

Vol. XXIX No. 744
Friday Mar. 11, 1927
*Registered with the GPO
as a Newspaper*

AT THE MEET.

Fox hunting exercises an almost irresistible attraction for Englishmen, but its greatest charms can be enjoyed only by a few. A very good day's sport can be obtained, however, by attending the meet and following the hunt—with discretion—by car.

LODGE



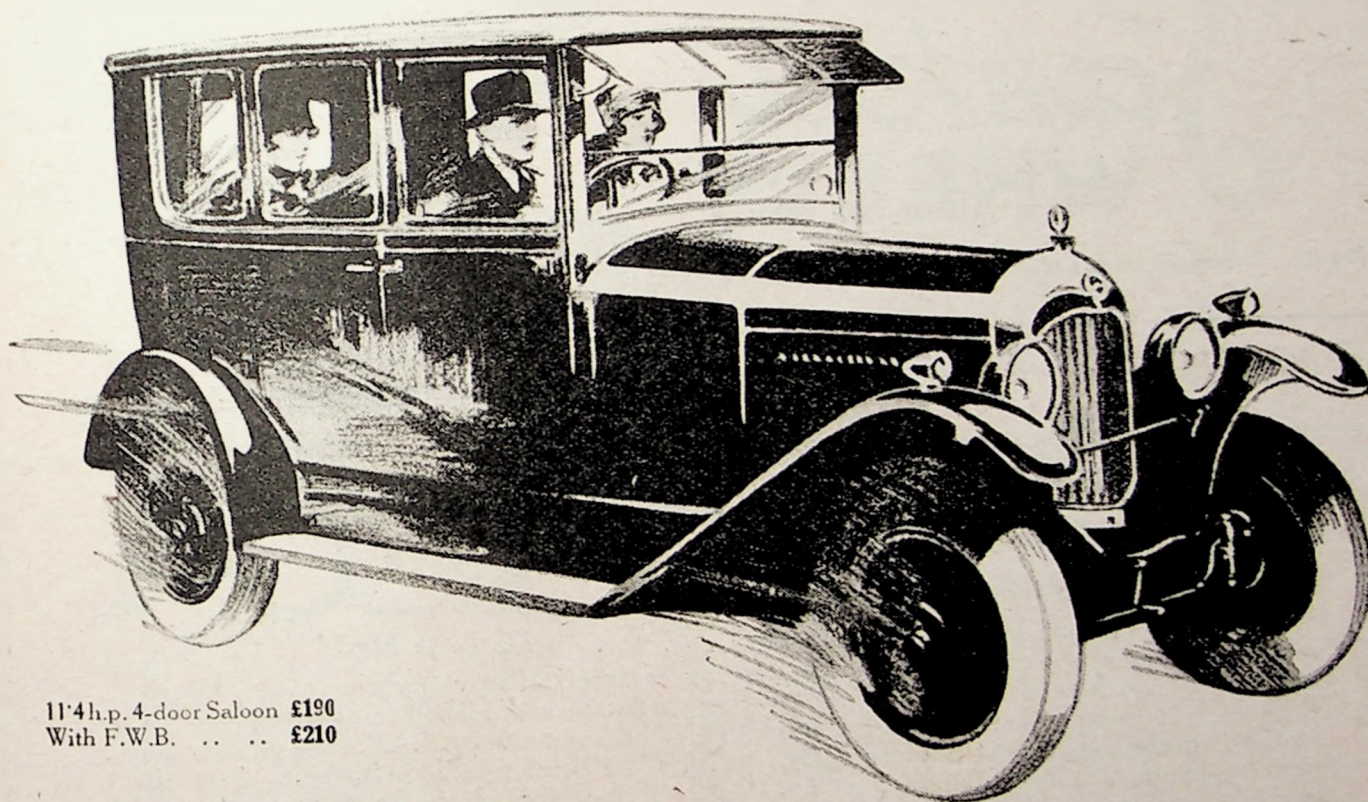
The Lodge standard plug C3 (new model) is unrivalled for getting the best out of the modern high-efficiency engine.

Accept no other make.

4 Door Full-sized Fully-appointed Saloon

CITROËN

for
£ 190



11.4 h.p. 4-door Saloon £190
With F.W.B. . . . £210

THE 11.4 h.p. Citroën Saloons, at these exceptionally low prices, offer advantages not to be found together in any other cars of their price and class—4 Doors, Luxurious All-Steel Coachwork, Beautifully Upholstered Interior and Fullest Equipment, including Electric Lighting and Starting, 5 Comfort or Reinforced Balloon Tyres, Clock, Speedometer, Boyce Motometer, Driving Mirror, Automatic Windscreen Wiper, Oil Gun Chassis Lubrication, Rug Strap, Sun Shield, Window Winders, Spring Blinds, Carpeted Rear Floor, Interior Lighting, and every feature which appeals to the owner-driver. Arrange a trial run to-day

**IMMEDIATE
DELIVERY**
from
**SLOUGH
WORKS**

Send for Citroën Book 18.

CITROËN CARS, LTD.
CITROËN BUILDING, BROOK GREEN,
HAMMERSMITH, LONDON, W.6.

West End Showrooms:
Devonshire House, Piccadilly, W

The SILENT that means so

The wheels of a car are like the strong right hand of a healthy man—they are "taken for granted." It is only in times of emergency that any test can be made; only in a crisis can the strong hand—the sturdy wheel—be appreciated.

Sankey Pressed Steel Wheels have, since 1908, carried millions of people safely and silently through every phase of joy and danger. The catastrophes these unbreakable wheels have averted cannot be catalogued—but they can be borne in mind. When you see the word "Sankey," there also is the word "Safety."

Sankey WHEELS

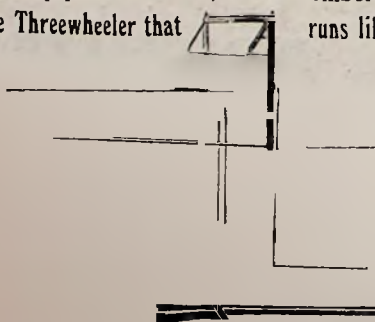
Joseph Sankey & Sons Ltd., Wellington, Shropshire

By general consent the

An unpopular problem made easy

While quite rightly expecting absolute reliability, to many the question of economy of upkeep and first cost must be kept to the fore. It is here that the Omega has strong claims to consideration. Tax only £4, petrol consumption 50.55 miles per gallon, less tyre wear. Decide on an Omega for cheap pleasure miles, and remember she is

"The Threewheeler that runs like a four."



Write to-day
or our full catalogue.

De Luxe Model

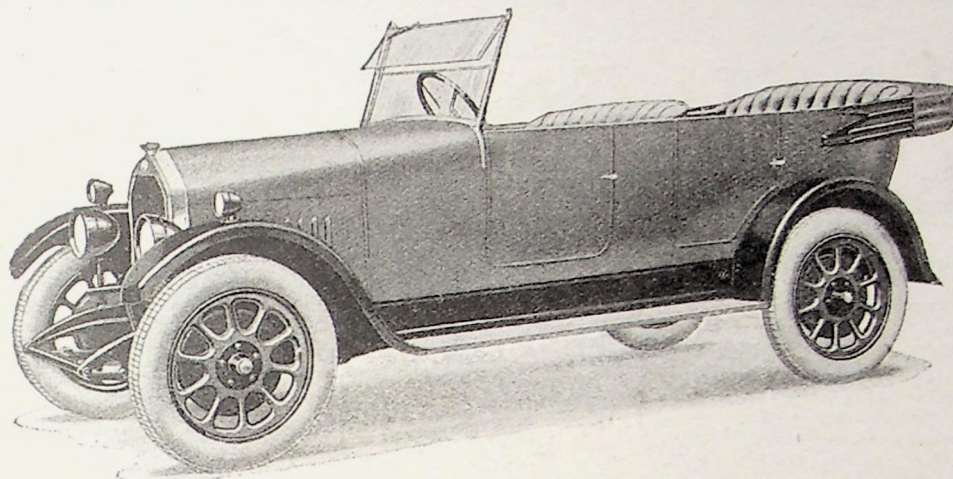
is accepted as a very high class and beautifully finished production. Fitted with 980 c.c. J.A.P. twin engine, 27 x 4 Dunlop Balloon Tyres, quarter elliptic springing front and rear, electric dynamo lighting by 5 lamps, double adjustable windscreen, smart dummy radiator, all controls in body, panelled in polished aluminium, completely weatherproof with hood, sidescreens and curtains, exceptionally roomy and is as steady as a rock at all speeds.

*We can
arrange
easy
terms.*

PRICES:

Popular Model	£95
De Luxe	£110
Family	£115
Sports	£125

W. J. GREEN, Ltd.,
OMEGA WORKS, COVENTRY.



Greater comfort, greater safety.

THE ever-popular 9/20 H.P. Humber models are now supplied with *Front Wheel Brakes* as a standard fitting. This additional refinement cannot fail to enhance the already eminent reputation for reliability possessed by these cars all over the world. The extra cost is trifling—only 7 guineas—but the gain in efficiency and driving control cannot be over-estimated. All to whom their own and others' security on the road is a prime consideration, will welcome this new factor designed to increase their comfort and confidence.

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.

Send for
fully illus-
trated Cata-
logue and name
of nearest
Humber agent.

Humber

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.

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

We are privileged to say that
THE AUSTIN MOTOR CO., Ltd.

approve and recommend

EXTRA HEAVY

"Filtrate"
 REGISTERED

FOR THE
AUSTIN SEVEN

"A British Oil for a British Car."

FILTRATE WORKS, LEEDS.

Vay

**OUR USED
 CARS ARE
 GUARANTEED**

1927 AUSTIN, 7 h.p., delivery from stock	.. £145
1927 CITROEN, 7 h.p., 3-str. (shop soiled), only	£120
1926 PEUGEOT, 7 h.p., 2-seated Coupe	.. £95
1926 CITROEN, 7 h.p., 3-str.	.. £85
1926 CITROEN, 11 1/4 h.p., 3-str., as new	.. £110
1926 ROVER, 9 h.p., 2-str.	.. £135
1926 AMILCAR, Grand Sports, 3-str.	.. £165
1925 STANDARD, 11 1/4 h.p., 4-str.	.. £115
1925 CITROEN, 2 and 3 str., from	.. £65
1925 FIAT, 10/15 h.p., English body, 4-str.	.. £165
1925 SINGER, 10/26 h.p., 4-str...	.. £115
1924 A-C, "Royal" Model, 2-str.	.. £120

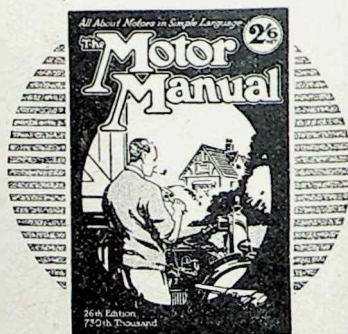
100 OTHER BARGAINS from £25 to £250.

Easiest Exchanges and Deferred Terms
 on any Make of New or Used Car.

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

'Phones - - Museum 3081, 3143 and 0140.

What's inside the Gearbox?



The gearbox is a sealed mystery to many motorists. A detailed and instructively illustrated description of its principles and working is given on pp. 54-58 of "The Motor Manual." This is but one of the numerous features of the largely re-written 26th Edition, where the motorist will find all questions answered and perplexities solved.

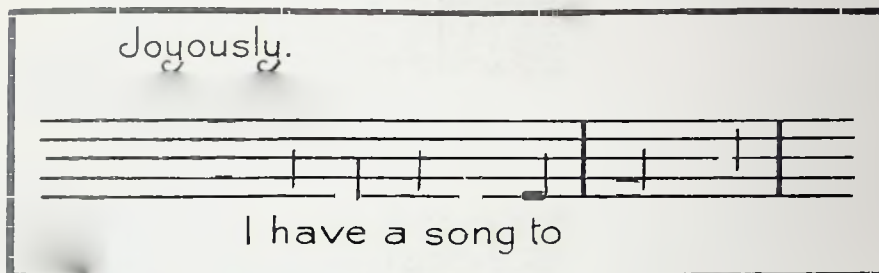
"The Motor Manual" deals with engine types, equipment, wheels, tyres, accessories — choosing, construction and operation, housing and valves, etc. — carburation, maintaining a cooling and silencing a car — repairs transmission system, from touring, legal drive-braking matters, etc., systems—ignition, starting, a glossary of lighting—bodywork and motoring technical terms.

2/6
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 lishers.

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

"THE MOTOR MANUAL"



Glyn Ceiriog,
Denbighshire.
Jan. 20th, 1927.

"Dear Sirs,

You will be interested to know that this car has now run over 20,000 miles, during which time it has given absolute satisfaction, so much that I intend to keep it another year. Previous to having a Jowett, I always changed cars every year, but now I see no advantage to be gained by doing so.

I know you are not in a position to need praise, but when I do get extra good service, I like to *make a song about it.*"

Yours truly,
T.P.C.

The Jowett is always in tune with its owner. Everything on the car is in harmony. Its performance and reliability are fortissimo, shall we say great, while in running costs it is double piano (very low). Dare we quote a certain anthem and say of the Jowett,

"The more we are together
The merrier we'll be."

Short two, £139. Long two, £150. Chummy, £145.

Full four, £150. Saloon, £185.

Deferred payments. £35 down, which includes one year's insurance and registration.

Dunlop Balloons and Stewart Speedometer standard.

JOWETT CARS LTD., IDLE, BRADFORD

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.

SEE FIRST THEN PAY



STORMGARD

Those are the only terms on which we sell the finest Motor Coat in the world. A moment's reflection will convince you that it **MUST** be something very special for us to be able to risk the rejections which might occur with an ordinary coat.

But the Stormgard is never rejected, simply because the moment you see it, the moment you slip it on, you know at once that here is a **REAL** Motor Coat, specially designed for the job—good looking, warm, stormproof, utterly impervious to wind or rain—a 4 Guinea coat that will save you many an expensive overcoat, and is much more appropriate wear for motoring. And if you don't want to keep it when you have seen it, just send it back and your liability ends.

Simply ask us to send you a Stormgard, enclosing this Advertisement and give particulars asked for. You will then receive your Stormgard on

3 DAYS FREE APPROVAL

Model 206. Ladies' or Gent's in Fawn with Broad Gabardine Storm Collar. Navy 5/- extra. Overseas postage 5/- PRICE **4 Gns.**

FUR COLLAR. For 21/- we provide a luxurious **DETACHABLE** Fur collar, adding enormously to the warmth and value of the "Stormgard." For the slight extra cost we strongly recommend you to see this special feature. The detachable fur is specially welcomed by those who wish to use the "Stormgard" in hot and wet weather.

When ordering please state height and chest measurement taken over waistcoat. Ladies state measurement over bust. Please quote colour and state if map pocket is required

THE DIRECT TRADING CO. (DEPT.)
25, Wharf Street, off Kirkgate, LEEDS.

CLUB" Black Enamel

Dries in twenty minutes, and is petrol, grease and oil proof.

Small Size - **7 $\frac{1}{2}$ d.**

Large Size - **1/3**

Of all Ironmongers, Stores, Garages and Cycle Dealers.

Sent post free if unobtainable from your local dealer.

SPECIAL HARD DRYING
ELLIANT & DURABLE

Sole Manufacturers:

SILICO ENAMEL CO.,
WARTON ROAD, STRATFORD, LONDON, E.

"WELLINGTON" LIQUID METAL POLISH

A
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., 4 $\frac{1}{2}$ d., 7 $\frac{1}{2}$ d. & 1/3; also in $\frac{1}{2}$, 1 & 1 Gallon Cans.

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

Muscle v. Machine!

NINE men without price
15 m.p.h.

at 114 m.p.h. This model can be and is bought by the motoring public. From this has been evolved various types, all capable of higher speeds than any other Cars of their class. Our Racing Successes are tests of the Iron Heart, Will and Endurance of the SALMSON, just as the Varsity Boat Race is a test for the physical fitness and stamina of "mere man."

NEARLY A HUNDRED YEARS

AGO the first University Boat Race was rowed at Henley. Every year this classic event attracts crowds in thousands. Already the crews are in training for one of the greatest tests of man's skill and endurance. This year the race will be rowed on Saturday, April 2nd.

ONLY FIVE YEARS AGO

the first SALMSON appeared on the Track and startled the Motor Racing world with its almost incredible speed. Since then the ingenuity of its designers has been able to produce a super-charged 10 h.p. model which has actually lapped at Brooklands

—NINE horse-power, £265
75 m.p.h. Guaranteed.

The Directors of Salmson Cars
Church Wharf, Chiswick Mall, W.4

INVITE Salmson owners to view the University Boat Race from their Works on Saturday, April 2nd. A buffet luncheon will be served from 1.30 p.m. Admission by voucher only. Full particulars will be announced in "The Light Car and Cyclecar" on March 18th or will be sent on application.

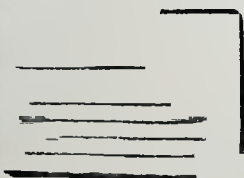
A complete range of models is always on view at the Showrooms of

The Sole London Distributors:
GORDON WATNEY & CO., LTD., 31, BROOK ST., W.1

Made for Motorists

who care for
CAR APPEARANCE AND
CAR PERFORMANCE.

THE GAITER
WITH
THE
WICK TUBE.



one hand
one push
to thoroughly
lubricate the spring
for the next 1,000 miles.

RAMSO CLEANING COAT
properly protects your suit. Prices
10/6, 12/6, and 14/9



DRIVER'S CUSHION

Designed to
bring driver
comfortably near
to controls. Size
17" x 17" x 4½".
Made in coloured
water proof
leather .. 8/6

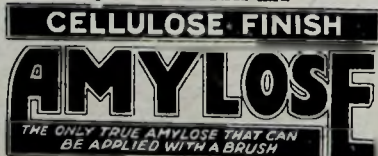
Write to Dept. L. for New Spring Catalogue of Accessories.

RAMSDENS (HALIFAX), LIMITED,
147/9, GT. PORTLAND STREET, LONDON, W.1.
And STATION WORKS, HALIFAX, ENGLAND.

If your Garage cannot supply you,
send direct. (Cash with Order).

ALONE I DID IT!

Made the old car look like new, and
with no costly spraying apparatus either.
JUST A BRUSH and



Lacquers and Enamels pro-
duce a renovated appearance.
AMYLOSE gives a polished
surface like the maker's finish
when new.

Proof against Petrol, Oil and Grease.

PRICES:
In Super Black and Standard Motor
Shades.
Flat ½ pint .. 3/-
Clear Varnish ½ pint .. 3/-
Flat 1 pint .. 5/9
Clear Varnish 1 pint .. 5/9
Post Free.

FELL & DEES,
Paint M^{rs},
DARLINGTON.

AMYLOSE
VARNISH

HOMAC'S

FOR

Homac's Ser-
vice is built
on a genuine
desire to do
more than is
expected.

To satisfy you
and ourselves by
making use of
many years'
specialised know-
ledge. That, and
advice is yours
freely.
Why not pay us a
visit?

1927 MORGAN PRICES REDUCED.
IMMEDIATE DELIVERY
OF MORGAN, CITROEN,
AND ROVER.

DEFERRED TERMS ARRANGED.
WRITE FOR CATALOGUE.

EXPERT MORGAN SERVICE AT

HOMAC'S
MOTOR AGENTS

243/7, LOWER CLAPTON ROAD,
Works: 46, London Rd., Clapton, E.5

Trade
Supplied

Phone:
Clissold
2408.

Special Features of this week's issue

The Motor

Tuesday, March 8

HOW TO PREVENT EXHAUST GAS POISONING.

Notes on its Composition and the Factors which Determine the Proportion of Deadly Carbon Monoxide Present. Precautions and Tests.

VANISHING SANCTUARIES OF LAKE LAND.

How the "Improver" Changes the Face of Nature.

AMERICAN RACING CAR DEVELOPMENTS.

The Merits of Two-stroke Engines for High Speeds and the Possibilities of Front-wheel Driving.

ENGINE WITH RECIPROCATING CYLINDERS.

A Novel High-Speed Two-stroke Design Embodying Moving Cylinders and Pistons and a Supercharging Device.

NEW CAR WITH TRIPLE COIL SPRINGING.

First Description of a very Interesting French Design with Many Original Features.

NEW CADILLAC PRODUCTION.

The Eight-cylinder La Salle, a very Distinctive Model.

ROAD TESTS SHOWING PRINCIPAL CHARACTERISTICS.

The 14-40 h.p. Humber. The Crossley "Six" Fabric Saloon. The Lea-Francis Supercharged "Special" Model.

THE INTER-VARSITY HILL CLIMB.

Good Sport but no Thrills. An Ascent at Nearly 60 Miles per Hour.

THE TRAGIC DEATH OF PARRY THOMAS.

Latest Facts and Pictures.

NEXT WEEK! IMPROBABLE INCIDENTS

The Owner-Driver meets the Meticulous Motorist. (Illustrated) CRANKS, MECHANICAL AND HUMAN. Weird Notions for Increasing Power by Still More Weird Inventors. And All the News and News Pictures.



PRICE 4d.

OFFICES: 7-15, ROSEBERY AVENUE, LONDON, E.C.1

REMY HORNS

CLEAR THE WAY

THE REMY HORNS illustrated are a certain aid to safe motoring. They are dependable in any emergency. On open country roads, in crowded city traffic, the slightest touch suffices to send forth a vibrant penetrating warning note (not a startling or unnerving blast) peremptory yet pleasing, which may be heard far ahead above the din of the city noises.

REMY HORNS, apart from mere mechanical efficiency, are handsome high-grade products, and look equally "at home" on the highest or lowest priced car or motorcycle. They can be easily fitted in a few moments, and will give years of service with no involved mechanism to go wrong.

REMY HORNS are obtainable in five types as illustrated below, so that there is one for your particular purpose. They are obtainable in the usual way through any dealer in high-class motoring accessories or may be ordered

Model 25, 75/- Post 1/- Model 18, 55/- Post 1/- Model 15, 30/- Post 9d.

Model 8C, 16/- Post 9d.

When ordering
the Electric Horns
specify 6 or 12 volt.

HAND OPERATED
Model 3V.
19/6
Post 9d.

The CARDINE SPRING SUSPENSION MODERATOR (ENTIRELY BRITISH MADE)

reduces the number of oscillations of the rear leaf springs from about 120 per minute to about 60 per minute, and it does this irrespective of the number of passengers, or the condition of the road or the speed. "Whatever the load, whatever the road, whatever the speed—SMOOTH RIDING."

PRICE, complete with fittings: for LIGHT CARS £4; MEDIUM CARS £5.

Free
Advice and
Literature
on request

Wherever they're
fitted they'll
Save!

Fill in, cut out
POST YOUR ORDER

attach P.O. or Cheque
OR ENQUIRY TO-DAY

To De'co-Remy & Hyatt Ltd., Dept. L.C.10,111, Grosvenor Road, S.W.1.
Attached please find P.O. or cheque for..... Or enquiry regarding.....
(Cross out words not required.)

- ☐ Delco-Remy Coil Ignition Magneto Replacement Unit suitable for many light cars.—"Better Spark—Instant Start." From £2-15-0 to £5-10. Postage 1/0. Wiring and Switch, 12/6. Full particulars on request.
- ☐ Cardine Spring Suspension Moderator. Whatever the road, whatever the load, whatever the speed, SMOOTH RIDING. For Light Cars, £4. Medium, £5.
- ☐ Blyphon Thermostat gives warm engine in 60 seconds, suitable any pump-cooled engine. 22/8. Postage 9d. Send pipe diameter.
- ☐ Remy Horns. Electric: Model 25, 75/-, postage 1/-; Model 18, 55/-, postage 1/-; Model 15, 30/-, postage 9d; Model 8C, 16/-, postage 9d. Model 3V (hand-operated) 19/6, postage 9d. Special Prices Irish Free State.

DEALERS.
Delco-Remy & Hyatt Accessories and Delco-Remy Coil Ignition meeting with world approval.

All Sales Credited
to dealers mentioned in Direct Sales Correspondence. Write for Mock Lists and Terms.

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AUSTIN 7 OWNERS

should fit the **BODELO BRAKE ATTACHMENT** to their Austin 7. It is easy to fit and effective in use. The **BODELO BRAKE ATTACHMENT** enables all four brakes to be utilised simultaneously by pressure of the foot pedal, but at the same time it does not interfere with the operation of the hand lever for the front brakes only.

**PRICE
30/-**

A post card will bring our illustrated leaflet, giving full particulars.

Write for particulars of the "Bodelo" Petrol Saver.

LLOYD & DEELEY,
177, BROAD STREET,
BIRMINGHAM.

Wholesale Stockists: Brown Bros., London and Branches.

What you Get for what you Spend. Search where you will, you cannot get better value.

A Thornber Garage will last a lifetime, because everything is solid in its construction. It is sent from works in sections—every section complete, ready for erection, which requires no skilled labour. No loose timber whatever is sent. All Garages have Gliding-out-of-way Doors, which move at a child's push, occupy no room when open, and obviate hinged door weakness. All fittings supplied. Two windows, top, half to open. Tenant's fixture, 12 months' free fire insurance.

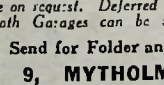
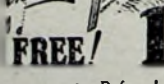
The OWNER-DRIVERS' Garage

Built of Thornber's Locjoint Weatherboards—the only suitable boards for outdoors. All sections complete, ready for easy erection. No loose timber. All fittings sent. Gliding out-of-way Doors. 2 windows. Insured. Built to last. 2 sizes.
Size: 16' x 9' x 7' x 9½' £15 Carr. fwd.
Fit or £4 extra. Carr. fwd.
Size: 19' x 9' x 7' x 9½' £18 Carr. fwd.

The SAFETY FIRST

Asbestos Fireproof Garage. All frame sections complete ready for Asbestos Sheets, which are supplied. Gliding out-of-way Doors. Two windows. All fittings supplied. Insured. Built to last. 3 sizes.

14' 5" x 8' 1" x 7' 12 ins.
x 9½' Carr. fwd. £12
Floor £3 10 extra Carr. fwd.
16' 5" x 9' 1" x 7' £15
x 9½' Carr. fwd.
Floor £4 extra Carr. fwd.
20' 5" x 9' 1" x 7' £19
x 9½' Carr. fwd.
Floor £5 10 extra Carr. fwd.



Carriage paid price on request. Deferred payment's can be arranged. Both Garages can be seen at works.

THORNBERS
FOR EVERYTHING IN WOOD

Send for Folder and state requirements.
9, MYTHOLMROYD, YORKS.
London Office: 47, Victoria Street, S.W.

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

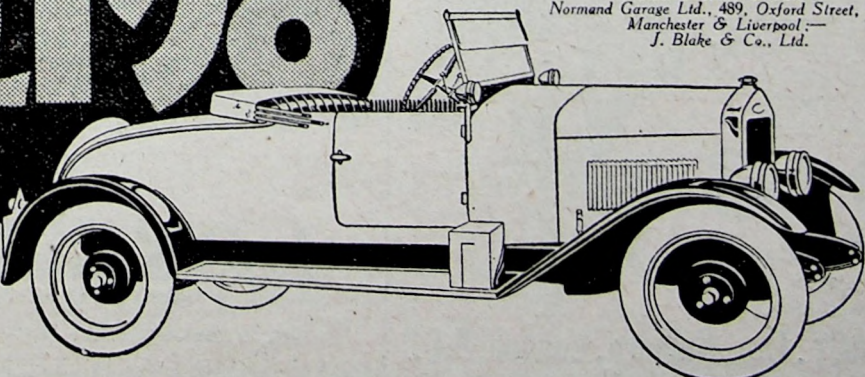
Make a dash for the 10-30

There's no need for us to go into details—you know as much about the value of cars as we do; if you have not yet made enquiries about this **NEW MODEL RHODE 10-30** it is up to you to do so right away.

"Taking it all round the new Rhode is an attractive car with a marked individuality."—Vide "Autocar."

Thus ends a remarkable article of a frank and unbiased opinion, after gruelling tests, of the leading car expert of one of England's leading car journals—and the remarkable run of popularity which this new model is enjoying is proof positive of its remarkable capabilities.

There's a complete Catalogue and all details at your disposal—a p.c. will bring them to you, or your local Agent will arrange a demonstration. A complete understanding of the many new and exclusive features which are to be found on this new model will well repay you in your search for care-free, trouble-free motoring.



Rhode

The Rhode Motor Co., Tyseley, Birmingham.

London & Home Counties:—
Normand Garage Ltd., 489, Oxford Street, W.1.
Manchester & Liverpool:—
J. Blake & Co., Ltd.

£198

T & H

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

GAMAGES

PRACTICAL & STYLISH MOTORING WEAR FOR THE OWNER - DRIVER

Greatly Reduced in Price.

SALE PROCEEDING.

Supreme Value in
Rainproof

SLIP-ON COATS

In dark blue Woollen Gabardine. Splendidly cut and tailored. Perfect fitting. This is a very useful coat for motoring. Is double-breasted, and has an all-round belt. Is interlined through body and sleeves with a super-quality oiled cambric, making the garment quite windproof and waterproof. Is offered during our Sale at the greatly reduced price of **48/9** Post free. Usual price 55/-
Kindly send size round chest over waistcoat.

Personal callers will find our Men's Motoring Wear Salon on the first floor, but if unable to call, post your order or phone Holb. 2700.

3LE BREASTED WATERPROOF DRIVING COATS

Splendid Value. Made in Double Texture Drab Parramatta. All seams sewn and taped. Well cut and perfect fitting. A most useful coat for the all-weather car. Fully guaranteed. Absolutely waterproof.
Stocked in all usual sizes.

each. Post free.

Kindly send size round chest over waistcoat.

A. W. GAMAGE, LTD., Holborn, London, E.C.1
And at 107, CHEAPSIDE, E.C.2.

B4

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.

"MOTORS AND MOTORING"

(ILLUSTRATED)

By E. T. BROWN

Motoring Correspondent of
"THE SPECTATOR" and "THE
WESTMINSTER GAZETTE."

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THERE ARE NOW 127 VOLUMES
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55, FONTENOY ST., LIVERPOOL. Telephone: CENTRAL 3304



Mr. E. C. Gordon England.

Why I run on "BP"

I run on "BP" for two reasons—one, because my Austin thrives upon it and I can depend upon "BP" always to give me the same result, and that in racing is one of the most important considerations.

Having satisfied myself with its excellence, the second reason can be considered, and that is, it is British Petrol, and I believe in the words of a famous car manufacturer 'Buy British and be proud of it.'

BP

The British Petrol

British Petroleum Co. Ltd. Britannic House, Moorgate, E.C.2

Distributing Organization of the
ANGLO-PERSIAN OIL CO. LTD.



HISTORY REPEATS ITSELF

As in 1899, so in 1927

Here is an extract from "The Irish Cyclist" of November 22nd, 1899—

"Mr. S. F. EDGE is evidently determined to bring out absolutely the best motor vehicle that the country can produce. For years past he has made a practical study of the subject, and week after week has experimented with various cars and new ideas introduced by himself. His usual week-end runs amounted to over 200 miles, and he made a point of getting to the bottom of every defect which manifested itself, and finding out the reason therefor. The accumulated experience of all these years he is now concentrating on the production of the most perfect car that skill and money can create. As already stated it is to be fitted with a Napier engine. It will be immensely powerful and exceedingly fast, and for comfort, strength, noiselessness and lack of vibration, will be ahead of anything heretofore placed on the market."

27 years further experience is embodied in the A-C to-day. A-C Cars are Guaranteed 3 Years and cost less to run per mile than any other cars of equal road-performance and carrying-capacity.

4-CYLINDER MODELS, 12-24 and 12-40 h.p., at prices from .. **£285**

Dunlop Cord Tyres are best and we fit them on all A-C Cars.
Cellulose Durobelle Enamel can be applied to any make of car by us at reasonable prices.



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Telephone: Kingston 3340-4.

Full range of A-C Cars at A-C LONDON CONCESSIONNAIRES, 55/56, Pall Mall, London, S.W.1
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RELIABLE DEMONSTRATION CARS FOR SALE.

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.

The Light Car and Cyclecar

A YOUNG CANUTE.

The recent floods in all parts of the country made many roads impassable for motorists. This small passenger tried hard to make the waters recede but, like the early king, she was unsuccessful.



NOTES, NEWS & GOSSIP *of* the WEEK

Petrol Pump Licences.

The opportunity to debate an interesting subject will be afforded to the House of Commons if the Bill providing for the licensing of wayside petrol pumps can be advanced this session. The Bill, which has received a first reading, was presented by Sir Frank Meyer.

Motor Show Dates.

This year's motor shows will be held on the following dates:—Glass's Used Car Show, April 11th-30th; Paris Motor Show, October 6th-16th; Olympia Motor Show, October 13th-22nd; Olympia Cycle and Motorcycle Show, October 31st-November 5th; Olympia Commercial Motor Show, November 17th-26th. A Scottish motor show will be staged at a date not yet fixed in the new Kelvin Hall, Glasgow.

This Week.

Vibration was once one of the biggest bugbears of light car designers, but during the past two or three years successful efforts have been made to eliminate it. The lines upon which designers have worked and the causes of various forms of vibration are dealt with in a special article. The "Beginner" series describes how to drive any conventional make of light car, whilst our centre pages are devoted to the advantages of carrying out various maintenance jobs in the most expeditious manner.

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LIGHTING-UP TIMES (Rear Lamps) for Saturday, March 12th.

London .. 6.27	Edinburgh 6.36
Newcastle .. 6.30	Liverpool .. 6.37
Birmingham 6.33	Bristol .. 6.37

Moon—Full, March 18th

Road Fund Accounts.

A pamphlet dealing with the Road Fund accounts for 1925-1926, together with a report of the Comptroller and Auditor-General thereof, has been published by H.M. Stationary Office, and can be obtained from Adastral House, Kingsway, London, W.C.2, price 3½d.

World Motor Transport Congress.

For the first time the World Motor Transport Congress is this year to be held in London, the three previous gatherings of the kind having been held in the United States. In future the venue is to change year by year. The 1927 congress will take place in November next, immediately prior to the Commercial Motor Transport Exhibition, under the auspices of the S.M.M. and T.

Next Week.

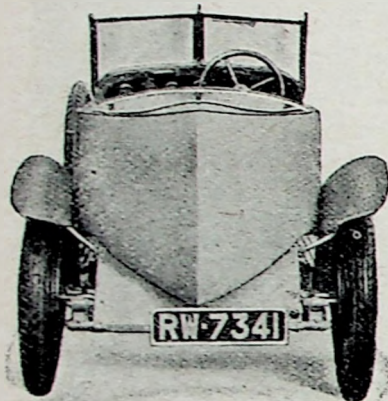
The advent of small-capacity high-revving engines emphasized the importance of keeping weight down to the lowest limits, and in an article entitled "Weight, Power and Economy" we shall endeavour to show how the avoirdupois of modern light cars can still further be reduced. The object is to obtain not only greater economy, but an even better performance. An amusing feature will be a skit on American production methods, in which our readers are taken in imagination to a typical American factory.

A Simple Ceremony.

Simple ceremonial marked the funeral of the late Mr. J. G. Parry Thomas, which took place at Old Byfleet on Monday last.

Unique Motor Race.

An eight-storied garage recently erected in Paris, at a cost of about 12 million francs, is surrounded by a circular drive connecting all the floors. Recently a "race" was held up this drive and provided much interest to the spectators. The cars were started separately at given intervals, and amongst other well-known race drivers taking part were Benoist and Divo.



Rear view of a new mahogany-decked body by Jarvis and Sons, Ltd., Merton, London. It is on an Alvis chassis.

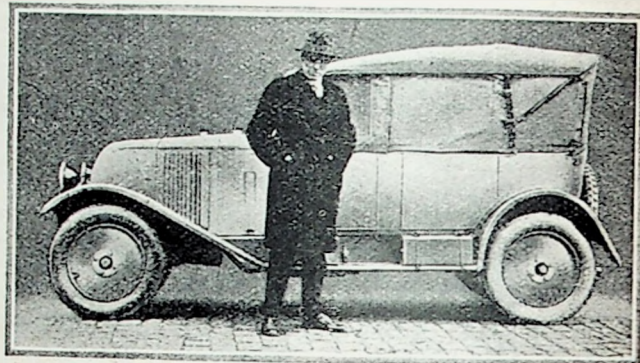
Popular French Rally.

A very successful "rally" or free-and-easy reliability run was held recently by our French contemporary, *Moto Revue*. The course chosen was from Versailles to Dreux, and the event was open to

New Zealand Motor Cup.

In the light car section of the competition for the New Zealand Motor Cup, run over a distance of 50 miles at Muriwai Beach, Auckland, on March 6th, Bugatti cars came in first, second and third. The winner's speed was 72 m.p.h.

Lieut. Estienne and the 9-15 h.p. Renault car, which he drove from Paris to Niger in eight days. The car was a standard model except for the special sand curtains.



The 1927 Monthlery Season.

The programme of the first meeting to be held at Monthlery this season includes the Grand Prix de l'Ouverture and a light car and cyclecar race. These events take place on Sunday, March 13th.

The Recent Floods.

Many motorists having occasion to drive along flooded roads recently found themselves in difficulties, and the Royal Automobile Club issued a warning to the effect that it was a mistake to "rush" floods, but, instead, the car should be driven through slowly in bottom gear, whilst too much reliance should not be placed immediately afterwards upon the brakes, as the wet linings would prevent them from acting at their full efficiency.

Wireless in Business.

Short-wave wireless stations have been installed in the South American branch depots of the General Motors Export Co., says Reuter. Each night at a given time the regional headquarters at Montevideo broadcasts messages to and receives reports from all the branches.

A Sporting Challenge.

In a letter which appears in our correspondence pages this week Mr. H. Beart, the Morgan driver who holds world's records, challenges Capt. R. Siran to race against him in a D'Yrsan.

The Indian Budget.

In presenting the Budget in the Legislative Assembly at New Delhi on February 28th, Sir Basil Blackett announced that there was a surplus of £2,500,000, says Reuter. The duty on motorcars is to be reduced from 30 per cent. to 20 per cent. ad valorem and on tyres from 30 per cent. to 15 per cent.

Essex Bridge Reconstruction.

Convent Bridge, which carries the main Braintree to Halstead road over the River Blackwater at Bocking, is to be reconstructed. It is learned that the Essex County Council has just placed a £12,000 contract for the construction of concrete abutments and retaining walls, together with the necessary steelwork, and the rebuilding is to start some time next month.

light cars, cyclecars and motorcycles. Competitors were allowed to choose their own average speeds. No fewer than 509 entries were received and, in spite of abominable weather conditions—rain, sleet and a gale of wind—470 actually took part in the run. The trial was won by M. Dardy in a Morgan. He managed to get within 1 sec. of the average speed which he had chosen for the whole run. As many as 30 competitors came within 1 min. of their chosen speeds and, in all, 285 competitors were "placed." Redon (Amilcar) was second, and third place was secured by a side-car combination.

BS

GO AS YOU
PLEASE!

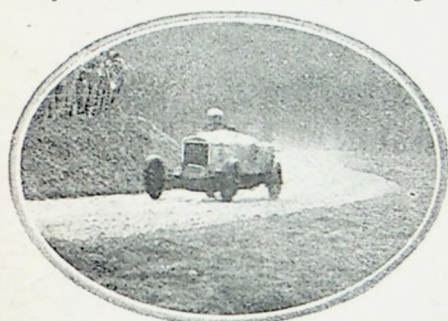
Competitors chose their own average speeds in a recent French reliability trial. The above photos show the start at Versailles and, in the oval, the winning Morgan driven by M. Dardy.

Building Censorship.

The Bootle Rural Council has supported a resolution from the Woodstock Rural Council asking the Government to authorize local authorities to reject all plans for buildings which threaten the rural beauty of the countryside.

Professor Low on Supercharging.

Before a well-attended meeting of the Birmingham University Engineering Society Prof. A. M. Low recently discussed the question, "Is Forced Induction Desirable?" Remarking on the difference between modern closed cars and the open railway trucks which were the acme of transport luxury a few decades ago, the lecturer stated that all important changes in transport have aimed at greater comfort or higher speed. Emphasizing the fundamental unsuitability of the internal-combustion engine

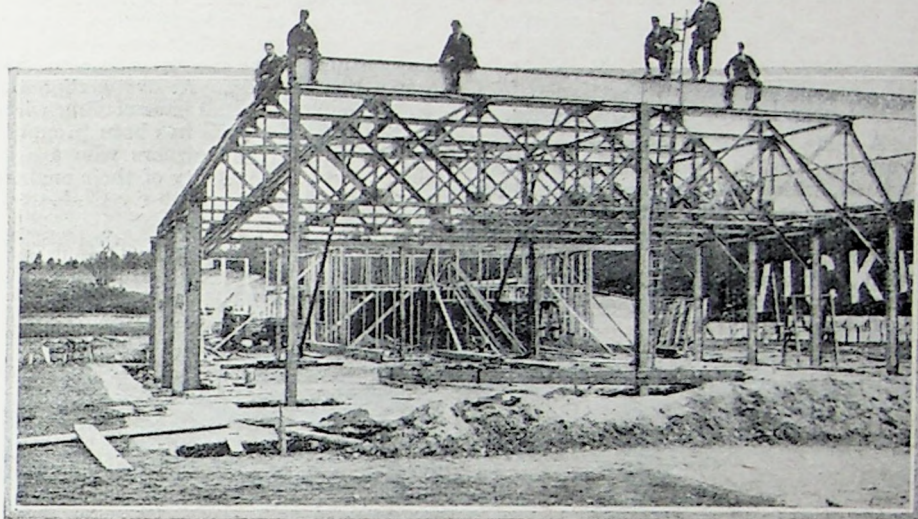


G. W. Bagshawe (Frazer-Nash) making the fastest run of the day in the Inter-Varsity Hill-climb.

for transport purposes, he showed that its defects could be reduced by supercharging, which gives increased maximum power, better pulling at low speeds and, consequently, less need for gear changing, together with greater reliability, provided that the engine is designed to be supercharged. He suggested that cars of the future will have a small supercharged engine tucked away in the vicinity of the gearbox, the whole length of the chassis being thus available for the passengers' comfort.

Improving the "Switchback."

Extensive widenings are taking place along the Cobham-Byfleet switchback road, over which motorists pass en route to Brooklands.



IMPROVING BROOKLANDS.

A new grand-stand is being built at Brooklands on the site of the old one which was burnt down last year. The new stand will afford spectators a better view of the racing.

Industrial Psychology.

The annual report of the National Institute of Psychology recently issued makes very interesting reading. The activities of the institute are concerned, of course, with the improvement of working conditions in factories and so forth in a manner which will facilitate increased production. The pamphlet deals with many instances in which improvements of this nature have been effected, and it is interesting to note that in one motor works the re-arrangement of a department resulted in increased bonus earnings by the workmen of more than 28 per cent., and, in addition, it was found possible to accommodate 32 per cent. more workers without overcrowding.

Back to the Roads.

During the month of December, 1926, more than 7 million fewer railway journeys were made than in the same month of 1925. This is a striking indication of the increased use which is being made of motor transport.

Bridge Declared Unsafe.

Eamont Bridge, Cumberland, on the main Penrith-Carlisle road, has been declared unsafe for traffic over a certain weight, and recently notices were placed at both ends of the bridge warning drivers of the conditions. It was recently decided by the joint committees of the Cumberland and Westmorland County Councils to rebuild the bridge at a cost of over £32,000. The hump-backed nature of the bridge has proved a continual source of danger to motorists.

De Dion Bouton Development.

De Dion Bouton, Ltd., announce that owing to the reconstitution of the French factory it has been found advisable to reconstruct the British De Dion Bouton Co. so that full advantage can be taken of the improved conditions and the business developed on sound commercial and financial lines. While the reorganization of the English company is being put into effect the business will be carried on temporarily pending reconstruction under a receiver appointed by the debenture holders, and there will be no interruption of service to owners of De Dion Bouton vehicles of all descriptions.

So far as the home trade is concerned, the chief lines of the reconstituted company will be the well-known bus chassis and the new six-ton lorry, with the lowest tax of any vehicle of the same capacity on the market. But the touring-car trade will not be neglected, as a new six-cylinder model will be introduced almost immediately, while the popular 12 h.p. model will be continued with certain improvements.



NEW MATHIS SHOWROOMS. — The new premises of B. S. Marshall, Ltd., at 25, Basil Street, Knightsbridge, London, S.W.

New Irish Trunk Road.

During the latter part of last year the Irish Free State Government approved a grant of £2,000,000 for road work, and the latest call on this is for a trunk road between Wexford and Enniscorthy, a distance of nearly 12 miles, at an approximate cost of £40,000.

Singer Junior Improvements.

A plated radiator, aluminium-covered running boards and sunk rear floor-boards, which provide increased comfort for the passengers, are modifications which have been standardized in the latest Singer Juniors. During a recent visit to the works at Coventry we saw large numbers of these popular cars in course of manufacture.

Engine Size Misunderstanding.

In connection with the reduced subscription for associate membership of the R.A.C. to owners of cars having engines of a capacity up to 1,100 c.c., the Club reports that a certain amount of confusion and misunderstanding has arisen, as some owners are under the impression that the question hinges upon horse-power. A list giving the engine capacity of all cars coming within the 1,100 c.c. class has been prepared by the R.A.C., and owners who are in doubt as to the capacity of their engines should communicate with the Club.

I.M.T. Examinations.

The next examination for the diploma of the Institute of the Motor Trade has been fixed for Friday, April 22nd, and will be held simultaneously in London and at various centres in the provinces. Full particulars can be obtained from the honorary secretary of the I.M.T., 157, Great Portland Street, London, W.1. The Institute wishes to make known, incidentally, that the majority of its meetings are not confined to members, as visitors, including those in responsible staff positions, in addition to principals, are cordially welcomed.

Roads Closed.

The R.A.C. reports that, in consequence of repairs to Forder County Bridge, the road leading to Broadhempston, between Newton Abbot and Totnes, is closed to all motor traffic until further notice. Main-road traffic will be unaffected, but motorists wishing to go to Broadhempston should take the Newton Abbot-Totnes road.

Northwich Rural Council has closed the road leading to Marston and Wicham, which also constitutes the main road to Warrington. Salt-mining has caused the road to sink and become flooded at a spot known locally as the Big Hole.

No Clue.

Many car owners, when writing to the manufacturers for information or spare parts, omit to give precise particulars regarding the actual model they possess. The Rover Co. point out that it is much better to quote the engine or chassis number of a car than the believed date of manufacture when corresponding, but it is surprising what a large number of owners fail to appreciate this. In one or two letters received at the Rover works recently, the registration number of the car has been mentioned! Naturally, this is no clue whatever to the model of the car, which might be of any date from 1906 upwards. Incidentally, the Rover Co. states that they are able to supply spare parts for cars dating right back to the year mentioned.

B10

AUSTINS IN INDIA.

In spite of the alternative modes of transport depicted above Austin Sevens are very popular in India, but, as shown in the oval, they are not found capable of swimming alone.

A Junior Grand Prix.

One of the outstanding events at the spring meeting of the Junior Car Club which will be held at Brooklands on April 30th will be a Junior Grand Prix, in which the competitors will have to cover 15 laps "round the island," that is down the finishing straight and along the home banking behind the members' hill. Artificial bends will be introduced, and the competitors will be in full view of the spectators practically all the time. The programme will include also a starting and stopping race, but this year the start will be in the finishing straight and the stopping line opposite the Vickers sheds. Women members of the club are reminded that they will be allowed to compete in all the events at this meeting.

High-speed Engine Carburation.

The next article of the series dealing with problems of high-speed engine carburation will appear in our issue of March 25th. The working of the B. and B., Cox-Atmos and Smith single-jet instruments will be described and illustrated. Constant-vacuum carburettors will be dealt with later.

Lost.

The latest wail received by our inquiry department:—"I have lost my ampere chain. Can you recommend a good make to replace it?" We have done our best to reply by post, and for the guidance of other readers (if any) in a similar predicament we suggest an endless belt made of square-section ohms coupled by triangular volts.

WHEN THE RACE GOES TO THE SLOW.



THE CAUSES OF VIBRATION.

PROBLEMS THAT ARE DIFFICULT TO SOLVE—
HOW EXPERTS HAVE TACKLED
THEM.

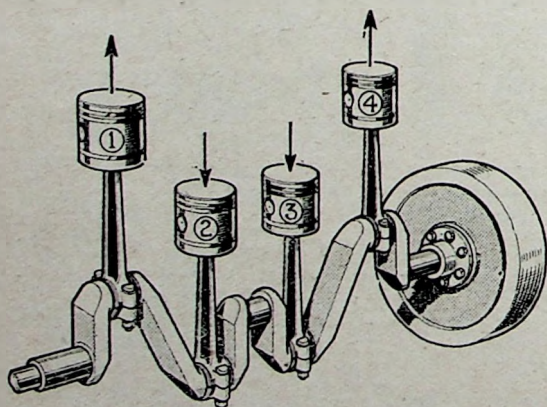
Happily rare nowadays, propeller shaft failures were not uncommon ten or twelve years ago. Perfect balance is the only real safeguard against the effects of centrifugal force.

THE fundamental causes of vibration are too numerous to be set forth in full, and the methods adopted to eliminate them vary from year to year.

Everything in motion generates a force by virtue of that motion; and the force is a potential source of vibration; furthermore, nothing is rigid, and every material "gives" when subjected to load. When we enter a car, the distortion that takes place in the springs and tyres (due to our weight) is readily noticeable; and although the distortion that occurs in the side members and the wheels is invisible to the naked eye it is sufficient to have a bearing upon the subject of vibration.

When an ordinary four-cylinder touring engine is running "all out" it is rotating probably at about 3,000 revs. per minute. At that figure a piston stroke takes place in a hundredth of a second, the piston being accelerated from rest and then brought to rest again, prior to being restarted in the reverse direction, in this very brief period. This stopping and starting of the pistons generates forces which may easily be in excess of half a ton. It needs only a little imagination to realize what violent vibration might result if we were to use a single-cylinder instead of four small ones. Designers, unable to eliminate the forces, set one against another by using multi-cylinder engines, where the unbalanced effects are neutralized.

A typical four-cylinder crankshaft is shown in an accompanying illustration. It is evident that while



A four-cylinder crankshaft, with connecting rods and pistons. The arrows show the direction of thrust due to arrested motion when the crankshaft is turning.

numbers 1 and 4 pistons are intent on flying upward numbers 2 and 3 pistons are exerting their energies in a downward direction. Thus one pair cancel out the evil effects of the other pair. In actual practice, owing to the effect of the connecting rods, the cancellation is not absolutely complete unless six cylinders are used; nevertheless, with engines of less than 1,500 c.c.

B12



CENTRIFUGAL

capacity, the resulting unbalanced force is not sufficient to make its presence felt. It is, however, not difficult to see that if one piston were heavier than its fellows it would, to a certain extent, upset the balance of the arrangement; and, accordingly, car makers insist that the pistons must be of exactly the same weight. There

Centrifugal force is one of the most difficult with which designers have to deal. Its effect can be gauged by carrying out the simple test suggested by this sketch.



are numerous other considerations to be taken into account when considering crankshaft balance, but the above reveals one of the most important.

The inherent tendency for metal to bend under load is at least an incipient cause of vibration, and during recent years great attention has been given to the rigidity of rotating parts so as to keep the vibration from this source down to a minimum.

Why Propeller Shafts Failed.

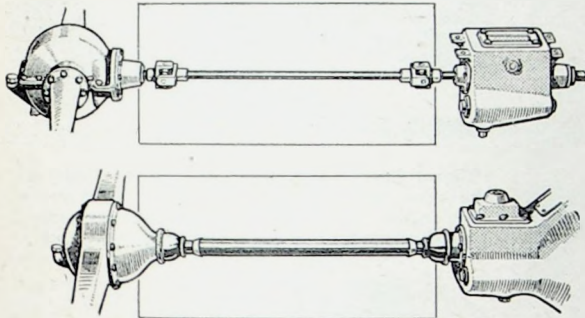
Let us consider for a moment the effects of centrifugal force. They may easily be felt by any reader who cares to tie a brick on to a piece of rope and swing it round and round. Long and small diameter propeller shafts such as were used on the cars of many years ago were amply strong enough to transmit the drive, but owing to their proportions they "bent" an almost imperceptible amount owing to centrifugal force. This amount was, perhaps, no more than .003 in., but obviously it tended to increase, the shaft being pulled more and more out of truth until ultimately it broke. On modern cars propeller shafts are nearly always made of tube, so that they are light and rigid; for a tubular shaft is far more difficult to bend than a solid one of similar weight.

On one or two occasions the writer has heard owners tell alarming tales of a car suddenly starting to vibrate. In nearly every instance the symptoms were the same. The machine ran perfectly for many thousands of miles, and then suddenly an unusual vibration was felt. The trouble was nearly always traced to a loose or worn universal joint which caused the propeller shaft to drop out of line a little, with substantially the same result as that caused by having too slender a shaft. One cannot help feeling that there is a certain class of owner who

is only too apt to neglect universals because giving them attention demands lifting the floorboards or crawling under the chassis.

Another cause of an otherwise perfect car commencing to vibrate may be loose engine or gearbox fixings. The car may be running perfectly, then a split pin in an engine arm bolt shears, and the nut slackens off a little. The engine starts to vibrate immediately because the vibrating forces, which are not sufficiently powerful to have effect upon a car as a whole, are powerful enough to cause the loose fixing to chatter.

Vibration due to the deflection of metal is usually accompanied by noise, because the minute movements of the parts set up sound waves; and it may be taken as an axiom that all vibrations lead to wear. How much noise a very minute vibration can set up may be heard when an anvil is struck with a hammer. The amount

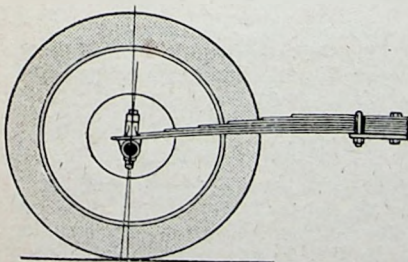


(Top) Old-fashioned and faulty. The solid shaft of small diameter whips easily compared with the tubular shaft of greater diameter shown below it.

of movement given to the surface of the anvil is so small as to be immeasurable even in these days when we can measure ten-thousandth parts of an inch with ease; but the noise of the blow is quite loud.

Another aspect of the vibration question is the natural vibration period of certain parts. A pendulum, for instance, will swing only at a certain number of beats per minute (depending upon its length), and this condition is taken advantage of in the design of clocks and, incidentally, in the transmission of the Constantinesco car. Springs, among other things, show a decided tendency to vibrate at a certain speed and to continue vibrating once they are set in motion at the critical pace. For that reason designers are often forced to use double valve springs, each of different diameter, to prevent valve bounce.

Leaf springs used for suspension naturally show



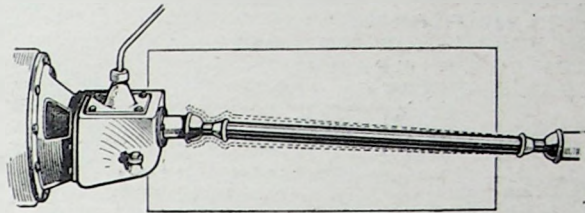
A slight castor of the front wheels is desirable so as to influence a car in taking a straight course. The steering pivot, it will be seen, is canted back slightly.

the same tendency, and of recent years efforts have been made to eliminate this vibration. In some cases friction material is placed between the leaves, or an extra friction brake, such as a shock absorber, is incorporated. Hydraulic dampers have also been fitted with success, but even now we have a long way to travel before the ideal suspension system is evolved.

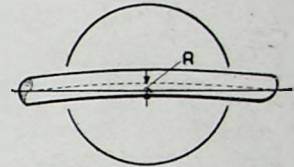
One of the most annoying features of unwanted vibration is that it sets up sympathetic vibrations in whatever nearby objects happen to have the same natural wave-period. The playing of a musical instrument will often bring an answering jangle from some

of the ornaments in a room; and, at certain critical speeds, car bodies begin to drum, tanks make weird noises, and driving mirrors dither in sympathy with the engine.

An unbalanced force in an engine causes the crankshaft to bend, imperceptibly but sufficiently to cause a



(Above) Worn universal joints are a prolific cause of chatter and vibration. (Right) "Whip" in a revolving propeller shaft tends to bend it, the distance R representing the exaggerated deflection of a shaft behaving in this way.



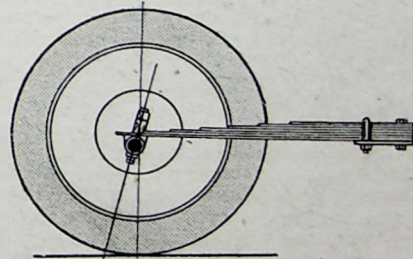
deflection of the crankcase walls, which sets up an air wave. This, in turn, causes other parts to vibrate in sympathy.

Car owners who find themselves troubled with this sympathetic vibration at critical speeds may effect a cure in a number of ways. Where the tank is at fault an extra tank strap, backed by a strip of felt or india-rubber, will often prove effective. A "dithering" driving mirror is often cured by attention to the holding-down screws or by setting the glass in a slightly different position.

Drumming Panels.

The location of a drumming panel is nearly always a matter of some difficulty, but it can usually be run to earth. The driver should run the car at the critical speed and then ask his passenger to press his hand on

Settlement of road springs under load tends to increase the castor in a quarter-elliptic spring and axle assembly of the type shown. This may lead to wheel wobble.



various parts of the body until the offending panel is located. The drumming can then be cured by stuffing a rag between the panel and the upholstery.

It must not be forgotten, of course, that in a few rare cases vibration may be caused by faulty plugs or carburation, resulting in uneven firing. Wheel wobble, too, is, in some cases, merely a matter of vibration set up by gyroscopic action and unbalanced wheels. The writer has dealt with the trouble by fitting new pins in the track rod ends in place of worn ones. On one occasion he found it was caused by the front springs, which had received a permanent set exaggerating the castor angle to an excessive degree.

In conclusion, it should be pointed out that if a car which has run smoothly for many thousands of miles suddenly develops chatter, an owner should investigate the matter and endeavour to trace the cause so soon as possible. It is quite likely, for instance, that the trouble can be accounted for by a nut which has slackened off and, naturally, one's investigations should begin with the moving parts. They are not always to blame, however, for, obviously, any part that is loose is liable to rattle.

Motoring for the Beginner.

HOW TO DRIVE.

A STRAIGHTFORWARD EXPLANATION OF GEAR CHANGING AND SO FORTH—HOW TO MASTER A STRANGE GEARBOX—THE BRAKES—HINTS ON ELECTRICAL EQUIPMENT.

IN this article we propose to give a general outline of the knowledge that a driver should possess in order to enable him to take his seat in a conventional car of practically any make and, after a preliminary survey, drive it with knowledge and confidence. To a man who has had very little experience—his driving being confined, perhaps, to one make only—this may appear to be something beyond his capabilities, but actually it is not so, for the rules which apply to driving one car appertain to nearly all other makes, and it is merely a question of exercising common sense and of acting with confidence.

Starting up from cold once called for a certain amount of knack and experience. That, however, was before the time when stranglers were fitted as standard; electric starters were a luxury and the study of carburation and ignition had not been brought to a high state of perfection. Nowadays, a driver should be able to take his seat at the wheel, switch on the magneto, make sure that the gear lever is in neutral, and with the strangler closed and the right toe on the accelerator pedal press the starter knob. After three or four seconds at the outside a well-behaved engine should fire, and in most cases it will be found that if the strangler control is released and slightly additional pressure applied to the accelerator any initial obstinacy that an engine might display will be effectively overcome, causing it to run at about 300 r.p.m., a speed which may be maintained for half a minute or so before the throttle is closed and the engine allowed to tick over on the pilot jet.

If the Clutch Sticks.

With a cold gearbox the engagement of first gear usually has to be done "snappily," owing to the fact that the heaviness of the oil in the gearbox quickly slows down the clutch shaft; but if, on the other hand, the grating of the teeth shows that the clutch will not free properly, then, with the clutch pedal fully depressed, a few sharp jabs on the accelerator pedal should be given, which will usually have the effect of

B14

(Above) Adopt a comfortable attitude. (Left) On the open road: left foot "resting," right on the accelerator. (Below) A useful guide for a novice. "top dead centre" of the wheel marked by string.

causing the driving member to "break away" from the driven members. No further trouble in this direction should be experienced, and changing up from first to second and so on will be easy.

As the oil in the gearbox warms up and becomes slightly thinner the necessary pause in neutral when making a change of gear will become proportionately longer, whilst after about half an hour's running it may be necessary to let in the clutch—with the lever in neutral—so that the rapid deceleration of the engine may be used to help to slow down the spinning clutch shaft and reduce the time taken to change gear quietly and smoothly. This applies particularly when changing from a low gear of, say, 17 to 1, to second gear, which may be about 8 or 9 to 1.

Double declutching when changing down is essential if wear and noise are to be avoided, and it will become a far less mysterious and difficult business if it is tackled in the following way:—Let the car be running along in top gear at, say, 20 m.p.h., now declutch, slip the gear lever into neutral, take the toe off the accelerator pedal and let the car coast in preparation for the second movement. The road speed having dropped to about 15 m.p.h., depress the accelerator so

that the engine revs. up, depress the clutch pedal and immediately slip the gear lever into the lower notch. Knack, acquired by practice, will be necessary before the change can be made neatly and quietly, and a driver should not be discouraged if he finds it difficult to begin with.

After a little practice carried out on the lines suggested it will be possible to couple up the two separate groups of movement, and in any case it will be far easier to double-clutch if it is remembered that the operations do really consist of separate groups.

The amount of revving up which an engine requires during double-clutching depends on the difference between the ratios of the two gears concerned. Thus, on four-speed gearboxes, in which ratios are fairly close, the engine will have to be revved up far less than with a three-speed gearbox in which the "gaps" are necessarily greater. To change down from a second gear of, say, 9 to 1 to a bottom gear of 18 to 1 will obviously require the engine to be revved up to, approximately, twice the speed at which it was running at the instant before the change was made.

Ignition Control.

Although most light cars are fitted with a lever for advancing and retarding the spark it is generally found that the fully advanced position can be maintained and that any appreciable degree of retardation causes a loss of power. For starting-up, however, it is sometimes advisable to retard slightly.

Newcomers at the wheel are advised to use four-wheel brakes with very great discretion. Their usefulness in avoiding a collision with some obstruction ahead which may suddenly present itself is counterbalanced rather by the risk of a driver who uses his brakes to the fullest possible extent of their power, being run into from behind by a car the brakes of which are not so efficient.

GOOD PRACTICE.

Confidence will be gained if a novice practises stopping and re-starting on a quiet local gradient, whilst the art of reversing should be mastered at an early stage.

It has been pointed out that a driver should experience little difficulty in taking over a strange car, but, obviously, one of the points which will perplex him is the exact disposition of the gears. Here are a few rules which should prove useful. In the case of a three-speed gate change the first-gear slot is nearly always opposite reverse, the latter being identified by the catch which prevents accidental engagement of that gear. To distinguish the second-gear slot from the top-gear slot it should be remembered that the latter is nearly always shorter than the former. With a four-speed gate change the reverse slot is usually a continuance or a side branch, as it were, of first; second is nearly always opposite first, whilst through the gate and travelling away from second gear is third, top, of course, being opposite third.

In the case of central gear levers of the ball-mounted type difficulties may arise, and it is as well for a driver to find out, if he can, whether there are three or four forward speeds. The following rule, however, nearly always applies in the case of a three-speed box: first, near-side back; second, off-side forward; top, off-side back; reverse, near-side forward. If the box is of the four-speed type, first is nearly always near-side forward; second, near-side back; third, off-side forward; top, off-side back. Reverse is, as a rule, engaged by releasing the reverse catch—this is done frequently by lifting the gear knob—and pushing the lever through first gear into the reverse notch.

A few general hints on handling a car may be given. First of all, remember that, theoretically, there is only one speed at which an engine is giving of its best, and that for that reason generous use of the gearbox should be made as occasion demands. It is not only false economy to hang on to top on a hill which has reduced the speed of a car to, say, 15 m.p.h., but also harmful to the working parts, which are being unduly stressed.

By all means rush a hill in top gear with the idea of avoiding a change down, but do not hesitate to engage a lower gear before the engine shows signs of distress. Far less harm will be done by a half-mile uphill run in second at, say, 27 m.p.h., in the case of a touring car, than by "chugging" up at 12 m.p.h. or 14 m.p.h. in top gear.

In country where very steep hills abound be prepared to use bottom gear, and do not be flurried if circumstances call for it. In the same way, it is advisable to engage a lower gear when descending a steep

A novice, therefore, should practise pulling up on a quiet road, his passenger being instructed to state when and at what point he wishes the car to stop—a reasonable distance being allowed, of course. The distance should be varied according to the speed at which the car is travelling. Experience gained in this way will be invaluable, for a driver will be able to ascertain just how his brakes behave under varying pressures on the pedal.

hill, especially if a warning notice has been erected before the gradient begins.

Do not let your thoughts wander when driving. If you are ambling along, hug the near side of the road so as to let faster traffic pass, whilst if pulled up in a traffic jam do not stop too close to the vehicle ahead, especially if it be horse-drawn.

The majority of the hints given in connection with the lighting equipment fitted on cyclecars apply in the case of four-wheel light cars. At least every 14 days fill up the cells of the battery with distilled or carefully strained rain water, so that the liquid is just above the tops of the plates. See that the terminals show no signs of corrosion and smear them with plenty

of vaseline. Make sure that the battery leads are not chafing at any point: a likely place is where they emerge from the battery box. Providing the dynamo is charging up to its proper output as shown by the ammeter confine your attentions to the dynamo. Inject an occasional drop of thin and good-quality oil in the oil cap provided. Too much oil at this point is nearly as bad as too little.

Violent oscillation of the ammeter needle points to a slack belt (if the drive is by this means), a dirty armature or worn brushes. Leave the cut-out alone; it is a part of the electrical equipment the least likely to get out of order. Lamps must be focused carefully and correctly if good results are to be obtained.

THE PASSING OF J. G. PARRY THOMAS.

THE tragic death of J. G. Parry Thomas during his record-breaking attempt at Pendine on Thursday, March 3rd, profoundly stirred the emotions not only of every sportsman in this country who had seen or read of him but in every country of the world where motor racing is followed, and where the name of Parry Thomas was a household word.

On Monday last, in the little church of Old Byfleet, almost within sight of the arena in which he had scored so many single-handed triumphs, he was laid to rest, and as one gazed round the hushed assembly one recognized on all sides faces that one associates with Brooklands: those who knew him—and loved him—at “the track” which had become his very existence in life, had travelled to pay their last tribute to him in death.

At 3 o'clock a brief service was held in the sitting-room of “The Hermitage,” Parry Thomas's Brooklands home, then the cortège was formed, and the hearse, followed by several cars and a mass of flowers and wreaths, was driven slowly round the track, out of the public entrance, thence to Byfleet. Here, in Old Byfleet Church, Archdeacon Hancock conducted the public service—a simple ceremony with choral accompaniment—and within a few minutes of its conclusion the final scenes at the graveside took place, and we looked our last on the oak casket that contained the remains of one of the most skilful, daring and best-loved of British sportsmen.

J. G. Parry Thomas was the son of the late Rev. J. W. Thomas, Vicar of Llanrhaiadr, Denbigh. He was 43 years of age and a bachelor. For several years he was the chief engineer to Leyland Motors, Ltd., and he made his first appearance at Brooklands on Easter Monday, 1922, as an unknown driver whose somewhat cumbersome-looking car created a certain amount of amusement.

Thomas, however, was not in the least disturbed, and when, during the same year, he began to lower records, he very soon made a name for himself and commanded the respect and admiration of all true sportsmen. Tirelessly he pursued his object, and as season succeeded season he gradually raised the speed of his famous Leyland-Thomas until its performance was the star attraction both at Brooklands and on the Continent.

During 1925 he spent a large amount of time at Monthéry, where he put up a record lap of 132.5 m.p.h. He delighted Frenchmen, who in

their thousands flocked to the newly opened track to see the daring Englishman who shared his popularity with Eldridge, and the enthusiasm of the crowd knew no bounds when the Leyland-Thomas and the big Fiat went off in company on a more or less impromptu race.

About this time he conceived the idea of building a 1,500 c.c. straight-eight racer, and during the following year his workshops at the track were busily engaged in constructing the first of two cars of this type. His faith was not misplaced, for at the conclusion of last season, using one of these cars, he raised the Brooklands

local hour record to nearly 113 m.p.h., thus becoming the holder of *The Light Car and Cyclecar* Challenge Cup.

For the coming season he had under consideration a very comprehensive programme, and intended to add at least two new cars to his stable, both by the way being under 1,500 c.c. This no doubt was the outcome of his determination to keep the Union Jack flying in the world of motor sport.

It can be truthfully said that to hundreds of people his death has come almost as a personal loss, and amongst those who are grieving for him are many children who easily found a way into his heart and for whom he had a lasting and very strong affection.

The late
J. G. Parry Thomas.

Famous French Factories.

THE MATHIS ORGANIZATION AT STRASBOURG.

WHERE THE ART OF MASS PRODUCTION HAS BEEN STUDIED WITH METICULOUS CARE—PRODUCTION OF 75 LIGHT CAR CHASSIS PER DAY.

MATHIS light cars became popular in England some years before the war. It may not be generally realized, however, that the creation of the house of Mathis dates from 1898, and that the concern thus belongs to the honourable fellowship of pioneer concerns on the Continent which actually founded the motor industry.

Mathis, at the present time, is one of the few really big firms on the Continent manufacturing light cars only. Curiously enough, the first productions of the factory were amongst the largest motor vehicles of their day, for the Mathis car of 1900 had a huge four-cylinder engine, 150 mm. by 160 mm. In 1910 Mathis concentrated upon the light car and produced a vehicle which was a perfect reduction of the typical big car of those days. The following year a similar, but even smaller, chassis was made, with an engine of 1,100 c.c. This type was continued and steadily improved until 1914.

After the war the Mathis business was entirely reorganized and the present enormous mass-production factory began to operate in 1920. The whole affair was organized after a close study of quantity-production methods in some of the best American factories.

Situated in the vicinity of Strasbourg, the works cover an area of about 200,000 square metres. A striking feature of the ensemble is the great delivery hall,

THE MAN RESPONSIBLE.



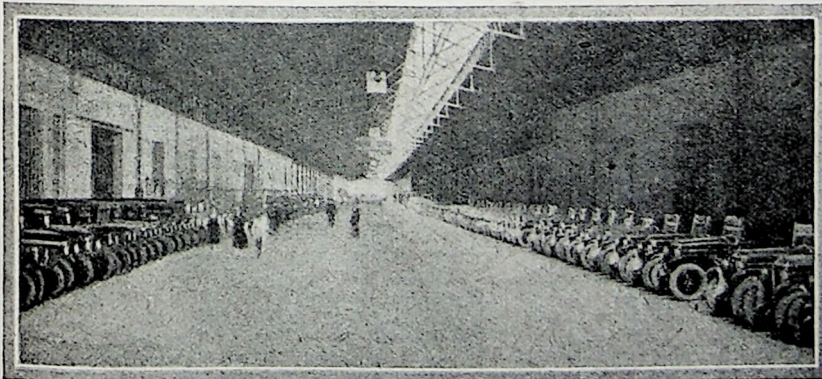
A characteristic study of M. Mathis at the wheel of one of his racing cars. He is a keen sportsman and is usually seen at race meetings and other motor sporting events.

An important experimental department is maintained, and in connection with this department the exceptionally well-equipped physical and chemical laboratories may be noted in passing. A large private railway station adjoins the factory, and from this sidings run to all the various shops. Shunting operations are conducted with electric locomotives.

The railway sidings connect with a vast covered hall running all along the rear of the factory and communicating with each individual shop. This hall corresponds with the great delivery hall for finished cars which we have already mentioned. The whole of the shops lie between these two halls. An endless belt, upon which the chassis is gradually built up, runs from shop to shop throughout the whole of the factory.

M. Mathis, the creator and director of all this vast organization, is seldom seen in public, except at sporting events. A keen sportsman and himself a fine driver, he seldom misses an important motor race meeting. One very special fact may be noted with regard to the Mathis organization, a fact which makes it unique amongst European motor works with a similar output: the entire Mathis car down to its smallest details is made within the walls of one great rectangular building. In practically all other works of such a size as the Mathis the various shops are distributed over a considerable area. At the Mathis works they form a single block.

Buyers of Mathis cars in this country have the benefit not only of scientific methods of construction which are surpassed by few motor-car factories, but of the exercise of the greatest care during the running-in process, cars being brought from Strasbourg by road under the direct supervision of the sole British distributors, B. S. Marshall, Ltd. Thus the work of the Mathis organization is completed in a satisfactory manner and cars arrive in London ready to be taken over by customers and driven without any regard for extra care during the first few hundred miles. This puts the finishing touch to car production and sales methods which surely are ideal.



NEARLY HALF-A-MILE LONG.

The vast "delivery hall" from which some idea of the size of the complete factory can be gained.

with which all the various shops communicate. This hall is over one-third of a mile in length.

The production amounts to 75 light-car chassis per day, and that of the body-building section 1,000 bodies per month. In the body-building department, as in the rest of the factory, the "chain" system is employed wherever possible. The bodies are placed on small trucks running on rails, and are passed along from one operation to another and from one shop to another in this manner.

In the Evergreen Country

AN INTERESTING ACCOUNT OF A WINTER RUN ON THE BERKSHIRE AND HAMPSHIRE BORDER MADE BY A PARTY OF LIGHT CAR ENTHUSIASTS WHO SET OUT TO ESCAPE FROM THE BLEAK AND LIFELESS COUNTRY-SIDE AND TO FIND A DISTRICT WHERE THE TREES ARE ALWAYS GREEN.



WE had hoped for a sunny afternoon for a run into the country, but seeing that it was the end of February, it was only to be expected that we were disappointed, and someone said "Oh, let's go to the pictures instead, the trees are all bare and the country looks so bleak and dreary on a dull day."

"Are the trees all bare?" thought I.

"I fancy not. Anyway, we'll go and see."

So off we went, and, leaving London, proceeded by way of Staines and Bagshot to Wellington College, near Sandhurst; here we found the wonderful avenue of Wellingtonias looking far from bare, and although the builder had been at work behind the trees, his work had been in the best of taste, and some of the glimpses we caught between the giant trunks were quite enchanting. At the top of the hill a wonderful view opened out before us. A deep valley, full of rhododendrons, firs, pines, and other evergreens lay at our feet, and away into the far distance greens of every tint and shade stretched out, with here and there a streak of gold, where a sandy road twisted upwards to the Hartford Flats.

Was this winter? Across the valley we saw a smoky veil approaching. Soon, it swept up the hillside around us. Snow! We decided that it was winter and scrambled back into the car.

It passed quickly, however, and we ran on down the hill, between the laurels, past the haunted house at Finchampstead, where the furniture is said to walk, and on to the little village

of Eversley, in the Blackwater valley.

Our next stop was at the church and rectory, half a mile beyond the village. Here for many years Charles Kingsley worked and lived, and here he sleeps beside an old yew tree, just in the churchyard gate—and such a churchyard too, full of the most delightful evergreen trees and shrubs, with beautifully kept paths and close-cut turf. Between the firs, the old grey tower tones delightfully with the greens and blacks of the grass and trees, and above it all rises the dark wooded hillside. What a picture! We felt that we should like to sit in the old seat by the gate, beneath the great oak cross, and dream awhile of Hereward the Wake, and Amyas Leigh, and "The Heroes," but the chill in the air reminded us that summer was not yet and, with a sigh, we once more got back into the car.

A lane of golden gravel runs away between the firs, and following it, we presently climbed a hill and found ourselves among the gorse and bracken of Riseley Common, a fine breezy heath,

A magnificent monument to a magnificent soldier—the Wellington Monument at Strathfieldsaye; behind is the entrance to the estate which was presented to the immortal hero of Waterloo by the nation.



with here and there a wonderful clump of firs standing out boldly from among the rhododendrons, their limbs tracing beautiful designs against the skyline.

On the far edge of the common we came to the entrance to Strathfieldsaye Park, the seat of the Dukes of Wellington, with a fine monument to the great soldier towering up above the tree tops.

From here it was not very far through the lanes to Silchester, the site of the famous Roman city of Calleva Atrebatum. The outside wall of the city still stands, a monument to the builders of those far-off days. It is about one and a half miles in circumference, and except where trees have grown on it and forced its stones asunder, it is in excellent condition.

Reading and the Bath Road, with the glow of the sunset coming through the pinewoods, we felt that we had indeed snatched a few hours of summer from winter's chilly grasp, and found a country where the trees are always green.

Now this run came as an agreeable surprise to every member of our party, and I feel sure that there are

ON THE
BORDER OF
HAMPSHIRE
AND
BERKSHIRE.

(Above) Unaffected by the chill of winter—a fine clump of firs at Riseley Common, near Strathfieldsaye, and (left) the picturesque church at Silchester which stands just within the walls of the Roman city of Calleva Atrebatum; the churchyard wall was built by the Romans nearly 2,000 years ago.

Silchester Church stands just inside the city wall, and we were glad to see that here an effort is being made to clear away the trees before they have destroyed the wall. The church and churchyard are most picturesque, but is it really necessary in these days to lock up country churches? Both here and at Eversley we were unable to obtain admission.

The land inside the wall has been farmed and ploughed for generations, but we are told that from an aeroplane it is still possible clearly to see the plan of the streets of the city. There are no buildings remaining, but in Reading Museum a fine collection of relics excavated from the site is on view, including what has very rarely been found—a Roman eagle.

A Roman Milestone.

We then ran on for a mile across Silchester Common to see the "Imp Stone." This is a genuine Roman milestone, still standing in its place beside the Roman road from the city. It obtained the present local name from the fact that until a few years ago the first three letters of the word "Imperator" were visible upon it.

If stones could speak, what tales it could tell of the travellers who have passed by! Roman legions on their way to Winchester. King Alfred's men, and their foes, the Danes, stout bowmen on their way to join Edward, Roundhead and Cavalier, down to our time, when the aeroplane drones above it.

Evening was now drawing in, and as we ran for home, through Mortimer and Burghfield, towards

vast numbers of other light car owners who would be equally surprised—and delighted—with the trip which I have described and with similar winter runs. It is too often imagined that, except on unusually bright and mild days, winter runs are bound to be dreary. To those who hold this view my advice is: Map out a *suitable* route and make the experiment—you are not likely to be disappointed.

G.C.W.



An old Roman milestone on Silchester Common; it is known as the "Imp Stone" because, until a few years ago, the first three letters of the word "Imperator" were discernible upon it.



RICH MIXTURE

LIGHT CAR COMMENT AND ADVICE

By
Focus

An Acceptable Luxury.

THE best features of a car always seem to be the most expensive. It is so with rear petrol tanks, with which I am wholeheartedly in love. My Singer has one, and it is really a most sensible and delightful arrangement. A gauge in the tank top shows how much spirit there is, the filler is most convenient, there is a "reserve" tap which traps a gallon, and, above all, there is no fear of clumsy garage men scratching the paint when filling up.

A vacuum supply tank is necessary, of course, but to-day these tanks are as reliable as the Flying Scotsman, and one never hears complaints concerning trouble caused by them.

That Smell of Petrol.

FEATURES of rear petrol tanks that appeal particularly to me are that there is no noticeable drumming, whilst if there is any slight leakage from the filler, if one corners a little too briskly, it merely evaporates into the atmosphere, and does not inflict its unwelcome presence on the nostrils of the occupants of the car.

One cannot say that for a scuttle tank with gravity feed. Quite the reverse, in fact, for I find amongst the many cars I try that there are few which do not smell distinctly petroly when the tank has more than two or three gallons in it, and the road is not so smooth and straight as it might be.

One Foot—Two Jobs.

IN connection with my paragraph last week suggesting that there were points in favour of a combined accelerator and brake pedal, I have received an interesting letter from a reader who has experimented extensively in this direction. He writes:—

Three years ago, owing to ankle trouble, I evolved a combined brake and accelerator control, which was briefly described and illustrated in a letter to *The Light Car and Cyclecar* for July 17th, 1925, written over the initials "A.M.I.E.E.," which tell their own story.

I used the device for the seasons of 1925 and 1926, and have not yet discovered any drawback; in fact, I would not be without it for anything.

The fact that acceleration is obtained by an action of a totally different kind from that which operates the brake makes for safety with either a novice or an expert at the wheel. The instinctive downward thrust of both feet is all that is required in an emergency stop.

B20

The right foot rests in a socket or sandal on the top of the brake pedal at all times, so that it is always ready in case of emergency. This saves a distance of at least 4 yds. at 25 m.p.h. The device simplifies the process of starting uphill, as it eliminates the use of the hand brake or the hand-throttle control. It enables the throttle opening to be maintained constant on the roughest roads and has entirely abolished the fatigue of the ankle so commonly found troublesome on a long journey.

It has been placed before several manufacturers, but they all seem shy of touching it. The — and — people both made the same excuse (on the same day): "It is so difficult to educate the public," they said. Yet in neither case would the men who saw it get into the car and use it.

If you are ever in Sheffield I should be delighted to show you the scheme, and, if you wished it, would gladly work out the details of a method of application to your own car. I have recently worked out the details of application for an Austin Seven belonging to an engineer friend, and after that one has done its trials the set of parts will probably be put on the market as an accessory.

An Old Story.

"FOR those who drive their own cars it is not necessary to take a mechanic on trips abroad. In any place you call at you will be able to find plenty of garages. You can find good mechanics and supplies of all sorts for motorcars everywhere, and at the very worst you are never so far from civilization that a wire will not quickly bring you any sized tyre or even the current sizes of ball bearings."

This from "Round the World in a Motorcar" should be of great comfort to those who think of following the prevailing craze and embarking on a circuit of the globe. It makes us less cock-a-hoop of post-war progress and enterprise, however, to discover that it was written in 1910!

"Pinched!"

I HAVE been pinched! No, do not gloat; wait till you have heard everything. Last Saturday I was travelling on the top of a General bus from King's Cross, London, to the Strand, and was half consciously admiring the way in which the driver was handling the vehicle.

A stop opposite Holborn Underground Station was followed by an excellent piece of acceleration, and we were sprinting down Kingsway quite briskly when suddenly my trained eye spotted a Man in Blue. The driver saw him also, but it was too late. We were stopped by an upraised

arm, and a few moments later a plain-clothes man arrived "at the double," clutching the inevitable stop-watch. After due consultation with his book of multiplication tables he announced that we had covered the distance from Holborn to the doors of the Stoll at an average speed of 26 miles per hour.

Judged by their expressions of annoyance at the delay the passengers were more inclined to sympathize with the bus driver than to uphold the law.

A Triumph.

WHILE travelling swiftly and smoothly along in an Austin Seven the other day it struck me what a notable example this little bus provides of sheer performance triumphing over that deadly impediment to motor design—ridicule. One remembers that when this car was first introduced it was received with amusement by motorists and hilarity by the comic Press, its diminutive size providing material for many a derisive joke.

Plenty of cars would have perished under such a torrent of adverse criticism, but the little Austin seemed to thrive on it, and when motorists who had laughed found that on the road they, like the Scottish chief in the poem, were "left lamenting," amusement began to give way to admiration. No one now questions the capabilities or utility of the Austin, and it holds a position in the car world which is unique.

The Future.

ONE often hears speculation as to the appearance of cars 15 or 20 years hence, but my own opinion is that unless some new, and at present unsuspected, engine is introduced little change in outward appearance is likely. Once evolution has progressed on certain definite lines, anything radically different has a poor chance of establishing itself and, as may be seen in the American industry, the tendency is to accept one conventional lay-out as standard and modify it to suit individual requirements and pockets.

In car development we have arrived at a stage when, if perfection has not been reached, we are at least obtaining satisfaction, and any sudden departure would need to show exceptional results to secure adoption. For this reason it seems probable

that the present lay-out will remain fixed for some considerable time, and any difference in appearance 20 years hence will consist chiefly of refinements that come imperceptibly.

It must not be forgotten that fashion has a habit of swinging violently back. Who would have thought 10 or 15 years ago that coachbuilders of 1927 would be delving among designs of the barouches and carriages of bygone ages for ideas to incorporate in car bodies?

Oddities Which Annoy.

PERSONALLY, I should not grumble if manufacturers called a "holiday" in attempts to alter appearance and concentrated on improving detail, especially in the direction of accessibility. I am not hypercritical, but in some cars there are aberrations of design that remind one of the man who built a house and forgot to include a staircase.

Grease-gun nipples are a case in point. Why, as a preliminary to reaching some of them, should a man have to search for mats, old coats or sacking and then perform contortionist feats beneath the car? Or, again, why fit a clutch spigot which, according to the exhortation in the instruction book, should be oiled every 50 miles? Fancy having to remove the carpet and lift the floorboards three times in a run of 200 miles in order to comply with this counsel of perfection!

On one car I know the sparking-plugs fit into a rather deep recess, and the manufacturers have thoughtfully provided a cranked spanner to facilitate removal. Unfortunately, while one can fit the spanner, the cylinder-head nuts effectually prevent one from turning it, except in the case of the front plug, and the only way of reaching the others is first to remove the front one and then work along the row.

More About Photography.

A PROPOS my recent article on photography, a reader reminds me that a photograph can sometimes be improved by judicious trimming. For this purpose a sheet of stiff paper should be taken, and a piece cut from the centre approximately the size of the print. Using the paper as a "frame," it should be moved about over the photograph when the effect of giving less foreground or detail at the sides and top will become immediately apparent.

In this connection it is not a bad idea to study optical illusion. Sometimes a row of trees looks very noble to the eye, but fore-shortened in a photograph with the last tree only just discernible it appears disappointing. If, however, the print is cut so that the end of the trees cannot be seen the effect is of a row stretching for miles. I have seen the method employed with less innocent intent, to make a handful of people around an "orator" appear a crowd, and (let it be whispered) six motorcars outside a works an imposing procession.

Why Is Slamming Necessary?

A DETAIL to which manufacturers might give their attention is the need for fitting doors that do not require to be slammed. A catch that did its work silently and surely ought not to be an expensive article, and it would spare us the irritating necessity of having to pull the doors violently in order to close them. The act of slamming a door is not good for bodywork, for cars are not so solid as railway carriages, and the frequent jars are a fruitful cause of rattles and squeaks.

The Disappearing Beret.

WHAT has become of the beret? Is it hibernating like the butterflies or has a brief season sufficed to end its popularity? Like most good things, the beret was spoilt by elaboration, and the addition of tufts, tassels or other fripperies created a comic-opera effect that was bound to bring the fashion into disrepute. Perhaps the real beret will re-emerge with the sunny days, for it is hardly a suitable form of headgear to wear in an open car in the winter, and in a closed car it certainly looks out of place.

By the way, it would be interesting to know why a hale and hearty-looking gentleman, in a saloon going along the Harrogate-York road the other day, found it necessary to wear leathers and a helmet, while his fair companion at the wheel was managing to look very charming and comfortable without even a coat or hat!

Why So Exposed?

MAY I plead for better protection of brake compensating mechanism on cars? On too many it is entirely exposed to water and mud from the roads, and one cannot expect it to work properly when plastered over or clogged with dirt. On a second-hand car which I examined for a friend a week or two ago the various joints were not working at all, the whole assembly moving en masse. Obviously, some kind of shield was badly needed.

My own method for keeping exposed joints of this kind free and in decent order is to keep them liberally supplied with cycle lubricating oil, which penetrates where thicker lubricating oil will never get.



IN THE
GOOD OLD STYLE. — The old almshouses and Guild Chapel at Stratford-on-Avon are amongst the best examples of half-timbered buildings in the country.

MIDLAND OFFICES:
BIRMINGHAM: 16, Bennett's Hill.
Phone: Central 2572-3.
COVENTRY: 6, Warwick Row.
Phone: Coventry 4776.
NORTHERN OFFICES:
MANCHESTER: 196, Deansgate.
Phone: Central 2467.

Lights and Safety.

THERE is, we regret to note, a growing tendency amongst motorists to interpret the lighting regulations literally by illuminating only one front light at night-time, the idea being to take advantage of the law so as to effect a slight economy of current. The obvious demands of safety are overlooked by drivers who carry economy to excess in this way, a fact which they appreciate when they meet another driver carrying only one light. Sometimes the conditions are aggravated by the use of minimum-power bulbs, and certain owners even go so far as to fit a special side lamp of the bijou order.

There may be some excuse for using only one light when a dynamo has ceased to function or a bulb has burnt out, but, considering the very small saving that is effected if the lighting system is in proper order, it is difficult to understand why any driver should resort to such an extreme.

At the present time there is a pressing need for the exercise of every precaution against mishap, and motorists who drive with only one forward light—particularly along dark country roads—are not only ignoring the dictates of common sense, but are laying the whole motoring community open to criticism. What, for instance, are the reflections of an anti-rear-light cyclist who encounters an inadequately lit car? It is for motorists to set the example of good sense and good manners, so that they can persuade other road users to follow the sensible lead which they give.

Supercharging.

SINCE we last commented upon the possibilities of superchargers on this page important developments, which were then foreshadowed, have occurred, and it seems now that forced-induction engines have reached or, at least, have nearly reached a stage when they can be confidently placed in the hands of the general public. On the Continent very big strides have been made in the design both of supercharging units and of engines suitable for operating efficiently with forced induction, and so satisfactory have experiments been that the car which was placed first for all categories in the Monte Carlo rally had a 1,100 c.c. supercharged engine, a bulky saloon body and five passengers. This particular event is essentially of a touring character, calculated to show up to

"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.

Conducted by
EDMUND DANGERFIELD.

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advantage the characteristics which are most desirable in a touring car.

In England, too, important developments in connection with supercharging for touring cars are pending, whilst we were able to announce last week that one British light car manufacturer is about to market a sports car fitted with a supercharged engine. This car we have been able to try on the road. It will restart on the level on top gear, run sweetly and accelerate well

in top gear at 8 m.p.h. and is capable of about 100 m.p.h. on the track. Petrol consumption is at the rate of approximately 20 m.p.g. In view of the fact that supercharging until recently was confined to racing cars, there is reason to believe that, with the increased number of experimenters which is bound to result from this invasion by the supercharger of the touring-car field, the next 12 months will produce developments of a most important nature.

The Bugbear of Vibration.

LOOKING back on the large number of cars which we have tested under road conditions during the past dozen years we realize that a very undesirable engine attribute, the presence of which was almost taken for granted before the war, is gradually being eliminated. We refer to vibration or, as it is more commonly known, engine "periods." Despite theoretical difficulties, designers are now evolving high-speed engines in which there is no noticeable period throughout the useful range of speed or in which the period of vibration is so slight and takes effect between such close speed limits that it can, for all practical purposes, be ignored. This is a very big step forward, for it will surely be admitted that vibration and its effects have, in the past, been one of the biggest bugbears of small cars. Those who enjoyed a run in one of the earliest cars will appreciate the enormous strides that have been made.

Until recently engines were unfairly credited with being the sole cause of vibration. It is now being realized more than ever that lack of perfect balance in propeller shafts, clutches, road wheels and subsidiary driven units may produce effects very similar to engine periods, and designers are turning their attention to the problems which arise. In this issue we include an article that throws considerable light on this subject, which is of paramount importance to private owners.

CYCLECAR COMMENTS.

By Shacklepin.

A SALOON-BODIED AERO-MORGAN—COMFORTABLE AND SILENT—SPEED AND ROAD-HOLDING QUALITIES UNAFFECTED.

ALTHOUGH the vogue of the fabric body has resulted in even the very smallest four-wheeled chassis being fitted with enclosed coachwork, one would hardly consider a saloon-type of body on a Morgan chassis to be really practicable. Such a body, however, has been designed and constructed and, as an accompanying photograph shows, it is of both attractive and sporting appearance.

Moreover, it is comfortable and cosy to travel in, not unreasonably noisy and does not in any way affect the performance of the Morgan.

The body, which is known as the Newt saloon, is built to the design of Mr. Russell, of 27, Harrington Gardens, London, S.W.7, who is marketing similar Morgans, the price of the complete cyclecar being well under £200. The body is constructed of ash framing covered with fabric in the normal way, and it is secured to the chassis in exactly the same manner as is the standard Morgan-Aero body. This is a feature which meets with the approval of the Morgan Motor Co., Ltd.

There is a wide door on each side, and the width of those on the production models will be 24 ins., 4 ins. wider than those of the car illustrated herewith. They provide adequate room for easy ingress and egress and open level with the floorboards, so that one steps straight out on to the road. With wider doors the rear quarter lights will be set back a corresponding amount. Sliding windows are provided in the doors, facilitating signalling and affording ventilation.

The port holes near the tail enable the driver just to see what is overtaking him, but being set obliquely overcome the dazzle which would be set up in the screen from the headlamps of any overtaking vehicles, as would occur were the window set in the middle of the tail, for example. Additionally, the port holes rather enhance the appearance.

The tapering off towards the tail with a perfectly straight waist rail together produce a striking and handsome appearance. Two colour schemes can be supplied at a small extra charge. The screen is of the flat single-panel type and provides

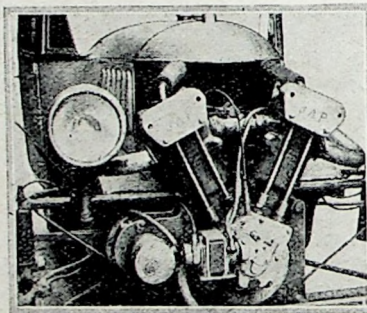
B24

The Newt saloon body is an attractive piece of work. Ample luggage space is provided in the tail, and close-up mudguards are fitted.

excellent driving vision. A double panel sloping screen with V corner-pieces can be supplied to order.

Concerning the interior, a pneumatic back squab is provided which, combined with pneumatic cushions, makes for great comfort. The doors are lined with pleated leather cloth, giving a pleasing effect. The standard equipment includes also a roof-light.

The height inside is over 3 ft., which provides sufficient headroom for any driver of average height,



The dynamo is mounted in a special bracket on the engine cradle plates, where it is readily accessible.

whilst the width, which is greater than that of the standard Aero body, avoids any cramping.

The tail over the wheel is arranged to provide accommodation for luggage and will, in fact, take a quite large suitcase. The gear lever is transferred to the centre and so does not interfere with the driver's door. The original Morgan scuttle and dash are retained, but the angle of the dash will be altered to make it slope.

The standard equipment will include the Beart reduction gear in the steering, a Dyneto electric wind-screen wiper, a speedometer and dash lamp. The Morgan standard battery will be used, but will be housed at the back of the seats in a locker fitted beside the centrally placed toolbox, through the bottom of which, of course, one gains access to the bevel-box. The standard

Morgan headlamps will be used, but neat little wing lamps are to be fitted additionally. A special bracket enables the dynamo to be fitted alongside the engine crank-case.

Close-up bicycle-type wings or flared wings will be optional. In the case of the first-named, they are rigidly secured and prevented from rattling by extra stays on the outside. These are bolted at the lower ends into the stub axles, the bolt passing through a hole drilled in the hub cap. The exhaust lifter is placed conveniently just inside the door.

I went for a run of about 100 miles in this saloon and was most agreeably surprised to find that it was not until one was driving very fast indeed that the noise inside became really appreciable. At normal touring speeds and up to over 50 m.p.h. it is not unreasonably noisy; in fact, when the bevels have been run in a little more—they were almost new—it should be quite quiet inside. One particularly good feature is that it does not drum at any speed.

The chassis of the Newt saloon tested was fitted with one of the latest type J.A.P. o.h.v. engines, and the fact that over 50 m.p.h. was recorded on the speedometer in bottom gear and that 70 m.p.h. can be obtained in top suffices to show that the saloon body does not mar the performance in any respect. Contrary to what might be expected, there is absolutely no sign of rolling when cornering fast. In fairness, it must be stated that the track of the chassis is wider than the standard Morgan job.

On greasy surfaces, too, it was particularly steady. The weight, incidentally, is only about 5 lb. different from that of a standard Aero.

The saloon will be supplied by Mr. Russell on either the o.h.v. or side-valve engine Morgan chassis, the price of the latter being about £12 lower.

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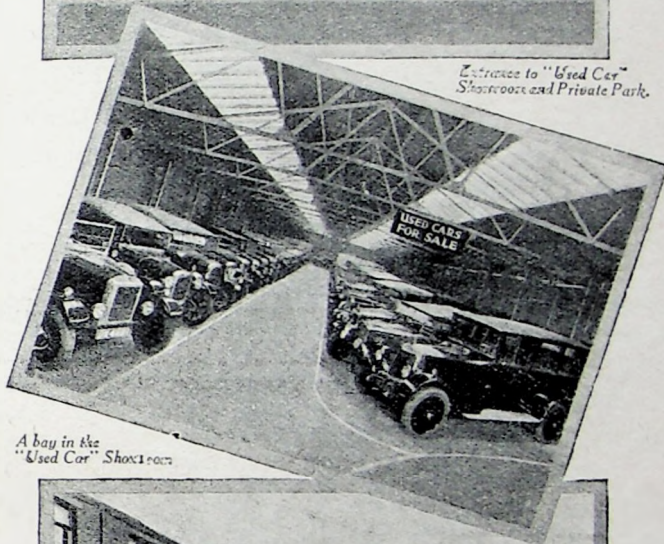
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Will it be the same this Easter?

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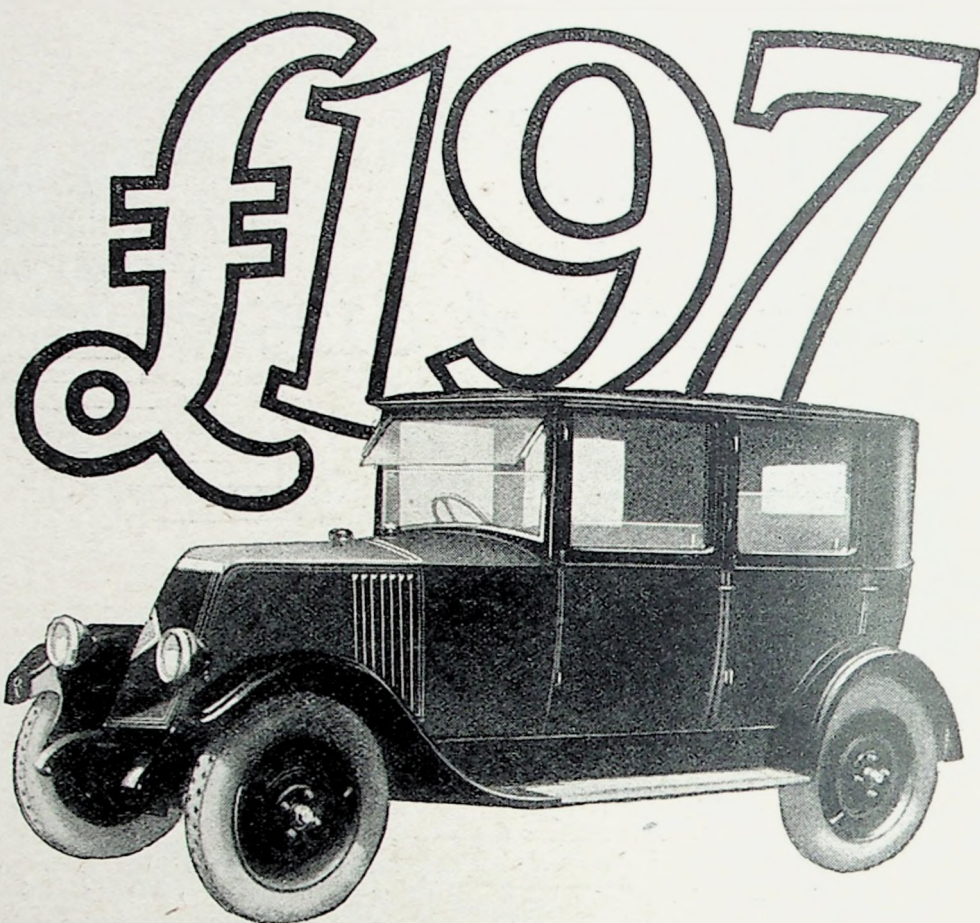
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OXFORD WINS HILL-CLIMB.

BAGSHAW'S FRAZER-NASH
MAKES THE FASTEST RUN.

A WISE club committee will make the motoring events which it organizes as attractive as possible to the club members, leaving the resultant entertainment of spectators to chance. It can certainly be said that the Oxford University Motor Club and the Cambridge University Automobile Club provided plenty of fun for their competing members at Ewelme Down last Saturday, when the Inter-University Hill-climb was held. That things were a little tame from the spectators' point of view was a secondary consideration.

The course, lent by kind permission of Mr. J. Murray, consisted of part of the drive leading to Ewelme Down. It measured a kilometre in length and included two or three gentle bends, which, with the exception of the first one, could safely be taken at speed by all the cars engaged.

The first man up was R. R. Jackson (Cambridge) in a single-seater Frazer-

Nash, who was timed over the course in 54.3 secs., equal to a speed of about 46.5 m.p.h. from a standing start. The rain, which had been descending in torrents, had scarcely abated before he started.

Several of the Austin Sevens did very well. A. N. Maclachlan (Oxford) being timed up in 56 secs., but W. B. Chisham (Cambridge) took no fewer than 91.2 secs. on his first ascent. No wonder he looked depressed. However, he did better on his second attempt. The weather improved and the icy wind dropped later in the afternoon, whereupon G. W. Bagshawe (Frazer-Nash), representing Oxford, put up the best time in the car classes, climbing in 42.6 secs., equal to a little under 60 m.p.h. In addition to Frazer-Nashes and Austins, good performances were put up by drivers of Amilcar, Alvis and Rally cars.

Two Morgans, which made the best times in the sidecar class, were driven

(Left) R. A. Beaver (Morgan-Jap).
(Above) A. N. Maclachlan (Austin
Seven), both Oxford men.

by E. A. Barker (Oxford), whose passenger lay prone across the tail of the vehicle, and R. A. Beaver (Oxford).

The result were as follow, Oxford winning the cup presented by the British Cycle and Motor Cycle Manufacturers' and Traders' Union:—

UNLIMITED C.C. SIDECARS.

1. E. A. Barker, 1,086 c.c. Morgan, 45 secs.
2. R. A. Beaver, 1,086 c.c. Morgan, 48.7 secs.

1,100 C.C. CLASS.

1. R. R. Jackson (Cambridge), Frazer-Nash, 54.3 secs.
2. A. N. Maclachlan (Oxford), Austin, 56 secs.
3. V. J. Wilmott (Cambridge), Rally, 56.9 secs.

1,500 C.C. CLASS.

1. G. W. Bagshawe (Oxford), Frazer-Nash, 42.6 secs.
5. L. S. Mainwaring (Oxford), Frazer-Nash, 47.6 secs.
3. W. D. Phillips (Cambridge), Frazer-Nash, 53.5 secs.

A. Arnold (Cambridge), Amilcar, 53.5 secs.

UNLIMITED C.C.

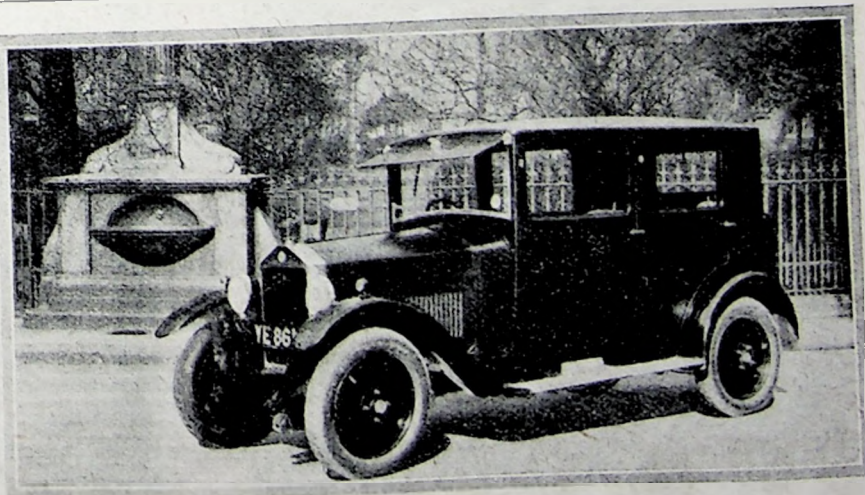
1. G. W. Bagshawe (Oxford), Frazer-Nash, 42.6 secs.
2. H. Martineau (Cambridge), Vauxhall, 46.6 secs.
3. L. S. Mainwaring (Oxford), Frazer-Nash, 47.6 secs.

(All subject to confirmation.)

Improved Mathis Coachwork.

SEVERAL very attractive 10 h.p. Mathis fitted with saloon coachwork can now be seen at the new showrooms of B. S. Marshall, Ltd., 25, Basil Street, Knightsbridge, London, S.W., the photograph showing what is called the Super de Luxe, price £315. This is of the Weymann type.

A photograph of the new showrooms of B. S. Marshall, Ltd., the sole concessionaires in this country for Mathis cars, appears in a news page. The premises at Hanover Square have been vacated and the new premises are not only larger but very much more convenient. They include a roomy and well-lit showroom, and in the basement a large workshop thoroughly up-to-date and capable of dealing with all forms of repair.



STUDYING
COMFORT.

— The new 10 h.p. Super de Luxe saloon Mathis. A trunk is a permanent fitting at the back.

INTERESTING GWYNNE DEVELOPMENTS.

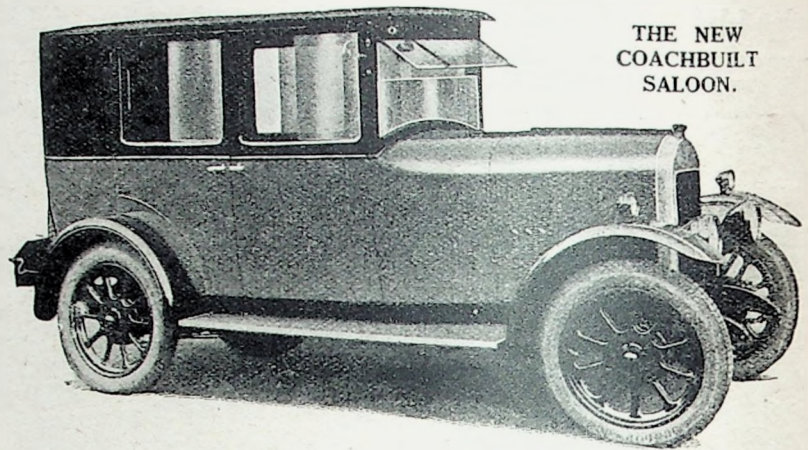
REDESIGNED ENGINE OF
GREATER CAPACITY, AND
MORE COMFORTABLE AND
LUXURIOUS COACHWORK.

FOR the coming season Gwynne Cars, Ltd., Church Wharf, Chiswick, London, W.4, are introducing a new range of 10 h.p. models, the outstanding features being re-designed bodywork and an entirely remodelled engine with a 5 mm. larger bore.

The cars will be obtainable in two and four-seater form at £220; for £260 a fabric or coachbuilt saloon is available, whilst an attractive sports model is listed at £275. Apart from the engine the characteristics of the 8 h.p. chassis have been retained, with the addition of four-wheel brakes as standard. These were fitted formerly as an extra.

In fitting a larger engine the manufacturers have been influenced by a desire to give extra power to cope with the slightly heavier bodywork. The bore and stroke are 63 mm. and 100 mm., giving a capacity of 1,247 c.c. and a Treasury rating of 10 h.p.

Great care has been exercised in redesigning the engine, which now incorporates thoroughly up-to-date features. The four cylinders are cast en bloc, and the neatness of the general assembly can be gauged by glancing at the accompanying photographs. Like the old engine, the new one has a stout three-bearing crankshaft, whilst forced-feed lubrication is, of course, employed. Thermo-siphon cooling is used, the



THE NEW
COACHBUILT
SALOON.

This model sells for £260. For the same figure a very handsome fabric saloon can be obtained. F.W.B. are now fitted as standard.

upper water outlet being of exceptionally large diameter.

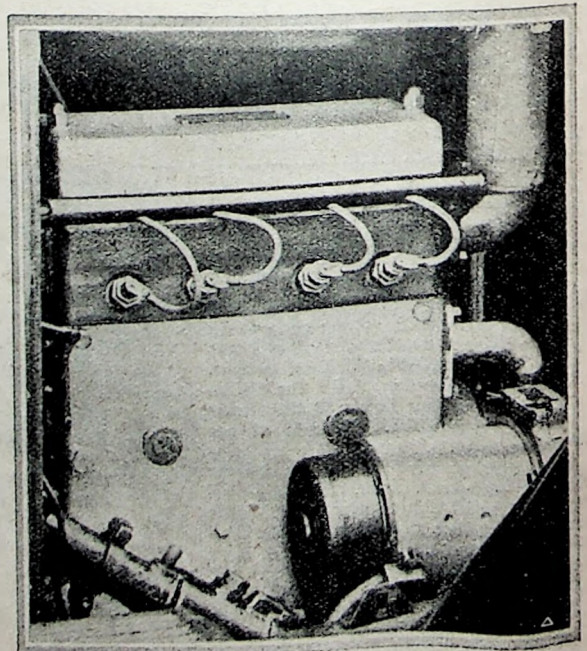
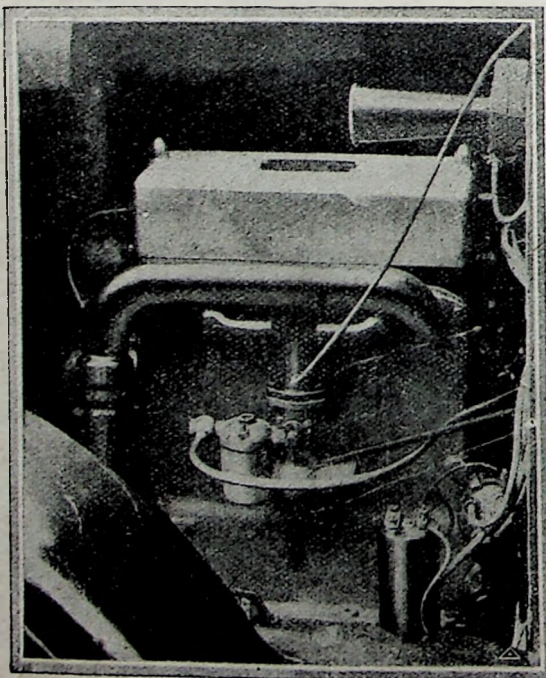
Coil instead of magneto ignition is now incorporated, the coil and distributor being driven by skew gear off the camshaft and situated to the rear and on the near side of the cylinders. Care has been taken to make the ignition unit very accessible. On the same side of the engine are the combined inlet and exhaust manifold, a very neat mounting being provided for the Solex carburetter. The exhaust manifold is led away at the front of the engine.

On the off side of the block is mounted a Lucas 12-volt chain-drive dynamotor, one of the features of which is, of course, the silent start which is possible with this type of dual-purpose machine. The plugs

are carried in the detachable head and are easily accessible, whilst removal of two nuts enables a cover to be taken off, disclosing the overhead-rocker gear. This is actuated by push-rod mechanism of a type which has already proved very satisfactory with Gwynne cars.

The whole unit strikes one as being eminently practical, the layout having been considered not only from the point of obtaining maximum efficiency but of providing an owner-driver with a power unit requiring little attention, but easy to get at should occasion arise.

From the engine rearward the chassis closely resembles previous Gwynnes, a cone clutch, three-speed gearbox and spiral-bevel semi-floating rear axle being employed. The gear ratios are 5, 8.65 and 15 to 1.



Near and off-side views of the new Gwynne engine.

The HARRIS LEON LAISNE.

A NEW FRENCH LIGHT CAR WITH UNCONVENTIONAL BUT EFFECTIVE SUSPENSION.

A NEW light car of quite exceptional interest has just made its appearance in France. This is the Harris Leon Laisne. The leading features of the car are great simplicity in chassis layout and a novel form of suspension, independent springing being provided for each wheel.

This idea has been coming into favour amongst French designers for some time past, and in the Harris Leon Laisne the system is introduced in a very practical manner. The side members of the frame consist of perfectly straight, heavy-gauge steel tubes, 80 mm. in diameter. The road wheels are carried on hollow steel levers, which are pivoted to the frame.

From each of these levers a small arm extends downwards through a slot in the top of the tubular side member and actuates a combination of powerful helical springs housed within the tubing. As the lever arrangement gives a reduction of 4 to 1 between the vertical movement of the wheel under the influence of road shocks and the movement imparted to the springs, it follows that the latter need to be very stiff. Actually, the combination of main and secondary springs requires a thrust of something like three tons to compress it "à bloc," a condition which, needless to say, is never

cylinder 1,200 c.c., a six-cylinder 1,200 c.c. and a six-cylinder 1,500 c.c. The power units are supplied complete by famous proprietary engine builders, whose productions are employed in many of the most successful French light cars.

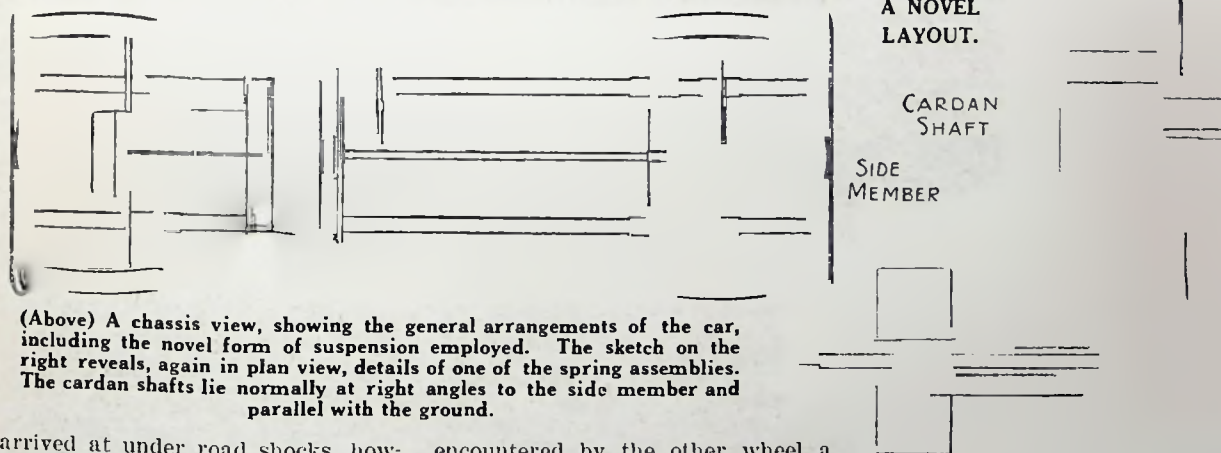
Transmission is by open propeller shaft to a Gleason bevel differential. From the differential to the rear wheels the power is transmitted through universally jointed cardan shafts, and in order to make these shafts as long as possible the inner ends have been brought close to the centre of the differential.

In the case of a car with independent suspension to each wheel steering arrangements call for careful study. It is obvious that when one front wheel rises over an obstacle not

in the Harris Leon Laisne chassis, which is a distinctly high-grade production throughout. One which may be noted in passing is the fitting of Timken roller bearings to the steering pivot pins. Four-wheel braking is employed, and the front-wheel brakes are operated by a heavy type of Bowden cable.

A sheet-steel platform stretches across the frame, acting both as an undershield (the transmission being above the level of the frame) and as a body platform. The front wings are also attached to this steel plate, and it may be noticed that they have no stays or internal supports of any kind.

The steel plate is only 12 ins.



(Above) A chassis view, showing the general arrangements of the car, including the novel form of suspension employed. The sketch on the right reveals, again in plan view, details of one of the spring assemblies. The cardan shafts lie normally at right angles to the side member and parallel with the ground.

arrived at under road shocks, however bad the surface may be. Thus there is a reassuring element of security, as the helical springs cannot in any circumstances be broken by the very small movement imparted to them. The main spring has a sectional diameter of 15 mm. and the secondary spring of 9 mm. The return spring, which functions as a shock absorber, has a sectional diameter of 10 mm. The tension of the springs can be adjusted to suit different bodies.

Three models of Harris Leon Laisne chassis are made—a four-

encountered by the other wheel a strain will be put upon the steering cross-rod. In the Harris Leon Laisne this difficulty is overcome in the following manner:—

From the bottom of the steering column a pair of ordinary bevel pinions transmit the rotary movement of the steering wheel to a cross-shaft. On this cross-shaft is a worm and nut reduction gear, mounted in the centre of the frame. The steering cross-rod is made in halves, which are articulated at the centre to the nut portion of the reduction gear. There are many detail refinements

above ground level and forms the floor of the body. The low build of the car is thus obvious. Our Paris correspondent was recently invited to try one of these cars, and he was very favourably impressed by the suspension. The vehicle tested was a stripped chassis with hard, cushionless seat attached directly to the steel platform. In spite of this it was difficult to detect the difference between running on perfectly smooth asphalt and on quite rough pavé.



HERE are few owners who do not still derive a great deal of pleasure from doing the odd jobs about their cars, but the days have passed when it was a real hobby, for nowadays business must be put before pleasure—thanks to the increasing utility of motorcars. For this reason the speediness with which maintenance jobs can be done is important, but some owners are only too ready to attribute delay to the general arrangements of the chassis or the equipment provided, instead of studying the methods they adopt.

This applies to small as well as big jobs, an instance being the periodical filling of the battery cells. This is regarded frequently as a job which can be done at an odd moment, but some drivers—not realizing that a coin will do as well—take the trouble to unearth a screwdriver from the tool kit so as to remove the screws from the cover of the battery box. Although celluloid funnels can be obtained for filling up, few owners have one, and, in its absence, they endeavour to pour the distilled water direct into the comparatively small orifices of the cells. Water is spilt and time subsequently wasted—if the owner is conscientious—by cleaning up. This can be avoided entirely by a few moments spent in making a paper funnel.

Grease-guns of the high-pressure or hook-on type have speeded up what was once a long and messy operation, but many drivers still use old-fashioned methods for replenishing the gun. Grease can be purchased nowadays in special containers for speedy and clean replenishing, whilst grease cartons ready for slipping straight into a gun are also obtainable.

One form of grease container is fitted with a circular disc which just fits the inside of the tin, and has a hole in its centre over which the open mouth of the gun fits. The barrel of the gun is placed in position, and when pressure is applied in a downward direction the grease is automatically forced into the barrel of the gun. A diagrammatic sketch of the arrangement is shown on the extreme right of the accompanying group of illustrations.

At the end of a long day's run there is a temptation to drive a car into the garage, switch off and forget about it until making preparations for the next run. There is one little job, however, which, if done when

DO IT THE :: :: QUICKEST WAY.

A FEW L.
BE SAVED
SHOWS T
LABORIO

the engine is warm, takes slightly less time. This is filling the sump. The engine being warm, oil finds its way through the gauze far quicker than when it is cold. We should emphasize that this is a comparatively minor point, but, nevertheless, it counts.

Washing a car in the approved fashion with hose and so on is most essentially a "labour of love," but if it is desired to do it thoroughly it is a mistake not to remove each of the four running wheels in turn so that access can be gained readily to the under parts of the wings, springs and so on. The inner sides of the wheels also can be dealt with in a minimum of time and with the least amount of trouble. Incidentally, the periodical removal of wheels prevents the tendency of some types to "gum up," a condition which may lead to long delays on the road when a driver is, perhaps, in a hurry and has to change a wheel.



A SELECTION OF
PRACTICAL HINTS.

With the idea of saving time later on, a wise owner fills the sump when the engine is warm. The seater hood is more easily erected from inside a car. It can be pulled forward evenly at each wheel in turn. It is more laborious, apparently, but really saves time and trouble. A tool roll handy: finally, it is quicker to fill up from a pump. An inset sketch shows

ES INDICATING HOW TIME AND TROUBLE MAY
MAINTENANCE JOBS AND SO FORTH. THE ARTICLE
THE QUICKEST WAY IS NOT ALWAYS THE LEAST
IT A LITTLE EXTRA TROUBLE IS GENERALLY
WORTH WHILE.

There are folk who are inclined to scoff at the phrase "one-man hood," but it is usually because they do not understand the correct way of erecting and lowering one single-handed. In the case of a four-seater, for instance, they usually make the mistake of trying to erect the hood from outside, whereas it is quicker to pull it up from inside, starting the job in the rear-seat compartment and stepping back into the front seat to finish it.

When lowering a four-seater hood, it is a mistake to endeavour to ease matters by pulling down on one of

the side members so as to produce the necessary concertina effect. It is generally quicker to push the hood straight back and up, so that it pivots on the rear stick only, then to go to the back and pull on the second stick, when the whole structure will collapse quite gently under its own weight. It can be held up, however, as desired, in order to fold the fabric neatly.

Filling up from two-gallon petrol cans is rapidly becoming old-fashioned; it is quicker to use the nearest filling station as a sort of headquarters, replenishing direct from a pump.

With regard to maintenance jobs which may require screwdriver, pliers, box spanners, and so on, it is a far better plan to produce the entire tool kit and unroll it near the scene of operations, so that any tool can be chosen at once, than it is to pick out what are considered to be the tools which will be necessary, the roll being left under the seat or in the appropriate locker. Other ways of saving time may suggest themselves, but the foregoing should be sufficient to indicate general lines upon which an attempt to save time and trouble should be pursued.

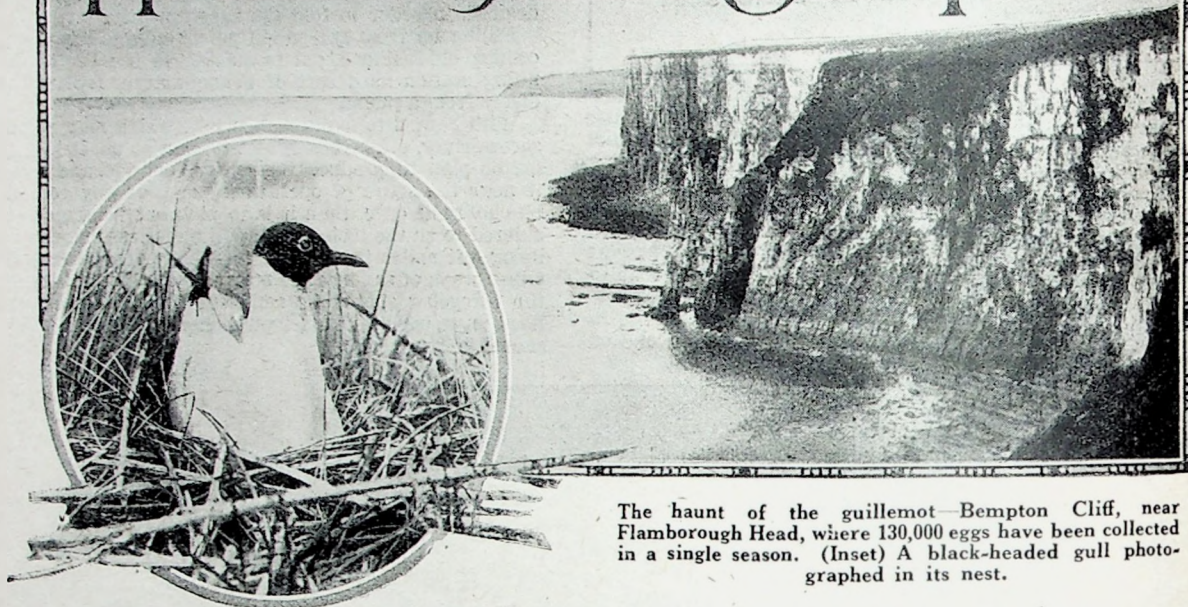
The illustrations
show only a few
various
ways saving
time. Others
should suggest
themselves to
owners who pride
themselves on
their efficiency.



A handy type of "quick-fill"
grease can. It is referred
to in the text.

day run, for example. A four-
naturally. 100, washing a car, remove
justments

Haunts of the Sea Fowl.



The haunt of the guillemot—Bempton Cliff, near Flamborough Head, where 130,000 eggs have been collected in a single season. (Inset) A black-headed gull photographed in its nest.

INTERESTING OBJECTIVES FOR TRIPS DURING THE SPRING MONTHS.

THERE are probably many motorists who take a casual interest in birds, but who are unaware of the places where sea-birds nest in large colonies in the British Isles. A visit to one of these colonies, of which there is quite a number, will prove most interesting throughout the nesting season.

One of the largest of these colonies is at Bempton Cliff, just north of Flamborough Head. Here the guillemot, puffin, kittiwake and razorbill nest in thousands. "Climmers," as they are called locally, collect the eggs in the early season, sometimes as many as 400 eggs being taken in one day. A very interesting afternoon may be spent watching these men, who work in parties of about five; four men stay at the top handling the rope, while the fifth descends the sheer cliff face, which is some 400 ft. in height, and works the ledges below, collecting the eggs and placing them in haversacks slung over his shoulders.

Protecting the Climber's Head.

Accidents, fortunately, are rare, the main source of danger being from falling rock loosened by the rope. As a head protection the climber wears a steel helmet, which proves a sound substitute for the stuffed bowler hat or policeman's helmet of pre-war days.

When undisturbed the birds can be seen in vast numbers lining the edges of the cliff on which the eggs are laid, while many more swim on the surface of the sea below. It is amusing to watch a bird returning to an already crowded ledge, where it is greeted by weird calls, and in many cases is forced to make several attempts before obtaining a footing.

Another large bird resort is situated at Ravenglass, on the coast of Cumberland. Here the birds are of a different species, being mainly black-headed gulls, amongst which are a few terns and oyster-catchers. The nests, of which there are hundreds, are situated amongst sandhills and are easily accessible. Permission can usually be obtained from the landowner to visit this gullery after midday, on the understanding that no eggs are taken or destroyed.

When walking amongst the nests a cloud of gulls will circle overhead, while the particular birds whose nests one happens to be near swoop down within a few feet

of the heads of the intruders, uttering almost deafening squawks.

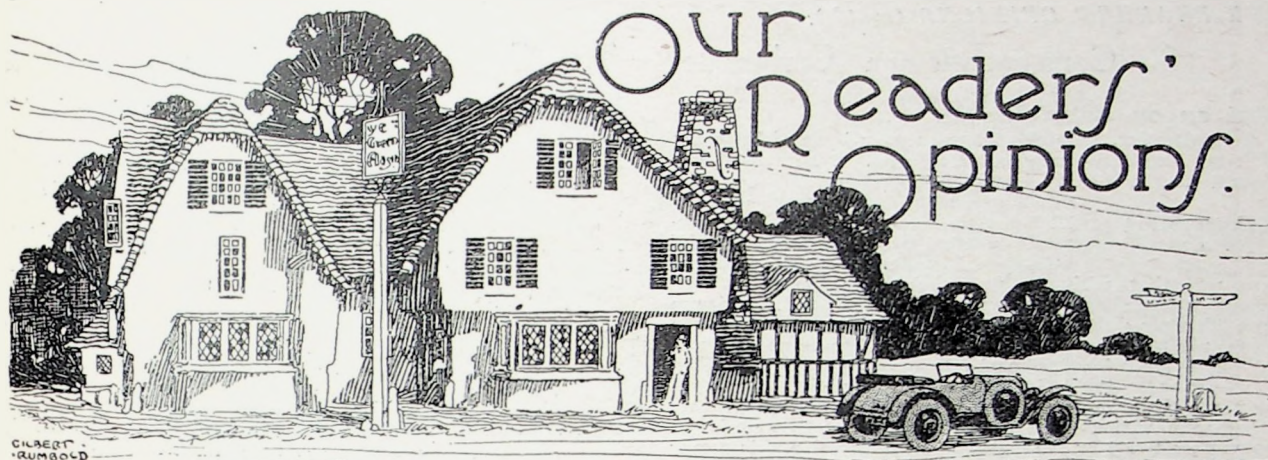
The young birds, which are of a mottled brown colour, make use of their natural camouflage by hiding amongst the coarse grass round the nests; sometimes they are so difficult to see that it is only by using care that one can avoid treading on them. The nests are so close together in some places that six to eight will be found in the space covered by an average four-seater light car.

It is only natural that the islands round our coast, being more secluded, are favourite haunts of sea-fowl; Ailsa Craig, Bass Rock, the Farne Islands, Lundy and Scilly Islands all have their bird colonies; but without going to the trouble of leaving the mainland the motorist will find smaller bird colonies in many of the more secluded parts of our coast. At these spots it is possible to spend a very pleasant afternoon, which will make an entire change from the usual week-end or afternoon's run.

N.L.L.



A young black-headed gull endeavouring to take advantage of its natural camouflage amongst the coarse grass.



We welcome at all times letters sent to us by readers for publication in these columns, but take no responsibility for the opinions expressed therein. No anonymous communications will be accepted, but writers may use a nom de plume if desired. To ensure publication in the next issue letters must reach this office not later than Monday morning. They should be addressed to the Editor, "The Light Car and Cyclecar," 7-15, Rosebery Avenue, London, E.C.1. 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.

CHEAPER CYCLECARS.

The Pros and Cons of Single-cylinder Engines.

Single-cylinder Cyclecars.

The remarks headed "Why Not Singles?" under "Topics of the Day," in last week's issue, naturally interested me very much and I fully agree with the editorial opinion that a single-cylinder-engine three-wheeler has distinct possibilities. I would go farther, in fact, and say that I can see no objections

to a single-cylinder four-wheeler. I am not quite sure, however, whether the saving in manufacturing costs would be so great as might appear at first sight.

I am aware of the efficiency of modern 500 c.c. single-cylinder engines, but I question whether this efficiency would be sufficient to allow of a simple two-speed chain and dog clutch gear being used. If a three-speed box must be fitted the cost of this would, in some measure, offset the saving on the engine.

There is also the taxation trouble. Whilst a "flat rate" of £4 per annum is charged for three-wheelers, irrespective of horse-power, I think the public will be inclined to go in for high-powered engines in order to get their money's worth. Of course, if there was a very great difference in first cost this consideration would not carry so much weight, especially as a little practical experience would soon prove the ability of a 500 c.c. single to do its job.

In my opinion, a very attractive four-wheeler could be built with the single-cylinder engine at the rear and fitted with a unit-construction three-speed gearbox, final drive being by a short chain to a solid rear axle.

SHACKLEPIN.

Sacrificing Comfort or Performance.

Your editorial headed "Why Not Singles?" opens an interesting field for discussion. The fact that 500 c.c. combinations are very popular in the motorcycle world, whilst even 350 c.c. machines are often used for sidecar work, would certainly seem to indicate that a 500 c.c. three-wheeler would be a success; there are, however, a number of other points to be considered. In the first place, a two-speed gear is practicable only on account of the large reserve of power available with the 1,000 c.c. twin-cylinder engines usually fitted to three-wheelers. With a 500 c.c. single, three speeds are practically essential if a good road performance is required. Thus part of the saving in cost obtained by using a smaller engine is wiped out by the increased cost of the transmission.

Again, even with three speeds, a reduction in weight of the whole vehicle would be desirable when so small an engine is fitted. As I see it, this weight reduction can be obtained only in two ways—by expensive body and chassis construction or by sacrificing comfort and weather protection. The former is obviously out of the question, whilst if the latter is adopted the resulting vehicle will not be much superior to a good motorcycle and sidecar.

Being only an "ordinary motorist" my views may be wide of the mark. This letter is not, however, written on the spur of the moment, for I have given this subject a good deal of thought and have followed the development of motorcycles and three-wheelers for many years.

OMEGA.

The Motorcycle Engine.

Surely what is wanted to revive the single-cylinder cyclecar—it would not be an innovation, as there were the A.C., the Premier, the Girling and a few others before the war—is the reintroduction of an engine of the Green water-cooled pattern. Such an engine, with a three-speed gearbox built in unit, could be mounted just in front of the rear wheel and with a single-chain drive would provide the basis of a really first-rate layout for an inexpensive three-wheeler. Whilst we have to depend for cyclecar power units upon engines designed for motorcycles, progress along the right lines necessarily must be very slow indeed.

HAL FRENCH.

All for £65—

Your remarks about single-cylinder engines under "Topics of the Day" impressed me as being particularly timely. Three-wheelers of recent years have not come down in price to anything like the same extent as have four-wheelers, and this, presumably, is because the three-wheeler manufacturers will not sacrifice performance to price. I should imagine that a standard model Morgan with a single-cylinder 500 c.c. air-cooled engine would be marketable at about £75 instead of the £89 which it costs with an 8 h.p. two-cylinder air-cooled J.A.P., whilst if smaller tyres were fitted and so forth, perhaps the price could be lowered to £70 or even £65.

The makers of the Omega and Coventry-Victor three-wheelers, who have apparently found their feet quite easily in the three-wheeler market, might well experiment along these lines, if Mr. Morgan's conservatism will not allow him to do so.

A. G. SALMON.

B35

OUR READERS' OPINIONS (contd.).

Constant-vacuum Carburetters—The Controversy Continues.

Test on an Aston-Martin.

Following Mr. Mantell's letter in your issue of February 25th my experience may be of interest. I have tried out several makes of fixed-choke carburetter and an S.U. constant-vacuum instrument on my 11 h.p. Aston-Martin; the latter carburetter is fitted as standard. The chief difference I noticed in these carburetters was that with the fixed-choke type the petrol consumption was about 27 m.p.g., and with the S.U. the figure was 38 m.p.g.; the slow running with both types was the same, whilst the acceleration also proved to be about equal. All-out speed with fixed-choke type was 63 m.p.h., with a four-seater touring body, and 68 m.p.h. with the S.U. I may say that the fixed-choke type carburetters tested were tried with various-sized choke tubes and jets, and in all cases were tuned by the makers. In my opinion, this proves that the variable-jet type is quite suitable for a small high-revving engine.

Interesting Results

H.F.G.

Large and Small Engines.

In reply to Mr. Mantell's letter in your issue of March 4th and your editorial note, I do not think that anyone in their sober senses who read his article could but suppose that he was referring to high-speed internal-combustion engines generally. He seems somewhat annoyed with me, and accuses me of making nothing but "blunt and unsupported contradictions." Now, it seems to me that a good many of my contradictions have had a great deal of support from your other correspondents, so that the situation might be left at that.

Do They Differ Materially?

Mr. Mantell's effusions on the constant-vacuum type of carburetter consisted mainly of a lot of bald statements unsupported by any evidence, and he should not mind if he gets contradiction. However, it now appears that Mr. Mantell has definitely tied himself down to engines of 1,500 c.c. and under. I should just like to ask him if he is seriously going to maintain that the problems of carburation on high-speed engines materially differ between this class and those of 1,501 c.c. and over? If so, I must brow up the sponge.

T. C. SKINNER.

Losing Sight of—

I fear that in the interval that has elapsed since the appearance of my original article on the carburation of small high-speed engines your correspondents, Prof. Low and "Samohlt," have rather lost sight of the main point at issue, which has been the subject of so much discussion. I am entirely with the Professor in his opinion that the direction of investigation should be along lines making for driving comfort, and I also agree with "Samohlt" that the study of extreme speeds is of much less importance to the average motorist than a good performance at ordinary road speeds.

—The Point at Issue.

I am a comfort-loving dog myself and personally have no use whatever for cars in which "putting up the knots" is the main if not the sole desideratum, but surely these gentlemen must recognize with me that there are thousands of motorists who have totally different views as to what constitutes joy when sitting behind the wheel. They must both know that a large number of cars are turned out each year in which every available ounce of power is required from the engine and that carburetter contracts are gained and lost on the results of one horse-power of variation on the bench. It was the increasingly difficult problem of "carburetting" these small high-speed engines that formed the subject of the article in question.

Every small engine is, in a sense, of the high-speed type, but the class to which I referred originally was of the order which is technically termed high-speed.

I refer to the class of engine which, with a limit of 1½ litres, produces 40 h.p. and over, and for this kind of power unit I was of the opinion that constant-vacuum carburetters were not so well suited as those of the fixed-choke order, owing to their higher resistance and therefore lower peak efficiency.

"Samohlt" agrees that in this respect the palm is due to the open carburetter, and thus the argument with him on this point is finished.

B36

I am puzzling to know, however, why he should characterize as "hair-splitting" my refusal to admit Mr. Moir's Bentley experiences as having a correct bearing upon the subject. I should have thought that an engine of this size (80 mm. by 150 mm., I believe) can have very little in common with the small "revvers" under review.

The Bentley engine, with its large reserve of power, does not require to be stretched to its maximum output as do small sports engines, and therefore its carburation conditions can be quite different, but when, for record-breaking purposes, this maximum has been required am I not correct in saying that fixed-choke carburetters were used?

In one respect I feel that I must stand corrected, namely, in apparently conveying, by inadvertent innuendo, the suggestion that Morris Motors' selection of accessories is governed by cheapness. Nothing could have been farther from my thoughts.

I am aware of Mr. Morris's preference for carburetters of this type and have no doubt his reasons are excellent, but the ordinary Morris is not a sports car and the power curve of its engine in no way corresponds with those of the engines under discussion. I am sure, therefore, he would be the first to admit that his preference and selection have no bearing in the present instance.

L. MANTELL.

* * Once again we must emphasize the fact that Mr. Mantell's articles and subsequent remarks apply only to high-speed light car engines of the sports type.—Ed.

Mr. Mantell's Remarks Upheld.

I have been technically associated with four of the best-known constant-vacuum carburetters (past and present), so I should know something about them. I certainly do not consider Mr. Mantell to be unfair to C.V. carburetters.

"Snap" Acceleration.

On the contrary, I consider that their capacity for "snap" acceleration can be sadly overrated. Run slowly with a C.V. and then open out suddenly; the valve will immediately rise to about three-quarters open, drop very slightly, and then remain in this position until the engine revs. have increased sufficiently to push it up farther.

In short, it belies its name—a fact of which anyone who has studied the action of a vacuum valve in relation to engine speed and throttle opening must be aware.

If this peculiarity is taken care of by dashpot restriction, which is provided on some well-known makes of C.V. carburetter, the valve becomes sluggish in action and does not seem to be keen on rising to its fullest extent.

To enable a C.V. carburetter to approximate to the peak of an open carburetter set for power it is necessary to reduce the weight of the moving parts or increase the lifting area. This impairs its C.V. qualities, without giving it the advantages possessed by the open carburetter with its free venturi choke. Quite recently two open carburetters have appeared which permit of almost unlimited "snap" acceleration, more, in fact, than any C.V. carburetters I have handled.

I do not consider Mr. Mantell's comments to be favourable to the open carburetter; on the contrary, he gives the C.V. the credit for "snap" acceleration, which I certainly have not experienced in my long connection with this type of instrument. Evidently Mr. Moir is lucky with C.V. carburetters.

ECONOMY.

Motorcycle-type Carburetters—

In connection with the recent articles and correspondence on carburation problems as they are affected by the design of the various makes, there is a question which I should like to ask. Why should not a sports-

—For Use on type motorcycle carburetter prove very satisfactory on a small, high-speed, four-cylinder car engine? I have in mind the

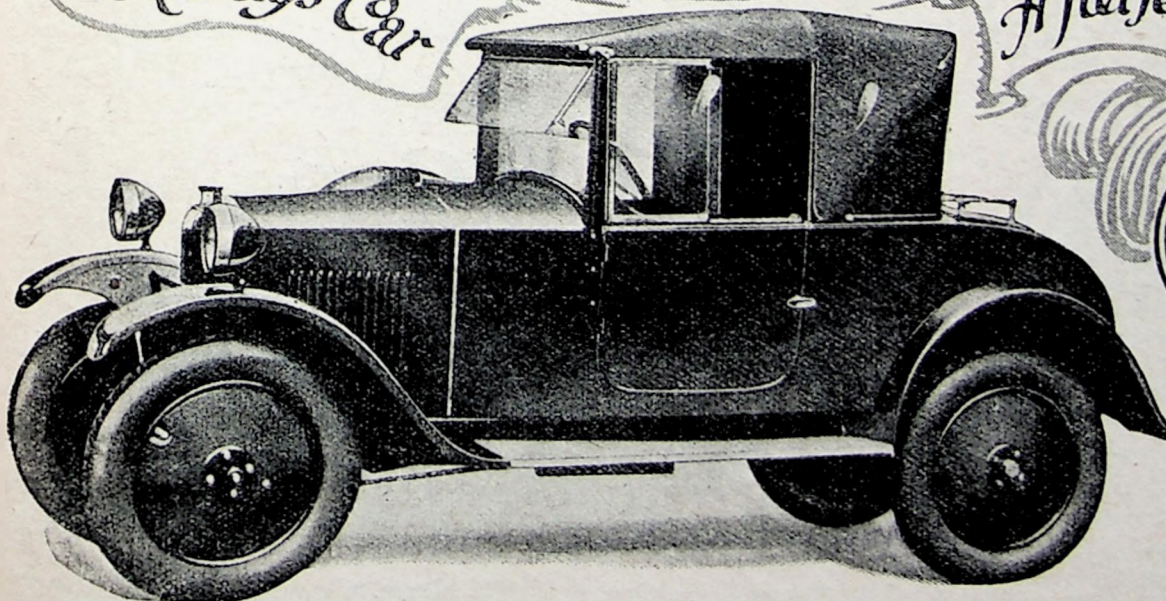
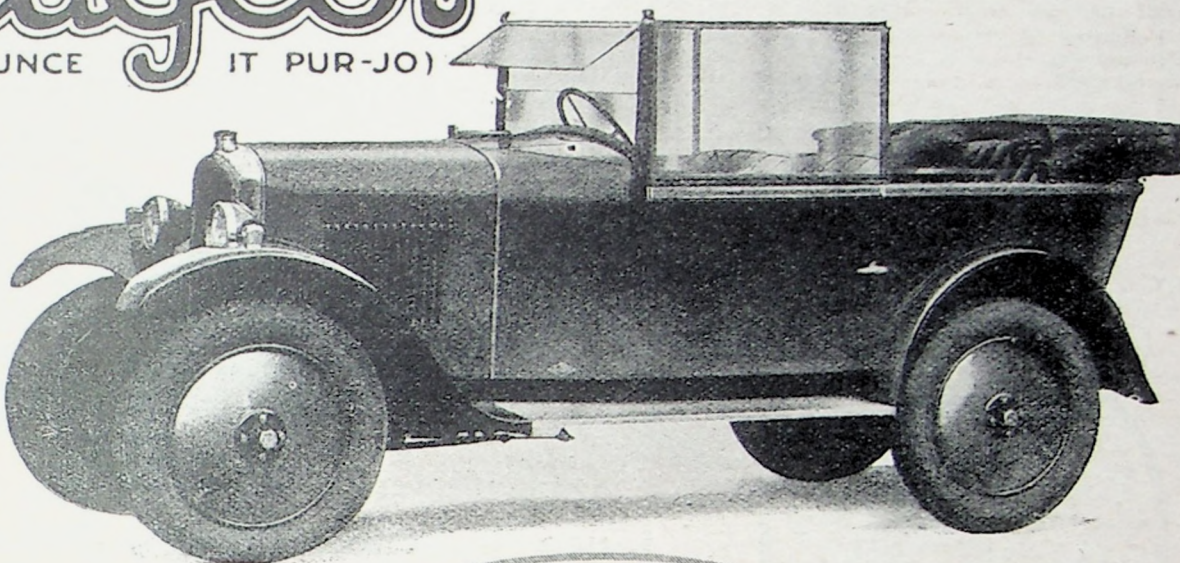
B. and B. tapered-needle instrument, one of which is giving me remarkable results on my Aero-Morgan. I get a really good tick-over, violent acceleration and 50 m.p.g. The carburetter is not, perhaps, so fully automatic as an orthodox car-type instrument, but there is only one additional control and, anyway, do not many car drivers fit an extra-air valve? My B. and B. air control needs no more manipulation than one of these valves. Can anyone answer my question?

J.B.M.

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OUR READERS' OPINIONS (contd.).

Correcting Skids—Beginners' Difficulties.

An Awkward Experience.

I read with interest the paragraph headed "That Skidding Tip," by "Focus" (whose articles I consider the titbit of your most interesting journal), but I wonder what "tip" would apply to an experience I had? I was taking a right-hand bend

Unpleasant Alternatives.

at from thirty to thirty-five miles per hour, when a very bad and unexpected skid took place. Had I directed the front wheels to the near side (the direction of the skid) I would have gone into a wall. As it was, I turned them to the off side, whereupon the car immediately turned round two and a half times, mounted a 5-in. kerb backwards, and finished against some railings, on the off side.

I maintain that, in a case like this, it is impossible to correct a skid, and had I hit the near-side kerb broadside on I would have been more likely to have capsized. I omitted to mention that when the skid occurred I was within two yards of the kerb, and the road had a fair camber.

JACK ADAM.

Where a Novice Fails.

Since your contributor "Focus" has brought up the point and you have invited correspondence on the subject of skidding, I venture to send you my opinion. "Focus's"

remarks certainly hold good if a skid occurs on a straight or almost straight road, due to excessive camber or violent braking, but skidding on a corner,

which is surely more usual, is quite a different matter. In this case the driver has started to turn his wheels (say, to the left) before the skid begins. His main idea is to get round the corner, and so he will continue steering to the left or even turn more so. Steering to the right would naturally appear absurd to the inexperienced driver, as this would at first cause the whole car to move towards the ditch until the skid was corrected. This idea of steering

for the ditch until the car is under control and can regain the crown of the road is foreign to the novice and must therefore be drummed into him. To turn into a skid is an invariable rule, although sometimes it appears the most obvious and sometimes the least obvious thing to do.

E. D. SHEPPARD.

Effect of Tyre Treads.

The list of accidents due to skidding of motor vehicles is increasing every week-end and, as skids seem to be dealt out by the hand of fate to careful, reckless and cautious drivers impartially, the cause would seem often to lie either in the car or the road. Roads have been coming in for a vast amount of abuse lately, and there have been many fiery diatribes against the "miniature skating rink," as Sir Cooper Rawson called the modern glass-like road. No doubt roads have a lot to do with skidding, and for safety there is much to be said for a well-rolled mosaic of tarred stone, but there is another factor which certainly does not appear to have received sufficient public attention.

Improved Patterns.

Granting that we have to accept these modern roads, it is advisable for motorists to take such steps as may be possible to them for the purpose of minimizing the tendency of a car to skid.

In this connection, when buying tyres, I find that the study of tyre tread patterns is well worth while. The old form of metal-studded non-skid arrangement is quite useless, but it is rather surprising to note the progress which has been made in what might be described as "rubber-studded" tyres. I find that some of these are astonishingly effective in cutting through the film of grease, and this refers especially to the highly efficient variety brought out during the last season. British car makers seem to have recognized this, judging by the popularity of one of these designs on new cars. There are, however, many kinds of patterns and ample choice.

ARTHUR GREENWOOD, M.P.

Beart Challenges the D'Yrsan.

The Cyclecar and the Combination.

Mr. Pettengell, in his letter headed "Is Cyclecaring Too Expensive?" compares a motorcycle combination with "several second-hand cyclecars." Is not this rather unfair?

He is comparing obsolete machines with a possibly up-to-date model. He admits that he "leaves three-wheelers out of this argument." Why? The three-

wheeler is certainly a cyclecar; in fact, the term cyclecar is sometimes restricted to three-wheelers (wrongly, of course) by the lay Press. Had he tried an up-to-date three-wheeler I fancy his disappointment with the cyclecar would have disappeared.

H. GEORGE MORGAN.

hundreds of races, and accidents very rarely occur, whilst the three-wheelers manage to hold their own in a most convincing manner.

Surely at least one Grand Prix for three-wheelers could be organized at Brooklands this year; a little competition and rivalry do no harm, especially as the sporting three-wheeler is to the man of moderate means a substitute for Grand Prix Bugattis, Boulogne model Frazer-Nasbes, etc. The views of three-wheeler owners on this subject would no doubt be of interest.

THREE-WHEELER.

Maximum Speeds of Three-wheelers.

I was surprised to notice, in the correspondence of your issue of the 4th instant, yet another letter from M. Raymond Siran, in which he states that a D'Yrsan has attained a speed of 110 m.p.h. for a distance of

A Sporting Challenge.

two laps on Monthéry track. This speed is, of course, phenomenal and I congratulate M. Siran, but when one considers that the D'Yrsan in question was fitted with a four-cylinder supercharged engine, of a design three years later than the V-twin unsupercharged engine, as fitted to the Morgan which attained 104 m.p.h. (incidentally, this speed was officially timed) it is a disappointment for me to learn that 110 m.p.h. was the highest speed to be attained from a three-wheeler fitted with an engine which should at least develop 50 per cent. more power than the old V-twin engine of 1925.

Furthermore, I gather from M. Siran's previous letter that he is anxious to meet a Morgan driver in France. I would, therefore, suggest that he arranged a contest on Monthéry track, when I shall be pleased to challenge him with my Morgan against his supercharged D'Yrsan over a distance of not less than 50 miles, and/or with an unsupercharged D'Yrsan over a distance of not less than five miles.

This, I am sure, will be a very interesting race and would give M. Siran ample opportunity of proving the sneeds he claims for the D'Yrsan.

H. BEART.

B39

Races for Three-wheelers Wanted.

As an interested Brooklands spectator during the last half-dozen seasons, I have often wondered why that extremely popular three-wheeler, the Morgan, has almost disappeared from track meetings during the last

year or two, only making its appearance occasionally in order to attack records.

Time was when a light car race was seldom complete without a Morgan entrant, whilst during the J.C.C. 200-Mile Races the Morgan could always be relied on to give the Frenchmen a run for their money in the 1,100 c.c. class.

I know that the J.C.C. have barred three-wheelers from competing in their 200-Mile Races, but this does not explain their absence from ordinary events on the track. Is the three-wheeler such a dangerous vehicle at high speeds that the Brooklands authorities do not encourage it? Mr. Beart seems to lap quite safely at 105 m.p.h. or so, a performance that rather belies this view.

Now that such firms as Omega and Coventry-Victor have also entered the three-wheeler field could not three-wheelers be encouraged once more? In France, Sandfords and D'Yrsans compete on equal terms with four-wheelers in

OUR READERS' OPINIONS (contd.).

J. G. Parry Thomas.

J. G. Parry Thomas has left us; true, only in form and not in spirit. Those who knew him and raced with him know what a very fine and thorough sportsman he was.

A Permanent Memorial.

The qualities he possessed, coupled with his infinite capacity for scientific research, made him, perhaps, the leading motorist of the world. Would it not be only his due that some permanent memorial should be erected to his everlasting memory? Could it not take the form of a head-and-shoulders bust to be placed, with the acquiescence of the Brooklands authorities, near the spot where he spent the last years of his life working out his experiments, aiming at and achieving his splendid results? Thomas was beloved of motorists. To them the memory of that excellent sportsman will always be very dear.

We took off our hats to Thomas while he lived; we very reverently bare our heads at the passing of a gallant gentleman.

B. H. AUSTIN.

Hire-purchase Systems.

I was much interested in your article "Why Not Pay As You Ride?" and would like to point out that buying furniture or houses on the hire-purchase system is not analogous to buying a car on the same relative to car purchase—the purchaser must not only give the dealer a banker's reference, but (and this is the point) he must also obtain a guarantor, who will guarantee to pay the balance, if circumstances require it. I am myself in this position, but do not care to put the onus of payment on someone else, so I must needs carry on saving until I have acquired the full purchase price of the car I want.

ROVER.

* * Our correspondent is mistaken in thinking that it is essential for those who buy a car under a hire-purchase system to obtain a guarantor; some dealers, in fact, require no references whatever.—Ed.

The Rule of the Road.

I should be glad to know what is the ruling of the law, if any, with regard to the passing of traffic where road repairs occupy a large part of the roadway. In my town,

Passing Road Repairs.

Birmingham, there is a definite regulation that all vehicles pass to the right, but, from an experience I had recently, it appears that every driver is not aware of this regulation, and it would go a long way to avoiding accidents at such places if it could be made more generally known.

I was driving on one of the main roads which passes over the Birmingham boundary to the adjoining borough of Smethwick, and a the road was up on my left, or near side, I passed over to the right, which, according to my interpretation, was correct.

Approaching me at a fast pace was a lorry, keeping to its near side instead of passing over to the centre of the tram track; in other words, it was not passing to the right. By a series of swerves of both myself and the other driver we managed to avoid a nasty smash: in fact, the lorry missed my front wings by a hairsbreadth.

The lorry driver pulled up after passing and indignantly demanded to know what I was doing, and on my pointing out that the rule of the road was to pass to the right, etc., I was informed that "there ain't no law," and, as luck would have it, there was no indication board at this particular spot.

In Birmingham, as I have stated, there is a definite rule, and there is always a policeman or an indication board, telling drivers to pass by the right; in other places, however, it seems to be a case of go as you please. A definite rule, which should be obeyed by all drivers, is required.

WINDUP.

* * Where a part of a road is blocked for repairs there is no universally accepted rule with regard to passing oncoming vehicles. In some cases (generally where tram tracks are being relaid) the normal rule of the road is reversed, but where this happens there is usually a policeman on duty or a notice instructing drivers how to proceed. The golden rule is: proceed cautiously and be prepared to pull up within a few feet if necessary.—Ed.

B40

Batteries in Ebonite Cases.

Car batteries have always suffered from misuse and neglect, and the present-day method of totally enclosing them in cases of black acid-resisting material makes matters worse. A battery so constructed may be stronger and may be beautiful to look upon, but the old-fashioned pattern is much to be preferred. The plates of the latter type can be seen; it is therefore an easy matter to discover the condition of the battery, whereas with the present-day pattern only an electrical engineer is able to diagnose faults and to set matters right; a messy operation of pitch removing may be necessary.

Perhaps one of our leading battery makers will supply us with a battery combining the merits of both types.

L. M. EVANS.

The Left-hand Rule for Pedestrians.

The authorities are agreed that if the left-hand rule of the footpath were introduced less accidents to pedestrians would occur. The people nearest the kerb would be facing oncoming traffic when stepping directly into the roadway, whilst those walking with their backs to the traffic nearest them would have the width of the footpath to cross before stepping into the roadway, thus giving them time to think of traffic dangers.

I suggest that the keeping of this rule would be considerably encouraged if two continuous white lines were marked on the pavements, one down the centre and the other along the top of the kerb. There would then be a strong psychological reminder of traffic dangers, whenever one crossed these lines. Great additional advantages would be the increased comfort and convenience to pedestrians, as the lines would tend to prevent people being "pushed off" the pavements into the roadway, where modern fast-moving motor vehicles involve them in heavy risks.

H. CECIL PARRY.

CONDENSED CORRESPONDENCE.

Mr. C. P. Abbott pays a glowing tribute to the generous methods of Leyland Motors, Ltd., in their dealings with Trojan owners. He owns a two-year-old model, which, after covering 19,000 miles, developed big-end trouble and, on taking the car to the Kingston works, the manufacturer agreed to supply him with a new engine at half price. Furthermore, no charge was made for fitting.

INFORMATION WANTED.

G.N.—A handbook and oiling chart for the 1921-2 model is wanted.—K. Overy, Abbots Langley, Watford, Herts.

AUSTIN SEVEN.—Hints for tuning a sports Austin Seven for speed would be very much appreciated.—"Ambitious," 58, Goddington Road, Strood, Kent.

JOWETT.—Any reader who is willing to sell a copy of the Jowett booklet, entitled "Blue Peter Goes East," is asked to communicate with R. C. Stone, 3, Berrylands Road, Surbiton.

A.C.—Readers' experiences of the 12 h.p. model and the opportunity to buy or borrow an instruction book would oblige.—B. Dean, care of A. Spill, 1, Cowper Avenue, East Ham, London, E.G.

ROVER EIGHT.—The opportunity to borrow or buy an instruction book dealing with the 1922 model would be esteemed.—Thos. L. Hadfield, 386, Ecclesall Road South, Park Head, Sheffield.

CALCOTT.—Any reader who is willing to lend or sell an instruction book for the 1922 11.9 h.p. two-seater model is asked to communicate with C. S. Johnson, 33, Olive Road, W. Dulwich, London, S.E.21.

D'YRSAN.—Owners of the o.h.v. sports model are asked to give their experiences of this car, with particular regard to speed and road-holding qualities.—S. W. Buckle, 4A, Station Road, Balham, London, S.W.12.

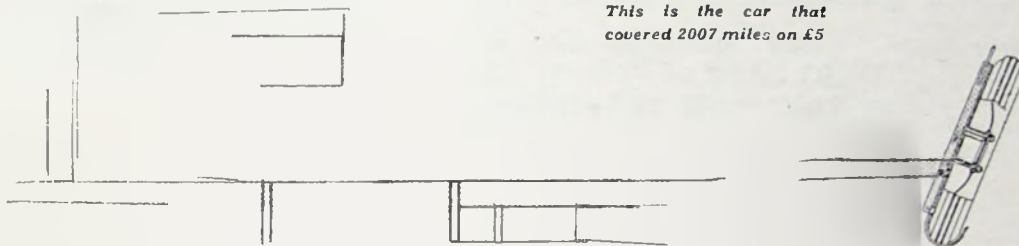
LOST.

Between Bromley Common and Keston, on February 28th, a starting-handle for a Coventry-Premier. Finder is asked to write to 22, East Street, Bromley, Kent.

This is the fourth of a series of announcements in which we indicate each fortnight the many points of technical superiority of "The Nippy Nine."

The sturdy chassis of "The Nippy Nine."

This is the car that covered 2007 miles on £5



9/20 h.p. ROVER MODELS, 1927.

2-seater - - £220
4-seater - - £225

Coupe (detachable head) - £235
Sports 2-seater £240

Semi-Sports 2 or 4-seater - £260

Coachbuilt Coupe - - £285

Saloon (Weymann) - £285

Saloon (Coachbuilt) £295

NOTE.—All models have 4-wheel brakes, seating in real leather, automatic screen wiper and lavish equipment. Choice of body colour: a wide range of smart two-colour body finishes is available.

Straightforward simplicity a feature of the 9/20 h.p. Rover

The chassis design of the 9/20 h.p. Rover is a fine example of the very latest motor-car construction. There is nothing "finicky" or diminutive about it. Every part is built up to its work: the margin of safety throughout is large. Here you have in a nutshell the principle reason for the satisfaction that owners of "Nippy Nines" the world over are obtaining from their cars.

As will be seen from the chassis elevation above, the main frame is of good, deep section; it is well braced by sturdy cross-members, with the result that the body mounted on it does not suffer from whip and so develop

rattles and squeaks. The folding luggage grid at the rear is hinged on the sprung chassis frame itself, and is quickly brought into use when required; when not wanted it is not adding to the overall length of the car.

The 8 ft. 8 in. wheelbase is exactly right for a medium-size car; it does not cramp body room, yet gives a reasonable overall length (12 ft. 6 ins. in the case of touring models, and a little more on the Sports types). The petrol tank holds 6 gallons of fuel—enough for about 240 miles running—and is specially made so that it does not "drum."

(To be continued.)

Have you seen the "Book of the Rover Nine"? We are holding a copy against your request—merely write your name and address on this page, tear it out and post to us. You will be very interested. The Rover Company, Ltd., 61, New Bond Street, W.1, and Coventry.



ROVER

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

❖ *Warwick Wright Says* ❖

Our showrooms are not the largest, nor are they the most expensive, or the newest, in Europe. They are just in the "Bond Street Tradition"—practical and good.

They contain the Right Kind of Cars at the Right Kind of Prices. The Right Kind of Terms, too, to suit your convenience.

When you are "Up West," just take a glance at our Bruton Street Depot, our premises in Bruton Place, and our Service Section in Grosvenor Mews.

Whilst your car is here, we will run the tape over it . . . and if you would care to know its Real Value, the figure is yours, Gratis.

Warwick Wright, Ltd.

150 NEW BOND ST., LONDON. W.1.

(Mayfair 2904)

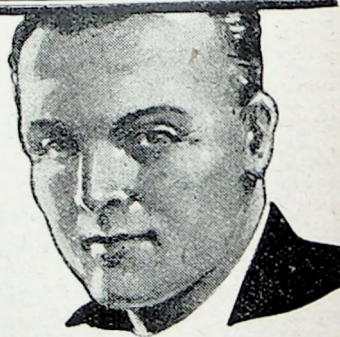
WHY Do People Buy the Wrong Car?

BY HENLYS CHIEF.

ONLY last week an elderly gentleman sent me a car which he had bought, but could not drive. It had a small engine and a high gear ratio. A friend had told him to buy it, and his wife liked the name.

Oh, yes, the car was all right—but quite unsuitable for the old gentleman. Yet, I honestly believe, that, over 50% of motorists are nearly as foolish. For want of experience and a little clear thinking they buy cars which quickly prove unsuitable. And, alas, they have to be sold at heavy losses.

These, briefly, are the reasons why I am now offering my personal advice free. If I am able to help anyone in any way, then I shall be more than satisfied with the goodwill I have thereby built up. Post the attached coupon now and I will write you by return.



**Fill in and Post this Form
for Free Personal Advice.**

Price
H.P. No. of Seats
Type of body
Colour
Maximum Speed
Do you strongly object to gear
changing?
Central or R/H gear change.
NAME
ADDRESS

N.B.—Insert above your price limit
and your preference in respect of
the other items.

HENLYS

LONDON'S LEADING MOTOR AGENTS,
91-155-157, GREAT PORTLAND ST., W.1.

Telephone Langham 3341 (7 lines).

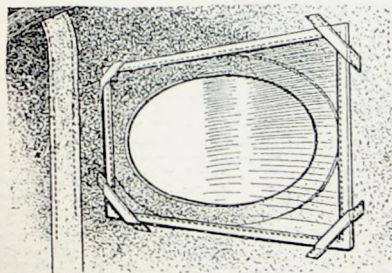
FACILITATE BUSINESS, and ensure prompt attention to your enquiries, by mentioning
"The Light Car and Cyclecar" when writing to advertisers. They will appreciate it.



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.

Protecting the Rear Window.

One of the first signs of wear on an open car is usually the cracking of the celluloid in the rear window of the hood. This is caused usually when the hood is folded. One way of getting over the difficulty is to turn the rear window into a separate screen, which can be detached like a side curtain and stowed away when the hood is folded. An oblong piece of celluloid should be cut and the edges bound with tape. Four strips of tape or stout elastic should be sewn on to the inside of the hood—across the corners—as depicted in the accompanying sketch. The celluloid is fixed in place by slipping it under the tapes in much the same way that postcards are secured in albums.



Showing the rear window "screen" in position with the hood erected. Corner straps hold it in place.

Precaution when Dismantling.

When making adjustments to, or working over, an open gearbox or crankcase, it is as well to be careful not to drop in a nut or a washer, or even some small tool, for it is not always easy to hook such articles out with a piece of wire. Time, or even a complete dismantling, can be saved by packing, not merely covering, so soon as possible, exposed parts with pieces of clean cloth or rag.

When decarbonizing, care should be taken not to allow carbon to get into tapped stud or bolt holes, as this will cause the bolts to "bottom" prematurely, or even strip their threads, before they have pulled the cylinder head tight. This can be prevented by temporarily filling the holes with paper, or cured by turning an easy-fitting twist drill, dipped in thick oil, in the hole to remove any carbon that may have got in.

When Overhauling.

When the cylinder block of an engine has been removed during an overhaul, there is always the risk of a piston turning sharply on its little-end bearing and cracking a piece out of the skirt by knocking against the con. rod. This can be prevented by tightly packing the insides of the pistons with paper, so soon as the block is lifted sufficiently clear.

Distilling Water.

Quite a large number of motorists buy distilled water for their accumulators from chemists. Some use rain-water which they have collected in a rusty iron tank or an exposed barrel. A great many simply use tap water, because they have nothing else handy. A very easy way of obtaining distilled water quickly is to direct the steam from the spout of a kettle of boiling water against the side of a jug of cold water. The steam condenses on the walls of the jug and can be collected by standing the latter in a clean basin. The process can be kept up indefinitely, provided that the kettle is replenished and the water in the jug replaced when it gets warm.



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.

T.P. (Truro).—The cut-out switch of a magneto is wired in the primary, or low-tension, circuit. High-tension switches are very seldom used on motor-cars.

L.W. (Stanford Rivers).—Chill-cast phosphor-bronze is the correct metal of which to make small-end bushes. We do not advise you to use case-hardened steel.

M.O. (Southampton).—The ordinary 10 m.p.h. speed limit is enforced in Bournemouth, except on the Undercliff Drive, where a limit of 8 m.p.h. is rigorously maintained. There is a 5 m.p.h. speed limit at Paignton.

J. McQ. (Glasgow).—The distance from Glasgow to Scarborough is 230½ miles and the route lies through Uddington, Abington, Gretna Green, Brough, Leeming, Thirsk and Pickering.

Longer Life for Morgan Dogs.

The sliding dogs on Morgan counter-shafts often become rounded off on the leading edges, this applying particularly to low-gear dogs. The result is that they are apt to slip out of mesh. This can be avoided if the high and low-gear dogs are interchanged, as this will bring the opposite faces of the "teeth" into engagement.

For Rover Nines.

Owing to the proximity of the ratchet trigger to the knob on the hand brake lever of Rover Nines it is difficult to get a good pull on the lever. This disadvantage can easily be overcome by replacing the knob with a suitable handle which can be turned out of brass and plated at a small cost. The handle gives more leverage, but it should not be more than 3¼ ins. long or it will foul the instrument board.

Cleaning Mudguards.

At this time of the year, when many cars are undergoing an overhaul and general smartening up in readiness for the coming spring, it should not be forgotten that a thorough cleansing and blacking of the *insides* of the mudguards will well repay owners for the trouble involved. Wings usually start to crack from the inside where mud cakes on, causing rust and disintegration, but if they are treated each season as suggested above they should last for the full life of the car, unless otherwise damaged, and will enhance the appearance of the vehicle. The blacking referred to may be carried out with enamel, or with one of the anti-rust preparations now on the market.

N.E.T. (Limpsfield).—The steepest gradient of Westerham Hill is 1 in 6½, and the general gradient is 1 in 11. The steepest portion of Hogs Trough Hill is 1 in 5½ and the average 1 in 10.

N.D. (Maidenhead).—If your B. and B. carburetter is of the variable-jet type you can enrich the mixture by withdrawing the tapered needle slightly from the jet orifice. With a fixed-jet model a larger jet must, of course, be substituted.

J.L. (Luton).—The reason why your efforts at soldering on a petrol pipe nipple have been unsuccessful is because you have not used a flux with the solder. There is a number of proprietary fluxes on the market, one of which, known as Fluxite, is very popular.

C.M. (Henfield).—The correct valve clearances of the Singer Junior engine are .003 in. inlet and .004 in. exhaust. When the engine is hot these clearances will close up somewhat, but so long as the thimbles on the valve stems can be turned with the fingers the adjustment will be correct. This is fully explained in the instruction booklet issued with the car.



BRISTOL M.C. AND L.C.C.

The first competition on the fixture list took the form of a team trial which was recently held over a sporting course of 12 to 14 miles in length. Two circuits had to be covered, each of which included a non-stop section. The start and finish were at the Royal Oak Hotel, Nailsea. H. Clegg, who was driving a 7 h.p. sports Austin, was the only car competitor to finish.

WOKING AND D. M.C. AND C.C.

The following light car drivers gained awards in the Woking Night Trial—Silver cups: H. R. Taylor, M. W. Stokes and R. A. Martin (Morgans), H. Jeffers (Frazer-Nash), H. J. Lovatt (Jowett), R. D. Wilson (Austin), J. P. Geldard (Ainsdale), W. P. Conradi (Salmon). Silver medal: Kenward Egga (Schneider). Bronze medal: J. L. Goddard (Morgan). Team award: H. R. Taylor, M. W. Stokes, J. L. Goddard (Guggenues team).

SURBITON M.C.

The opening run and tea dance has been arranged for March 20th, and will be held at Newlands Corner Hotel (the club's new country headquarters). It will help the organizers considerably if the intending participants will notify the honorary organizer of their intention to attend at least seven days before the event, as this will facilitate the arrangement for seating accommodation. Tickets will be issued at the hotel for 2s. 6d. each. Tea will be served at 4 p.m., and the function will be held regardless of the weather.

WOOD GREEN AND D. M.C.

The semi-sporting trial held by the Wood Green and D. M.C. recently was made considerably more difficult than was anticipated owing to the heavy rains which preceded it. There were six observed sections, three water-splashes, and a stop-and-restart test on a steep hill. The last water-splash was responsible for the failure of all but four of the competitors, and undoubtedly the "star turn" was put up by a Morgan, which apparently floated to the centre and sank! The observers were compelled to carry the passenger ashore and then to save the machine. Lunch was taken at Burnham Beeches, and from then on the run was comparatively easy. In spite of the difficulties encountered only one competitor failed to check in at the finish.

BRIGHTON AND HOVE M.C.

On February 27th the club held its first reliability trial of the year for cups presented by the captain and vice-captain. The course, which was about 50 miles long, consisted chiefly of secondary roads and lanes, and was found very "sticky" in parts. H. Trelogan (Riley) left the road and encountered a miniature lake of flood water which stopped his engine and forced him to back out on the electric starter. An acceleration test was held up Cobbs Hill, a winding gradient of approximately 1 in 4. Fastest time was made by J. G. Simpson Lee (Alvis) who made a spectacular ascent, covering a distance of about 300 yds. in 37.15 secs. Of the 17 starters only one retired. The vice-captain's cup was won by Miss Setton (A.C.), and J. G. Simpson Lee was awarded a souvenir.

PENRITH AND D. M.C.

The annual general meeting was held at Penrith on March 2nd. The hon. secretary stated in his annual report that the club was to be congratulated upon the large membership obtained during the first year of its existence. About half-way through the season the committee decided to terminate their agreement with the A.C.U., and it was open to the meeting to apply for re-admission. The financial report showed that the club finished the year with a balance on the right side. The hon. secretary reported that on the social side there had been a lack of interest; during the year the club had gone to immense trouble to organize social runs and trials, and it was disheartening to find the patronage of the members limited to a dozen or less. The chairman, in moving the adoption of the report, said it was very satisfactory considering that it was the club's first year, and they had more or less to find their feet. Following considerable discussion it was decided to apply for re-admission to the A.C.U., and a desire was expressed by some members for more evening runs. The officers were elected as follows—President, The Earl of Lonsdale; Captain, Mr. J. L. Peel. Vice-captain, Mr. Allison. Hon. treasurer, Mr. G. W. Walsh. Trials secretary, Mr. T. Dixon. Hon. secretary, Mr. H. P. Wilson.

R.A.C. PERMITS.

The R.A.C. has issued the following closed permits:—March 13th, Norfolk M.C., map reading trial; March 19th, Essex M.C., reliability trial; April 30th, North London M.C., reliability trial.

CITY OF LONDON M.A.

The following events have been arranged to take place in the near future:—March 12th, petrol consumption trial, open to clubs in the South Midland Centre. March 20th, social run to Ightham; meet at Finsbury Circus, London, 10 a.m. March 27th, sporting trial (London Eagle M.C. invitation). April 3rd, hill-climb; meet at Finsbury Circus 9.30 a.m. April 15th, Easter run to Devon starts; meet Great West Road 8 a.m. April 24th, social run to Worthing.

FORTHCOMING EVENTS

March 12.

Southport M.C. Race Meeting.
J.C.C. Yorks Centre. Closing Dance.
Bristol M.C. and L.C.C. 1922 Secretary's Cup, half-day Trial.
City of London M.A. Petrol Consumption Trial.
North London M.C. Opening Run.

March 13.

Leeds M.C. Viking Cup Event.
Woodford and D. M.C.C. Semi-sporting Run.
Norfolk M.C. Map Reading Trial.
Sydenham and D. M.C. Freak Hill-climb.
Wood Green and D. M.C. Run to Camberley.
London Eagle M.C. Run to Astridge Park.

March 19.

Essex M.C. Winter Trial.
J.C.C. Opening Rally.
Kent and Sussex L.C.C. Rally and Treasure Hunt.
Bristol M.C. and L.C.C. First (Wessex) Centre League Trial.

March 20.

Leeds M.C. Despatch Riders' Competition.
City of London M.A. Run to Ightham.
Wood Green and D. M.C. Run to Canterbury.
Surbiton M.C. Opening Run and Tea Dance.

April 1.

"Welsh" 24 Hours Trial.

"WELSH" RELIABILITY TRIAL.

The "Welsh" 24 hours' open reliability trial, organized by the Liverpool M.C. (open to the Cheshire Centre of the A.C.U.), will start at the Old Haymarket, Birkenhead, on April 1st, and finish at Mills Garage, Ledsham, on April 2nd. The course will be approximately 580 miles long, chiefly in North Wales, and observed hills and colonial sections will be included, also easy-starting, acceleration and brake tests.

ESSEX WINTER TRIAL.

The Essex M.C.'s one-day winter trial (open to members of the Essex Motor Club and clubs in the Eastern Centre A.C.U.) will be held on March 19th, the start being at the Bald Hind Hotel, Chigwell Row, at 9 a.m. There will be a flexibility test on a hill and an easy-starting test. Entries will be received by the hon. organizer, Mr. E. J. Bass, 40, Chancery Lane, W.C.2, up to the first post Saturday, March 12th. Entry fee and one lunch 12s. 6d., extra lunch ticket 3s. 6d.

HARROW AND D. M.C.

At the general meeting of the Harrow and District Motorcycle Club it was decided to rename the club the Harrow and District Motor Club. The annual subscription will remain the same for car owners (5s. yearly and 2s. 6d. entrance fee). The opening run took place on February 27th to the Stonor Arms, Henley. After tea several of the members who had taken musical instruments with them formed a band, to the music of which the rest danced. Intending members are asked to communicate with the hon. secretary, Mr. F. A. Weston, 38, Gayton Road, Harrow.

PORTSMOUTH AND D. JOWETT C.C.

The first outdoor rally will take place on March 27th. An enjoyable evening was spent recently when the club held the third of a series of whist drives and dances at Kimbell's Cafe, Osborne Road, Portsmouth. There were 150 guests and many prizes were won.

DISABLED DRIVERS' M.C.

The annual general meeting will be held on Saturday, March 26th, at Slater's Restaurant, 82, Victoria Street, Westminster, at 3.30 p.m. The meeting will be followed by tea, and, in order that adequate arrangements may be made, members are asked to advise the hon. secretary, whether or not they will be able to attend. Communications should be addressed to 15, Vicarage Road, Hampton Wick, Kingston-on-Thames. Telephone, Kingston 1789.

J.C.C. OPENING RALLY.

The opening rally will be held at Burford Bridge Hotel, near Dorking, on Saturday, March 19th. In the afternoon, commencing at 3 p.m., a "Car Appearance" competition will be held, in which all members of the club may enter. The age of competing cars and also their appearance from the bodywork and chassis points of view, will be taken into account. Judging will take place between 4 and 5 p.m., and entries will be accepted up to 4 p.m. No owner who has not reported by 4 o'clock will be allowed to compete. For the benefit of new members it may be pointed out that evening dress will not be worn.

CUMBERLAND COUNTY M.C.

At a special meeting of the committee the delayed balance-sheet for the past year was presented and adopted. The report showed a profit on the year of £4 12s. 6d., making a balance at the bank of £71 19s. 2d. This was stated to be most satisfactory in view of the fact that the club sustained a loss of over £25 in consequence of the cancellation for the third year in succession of the open Alan Trophy Trial. The second social run to Lodore Falls, Keswick, was well attended.

Prospective members should communicate with the hon. secretary, Mr. F. J. Rowlands, Douglas House, Nelson Street, Carlisle.

HUDDERSFIELD AND D. M.C.C.

Following the surveyor's report on the hill at Dalton Bank, work was at once commenced, and the track is now well on its way to completion. When finished it will be 185 yds. in length and 40 ft. wide. The first 10 yds. will be level, followed by 12 yds. of 1-in-6 gradient, and the remainder of the climb will be graded from 1 in 3 1/4 to 1 in 1 1/2, the length of the latter gradient being 7 yds., the average for the whole length being 1 in 3.184. The membership of the club to date is very satisfactory, and applications for membership are being received every post. Following a hill-climb on Easter Saturday, a one-day semi-sporting trial will be held on May 1st. A paper-chase will be held on Saturday afternoon, May 28th.

SYDENHAM AND D. M.C.

The opening event of the season will be held on March 13th, and will take the form of a freak hill-climb, held, as on past occasions, on a private hill between Eynsford and Shorham. The start will be made at 2.30 p.m., entries being taken on the spot. The hill may be easily reached from the London to Wrotham road by turning right just past Farningham, towards Eynsford, following the road for a distance of 2 1/4 miles. Dye will be used to assist competitors and spectators to find the hill. After the climb the club will adjourn to the Clearways, between Farningham and Kingsdown, for tea, a social programme and dancing arranged for the evening. A full programme of events has been compiled for the coming season, including the usual speed hill-climb.

Full details may be obtained from the hon. secretary, Mr. S. E. Burlington, Isfryn, Christ Church Mount, Epsom, or from the hon. Press secretary, 205, Brockley Road, Brockley, S.E.4.

LONDON EAGLE M.C.

The social run to Maidens Grove on February 27th was well attended, despite the somewhat unfavorable weather conditions. There has been a very gratifying influx of new members and the club's strength promises well to exceed that of last year. A run to Astridge Park has been arranged for March 13th, when an American hill-climb will be held. There will be no entrance fee.

The annual Frencham cup trial will be held March 27th over a very sporting circular course, starting from Ripley, Surrey. As this is a restricted open event, entries will be confined to members of five clubs in the South Midland Centre, viz., the City of London M.A., Watford and D. M.C., Slough and D. M.C., the Amateur M.C. and the London Eagle M.C. In addition to the Frencham cup a generous awards list has been arranged, including two silver cups for the best class performance. The entrance fee is 3s. 6d., and, as considerable care has been taken to provide an efficient organization, a good day's sport is anticipated.

Tickets (price 2s. 2d.) for the club dances to be held at the Cricklewood Dance Hall on March 17th and 31st may be obtained from Mr. A. Wilson, 70, Mansfield Road, N.W.3. All other particulars may be obtained from the hon. secretary, Mr. L. E. Beckett, Hill Crest, Dollis Hill Lane, N.W.2.

NOT only the Brooklands Sports Model is illustrated, but all Lea-Francis cars are extraordinary in their hill-climbing powers. Lea-Francis

RELIABILITY & PERFORMANCE

have secured over 100 awards in reliability trials. Write for a personal demonstration of these wonderful cars. Full particulars from—

LEA & FRANCIS LTD. and reduced, **COVENTRY.**

London Showrooms: **118, Gt. Portland Street, W.1.**

Telephone—Museum 8720.

10 h.p. Models from **£210**

12 h.p. from **£285**

Coupe, Saloon or Open Cars.

Deferred payments and exchanges.

LEA-FRANCIS

AWARD
IN THE 1000 MILES
OFFICIAL SIX DAYS
TRIAL for
Hill Climbing
Consistent Reliability
and
Condition after Trial

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

GUARANTEED USED CAR BARGAINS

— IMPORTANT. —

We undertake to give
our genuine written
Guarantee with all
second-hand cars sold.

PLEASE SEE YOU GET IT.

A FEW OF OUR VARIED SELECTION

CITROEN	1921, 10 h.p., 4-seater, lighting, all-weather, tax paid	£37-10
ROVER	1923, 8 h.p., Chummy, dynamo lighting, excellent	£44-10
ROVER	1924, 8 h.p., 4-seater, all-weather, lighting, taxed, excellent order	£52-10
A-C	1922, 12 h.p., 2-seater, lighting, starter, all-weather, speedometer, etc.	£59-10
CITROEN	1925, 7 h.p., 2-seater, all-weather, starter, etc.	£65
CITROEN	1924, 11'4 h.p., 4-seater, English body, lighting, starter, all-weather, etc.	£79-10
AUSTIN	1925, 7 h.p., Chummy, starter, lighting, tax paid, perfect order	£89-15
PEUGEOT	1926, 7 h.p., 2-seater, balloon tyres, fully equipped, mileage only 3,000	£89-15
CITROEN	1926, 7 h.p. Cloverleaf, like new, small mileage, fully equipped, several extras	£97-10
CITROEN	1926, 3-seater, lighting, starter, speedometer, like new	£102-10
AUSTIN	7 h.p., late 1926, rigid curtains, fully equipped, like new	£115
CITROEN	1926, 11'4 h.p., 4-seater, English body, fully equipped, extras, repainted	£112-10
SINGER	1925, 10/26 h.p., 4-seater de Luxe, maroon, fully equipped, extras, excellent condition	£114-10
SALMSON	1926, 10/20 h.p., 4-door, 4-seater, F.W.B., lighting, starter, all-weather, fine order	£119-10
CLYNO	1926, 2-seater, lighting, starter, all-weather, usual equipment, repainted	£117-10
CITROEN	1926, 11'4 h.p., English body, 4-seater, usual equipment, like new, only done 4,000 miles	£127-10
SINGER	1926, 10/26 h.p., 4-seater, maroon, all-weather, lighting, starter, several extras	£152-10
SINGER	1925, 10/26 h.p., Saloon, fully equipped, splendid order	£155
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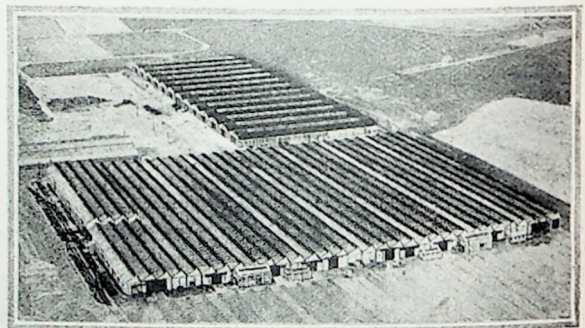
AROUND THE TRADE.

As usual, *The Accessory*, the monthly journal published by Brown Bros., Ltd., is full of particulars about the latest and most useful fittings and "gadgets" for motoring.

We are advised that Mr. W. T. Grose, of the Wilcot (Parent) Co., Ltd., has sold his interest in Tecalemit, Ltd., and is, therefore, no longer connected with that business.

Our attention is called by General Sales Promotion, Ltd., 11-12, Pall Mall, S.W.1, to the fact that the type of all-weather map, the virtues of which we extolled recently in an article entitled "About Motoring Maps," is now being marketed by them, and that a very attractive edition will be available by the beginning of May.

W. J. Green, Ltd., Omega Works, Coventry, have just issued a very useful instruction book for the Omega three-wheeler. The book is illustrated with well prepared photographs and deals with the subject in a clear, but not-too-technical manner, giving just the information which the average owner of one of these cyclecars is likely to need.



A fine aerial view of the Citroen factory at Slough, which has now been in operation a year.

We have received from The B.E.N. Patents, Ltd., 90-98, Victoria Street, S.W.1, a well-illustrated folder dealing with the B.E.N. Myers hydraulic car washer. This system is claimed to provide an entirely new standard of car washing service with high pressure, to reduce washing costs and to show a saving of 75 per cent. in time and 50 per cent. in water.

It is interesting to note that the laying of the concrete floors incorporated in "Simplex" garages made and erected by The Simplex (Light Building) Construction Co., Fetcham Grove, Leatherhead, Surrey, is supervised by one of the principals of the concern, so that motorists who invest in one of these buildings may be assured that the work is properly carried out.

Magneto Concessions Co. (England), Ltd., inform us that Mea magnetos, for which they hold the sole concession for Great Britain and Ireland, are now available, in a certain type, fitted with a dry-running "automatic advance device." It is claimed that by the use of this an improved engine performance is obtained and that an additional 13 degrees of advance is available.

We are asked by Etienne et Cie., 61-63, Great Eastern Street, London, E.C.2, to point out that the price quoted for their Stadium windscreen wiper as advertised on page 26 of our issue dated March 4th should have been 10s. 6d. for the single-arm model and 12s. 6d. for the dual-arm model, instead of 12s. 6d. and 15s. respectively, as the prices were reduced on the day that the advertisement went to press.

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.

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Before making your final decision let us quote you our

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Sale Price **5/9**
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Order per return.

CAR DUST COVERS

AMAZING PRICE REDUCTIONS!

Size.	Usual Price	Sale Price	
10 x 6 ft.	Usual Price 11/6.	Sale Price 9/6	
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21 x 18 ft.	Usual Price 38/0.	Sale Price 30/6	
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Step Mat in Aluminium frame, with straight bars or Rubber Mat. Size 12 x 8 in. Every car should be fitted with one now before prices return to normal. Post 6d.

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CHAMOIS LEATHERS.

Fine quality, soft, yet long-wearing. Size about 21 in. x 22 in. Sale Price, each **4/-** for 11/6.

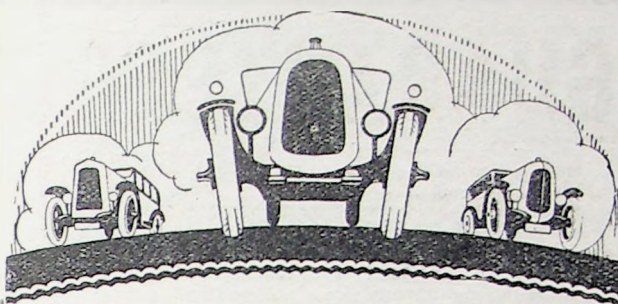
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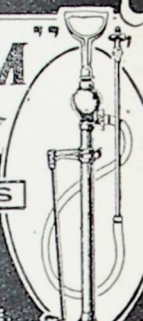
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A.C. 1921, Anzani, 2-seater, dynamo, full equipment, balloons on rear, paint, etc., excellent £63
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A.C. 1923, de Luxe, 2-seater, sunk dicky, 11'9 Anzani, dynamo, starter, clock, speedometer, all gauges, pneumatic upholstery, paint and hood and mechanically perfect, very distinctive and economical £95
ALBERT, 11'9, 1922/3, G.3 Saloon type, all-weather, 4-seater, 4-speed, dynamo, starter, 2-door body, frameless windows, adjustable seats, 4-piece V-screen, excellent tyres, 2 spares, luggage grid, taxed, exceptionally smart, roomy and distinctive £68
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CALCOTT, 1924, 10'4, 2-seater, sunk dicky, dynamo, starter, clock, speedometer, double screen, excellent tyres, perfect mechanically, exceptionally sound, reliable £78
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CITROEN, 1923, 2-seater, dynamo, starter, clock, speedometer, all extras, excellent paint, upholstery and hood, recently overhauled, very economical £58

CITROEN 7, 1925-6, 3-seater, cloverleaf, dynamo, starter, balloons, excellent original paint, plating first-class, new condition throughout, smart and economical £75
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CLYNO, 1924, 11 h.p., de Luxe 2-seater, sunk dicky, dynamo, starter, excellent tyres, clock, speedometer, screen-wiper, rigid sidescreens, good hood, recently overhauled, first-class throughout, very smart, reliable £68
CLYNO 1925, 11 h.p., 4-seater, balloons excellent, dynamo, starter, clock, speedometer, rigid A.W. equipment, good hood, upholstery, paint, and mechanically perfect, all extras, taxed, very economical, smart, reliable £98
CLYNO, 1925, 10'8, 2-seater, sunk dicky, dynamo, starter, balloons, clock, speedometer original finish, as new throughout £38
CROUCH, 1923, 11'9, Anzani, 2-seater, excellent tyres, upholstery and paint unsprayed, exceptionally sound, smart £65
DEEMSTER, 1923, 11'9, Anzani, 2-seater, sunk dicky, dynamo, starter, all extras, double screen, taxed, upholstery, paint, and mechanically sound, fast and comfortable £58
JOWETT 7, 1922, 2-seater, de Luxe, full equipment, excellent paint and upholstery, new hood, very sound and economical £58

JOWETT 7, 1923 (1924 model), 2-seater, sunk dicky, dynamo, leather upholstery, all extras, new hood, exceptionally sound £63
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PALLADIUM, 1923 model, 11'9, 4-seater, dynamo, starter, 4-speed, excellent tyres, speedometer, clock, rigid sidescreens, luggage grid, taxed, upholstery, paint and mechanically as new, exceptionally smart, roomy £68
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SALMON, 1925, 9'5 English 2-seater, sunk dicky, dynamo, starter, detachable wire wheels, excellent tyres, full all-weather equipment, very little used, very fast, £78
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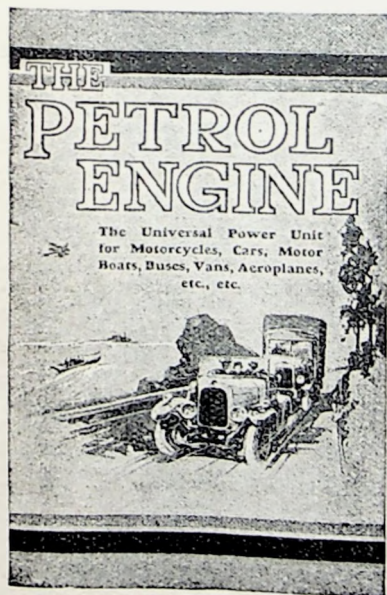
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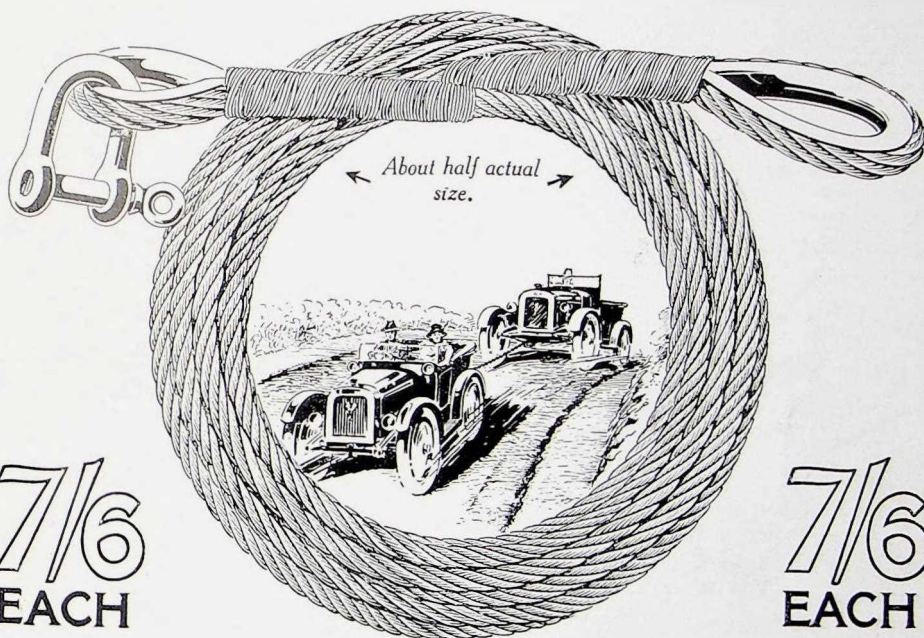
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