the engineers during the progress of the voyage to or from New York. Similar garages, but on a smaller scale, are also arranged on the company's well-known liners "Paris" and "De Grasse."

Chromium Plating Progress.

The difficulties which are presented by chromium plating are rapidly being overcome and before long it is expected that it will be possible to deposit this metal as easily as other electro-deposited metals. At present the cost of chromium plating is about 50 per cent. higher than that of nickel, but the durability of chromium is such that it may be relied upon to last almost indefinitely. A concern which is specializing in chromium plating is W. M. Still and Sons, Ltd., 29-31, Charles Street, London, E.C.1.



An illuminated mirror in the steering-wheel boss is the latest thing on milady's car.

Trade Developments.

As the first move towards opening up a chain of service stations, Wm. Whiteley, Ltd., which recently came under the control of Selfridge and Co., Ltd., have purchased the business of Coppen, Allan and Co.

The R.A.C. Grand Prix.

The regulations for the second R.A.C. Grand Prix, which will take place at Brooklands on October 1st, have now been issued, and copies can be obtained from the Secretary, R.A.C., 89, Pall Mall, London, S.W.1. The distance of the race will be about 325 miles and, of course, turns or bends will be introduced. Entries will be limited to cars having engines of not more than 1,500 c.c. capacity, and the list closes, at ordinary fees, on July 1st, but entries at double fees will be received up to September 1st. The track will be available for practice purposes on September 19th and 22nd and from September 26th to 30th inclusive.

Henlys' Alvis Meeting.

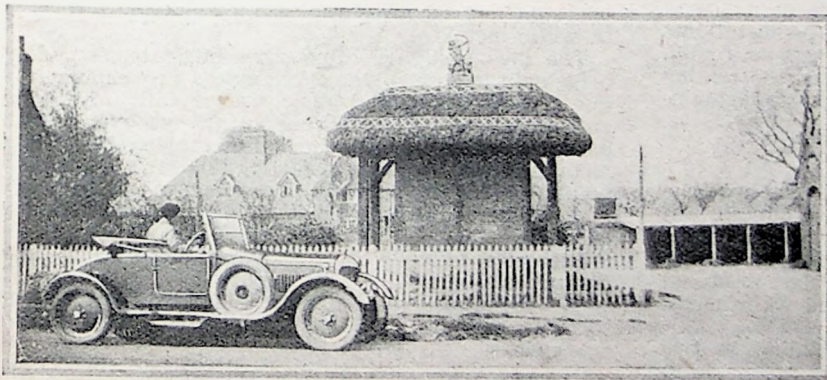
Henlys, Ltd., who are organizing the all-Alvis meeting at Brooklands on June 11th, announce that they have been overwhelmed with entries. A slight modification has been made in the programme and instead of a demonstration at high speed by the Earl of Cottenham and Major C. M. Harvey, a pageant of progress will be staged. In this, Alvis cars for the years 1921 to 1927 inclusive and the Alvis racer hitherto known as "Firefly," and now renamed "The Spirit of Alvis," will race on a handicap basis. In addition a treasure hunt will take place after the racing is over, the clues being given during the meeting. Applications for free tickets for Alvis owners or Henlys' customers should be made to Henlys, Ltd., 91, Great Portland Street, London, W.1.

A False Alarm.

Driving towards London along the Chelmsford Road last Sunday evening, a member of our staff found himself suddenly behind a long queue of cars travelling at considerably under 20 m.p.h. The procession, which was added to at every moment, proceeded for over two miles, each driver, no doubt, imagining that he was in some kind of trap. Investigation, however, showed that the leading car was one of particularly ancient vintage and incapable of a higher speed. So soon as this was discovered it was rapidly left behind.

British Cars in New Zealand.

Speaking at a luncheon given by the Wellington Chamber of Commerce recently, Mr. W. E. Rootes, managing director of Rootes, Ltd., and one of the delegates of the British Motor Manufacturers Association investigating motorists' requirements in Australia and New Zealand, said that British manufacturers were now taking special interest in overseas trade, and that he had been much struck by the loyalty of New Zealanders to their Motherland. He realized, however, that Great Britain could not expect to succeed upon sentiment alone, but must deliver the goods. He gave it as his opinion also that if Great Britain could capture the motor trade of the overseas dominions it would mean permanent employment for 80,000 people.



THE VILLAGE SIGN. — This quaint village sign has been erected by Sir Robert Baden-Powell at Bentley, Hants.

MOTORING MATTERS IN PARLIAMENT.

Various suggestions have been made to the Minister of Transport as to the means which might be taken to speed up motor traffic and lessen its risks. Sir Harry Brittain invited the Minister to consider the matter of automatic signals, as these are to be seen in foreign countries.

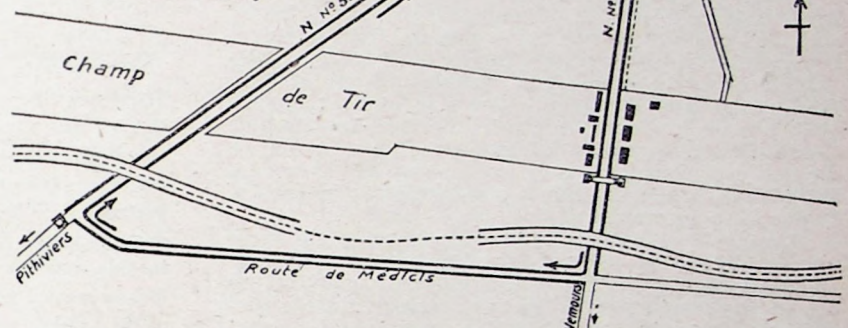
Lt.-Colonel Ashley told the House that automatic signals for motorcars are frequently submitted to him and in every case the merits of the devices are carefully examined by the technical officers of his Department. His own opinion is, however, that where a vehicle is so constructed as to allow it, signalling by the hand and arm of the driver is as effective as any other method, but he admitted that this system presented difficulties at night.

Members have shown anxiety to obtain information regarding the progress

Whitewashing Their Reputations.

According to a provincial paper, an ex-inspector of the Metropolitan Police has suggested a method of dealing with motor bandits which, if nothing else, is distinctly original. His idea is that pails of whitewash should be hung on the walls of every police station and two or three syringes provided. If information is received that a "wanted"

The new Bol d'Or course at Fontainebleau, which will be used on Whit-Monday.



car is in the neighbourhood, police constables should wait at each side of the road and spray the car and its occupants as much as possible so that they could readily be identified. No mention is made of compensation to innocent parties, accidentally whitewashed.

Supplies on the "Edinburgh."

As in previous years, the North Road Garage, four miles south of Grantham, will be open for the benefit of London-Edinburgh competitors and other wayfarers. A large and efficient staff will be in attendance for the supply of fuel, oil and tyres, whilst repairs will be carried out in an expeditious manner.

American Austin Sevens.

Negotiations are proceeding for the supply of Austin Sevens for the American market, but no information has yet been received that any conclusion has been reached. It has been suggested that the cars, if manufactured in America, would sell at £90, but Sir Herbert Austin has expressed the view that this figure is somewhat on the optimistic side.

The 1927 "Bol d'Or."

The annual French Bol d'Or 24-hour Race takes place, as usual, during the Whitsuntide holidays. This race becomes more and more important each year, and it is now by far the most popular small car event of the season on the Continent.

In many respects the Bol d'Or bears a close resemblance to the Rudge-Whitworth Cup Race, but there is this important distinction between the Bol d'Or and the famous Le Mans contest. In the Bol d'Or the same driver must be at the wheel throughout the whole 24 hours.

The race is being held this year at Fontainebleau, on a section of the old motorcycle Grand Prix circuit, as the usual Croix de Noailles course in the Forest of Saint Germaine is not available.

The new course has a circuit of just over 6 kiloms., and the road surface is said to be in excellent condition. No fewer than 43 light cars and cyclecars are entered for the event. Eight of these are in categories 750 c.c. or below, and the remainder are in the 1,100 c.c. class.

The race starts at 5 p.m. on Sunday afternoon and finishes on Whit-Monday.

Light Cars in the Making.

HOW DIECASTINGS ARE MADE.

RAPID PRODUCTION, SMOOTHNESS OF FINISH AND EXTREME ACCURACY ARE FEATURES OF THIS CLEVER PROCESS.

A LARGE number of the components used in light cars are made by a process known as diecasting, but its scope, unfortunately, is restricted at present by two factors—choice of material and limitation of size. Diecastings can be made only in alloys having a comparatively low melting temperature, such as aluminium or white metal; this excludes the use of iron, steel, brass and gunmetal. The size of the castings that can be produced is also subject to considerable limitations. Articles in aluminium alloys cannot be die-cast economically if they are of a weight exceeding 15 lb. each, while those in white metal cannot exceed 10 lb. each in weight.

Although diecasting is utilized for turning out large numbers of fittings, such as caps, washers, pump bodies and so forth, its greatest use in motorcar manufacture lies in the production of white-metalled bearings and bushes. Not only are the great majority of big-end and main bearings either lined or cast solid by the process of diecasting, but large quantities of cylindrical bushes also are manufactured in this manner. Accordingly, we shall deal with the production of these components by explaining very simply the principles of diecasting.

Diecastings are made by forcing molten metal into a metal die, in which is cut the impression or mould of the article which is to be produced. The metal sets very quickly on entering the die, which acts as a chill, and almost immediately the mould is filled the casting can be ejected. Thus a very large output can be maintained by this process.

Accurate Castings.

The chief advantage of diecasting is the extreme accuracy with which the castings can be produced. In most cases no subsequent machining is required, the necessary finishing being carried out with a file or scraper. Aluminium diecastings can be produced within a limit of accuracy of .002 in. and white metal within .001 in.

Diecasting differs from ordinary founding in two main characteristics. First, the castings are made in permanent moulds, which may be used an almost indefinite number of times, whilst a sand mould can be utilized for turning out only one casting. Secondly, the metal is poured into a sand mould by gravity, but in diecasting the permanent moulds or dies are filled, as a rule, by injecting the metal under pressure either by means of a piston operated by hand through a rack and pinion or by means of compressed air acting directly on the face of the molten metal and throwing it into the die. Other methods have been evolved, but are not generally practised in this country.

CASTING BY MACHINERY.

This machine is used for die-casting engine bearings under pressure. The molten metal is forced into the dies by movement of the handwheel.

The compressed-air method, in which the pressure applied sometimes reaches 1,500 lb. per sq. in., is used for making aluminium diecastings, whilst the hand-operated method gives the best results for diecasting in white metals.

The dies used are often very intricate, sometimes being split in as many as seven places as well as carrying several cores, and their design calls for highly specialized skill. Great care is always exercised in determining the best methods for running the molten metal and for ejecting the casting from the die. These points, which are entirely dependent upon the shape and weight of the article, govern the specific design of each die.

Diecast automobile bearings can be divided into three distinct classes:—

(a) Those cast solid in white metal and fitted into main-bearing housings or connecting-rod big-ends.

(b) Those cast as liners direct into their housings and adhering to them. This practice is not adopted for main bearings.

(c) Those in which a white-metal lining is cast into a bronze shell, the composite bearing being afterwards fitted into its housing.

The second of these types (b) necessitates the incorporation of the housing as part of the die and the modern practice of lining big-end bearings directly into the connecting rod is performed by a special machine, which rotates the rod at a high speed and lines the big-end by a centrifugal process.

EXAMPLES OF DIE-CASTING.

These parts have all been produced by die-casting to such close limits of accuracy that practically no subsequent machining is necessary.

In the third category the bronze shells are inserted as liners in the die, the white metal being forced into the cavity provided and made to adhere to the shell. Solid diecast bearings, although easier to manufacture from the production point of view, are not popular with designers and are not used to any great extent.

Let us consider the procedure followed in diecasting liners into bronze shells. We will follow the production of a fairly simple design of bearing. The bronze shells are made from sand castings and, before being white-metalled, are machined up to slightly over the finished sizes, except in the bore which is finished to size. This preliminary machining is necessary in order that the shell may fit accurately into the white-metalling dies, which, for half-bearings, are of the simple two-part type.

This simplicity of die design is due to split bearings being cast in halves. If bushes are not produced split, a metal core is necessary, and this refinement makes the die more intricate. The bronze shell, after being heated to a certain temperature, is placed in position on the bottom half of the die and is then covered by the top half. The extreme accuracy of the die sizes and the preliminary machining of the shells cause each shell to be located in exactly the same position.

Not only are the shells heated, but the die itself is maintained at a similar temperature. This practice is necessary in order to avoid defects in the diecast white metal, such as, blow-holes, which would other-

face which is ideal for bearing purposes, but this advantage holds good only when the bearings are fitted to new journals because, if it is necessary to bed them in, this hard polished surface is removed by scraping.

Another great advantage in diecasting is the elimination of machining operations necessary to produce oil grooves, oil reliefs and so forth in bearings, as they can be formed by making suitable provision in the die, the only necessary additions being strips of metal of the same shape and size as the oil grooves, correctly located on the bottom half. These oil grooves are often very complex in form and would be costly to produce by machining operations.

Great care is exercised in ensuring that perfect adherence takes place between the white metal and the bronze shell. This is secured by tinning the bore of the shell before placing it in the die for casting. The operation of tinning is carried out by applying a wash of whitening to the shell, except on the bore, heating in a special oven, fluxing on the bore and



These dies are used for casting aluminium elbows, one of which can be seen above in front of the open dies. The photographs were taken in the foundry of R. W. Coan, Ltd., London.

wise be caused owing to unequal cooling of the metal.

The die is then placed on the diecasting machine, being located in such a position by means of dowels and stops that the aperture in the die is coincident with a similar aperture in the machine. Thus a clear passage is available between the die and the machine. The die is then securely clamped to the machine by an overhead screw device, which tightens down on to the top half of the die.

Pressure is applied by the hand wheel and the molten white metal is forced up through the orifice into the die. This pressure is maintained for a few seconds until the white metal has set in the die, and is then released. The die is now ready for removal from the machine, to which it is attached by white metal solidified into the apertures of both the machine and the die. It is released from the machine by the operator pulling it towards him, thus shearing through the runner. The die is then split open and the white-metalled bearing ejected from it.

The bearing is now ready for machining, but the white metal does not require boring, for it has been cast correct to size. Diecasting gives a chilled sur-

plunging the shell into a bath of white metal. The shell, on withdrawal, will be tinned on the bore only, the whitening acting as protection to the other surfaces.

A typical diecasting machine is shown in an accompanying illustration. The white metal is melted in the body of the machine by means of gas-fired burners, the temperature being always kept under observation by means of a pyrometer immersed in the molten metal. The dies are clamped over the orifice through the medium of a hand screw-press. The necessary pressure for injecting the metal into the die is applied through a hand wheel, by which a pressure of 200 lb. per sq. in. can be obtained. This machine is particularly suitable for white-metalling bearings, but for producing diecastings of a more intricate form the machines become far more complex, special arrangements being made for opening the dies on the machine.

Although the foregoing description has dealt with pressure diecasting, it should be pointed out that quite often the molten metal is poured by gravity into the dies, and perfectly satisfactory castings can be made in this way.

The 9.5 hp HORSTMAN

Both the head-on and broadside appearance of the new Horstman strike a distinctly novel and somewhat "rakish" note.

A NEW Horstman model has just been introduced and made its first appearance at the Bath and West Show. The engine is of the four-cylinder o.h.v. type, 62 mm. by 100 mm. (1,207.6 c.c.). It is water-cooled and has a three-bearing crankshaft with forced lubrication to all the working parts. A Lucas starter-dynamo unit is mounted on the timing case and coil ignition is used.

Features of note under the bonnet are the clean appearance of the unit, the large waterpipes, the careful attention that has been given to general accessibility and the provision of a useful hot-spot in the inlet pipe.

A single-plate Ferodo-lined clutch is used and a short shaft from this, with a universal joint at each end, takes the drive to the totally enclosed propeller shaft, which is supported at its forward end by a long Hyatt bearing. The clutch shaft is hollow and forms a receptacle for oil which feeds the spigot bearing, clutch-withdrawal mechanism and the rear-end bearing of the shaft.

The gearbox is mounted at the back end of the propeller shaft adjacent to the rear axle, the gear lever itself being supported, with the hand-brake lever, on an aluminium casting which is formed at the front end of the torque tube. The gearbox provides ratios of 5, 9 and 18 to 1, and, like the rear axle, is identical in most respects to the unit fitted to the 12-30 h.p. model which was produced by the concern in 1924.

Unusual Braking System.

The brakes are of a distinctly original kind, expanding bands being used instead of shoes. These bands are made from strip steel and they engage with special hook-shaped cams that give a much greater expansion than the ordinary arrangement and should ensure a serviceable and satisfactory braking system. Nine-inch brake drums are fitted, and it is stated that when the brakes are violently applied all four wheels can be locked.

The springing, in keeping with Horstman traditions, is of the full cantilever type all round, whilst the back and front springs are of the same length and so planned that a parallel motion of the car with the road takes place. The designer claims that it has proved completely to eliminate that objectionable "kick in the back" which is noticeable in the case of so many small cars when rough roads are being traversed. The pivot points of the cantilever springs are attached to the sides of the chassis frame instead of beneath it, and this gives a low centre of gravity and a sporting appearance, whilst leaving nearly nine inches of ground clearance.

B14

FIRST DESCRIPTION OF A NEW MODEL WHICH HAS MANY ORIGINAL FEATURES. EXPANDING BAND BRAKES AND FULL CANTILEVER SPRINGING ARE NOTABLE POINTS IN THE SPECIFICATION.

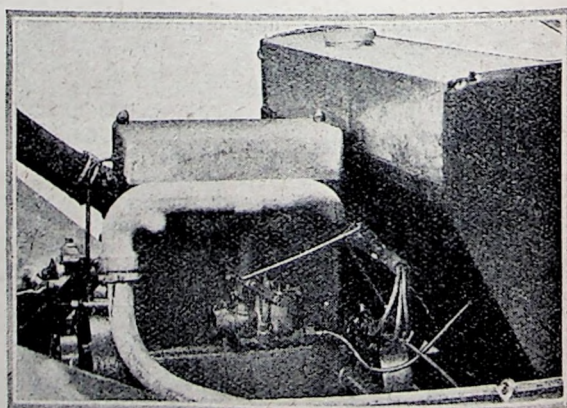
The open four-seater body is of a distinctly original type. The bonnet and scuttle are covered with sheet aluminium, whilst from the scuttle to the back of the car, fabric covering is used. The body framework is made of angle steel welded into frames which are then covered with three-ply wood, over which the fabric is stretched. The construction is claimed to be very strong and flexible and, as only 56 lb. of steel is used, its weight is unusually low. In spite of this, however, it is amply strong.

Behind the back-seat squab is a large space for luggage, whilst, if required, the upholstery can be removed from the rear compartment, when sufficient space is available to carry a complete camping equipment or to stow sufficient luggage for a very long tour. This is one of many practical features which make it evident that the needs of the present-day owner-driver have been carefully studied.

A single-panel non-adjustable front screen is provided and a neat detachable hood and rigid side curtains are fitted as standard. An automatic windscreen wiper is included in the standard specification, and this, of course, is practically a necessity with the fixed screen. The fact that the screen is set at an angle shows that consideration has been given to the elimination of the dazzle otherwise created when the car is being followed by another after dark.

Amongst special claims made for the car are that maintenance work has been reduced to a minimum—there being only eight points needing attention from an oilcan and no greasers—and that the steering is particularly light and easy to control.

The price, we understand, will be about £200, whilst full details can be obtained from Horstman, Ltd., Bath.



The 1,207 c.c. engine has a very neat appearance and certainly lacks none of the most up-to-date features of design.

LIGHT CARS FOR INDIA.

OUR CONTRIBUTOR, WHO IS WELL QUALIFIED TO WRITE ON THE SUBJECT, BELIEVES THAT IT IS LACK OF ENTERPRISE WHICH ALLOWS OTHER COUNTRIES TO OUTSELL US IN OUR "MOST VALUABLE POSSESSION."

THERE is, perhaps, one thing which strikes the Englishman in India who is interested in motoring more than anything to-day and that is the very small number of British-made cars in the large cities and towns of India as compared with the enormous number of American, French and Italian makes.

The writer has taken a rough census of cars in such cities as Bombay, Calcutta, Madras, Delhi, Lucknow, Allahabad and Lahore within the last six months and the results have given an average of one British-made car for every ten of "foreign" manufacture.

It would almost seem that the British motorcar maker has completely forgotten the very existence of Britain's most valuable possession, "The Empire of India." We have a European population of approximately 350,000 in British India, the great majority of whom are in a position to keep a car, and would be willing to "Buy British" every time if the British manufacturer would only assist them to buy. I say nothing about the hundreds of thousands of well-to-do Indians who at present are being forced to purchase cars of foreign manufacture.

I have made it a point since arriving in England a few weeks ago to visit some of the most famous motorcar firms turning out popular light cars, and in most cases I have been met with complete indifference and unconcern so soon as the question of a suitable car for India has been mooted; only in three cases did these firms evince the slightest interest in the requirements of the overseas buyer generally and the man in India particularly.

Unsuitable Models.

The ordinary popular standard light cars as sold in England are only suitable to the conditions out East in the great cities, and once you get away from the main road out in the country districts something different is required.

We need a car with a track of 4 ft. 8 ins., a clearance of at least 9 ins., cellulose finish, a large radiator area with a fan that does not depend on a flimsy leather belt for its action, and an all-weather equipment which will stand up to all weathers. Lastly, we need a price comparable with that of the really excellent cars produced by go-ahead American firms which have studied our requirements and have given us just what we need.

To-day I can purchase in India a car embodying all the points I have mentioned for the equivalent of £250, but it is not a British production and there is no British car at that price, or anything like it, with the requirements I have enumerated, on the Indian market to-day.

With the exception of one or two live British manufacturers who do make an overseas model (but which costs considerably more than £250) I venture to think that the average British motor firm is not worrying about the Indian market, or is it that they are making such enormous profits supplying the home demand that they have not time to think of the Greater Britain across the seas? If so I would like to put a question to them: "Is the home demand likely to go on at the present rate indefinitely? Is not the 'saturation' point in England already visible on the horizon?"

Enterprise Rewarded.

Quite recently two or three very well-known English firms have established their own depots in Bombay and Calcutta. The products of these firms are already seen in increasing numbers in the great Indian cities, and they will increase their numbers if they can produce and sell a car equal and at a price more comparable with that of those non-British cars which are so eminently suitable to our needs and conditions in India to-day.

The Government of India have in their latest Budget lowered the import duty on all cars from 30 per cent. to 20 per cent., and in one province alone a sum of three crores of rupees (1 million in sterling) has been allotted for roads, due entirely to the huge development of motor transport throughout the Indian Empire during the past five years.

In my opinion the British motor manufacturer is already three years late in getting a footing in the Indian market, and it seems to me if he thinks he can wait until the saturation point is reached at home before he turns his attention to the Empire of India, then my answer to him is: "You will be too late; there will be no room for your wares and no demand for them." It is a case of now or never.

The writer has had considerable experience of so-called "Agents for British cars" in most of the large towns in India—outside these towns there does not exist a single agent or spare-part supplier for any make of English car, although even tiny villages have their Ford agents and excellent service arrangements for most of the well-known foreign makes of car—and, speaking generally, these agents for British cars are useless and of little assistance. They have no supply of spares and are quite indifferent as to whether they can procure them or not. Personally I have found it quicker to write home to the makers myself than to wait on the spare-part merchants, and far less costly. On the other hand, should you be one of the great majority and own a foreign car, you will find their depots, agents and spare-part service stations not

only in the main cities but in most small towns and many rural districts as well. Can you wonder the Briton in India prefers to buy non-British cars?

I have myself owned one American car and one English car during the past six years in India, and the extraordinarily efficient spare part service I received for the former from really reliable agents all over India served to accentuate in a striking manner the absolute lack of any service whatever rendered by the so-called agents of the latter.

I remember seeing a board outside a large Indian motor salesman's premises in Calcutta informing me that they were agents for my particular English car. On asking them if they had any spares for my model, which was then barely 18 months old, I was told they had none, but they could write to Coventry for what I wanted, and it would take about nine weeks altogether!

On another occasion I asked an agent to show me a certain English car which he advertised in very large lettering over his garage. He calmly told me he had none of those particular cars at the moment, and in any case he would not recommend them too much as he had a better car he would much prefer to sell me (mentioning a famous make from across the Atlantic) at only half the price.

The Indian "Agents."

One afternoon I was driving my English car down the main road of one of the biggest provincial towns in India when I was hailed by an agitated Parsee gentleman who remarked that he was the agent for the particular brand of car I was driving, and as he had just received a new model of the same make from Coventry, would I step into his premises and show him how to work it, as the makers had sent it out to him without any instruction book!

These are the so-called "agents" with whom British motor manufacturers are entrusting their business. Can they be surprised that they do not sell their cars in India?

Another point to which I should like to call attention is the advertising of British cars in India. Advertisements do certainly appear in the Indian

papers for English cars, but not in the same convincing live way as those of foreign cars. To give an example which occurred just before I left India this year. The Legislative Assembly had passed the Bill for lowering the import duty on cars into India by 10 per cent. at 4 o'clock in the afternoon, and in the next morning's newspaper every foreign car maker announced the reduction, but not a single British car agent made any announcement for some days afterwards.

One firm actually advertised their cars at the prices they sell them in England. What is the use of a sterling quotation to us, who think only in rupees, and have to calculate the rate of exchange, import duty, freight, landing charges and so on before we can arrive at the price of that particular English car in Calcutta?

Is it Conservatism?

There does certainly appear to be something radically wrong with the British motorcar manufacturer—what is it? I think sometimes it is a case of too much conservatism. A little more radicalism is needed in the export offices of British firms.

In conclusion I would like to suggest to the great British motorcar manufacturers first of all to produce a car suitable for Indian conditions and at a price comparable with the foreign article now so firmly established in that country, and then to follow it up by opening an Indian depot having a chain of real live European and Indian agents throughout the whole country, carrying a comprehensive stock of spares.

If only British traders could realize the great market they are losing (some affirm it is already lost), and wake up to the needs of the vast motoring community of India, I predict that in 10 years' time, instead of the British car being seen in the proportion of 1 to 10 of other kinds on the roads of India, it would be the rule rather than the exception to see British cars outnumber all others throughout this great Empire of India.

The British motorcar is the finest in the world to-day, yet we in India are being forced to buy the second best simply because the British maker will not do his bit to help us "Buy British."

AN EXILE RETURNED.

HOW TO SAFEGUARD YOUR CAR.

QUITE a large number of cars are being stolen from parking places in big towns, to say nothing of the petty thefts of coats, suitcases and even large portmanteaux from the luggage grids, and all this, he it noted, in spite of the vigilance of the authorized attendants, who are very much on the qui vive.

At one parking place alone an average of one car a week has been removed by thieves, and in many respects owners themselves are frequently to blame.

One point towards the safety of your cars is to remember that the closer they are parked the safer they are, as it requires more manoeuvring to get one out and, consequently, takes longer to get away. Thieves do not like taking any but the mildest risks.

There are many safety devices on the market, but these usually consist of locking the steering, which, if cars are parked very close together, is a nuisance, as those so fitted cannot be moved by the attendant to facilitate the ingress or egress of others.

A very simple way is to take the carbon brush from the magneto with you, providing you can be certain of your ability to put it back again.

Another good plan is to fit a lock to the gear gate or petrol tap, whilst the fitting of a secondary petrol tap in an accessible yet not-easily-seen position is a precautionary measure which costs little and provides a useful, if not absolutely infallible, safeguard against theft.

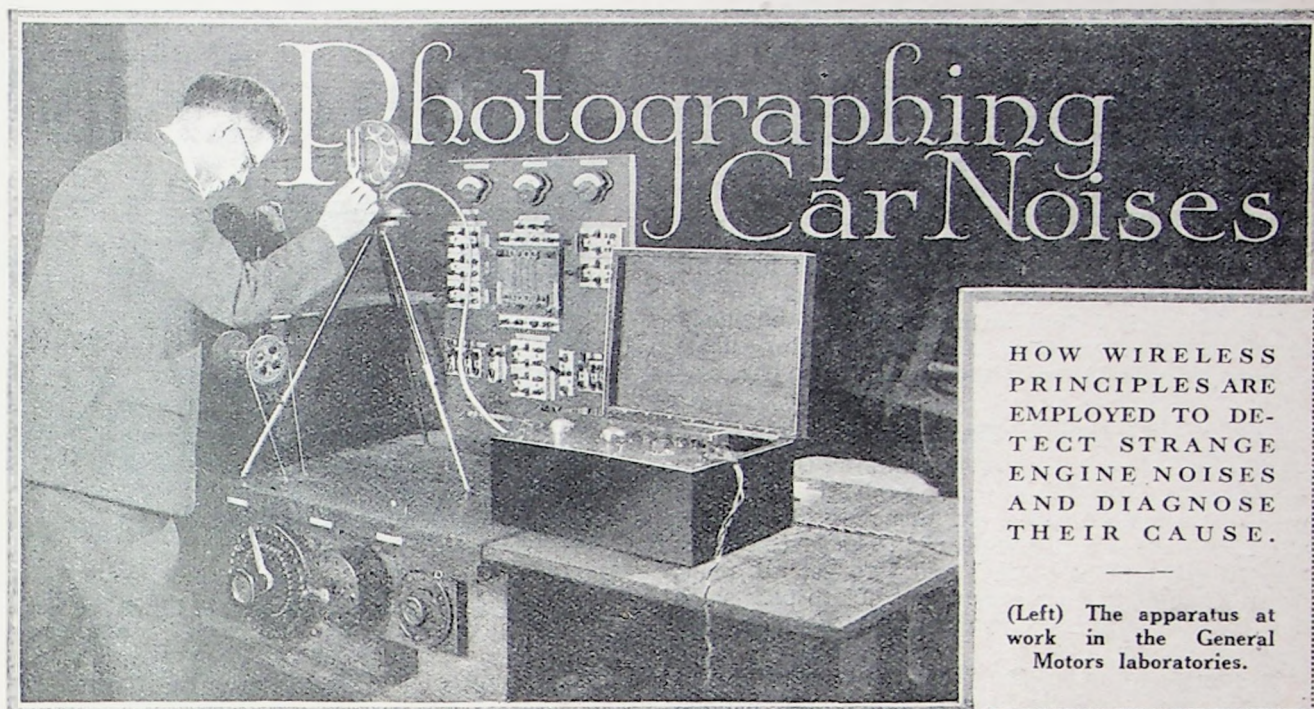
B16

So many people, either in the hope of saving themselves a small tip or merely through thoughtlessness, omit to see the London car-park attendants before leaving their cars. It is their job to issue a form, filled in with the registration number of the car and showing the time by which the car must be removed to comply with the regulations.

If, when you park your car, you take this form with you, instead of forcing the attendant to leave it on the front seat for anyone to pick up, and let him have a good look at you—for a memory for faces is part of his stock-in-trade—you do at least give him a chance of spotting a thief should one enter your car, whereas if he has never seen you he cannot tell that the thief is not the rightful owner.

Only two or three weeks ago an attendant who, unfortunately in this instance was a comparatively old man, found a thief actually about to get into the driving seat of an almost new car, and as this man was not the owner—whom he knew by sight—he at once stopped him. The would-be thief, however, was a young and well-built fellow and, there being no policeman within hail at the time, the attendant could not stop him from running away. Had the attendant not previously seen the owner, another car would have been on the missing list, instead of, as was almost the case, another name being added to the roll of "his Majesty's guests."

A.S.



HOW WIRELESS
PRINCIPLES ARE
EMPLOYED TO DE-
TECT STRANGE
ENGINE NOISES
AND DIAGNOSE
THEIR CAUSE.

(Left) The apparatus at
work in the General
Motors laboratories.

THE day is not very remote when a man will drive into a garage, report that there is a mysterious noise in his car and have the trouble immediately diagnosed by means of a microphone. If he cared to wait he could see a photograph of the noise, and, if this tallied in appearance with a radiograph of a "stock" noise, the proprietor would know at once what attention to give the car.

The General Motors laboratories in Detroit are prosecuting research work on these lines at the present time. The problem of photographing simple noises has been solved, but some difficulty is being experienced in getting noises in the interior of an engine to "pose," owing to the noise of synchronizing movement by other parts of the vehicle and mechanism. It is expected, however, that this trouble will be got over in time.

The General Motors apparatus for graphically recording sounds is shown in an accompanying photograph. Radiographs of a number of these sounds are also shown. Although the apparatus has been founded on wireless practice, ordinary wireless equipment is not accurate enough for this work, and the units have been specially built and put together.

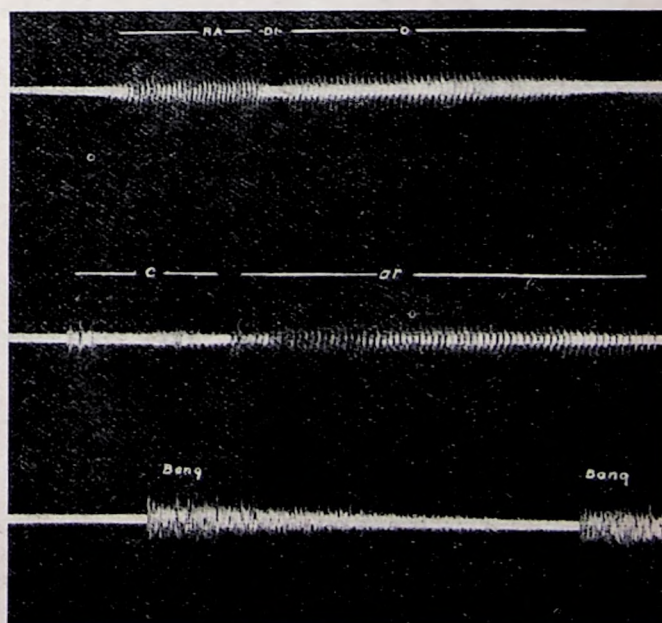
The Principle Employed.

In order to record a sound, the microphone on the tripod is placed close to the sound and connected by a two-wire circuit to an amplifying valve assembly. The slight pulsations developed by the microphone, on amplification, are delivered to the variable element of the oscillograph. This unit has a timing device which makes permanent records possible on a photographic film. The variable element in the oscillograph focuses a reflected beam of light on the film by means of a small mirror which is provided for the purpose.

As has been stated already, the radiographs shown here record relatively simple sounds compared with those met with in motor practice. A

study of the radiographs will reveal how the apparatus records the wave form, intensity and pitch of some of these noises. The line of research now being followed to overcome reflected or "telegraphed" car noises is by methods of analysis. By separating the records of multifarious noises it is anticipated that the correct "exposures" will be developed in time.

The principle of photographing sound in order to obtain a permanent record of its nature and intensity was, we believe, first used by Professor A. M. Low, who employed it so long ago as before the war. Results which he has obtained have proved useful in many branches of industry.



Radiographs of the spoken words "radio" and "car," and (below) the effect of using a hammer close to the microphone.

A New Kind of Noise.

A DAY or so ago I had a most extraordinary and amusing experience and one which, I am sure, has never happened to any other motorist. I was out for a potter round, with no definite objective, when some friends who were with me asked me to call a halt to admire a particularly fine view. I pulled the car well in to the side of the road and ran one of the front wheels up a slight bank to allow plenty of room for passing vehicles.

The moment I had switched off the engine I heard a most peculiar squeaky, hissing noise coming, seemingly, from the vitals of the car.

A Simple Explanation.

AT first I took little notice, thinking that it was something cooling down or probably a drop of water splashed on to the exhaust manifold boiling away. These theories appeared to be justified, for presently the noise ceased, and I forgot all about it until one of my passengers got out to pick some flowers. At once the squeaking started again with renewed vigour.

It seemed to be coming from the crankcase, but I could find no cause for it under the bonnet. Nothing was dripping or running and nothing was unduly hot. I was just about to give it up when I discovered the source. Nearly concealed in a little cavity in the straggling roots of a tree was a nest full of open, yellow beaks attached to hungry, clamouring baby robins.

A Lightning Diagnosis.

I WITNESSED a very amusing incident in the thick of London traffic last week. When the policeman's arm fell a small car of well-known make gave a series of jerks and then stopped dead in the middle of the crossing. The electric starter proved unavailing, but the owner evidently knew his bus, for, without seeming the least bit flustered, he got out, applied his lips to the vent in the petrol filler cap on top of the scuttle and gave a vigorous blow.

The trick worked, for the engine immediately responded to the starter and the owner departed, ignoring the sarcasm of sundry other drivers whom he had held up. His manœuvre suggested some kind of airlock, but it is not everyone who could have diagnosed it and cured it so quickly.

Watford By-pass.

PASSING along the new Watford by-pass the other day, I was surprised to notice the dangerous manner in which it joins the road from Elstree to Edgware. It seems to me that a splendid opportunity occurred here to make an intersection that would be as safe as engineering knowledge could devise, yet so far as can be seen the junction will be as abrupt as most main crossings and as perilous.

When I was there an A.A. man was directing traffic and a busy time he had, but he left before I did, and thereafter there was extraordinary confusion, smashes being avoided only by inches. The trouble is that one emerges from the by-pass via a rising gradient, and on turning sharply to the right for Edgware there is another rise. The consequence is that many drivers find themselves forced to change down suddenly just at this criti-

IN THE HEART

There is nowhere like the Highlands of Scotland for the charming road borders.

cal spot whilst they are in the path of traffic coming over the hill from the Edgware direction.

The new road itself is an admirable example of its kind—broad, safe and even picturesque. It is sure to be thronged in the summer. This makes the creation of a less perilous junction near Elstree all the more imperative.

Those Dolls.

MOST of us are intolerant of the habits of others, but I do not think I am unduly so in being almost enraged when I see some idiotic doll or animal dangling from a string just inside the rear window of a saloon. This plundering of the nursery first found favour amongst Parisian folk who wished to call attention to themselves, and it is one of those little fancies of fashion which one would have thought would never have crossed the Channel. I pray that I, too, will not come under the spell of the dangling goliwog.

The Expert.

A MAN I know, who a few years ago returned from the East, married and settled down, has frequently claimed to have had considerable motor-ing experience; indeed, his attitude towards cars in general has been decidedly blasé, like that of one to whom their attraction had lost its appeal. At Easter I was surprised to see him at the wheel of a car, and noticed that the man seated beside him was giving him driving lessons! He was an absolute novice, and however much he may have wished to have hidden the fact, the noise he made when going through the gears gave him no chance. I expect he will now claim that his previous cars were Fords or Lanchesters!

We Critics.

A NATIONAL trait is that we are slow to praise and quick to criticise. This seems to apply particularly to cars. I have the fault—if such it be—myself, and it seems to be shared by everyone I know. My attention was called to the fact by a Frenchman with whom I went for a run the other day in a little Renault which he has brought over

it is to control—from the driving seat; but I maintain that no car can be steered accurately or safely from the passenger's seat.

Surely a car controlled in this manner is being driven "in a manner dangerous," but, if so, who should be indicted—assuming that they both have licences—the "driver" or the passenger? Anyway, it is a stupid practice on a main road.

Always the Way.

"WHEN in the chronicles of wasted time—" This deponent having an evening to spare (a rarity!) spent it on giving a car which he uses for hack purposes a really good clean preparatory to a long journey on the morrow. Four hours he spent in this manner—washing, polishing and even removing the dirt of months from beneath the chassis.

When darkness finally put a stop to operations the car certainly looked better than it had for weeks, and was, in fact, quite smart. Alas! the next day brought heavy rain, and as the journey had to be made over roads which, for several miles, had been thickly strewn with sand on top of wet tar, the car was soon the sorriest mess imaginable. I suppose I must console myself with the thought that I did at least get four hours' exercise!

Chassis-frame Flexion.

FOR the first time the other day I had a ride on the rear seat of my Lea-Francis Gordon-England saloon, and, as it happened, we were traversing very rough by-lanes. The experience was most extraordinary, for the seats and floorboards are fixed to the chassis frame securely, whilst the body back and sides are three-point suspended. Any flexibility of the chassis frame, therefore, causes independent movement of the rear seat and the arm rest, and the sensation experienced by passengers is most unusual.

Changing from my rear seat to the bucket seat beside the driver, I took advantage of the rough roads to keep an eye on the after-part of the body, and the amount of independent movement which was evident was most impressive, in spite of the fact that the Lea-Francis has, perhaps, the strongest chassis frame of any modern light car. With an ordinary body all this flexing has to be resisted by the body frame, and I am left astounded that any coachbuilder can evolve a design robust enough, or find material sufficiently stout, to withstand it.

I Hate Him!

IS there anything quite so irritating as to have as a passenger someone who will persist in talking of the virtues of this car or that in a manner which wittingly or unwittingly suggests that one's own bus is a mere "selling plater"? I had to endure the company of a person of this type for some considerable distance recently, and by the time he had spoken of the silence of the Rolls and the acceleration of the Bentley and the road-holding qualities of the 45 h.p. Renault, I began to feel I was rattling along in a sugar-box mounted on four perambulator wheels.

When we came to a stiff hill the remark was, "I don't suppose she'll take it on top like a Crossley I was once in," and when the acclivity was surmounted without a change of gear the comment

THE HIGHLANDS.

complete seclusion and nature at its wildest and grandest. This banks of Loch Laggan.

to this country, and with which he has just set out for a tour of the Highlands.

After I had been driving the car for about half an hour its owner turned to me and said, "Well, what do you think about it?" I replied, "The horn button is very awkward to get at."

"How typical of you English!" he almost spat at me. "You say nothing of the comfort, the silent running, the splendid pulling on top gear and the beautiful finger-light steering. Instead, you criticise the position of the horn button, which any idiot could alter in half a minute. Pah!"

A Risky Practice.

DRIVING home the other evening I saw two things which, I am glad to say, are rare in my experience. The first was in a rather slum-like side street, in which dozens of children were playing, and drawn up at the side of the road was an old four-seater light car with the engine running.

There was no sign of the driver, but the car was swarming with children, all busy examining and testing the controls. Quite possibly a childish attempt to engage a gear would have stopped the engine, but there is just a chance that it would not, and, if the car had started, some of the children on board and some of those playing in the road must have been hurt. As two urchins were devoting their concentrated efforts upon horn-blowing, I can only hope that the neglectful owner's attention was attracted before it was too late.

Dual Control.

ON the same journey, in a very busy main road full of trams, buses and lorries, I came up behind a Rover Eight driver who seemed to be steering a rather erratic course. Two trams were missed only by inches, and I could see that plenty of space would be necessary before I could pass the Rover in safety. When the chance came I accelerated rapidly and, whilst passing, glanced round to see if the cause of the erratic driving was obvious. It was!

The passenger was steering and leaning across the "driver"—a very fat man—to do it. Everyone who has driven a Rover Eight knows how easy

was, "H'm! not bad." A sudden application of brakes to avoid a dog evoked the observation, "Now, if your brakes had been servo, etc.," and a slight skid brought us back to the big Renault again. And so he continued for the whole of that miserable journey. Of such men it has been said,

"They talk to misers of their heir
And women of the days that were."

After Dark.

DRIVING along a narrow road in the Home Counties the other night I was hooted out of the way by a large car travelling at speed. Just at that spot it was impossible to draw in sufficiently to let it pass, so I ignored the driver's violent use of the horn for several hundred yards until it was easier to draw in to let him pass. He rushed past shouting at me, and straightway got the reflection of my very powerful headlights in his vertical windscreen and was completely blinded. He tried his utmost to escape from the trap of his own setting, but in vain, and finally had to drop to a crawl whilst the crowd with him hurled abuse in my direction.

For what followed I was fully prepared. Pulling into the mouth of a side road he allowed me to pass, and then tried the effect of his own headlights. I would have given much to have wit-

nessed the astonishment on his face when he saw me speed ahead without any discomfort whatever. The windscreen of the car I was driving was of the sloping type, which throws reflections downwards!

A True Story.

A MAN with a brown-paper parcel under his arm entered the London service depot of a well-known light car manufacturer. Upon being asked what he wanted, he produced a carburetter from the paper and said:—

"You might just tune this up for me. I've heard that you undertake such work. I'll call for it this evening. Please tune it properly, as my car is not running at all well."

Why Not White Roofs?

WHY, I wonder, has every saloon a black roof? It would be impossible to think of a less satisfactory colour. Black shows all the dust and dirt, it has a sombre, dismal appearance and it absorbs the sun's rays instead of reflecting them. In these days, when small enclosed cars are becoming so very popular for use all the year round, I really think that some brave coachbuilder might forget the conventions of the days of the horse-drawn brougham and experiment with a new colour—preferably white.



A SOUTH AFRICAN
ROVER CLUB.

B20

Members lounging by the cool waters at Magaliesburg, which is a two hours' run from Johannesburg. Thirty-one Rover 9 owners belong to the club.

MIDLAND OFFICES:
BIRMINGHAM: 16, Bennett's Hill.
Phone: Central 2572-3.

COVENTRY: 6, Warwick Row.
Phone: Coventry 4775.

NORTHERN OFFICES:
MANCHESTER: 196, Deansgate.
Phone: Central 2467.

The **Light Car** and **Cyclecar**

Conducted by
EDMUND DANGERFIELD.

TEMPLE PRESS LIMITED,
7-15, Rosebery Avenue,
London, E.C.1.

Inland Telegrams - "Pressimus,
Holb, London."

Cables - "Pressimus, London."

Telephone - Clerkenwell 5009
(7 Lin.s).

"THE LIGHT CAR AND CYCLECAR" WAS
FOUNDED IN 1912 TO CATER FOR THE
NEEDS OF USERS AND POTENTIAL
PURCHASERS OF LIGHT CARS AND
CYCLECARS, AND IT HAS CONSIST-
ENTLY ENCOURAGED THE
DEVELOPMENT OF THE ECONOMICAL
MOTORING MOVEMENT FOR OVER
FOURTEEN YEARS.

NO CAR WITH AN ENGINE CAPACITY
EXCEEDING 1,500 C.C. (1½ LITRES) COMES
WITHIN THE SCOPE OF THIS JOURNAL,
THAT CAPACITY BEING GENERALLY
RECOGNIZED AND ACCEPTED AS THE
LIMIT FOR A LIGHT CAR ENGINE.

Motor Spirit Dangers.

A FATAL accident occurred last week when a petrol tank burst whilst it was being repaired. This was not by any means the first accident which has taken place in similar circumstances, nor are petrol fires and explosions nearly so rare as most people believe. Minor mishaps due to petrol igniting are frequently occurring, and really serious accidents are often mentioned in the newspapers. Their cause is nearly always due to the fact that the people immediately concerned have allowed familiarity with motor spirit to breed contempt for its potential danger. Motor spirits, it must be remembered, are highly volatile and give off a gas which, when confined, even at atmospheric pressure, explodes almost with the force and damaging powers of a bomb. In addition, of course, the liquid fuel itself is extremely inflammable—very much more so than most people imagine.

We comment on the matter on this page because we do not believe that the potential risks which are incurred when motor spirit is carelessly handled are commonly appreciated. The more experienced the owner the less does the risk occur to him. We advise all our readers invariably to treat motor spirit with the respect which it deserves and, above all, not to smoke when handling it, and not to allow any part of the petrol system to leak. When a tank or pipe which has contained petrol has to be soldered, the parts should first either be left in the hot sun for an hour or two after draining or they should be washed out with very hot water.

Light Cars for India.

AN ex-resident in India gives in this issue his carefully reasoned opinion, based upon sound practical experience, of the possibilities for British light cars in India. He expresses the belief that the sole reason for their lack of popularity can be traced to the apathy of the motor agents in India and the lack of support and encouragement which they receive from the car makers in Coventry, Birmingham and elsewhere. Our contributor is a man whose opinions are to be respected, and he has unquestionably a very intimate and useful knowledge of his subject.

At the same time we think that he makes the

Topics of the Day

mistake of punishing the British light car manufacturers when really they need sympathy. He overlooks the fact that their biggest market is their home market, and he does not pay heed to the fact that for this market they need to design their cars with many special requirements in view, not the least of which is the method of taxation by horse-power. Another fact which our contributor overlooks is that to capture the Indian market

on a large scale it would be necessary for our light car manufacturers to design special models for the purpose, and there has been little inducement to do this under the trying industrial conditions which have prevailed during the past few years. We feel ourselves that once our Overseas Dominions have brought the roads in and around their big cities approximately to the same state as those in Great Britain—already this is in sight—the British light car in its present guise will prove a formidable invader.

Despoiling the Countryside.

MOTORING parties have come in for a considerable amount of criticism recently in connection with raids upon public commons and wooded land. They have been accused of descending upon these beauty spots with scissors, knives and even trowels, bent upon securing blooms for their vases at home and flowers and roots for their gardens. In our opinion their depredations have been magnified beyond their true extent, but it must be acknowledged that several specific cases have been stated where motorists have laid themselves open to severe criticism.

Common land and other open spaces provided for the benefit of the public should be treated exactly as one would treat another man's garden. They are not the property of individuals, but of the community, and those who enjoy their amenities should do so with a feeling of responsibility towards brother motorists, local residents and others who enjoy the benefits which are provided. Naturally, in very remote districts, no harm is done by picking wild flowers, but even when it is obvious that nobody will suffer from a minor raid of this kind, those who take the blossoms should avoid damaging the plants.

ng the
-12 h.p Peugeot

PRACTICAL ADVICE FOR THE
7-12 H.P. PEUGEOT OWNER WHO
IS ANXIOUS TO KEEP REPAIR
BILLS AND RUNNING COSTS
DOWN.

THE design of this popular small car embodies an engine the cylinder block of which, with the head and the greater part of the crankcase, is cast in one piece. Transmission is on conventional lines, but the gearbox is placed at the rear of the torque tube and there is no differential gear. Brakes operate only on the rear wheels, the same pair of shoes being actuated either by the hand lever or by the pedal as required.

Lubrication of the engine is by a submerged gear pump and splash. The system works quite automatically and no pressure indicator is provided. There is a coarse gauze filter incorporated with the pump, but this should require cleaning only at very long intervals. In any case, it cannot be got at without dropping the sump. The oil recommended for use in the engine is Vacuum BB, but, as is usually the case, there can be no objection to using other high-grade oils of suitable consistency.

As there is no fine filter in the oil-circulating system, it is strongly recommended that the filter at the mouth of the filler orifice should invariably be kept in position when filling up with oil. Another recommendation of the makers having reference to filling up with oil is always to have the engine ticking over gently while the fresh oil is being added. By this means large quantities of oil are thrown over the camshaft-operating chain, valve-operating mechanism and other parts of the engine.

The dipper rod is marked for maximum and minimum levels on one side and is graduated on the other side in fractions of a litre. The ideal level is just below the maximum mark.

It is recommended that every 2,000 miles the sump should be drained by removing the hexagonal plug from

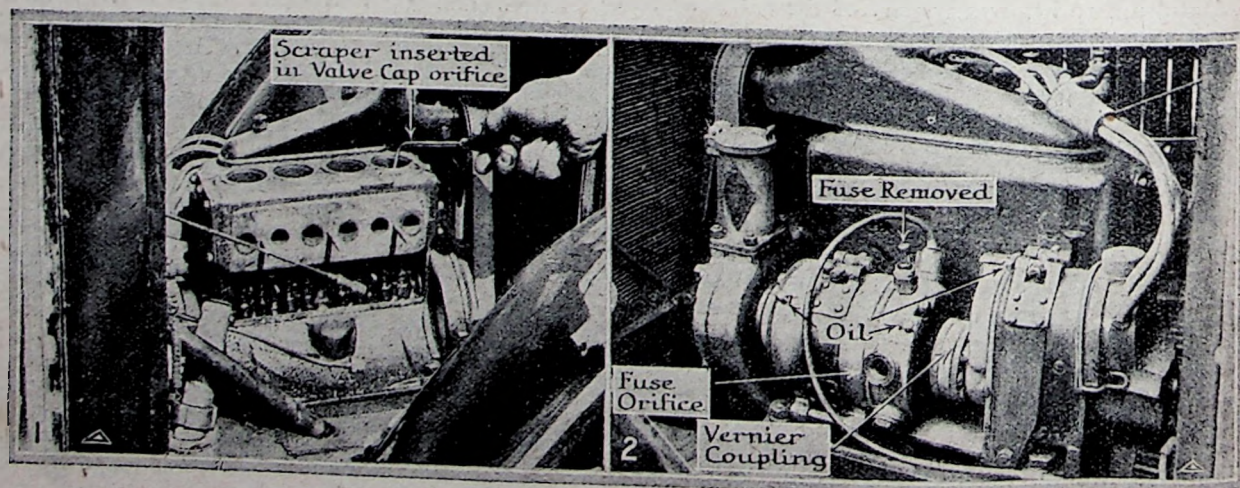
the base and refilling with fresh oil. About half a gallon of oil will be required for refilling. Flushing out with paraffin is not recommended.

Chassis lubrication is by high-pressure gun and there are 22 points requiring attention. There are no screw-down caps, but there is a number of points, such as knuckle joints on the brake-operating mechanism, that require oiling from time to time. Clear instructions regarding the use of the grease gun are given in the manufacturers' handbook. Two points especially call for frequent attention. These are the clutch-withdrawal race and the universal joint. When greasing steering joints it is well to relieve them of weight by jacking up.

The back-axle casing, which contains both the gear mechanism and the final worm drive, should be filled to the level of the overflow plug with Mobiloil C; in no circumstances must very thick or semi-fluid lubricant be used. The filler orifice, which is of ample size, is fitted in the usual place in the top part of the casing. The level plug is situated conveniently in the rear, so that there is really very little excuse for over-filling.

In any case, full provision is made to guard against this by the fitting of two drain tubes. These drain tubes are arranged one at each end of the axle-shaft housings, to prevent oil from reaching the brake drums. It is important that these tubes should be kept quite clear, which can be done by occasionally pushing a piece of wire up them. Ample provision is made in the design of the back axle, however, to prevent oil from finding its way along the axle shafts, felt washers being used for the purpose.

Decarbonizing the Peugeot engine has, of necessity, to be done without dismantling. The operation is quite



- (1) Scrapers are used for decarbonizing. They are inserted through the valve-cap orifices and valve ports.
(2) The fuse is situated in the dynamo casing. It is easy of access.

a simple one; so simple, in fact, that the price at the works for thorough decarbonizing and ordinary attention to valves is only 12s.

All four valve caps are first removed, together with the carburetter and the exhaust manifold. Scrapers are then used for removing the carbon, these being inserted through the valve-cap orifices and valve ports. After a thorough scraping the carbon particles should be blown out by means of bellows. Valve grinding is perfectly normal and straightforward and calls for no explanation here. The correct clearance between the valves and tappets is .3 mm. when hot.

The proper timing of the ignition is for the spark to occur 1.5 mm. before T.D.C. On the R.B. magneto there is a Vernier coupling operating in the ordinary way, whereby accurate adjustment of magneto timing may be made, but the ignition is fixed and cannot be varied by the driver.

It is unlikely that the owner will need to vary or check the valve timing, but the following figures are given: — Inlet valves, open .6 mm. past T.D.C., close 4 mm. past B.D.C.; exhaust, open 15.5 mm. before B.D.C., close .1 mm. past T.D.C. The timing is varied by altering the position of the driving chain on the sprockets.

The tensioning of the clutch springs is an operation that is not likely to be required very frequently, but it is a simple enough matter. Should slipping occur owing to inadequate spring pressure, each of the four studs in the back clutch plate must be given a turn with a screwdriver. These studs are locked by means of hexagonal nuts, and it is of the utmost importance they should be securely locked up again. It is also important that each one should be turned exactly the same amount.

One complete revolution in a clockwise direction is, as a rule, found to be sufficient to prevent any slip. Before carrying out this adjustment, however, the clutch pedal itself should invariably be carefully examined to see that it has the proper amount of travel and that the clutch is not slipping through being held partly out on account of poor adjustment of the clutch stop.

The entire business of brake adjustment is carried out by means of the two butterfly nuts at the respective

ends of the operating rods. As the back axle has no differential, it is not important to get absolute evenness of braking effect on the two drums. The usual practice is simply to make sure that each butterfly nut

Grease Gun
Connected to
Clutch
Withdrawal

Brake Mechanism
Joints wiring
Oiling

This photograph shows clearly the main points on the transmission that require attention. Note the peculiar arrangement of the cells of the battery, which is seen on the left.

The clutch, being of the Ferodo-lined plate variety, requires no lubrication whatever on its surfaces. There are two parts of the clutch which sometimes need adjustment. One is the clutch stop and the other is the four studs whereby the tension of the clutch springs is varied. The clutch stop consists of an ordinary stud with lock-nut, which comes into contact at the end of the forward movement of the clutch pedal with a buffer piece. Correct adjustment is such that the pedal will move about three-eighths of an inch before the weight of the clutch springs is felt.

is taken up or slacked off to exactly the same extent as its fellow.

As has been explained in discussing lubrication of the back-axle casing, the danger of getting oil on to the brake linings is very small indeed, but should this happen the only satisfactory course is to remove the brake drums and to burn the linings with a blow-lamp. The linings are made of asbestos, so that there is no danger whatever of damaging them by heat.

Steering is by bevel pinion and sector, and provision is made to take up any backlash by tightening up the

mesh of the pinion in the sector. This is done by means of a special tool provided in the kit, which is used to screw home the collar on the top of the steering box. There is a locking bolt holding this collar in position, and this must, of course, be slacked off and then replaced after adjustment. The nut on this locking bolt is, by the way, castellated and secured by means of a split pin.

The electrical system consists of a starter, which works on teeth cut in the flywheel, and a separate dynamo driven in tandem with the magneto. None of these parts call for any exceptional attention, but a

comes away with it, when it can, of course, be examined and renewed if necessary.

The Zenith carburetter requires practically no attention excepting the occasional cleaning out of the two filters, one of which is underneath the main jet and

(1) The back axle, showing brake adjustments, oil-level plug and speedometer drive. (2) Greasing the universal joint. (3) There are two filters in the carburetter and these require occasional removal for cleaning purposes. (4) Steering backlash is taken up by tightening the collar shown.

number of oiling places is provided. A few drops of thin machine oil should be inserted every thousand miles or so through the oilers which are provided for the purpose.

The dynamo fuse is easily accessible through a large hexagonal plug in the dynamo casing. This is removed and the fuse, which is situated in a small glass tube,

the other at the main petrol intake. Both of these are removed by unscrewing their respective plugs, situated immediately underneath the carburetter. The proper setting for this carburetter is as follows:—Choke, 14; main, 65/65; slow-running jet, 45. It is not recommended that other settings should be tried, as it is unlikely that the general running will be in any way improved.

The tyres are 715 mm. by 115 mm. Michelin and correct inflations are 20 lb. per sq. in. for the front and 22½ lb. per sq. in. for the rear.

THE MAN OF PURPOSE.

THE grim-featured man gazed with basilisk eyes at his silent, helpless victim awaiting with dispassionate calm the ordeal that seemed so inevitable. His tense look savoured more of stern, implacable resolve than of hate or vindictiveness.

At last he broke the threatening silence, speaking in low and murmurous tones.

"The time has come. I almost shrink from doing it . . . but I must stifle my qualms. Undoubtedly it is—it *must* be—for the best. Things will run more smoothly in the near future."

Chin resting in hand, he appeared lost in cogitation.

Was this some master criminal, some king of the underworld, toying with a dangerous, thwarting adversary fallen unhappily under his baleful influence? Or was it some clever but over-zealous scientist, obsessed with a crazy desire for knowledge and power, about to perform a horrible deed for the sake of his lust for progression?

The man of purpose slowly recovered himself, and, after a glance into a well-thumbed, mysterious-looking tome, busied himself at a sturdy deal table, where lay, in miscellaneous array, the awesome paraphernalia of his craft—or nefarious undertakings.

"I must not make a mess of it *this* time," he mused.

R24

"It is a dirty business altogether, but——" he shrugged a pair of gaunt shoulders—"there is no alternative if I am to be assured of—*silence*."

He gestured restlessly.

"Oh, why does the thought of it appal me? Am I turning yellow already?" he cried, in fierce self-contempt.

With forced enthusiasm he applied himself once more to his preparations, his long, deft fingers working quickly and with decision.

When eventually he turned and spoke again, his voice had lost its former note, and was now self-assured and perilously oily.

"We shall not be very long now."

A diabolical grin spread over his face. He held something in his hands that glinted brightly in the fitful gleams cast by the little lamp standing on the table.

Again the silence became oppressive and unbearable.

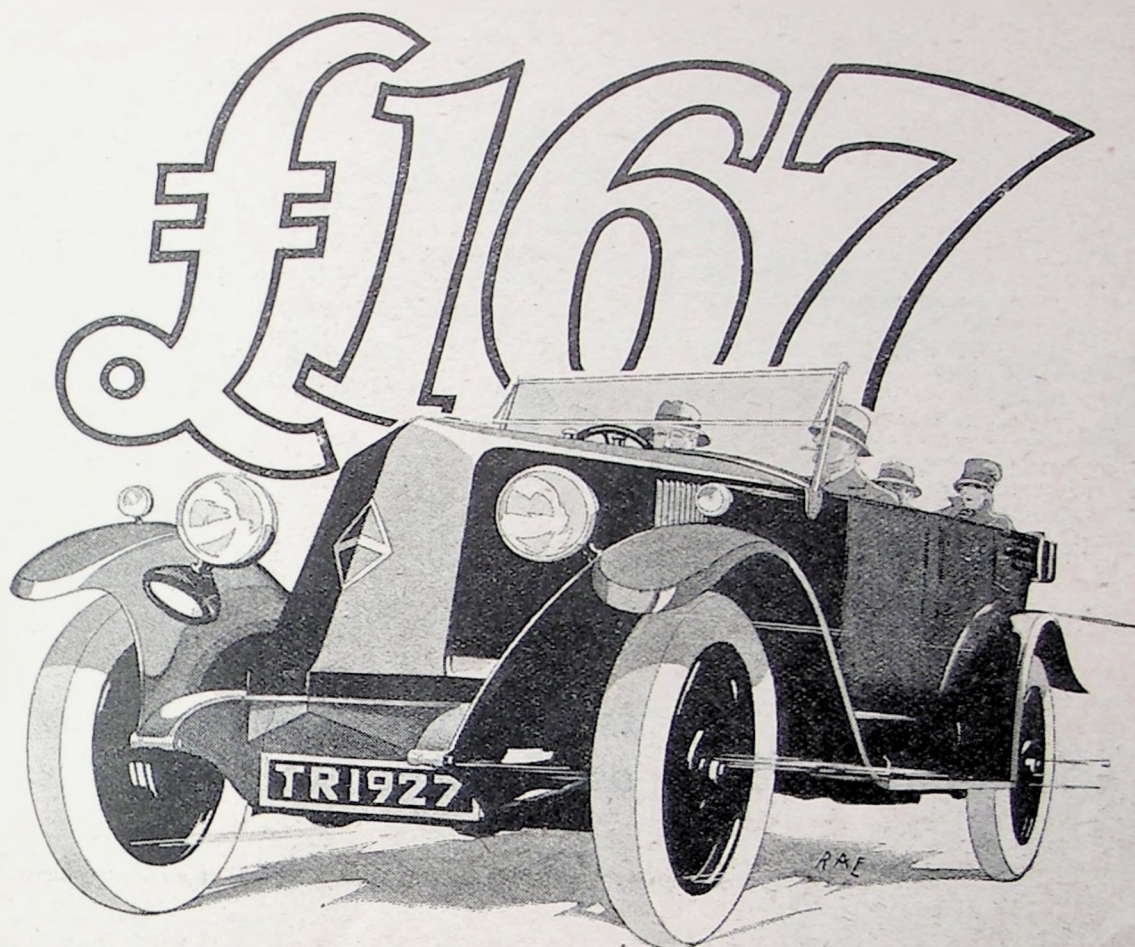
What was that—oozing—oozing—oozing?

The grisly-visaged man carefully wiped those cruel, wiry hands.

"Now I can push on with things!" he exclaimed.

The grease-gun at last was filled and all ready for use.

A.B.



4 DOOR... 4 WHEEL BRAKES FULL FOUR SEATER

45 M.P.G. TAX £9 OVER 45 M.P.H.

A RENAULT FOR £167. And such a Renault—roomy, substantial, and trustworthy, the most amazing value ever offered. In price, running costs, tax and upkeep it emphasizes economy as no car has ever done before.

Write to-day for illustrated literature and technical specifications of the 9/15 Models. 2-seater with double dickey £159-10. Standard Open Tourer £167. De Luxe Open Tourer £184. Four Door Saloons from £207. Coupes from £225.

Write for descriptive literature.

RENAULT LTD., *Head Office and Works,*
14, SEAGRAVE ROAD, WEST BROMPTON, S.W.6.

Showrooms: 21, Pall Mall, S.W.1. (Phone: Reg. 0974.)

RENAULT-BUILT TO LAST A LIFETIME®

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

Taking the Guess out of Car

The Customer thinks-

*He is hardly reassured when car dealers
and makers avoid this question with-*

But the makers of the
TROJAN *say-*

Maintenance

"Cars are cheap enough, but I'm a little afraid of the cost of upkeep—how much will it be?"

"Oh, very little for upkeep—a most economical proposition."

"With the sole object of proving our claim that the **TROJAN** is

The Simplest Car in the World,

costing the least to maintain, we give a signed undertaking that beyond the usual running costs for petrol, oil, tyres, etc., the

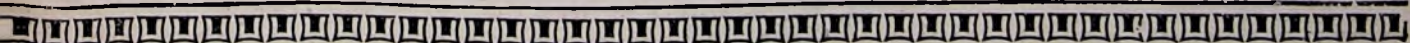
*Maintenance Expenses shall be
Nothing for the first 5000 miles"*

Prices from

£125

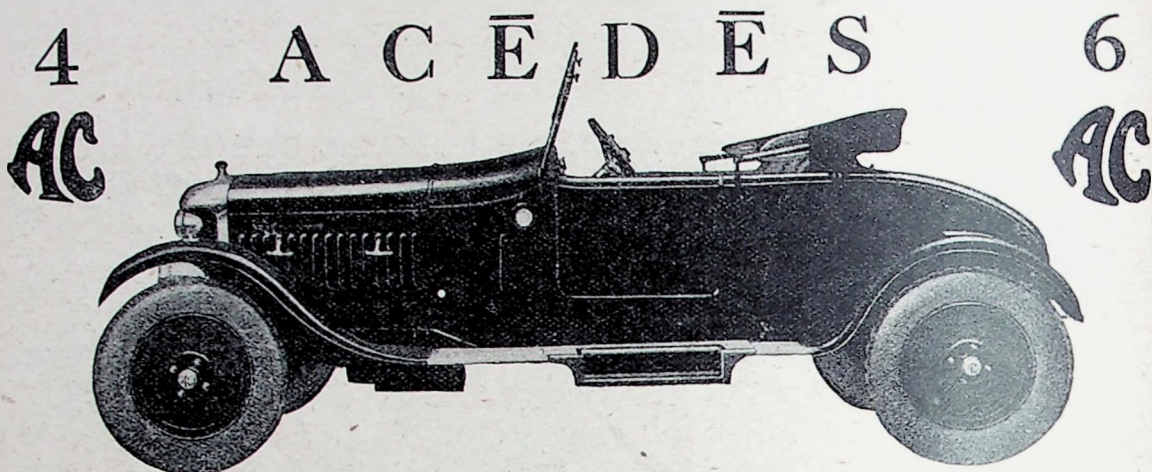
The 4-seater 3-door
model TROJAN
means real holiday
times for the
youngsters.

LEYLAND MOTORS LIMITED • LEYLAND • LANCs



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

B27



A BRITISH CAR

and the least costly of its class

∴ to run per mile ∴

Only by personal experience of an
A-C (ACĒDĒS) on the road can
you fully realise its immense
superiority. The ideal car
for ladies' use. Top gear
in Town or Country.

Dunlop Cord Tyres are best and we
fit them on all A-C (ACĒDĒS) Cars.

We can supply perfect used cars under guarantee.

A-C (ACĒDĒS) CARS LTD.

THAMES DITTON, SURREY, ENG.

Telephone: Kingston 3340-4.

Full range of A-C (ACĒDĒS) Cars at

55-56, Pall Mall, LONDON, S.W.1,

110, Bold St., LIVERPOOL, and

CYCLECAR COMMENTS.

By SHACKLEPIN.

FREAK DESIGNS AND WHERE
THEY FAIL—A HOME-BUILT
FOUR-CYLINDER ENGINE—
INTERESTING NEW ENGINE-
GEARBOX UNIT.

IT is something of a coincidence that recently by the same post I should have received two letters from readers who wish to build what I can describe only as freaky cyclecars, about which my advice was asked. In each case I replied by post, but it occurred to me that the subject was one of general interest, so that it might well be discussed on this page.

Frankly, I am very much against freak design unless it can be proved that a departure from the orthodox presents distinct advantages. Deliberately to build a freaky cyclecar for no other reason than to excite comment is, in my opinion, a waste of time and money.

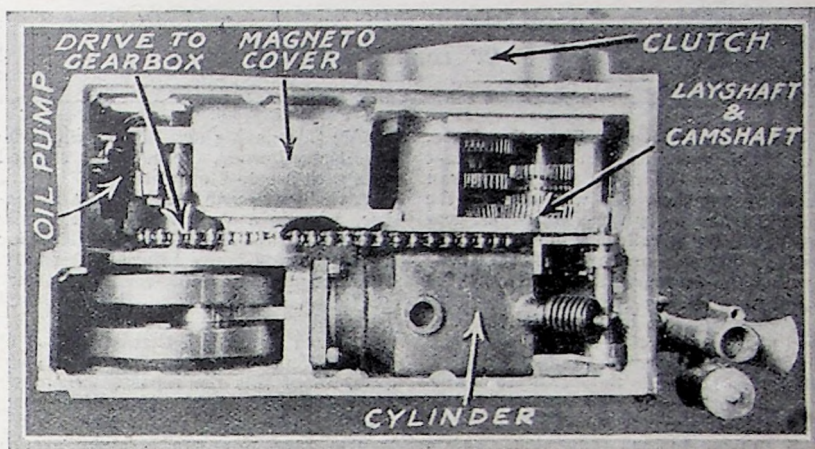
A machine of this type in all probability would give endless trouble and its market value would be absolutely nil, although its cost might have been very high.

One of the two enthusiasts to whom I have referred wished to use 18-in. or 20-in. wheels on his cyclecar. I am not at all sure whether wheels in either of these sizes are obtainable, and even if they were there is still the question of finding tyres to fit them. On the road small wheels give rise to very uncomfortable riding, because they drop into potholes over which ordinary-sized wheels would pass without conveying any appreciable jolt to the occupants of the cyclecar.

Again, unless they are to look hopelessly disproportionate, all other parts of the car must be to a scale which will blend with the wheel sizes, and this would mean a very small vehicle.

No doubt many of my readers remember the pre-war Baby Peugeots which were very excellent little cars, designed and built on really sound lines, but they had 550 mm. by 65 mm. tyres, which unquestionably spoilt their appearance. I owned one of these cars and fitted it with a low-built streamlined body, but even then it did not look really nice, and it was not practicable to fit larger wheels because the gear ratios would then have been too high.

I was very interested to learn that the reader who proposed to use the small wheels has designed and built his own 350 c.c. four-cylinder engine. It has twin overhead camshafts, four $\frac{1}{2}$ -in. diameter valves per



A COMPACT
UNIT.

The Tinkler engine-gearbox unit is arranged compactly in a box which makes it entirely self-contained and oil-proof. A unit of this kind should be ideal in a cyclecar.

cylinder and midjet sparking plugs. The compression ratio is 9 to 1.

My correspondent is a little disappointed because on test the engine develops only 8½ h.p. at 6,400 r.p.m. I have not seen a power curve of the engine, but, in my opinion, a compression ratio of 9 to 1 is much too high, and I think it very likely that more power and, certainly, smoother running would be obtained by lowering the ratio to at least 7 to 1.

With this ratio it would be just possible to use ordinary petrol without risk of detonation.

I imagine that at present a good deal of pre-ignition takes place, and it is only the very high speed of the engine which enables it to run at all; if it were slowed down under load the pre-ignition and detonation would stop it. Hammer-like blows on the pistons will not give nearly so much power as comparatively slow but powerful pushes.

The foregoing remarks have been made entirely at random, because I know nothing whatever about the engine in question, excepting the details mentioned above. It is quite possible, therefore, that I am wrong in my suggestions regarding the lack of power. In any case, I shall be very pleased to receive further news of the engine, because it is not often that one has the pleasure of dealing with amateur engine builders.

A new engine-gearbox unit which has been entered in a machine known as the Tinkler for the Tourist Trophy Races is causing a considerable stir in the motorcycling world.

The engine takes the form of a 500 c.c. water-cooled single-cylinder

mounted horizontally in a large aluminium box, which also encloses the magneto and gearbox. A photograph on this page gives a good impression of the general layout, but it is necessary for me to explain that in the ordinary course of events the whole box as shown is covered in with an aluminium lid, which makes the entire unit self-contained and oil-proof.

The clutch is in the outside "fly-wheel," and this appears to be the only point at which one can direct criticism, for it would have a very heavy load to transmit when bottom gear was engaged.

I understand that the inventor has entered for the Tourist Trophy Races thoroughly to try out this extremely clever and interesting little unit, and there seems some likelihood, if it proves on the road to be as successful as one would assume from its design, that it will be put into production. I can imagine nothing better calculated to further interest in cyclecars than a unit of this kind becoming available. It could be mounted very easily in a cyclecar frame, it would be ideal for fixing towards the rear so that the transmission could take the form of a single chain to the rear axle, and its sturdy construction and clever design should ensure absolute reliability.

Amongst the other novelties which are embodied, I may mention the use of the gearbox layshaft as the camshaft and the provision of helical constant-mesh wheels. The gears are changed in a very novel manner, the pinions first being meshed and then locked to their respective shafts with dog clutches.



AMERICA'S CLASSIC RACE.

Duesenberg Takes the Honours at Over
97 m.p.h. for 500 Miles.

THE Indianapolis 500-mile Race, which was held in America last Monday, can be aptly described as a race of smashes. It was one of the most extraordinary races which has ever been run, for a college student with no racing history secured first place against the strongest field that America could produce.

George Souders by name he took the lead at the wheel of a 1,500 c.c. Duesenberg after 370 miles and held it to the end. He made only two stops during the entire race and put up the remarkable average speed of 97.54 m.p.h.—2 m.p.h. faster than last year's winner, who gained the honours in the first race of the series with an engine limitation of 1½ litres.

Souders, prior to this big success, had only a small local reputation as a dirt-track racing man in Texas, and his big success at Indianapolis will net him something like £6,000.

A famous track-racing man, Earle Devore, was second, 7½ miles behind Souders, and Tony Gullato was third. In *The Motor* American correspondent's cabled report of the race it is stated that it provided "the most spectacular display of nerve ever seen in a similar contest."

This was when Norman Batten's car caught fire and Batten stood up in the cockpit and drove the flaming car first with one hand, then with the other, and finally with his foot, until he reached the pits, where the fire was extinguished.

For this daring act, during which he was badly burned, the judges presented him with a gold stop-watch.

A thrill was provided by Jules Ellingboe, who is a very well-known driver and who drove his car into a retaining wall and was badly injured internally. Another unfortunate driver was Howard Kolbert, whose car skidded and capsized.

It was estimated that a crowd of nearly 15,000 people were present, but in spite of this the reporter whom we quoted above remarks that "the sport seems to be waning in America."

The race was run straight around the track, the length of each lap of which is 2½ miles. The practice, now common at Brooklands, of putting obstacles on the track in order to make long-distance races more similar to road events has not yet spread to the other side of the Atlantic and, in consequence, long-distance track events are run at much higher speeds than those which are common for similar events at Brooklands.

It is interesting to recall that the first of the Indianapolis 500-mile Races was run 16 years ago, when the winner was a 10-litre Marmon, which averaged 74.59 m.p.h. The following year a car of approximately the same capacity came home at 78.7 m.p.h. In 1915, a 5-litre car won at 89.84 m.p.h.; in 1920, a 3-litre car at 88.5 m.p.h.; and in 1923, a 2-litre car at 90.95 m.p.h. Last year's winner averaged 95 m.p.h.

BLACKPOOL SPEED TRIALS.

THE speed trials held on the promenade at Blackpool by the Blackpool and Fylde Motor Club have always been well-organized affairs, and fortunately in last Saturday's event favourable weather played an important part in ensuring a successful meeting, in contradistinction to the conditions which prevailed on the occasions of the past two events. The actual course was half a mile in length, with an ample additional length of the promenade to allow the drivers to pull up after passing the finishing point. The competitors were despatched in pairs, an arrangement which added considerably to the excitement of the meeting, as duels were fought out on practically every run.

The car section of the programme was timed to start at 10 a.m. The first event was for touring cars up to 1,500 c.c., and was won by E. Hillary (Frazer-Nash) at 50.85 m.p.h., R. Mellor being second at 48.39 m.p.h. In the 2,000 c.c. touring car section the position was reversed, R. Mellor taking the premier award at 52.02 m.p.h., while E. Hillary was second at the same speed at which he won the 1,500 c.c. class.

The next class—the 3,000 c.c. event—went to H. Slater (15.9 h.p. Sun-

beam) at a slightly less speed—51.14 m.p.h. The unlimited class produced some exciting duels, the results showing that very even times had been recorded. Actually the speeds of the first three cars were between 53.57 m.p.h. and 52.63 m.p.h., G. Pemberton (Vauxhall) being the winner, R. Mellor (Frazer-Nash) being second and

E. L. Boston (Vauxhall) a good third.

The difference between the touring cars and racing cars was very soon demonstrated when the racing classes were commenced. Even in the 1,100 c.c. class fast speeds were recorded, the winner—E. L. F. Mucklow (Frazer-Nash-G.N.)—averaging 58.44 m.p.h. over the half-mile course. In the next event, the 1,500 c.c. section for racing cars, B. H. Davenport, driving his spidery Frazer-Nash, recorded 62.5 m.p.h.

It was not until the 2,000 c.c. event was run, however, that the interest for all concerned reached the maximum, as Raymond Mays (Mercedes) and B. H. Davenport (Frazer-Nash) were pitted one against the other. Actually, in this event, Mays made fastest time in 27 secs. (equal to a speed of 66.67 m.p.h.), but Davenport was only ½ of a second slower. This redoubtable pair met again in the 1,500 c.c. event, where the position was reversed, Davenport recording 27 secs. and Mays ½ sec. slower. Davenport also won the unlimited class at the same speed as he had put up on his previous run. Thus Mays and Davenport tied for first place, so it was decided that a re-run should be made, but as the Mercedes developed gearbox trouble an exciting event was thereby unavoidably cut out.

After the racing car section the various classes for sports cars were somewhat tamer. The majority of the races were won at speeds varying from 50 m.p.h. to 55 m.p.h. G. L. Jones (Bugatti) took first place in the 1,100 c.c. to 1,500 c.c. section. In the 1,500 c.c. to 2,000 c.c. class the Hon. Mrs. V. A. Bruce (Accedes) recorded a win at 50.86 m.p.h.; H. Slater, with his Sunbeam, won the 2,000 c.c. event, while S. E. McGowan (G.N.) won the unlimited c.c. class at 56.25 m.p.h.

RESULTS.

TOURING CARS.

Up to 1,100 c.c.—1st, E. Hillary (Frazer-Nash), 50.85 m.p.h.
Up to 2,000 c.c.—1st, R. Mellor (11.9 h.p. Frazer-Nash), 52.02 m.p.h.

RACING CARS.

Up to 1,100 c.c.—1st, E. L. F. Mucklow (Frazer-Nash-G.N.), 58.44 m.p.h.
Up to 1,500 c.c.—1st, B. H. Davenport (Frazer-Nash), 62.5 m.p.h.
Up to 3,000 c.c.—1st, B. H. Davenport (Frazer-Nash), 66.67 m.p.h.
Unlimited c.c.—1st, B. H. Davenport (Frazer-Nash), 66.67 m.p.h.

SPORTS CARS.

Up to 1,100 c.c. List price not exceeding £550—1st, G. L. Jones (Bugatti), 53.25 m.p.h.
Unlimited c.c.—1st, S. E. McGowan (G.N.), 56.25 m.p.h.

THE LONDON-HOLYHEAD TRIAL.

ALTHOUGH well supported by Amotorecyclists and Morgans, the London-Holyhead trial was given a miss by the car folk. Only nine cars faced the starter; the drivers, however, had reason to congratulate themselves for they had 24 hours of strenuous sport, perfect weather and majestic scenery.

It had rained the whole of Friday and it was feared that the dismal weather that made last year's event so unpleasant would cause discomfort again this year. But some two hours before the start the weather cleared up, and beyond some fog for the first hour or so it was perfect throughout.

Among the interesting machines we noticed was R. G. C. Schwalm's Frazer-Nash. On the fascia board there were

no fewer than 11 instruments as well as various gadgets and switches. The owner assured us that they were all different and all worked!

After Reading the fog lifted and the night became intensely cold. By the time Cirencester was reached, however, the sun had risen and the dawn was very beautiful. The easy going during the night had made everyone early, and I. J. Higgs and H. S. Stevens whiled the time away by improvising an excellent banjo concert.

There was a secret check at Ross. A few miles farther a breakfast was taken at Hereford, and here the genial R. M. Dixon caused some amusement by hiring a taxi from where he left his car to the breakfast control a hundred yards away.

At Rhyader the trial started in earnest. Good roads were left behind and a path was taken across the mountains, the scenery of which was very grand. The water-splashes, starved by lack of rain, were so shallow that they caused no trouble. A secret check at Devil's Bridge was cunningly placed to catch any who happened to have been delayed by the rough going.

The piece de résistance of the trial, however, was the 15 m.p.h. section after Stay-a-Little. As this is reached by a steep, winding hill, no one was early in the village. The subsequent descent into Machynlleth beggars description. Over loose rocks the cars bucketed and jumped, but, to the surprise of everyone, only one car competitor—R. M. Dixon (Newton-Ceirano)—had to retire.

After lunch the competitors hurried to Bwlch-y-Groes, where all the four-wheelers made clean climbs, although several engines protested by showing a whisp of steam from the vent pipes. Some excitement was caused when H. J. Vidler (1,096 Morgan), taking one of the corners near the top of the hill too fast, skidded and left the road. The car landed on its side on a ledge some distance from where it left the road, but fortunately neither of the occupants was hurt. It says a deal for the sturdy construction of his machine that he was able to drive it 32 miles to the next check before retiring. A. C. Maskell (980 Morgan), as usual, performed well on the hill.

It seems that Bwlch-y-Groes is no longer a real test for light cars. Not so many years ago competitors used to toil up its shale-strewn slopes with their engines making hard work of it in bottom gear. To-day the four-speeders use second most of the way up.

After the tea check at Bettws-y-Coed the main road was reached, and the competitors wended their way to the end through the most beautiful scenery in Snowdonia.

All the Morgans finished except H. J. Vidler's and M. W. Stokes's, whilst R. M. Dixon's Newton-Ceirano was the only four-wheeler which retired.

HEPOLITE SCAR THRILLS.

Vast Crowds Watch Good Sport on Grade of 1 in 1½.



CLIMBING freak hills is a form of motor sport which has become firmly established in the favour of Yorkshire motorists, and there was no doubt as to the degree of interest aroused in last Saturday's event, whilst a walk through the parking enclosure shortly before the start showed that a large proportion of visitors were light car owners.

Hepolite Scar has undergone many improvements since it was first opened some two years ago. The principal track, which is described as the "round course," includes two hair-pin bends, and the surface has generally been made faster, in addition to which a steel barrier has been erected to prevent any encroachment on the part of spectators.

The "Rodeo" course, which goes up the hill in a bee-line, culminates in a piece of frightfulness where the gradient is 1 in 1½. This section has been made much wider and is accordingly safer.

There were classes for cars up to 1,100 c.c. for both "round course" and "Rodeo" climbs. An interesting entry was that of Miss V. Worsley's 9.5 h.p. Salmson. This lady has been successful to a remarkable degree in Northern sporting events and was a prime favourite with the crowd.

The same remarks apply to Mr. W. S. Canney, driving a 7 h.p. Jowett, wherein, of course, was a strong appeal to local sentiment.

Miss Worsley was first competitor in the "round-course" event, and her climb, although not fast, was remarkably steady and unflurried. Her arrival at the finishing line was signalled by a burst of warm applause. A. Canby (Sports Salmson) came up faster, but stopped in the last 10 yds. apparently through wheelspin. W. S. Canney's Jowett made a remarkably good climb at touring speed, and H. R. Humphries was very good with his 8.9 h.p. G.N. Much the best climb, however, was that of L. Cole, who took his Frazer-Nash to the top in 50½ secs., beating Humphries by 2½ secs.

There was a high degree of interest manifested in the "Rodeo" event, which is recognized as a severe test even for modern light cars. The surface, however, was in splendid condition and no driver considered chains to be necessary.

A. Canby drove his Sports Salmson halfway up the 1 in 1½ gradient, where he stopped at a perilous angle, but was immediately salvaged by a strong body of marshals equipped with heavy wood

A gradient of 1 in 1½ provides a test that few can pass. A. Canby's Salmson and W. S. Canney's Jowett are shown.

chocks. L. Coles's Frazer-Nash stopped in the same place, as did W. S. Canney (Jowett). Both of these cars were assisted to the top by sheer man-power.

By far the best "Rodeo" climb was that of H. R. Humphries, who took his 8.9 h.p. G.N. to the top in 43 secs., but excellent though this performance was it is a long way from the record of 30.9 secs., which time stands to the credit of Captain Frazer Nash and was made nearly two years ago.

It is estimated that 10,000 spectators were present when the car classes were run, and the competitors were started off with a promptness which sustained the interest right to the end.

THIS evening will start another of those great treks that have made the Motor Cycling Club's organizing ability and the British light car driver's sporting enthusiasm the envy of motorists the world over.

At 7 p.m. official cars piloted by Messrs. Wells and Van Hooydonk will pull out from the Earl of Stratford's beautiful estate at Wrotham Park, just north of Barnet on the Great North Road, and half a minute later will follow the first motorcycle competitor, the leader of the 311 enthusiasts who have entered for the twentieth London to Edinburgh run organized by the Motor Cycling Club.

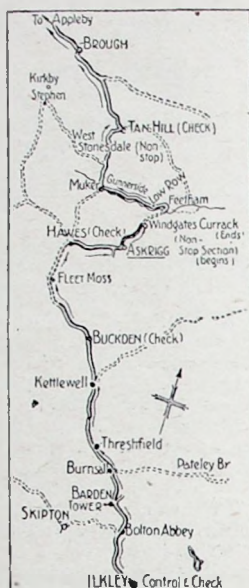
Looking through the list of entries, which is printed opposite, it is at once obvious that this trial, especially so far as cyclecar and car entries are concerned, is essentially one in which amateur drivers are in evidence. Many of the names have appeared with considerable regularity in all Motor Cycling Club programmes for the last six or seven years. Some of the cars, too, have many awards to their credit.

The Route.

The route followed will be exactly the same as last year as far as Moffat, in Scotland. That is to say, the main North Road will be followed through Potters Bar, Stevenage, Riggleswade, Stamford and Grantham to Doncaster. From there the main road is followed to Ilkley, where there is a stop for a second breakfast. Soon after this, however, cross-country tracks are followed through Buckden, Fleet Moss and Hawes to Askrigg, where there is an observed hill. There is a second observed hill near West Stonesdale, and from there a fairly direct course is followed to Carlisle, via Appleby and Penrith.

For many years the run from Moffat to Edinburgh has been generally considered to be the world's worst form of torture. By the time Moffat was reached, on the Saturday afternoon, everybody had had some 24 hours at the wheel and was thoroughly "fed up." From Moffat onwards the going used to be easy, and although the scenery was particularly fine the competitors were far too sleepy to appreciate it. In past years it has been a common sight to see half-a-dozen cars pulled up by the roadside with their crews having 15 minutes' sleep, with some poor wretch of a passenger posted as sentry to wake them all up in time to get along again. Occasionally, the unfortunate victim chosen to do sentry-go would himself fall asleep, and then there would be a terrible "blind" to make up for lost time.

Last year a new form of sport, to



The Wharfedale section, which includes two observed hills.

wit, "snail-racing," was invented to while away the time during the waits outside checks; the game was to catch snails from the meadows by the side of the road and to make them race over a course of six inches or so, their respective backers prodding them violently with blades of grass to encourage them in their efforts!

But this year the organizers of the run have stiffened up considerably the route between Moffat and Edinburgh. Instead of following the conventional Devil's Beef Tub route, competitors will turn right in Moffat and continue to Cappercleugh, and from there past the Talla Reservoir to join the main road at Newbigging.

TO EDINBURGH

TO-NIGHT 311 VEHICLES LEAVE LONDON BEING THE TWENTIETH ANNUAL RUN OF THE MOTOR CYCLING CLUB. ENTRIES INCLUDE 15 THREE-

This new route, while not including any hills of a freakish nature, provides fairly hard going all the way. The road, which is very narrow, climbs steadily for six miles on end. Three shallow water-splashes are crossed, and then the road descends some 1,400 ft. in the course of two miles. It is anticipated that this new departure will solve once and for all the difficulty of previous years—of keeping awake. At the same time competitors will be introduced to some of the very finest scenery in southern Scotland.

The entire convoy of motor bicycles, three-wheelers and cars will take nearly three hours to pass a given point.

Askrigg and West Stonesdale hills are the best vantage points, but many light car enthusiasts will, no doubt, assemble at other points along the route to form their own

(Above) Cars at Wrotham Park lined up ready to start the run. (Right) A view of the route this year beyond Moffat.

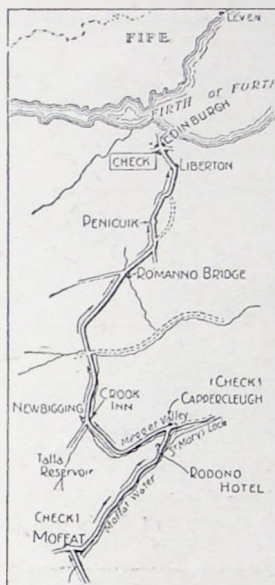
H TO-NIGHT.

ON FOR EDINBURGH, THE OCCASION
ORGANIZED BY THE MOTOR CYCLING
ELED CYCLECARS AND 74 SMALL CARS.

opinions of the relative merits of the various cars entered. Wrotham Park, whence the start is made, is private property, and spectators are not admitted, but a good view of the procession as it files slowly past can be obtained along the lane leading from the exit from Wrotham Park to the Great North Road, and all along the North Road at various points that will be passed before darkness has set in. A favourite point for spectators is Mardley Hill, between Welwyn and Knebworth.

It will be nearly 11 o'clock on the Saturday night before the last car, with its tired and hungry crew, will have been safely piloted into the Waverley Market House in Edinburgh.

The first of the cyclecar competitors will reach Biggleswade at 10.4½ p.m., Grantham at 1.25½ a.m., Ilkley at 7.35½ a.m., Askrigg at



The interesting new section between
Moffat and Edinburgh.

10.40½ a.m. and Carlisle at 2.0½ p.m.
A fully illustrated report of this run
will appear in next week's issue.

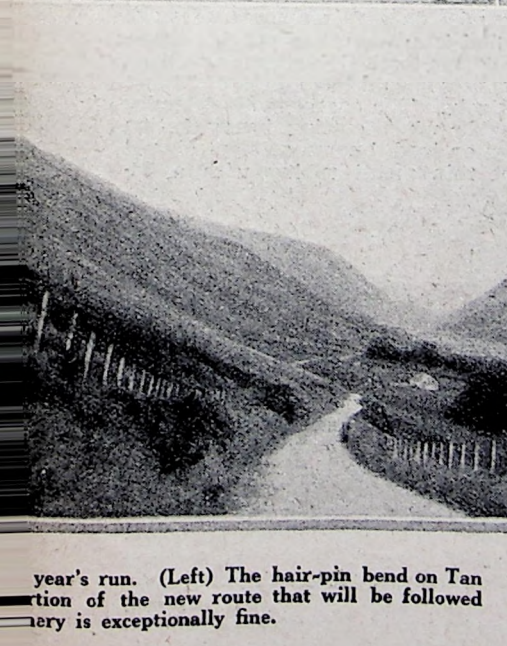
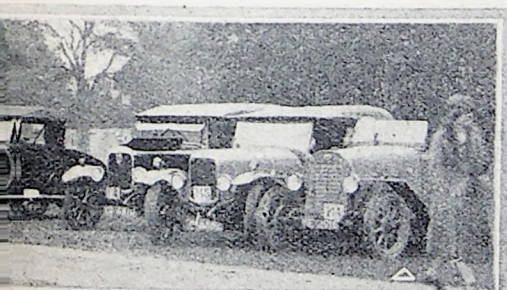
The list of entries is as follows:—

THREE-WHEELERS (15).

- 170 McCarthy, S. A. (10 Morgan-J.A.P.).
- 171 Baker, H. W. (10 Morgan-Blackburne).
- 172 Hall, S. (8 Morgan).
- 173 Thurlby, J. S. (8 Morgan-J.A.P.).
- 174 Macaskie, D. S. O. (8 Morgan-J.A.P.).
- 175 Johnson, V. L. (10 Morgan-Blackburne).
- 176 Marshall, G. H. (10 Morgan-Anzani).
- 177 MacMahon, M. J. P. (10 Morgan-Blackburne).
- 178 Maskell, A. C. (10 Morgan).
- 179 Swift, G. E. (8 Morgan).
- 180 Harris, G. O. (10 Morgan-J.A.P.).
- 181 Vidler, H. J. (10 Morgan-Blackburne).
- 182 Stafford, E. J. S. (10 Aero-Morgan).
- 183 Godley, W. G. (10 Morgan-Blackburne).
- 184 Smith, R. D. (8 Morgan Special).

CARS (127).

- 185 Freeman, V. L. (12.8 Austin).
- 186 Baxter, G. (17.5 Essex Six).
- 187 Jeffries, H. (11.9 Frazer-Nash).
- 188 Bliss, W. E. (10 Fiat).
- 189 Barber, J. W. (10 Salmson Sports).
- 190 Dixon, R. M. (10.8 Newton-Ceirano).
- 191 Dixon, J. W. (12.40 Alvis).
- 192 Pollitzer, J. (22.90 Alla-Romco).
- 193 Clegg, H. (7 Austin).
- 194 Milton, W. J. (7 Austin).
- 195 Podmore, A. (11.9 Lea-Francis).
- 196 Barker, W. J. (16.45 Wolseley).
- 197 Barker, R. J. (20.60 Buick).
- 198 Haward, W. J. (11 Bayliss Thomas).
- 199 Hinchence, E. S. (11.9 A.C.).
- 200 Roe, S. H. (11.9 Riley).
- 201 Slater, J. (15.9 Sunbeam).
- 202 Yule, J. (11.9 Morris-Cowley).
- 203 Stevens, G. F. (12 Riley).
- 204 Cornish, O. H. C. (11.9 Frazer-Nash).
- 205 Moss-Blundell, C. B. (10 Salmson).
- 206 Harris, S. (27 Buick).
- 207 Millar, E. (11.9 Frazer-Nash).
- 208 Jaques, F. A. (11.9 Frazer-Nash).
- 209 Schwalm, R. G. C. (11.9 Frazer-Nash).
- 210 Martineau, L. (10 Salmson G.P. Special).
- 211 Martineau, G. H. (10 Salmson G.P. Special).
- 212 Jackson, G. L. (11.8 Alvis).
- 213 White, R. J. A. (8.5 Renault).
- 214 Williams, R. L. (11.8 Alvis).
- 215 Gem, J. H. (10 Singer).
- 216 Eastwood, G. W. (12 Riley).
- 217 Palmer, G. B. (16.10 M.G.).
- 218 Hill, F. R. H. (13.9 Delage).
- 219 Brickwood, R. R. (14.60 Lagonda).
- 220 Kipling, A. U. (15.9 Hotchkiss).
- 221 Walker, P. D. (11.9 Lea-Francis Sports).
- 222 Hall, S. G. (8 Singer Junior).
- 223 Mann, J. (15.9 Delage).
- 224 Cleaver, F. C. E. (10.9 Lea-Francis).
- 225 Duncan-Smith, D. (11.9 Frazer-Nash).
- 226 Rogers, C. (11.9 A.C.).
- 227 Hobbs, J. (11.9 Riley).
- 228 Waters, R. B. (10.15 Salmson).
- 229 Tointon, J. B. (10.8 Riley).
- 230 Greenhill, A. L. (15.9 Berlet).
- 231 Wood, A. W. (11.9 Morris-Special).
- 232 Dobson, C. F. (13.9 M.G. Super-Sports).
- 233 Stevens, H. S. (12 Lea-Francis).
- 234 Herber, A. (10 Salmson).
- 235 Linzell, C. J. (7 Austin).
- 236 Reigato, H. G. (19.5 Invicta).
- 237 Ahern, J. H. (19.5 Invicta).
- 238 Douglas-Morris, E. M. (24 Buick).
- 239 Higginbottom, G. (13.9 M.G. Super Sports).
- 240 Eastwood, H. F. (12 Beal).
- 241 Vaughan, G. E. (10 Salmson Sports).
- 242 Vos, S. B. (7 Austin Cup Model).
- 243 Herrv, T. R. (9.5 Salmson C. P. Special).
- 244 Walker, K. F. A. (10 Salmson).
- 245 Banks, B. R. (11.9 Morris-Cowley).
- 246 Barsen, H. F. T. (11.9 Morris-Cowley).
- 247 Richardson, R. A. (8 Laflotte).
- 248 Richardson, G. (7 Austin).
- 249 Wycland, G. B. (11.4 Newton-Ceirano).
- 250 Kaye, H. (11.9 Morris-Cowley).
- 251 Thorburn, A. H. S. (9.8 Singer).
- 252 Reeve, W. R. (10.4 Windsor).
- 253 Turner, L. W. (9.8 Lea-Francis).
- 254 Becker, L. C. (21.6 Buick).
- 255 Clark, R. A. F. (12.40 A.R.C. Sports).
- 256 Rowland, R. C. (19 Austro-Daimler).
- 257 Sawe, G. I. L. (10.25 Talbot).
- 258 Fitt, C. O. (7 Gordon England Cup Model Austin).
- 259 Hay, J. V. (11.9 Morris-Cowley).
- 260 Clegg, E. A. (10.8 Riley).
- 261 Bramley, W. B. (10.4 F.N.).
- 262 Haynes, F. H. (10.5 Wolseley).
- 263 Stanley, S. C. (11.4 Alvis).
- 264 Juett, A. H. C. (7.8 Austin).
- 265 Vaughan Knight, H. H. (24.16 Garner Straight Eight).
- 266 Cottee, S. W. (13.9 Bean).
- 267 Jowitt, W. T. B. (32.4 Stutz).
- 268 Simpson Lee, J. G. (12.50 Alvis Super-Sports).
- 269 Bainbridge, J. B. (48.4 Rolls-Royce).
- 270 Redman, D. S. (11.9 Bugatti).
- 271 Driskell, J. A. (9.5 D.F.P.).
- 272 Watson, E. E. (9.5 D.F.P.).
- 273 Faulkner, C. E. (10.15 Fiat).
- 274 Bell, A. H. (24 Buick).
- 275 Walker, C. M. (11 Rhod).
- 276 Young, W. C. (14.28 Morris-Oxford).
- 277 Ripley, H. J. O. (7 Austin).
- 278 Shelton, L. J. (12.8 Alvis).
- 279 Daniel, K. H. (12.50 Alvis).
- 280 Newman, J. A. (9 Humber).
- 281 Ives, D. J. G. (7 Austin).
- 282 Russell, H. G. (7 Jowett).
- 283 Lovatt, H. J. (7 Jowett).
- 284 Ward, E. A. D. (7 Jowett).
- 285 Clark, J. (8 Senechal).
- 286 Llewellyn, A. S. (19 Austro-Daimler).
- 287 Berry, A. J. (30.98 Vauxhall).
- 288 Gallifent-Holmes, C. W. (9.5 Donnet-Zedel Super-Sports).
- 289 Gilchrist, D. L. (9.5 Donnet-Zedel).
- 290 West, D. (7 Fiat).
- 291 Fullbrook, A. E. (8 Singer Junior).
- 292 Twontyman, T. (10 Carmier).
- 293 Couper, W. M. (8.9 Amilcar).
- 294 Hall, J. J. (12 Galloway).
- 295 Turner, C. M. C. (10 Gwynne).
- 296 Ward, J. (8.9 Rover).
- 297 Buckle, G. H. (8.9 Amilcar).
- 298 Shelton, J. A. (13.9 Rover).
- 299 Wainwright, T. R. (8.9 Amilcar).
- 300 Buckingham, E. H. (8 Senechal).
- 301 McVicar, R. G. (16.40 Erskine-Stade-baker).
- 302 Handover, R. J. (16.40 Erskine-Stade-baker).
- 303 Shephard, J. A. (12.30 Galloway).
- 304 Conradi, C. D. (9.5 Salmson Sports).
- 305 Allen, W. L. (16.40 A.C.).
- 306 Reffell, R. (8.9 Swift).
- 307 Whitcroft, C. R. (11.9 Riley).
- 308 Blackburn, W. H. (11.9 Riley).
- 309 de Larrinaga, N. (14 Armstrong Siddley).
- 310 McGowan, A. P. (7 Austin).
- 311 Strong, G. H. (7 Austin).



year's run. (Left) The hair-pin bend on Tan
tion of the new route that will be followed
ery is exceptionally fine.

HOW TO USE A HACKSAW.

FEWER BLADES WILL BE BROKEN AND MORE ACCURATE WORK WILL RESULT IF THE HINTS GIVEN HERE ARE ADOPTED.

THERE are few tools more difficult to use properly than a hacksaw. This is due largely to the fact that the blades are thin and that they are hardened to the point of brittleness; therefore, the least unsteadiness in the sawing motion causes the blade to break. Used with care, however, an ordinary blade will last for a very long time. The art of sawing metal successfully consists in first choosing a suitable blade for the work in hand, by seeing that it is screwed up to correct tension in the frame and by making sure always to work the saw backwards and forwards steadily at a speed of not more than 60 strokes per minute.

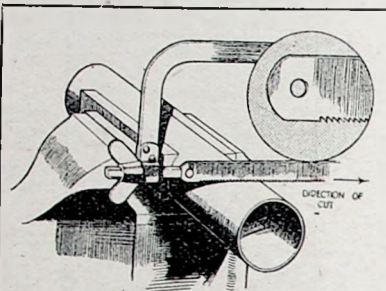
Hacksaw blades vary in length and in the number of teeth per inch. The most suitable all-round length for amateur use is 10 ins., and, except when sawing large sections of solid metal, 32 teeth to the inch will be found most satisfactory.

There are two types of hacksaw frame available; one is the rigid type designed to take blades of only one length, whilst the other is adjustable and will take, as a rule, blades of any length between 8 ins. and 12 ins. No definite figures can be given for the tension to which the blade should be screwed up in the frame, but it should be tight enough to avoid the possibility of twisting easily.

The metal to be cut must be held rigidly and the cut should always be taken as close as possible to the point of support; that is, supposing it is desired to cut off a piece from the end of a steel bar, the bar should be held in the vice so that the cut is made not more than an inch away from the side of the vice jaws. Any greater distance than this will have a tendency to cause the bar to vibrate, with the almost certain result that the blade will bend and break.

If, for any reason, the blade does bind, no attempt should be made to twist it sideways. Instead, it should be pulled or pushed very gently until it frees itself. It is advisable always to take full-length strokes when cutting and each stroke should be horizontal.

When cutting square material or any piece of metal which has a sharp corner, the saw should be held not quite horizontally, so that the cut is started at the farther edge, but no attempt should be made to start



By using a fine-toothed blade reversed in the frame thin metal can be cut more easily.

the cut directly across the corner, as this will result either in the blade slipping or in its having several teeth stripped. Sometimes in order to ensure that the cut is started correctly, it is a good plan first to file a slight nick in the metal with a square or three-cornered file.

Non-ferrous metals such as brass or phosphor-bronze require the use of a sharp saw to cut them easily and it is useless to use a blade which has become blunted when endeavouring to cut these metals. A worn blade, however, can successfully be used on such soft

metals as aluminium, and within limits such a blade will also cut steel, but cast-iron requires the use of a sharp saw, and as even high-quality blades cost only 3s. per dozen in the 10-in. size, it is worth while to fit a new one occasionally, as it will ensure good work, with a minimum of labour.

For all ordinary cutting the blade should be secured in the frame so that it cuts on the push stroke, but when thin-section tubing or sheet metal is being cut it is advisable to reverse the blade so that it cuts on the pull stroke, as shown in the accompanying illustration. The reason for this is that a large amount of vibration is set up when cutting thin metal, and this, if transmitted to the blade, will cause it to bind and break or at least to strip some of its teeth. If, however, it cuts when in tension, the vibration of the frame does not affect it and a smooth cut can be made.

It is a mistake always to apply pressure to the blade when cutting; rather it should be allowed to feed itself through the metal with not much more than the weight of the operator's hands upon the frame. In this connection it might be well to point out that two hands should always be used on a hacksaw, the right hand grasping the handle whilst the left holds the farther end of the frame.

Amateur mechanics who do a fair amount of work in their garages will find it advisable to provide themselves with a set of coarse-toothed blades as well as fine-toothed; these two sets should have teeth of 32 and 16 to the inch respectively. The coarse-toothed blades will be found invaluable when cutting heavy-section metal and also for use on lead, but no attempt should ever be made to cut thin metal tubing with a 16-toothed blade.

CAR INVENTIONS WE LACK.

TO dazzle the dazzler is the object of an invention recently placed on the market. It is a mirror device that reflects the lights from an oncoming car into its owner's eyes.

Leaving aside the question of possible accidents and collisions which this particular device might cause, there would appear to be some scope for the marketing of articles of a retaliatory nature. Here are a few suggestions for inventors of motoring novelties:—

The Auto-matic Boxer would be in great demand. Such a device should consist of a long, flexible metal arm with a boxing glove on the end, controlled by a lever at the side of the driver. Pressure on the lever would cause the arm to extend and hit other drivers

on the head when they make us brake violently by cutting in when they overtake.

The Hampstead Tickler would be a somewhat similar device, but with a bunch of feathers on the end, to reach out in front and tickle the ears of deaf lorry drivers who persist in keeping to the middle of the road.

Another device that should not be beyond the scope of inventors' genius would consist of a wireless mechanism to give warning of the approach of a hidden car at cross-roads and side turnings. It should automatically cause the horn of the approaching car to sound loudly, and would also be useful for arousing meditative drivers. Of course, if it went wrong in traffic the

noise might be a trifle overpowering, but that is a little matter which inventors could doubtless overcome.

Yet another invention that one would like to see would be an automatic scoop for collecting stray dogs and old ladies and depositing them in safety on the pavement. The apparatus which enables an express train to gather in a mail bag at speed should be capable of modification in this direction.

But most of all an automatic signboard for the backs of cars is needed. It could be operated by a typewriter keyboard on the dash, and would be quite practicable. Many of us have seen the "typewriter racing machines" at large fairs, by means of which illuminated letters are thrown on to a big screen. How delightful it would be if we could print just what we thought of that fool-driver in front—after we have caught and passed him.

Many valuable ideas might be borrowed from the realm of fiction. Mr. H. G. Wells, for example, describes an ingenious arrangement whereby a man may become invisible. The value of this when in police

traps would be great, but it would be necessary, of course, to bring the car into the scheme as well. Similarly with the wonderful acid solution used by the villain in "Bulldog Drummond" to dissolve a body, thereby destroying every trace of incriminating evidence against the perpetrator of the outrage. No doubt it would be a simple matter to arrange a spraying device, using this convenient solution on a car to deal with (in the user's opinion) troublesome members of the public.

War-time experience also suggests some useful inventions for the light car owner. Camouflage, for example, has possibilities, as also have small portable barbed-wire entanglements of the "gooseberry" variety now that the practice of abandoning infants in parked cars appears to have established itself.

Finality in light-car equipment appears to be as far off as ever. Undoubtedly a fortune awaits the inventor whose brain is sufficiently fertile and adaptable to get busy along a few of the lines that have been already indicated. J.L.C.

TRICKS OF THE TRAMWAYS.

THE rumour that the profession of designer of tramway routes is practised exclusively by Chinamen is probably entirely without foundation, but the manner of its arising is easily appreciated. Compared with the average busy tramway junction in almost any large city, the most complex problem in Oriental mysteries loses most of its terrors.

In a district that a driver knows well difficulties are bad enough, but in one where the driver is a complete stranger the utmost caution is called for. Many an experienced London motorist, for example, absolutely dreads passing through certain cities in the Midlands and the North, where direction boards on the trams tell him nothing and he is in constant fear of being crushed as a tramcar swings suddenly off from the straight. Even a sudden turn away from the overtaking light car may cause disaster, as the back of the tramcar frequently swings suddenly outwards and hits a wing.

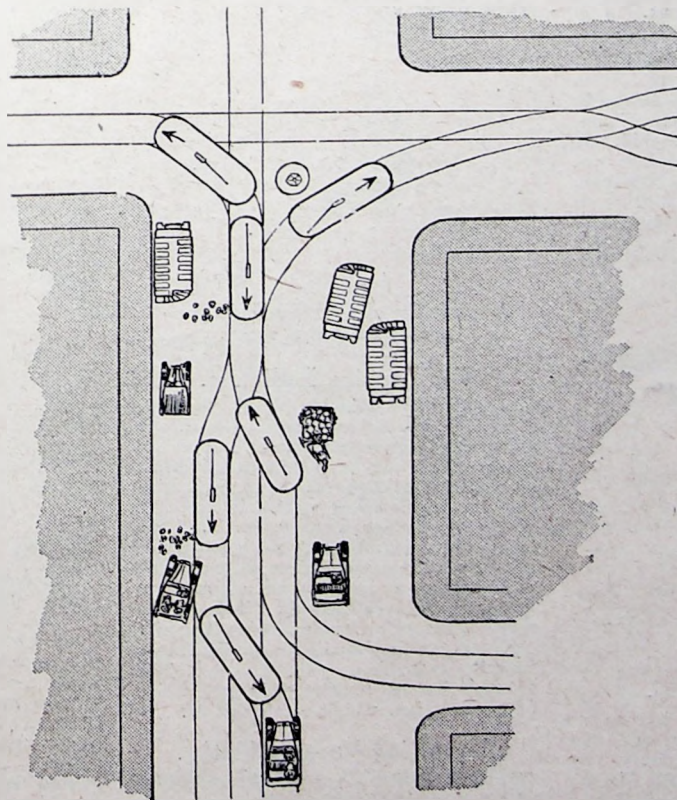
Overtaking a tramcar calls for the utmost caution, and the great rule for safety is always to watch the track for some considerable distance ahead to make quite sure that it does not bend suddenly across, allowing insufficient space for passing. If there is the slightest doubt on this point, the only safe course is to stop behind, and even when doing this great care has to be exercised, as the braking powers of a tramcar are terrific and the motorman has no means of signalling to traffic behind. In this connection also

it is well to bear in mind that even when it is possible to do so tramcar drivers seldom give traffic signals of any kind.

Another point to watch when running fairly close behind a tramcar is the danger of running into some deep pit that has been dug in the course of repairing the track. The usual method of indicating that the track is up is by means of red lamps or flags on the ground, one immediately on each side of the track at the start of the obstruction, but a tramcar approaching these safeguards completely obliterates them from the view of the driver of any vehicle following, so that he sees them too late and falls into the hole. The only safe course is to avoid following closely behind tramcars so far as may be possible, and this applies especially at night.

Excepting in one or two cities having by-laws on the subject, the law permits motorists to pass a tramcar on either side, but passing on the off side should be avoided in cities unless the road is absolutely clear, as in the event of an accident evidence will always be given to the effect that the defendant pulled over on to the wrong side of the road. At the same time, when passing a stationary tramcar on the near side the utmost care must be taken to avoid scaring or worrying passengers entering or leaving. The police in

many cities are keenly on the look-out for inconsiderate driving of this kind, and do not hesitate to prosecute. In Glasgow the practice is forbidden,



The average tramway junction calls for great caution on the part of the small car driver, especially in a district with which he is not familiar.

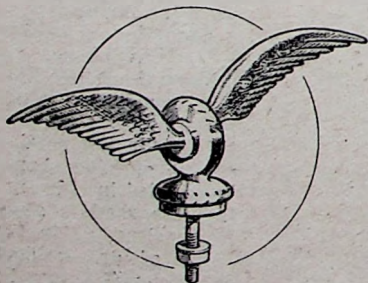


A Handy Cleaner.

HUTTONIZING FLUID, which was referred to in this journal a few weeks ago, is now being handled by Brown Brothers, Ltd., Great Eastern Street, London, E.C.2. This cleaner, which is sold in one-pint cans at 3s. 6d., has several uses. It may be employed as a polish pure and simple, in which case it is applied while the car is still wet after hosing down; it should then be washed off with a sponge and leather, the body finally being polished with a soft duster. Alternatively, a small quantity of the fluid can be added to the water used for washing the car. It is claimed to be especially suitable for cars with cellulose finish, whilst it can also be used for glass windows, celluloid side screens or leather upholstery. It can also be employed to remove tar spots or, for cleaning the hands.

A Handsome Mascot.

AN accompanying illustration shows a rather attractive wing mascot for fitting to the radiator filler cap. It is marketed by Messrs. J. Wilkinson, 8, High Street, Tettenhall, Wolverhampton, and sells for 7s. 6d., post paid. It will be noticed that its shape does not prevent the bonnet from being opened, whilst there are no sharp points projecting forward which would be likely to catch the clothes. It is heavily plated and forms a quite pleasing mascot, which should improve the appearance of any car.



An attractive wing mascot for the radiator filler cap.

Picnicking de Luxe.

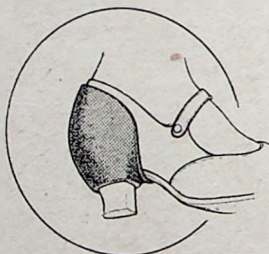
A SUPER picnic outfit, known as the Lonsdale luncheon and tea cabinet, is being manufactured by Messrs. J. H. Faulkner, 193-197, Regent Street, London, W.1. Its conception is exceedingly clever, for the cabinet measures but 30 ins. by 10 ins. by 10 ins., yet holds four collapsable seats and crockery, cutlery and provision containers for four people, whilst space is also provided for cigars and bottles of wine, and so forth; the actual cabinet

B36

is fitted with collapsable legs and hinged sides, so that it forms a table about 2 ft. 6 ins. square. Polished seasoned oak is used for the cabinet and the fittings are of brass. The price of the cabinet and seats only is £10, whilst £15 is charged for the complete outfit.

Protecting Women's Shoes.

MANY women drivers complain that the backs of their shoes become scratched and worn owing to rubbing on the floorboards. Dunhills, Ltd., 359-361, Euston Road, London, N.W.1, are now marketing rubber protectors of the type shown in the illustration. These are constructed of stout rubber and can be quickly slipped over the shoes. The "Universal" shoe protectors, as they are known, are marketed in a number of colours, the price per pair in black, brown or grey, being 3s. 6d., whilst 4s. is charged for a pair of blue, green, yellow or red protectors.



A speciality of Dunhills, Ltd.—protectors for ladies' shoes.

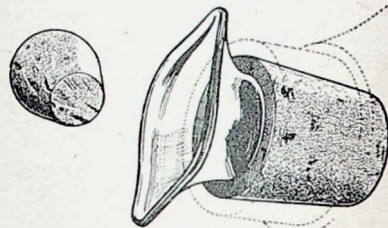
For Leaking Radiators.

ANDREW PAGE AND SONS, LTD., 68, Albion Street, Leeds, are marketing a radiator cement known as Solder Seal. Its great feature is that it employs a chemically prepared aluminium base, which reacts in the hot water in the cooling system, and on coming into contact with the atmosphere hardens into an aluminium filling which will contract and expand with heat, thus permanently sealing the leak. The manufacturers claim that it is also quite satisfactory for repairing small cracks in cylinder heads or water jackets. The preparation is marketed in attractive enamelled tins, which retail for 3s.

Improving Vacuum Flasks.

PICNIC enthusiasts will be interested in the Patris hygienic pourer for vacuum flasks which is being marketed by the Patris Co., 11, Thornfield Road, Bishop's Stortford, and which sells for 8d. As an accompanying illustration shows, the pourer consists of a double-lipped glass tube having a cork jacket and stopper. It is intended to replace

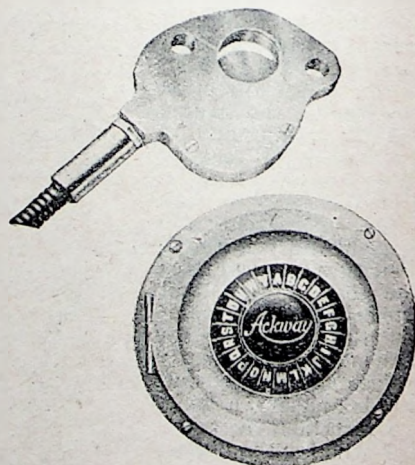
the usual cork stopper, and besides making it easier to pour out the contents of the flask, it prevents drops creeping back along the neck of the glass container and finding their way into the packing between the container and the outer case. These pourers can be obtained from most dealers selling vacuum-flasks, or direct from the address given. In order to obtain the correct size, the old cork stopper marked to show how far it goes into the neck should be sent when ordering.



The Patris pourer for vacuum flasks.

Ingenious Ignition Lock.

KING, STRINGER AND CO., LTD., Ackway Works, The Hyde, Hendon, London, N.W.9, are placing on the market a most ingenious ignition lock. It is of the letter combination type and has three concentric discs each of which has twenty-four letters stamped on its periphery. When locked it cannot be detached unless the combination is known, while it is very substantially made so that it would be impossible to force. The letter combination can easily be changed—a very useful feature, as the alteration may be made from time to time as a precau-



The Ackway ignition and induction lock. (See accompanying paragraph.)

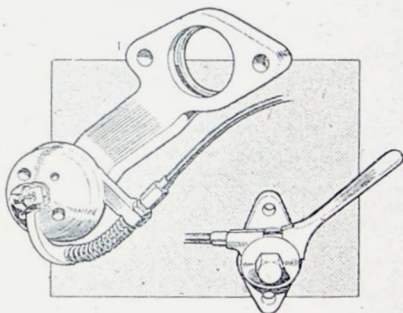
tionary measure. A change in the combination cannot, of course, be made when the device is locked.

Two models are marketed; the first is merely a switch lock pure and simple and retails for 48s. With magneto ignition it is always possible, even if the switch is locked, to detach the earth wire from the magneto and thus start the engine. For this reason the manufacturers have produced a second type, the prices of which range from 68s.; this lock not only prevents the switch from being operated, but also closes a slide on the induction side of the carburetter, thus making assurance doubly

sure. The cable working this slide is enclosed in a very stout casing, so that it cannot be cut with an ordinary pair of shears, but should a thief succeed in cutting the casing the slide would still remain closed as it is spring-loaded.

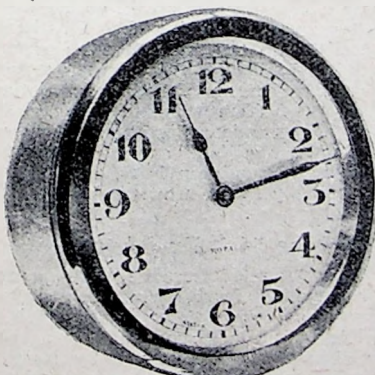
A Well-made Extra-air Valve.

READERS who are contemplating the fitting of an extra-air valve should investigate the claims of the Whalley, which is shown in an accompanying illustration. It is manufactured by S. Whalley and Co., 7, The Carrs, Wellington St., Stockport, and models are supplied to fit practically



One of the Whalley air valves; models are made to suit practically any car.

any car. The method of admitting air differs from other devices of a similar nature in that a ground disc valve is used; the faces of the valve are kept together by spring pressure, and as wear merely tends to make the faces smoother the valve, when shut, will naturally remain air-tight almost indefinitely. Air enters through holes in the valves and passes to the induction pipe via a drilled flange. Incidentally the disc valve itself is attached to the flange in such a way that it can be set in the most convenient position for the Bowden operating cable. The price of the popular types is 35s., but a number of other models to suit individual cars are listed and the prices vary accordingly.



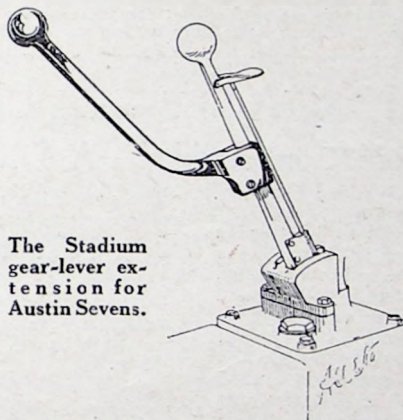
The Rota electric clock, which is driven from the car battery and does not need winding.

An Electric Clock.

THE value of a clock on the facia board is unquestionable, but unless a driver has a particularly good memory an eight-day clock is often inadvertently allowed to stop. With the Rota electric clock this drawback does not exist, for it derives its motive power from the car battery and requires no winding. Many

readers will no doubt be rather prejudiced against a clock of this type, believing that it will constitute a drain on the battery, but they need have no fears on this score, as with a six-volt battery the current consumption is stated to be approximately .5 ampere-hour per year.

The clock is by no means complicated. The motive power is supplied by a small electro-magnet, which draws one end of a pivoted armature towards itself against the tension of a coil spring. As soon as the armature has reached a certain position the current is cut off by a make-and-break and the spring slowly returns the armature to its original position, this movement driving the actual clock mechanism. After about 30 seconds, contact is again made and the electro-magnet once again draws the armature towards itself, this sequence, of course, continuing so long as current is supplied to the clock. These movements are governed by an ordinary synchronized escape-



The Stadium gear-lever extension for Austin Sevens.

ment, so that accurate timekeeping is ensured, just as in a conventional clock. The Rota clock is marketed by Boyce Motor Accessories, Ltd., 7 Baron Street, Angel, London, N.1, and sells for £3.

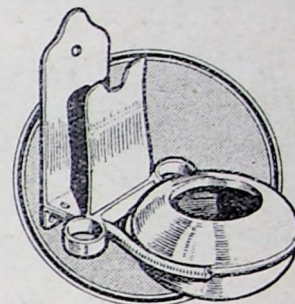
For Austin Sevens.

AUSTIN Seven owners who have found that they have to lean forward somewhat to reach the gear lever will be interested in a gear lever extension which has just been placed on the market by Etienne et Cie., Stadium House, 61-63, Great Eastern Street, London, E.C.2. As an accompanying illustration shows, it is quite a straightforward device; it is made of solid aluminium, and any owner should be able to fit one to his car in a few minutes, as it is attached merely by a clip and two bolts, no drilling or tapping being necessary. Incidentally it is possible to vary the height of the extension to suit individual drivers. This accessory, which is known as the Stadium Easy-reach gear-lever extension, sells for 7s. 6d.

A Smoker's Companion.

AN attractive smoker's companion has just been put upon the market by Modern Productions, Exeter Street, Birmingham. It is finished in nickel-plate and sells for 7s., whilst attachment either to the facia board or the sides of the body is quite easy to carry out. The companion consists of a matchbox container and an ash bowl, a ring being provided on each side so that a couple

of pipes can be carried. The bowl is instantly detachable for cleaning, as it is attached to the bracket by spring arms which partially enshroud the bowl. Vertical movement is prevented by a V-shaped rib which runs round the bowl and engages with the spring clips.



A neat smoker's companion for the facia board. It is marketed by Messrs. Modern Productions.

A New Battery.

THE General Electric Co., Ltd., Magnet House, Kingsway, London, W.C.2, have just placed on the market a new starting and lighting battery of the all-moulded type. The cells are completely enclosed in a moulded case and each cell can be removed fairly easily by applying heat to the lids, which are separately sealed to the case. The plates are especially designed to withstand heavy discharges and plenty of free acid space is allowed. Handles are attached to the battery, but these may be removed where space is a consideration. In cases where the battery will be carried in a fairly exposed position, a moulded lid which should effectively protect it from dust and so forth can be supplied. Both 6 and 12-volt models are made.

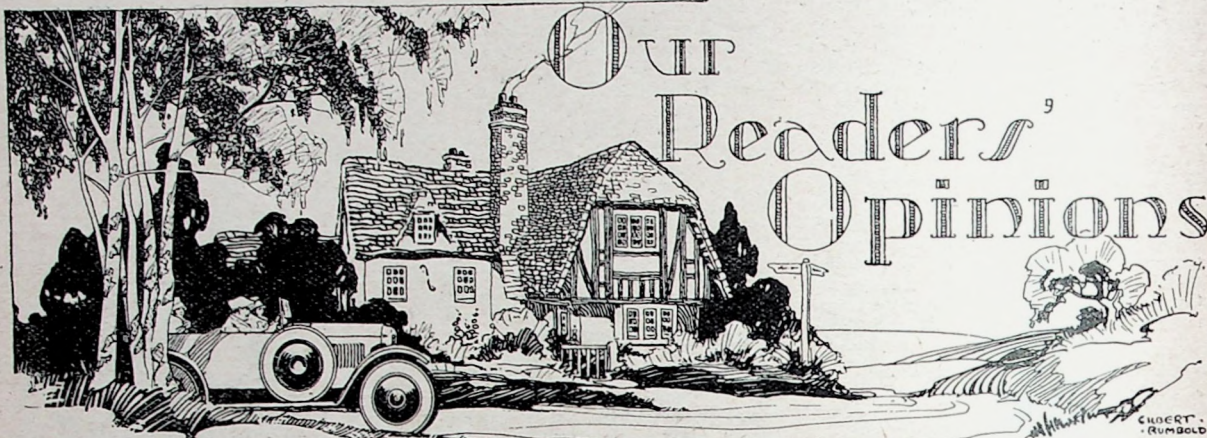
New Pyrene Fire Extinguisher.

LIGHT car owners will welcome the introduction of a new model of the popular Pyrene fire extinguisher. It



The new Pyrene fire extinguisher, which holds one pint, beside the well-known quart size.

has been produced especially for their use and is much smaller than the well-known quart size, as it holds only one pint, and is completely discharged with half the number of strokes. Tests have shown that the capacity is ample to extinguish all the common forms of fire outbreak on a car and the new model is likely to be very well received at the attractive figure of 35s.



We welcome letters for publication in these columns, but take no responsibility for the opinions expressed. No anonymous communications will be accepted, but writers may use a nom de plume. To ensure publication in the next issue letters should be addressed to the Editor, "The Light Car and Cyclecar," 7-15, Rosebery Avenue, London, E.C.1, and should reach us on Monday. We reserve the right to make any alterations or deletions which we deem necessary. Please write only on one side of the paper and leave a wide margin.

MOTORCYCLES versus CARS.

Which are the More Comfortable?—A Divergence of Opinion.

Motorcycles Favoured, but—

I was interested to read "Ex-Motorcyclist's" letter in your issue of May 27th. I, too, have recently changed over—from a sidecar outfit in my case—to a small car, and, like your correspondent, have found the car to be vastly overrated on several points. I cannot say I find it tiring to drive. Four hundred and thirty-four miles is my longest day's run to date, and I found the car rather less exhausting than a sidecar outfit to drive, and about the same as a solo motorcycle. There can, of course, be no question that the passenger is better off in a sidecar; springing, warmth and absence from draughts are all inferior in the car, as anyone with extended experience of both types will testify.

As for engine noise, I was surprised to find that the smooth purr of my old 976 c.c. J.A.P. twin was no more obtrusive than my present 1,100 c.c. water-cooled four. That a car is less manageable on "rough stuff" and hairpins will not be denied, and it is more liable to punctures; that is, if the sidecar outfit we compare is sufficiently heavily tyred. The accessibility of a car chassis for adjustments and lubrication, too, is often poor.

The great advantage of the car is sociability: one can talk comfortably to one's passenger, and the fact that one can motor in ordinary clothing is another strong point in its favour. If we will be honest with ourselves, approaching age usually turns the scales!

ANOTHER EX-MOTORCYCLIST.

Where Motorcycles Fail.

My experiences on changing from a motorcycle to a light car have been happier than those of your correspondent "Ex-Motorcyclist." My motoring started with a lightweight solo and continued via a big single and sidecar and a big twin combination. The solo was fairly comfortable, but was used mainly for backwork within a 20-mile radius. The big single outfit was a nightmare of discomfort, the road shocks through saddle and forks and the pull on the steering (although the sidecar was fitted by the makers as standard) were so bad that after 50 miles one could hardly stand up. The big twin had very good steering, large tyres and Terry saddle, and it was possible to ride 100 miles in four hours over good roads without feeling tired. Of course, with every machine the strain of wind, dust or flies in the eyes was unpleasant, and one collected huge quantities of mud in winter, dust in summer, and a certain amount of oil always.

Fifteen months ago I changed to an Austin Seven. This far excels the big twin combination for driving comfort.

D38

The protection and convenience of the later-type hood and side curtains are better than on any other car I have seen. The smoothness, silence and flexibility of the engine are a sheer delight. Steering is finger-light, and the driving-seat is adjustable. The petrol consumption is lower than on the 8 h.p. combination and the oil consumption only about half. Although the maximum speed of each is about the same I can keep up a better average in the Austin with less effort.

ROAD-HOPPER.

"Thoroughly Shaken Up."

Surely your correspondent, "Ex-Motorcyclist," is not serious when he suggests that he was more comfortable on his motorcycle than he is in the car which he has just purchased. As one who also has changed over from a motorcycle to a car, I must say that I find the latter infinitely more comfortable from every point of view.

A Question of Comfort.

On a motorcycle combination a run of anything over 100 miles was a considerable strain on my arms, whilst I always finished up with a feeling that I had been thoroughly shaken up. Despite the fact that on several occasions I have exceeded 200 miles in a day on my present car, I have never yet experienced a feeling of fatigue greater than would be expected from a day in the open air, either on foot or a wheel. My car is a Jowett, short wheel-base two-seater; so "Ex-Motorcyclist" cannot argue that the reason for my difference of opinion is that I own an expensive car, as he is probably aware that the price of the Jowett is only £139.

P.R.T.

Advice to "Ex-Motorcyclist."

I read the letter from "Ex-Motorcyclist," which was published in your last week's issue, with considerable interest, for I, too, recently changed from a motorcycle to a low-priced light car and I was just as disappointed as he was by its comfort. In my case the reason was partly that I am particularly tall—I am 6 ft.

Air Cushions Help.

3 ins. in my socks. My legs are naturally doubled up somewhat when I am driving, but I found that I soon got used to this, the chief trouble being that the angle of the seat squab and cushion was wrong. I overcame this difficulty by scrapping the existing spring cushions and fitting an air cushion in its place, as I found that this would adapt itself far better to any position I liked to take up. I also obtained a small driving cushion which supports the small of my back. With these modifications my car is now far more comfortable than the motorcycle I used to run, and probably your correspondent "Ex-Motorcyclist" would be able to get over his troubles in a similar way.

R. J. JOHNSON.

BY APPOINTMENT

Wakefield strol

will add power and reliability to your engine, while reducing wear and carbonisation to the minimum.

Brooklands

Middlesex M.C.
Meeting,
May 21st, 1927.

As at every other Car
Meeting this year,
every Race was won
on CASTROL!

OVER 200 Leading Motor Manufacturers endorse this statement by recommending you to use this world-famous lubricant—the product of an All-British Firm.

The grade recommended for your needs is shown on the Wakefield Chart at any leading Garage or Service Station. For your home garage, order a three, five or ten gallon drum from your local agent, and on the road buy from the Wakefield Branded Cabinets at our recommended price of 1/6 per quart for CASTROL "CW" or "AA," 1/8 for CASTROL "C," and 1/10 for CASTROL "XL."

Although an Aristocrat, Wakefield CASTROL will mix with other oils; but naturally for 100% efficiency you must use 100% CASTROL. Try CASTROL to-day and let your engine decide! You will soon realize why over 200 Leading Motor Manufacturers recommend—

WAKEFIELD

Regd.

MOTOR OIL

Montlhery

On May 17th, Mr. W. D. Hawkes, driving Mr. Eldridge's 1,500 c.c. Miller Special, broke the following World's Records in Class F, subject to confirmation:

*Brance
Tanks*



"THE TIMES" said on Tuesday, May 31st:—

CARS OF TO-DAY. The 7-12 H.P. PEUGEOT.

(By our Motoring Correspondent.)

The smallest Peugeot is an inexpensive and comfortable car for four persons.

It has one of the smallest four-cylinder engines made, the bore and stroke being only 51 and 88 mm. These dimensions give it a capacity of 719 cubic centimetres. The four-seater costs £165, the annual tax is £7—the Treasury rating being 6.4 horse-power—and such a car should run 45 or 50 miles to the gallon without special tuning or driving, and 150 miles a day with comfort.

The engine is cooled by water circulating naturally through a film radiator, behind which is a fan. The driving belt can easily be regulated and a handy tap will drain the system. The radiator is carried on the side members of the frame, but the front suspension of the chassis is by transverse spring. It has an extension tank and an adjustable head stay. The valves are side by side and the outlet water manifold to the radiator is accessibly held by two nuts. The bracket for the fan is neatly formed at the front end of the manifold. A grease valve is fitted to the fan bearing. There is a combined oil filler and breather, set well forward, the lid is hinged, and there is a gauze inset. A dipper gauge rod is near by. Timing is by chain, the tension of which cannot be altered externally, at least not on the car tried. The generator and the magneto are driven in tandem. With a very short engine this plan places the magneto rather far back and a mirror must be used for inspecting the make-and-break. Against this drawback may be set easy unit detachment. Generator and magneto are held by one strap each and the pull-out couplings are made of rubber with eight studs one side and nine the other so that good regulation is simply obtainable. The crankshaft runs in two ball pattern bearings. Lubrication is by troughs which are supplied with oil by a pump in the base. A positive feed is delivered to the timing drive.

On the off side, under the bonnet, are the valves and the tappets. The cylinder head is fixed—the block is cast with the upper half of the crankcase—and therefore valve caps are used. The makers have wisely fitted four only, and each one allows two valves to be withdrawn after its removal. I liked the general scheme of the inlet and exhaust. The exhaust manifold is kept well up so that it hardly obstructs other parts. It can easily be detached, as it is held by three nuts which are ready to hand, and the exhaust pipe joint is threaded. The horizontal carburettor is bolted to the manifold and the ingoing gas is thus heated. The jets are accessible from above, and there is a filter below the float chamber. The petrol tank is in the scuttle and holds four gallons, a larger amount than it seems because of the rate of consumption. The tappet cover comes away quickly by hand, the two hand screws being permanently attached to it. With the plate removed clearance can be altered, but the easiest way would be to drop the exhaust manifold and carburettor. The size of the valves and the valve springs shows how efficient the four-stroke internal-combustion engine has become. Drainage of the sump is by bottom plug; the main filter is in the base.

The engine and clutch are held to the frame at four points. Steering is by enclosed pinion. A single-plate clutch transmits the drive, and withdrawal is by fork and thrust race. There is a grease valve, rather tucked away, for this bearing. The spigot is a ball bearing. It is packed with lubricant when erected and has grease retaining washers. The electric starter pinion is protected by a half-case.

Cabriolet with Dickey Seat, including Electric Starter and Lighting Set.
Or Saloon Type All-weather with Four-Seater Fabric Body.

PEUGEOT (ENGLAND) LTD., 78/80, Brompton Rd., London, S.W.3.

The gear box is combined with the rear axle, but the control is simple and, as there is no differential gear, the unsprung weight is not excessive. A shaft runs from the clutch to a cross member where is the forward end of a torque tube housing the propeller shaft. A metal universal joint is encased in the spherical attachments of the torque tube. A triangular stay is used between front end of tube and rear axle and it is ball-jointed forwards. There are three forward speeds and a reverse with ratios of 6, 9, 15 and 20 to 1, and these are governed by a lever centrally placed and working on the straight-through principle. There is a catch for reverse. There is just the one stout and adjustable rod running to an arm at the side of the box. The axle has an underslung worm, and a neat drive for the speedometer is obtained by making the nut on the end of the worm shaft act as gear for the cable. There are top, level, and drain plugs to the axle and gear box casing, and in the outer ends of the axle sleeves there are oil drains.

BRAKES.

There are two brakes only and both are applied by central hand lever or by pedal. The drums are enclosed and wear can be taken up by hand. The axle case is tied by an alterable rod. The springs at the rear are quarter-elliptical, and are shackled at the back ends. In front an inverted half-elliptical spring, shackled at both ends and set across the frame, insulates the frame from the axle. The track rod is behind and set reasonably out of harm's way. The axle is tubular. Disc wheels, with a spare carried on the off-side, have balloon tyres of 715 mm. and 115 mm.

The floorboards, except directly over the clutch, can be lifted out, when the battery is get-at-able. The body has one wide door, and both front seats have hinged backs, while each seat can be lifted vertically without disturbing the cushion when free entrance is obtained to the back seat. Here the squab is commendably high, and behind it are kept the rigid side pieces in bags in a cupboard attached to the squab. The coachwork is fabric-covered.

I found the car comfortable to drive or to travel in. One must sit at the back with the knees drawn up (if one does not sit aslant), but there are foot wells, and the model can justly be called a four-seater. It has a 7ft. 5½in. wheelbase and a 3ft. 2½in. track and the ground clearance is 7in. Speeds of about 12, 25, and 45 on first, second, and third allow a little reserve. With a favourable wind, dry roads, and two up 40 was shown on an adversely graded stretch. Dashwood Hill called for first speed, but on this a rate of ten miles an hour was attainable with a margin, and there was ample in hand with a standing start on the 1 in 10 section. The day was hot and I did not spare the car, but there was no sign of overheating. The machine can be driven mile after mile at 30-35 without suggestion of cruelty. The engine was quiet and reasonably well balanced, and the overrun was not pronounced. Except for making the steering somewhat heavy on the lock, one would never suspect—at any rate on dry roads—the absence of a differential, and this "seven" holds the road remarkably well. The engine responds, and for its size has courage. I prefer variable ignition, though there are advantages in the fixed type on a car of this size. The accelerator pedal should be set at a different angle. The gear change is simple, if a shade heavy. With the clutch and brake actions I have no fault to find. A cabriolet with dickey costs the same price.

By courtesy of "THE TIMES."

£165

OUR READERS' OPINIONS (contd.).

The Air-Valve Controversy.

There is, in my opinion, no getting away from the rather unpleasant and unfortunate fact that the small car owner has been, for some years now, misled by the extravagant claims of the manufacturers of air valves. The trouble appears to me to be due to the fact that advertising copy-writers, completely devoid of technical training or comprehension, have been given altogether too free a hand. Naturally, when confronted by balderdash and vague generalities on the subject of the advantages of air valves, Mr. Light Car Owner, being essentially a man of common sense, however lacking may be his engineering or scientific training, turns over the page and reads some other advertisement in which the claims made are at any rate reasonable.

As the result of constantly seeing extravagant and unwarranted claims for some years, the present-day small car owner now has a most healthy mistrust of manufacturers of these fittings. This is a great pity from every point of view. The truth has been clearly and admirably explained by a number of your correspondents already, and so there is no need whatsoever for me to go into details. Expressed as briefly as possible, the points to be borne in mind are that the carburettor giving 100 per cent. automaticity has yet to come, and this applies especially to the conditions arising when a long hill has to be descended.

In common with most light car enthusiasts I shall welcome

the publication of the results of your test, not because it is a matter of the smallest consequence to me which concern participating succeeds in making the more favourable impression on the judge, but simply because I consider it a matter of supreme importance that the public should be given some real facts and not a mass of rubbishy sales propaganda.

VERITAS.

The Mentality of "Robert."

Your correspondent, "E.R.K.," who cites the imaginary episode of a "Sporty Boyce" coming home about midnight in his 8 h.p. "Wheezicar," complete with loud exhaust and no rear light, sounds extremely fictitious.

A Reply to "E.R.K." I should very much like to know why the British "Robert," who is apparently quite a reasonable fellow in

mufti, should display such colossal ignorance when in blue. Almost without exception, the average policeman seems to take an uncommon amount of interest in any small car which looks at all fast. Does the man in blue expect the driver to do something hectic without warning—possibly he anticipates some infringement of our prehistoric motor laws—or is it that the sports car really is a dangerous vehicle? Personally, I am most certainly of the opinion that drivers of sports cars are far more competent and considerate than drivers of the more popular cars (I anticipate a storm of protests). Any inconsiderate driving by a sports car owner is seldom tolerated, yet touring cars, which at times are driven in a pitiful manner, do not appear to attract the attentions of the "Robert" which they warmly deserve.

FRAZER NASH.

Cooling Systems of the Future.**"Dissatisfied's" Letter Criticised.**

I am afraid that I cannot agree with the remarks of your correspondent "Dissatisfied" on the subject of cooling systems. He suggests that a system employing some liquid

"Inconvenient and Costly." liquid should be carried so that it would

boil, the actual cooling being effected by vapour. I am aware that a number of reasonably successful experiments have already been carried out in connection with steam cooling, but your correspondent's suggestion to use another liquid seems totally wrong, for whatever the liquid used it would not be so cheap as water, which is, to all intents and purposes, free.

With any system employing a boiling liquid a safety valve has to be provided to prevent excessive pressure being generated, and this would mean that some of the liquid would inevitably be lost. Thus, every driver would have to carry a spare supply of the liquid, and the system would therefore be both inconvenient and costly. I am perfectly willing to admit that water-cooling, or, for the matter of that, air-cooling, is not ideal, but I cannot see any hope on the lines suggested by your correspondent.

NOT QUITE DISSATISFIED.

The Perkin Tube Suggested.

Under the heading "Cooling Systems of the Future," "Dissatisfied" quite rightly tells us that a liquid will be employed, although I do not quite see why water should be excluded. To me it is perfectly obvious that the simple and ingenious device called the Perkin tube will be employed, if only because it is the best

A Chance for Inventors.

and simplest means of conducting heat yet devised. I had better describe it. It takes the form of a thick-walled metal tube, closed at both ends and half filled with water—glycerine, alcohol or other substance being added to prevent freezing or to raise the boiling point—and that is all.

In practice Perkin tubes have been used for heating bakers' ovens and they were employed many years ago in motorcar radiators in connection with the water-circulating system, but there is nothing to prevent their being used by "immersion" in the metal of the cylinder head, stuck into it, maybe, "like quills upon the fretful porcupine." Of course, the projecting ends of the tubes would be gilled or otherwise arranged to expose a large surface to the cooling air. As both ends of a Perkin tube are within a degree of the same temperature soon after the liquid begins to boil,

it will be clear that the result should be better than with the best of water-pump circulation.

Having suggested the use of the Perkin tube some years ago, I am rather disappointed that no manufacturer has become interested, and I would like to appeal to some of those amateur light car makers who thrive in this country. There are bound to be difficulties in the way, although none have yet been suggested, and I am quite convinced that "fame and fortune" await the man who puts this theory into practice, if he does it with the right equipment of experience and enthusiasm.

By the way, the Perkin tube works merrily away up to a dull-red heat without serious danger of bursting.

J. H. LESTER, M.Sc.

Air-Cooling Supported.

I should like to point out to "Jowett" that his remarks concerning air-cooled aero engines rather date his experience with the type. The periods between overhauls of modern aero engines of both types are

A Return to Favour Predicted. based on the necessity for a very much higher degree of reliability than is reasonably called for in car practice.

Engines are dismantled at regular intervals for inspection and decarbonizing naturally follows at these times. The water-cooled types certainly show no advantage over the air-cooled in running hours between these periodical inspections.

The modern air-cooled aero engine is run for approximately 150 hours between top-overhauls and 320 hours between dismantling for complete inspection. "Jowett" might bear in mind that these times represent some 15,000 and 32,000 miles respectively at a cruising speed of 100 m.p.h.

Oil consumption is certainly somewhat heavier on the air-cooled types and the carbon deposit is harder. This can surely be fairly weighed against the troubles attendant on water systems, particularly the delicate nature of radiators and water-circulating pumps. Cooling need present no difficulties (many air-cooled engines to-day are being over-cooled) except that the motoring public appears to insist on at least the appearance of a radiator. Unfortunately few designers of air-cooled car engines have given much, if any, thought to the need for cooling sumps. Noise from valve gear, etc., could be enormously reduced by care in design.

In my opinion, it remains only for the price of high-grade materials to become reasonable and, in a few years' time, water-cooled internal-combustion engines will be seen only in museums.

A.M.I.A.E.E.

B41

OUR READERS' OPINIONS (contd.).

Local Pronunciations.

"Focus's" remarks regarding local pronunciations of place names are distinctly interesting. I have been caught several times myself when inquiring the way. I remember,

The Effect of Wireless. a few months ago, inquiring of a road-mender which was the best way to Leominster and was greeted with a blank stare. On repeating the name several times, the old man suddenly remarked: "O, it's Leinster you'll be wanting, mister." I wonder how long it will be before differences in pronunciation of this sort will die out? The advent of wireless should certainly have some effect.

E. N. WILLIAMS.

What is a Day?

I do not wish to cast doubt on Mr. J. Deverell's statement, but would like to ask a question which might be considered pertinent. What does he mean by a day? Surely

Twelve or 24 Hours? not the generally accepted 12 hours. I would like to point out also that if this gentleman averaged 30 m.p.h. without any stops his time for 527 miles would be 17 hours 34 minutes, and would therefore suggest that he would have been more correct in saying a day and night, as he presumably stopped once or twice for meals. His own longest trip between dawn and dawn is just over 100 miles, accomplished actually in 11 hours 58 minutes running time. After that experience I doubt whether Mr. Brown's record of 527 miles "has been often exceeded by other Gwynne owners."

A.C.12.

High Mileages in a Day.

I was very much amused at the letter from Mr. J. Deverell, who appears to be proud of the fact that he covered 527 miles in a day. Personally, I cannot see any point in performances of this nature.

What is the Object? To cover a high mileage one has merely got to choose a good main road and keep going steadily for 24 hours, making the stops for meals and filling up with petrol as short as possible. I myself run a 1923 Rover Eight, and the greatest distance I have covered in a day is 200 miles, simply because I consider that this distance is just about as far as it is really comfortable to travel if one wishes to enjoy the run and visit the places of interest. I have no doubt, however, that if I liked to start at midnight and spend a thoroughly miserable day jogging along almost continuously I could cover 600 miles in 24 hours, but when I had done it how much better off should I be? I should merely have made myself very tired, wasted a day and used a good deal of petrol and oil to no purpose. No, I am afraid I cannot see the object of such a performance.

E.P.P.

Three or Four Speeds?

Your correspondent, "E.G.G.," whose letter was published recently, asked for the views of manufacturers on the question of three or four-speed gearboxes. Surely he

Engine Flexibility. will agree that, other things being equal, one speed is better than any greater number, or, failing that, a two-speed gear is the next best arrangement, and that six speeds would be an unnecessary complication. Briefly, it comes down to the point that the number of speeds required depends on the flexibility of the engine. If your correspondent plots a curve showing at what revs. the engine will propel the car up any given gradient, he will then see exactly the number of speeds that are required for a car of known weight and horse-power. It will be obvious that a lorry weighing five tons with an engine that gives 10 h.p. at 4,000 r.p.m. will need quite a lot of gears if it is to have perceptible movement on top speed. Conversely, a racing car with an enormous power-weight ratio generally has one or two gears.

The A.C. car, which has approximately 1 h.p. for every cwt. it propels, is amply provided, however, with three gears; in fact, the lowest speed is only used for freak hills. All starting can be done on second gear, and most main road hills can be ascended in top, occasionally dropping to second if quick acceleration is required.

I think the onus of proof lies upon those who use four-speed boxes as to exactly why the complication of the extra speed is required.

H. W. PITT.

B42

Shock Absorbers and Spring Lubrication.

I can quite understand "Puzzled" not being able to appreciate why manufacturers fit spring gaiters to keep springs flexible and, at the same time, fit shock absorbers to stiffen up their action. The reason

A Reply to "Puzzled." is that unless the present type of spring is kept properly lubricated it will rust up and entirely lose its springiness.

To make sure that this does not happen they are kept lubricated, but this, unfortunately, makes them also too flexible and their action therefore has to be checked by shock absorbers. It seems to me that a far more business-like plan would be to design springs which would not rust up, but which, at the same time, could not have excessive movement. This might probably be done by preparing the surface of the leaves in a special way, but, not being an inventor, I cannot suggest anything more definite than this.

A. P. SWANN.

The Road Fund Raid.

I am very glad to see that the Chancellor of the Exchequer is not having it all his own way over the Road Fund raid. I was particularly glad that a Labour Member

Outspoken Criticism. (Mr. Townend) should be so strong in his condemnation of Mr. Churchill's policy, for one would expect the Labour Party to be strongly in favour of any

plan for taxing car owners, who are generally regarded as "rich men." There is no doubt that our roads are in nothing like such good condition as they might be, whilst, although much has been done, many dangerous corners still need improvement, and in view of this the raid seems to me to be pure robbery. If our roads had been perfect there might have been some excuse for breaching the pledges given when the Road Fund was first instituted, but, as it is, there is no justification whatever.

I realize, of course, that whatever taxes are imposed some section of the community is bound to suffer, but it is very significant that people who shout most are usually taxed least. Presumably Mr. Churchill thinks that if motorists shout at all their voices will not be very loud. It is therefore up to us to make ourselves heard. Who is going to take the lead? There seems to be no organization capable of doing it at the present time.

NEVILLE ROBINSON.

"Where to See the Eclipse."

It was with interest that I read your article in the May 20th issue of *The Light Car and Cyclecar* under the title "Where to See the Eclipse." Criccieth being where

A Generous Offer. the central line enters this country makes its situation an ideal one for viewing this spectacle. The inquiries that are made concerning what facilities

are offered both to motorists and others less fortunate prompts me to place before you any information possible which might interest your readers.

An unexcelled viewpoint is the summit of Ednyved Hill, which is the highest point in the district, being 450 ft. above sea level. The panoramic view alone that can be enjoyed from this hill is one which once seen is never forgotten, as it commands a magnificent and extensive scene of the Snowdonian range and the whole of Cardigan Bay. As the position of the sun will be well up above the distant mountains a clear and unobstructed view of the solar eclipse will be obtained. The shadow of the moon will be seen sweeping over the expanse of sea and verdure-clad slopes of the mountains.

Without desiring to mislead any person it is safe to say that the Ednyved Hill viewpoint for the eclipse is all that can be desired.

Facilities have been made with a representative of the A.A. to park cars near the vantage point. The cars will be parked on the golf course, of which the Ednyved Hill forms part, and a nominal charge will be made to cover any damage done and to cover the wages of our men who will be in charge. Signposts will be put up about a week beforehand directing motorists to the grounds.

The golf clubhouse, which is situated on the side of Ednyved Hill, will be open and at the disposal of all. The requirements of visitors in the way of light refreshments will be provided for. I can assure you that my committee will make the best arrangements possible in the interests of intending visitors.

E. IVOR MORGAN,

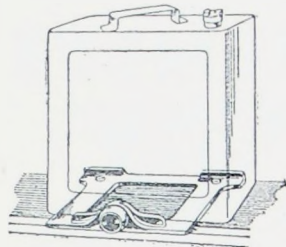
Hon. Sec., the Criccieth Golf Club.

meeting the needs of light car owners

Everything the motorist needs can best be had from Dunhills.

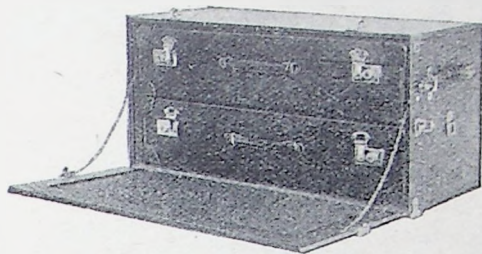


ALL-METAL ASH TRAY.
No. 4795/80. Electro-plated finish.
Price 5/- Post free.



"STADIUM" PETROL CAN CARRIER.

The "Stadium" Petrol Can Carrier is squarely shaped and grips the can rigidly, and prevents the slightest rattle. It is strongly made of solid cast aluminium highly polished, and fitted with very efficient locking device. Model 6667/80. 6/6 each. Post free.



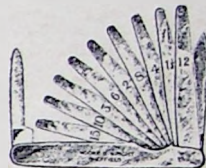
DUNHILLS TWO-IN-ONE TRUNK

specially designed for Austin 7 cars. The outer case is made of 3-ply wood covered with best quality leather cloth. The inner cases are made of vulcanized fibre. All cases are fitted with best quality nickel-plated locks. Price £3 17 6



LUGGAGE GRID FOR AUSTIN 7.

Will conveniently accommodate a Suit Case or light Packages. Fitted with movable panel guard, which protects Body and allows free access to Spare Wheel (when at rear) or other fittings. Can be folded up against Body or Spare Wheel when not in use—a big advantage where very small Garages are used. Price 20/-



ENGINEER'S PEN KNIVES.

No. 137. Engineer's Pen Knife, with German Silver handle. 3 1/2" long, containing 9 feeler gauge blades ranging from 1 1/2 to 15/1000ths of an inch, and two knife blades; convenient and handy for the pocket, length 3 1/2". 5/6 each. Post free.

LEATHER CUSHIONS.

Patch piece velvet calf motor cushions. Fringed, size 16" x 14". Price 10/6 Post free. Can be supplied in rose, brown, grey, and green.

DUNHILLS DRIVING CUSHION.

Prevents strained position when driving. In plain Leatherette, in green, brown, blue and black, 27/6. Antique, in brown, blue, red and grey, 33/- Post free.

DEEP HIDE SUIT CASES.

Cut from real hide and mounted on metal frames, fitted with two locks and real leather handle.

Sizes: 22 x 13 1/2 x 5 1/2	22 9
24 x 14 1/2 x 6	24 6
26 x 14 1/2 x 6 1/2	26 -
28 x 15 1/2 x 7	28 -
30 x 15 1/2 x 7 1/2	31 6

"STADIUM" METAL TOOL BOX.

Suitable for light cars and small saloons. Made of heavy gauge steel fitted with strong combined lock and latch. Finished in hard, glossy, black enamel. Model 6664/80. Size 15" x 7" x 7". 12/6 each.

Dunhills serve you as well by post as if you actually called at the showrooms.

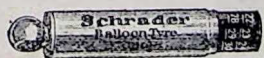
SPECIAL LINE CHEAP DUST COVERS. WHITE COTTON SHEETING.

10 x 6	10/-	18 x 12	31/6
12 x 9	16/-	18 x 15	39 -
15 x 9	29/-	21 x 12	37 -
15 x 12	26/-	22 x 15	47 -



ROLLS OF CLEANING CLOTH.

Special Offer, 50 yards 4/6
Best Quality, 50 yards 7/6
Post free.



BALLOON OR LOW PRESSURE TYRE GAUGE.

Calibrated in units of single pounds from 10 lb. to 42 lb.

No. 5192/80. Price 6/10 Post free.

DRIVING GAUNTLETS.

Made of good quality Cape Leather, strap at wrist. Unlined, 10/6 Lined, 12/6



PEDAL COVERS.

For all Cars. Prices on application.

DUNHILLS SERVICE FOR MOTORISTS.

Complete expert service for Fitting, Renovating, and Repairing Accessories, Upholsteries, Hoods, and Side Screens.

Send the Coupon for Dunhills free catalogue.

Dunhills

359-361, EUSTON ROAD, LONDON, N.W.1.

2, Conduit Street, Regent Street, W.1.
GLASGOW: 72, St. Vincent Street.

To Messrs. DUNHILLS Limited,
359-361, EUSTON ROAD,
LONDON, N.W.1.

Please send your 250 page
Illustrated Catalogue No.
A2 to:—

Name

Address

(This wonderfully useful and
complete Catalogue sent Post
Free.)

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

ALL ROADS LEAD TO—

Tickets are available free to all Alvis owners and to customers of Henlys Ltd. Others can, of course, obtain them at the entrance at the ordinary charges. Full particulars from Henlys Ltd. or the Alvis Co.

BROOKLANDS FOR HENLYS

RACE
ON
SATURDAY, 11th JUNE,
1927

STARTING 2 P.M.

THE success of the season last year, this unique event promises to be a really tremendous success this year. There is a race for any make of car, and all sorts of tests for Alvis cars. Also skidding and high speed exhibitions, a treasure hunt for £10, and music, etc.

On no account miss this "Event of the Year."

Warwick Wright Says

**If your problem is your
old car—**

**And you want to buy a new
car—**

Consult us.

Warwick Wright Ltd.

150 New Bond Street, W.1.
Mayfair 2904

OUR READERS' OPINIONS (contd.).

Gaudy Advertisements.

Hats off to the B.P. Co. for their thoughtful move in painting their pumps to tone with rural surroundings! The colours which have become an eyesore on our country

An Eyesore.

highways have for a long time been a thorn in my side, and particularly so since a smart garage has been opened just near my home. The architecture is carried out in a style in keeping with the overhanging chestnut trees, the gravel sweep up to the doors and the flower borders which surround it; and then they go and spoil the whole effect with gaudy signs and petrol pumps right in front.

May I suggest that white paint would make petrol pumps just as conspicuous without clashing with surrounding scenery? And cannot manufacturers of cars and accessories dispense with some of their horrible enamelled tin hoardings?

COUNTRYMAN.

CONDENSED CORRESPONDENCE.

Following the remarks of the Arc Manufacturing Co., Messrs. Aldam and Co., makers of the Mosaire extra-air valve, write to point out that provision is made in their semi-automatic model for variation of suction in the induction pipe and that this model can be used to admit air to the engine for braking purposes when descending steep hills. The concern has also sent us cuttings of advertisements published in the past which substantiate the recent statements regarding price reductions.

Mr. Claude D. P. Freeman calls attention to the fact that the village of Winsford, a corner of which was illustrated in a recent issue, lies within the Somerset boundary; from the caption a reader might have been led to believe that the village is situated in Devon.

Mr. J. P. Dingle, who did extraordinarily well in the Essex Motor Club's six-hour race with an Austin Seven Cup model, asks us to point out that he had no plug trouble from start to finish, his stops being only to replenish and to clear an obstruction in the petrol feed pipe.

Mr. E. H. Gurney (Plymouth) writes to point out that Mr. Fearon, whose letter was published with other Peugeot owners' experiences, is mistaken in thinking that the engine and chassis of the 1923 model is identical with that of the latest type. Mr. Gurney remarks that although to the casual observer the engine looks similar, it is slightly larger, has a different camshaft, a larger engine water jacket, an improved clutch and several other modifications.

INFORMATION WANTED.

AUSTIN SEVEN.—Readers' experiences of this car would be appreciated.—E. A. Pearse, Persalt Works, Belfast Road, Stoke Newington, London, N.16.

NEW CARDEN.—The opportunity to buy or borrow an instruction book for this car would be very much appreciated.—R. King, 4, Blackheath Hill, Greenwich, S.E.10.

WOLSELEY.—Information regarding the best adjustment for the S.U. carburettor, the easiest means of adjusting the distributor, and the oil consumption which should be obtained with the 7 h.p. 1923 model would oblige.—T.C.J., 1, Talbot Road, Knowle, Bristol.

CLUB ITEMS AND SPORTING EVENTS.

LONDON EAGLE M.C.

The London-Salisbury-London trial of the London Eagle Motor Club will be held on June 12th. The premier award for this trial, which is the club's most important event of the year, is the Rickards Trophy. The course will not be in any way freakish, but some interesting non-stop sections are included.

DISABLED DRIVERS' M.C.

A social event including a treasure hunt will be held by the Disabled Drivers' Motor Club at The Cromwell Hotel, Stevenage, Herts, to-morrow, June 4th. Members and their friends are asked to assemble at 3.15 p.m. and after tea the treasure hunt will be held. Any member may compete, and entries, the fee for which is 2s. 6d., will be accepted during tea. It is pointed out that this event is purely of a social nature and no freak tests, bad roads and so forth will be included. The hon. secretary of the club is Mr. P. Brough, Bradenhurst, Ifale Lane, Mill Hill, London, N.W.7.

LIVERPOOL M.C.

The Liverpool Motor Club will hold a one-day semi-sporting reliability trial for the Fraser Dackers Challenge Cup on June 19th, the route starting from Liverpool and finishing near Buxton. The trial is open to members of the organizing club and to registered members of the clubs in the Cheshire Centre of the A.C.U., whilst, in the case of cars, it is open to members of the following clubs:—J.C.C. (Northern Centre), Sutton Coldfield and N. Birmingham A.C., Southport M.C. and N. Manchester A.C. The course will be 110 miles in length and will have to be covered to a 20 m.p.h. schedule as far as Now Cop Station, after which sidecars, three-wheelers and cars will run to an 18 m.p.h. schedule. Entries should be sent to Mr. E. Fraser Dackers, 42, Argyle Street, Birkenhead, from whom further particulars can be obtained.

NORTHERN CENTRE SPEED TRIALS.

The Northern Centre Board of the A.C.U. has decided to hold its open speed trials on Whit Monday in the form of sand races, and these will be held on the West Shore, Walney Island, on the course used by the Furness Motor Sporting Club on Easter Monday. The position of the course is not in the usual outlandish spot selected for such events, but is within a short distance of the town, and it is hoped that a bus service will be run to the shore for the benefit of spectators. The shore at this particular place forms a natural amphitheatre, as there is a steep bank of shingle with a grassy flat section on the summit. Spectators will thus be able to secure an uninterrupted view of all the races. Mr. N. Jackson, of the North-Western Centre A.C.U., has accepted the position of Union steward, while the remaining stewards are Mr. T. B. Westmorland and Mr. A. J. Miles. Mr. F. Pilling, Barrow-in-Furness, is the secretary of the meeting, with Mr. I. O. Moore, 18, Infield Park, Barrow-in-Furness, as clerk of the course. Full particulars of the meeting may be obtained upon application from the last-named.

BRIGHTON AND HOVE M.C.

We have received a copy of the prospectus of the second Brighton to Beer (Deron) reliability trial which will start from Brighton on Saturday, June 11th. It is an open-to-centre event, and the hon. secretary, Mr. C. L. Clayton, 10 Prince Albert Street, Brighton, points out that entries close definitely to-morrow, June 4th.

FORTHCOMING EVENTS.

June 3.
M.C.C.'s London-Edinburgh Run Starts.

June 4.
Southport M.C. Race Meetings.
Bristol M.C. and L.C.C. Gymkhana.
North Manchester M.C. Half-day Trial.
West of England M.C. Trial.
Disabled Drivers' M.C. Rally and Treasure Hunt.

June 6.
Brooklands Meeting.
Essex County and Southend-on-Sea A.C. General Efficiency Trial.
Hikley and D. M.C. Skilful Driving Contest on Rosedale, Abbey Bank.
A.C.U. (Northern Centre). Speed Trials, Walney Island.

June 7.
Leeds M.C. Post Hill Climb.
June 11.
Brighton and Hove M.C. Brighton to Beer Trial.
Henlys, Ltd. Alvis Rally, Brooklands.
Huddersfield and D. M.C. Freak Hill-climb.
A.O.U. (South Midland Centre). Championship Trial.

June 12.
Monthéry Grand Prix and Women's Championship Meeting.
London Eagle M.C. Trial.
J.C.C. (S.W. Centre). Rally.

June 18.
J.C.C. High-speed Reliability Trial.
Blackpool M.C. Speed Trials.
Langford and District L.C.C. Pineo Memorial Trial.
West Kent M.C. Reliability Trial.

June 18-19.
Rudge-Whitworth Cup Race, Le Mans.
Sheffield M.C. All-night Trial.

June 19.
Penya Rhin Grand Prix, Spain.
Liverpool M.C. Derbyshire Trial.

J.C.C. SOUTH-WESTERN CENTRE.

A picnic rally will be held on June 12th, when the South-Western Centre are meeting headquarters at Frensham Ponds, where there will be a freak hill-climbing competition. The Centre is organizing a gymkhana on Saturday, June 25th, at Burlesdon, near Southampton. Members who desire further information should apply to the organizing secretary, Mr. A. H. Ely, Union Bank Chambers, High St., Southampton.

R.A.C. PERMITS.

The R.A.C. has recently issued permits for the following events:—Open: July 2nd, Midland A.C. Hill-climb at Sheilsley Walsh; July 16th, Liverpool M.C., Colwyn Bay Speed Trials. Closed: June 4th, Southport M.C. Race Meeting; June 11th, Huddersfield and D. M.C. Freak Hill-climb; June 18th, West Kent M.C. Reliability Trial; June 19th, Liverpool M.C. Reliability Trial; June 23rd, Newcastle and D. M.C. Travers Sued Trial.

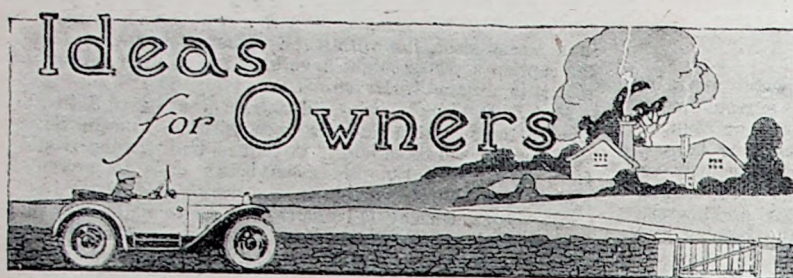
CARSHALTON M.C.C.

The following are the results of the Carshalton M.C.C.'s reliability trial from Carshalton to Malvern and back, which was held on May 21st-22nd:—H. Beart and Co., Ltd., Cup (for the best performance by a three-wheeler): A. C. Maskell (Morgan). Silver Cups: H. R. Taylor (Morgan), A. C. Maskell (Morgan), H. J. Vidler (Morgan), H. W. Baker (Morgan), J. Boxall (A.C.), A. Gruzelier (A.C.), H. J. Lovatt (Jowett). Silver Medals: L. F. Wilson (Morgan), H. J. R. Kent (Austin 7), H. Jeffers (Frazer-Nash), G. Reece (Amical), G. T. J. Smith (A.B.C.). Bronze Medals: J. E. Johnson (Morgan), R. Parsons (Morgan), H. Weeks (Morris).

LANGFORD AND D. L.C.C.

The Langford and District Light Car Club held its first trial of the year on May 21st, and 13 competitors faced the starter out of an entry of 19. The course was 65 miles in length and, starting from Filton Aerodrome, lay in the neighbourhood of Nailsworth, Tetbury and Chipping Sodbury. The chief observed hill was Azo Lane, which proved to be in good condition. R. Schwalm, R. Taylor and W. J. Corpe, all driving Frazer-Nashes, were very fast, but in taking the hair-pin Corpe shed a front tyre. Amongst those who made good steady climbs were K. Marsh (Austin 7), A. Morrish (Bajliss Thomas), J. Steadman (Riley), G. Dejingh (Clyno) and Langford Sainsbury (G.N.). At Horsley there was an observed hair-pin bend, but all the competitors made clean climbs with the exception of Langford Sainsbury, who crashed into the wall, the front axle of his car being so bent that he had to retire. Nop Hill, which was the last observed section, gave very little trouble. A. Davies (Rover) and Miss N. Taylor (Humber) being the only failures. A handicap scheme was used so that competitors driving touring or old cars should have an equal chance with the drivers of modern sports models, and the system proved a distinct success. The following is the list of awards:—

Silver Cup (for the best performance of the day): K. Marsh (Austin 7). Silver Medals: J. Steadman (Riley), A. Morrish (Bajliss Thomas), H. Schwalm (Frazer-Nash), G. Dejingh (Clyno), P. C. Taylor (Frazer-Nash) and Miss N. Taylor (Humber Eight). Bronze Medals: O. Doubleday (Austin 7) and A. Fry (Austin 7). The next trial of the club is the Norman Pineo Memorial Trial on June 18th. Full details may be obtained from the hon. secretary of the club, Mr. R. G. Schwalm, 5, Grange Road, Clifton, Bristol.



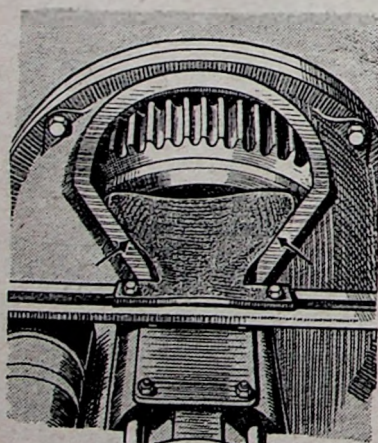
We invite readers to send us hints gained from their own experience for inclusion in this feature. Five shillings will be paid to the sender of any hint published, but we cannot undertake to return contributions not used.

A Use for Old Oil Drums.

A five or ten-gallon oil drum makes a very good incinerator if the top is cut out and the sides punctured with holes about 2 ins. in diameter. A five-gallon drum is obtainable at almost any garage for 2s. 6d., and will be found most useful for destroying garage and garden rubbish.

Smart Number Plates.

The appearance of a car is considerably enhanced if its number plates are clean and have a smart appearance. They can be renovated by first obtaining the necessary letter and figure transfers from an accessory house and then removing and carefully black enamelling the plates. When this has been done the transfers can be applied, and after they have become nicely set the whole surface of the plates can be given a coat of transparent varnish.



Jowett owners will be interested in this simple clutch stop.

Jowett Clutch Stop.

A very simple clutch stop for a Jowett car can be rigged up easily and inexpensively by any amateur mechanic. It consists chiefly of a piece of stout sole leather about 6 ins. by 3 ins., cut as in the sketch. It should be attached to the grooved aluminium cross-member which takes the floorboards, and rivets or box nails may be used to hold it in place. It should be tucked inside the open top of the clutch housing so that the thrust is taken against the edges of the orifice as indicated by the arrows.

B46

Battery Connections.

It is not advisable to use copper wire for connecting up the terminals of an accumulator, as the fumes from the acid will corrode the copper. A better plan is to make the connections with strips of lead cut to the required length and width and having holes drilled in the ends for the terminals. These strips offer less resistance and the lead will not corrode.

To Cure Overheating.

Most cars which develop a tendency to boil on the slightest provocation in very hot weather can be cured of this annoying habit by thoroughly cleaning out the radiator, which is easily done by draining it and, with the plug removed from the bottom, directing a powerful jet of water through the filler cap. After this the plug should be replaced, the cooling system filled and $\frac{1}{2}$ lb. of washing soda inserted. After running about 20 miles the solution should be drained off, the whole system thoroughly washed out with fresh water and then refilled with rain water. A radiator through which the water is not circulating properly has cool patches which can be felt with the hand even when the water is nearly boiling.



Queries of general interest will be answered under this heading whenever possible, but a stamped addressed envelope must be enclosed for reply by post. Telephonic inquiries cannot be answered.

H.G. (Brentwood).—Except in unavoidable circumstances it is a great mistake to ream out carburettor jets. You should obtain new jets, a size or two larger than those now in use, from the makers.

G.A. (Frinton).—The side plates of your Morgan driving chains can be removed by the use of a special rivet extractor, obtainable from any large accessory dealer. There is no need to grind off the heads of the rivets before using the extractor.

M.E.L. (Port Sunlight).—Sulphate can be removed from the terminals of a battery by washing them with a hot solution of common washing soda dissolved in water. Rinse afterwards with clean cold water and coat the terminal nuts and posts with vaseline.

For A.C. Owners.

After the back axle of an A.C. has been drained it is a long and troublesome job to refill it, as the oil capacity is about $5\frac{1}{2}$ pints. Much time can be saved by jacking up one back wheel and turning it backwards while the oil is being added, for the rotation of the wormwheel will draw the oil away from the filler orifice.

Speedometer Cables.

It is not commonly appreciated that a speedometer cable will not continue to give good service unless it is periodically lubricated. One way is to remove the top end and pour oil down inside the casing, but a far better plan is to remove the whole cable complete, attach a piece of string to one end of the inner cable and draw it out through the other end. The inner cable can then be generously smeared with vaseline and pulled back into its casing with the string.

Front-wheel Bearings.

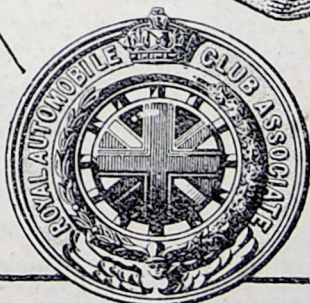
Now that front-wheel brakes are so common, provision for lubricating front-wheel bearings is generally of a rather unsatisfactory character, the makers deliberately planning it so in order that over-enthusiastic owners shall not give the bearings too much grease, which might escape on to the brakes. With such cars it is wise to remove the front hubs from the stub axles about once a year, wash the bearings thoroughly with paraffin and plentifully smear them with thick grease before re-assembling. Prior to tackling the job it is a wise plan to write to the makers for a new set of felt washers in case the old ones are in a bad condition, or are damaged when being dismantled.

B.F.K. (Chesterfield).—The best "tool" for cleaning the pilot jet is one of the little instruments sold by stationers for cleaning the points of stylograph pens. They are sold for a penny each and many motorists use them for this purpose.

G.R.L. (London, S.W.11).—The easiest way to find out how many revolutions your engine does per mile in top gear is to measure the circumference of one of the rear tyres in inches and divide this into 73,360. The dividend must then be multiplied by the top gear ratio, when the quotient will give the figure you seek.

L.O.S. (Cardiff).—The 7 h.p. Citroën is now out of production, but it was not withdrawn on account of it possessing any mechanical weakness, and you would certainly have a bargain if the second-hand one offered to you at £65 is really in the condition described. Perhaps the weakest point of the car was the differential, which wears rather rapidly if excessive use is made of the foot brake, which acts on a drum on the transmission.

Why you should join the R.A.C.



ROAD SERVICE IS NEEDED BY EVERY MOTORIST.

The R.A.C. provides a complete service for the motorist's every need. Beyond the many Guides on the Road always at hand with help and information, there is the "Get-You-Home" Service—which alone is invaluable; then the Touring Facilities are of utmost use, so also are the Free Legal Defence, the Technical Advice, and the Special Insurance Facilities. The Licence Reminder and Lost Property Services are in themselves special features, whilst the use of Local Offices and Reading Rooms is often extremely helpful. You know that you will undoubtedly require any one of these Services at some time—so become an R.A.C. Associate-Member now, and enjoy the most complete service whether on or off the Road.

£2.2.0 p.a., WITHOUT ENTRANCE FEE
CARS up to 1100 c.c. PAY £1.1.0 ONLY.

DIDDED!

The Motorist who insured without R.A.C. Expert Advice.

The R.A.C. Insurance Department gives the best possible advice to Associate-Members intending to insure. The Club is not directly connected with any Insurance Company, and the Insurance Department exists solely for the benefit of members.

Cut out, fill in in Block letters and post to:—

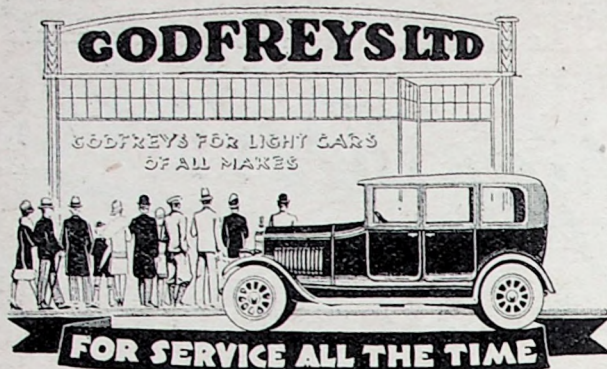
The Secretary, ROYAL AUTOMOBILE CLUB,
83, PALL MALL, LONDON, S.W.1.

I would like to become an Associate-Member. Please send me illustrated booklet and full particulars free of charge.

Name.....

Address.....

"The Light Car."



You can possess one of these cars for a few pounds

Austin
Citroen
Clyno
Lea-
Francis
Peugeot
Rhode
Renault
Singer
Trojan
and
other
leading
makes.

We require only a small deposit. The balance you may defer over such a period as you consider most convenient—that is to say, six months, or twelve, or eighteen; and as we finance our Gradual Payment System ourselves, the whole matter is quite confidential and private. We offer tip-top market prices for cars taken in part exchange, because by thoroughly overhauling them and making them entirely roadworthy, we are able to ensure for them a quick sale. They have come to play a very important part in our business. We will be really pleased to take you round our showrooms. May we? No obligation will be incurred.

GODFREY'S

LIMITED

or Cars
and satisfaction

366/368, Euston Road

London, N.W.1

Telephone: MUSEUM 3401 (3 lines).

North London Branch:

232, Stamford Hill, N.16.

Telephone: CLISSOLD 7127.

Hours of business at Stamford Hill: 9-6, Thursdays 9-1.

Deferred
Payments
arranged.

Part
Exchanges

Trial runs
without
obligation.

AROUND THE TRADE.

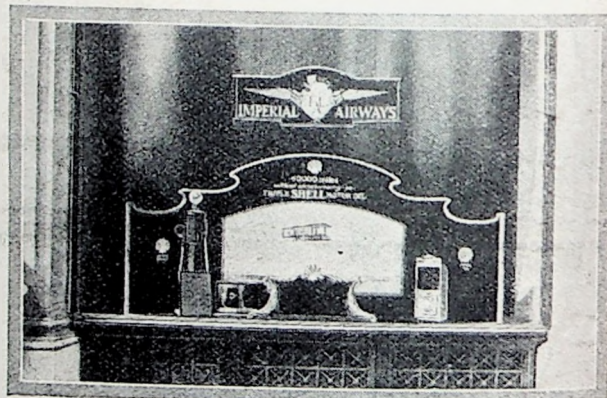
Romac Motor Accessories, Ltd., The Hyde, Hendon, London, N.W.9, have just issued an illustrated catalogue dealing with Romac accessories.

Dunlop tyres were used on E. A. D. Eldridge's Miller special when Hawkes broke the 1,500 c.c. record for the 100 miles at Montlhéry (yet to be confirmed).

Morgan owners will be interested to learn that the concern of H. Beart and Co., 102, London Road, Kingston-on-Thames, has now been formed into a limited liability company. Mr. H. Beart is well known as the holder of many Morgan speed records.

In addition to the repair of broken parts by welding, The New Welding Co. (Southern), Ltd., 26, Rosebery Avenue, London, E.C.1, undertake the manufacture of small parts, such as brackets and so forth, and are prepared to work accurately to dimensioned drawings.

In support of their claims regarding the use of Mixtrol, the Mixtrol Oil Co., 43, Berners Street, London, W.1, announce that if, after six months' use, the value of their product is doubted, the money paid for all Mixtrol used during that period will be refunded in full.



This attractive Shell oil exhibit was shown recently in the window of Imperial Airways, Ltd., Charles Street, London.

Owners of Singer Junior cars will be interested to learn that Bentley and Draper, Ltd., 4, Fenchurch Avenue, London, E.C.3, are now supplying special shock absorbers for fitting to these cars. They are designed, of course, for clamping directly in place, no frame drilling or other mechanical work being necessary.

Sports model Hilton-Pacey three-wheelers, similar to that in which Mr. J. J. Hall recently broke seven world's records (subject to official confirmation), can now be supplied by Messrs Hilton Pacey Motors, Woking, Surrey, at a price of £80. It is interesting to note also that this concern carries a stock of all Bleriot-Whippet spare parts.

Built on a special Austin sports chassis the new Taylor body has a very pleasing appearance. It is claimed that ample legroom is available and that three suit cases can be accommodated in the tail. The price of the Taylor special sports Austin Seven is £175. These models are supplied by H. Taylor and Co., 49-53 Sussex Place, London, S.W.7.

The Vacuum Oil Co., Ltd., informs us that Captain Charles Lindbergh's continuous flight of 3,600 miles in 33½ hours was accomplished with a 200 h.p. air-cooled radial Wright Whirlwind engine using an ordinary standard grade of Mobiloil B. The A.C.-Sphinx Sparking Plug Co., Ltd., point out that their plugs played no small part in the achievement, for calculations show that each one had to fire approximately a million times during the flight.

WHEN REPLYING to advertisements, mention "The Light Car and Cyclecar." It helps the

THE DERBY WINNER!! GREAT ODDS. 100 to 1!!!



If you didn't find "it," do not worry, but if you really want a "CERT," back one of our

GUARANTEED LIGHT CARS

at even money, and your winnings in good service and pleasure will be worth ten-fold a ten-to-one chance on any Derby winner.

ROVER, 1927, 9 h.p., 4-seater de Luxe lavishly equipped, *unregistered*, hardly soiled, done a few demonstration runs only, F.W.B.'s, dynamo lighting, self-starter, and other usual equipment, £195. Choice of another one at £206

SINGER, 1926/7, 10 h.p., 4-seater de Luxe, dynamo lighting, self-starter, F.W.B.'s, speedometer, automatic windscreen wiper, all-weather equipment, leather upholstery, balloons, practically indistinguishable from new. Tax paid for the year . . . £159 10

STANDARD, 1925, 11-4 h.p., 4-seater, dynamo lighting, self-starter, clock, bulb and electric horns, balloon tyres, in gorgeous condition. £97 10

JOWETT, 1923, 7 h.p., 4-seater de Luxe, dynamo lighting, self-starter, clock, speedometer, rigid all-weather equipment, complete set of new balloons, gorgeous condition throughout . . . £95

EXCHANGES

RENAULT, 1925, 8-3 h.p., 3-seater Cloverleaf, dynamo lighting, self-starter, speedometer, all-weather equipment, new tyres, very carefully used, beautifully kept car, specially finished wine colour, gold lining. Tax paid for the year . . . £94

RENAULT, 1925, 8-3 h.p., 3-seater Cloverleaf, starter, lighting, very fine condition, beautifully finished . . . £92 10

CITROEN, 1925/6, 7-5 h.p., 3-seater Cloverleaf, dynamo lighting, self-starter, original balloon tyres, speedometer, very fine condition. Tax paid. £79. Choice two more at £72 and £75
CALTHORPE, 1923/4, 11 h.p., 4-seater, dynamo lighting, self-starter, clock, speedometer, antique leather upholstery, rigid all-weather equipment, beautifully coach finished in plum red, new tyres, highly recommended car. £72
AUSTIN, 1923, 7 h.p., Chummy 4-seater, dynamo lighting, rigid all-weather slidescreens, good tyres, smart appearance. Tax paid. £72 10. Choice of two more at £65 and £67 10

AND TERMS

ROVER, 1924/5, 8 h.p., de Luxe full 4-seater, dynamo lighting, self-starter, clock, speedometer, leather upholstery, rigid all-weather equipment, beautifully coach finished. Tax paid . . . £57 10

ROVER, 1924/5, 8 h.p., full 4-seater, dynamo lighting, self-starter, finished Nile blue, rigid all-weather equipment, good tyres, extremely smart and serviceable car . . . £59

ROVER, 1923/4, 8 h.p., de Luxe 2-seater Coupe, dynamo lighting, self-starter, speedometer, automatic windscreen wiper, dashlight, etc., leather upholstery, new cord tyres, tax paid, smart and carefully used. Ideal ladies' car. £58

A-C, 1921/2, 4-seater tourer, dynamo lighting, self-starter, clock, speedometer and other equipment, beautifully finished Royal blue, smart appearance and excellent mechanical condition . . . £57 10

KIRK & CO.

22 & 49, Praed St., Paddington, W.2

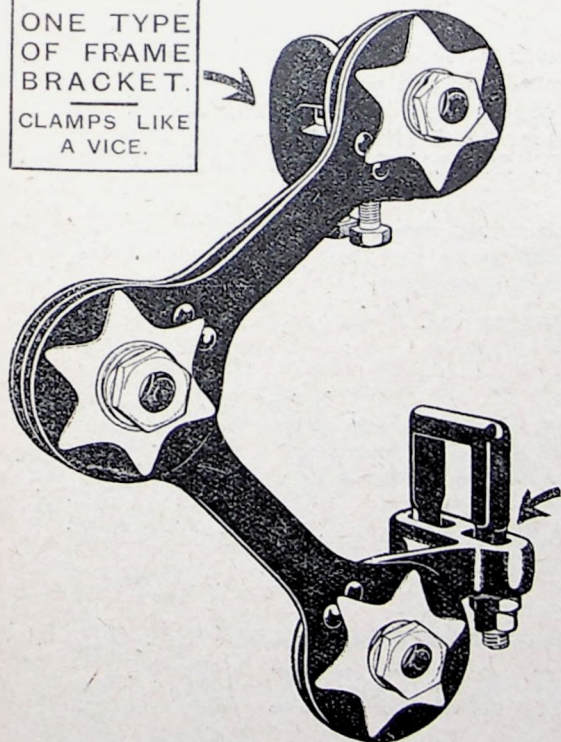
'Phones: Fadd 6049 and 6892.

4 minutes from Marble Arch and Paddington Stations.

Open until 8 p.m. every night and Sunday until 1 p.m.

ONE TYPE OF FRAME BRACKET.

CLAMPS LIKE A VICE.



ONE TYPE OF AXLE BRACKET.

CLAMPS WITH SPRING CLIP.

EASY TO FIT WITH TOOL KIT SPANNERS WITHOUT FRAME DRILLING.

The Autocar, Jan. 25th, 1926, says, "For a considerable period we have been using a set of B & D Stabilizers. After 6,000 miles on the single-arm type a change was made to the new duplex-arm type. Although the original type was highly satisfactory, and showed no visible signs of wear after 6,000 miles, the later type is a considerable improvement in many ways."

Features which appeal strongly to owners of small cars, are their moderate price . . . and the fact that they can be fitted without alterations to the chassis or special tools."

"Shackleton" in "The Light Car and Cyclecar," says: "I was able to report very favourably and the fittings have now been in use nearly 2,000 miles with entire success."

A user, after a long Continental tour writes:—

"The B & D's have given me great satisfaction, having greatly improved the riding of the car."

Further Improved
1927.

3 Sizes.

52/6

63/-

72/-

per axle, including brackets. Carriage extra.

STEERING DAMPER for MORGAN. . . 17/6
Postage 6d.

BENTLEY & DRAPER, LTD.,
4, Fenchurch Avenue, London, E.C.3

'Phone: Avenue 3029.

'Grams: "Bendrapic, Fen, London."

The B&D STABILIZER

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

CARS for QUALITY

These 5 features have made many 9/20 H.P. Owners

*Revised prices of models fitted with
Front Wheel Brakes:—*

9/20 H.P. 2/3-Seater with
Dickey Seat .. £267 7s.

9/20 H.P. 4-Seater
Tourer .. £267 7s.

9/20 H.P. 4-Seater
Saloon .. £322 7s.

Dunlop Tyres Standard.

The front wheel brakes are of the
internal enclosed type operated by means
of levers and cams located above the
axle bed. The entire mechanism forms
a unit with the front axle.

**MODELS ARE AVAILABLE FOR
IMMEDIATE DELIVERY.**

**Send for fully illustrated
Catalogue and name
of nearest Humber**

AMPLE POWER.

The powerful 4-cyl. Humber engine vindicates in practice the principle of its design. It has proved itself time and again on track and road alike to be unsurpassed for reliability.

ECONOMICAL RUNNING.

Your pleasure is not marred by large demands on your pocket for running and upkeep.

FRONT WHEEL BRAKES.

Fulfilling the felt need for security in dense traffic and ensuring confident driving.

MODERATE PRICE.

The lowest figure compatible with integrity of construction throughout.

HUMBER QUALITY.

The guarantee of a name famous all over the world for British Craftsmanship.

HUMBER LIMITED, COVENTRY.

LONDON:

West End Showrooms: 94, New Bond Street, W.1.

Export Branch Office: 32, Holborn Viaduct, E.C.1.

Repair Works and Service Depot: Canterbury Road, Kilburn, N.W.6.

9/20 h.p. 4-Seater Tourer, with Front Wheel Brakes.

AUSTIN TOURS

ELY CATHEDRAL

Ely Cathedral was begun by Abbot Simeon in 1083. It includes every style of architecture, from Early Norman to late Perpendicular. The fine Galilee porch was completed at the commencement of the 13th century. The beautiful Decorated Octagon tower and lantern (170 feet high) was finished in 1328.

HOW TO GET THERE FROM LONDON

From London strike north west through Hampstead, Finchley, Barnet, Hatfield, Stevenage, Baldock, Royston and Cambridge to Ely. (Distance, 72 miles.) Return by Royston, Buntingford, Ware, Waltham Cross and Tottenham.

□ An Austin Seven is the cheapest form of luxury travel.

*Austin
Seven*

at Works

£145

AUSTIN MOTOR COMPANY, LTD.,
LONGBRIDGE - - - BIRMINGHAM.

London Showrooms:
479-483, OXFORD ST.,
W.1.

