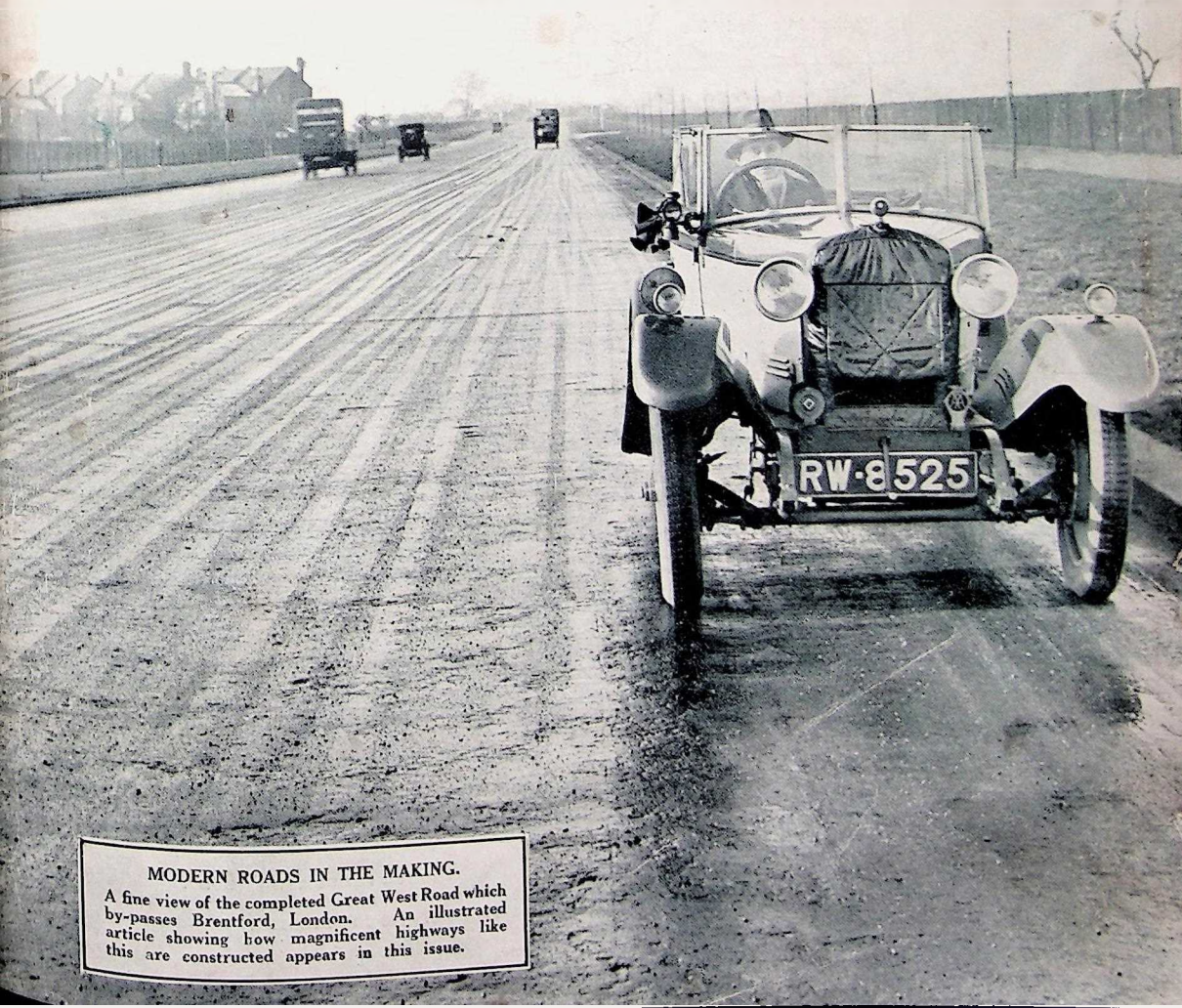


*The*  
**Light Car**  
*and*  
**Cyclecar**

Founded 1912  
The only Small Car Journal

3<sup>D</sup>

Vol. XXIX No. 736  
Friday Jan. 14, 1927  
*Registered at the GPO  
as a Newspaper*



**MODERN ROADS IN THE MAKING.**

A fine view of the completed Great West Road which by-passes Brentford, London. An illustrated article showing how magnificent highways like this are constructed appears in this issue.

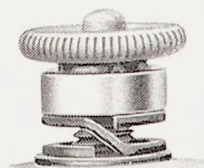
# For the "Sports" engine

the

# LODGE

## SPORTS PLUG

is the finest plug that  
has ever been made



Lodge Sports  
Model H1

On sale everywhere

**6/-**

Packed in sealed blue  
metal box.



**LODGE**  
MADE IN ENGLAND

For ordinary touring, or for  
cool running engines, the  
new standard Lodge plug  
(model C3) 5/-, is the plug  
to use.

**LODGE PLUGS LTD., RUGBY.**

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

# CITROËN

## 4 Door Full-sized Fully-appointed Saloons

THE Saloon bodies have generous proportions, deep roomy seats, ample leg-room for 4 full-sized persons, and luxurious upholstery. Fitted throughout in excellent taste, and with exceptionally complete equipment, these models have every refinement which the owner-driver desires. Arrange a trial run to-day.

11.4 h.p. All-Steel Saloon

£190

with Front Wheel Brakes  
(as illustrated)

£210

*Supreme  
Closed Car  
Value!*

Immediate Delivery  
from  
BRITISH WORKS,  
SLOUGH

Send for Citroën Book 18

CITROËN CARS, LTD.  
CITROËN BUILDING, BROOK GREEN,  
HAMMERSMITH, LONDON, W.6  
West-End Showrooms:  
Devonshire House, Piccadilly, W.1

D.A. 249

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

# 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

### M'KINNON "DREADNAUGHT" Non-Skid TYRE CHAIN.

NOTE THE "BLUE BOY"  
— LEVER LOCK —  
QUICK & EASY FITTING.

imparted by the "Dreadnaught" Chains render motoring safe under the worst conditions. The ever present danger of skidding is eliminated. No injury to tyres is caused by their use, and they stand the hardest wear. Manufactured for Cord, Balloon, Single and Twin Pneumatics, also Single and Twin Solids, all Motorists should include these chains in their equipment.

**ZIGZAG  
PATTERN**

The "BLUE BOY" Lever Lock Fastener.

a special feature—no jacking up to fit or remove.

Order from your usual Motor Agent or from the Sole Concessionaires for Great Britain and Ireland:  
**CESSORIES (EDINBURGH) LTD.**

LONDON:  
46-8, Essex Street, W.C.2.

EDINBURGH:  
4, Queensferry Street Lane.

DUNDEE:  
109 and 111 Cowgate.

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

THE



CAR

NO CLUTCH!

NO GEARS

2-3-SEATER TORPEDO.

Price £215 Complete.

THE Constantinesco Car is fitted with the Constantinesco Torque Converter combined in one unit with the engine. No gears or clutch are required. The Converter has the inherent characteristic which provides just the right torque at the right time to suit the prevailing road conditions without the aid of controls of any kind beyond the throttle control of the engine. The Converter enables a smaller engine to be used.

The Car freewheels automatically, giving considerable economy in petrol consumption. It cannot run backward while in forward gear or on an up gradient.

**ON SHOW NOW**

at

**MR. CONSTANTINESCO'S LABORATORY,**

**130, WILTON ROAD, LONDON, S.W.1.**

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

# GAMAGES SPECIALITIES FOR THE AUSTIN 7

## AUSTIN 7 HORN

Specially constructed to fit the standard 7 h.p. Austin Car. A hole is drilled in the wooden stand immediately below and in line with the wind screen. Barrel part of horn is then passed through the hole and tightened by nut on end. Bulb can be adjusted to any angle. Post free. **SPORTS MODEL**

1916

## Electric SPOT LIGHT.

Black with nickel-plated mounts and complete with bulb. Heavily plated reflectors. 5 in. diameter front. Convex mirror is 5 in. diameter and embodies bar switch.

Price

25/-

The above is a complete Car. 7 h.p. Foglight, Inspection Lamp and Driving Mirror.

## HOLBORN DASH LAMP.

Light can be reflected in any direction. Can be fitted WITHOUT DRILLING dashboard, as wire leads to base of lamp through groove in ferrule. Complete with bulb. Post 3d. Price

5/-

## SCREEN WIPERS.

Best quality Spring Top Pattern, with twin squeegees and handle for operating. Fits either plain edge or metal head type screens.

## SPARK PLUG TESTERS.

Combined Pencil and Spark Plug Tester. This handy little instrument at once denotes any faulty firing of your plugs, or leak in your electric circuit. No motorist should be without one. Post 2d. Price

2/3

## SCOPE MIRRORS

to fit 7 h.p.  
AUSTIN  
CARS.

7/6

Very well made and finished, and giving a very wide range of vision of the road behind. Splendid quality throughout and really good value at, EACH

Post free.  
Order per return.

## LEAF SPRING OPENERS

Enables you to grease your springs with a minimum of trouble. The simplest and easiest to operate on the market, being far in advance of those operated by screw arrangement. The adjustment once set, you can go round the whole lot and open up the most obstinate spring with the

Post free.  
Price

## LUGGAGE GRIDS.

"EASYFIT" Racks. Should be fitted to every car. An efficient Luggage Rack, which also provides an excellent

20/-

best Rear Buffer and saves damage to Car. To fit 7 h.p. Austin Cars. Also stocked to fit all makes of Cars at slightly varied prices. Price

## DE LUXE STEP MATS

Well and strongly made and very attractive in appearance. Specially shaped to fit 7 h.p. Austin Running Boards. Price, per pair,

**A. W. GAMAGE, L<sup>td</sup>** Holborn, LONDON, E.C.1  
City Branch: 107, CHEAPSIDE, E.C.2.

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

# If you want—

A car polish that will remove grease spots and all dirty marks, and polish in one operation—

A car polish that contains no "wax"—

A car polish that does its work in half an hour—

A car polish that is economical and very easy to use—

A car polish that produces a brilliant and lasting polish on all surfaces—

A car polish that remains unaffected by dust or moisture—

# se CHEMICO<sup>™</sup> CAR POLISH

THE COUNTY CHEMICAL Co. Ltd.  
Chemico Works, BIRMINGHAM

THE COUNTY CHEMICAL CO., LTD.,  
CHEMICO WORKS, BIRMINGHAM.  
Please send me in accordance with your offer a generous testing sample (Post Free) of your "Chemico" Car Polish, together with instructions for use.

NAME.....

ADDRESS.....

NEAREST GARAGE.....

## Cars for Scotland Yard.

We are pleased to announce, and we think our friends will share in our pleasure, that we have supplied a fleet of cars for the use of the Metropolitan Police. Nothing but the best would do for the Authorities, and everyone will agree that they ought to have the best. Therefore, the elimination trials were very severe and protracted, extending over a year in fact, which enhances the honour accruing to Jowett Cars Limited. We realise that an example set by such an Authority will be widely followed, and we advise intending purchasers to place their orders as early as possible to avoid delay in delivery.

May we strike a lighter note by suggesting to Mr. Rupert D'Oyly Carte that he might allow the Policeman's Song in "The Pirates of Penzance" to read—

"A Policeman's lot is now a happy one."

Full Four, as supplied to Scotland Yard, £150.  
Short Two £139, Long Two £150, Light Four £145,  
Saloon £185.

"The little engine with the big pull."

Jowett Cars Ltd., Idle, Bradford.



# For Better Spark- instant Start

7,500,000 (Seven Million Five Hundred Thousand) car users have praised the Delco-Remy Coil Ignition System with its Better Spark — instant start, at any speed, and on the coldest day.

Not only is the spark more certain — in fact, absolutely certain, but the wider range of advance and retard of Delco-Remy Coil Ignition System gives better top-gear performance at low speeds than any other form of ignition.

78½% of the different makes of cars of the world using Coil Ignition are equipped with Delco-Remy Coil Ignition.

**fit** You can have your NEW CAR, whatever its make, equipped with the Delco-Remy Coil Ignition System.

## DELCO-REMY COIL IGNITION

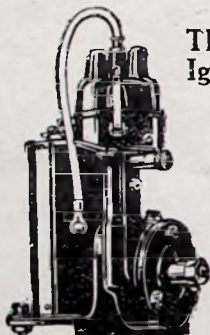
For existing cars order

The Delco - Remy Coil Ignition Magneto Replacement Unit.

Suitable for many light cars.

Prices from  
£3 - 15 - 0  
to  
£5 - 10 - 0  
(Postage 1/6)

Wiring and Switch 12/6 extra.  
Write for quotation for your car.



The Delco-Remy Coil Ignition Magneto Replacement Unit. Spark independent of engine speed. Instant Start. Instant Acceleration. Save petrol and oil. Easily fitted. Better slow-speed in top-gear performance.  
Special Prices Irish Free State.

**free**  
Advice and  
Literature  
on request

"Wherever they're  
fitted they  
Save!"

Fill in, cut out and attach P.O. or Cheque.  
**POST YOUR ORDER OR ENQUIRY TO-DAY**  
To Delco-Remy & Hyatt Ltd., Dept. L.C.2, 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 £3 15 0 to £5 10 0. Postage 1/6. Wiring and Switch, 12/6. Full particulars on request.
- ☐ Cardiac Spring Suspension Moderator. Whatever the road, whatever the load, whatever the speed. **SMOOTH RIDING.** For Light Cars. £4. Medium. £5.
- ☐ Siphon Thermostat gives warm engine in 60 seconds, suitable any pump-cooled engine, 22/6 Postage 5d. Bend pipe diameter.
- ☐ Remy Horns. Electric. Model 25, 7/6/-, postage 1/-; Model 18, 5/6/-, postage 1/-; Model 15, 3/6/-; Model 8C, 1/6/-, postage 1d; Model 2V (hand operated) 1/6/-, postage 5d.

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 Stock Lists and Terms.

NAME.....  
ADDRESS.....  
DEALER'S NAME..... ADDRESS.....

## CLUB" Black Enamel

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

Small Size - **7 ½ d.**

Large Size - **1/3**

Of all Iron-mongers, Stores, Garages and Cycle Dealers.

Sent post free if unobtainable from your local dealer.

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

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

# READ

# The Motor

regularly

!

## Special this week

**American Car Developments.**

As Revealed at the New York National Automobile Show.

Wireless Report and Pictures of New Cars by Wireless.

**New Springing Systems.**

Interesting Semi-Elliptic Spring in which no Shackle is Required.

**"Servo-Braking." What it Means.**

A Simple Description of the Working of Various Forms of Power-assisted Brakes.

**Is the Touring Car Doomed ?**

Prediction which Implies that in a Few Years' Time there will be Only Two Types of Body.

**The Motor Plebiscite.**

Order of Importance of 20 Motorcar Improvements—Notable Response.

**Insurance Policies Reviewed.**

Puzzling Points of Motor Insurance Documents Analysed.

**Novel Method of Testing the Steering of Cars.****A Carburetter Suitable for Alcohol or Petrol.**

Device which Will Deal with Both Fuels without Adjustment.

**New Observation Car.**

Entirely New Type of Body with Novel Features.

**Road Tests Showing Principal Characteristics.**

The 14-28 h.p. Standard Park Lane Saloon.

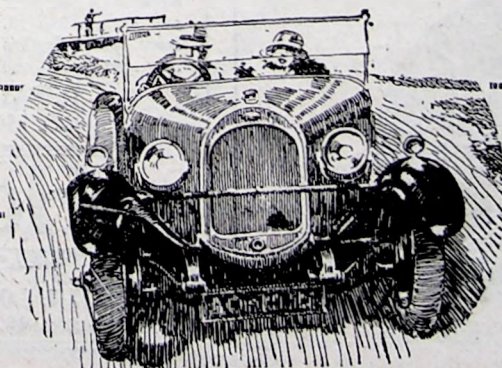
**Non-Inflammable Petrol.**

Claims Contested. A Contradiction in Terms.

**Over 126 Miles in the Hour.**

Eldridge's Wonderful Performance at Montlhery.

**NEXT WEEK.—AN OWNER-DRIVERS' NUMBER.** *Special Features —* Some Finer Points of Driving. "Gadgets" and How to Fit Them. Practical Notes on Maintenance and Overhauling. Arranging The Home Garage. Rust and Corrosion. How to Prevent Deterioration. Easy Starting. Etc., etc.



"The Motor"  
is published  
every Tuesday.  
Price - 4d.

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



## The Drum that cannot be beaten

The modern motorcar has a wonderful engine, but the most wonderful engine in the world is incomplete without the protective film of oil on working surfaces. The utmost precision of workmanship and finish on bearings, pistons, and cylinder-bores makes "nothing but the best" a *sine qua non* in the matter of lubricating oil. Since motoring began, "Filtrate" has been famed for the prolonging of life in engines. You cannot buy—users do not wish—nor do engines need anything better. "Filtrate" Oil retains its body when hot, its fluidity when cold. Decarbonisation is less frequently necessary, and —"FILTRATE" is BRITISH



FILTRATE WORKS, LEEDS

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

"JUNIOR"  
**DRAGON**  
AMPLION

Model AR. 111

48/-

Other Amplion models from 38/-



Finished in a pleasing chocolate shade.

Announcement of Graham Amplion Limited, 25, Savile Row, London, W.1.

## YOUR 1927 MORGAN and expert Morgan service AT HOMAC'S

ALL PRICES REDUCED

**STANDARD**  
model now fitted with double wind-screen, black leather cloth hood, electric horn and celluloid covered steering wheel.

**DE LUXE FAMILY**  
and **AERO** models now 3 in. wider and longer. 7 in. front wheel brakes now standard.

**STANDARD Model** - £89  
**DE LUXE, air-cooled** - £110  
**DE LUXE, water-cooled** £120  
**FAMILY, air-cooled** - £111  
**FAMILY, water-cooled** £121  
**AERO, water-cooled** - £127  
**AERO, 10/40 h.p., Racing** £140  
**SELF-STARTER** £10 extra.  
**DEFERRED TERMS ARRANGED.**  
**WRITE FOR CATALOGUE.**

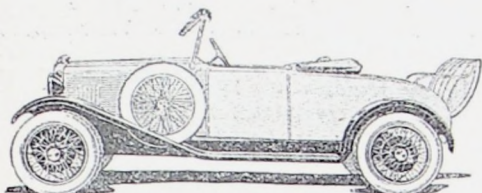
**REPAIRS & OVERHAULS  
BY MORGAN EXPERTS.**

TRADE  
SUPPLIED

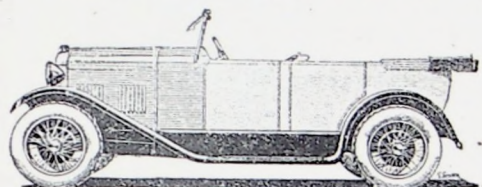
**HOMAC'S**  
MOTOR AGENTS

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

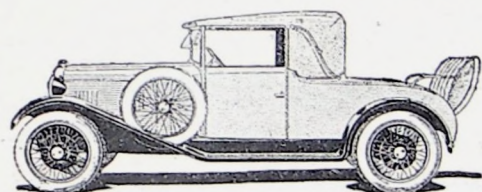
PHONE:  
CLISSOLD  
2408.



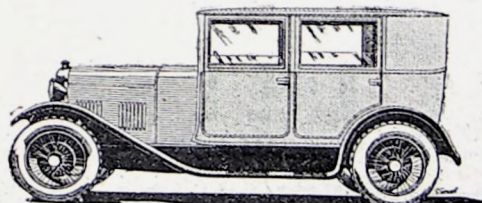
Two-seater de Luxe - £199



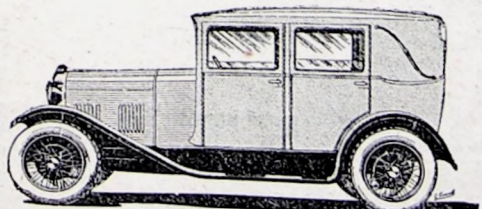
Four-seater - £199



Two-seater Coupe - £225



Four-door Fabric Saloon £248



Weymann Saloon - £275

10/20 H.P.

£10 Tax,

F.W.B.

FULL DIFFERENTIAL.

(SPORTS MODELS From £165.)

**WORTH  
SALMSON  
CONCENTRATING  
ON!**

Here are illustrated a few of the famous Salmson Models on show at our Showrooms.

A trial will convince you that Salmson gives you better performance, better all round value and more comfort than any other 10 h.p. car at or near the price.

May we send catalogues?

Part Exchanges.  
Deferred Terms.

SOLE LONDON DISTRIBUTORS:—

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

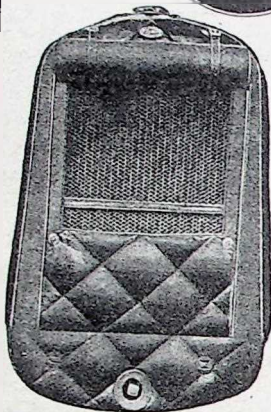
Sole Concessionaires for U.K. & British Dominions:—

S.M.S. Ltd., Church Wharf, Chiswick Mall, W.4. Chiswick 3531

Mayfair  
0267-8-9.

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

REGISTERED TRADE MARK  
**FABRAM**  
BRITISH MADE



THEY give a wide range of temperature control. The front is made in two sections—top half rolls up and the bottom half rolls down. So the bottom half of the radiator can be covered while the top half remains open. The muff can be put on or taken off without removing filler cap. Prices for any car from **18/-**

**Better Driving Light for YOU**  
— SAFER FOR HIM.

## HEADLAMP LENSES

prevent dangerous dazzle and increase the intensity of light where it is required—on the road. They undoubtedly make night driving safe for yourself and the other fellow. Satisfaction Guaranteed. You merely replace existing glasses. .. Prices from **7/6** per pair.



THE GAITER WITH THE WICK TUBE.  
— one hand — one push  
to lubricate the entire spring.

|                                |    |    |             |
|--------------------------------|----|----|-------------|
| CITROEN (11'4 and 12'24), 1927 | .. | .. | £4 : 10 : 0 |
| JOWETT (8)                     | .. | .. | £4 : 4 : 0  |
| LEA-FRANCIS (8'9 and 12)       | .. | .. | £4 : 5 : 0  |
| RENAULT (8'3)                  | .. | .. | £3 : 15 : 0 |

Prices for any car on application.

COVER YOUR CAR WITH A  
**FABRAM DUST SHEET**  
COVER YOURSELF WITH A  
**RAMSO COVER COAT**

Write for Free Illustrated Lists to Dept. L.

**RAMSDENS (HALIFAX) LIMITED**  
147/9, GT. PORTLAND ST., LONDON, W.1  
& STATION WORKS, HALIFAX, ENGLAND.

# A SUDDEN EMERGENCY

WHEN DRIVING AN AUSTIN "7"

And how useful would you find a free hand for signalling or steering, but the operating of the hand brake requires all your attention.

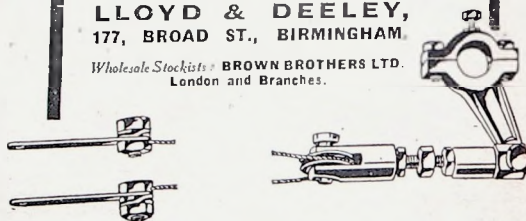
Fit a BODELO BRAKE ATTACHMENT which will enable you to apply all four brakes simultaneously by means of the foot pedal only and will leave your hands perfectly free. The BODELO is extremely simple to fit and absolutely effective.

**PRICE 30/-**

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

**LLOYD & DEELEY,**  
177, BROAD ST., BIRMINGHAM.

Wholesale Stockists: **BROWN BROTHERS LTD.**  
London and Branches.



Laystall for Smithy and Accuracy in every Motor Repair.

## LET LAYSTALL

DO YOUR NEXT WELDING JOB

and you will

## LET LAYSTALL

DO YOUR NEXT WELDING JOB

Laystall, Ever St. Southwark, London, S.E. 1 and at Liverpool.

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

*THE WISE MAN OF THE ROAD.*

DOES YOUR CAR ROLL AND SWAY after taking a road shock, and are you nearly shaken out of your seat? If so, the suspension is too light, and the only reliable and easy way to remedy this is to fit THE STOTT ANTIBOUNCE CLIPS—they are the only shock absorbers which fit to and act on the springs themselves.

**TO ESSEX OWNERS.**

Read what an Essex owner has to say about the STOTT ANTIBOUNCE CLIPS on his Essex Saloon, and then try a set for yourself and enjoy the same comfort:—

"With reference to the Stott Antibounce Clips, we have tried these on an Essex Coach, and we can assure you that they are a very great asset in the rough country which we have round here."

**Prices from 11/6 per pair.**

A post card to the makers will bring their booklet on car suspension, and they will be glad to give you all the information they can with regard to your own particular make of car.

**RICHARD BERRY & SON**

# Great Clearance Sale

of

# Brand New MATHIS Cars

4-seater, 6-cylinder, 4 speeds, dynamo lighting and starting, front wheel brakes, clock, speedometer, electric and bulb horns, kit of tools, five disc wheels fitted with 730 x 130 Michelin Confort tyres. Tax £12. Price **£125**

2-seater, 4-cylinder, 4 speeds, dynamo lighting and starting, five disc wheels fitted with 730 x 130 Michelin Confort tyres. Tax £8 - - - Price **£90**

*Several other Models to be sold at enormous reduction.*

**ATOM MOTOR COMPANY, LTD.**

(GEORGE BROOKE, Receiver and Manager),

Mill Lane - - - West Hampstead, N.W.6.

Telephone: Hampstead 7018/9.

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

# Britain's Best Value

## The SINGER 4-Seater "SENIOR" at £220

with complete equipment for all-weather conditions, is undoubtedly the best value for money on the market.

Four-wheel Brakes; Balloon Tyres; real Leather Covered Pneumatic Upholstery; 12-volt Lighting Equipment; and all the luxurious fittings of last year's model; but in addition, the 1927 Model includes many extras, such as Leverol Sliding Bucket Seats, improved all-weather equipment with sliding panel; clock; floor mats; Lucas Shock Absorbers fore and aft; Tank at rear with Petrol Gauge; and Half-Elliptic Springs in front.

Deferred Payments Arranged £50 down

*Generous allowance for your present Car.*

New Model 2-Seater, with dickey - £220

Luxurious Coachbuilt Saloon - £260

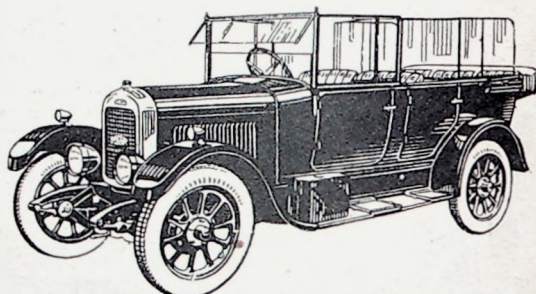
## SOLE LONDON DISTRIBUTORS:

COOK & PALMER, Ltd.,

202, Great Portland Street, W.1.

'Phone - - - - - Langham 3314.

SINGER  
"JUNIOR"  
Full 4-Seater  
£148 - 10 - 0



"SENIOR" ALL-WEATHER, £220

Woodwright.

## THE

itted with 980 c.c. air-cooled twin J.A.P. engine, 27 in. x 4 in. Dunlop tyres, B. & B. carburetter, Hans Renold chains, spring upholstery and cushions, quarter elliptic springing front and rear, quickly detachable wheels, electric dynamo lighting by 5 lamps, double adjustable windscreen, all controls in body, foot accelerator, and handsomely finished in polished aluminium. Completely weatherproof with hood, sidescreens and curtains.

Write us to-day for  
our full catalogue.  
**W. J. GREEN Ltd.,**  
**Omega Works,**  
**COVENTRY.**

### PRICES:

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



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.

# 'SOLEX' SUCCESSES-1926

## *A Wonderful Record on Road & Track*

### 200 MILES RACE (BROOKLANDS, SEPT. 25th)

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| 1,500 c.c.                          | 1,100 c.c.                          |
| <b>FIRST</b> Segrave Talbot special | <b>FIRST</b> Martin Amilcar special |
| <b>SECOND</b> Divo Talbot special   | <b>SECOND</b> Duray Amilcar special |
|                                     | <b>THIRD</b> Morel Amilcar special  |

750 c.c.  
**FIRST** Gordon England Austin special  
**SECOND** Hendy Austin special

For the sixth year in succession, "Solex" equipped cars have secured premier honours in this important race.

### GEORGES BOILLOT CUP (August 26th, 1926, Boulogne)

|               |                                                                                                |
|---------------|------------------------------------------------------------------------------------------------|
| <b>FIRST</b>  | "Solex" equipped 'Chenard-Walcker,' driven by Lagache. Time 5 hours 39 minutes 52 3/5 seconds. |
| <b>SECOND</b> | "Solex" equipped 'Chenard-Walcker,' driven by Léonard. Time 6 hours 16 minutes 8 3/5 seconds.  |
| <b>THIRD</b>  | "Solex" equipped 'Chenard-Walcker' driven by de Zuniga.                                        |

(Won by "Solex" Equipped Cars for the FIFTH YEAR in succession)

### 278 MILES LIGHT CAR GRAND PRIX (Boulogne, 1926)

**FIRST** "Solex" equipped 'Bugatti,' driven by G. E. T. Eyston. Time 4 hours 20 minutes 43 1/5 seconds. Speed 64.125 m.p.h.

*Subject to Official Confirmation:*

1925 Grand Prix (Boulogne) for cars of 1,500 kilo. was also won on "Solex"

### WORLD'S RECORDS

On March 16th, at Southport Sands, Major H. O. D. Segrave, on the 4-litre Sunbeam, with "Solex," established a world's record speed of 152.336 m.p.h.

On the Monza Track, Milan, Miss V. Cordery completed 25,000 kilometres at an average speed of 89.7 m.p.h. on a British 'Invicta' Car, "Solex" equipped.

### THE DEWAR TROPHY

#### The Blue Ribbon of the Motoring World

Awarded to Miss V. Cordery and her Invicta Car fitted with two standard "Solex" Carburettors.

|                          |                            |                                                    |
|--------------------------|----------------------------|----------------------------------------------------|
| San Sebastian            | Grand Prix D'Europe        | First and Second (Bugatti)                         |
| "                        | Grand Prix De Tourisme     | First and Second (Chenard-Walcker)                 |
| "                        | Grand Prix D'Espagne       | First and Second (Bugatti)                         |
| Miramas                  | Grand Prix De L'A.C.F.     | First (Bugatti Goux)                               |
| "                        | "                          | 750 c.c. First (Austin)                            |
| Rome                     | Speed Grand Prix           | "Solex" equipped Bugatti First in general class    |
| "                        | Touring Grand Prix         | "Solex" equipped 'Ceirano' First in general class. |
| "                        | La Targa Florio            | "Solex" equipped cars were First, Second and Third |
| Brooklands               | Evening News Gold Cup Race | "Solex" equipped cars were First and Second        |
| Race for Production Cars | 750 c.c. Class             | "Solex" equipped Austin First                      |
|                          | 1100 c.c. Class            | "Solex" equipped Salmons First                     |
|                          | 1500 c.c. Class            | "Solex" equipped Amilcar Second                    |
|                          |                            | "Solex" equipped Fraser Nash First                 |
|                          |                            | "Solex" equipped Alvis Second and Third            |

### THE NO-TROUBLE CARBURETTOR

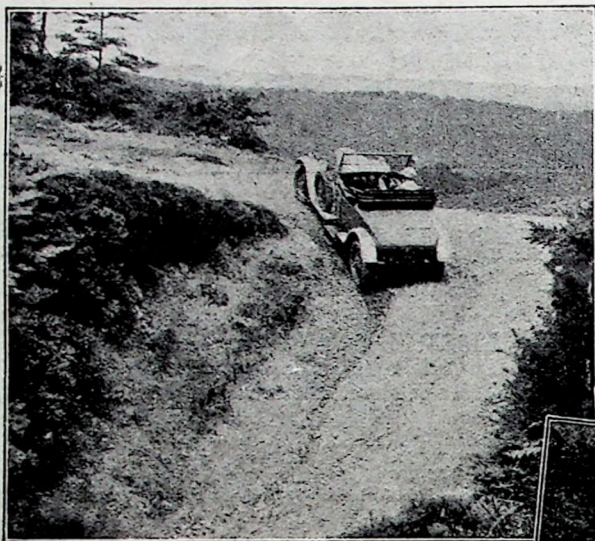
*and note the difference*

SOLEX LTD., 223-231, MARYLEBONE ROAD, LONDON, N.W.1

*Goodall Ad.*

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

B7



# AC

4-CYL. models  
12-24 and 12-40 h.p.  
from **£285**



## Try one—on the toughest hill you know

These photographs show a recent ascent of Leith Hill, near Dorking, made by Mrs. Bruce in the Hon. Victor Bruce's A-C Car. The ease with which such a hill is conquered by A-C Cars is convincing testimony to their great power and reliability, yet the A-C costs less to run, per mile, than any other car of equal road-performance and carrying-capacity. Try one for yourself, and prove these things by actual personal experience. *S.F. Edin*

EVERY A-C MODEL IS GUARANTEED 3 YEARS.  
Payments over 3 years, if desired.

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



THAMES DITTON, SURREY, ENGLAND.

Full Range of A-C Cars, at A-C LONDON CONCESSIONAIRES, 55-56, Pall Mall, London, S.W.1  
(Opposite Marlborough House.)

We can supply perfect used cars — under Guarantee.

# The Light Car & Cyclecar



## WOMEN PROVE THEIR SKILL.

A trial in which only women were eligible to compete was held recently by the Wood Green and District M.C. The photograph shows Miss M. Walker (Singer) in the restarting test on the slippery surface of Whyteleafe Hill.

## NOTES, NEWS & GOSSIP *of the* WEEK

### This Year's "Exeter."

Contrary to previous custom, the M.C.C. annual London-Exeter run will start this year on the night after Boxing night; that is, on Tuesday, December 27th.

### One in Every Five.

The number of driving licences issued in Coventry during the year ended November 30th, 1926, was 11,602, which works out at one for every five of the adult population.

### This Week.

The possibilities of the internal-combustion turbine have been discussed at some length in this journal and it has been pointed out that inventors are faced with grave difficulties in trying to achieve a practical and efficient design. Considerable interest, therefore, attaches to an ingenious rotary engine—a very near approach to a turbine—which we describe in this issue. "Modern Roads in the Making" is the title of an illustrated article which should appeal to our readers.

No. 736, VOL. XXIX.

### ON OTHER PAGES

|                                       |     |
|---------------------------------------|-----|
| A South African Tour                  | 174 |
| Will the Gearbox Survive? (Concluded) | 176 |
| The Law of Obstruction                | 178 |
| Rich Mixture                          | 180 |
| Topics of the Day                     | 183 |
| Cyclecar Comments                     | 184 |
| A New Rotary Engine                   | 185 |
| A Useful Portable Grinder             | 186 |
| Modern Roads in the Making            | 188 |
| A Trial for Women Only                | 190 |
| Our Readers' Opinions                 | 192 |

### LIGHTING-UP TIMES (Rear Lamps), for Saturday, January 15th.

|            |      |           |      |
|------------|------|-----------|------|
| London     | 4.47 | Edinburgh | 4.38 |
| Newcastle  | 4.38 | Liverpool | 4.50 |
| Birmingham | 4.49 | Bristol   | 4.57 |

Moon—Full, January 17th.

### Your Licence.

The fourteen days' grace allowed in connection with the renewal of car licences expires to-day, Friday, January 14th.

### Royal Recognition.

A royal warrant of appointment as purveyors of motor oils to His Majesty the King has been granted to C. C. Wakefield and Co., Ltd., the well-known lubricant manufacturers.

### Our Front Cover.

The car depicted in our front-cover photograph is a 9-20 h.p. semi-sports four-seater Rover. The type was introduced last summer and is rapidly gaining favour.

### Next Week.

The problem of cross-roads and how to solve it will be one of the principal subjects discussed in next week's issue. It will be accompanied, as it were, by a very striking front-cover picture showing one of the many land lighthouses which are springing up on the main roads of the country and which are going far to reduce the danger of cross-roads. Under the heading, "Famous French Factories," we shall deal with the wonderful organization which produces Renault cars.

### Stolen Motor Vehicles.

It was recently stated that 897 cars and motorcycles had been stolen in the Metropolitan Police area during 1926, and, of these, 691 had ultimately been recovered.

### Puncture-sealing Compounds.

The American Bureau of Standards, states Reuter, is looking into the question of puncture-sealing compounds for pneumatic tyres. When all the data has been collated a circular dealing with the various aspects of the subject will be issued.

### The Motor Plebiscite.

Readers taking part in the interesting plebiscite on desirable improvements to the motorcar are reminded that the voting forms published in *The Motor* of January 4th must be filled in and returned by Monday, January 17th. Full particulars appeared in the issue of January 4th, and £100 is offered in prizes. Competitors should bear in

### Thankfully Received!

During the quarter ended September 30th, 1926, the total amount collected in fines at the Surrey police courts was £6,611, Godstone heading the list with a contribution of £1,294.

### Packing for Export.

Evidence of the careful manner in which Trojan cars are packed for shipment abroad is shown in a photograph on this page. By the method adopted not only are the parts protected from possible damage, but the size of the case is kept within reasonable dimensions, thus reducing the shipping charges.

### Concession to Motor Tourists.

The Automobile Association announces that in future British owners of motorcars landed at any of the southern ports without registration or licences will be allowed to proceed to the office of the nearest registration authority to comply with the require-

### 'Ware Woodford!

The police are very active on the Epping road through Woodford, Essex. Traps, as well as hold-ups for minor technical offences, are being organized both night and day.

### Technical Evening Classes.

The evening classes in motor work, held at the Borough Polytechnic, London, S.E., resume for a 12 weeks' term on Monday, January 17th, at 7.30 p.m. Lectures are given on Mondays and Thursdays, whilst Tuesdays or Fridays are devoted to practical work.

### Paraffin as a Fuel.

A well-known firm of marine engineers has recently been experimenting with a fuel mixture of one part petrol and three parts Royal Daylight paraffin. A 10 h.p. marine engine was used, the carburettor being a standard Zenith. The design of the induction pipe of the plant used lends itself admirably for vaporizing purposes, and the results obtained—even with standard jets—were considered eminently satisfactory.

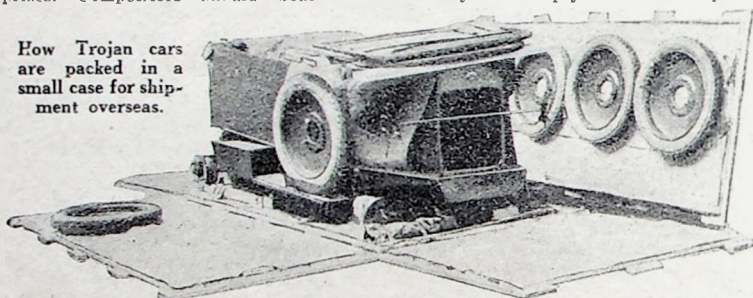
### Our Debt to Cyclists.

"If any one name rather than another deserves to be pre-eminently associated with the genesis of to-day's new roads it is that of W. Rees Jeffreys," says *Cycling*, in an article entitled "How the New Road Came." The writer recalls that Mr. Jeffreys was a prominent figure at cycle meetings a quarter of a century ago and points out that so far back as 1903 he advocated the construction of eleven new roads out of London and one circular road.

### Recent Fiat Successes.

The annual Italian reliability trial for the Garda Cup, held during December, was won by a team of 9 h.p. Fiats, with a total variation of only 10 seconds on the time limit. An average speed of 31 m.p.h. had to be maintained throughout the run. Of the 77 cars competing 32 were Fiats, and of these 31 finished within the schedule time. In speed trials held recently in Lisbon a sports-type 9 h.p. Fiat won the 1,100 c.c. and 1,500 c.c. classes, and proved faster than several cars in the larger categories.

How Trojan cars are packed in a small case for shipment overseas.



mind the need for exercising care when filling in the voting forms. A number of those already received have been incorrectly completed and cannot, therefore, be considered by the judges.

### Jowetts for "The Yard."

After severe elimination trials Scotland Yard has ordered a fleet of 60 Jowett cars for police use. The first batch of 15 cars was delivered on January 1st, and it is interesting to learn that all the fleet will be equipped with Triplex glass windcreens. To cope with this and other large orders the Jowett factory at Idle is working day and night.

ments of the law. Thus, motorists landing at Dover or Folkestone may proceed to Canterbury or Maidstone; motorists landing at Newhaven may proceed to Lewes; motorists landing at Southampton Docks may proceed to the Southampton registration office. In the case of motorists residing in other parts of Great Britain, the registration office nearest to the port of landing will, after issuing the necessary licences, forward the papers to the licensing office in the motorist's home area. These arrangements have been made with the registration authorities mentioned, and also with the police authorities, under the sanction of the Ministry of Transport.



**A LARGE ORDER.**  
The vanguard of the fleet of 60 Jowett cars ordered by Scotland Yard leaving the works.

### Rear Lamps for Mounted Police.

Following an accident in which a mounted policeman was run into by a car at night it has been decided that mounted officers of the Bradford police force shall carry rear lights. Red, two-volt electric lamps are to be used and they will be fixed above the tails of the horses.

### Ill-placed Lights.

The low kerb-like partition along the centre of the bridge at the bottom of School Hill, Lewes, Sussex, has been fitted at each end with an electric lamp. The lamps are not more than 3 ft. from the ground and show a dazzling white light, which, instead of being a help to drivers, is a positive hindrance.

### Out of the Frying-pan.

The chief constable of Berkshire recently expressed the opinion that speed limits merely added to the difficulties of the police, and it was better to take proceedings for dangerous driving when evidence supported such a charge.

### Spanish Motoring Road.

The Spanish Cabinet has authorized the construction of a direct track between Madrid and Valencia, a distance of about 168 miles, exclusively reserved for motor cars, says Reuter. The track will be built entirely by private enterprise, but the concessionaires will be empowered to levy a toll, approved by the Government, on cars using it.

### Night Driving Barred.

A decree prohibiting motorists from using the roads of the Canton of Grisons, Switzerland, between the hours of 10 p.m. and 5 a.m. has been drawn up by the police authorities and is to be submitted to the Council of State and the Grand Council. This action is a result of complaints that the noise of motorists is disturbing at night. The prohibition of motor traffic during certain hours of the day has, of course, been in force in various parts of Switzerland for some time.

### Eliminating Horse Traffic.

To eliminate the obstruction caused by very slow vehicles, and thus to speed up traffic in congested areas, our associated journal, *The Commercial Motor*, suggests that, at the expiration of three years, all horsed vehicles should be barred from using certain roads. In order to avoid hardship to owners of this type of vehicle it is proposed that a subsidy should be granted from the Road Fund, the amount allowed for each horsed vehicle diminishing to zero at the end of the three years' limit.



### PILOT, MOTORIST AND STEEPLECHASER.

Is it because 'chasing and race driving do not offer enough excitement that George Duller has gone in for flying? He is shown above in the 225 h.p. 'plane which he bought from Steve Donoghue.

### Car Prices.

A handy 16-page booklet, giving the prices and condensed specifications of all models of all cars on the British market, will be presented free with the issue of *The Motor* dated Tuesday, January 18th. This reference book was originated by *The Motor* several years ago, and each issue has met with increased appreciation, as it is invaluable to those about to buy a car.

### Avoiding Congestion.

The new main road at Whitehaven, the construction of which was commenced in November, 1923, was opened to traffic on Sunday, January 2nd. The new road, which extends from near the Toll Bar Cottage, on the north side of Whitehaven, to Inkerman Terrace, Hensingham, on the south side, enables traffic to avoid the narrow streets of Whitehaven.

### An Interesting Case.

The case of a motorist who ran his engine for some minutes whilst the car was stationary was heard recently at Whitehaven Police Court. In consequence of the noise a resident outside whose premises the engine was running called a constable and a summons was subsequently issued under that section of the Act which requires that proper steps must be taken to stop the machinery of a motor car whilst the vehicle is stationary. For the defence it was stated that the driver was carrying out adjustments to the engine. The magistrates were of opinion that the nuisance could have been avoided, but as the charge was the first of its kind in the district they decided that the case would be met by payment of £1 9s. 6d. costs.

### British Renaults.

A factory which, it is expected, will employ nearly 1,000 British workers is to be opened in the near future by Renault, Ltd. The factory, situated at Acton, will be controlled by the British company.

## ITALY PLANNING BIG RACING SEASON.

OUR Milan correspondent forecasts considerable Italian activity in the racing world during the coming season and emphasizes the importance with which Italian designers are regarding the 1,500 c.c. car.

One of the most interesting items of news is that Alfa-Romeos will make an official return to sporting events with the new 1,500 c.c. racers in the classic Targa Florio—one of the most gruelling road races on the calendar. The event takes place yearly in Sicily and will be run off this year in April. The new Alfa-Romeos have six-cylinder supercharged engines with twin overhead camshafts, a slightly modified standard chassis being used. If the results of the Targa Florio are sufficiently encouraging the cars will compete in other international events.

Another car which is coming to the front in Italy is the Maserati, a team of which, managed by Sig. Maserati himself, will probably be seen in Europe this year. Already they are down to start in the Tripoli Grand Prix (Africa), the third Grand Prix of Rome and in several events due to take place at Monza. Since last year the design has been modified slightly, the super-

charger now being fitted between the carburettor and the engine.

Last year the 1,500 c.c. O.M.s were the cause of much disappointment in this country and abroad, for, although they were entered for every Grand Prix event and also in the 200-Mile Race, they were not ready in time to take part in any. However, excellent work has been done during the winter and, according to our correspondent, they are now in excellent fettle.

The design has been altered in that a very low chassis has been substituted for that which was first used and which did not give entire satisfaction.

The plans of the Fiat concern are not yet clear, but it is rumoured that the next French Grand Prix will see Fiats on the starting line. For the time being the six-cylinder two-stroke engine, of which details were given in this journal, has been put on one side, and if Fiats race it will be with a new four-stroke supercharged 1½-litre engine.

Much interest attaches to the news that Count Maggi, the well-known Bugatti amateur driver, may appear at the wheel of a 1,500 c.c. Talbot and, perhaps, of a Sunbeam for the races of higher category.

### The Police and Wireless.

It seems probable that, in the near future, police communications will be developed by the wider adoption of cars equipped with "wireless." The cars will be able to transmit as well as receive messages.

### Southport More Secure?

The future of the Southport race meetings on the foreshore is not absolutely certain, but, judging by the tone of the remarks made by the Mayor of Southport on the occasion of the club's annual dinner, the local authorities regard the club's activities with a favourable eye and there seems therefore every reason for optimism in this direction.

### Another P.C. Charming.

Given the signal to proceed by a constable on point duty, who had been holding up the traffic at a busy cross-roads, a driver stopped his engine in getting away. P.C. Charming No. 11 (we dealt with the exploits of P.C. Charming No. 1 in a recent issue) stepped quickly to the starting handle and gave it the necessary pull up. Further than that he smiled all the time!

### Regulating Tram Traffic.

"At the majority of tram stopping places there is ample room between the tram and the kerb for a motorcar and a double-file queue of passengers. If such queues were formed on special elongated and railed refuges, running parallel with and close to the rails, a free passage would be left for cars. At present passengers form in a straggling crowd which extends from the kerb to the tram and all other road traffic is held up." A reader makes this suggestion, which, although open to criticism, certainly presents possibilities.

### Searching the Rainbow.

Although blue, green and grey still remain popular colours for bodywork in America, several makers are experimenting with more unusual hues, Persian blue and Biscay green being amongst the latest. For an extra charge a customer may have his car finished in any colour of the rainbow!



Sir John Smith, director of F. C. Smith (Motors), Ltd., who was in the New Year's Honours List.

### What a Hope!

Splashguards on motor vehicles in Paris, we learn, are not to be made compulsory. It is amusing to note, however, that it is forbidden to splash pedestrians, and drivers guilty of the offence can be summoned. How the trouble is to be avoided merely by legislation is rather an amusing problem, as, so far, inventors have failed to solve it mechanically. In view of the speeds popular in the French capital we cannot help smiling when we learn that French taxi drivers are instructed to avoid driving fast over pools of mud.

### Motoring Round the World.

Best wishes for success to Miss Violette Cordery, the 24-year-old exponent of motoring, who on February 15th hopes to set out on a world circuit by car. It is anticipated that the trip will take five months.

### Accusations Resented.

A special correspondent of a London evening paper has been given to understand that "the police resent the accusations from the magisterial Bench and elsewhere that they ought to be chasing bandits instead of giving their time to 'piffing offences' by motorists." Their defence is that it is their duty to see that motoring laws are observed.

### He Who Hesitates...

A Berlin motoring school has installed an apparatus for testing the reflexes of the pupils. A dummy car, fitted with the usual controls, is arranged in front of a screen on which lights, indicating traffic, are shown. The controls are connected to instruments which register to a fraction of a second how quickly a pupil "driving" the "car" has acted in an imaginary emergency. Similar apparatus is in use by a Paris municipal omnibus concern.

### Daylight Bulbs.

We have recently sampled the effect of Philips's "natural colour, daylight blue glass" headlamp bulbs and have been very favourably impressed with the noticeable increase in the light obtained—especially with regard to the colour, which helps to make night-driving far more restful. These bulbs cost 50 per cent. more than ordinary "white" bulbs. A detailed price list can be obtained from the makers, Philips Lamps, Ltd., 145, Charing Cross Road, London, W.C.2.



### COLONIAL CONDITIONS.

A clay road, which was included in the course of a recent trial in North Auckland, New Zealand, provided such stiff going that the Austin Seven, shown above, was the only car to get through without assistance. All the others had to be towed.

## IN TYPICAL SOUTH AFRICAN COUNTRY.

(1) This charming scenery amply compensates for the roughness of the road. (2) A view from the Table Mountain road, near Pietermaritzburg; it presents a somewhat striking contrast with the luxuriant foliage seen in photo No. 3, which depicts a path by the side of the river Umgeni, near the Albert Falls. Judging by the photographs (4) and (5) the natives take a considerable interest in the Trojan which, in the latter, is shown on a little-used road near Richmond. The performance of another British car in South Africa is dealt with on the following pages. -

## A SOUTH AFRICAN TOUR.

HOW A ROVER NINE FARED IN STRANGE COUNTRY—A 630-MILE TRIP WHICH INCLUDED THE CONQUEST OF THE MONTAGU PASS.

*Devoid of "trimmings" the following article details the performance of a British-made car in a country noted for difficult road conditions. As the writer says, the achievement of the car is surely a record in which any light car maker might take pride.*

OUR car, a 9-20 h.p. Rover, was sent by rail from Johannesburg to Oudtshoorn, as we had neither the time nor the desire to drive there, the distance being roughly 800 miles of bad roads, including several hundred miles of Karoo—a veritable desert.

From Oudtshoorn we turned south in order to strike what is known as the Garden Rente through the Cape Province. About 30 miles from Oudtshoorn the Montagu Pass (2,440 ft.) is encoun-

tered. The whole pass was shrouded in mist, and it was impossible to see more than a few yards ahead. From the top of the pass to George, a quaint old town, is about eight miles, of which three or more are around the side of the mountain. The gradients are steep and the curves sharp, necessitating the utmost care in driving.

George stands about 500 ft. above sea-level, and is the jumping-off place for Knysna and its lovely surroundings, the Wilderness, Plettenberg Bay and Keurbooms River. Leaving George after lunch we headed for Knysna, about 54 miles. The road is good, but again we encountered severe gradients and sharp bends. Miles of this road wind through virgin forest, in which all sorts of birds and small animals, such as rock rabbits and monkeys, are to be seen. The whole way is bordered with lovely wild flowers of all descriptions.

B14

### AMONGST THE ROCKS.

Carrying three adults and their luggage, the car gave an excellent account of itself. (1) On the threshold of the Montagu Pass. (2) In eerie surroundings—the entrance to the Cange Caves.

Making Knysna our headquarters, we toured the surrounding district for several days, visiting Von Plettenberg's Bay, Knysna Heads, the forest, where the guidebook tells you wild elephants are still to be seen, and the Garden of Eden, which is simply one mass of luxurious ferns, flowers and trees.

Then came Keurbooms River, with its fine reflections and its novel ferry. The car and occupants are dragged across by hand power for the princely sum of 6d.—much cheaper than the British ferries we read of in *The Light Car and Cyclecar*.

We returned to George via the Wilderness—a favourite resort in this part of the world—and climbed the Montagu Pass in brilliant sunshine. The engine boiled several times on the climb, but, considering the load and the gradient, this may be excused, for the cooling system of the Rover



is more than ordinarily efficient. After arriving back at Oudtshoorn we made two further sight-seeing trips—the first to Meirings Poort, a rocky defile through the mountains seven miles long. At places the walls are absolutely vertical, not more than 50-100 ft. apart, and rising upwards for hundreds of feet. The district would delight the organizers of trials at home, as we counted 32 “drifts” (water-splashes) in the seven miles!

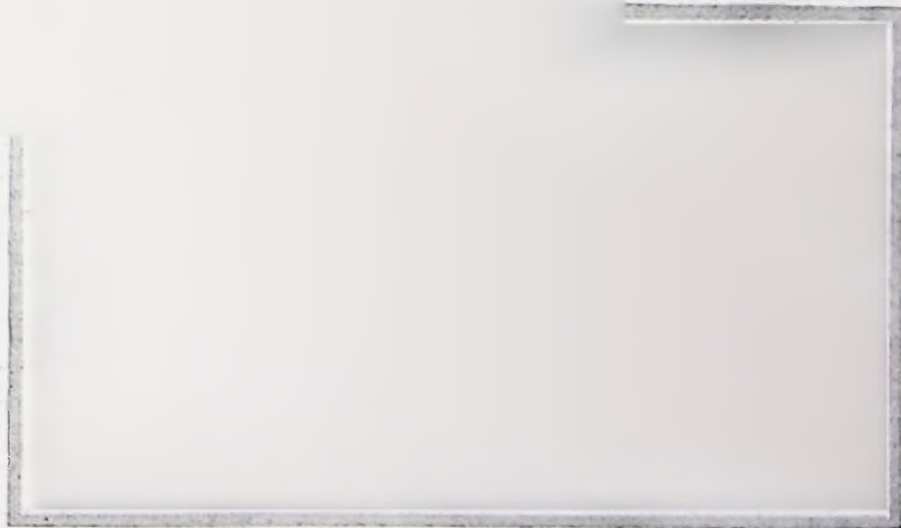
Our remaining trip was to the Cange Caves, the entrance of which is seen in one of the photographs. These huge caverns extend for miles into the hills, and the stalactite and stalagmite formations in them are very wonderful.

A word of praise for the car. It carried three passengers and their luggage—which amounted to six suitcases—throughout the tour of about 630 miles. Our troubles were few. We had several

oiled plugs owing to the very long descents and the magneto advance and retard rusted up solid owing to the effects of exposure in the biting sea air. We got off with only one puncture, and considering the conditions of the trip, this surely is a record in which any light car maker might take pride. G.F.S.

#### IN ALL ITS GLORY.

Three photographs which give a vivid impression of the glory of South Africa. (3) The business-like ferry across the Keurbooms River. (4) At Knysna Heads—note the resemblance to the head of a lion formed by the arch and shadows. (5) Picking arum lilies in the forest close to Knysna.

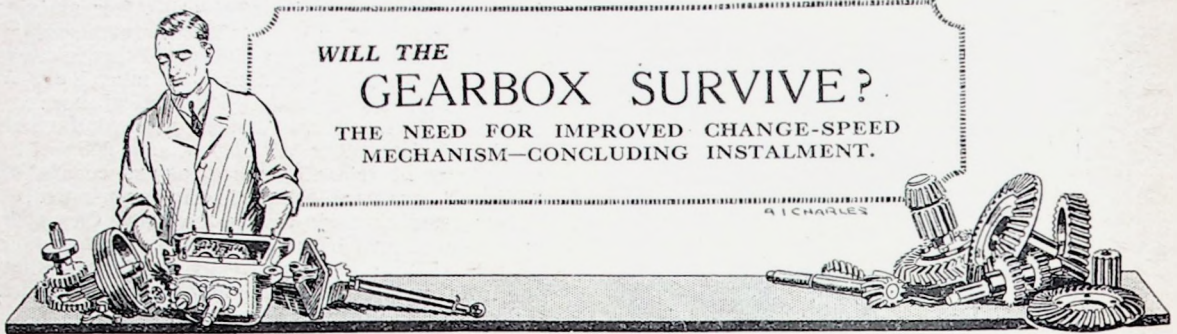


#### AT HOME—AND ABROAD.

AT the height of last summer I decided that motoring on main roads within a 50-mile radius of London was not very pleasant, owing to the extraordinary congestion and the risk of becoming a victim of the “cutting-in” fiend, but when looking back I realize that I was needlessly pessimistic—I had forgotten the winter. On a recent Sunday run northward from London, despite all the attractions of a spring-like day, the road was practically

deserted. The sun shone, the air was like champagne, and at every “busy” cross-road the patrol waved me on, his face wreathed in smiles. This surely proves that a lot of motorists do lay up their cars for the winter, and that quite a lot more are ignorant of the joys of winter motoring. What a contrast, by the way, with the conditions which are popularly believed to rule in other parts of the world.

Focus.  
B15



**L**AST week the drawbacks of the conventional gearbox were discussed and the more successful alternative types of actual gearbox were described; attention may now be turned to other methods of varying the ratio between the engine and the back axle.

One of the earliest forms of variable gearing employed belt drive and expanding and contracting pulleys. This system enjoyed considerable popularity on early cyclecars, and was, in fact, fitted to one well-known make of motorcycle until some three years ago. The unsuitability of belt drive for heavy loads has, however, resulted in this system dropping out of use. Its one advantage was that, within certain limits, any desired reduction could be obtained, whilst, of course, it was very simple to control.

Final chain drive is not very much used at the present time, but it is still employed on all English three-wheelers now in production and on one or two cars, notably the Frazer-Nash and the Trojan. It lends itself to a very simple way of providing the usual number of speeds. In the case of the Morgan, Omega and Coventry-Victor, the propeller shaft transmits the power through bevel gears to a cross-shaft situated at the rear of the chassis, the bevels being enclosed in a suitable casing.

The shafts project on each side, and carry keyed and slidably mounted dogs. A chain sprocket, free to rotate independently of the shaft, is mounted on each side and either sprocket can be positively driven by engagement with the appropriate dog. Ordinary driving chains connect these sprockets to two others, situated one on each side of the rear wheel. By employ-

chains from time to time, requires very little attention. One advantage of the layout is that, should a chain break, only one gear is affected, and the car can still be driven on the other gears. Chains of this type frequently make a certain amount of noise—on all gears, of course—but this is considerably less than that made by most indirect gears of the conventional sliding pinion type.

Friction drive was very popular among cyclecar manufacturers in the past, and is still employed in a few instances, the G.W.K., the new 7 h.p. Waverley and the Lafitte being prominent examples. The principle employed by the two former makes is shown in an accompanying illustration. Simplicity and ease of manufacture, with a consequent lowering of production costs, are very good features, whilst, as the conventional clutch is dispensed with, a further saving is thus effected.

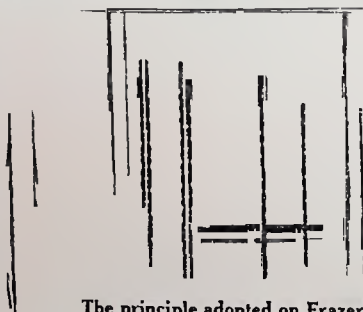
A fibre or cork-faced disc, from which the drive is taken to the rear wheels, is held against the engine flywheel (or a disc driven by a propeller shaft) by the pressure of a strong spring. Drawing the discs apart by a pedal disconnects the drive, but, in contrast with a clutch, they must not be slipped, but engaged briskly, otherwise there is the risk of a "flat" being formed. In getting away from rest the engine is revved up at the same moment that the discs are engaged.

### Varying the Ratio.

Variation in gear ratio is obtained by sliding the driven disc along its shaft. It will be readily seen that by moving the driven disc past the centre of the driving member a reverse gear is obtained. Between the top and bottom gear limits any desired ratio is obtainable, but it is usual to arrange for four or more definite positions of the controlling lever.

A novel type of friction gear is employed in the case of the Lafitte, a French car which has recently been placed on the English market. The principle of varying the ratio by moving one friction disc in relation to another is retained, but the method of applying the principle is both novel and ingenious. Actually, the engine flywheel is utilized as the driving disc, and its rear face is convex, whilst the driven disc is correspondingly concave. Variation in gear ratios is obtained by tilting the whole engine, which is mounted on suitable trunnion bearings.

Electric driving systems in which the gearbox is eliminated entirely have never achieved any great measure of popularity for private cars but have been employed with success for commercial vehicles, the outstanding example being the Tilling-Stevens petrol-electric motorbuses. These are fitted with an ordinary internal-combustion engine in the usual position, this being used to drive a dynamo through the medium of a spring drive. The dynamo generates current for an electric motor, the final drive being by an orthodox propeller shaft and rear axle. The speed of the vehicle is controlled by the accelerator pedal, for the faster the engine runs the greater is the output of the dynamo and, consequently, the greater the torque of the motor.



FINAL  
DRIVE  
BY  
CHAIN.

The principle adopted on Frazer-Nash and G.N. cars to obtain three forward speeds and a reverse.

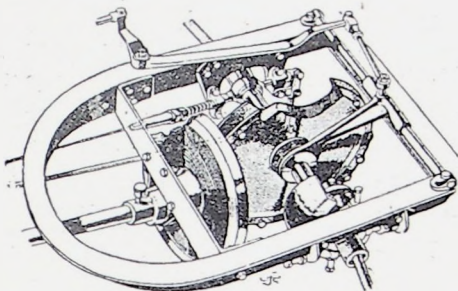
ing sprockets of suitable size, and driving by one or other of the chains, two forward ratios are obtained. No reverse is provided, although this could be arranged.

The same principle is adopted in the case of Frazer-Nash and G.N. cars. Here the countershaft carries three sprockets for providing the forward speeds and the necessary dogs for their engagement. A subsidiary shaft driven from the main countershaft by a sliding pinion carries an extra sprocket driving a fourth chain, which gives reverse.

This type of drive allows of very easy gear changes, and beyond the need for lubricating and cleaning the

The system has the advantages of absolute simplicity of control and a very sweet drive, it being impossible to move off with a jerk; thus the wear on the final transmission is considerably reduced. On the other hand, the initial cost is greater, the weight of the chassis is appreciably increased, and there is a greater loss of efficiency than in the case of conventional transmission systems.

Undoubtedly one of the most revolutionary inventions in transmission systems is to be found in the



A simple type of friction drive in which variation in gear ratio is obtained by sliding the driven disc along its shaft.

Constantinesco car which made its bow at the last Paris Salon. This car has no clutch or gears in the general sense of the terms, their place being taken by an ingenious device known as a torque converter. This is entirely automatic in action and is so arranged that when the engine is ticking over no drive is transmitted to the rear wheels. On the engine speed being increased to about 1,200 r.p.m., the drive is gradually taken up and the car commences to move off smoothly; if the accelerator pedal is kept fully depressed the ratio between the engine and rear wheels is steadily raised, until, at about 35 m.p.h. on the level (the approximate maximum speed of the car), it corresponds to "top gear."

So long as the throttle is kept fully open, the engine speed will remain at a figure corresponding to its maximum power output. Thus, although the engine speed does not vary, the road speed will rise and fall according to the road conditions encountered. When not travelling "flat out," the road speed can be raised in the usual way by the accelerator pedal, the torque converter still altering the gear ratio to suit different conditions.

It is not proposed to deal with the Constantinesco torque converter in full here, but the following brief description will serve to make its action clear.

The reader can best understand the principle by experimenting with a fairly long stick having a weight at one end. If the stick is held tightly at its unweighted end by the left hand and grasped at a point two-thirds of the way up by the right hand, as shown

in the position (1) in the accompanying illustration, a slow backwards and forwards movement of the right hand will merely result in swinging the weight to and fro. This corresponds to the "neutral" position, and the equivalent action in a simple form of the Constantinesco converter is shown in an adjacent drawing.

When the speed at which the right hand is moved is increased, a tendency for the left hand to move backwards and forwards will be felt owing to the inertia of the weight, which, however, continues to swing, although its length of travel is not so great. This condition is shown in (2).

The similarity between the action of the weighted stick and that of the type of converter shown will readily be seen. The connecting rod between the crankshaft and the pendulum corresponds to the right hand, whilst the pivot of the pendulum is, of course, equivalent to the left. It will be noticed that the pivot is mounted on a link and can, therefore, move from side to side, this movement being conveyed to a "mechanical valve" (a special form of ratchet gear), which converts it to a rotary one and so drives the rear wheels through the conventional propeller shaft and bevel gears. The action shown in (2) corresponds to a low gear, for the resistance at the pivot is fairly great and the speed at which the connecting rod to the crankshaft reciprocates is considerable.

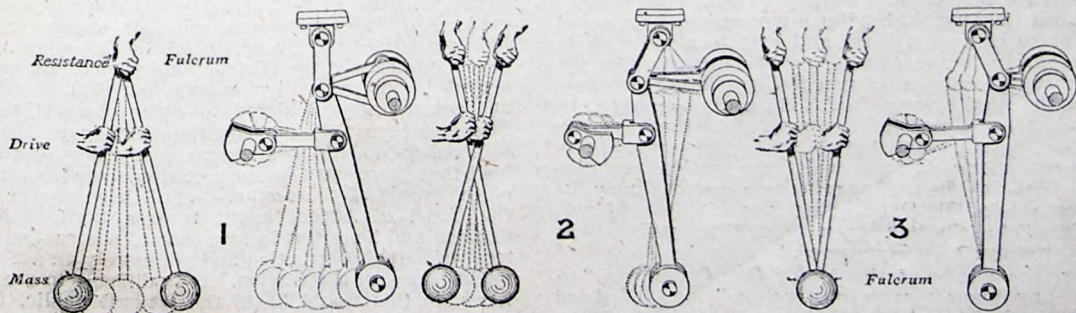
### The Top-gear Equivalent.

If the stick is not held so firmly and the right hand is moved backwards and forwards at the same speed as in (2), the weight will remain stationary and the movement of the left hand will be increased as in (3). Thus the turning effect imparted to the mechanical valve for each engine revolution is at a maximum and the action under these conditions is equivalent to top gear.

The illustrations merely show the principle of the converter and are not drawings of the actual mechanism employed in the Constantinesco car, wherein the converter is incorporated in the engine—a two-cylinder, two-stroke unit of 493 c.c.

From the references in this and the preceding article to alternative transmission systems, it will be seen that designers are well aware of the faults of the conventional sliding pinion type of gearbox, but it seems doubtful whether the efforts of inventors will result in its being ousted from its present popularity for several years to come. It has a number of advantages, chief of which are, perhaps, its reliability and its compact form, which enables it to be built up to form a very neat unit with the engine.

That it will eventually be dropped in favour of some improved system there seems little doubt, but we do not think this will happen until many years have passed. In the meantime it seems probable that efforts will be made to make gear-changing a more simple task and so remove that which is, from a driver's point of view, its main fault.



A simple form of Constantinesco converter, showing how its action may be likened to that of a weighted stick; the positions are equivalent to (1) neutral, (2) low gear and (3) top gear.

*Legal Aspects.*THE LAW OF  
OBSTRUCTION.VALUABLE INFORMATION ON  
AN IMPORTANT SUBJECT.

By a BARRISTER-AT-LAW.

IT is apparently the opinion of most policemen and many justices that the leaving of a car unattended anywhere for over 10 or 15 minutes is an offence in all circumstances. The law as to obstruction is certainly very wide, but it does not go so far as this. Part of the uncertainty which exists as to the exact state of the law is no doubt due to the fact that there are at least three Acts which deal in different language with the offence of obstruction.

By the Motor Car (Use and Construction) Order of 1904, "Every person driving or in charge of a motorcar when used on any highway shall not allow the motorcar or a vehicle drawn thereby to stand on any such highway so as to cause any unnecessary obstruction thereof." The penalty is a fine not exceeding £10, and the Court has no power to suspend or endorse the licence or disqualify the holder.

By the Town Police Clauses Act of 1847, "Every person who by means of any cart or carriage wilfully causes any obstruction in any public thoroughfare" is guilty of an offence under the Act. The penalty is a fine not exceeding 40 shillings or more than 14 days' imprisonment.

Finally, under the Highway Act of 1835, "If the driver of any carriage whatsoever on any part of the highway shall leave any carriage on such highway so as to obstruct the passage thereof . . . or if the driver of any . . . carriage whatsoever shall prevent any person from passing him . . . or by negligence or misbehaviour prevent, hinder or interrupt the free passage of any other person or carriage . . . or shall not keep his . . . carriage on the left for the purpose of allowing such passage," he shall be liable to a fine of not more than £10 if he is the owner, or £5 if he is not the owner, or, in default, to a penalty of not more than six weeks' imprisonment.

**An Important Decision.**

Most prosecutions take place under the first-named Act, but a certain amount of light is thrown on its meaning by a decision in 1917 in a case (*Gill v. Carson*, 1917, 2 K.B. 674), under the Town Police Clauses Act. The offence there was "wilfully causing obstruction," and Lord Reading said, "For a person merely to stand still, or to cause his horse and cart to stand still, in the roadway is not causing an obstruction. An obstruction will only be caused if there is unreasonable use of the road by stopping." He goes on to say, "In my judgment it is not necessary to prove that a person has been actually obstructed. It is quite sufficient to prove circumstances from which the justices can conclude that in the ordinary course persons may be obstructed, and that the actual use of the road was calculated to obstruct even though no person was proved to have been obstructed."

Now, the words of the Motor Car Order are "to cause any unnecessary obstruction," and if Lord Reading's decision is applied to them they will be equivalent to "unnecessarily using the road in a manner calculated to cause obstruction."

If, in fact, an unattended car causes no obstruction at the time when it was left no traffic, or very

little traffic, could be anticipated, it seems reasonably clear from the language of the Act and Lord Reading's judgment that a conviction could not properly be sustained. The fact that drivers are frequently convicted of obstruction for leaving cars in deserted streets which were likely to remain, and in fact did remain, deserted during their absence does not necessarily make such convictions proper, and it seems that there would be a reasonable chance of the High Court quashing them on appeal in such circumstances.

As regards obstruction while on the move, the law is rather more definite, and certainly under the Highway Act (quoted above) it has been held that there must be an actual obstruction. Thus, where a lorry was taking up most of the road, so that a car could not pass it on its right side but was willing to pass it on its wrong side, and in fact did so, the driver of the lorry was held by the High Court to be guilty of no offence (*Nuttall v. Pickering*, 1913, 1 K.B. 14).

Similarly, another lorry driver was acquitted, although he compelled cars behind him to go on to the off side of the road to pass him and he had been warned by a policeman to keep to his near side. There was no oncoming traffic, and the Court held that in fact there was no obstruction (*Sleith v. Godfrey*, 1921, 90 L.J., K.B. 193). In either of these two cases had it been impossible for the cars behind to pass as they did, the driver of the lorry would, of course, have been convicted.

**Slow-moving Vehicles.**

Under the Motor Car Order the driver of a slow car, holding the crown of the road so that faster cars following can pass only at very favourable moments, can properly be convicted of obstruction. Drivers who indulge in this kind of obstruction deserve the fines they too rarely get—too rarely because if they were going at 20 miles an hour the driver behind would be living in a glass-house from the legal point of view if he complained that he could not pass them.

To sum up, in order to secure a conviction for obstruction while moving it is necessary to prove an actual obstruction. This, it should be remembered, is purely a matter of fact and depends entirely upon the evidence. The question is whether anyone was, in fact, obstructed by the action of the defendant. And in order to convict for obstruction by leaving a car unattended the prosecution must show that it was an unnecessary act calculated to cause obstruction.

It seems possible that on the analogy of the case referred to under the Highway Act, where the Court held that there must be an actual obstruction, in spite of the words of the section, "shall keep to the left," the Court of Appeal might reverse Lord Reading's decision and hold that in any case of obstruction there must be actual obstruction and not merely an act which might cause an obstruction. It is difficult to see what hardship this would be to the general public, for in cases where a car was left in a busy street it would be quite easy to prove actual obstruction, and why motorists should be fined for an act which, in fact, does no one any harm, and could in no event have done any serious harm, it is difficult to imagine.



## WILL YOU WALK INTO MY PARLOUR?

THE INNOCENT ABROAD—TRAPS FOR THE UNWARY  
COLLECTOR OF ANTIQUES—HOW FAKED CURIOS CAN  
BE PALMED OFF.



THE motorist who seeks to go about the country "picking up" antiques for a mere song would be better advised to follow Mr. Punch's famous dictum on another subject and "Don't." For years now the collection of antiques has been such a highly organized business—as witness the advertisements of English antiques in the American society journals—that the chance of an outsider finding an unsophisticated cottager willing to part with a treasure for a few pence is exceedingly remote.

Dealers and their agents abound. Auctioneers are not exactly novices at their calling, and even the most illiterate rustic has enough *nous* to know that anything which has been in his family long may have a value beyond its utility. And there are always his children, rural, but rustic no longer, to supply the knowledge for him.

The man who sets out curio hunting with little ammunition in the shape of money will thus find little game left for his gun. On the other hand, he may easily fall into the position of being regarded as fair game himself. The innocent abroad after antiques is no new phenomenon, and it is not surprising that there has arisen a fraternity willing and anxious to exploit him. And not only him, but also people who may claim to have some knowledge of curios and antiques. Probably in no other direction has the faker been so active. No matter what branch of collecting one takes up, there the snares of the faker at once become apparent. Even experts are sometimes caught. The genuine dealer has to be continually on his guard against the counterfeiter, and he is never so suspicious as when some country dweller walks into his premises to dispose of an alleged antique which poverty has driven him to sell.

For the fact must be admitted that many of our truly rural inhabitants are in nefarious league with

fakers to catch the unsuspecting birds who venture into their cottage parlours. Furniture, ornaments, clocks and other articles of supposedly antiquarian value are planted in these innocent-looking abodes, and sooner or later the prey is caught. The cottager takes a commission on the sale and the trap is baited afresh.

The victim may never know how he has been swindled. He is not urged to buy; indeed, the apparent owner generally manifests the greatest reluctance to sell, and often the transaction is completed amid tears of regret at the departure of a family treasure.

A friend of the writer's, now dead, once had a striking illustration of the ease with which faked curios can be palmed off on the innocent. The curator of a big museum in the Midlands, he acquired a spurious Toby jug to place among a collection as a warning to the unwary.

One day a dealer in the city, who was a bit of a wag, attempted to impose on him by sending a youth with a supposed Roman pot to be put among the exhibits. The plot was exposed, and, in return, the curator asked a ne'er-do-well who haunted the museum if he would take the Toby jug, put it up his chimney and see if—also as a joke—he could palm it off on the dealer. The man consented.

That was the last the curator saw of him. Twelve months later my friend went to a furniture emporium to purchase some material for a case, when he was asked by the proprietor to inspect a treasure that he had "picked up" for a trifle from a needy man, in whose family it had been for generations. And there in front of his astonished eyes was the counterfeit Toby jug!

Without disclosing his share in the transaction the curator revealed the true value of the jug and bought it back for what the firm had so trustfully given.

G.A.



The fact that nothing is guaranteed is the safeguard of the cottager, for by the price he asks he seemingly has no idea that the piece under negotiation has any antiquarian value at all.



# RICH MIXTURE

## LIGHT CAR COMMENT AND ADVICE

*By*  
**Focus**

### Central Control.

A MAN at the club the other evening was bemoaning the fact that his new car of French make has central gear change. He said that his previous cars, also of French origin, all had the same "defect." "Anyone would think," he added, "that Frenchmen as a race were left-handed." What this critic forgot was that in France drivers sit on the left of the car, and consequently use the right hand for central gear and brake levers. They do not all do so, however, for one sees quite a large number of right-hand-controlled cars on the French roads—and they are French cars built for the Continental market.

### A Dead Controversy.

NOT long ago—I suppose it would be about six or seven years—bitter controversies used to centre in the subject of right-hand or left-hand control, and the rival schools of thought were as certain of their convictions as the "three speeds or four" combatants of the present day. Time has mellowed the opinions of the right-handers, however, and I suppose there must now be many thousands of them who daily stir up their gears with the aid of a central lever.

Personally, I prefer a right-hand change, and my last three cars have been so provided, but a left-hander often gives a rather more "positive" change, especially in the case of very cheap cars. Some of the 1927 models I have tried have, by the way, an extraordinarily easy change—light clutches and rounded-off pinions must be thanked for this.

### My Little Say.

THE memorandum to police forces on the subject of civility seems, from the motorist's point of view, a shower of shrapnel discharged for the purpose of getting home at a few. It would be a pity if the impression were created that the police as a whole are guilty of rudeness. They are not. There are, of course, places where the police, acting on orders from some mandarin, have been so assiduous in trapping motorists that they have unconsciously taken on the autocratic attitude of the local bench; but they are exceptions.

I know counties where police traps—as opposed

to examinations of licences—are absolutely unknown, and the officers are as respectful and courteous as one could wish. Occasionally a policeman whom we encounter may appear unnecessarily brusque, but how many of us having his wearisome and often exacting task to perform would retain unruffled tempers? I have had my brushes with Robert, but as a public servant he can give points in politeness and helpfulness to most others in official positions.

### Grease or Oil?

THE modern high-pressure grease gun is a great boon, but it pays one periodically to see that it is actually doing its work. While overhauling a car which had been run for 12 months, I discovered that the lubricant had not been successfully penetrating to several places, with the result that the parts had become dry and rusty.

The trouble is that where a spindle is bearing weight, grease under pressure tends to take the line of least resistance and emerges wherever there is clearance. The owner observing this concludes that the part is efficiently lubricated and withdraws the gun.

There are two safeguards—either to relieve the part of weight with a jack when greasing up or to use gear oil in the gun instead of grease. Oil penetrates better than semi-solid preparations, and, moreover, it does not so easily work out. I have used engine oil quite successfully.

### Oily Brakes.

WHILST on this subject, I should like to ask whether it would not be possible to make brake drums secure against the entrance of oil. In too many cases the advice about lubricating hubs by filling up the caps with grease or applying the gun frequently to brake mechanism results in the braking powers being considerably diminished for a day or two, due to the grease getting through on to the linings. In any case, it would be a boon if makers would provide two fair-sized holes in every drum, situated opposite to each other, so that one could swill out unwanted oil with an injection of petrol. On some cars exposing the interior of a brake drum is none too easy.

*Is it in Neutral?*

THE sad accident to a Cambridge doctor who was knocked down and killed by his own car which he cranked up while it was in gear calls attention to a danger that needs to be carefully guarded against in these days when the starting handle is so little used. Although fatalities from this cause are fortunately rare, injuries are by no means uncommon, and any garage man can relate instances of drivers being placed in jeopardy through using the starting handle when standing between the bonnet and another car or perhaps a wall.

The engine may not fire, but if a gear is engaged and the brakes are off, a heave on the starting handle is sufficient to pull the car suddenly towards one, frequently with painful consequences. Interlocking arrangements to prevent this would introduce complications which are hardly desirable, but if owners would make a point of always feeling the brake and gear levers before touching the handle the possibility of accident would disappear.

*A Conversion Consideration.*

I CAME across a man a few months ago in great trouble over a car he had bought in France and brought into this country. His purchase fulfilled all his expectations except in the matter of left-hand drive, which he found a much greater disadvantage than he had anticipated. In traffic it was distinctly unpleasant, and, coming out from behind country buses at week-ends on main roads against

the dominant direction of the traffic, was fraught with some peril to himself—and others.

As conversion to right-hand steering was a simple matter allowed for by the designer, he was anxious to carry it out, but realized that the door would then be on the right side of the car, which would be the wrong side. It meant that his passenger would have to get in first and push past the steering wheel as well as the levers, and, further, that he or she would have to be decanted into the road in busy thoroughfares instead of on the pavement.

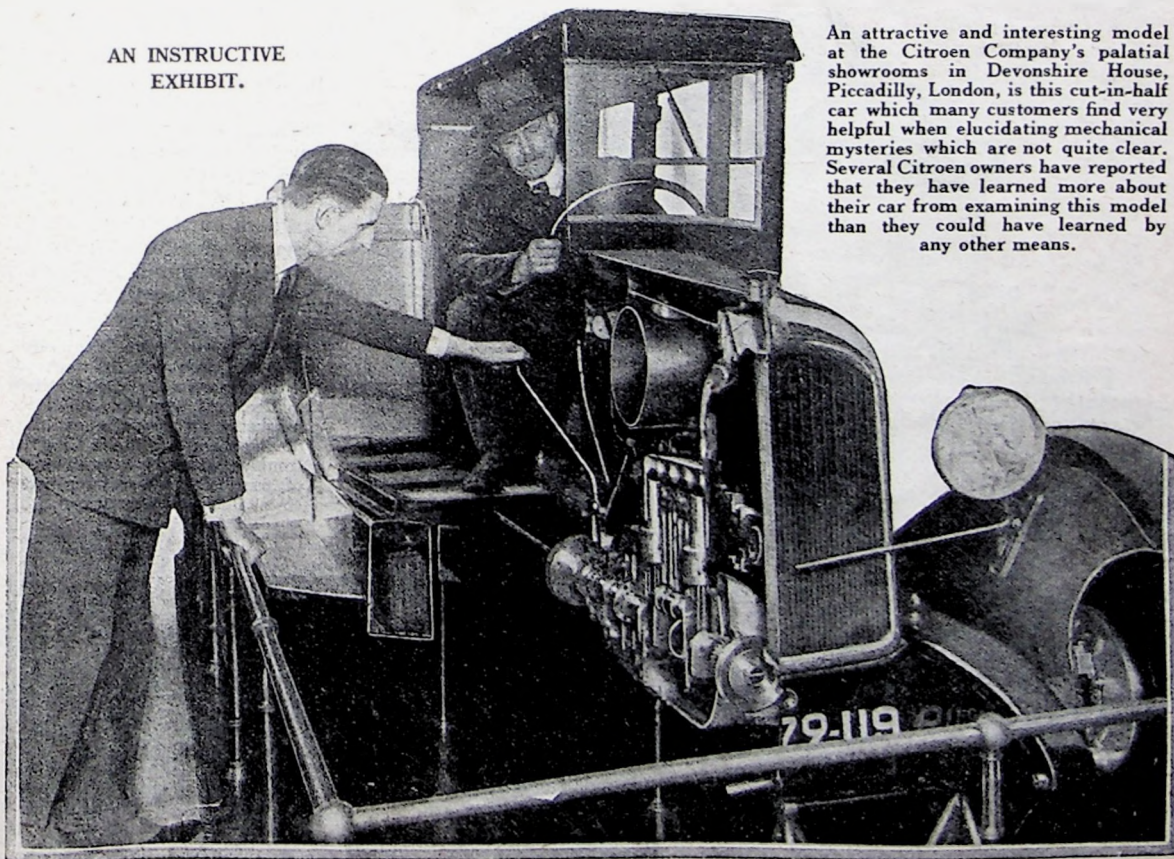
However, as his personal safety was a question to outweigh all others, he decided to move the steering to the right, and has never regretted it. He says that when he has shopping to do he has not to disturb his passenger every few minutes as he once did, and that if he had the choice in the case of his next English car he would be in favour of it.

*When is a Car—?*

AT what stage of dismantlement does a car, as such, cease to exist? What should be the limit of pulling to pieces before the licence is surrendered?

I am prompted to ask these questions as the result of the activities of a young friend of mine. Owing to a regrettable carelessness on the part of a lamp-post that omitted to get out of his way, his cyclecar suffered a certain amount of structural alteration, and he decided to sell it. The people who

AN INSTRUCTIVE  
EXHIBIT.



An attractive and interesting model at the Citroen Company's palatial showrooms in Devonshire House, Piccadilly, London, is this cut-in-half car which many customers find very helpful when elucidating mechanical mysteries which are not quite clear. Several Citroen owners have reported that they have learned more about their car from examining this model than they could have learned by any other means.

came to see it, however, decided otherwise, and it was on his hands for several months.

In despair he began the laborious process of pulling it to bits and getting rid of them one by one. The body was soon disposed of, the wheels went, and after some time the engine found a buyer. Little by little in his spare moments he took off the different components until he had only the frame, the back axle and a few odd items too trivial for description of the sight of which he became utterly tired. Then one fine day a friend of his called, gave him £1 for the lot and began the process of synthesis. He advertised for parts, obtained them in no time, and the car is once more running about under its old numbers, and has been painted in accordance with the colour on the disc, while the engine number has been legally corrected. Unfortunately, the new owner discovered that the side-members of the frame had been damaged in the collision already recorded, and had to fit fresh ones bought second-hand. Query: Is this the same car?

#### *Those Rumours.*

THE official denial that Ford is to produce a six-cylinder model deals a death-blow to a rumour that has been floating about most garages during the past few months. I wonder how long it will be before a similar fate befalls the rumour about the 8 h.p. Morris? Long before the Show I heard of the imminent production of this model which, according to a garage hand who had a brother whose wife's cousin was employed at the Morris works, was to make its appearance at the

end of the year and sweep the market for cars under 1,000 c.c. It is remarkable how these rumours grow; but may it not often be a case of the wish being father to the thought?

#### *Parking Lights.*

THE strict letter of the law demands that when a car is left in a public parking area at night the off-side front lamp and the tail lamp should be burning—which, from the point of view of the accumulator—is just a trifle hard. Lately I have been conducting a little test on my own account with one of the useful little parking lamps marketed by the Marble Arch Motor Supplies. It is mounted at the base of the off-side screen pillar, and serves as a combined side and tail lamp. It has now done duty on several occasions in well-known—and strictly supervised—London car parks. So far, the police have taken no exception, and my battery has simply “bubbled over” with approval.

#### *Inelegant Coachwork.*

THE “slab-sided” architecture which seems to obsess those responsible for modern buildings in our great cities appears to have beset designers of car bodies which tend more and more to resemble the massive rather than the elegant. In this respect, fortunately, British designers are proving more conservative than those on the Continent, and lines suggestive of speed are preferred.

Curiously enough, in America there is a notable breakaway towards the designs of barouches and other types of horse-carriages of the past, and some of the bodies being produced are really remarkable examples of the coach-builder's art. It would be interesting to speculate how far German aeroplane design is influencing body-builders on the Continent, for German machines now give the impression of having been moulded rather than built.

The Monnow Bridge, Monmouth, forms a gateway to the town and is a rare example of a fortified bridge. It was loop-holed for musketry so recently as 1839, during the South Wales Chartist troubles, and it has been an object of particular interest for more than half a century.

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"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. (11 LITRES) COMES  
WITHIN THE SCOPE OF THIS JOURNAL,  
THAT CAPACITY BEING GENERALLY  
RECOGNIZED AND ACCEPTED AS THE  
LIMIT FOR A LIGHT CAR ENGINE.

### Police and Politeness

A CIRCULAR letter recently issued by their chief to the members of the Metropolitan Police Force emphasized the need for the display of tact and courtesy, particularly where motorists are concerned. It will be generally agreed that if the letter was intended to imply that the Force, as a whole, is lacking in politeness, it hardly does justice to a body of men which has a world-wide reputation for civility and efficiency; but there are black sheep in every fold, and individual members of the Force—led away, perhaps, by youth and inexperience—will, we hope, read, mark and learn. It is that sometimes adopted attitude of brusqueness on the part of officers and men to which motor drivers take exception.

In the case of an alleged criminal offence it is, doubtless, excusable, but there is no reason at all why a constable should be anything but cheerfully polite when the issue is nothing more serious than, say, an obscured number plate or an alleged noisy exhaust. Even when a driver is unfortunate enough to be caught in a trap he expects civility, for he is merely breaking a law which, it is publicly and officially admitted, is disregarded by every motorist in the land from the highest to the lowest. To the vast majority of the Metropolitan Police we pay a just tribute by saying that they are a cheerful, well-disciplined body of men, who nearly always treat motorists with a degree of courtesy in entire keeping with the authority they are entitled to exercise. In general, the same may be said of the police throughout the country.

### The Show or the "200"?

THE R.A.C. must make the best of the very late date—October 1st—allocated for this year's British Grand Prix, which takes place at Brooklands, because it must bow to an international arrangement, but we doubt very much whether the promoters of, and intending participants in, the 200-Mile Race—which is recognized as the most popular and best-supported small car race of the year—will rest content with the very unfavourable date—October 15th—fixed for the event.

The fact that it comes hard on the heels of the Grand Prix is bad enough, for it leaves a very small margin of time for dismantling cars which are to compete in the second as well as the first

event, and for practising; but that is not all: Olympia opens its doors on October 14th, and it is doubtful whether manufacturers will have the courage to face the complications caused by this dual upset of their factory organization. The Show alone calls for a united front on the part of individual firms, and if their forces are to be divided, either the Show or the race must, from their point of view, suffer considerably. Concerns which

do not desire to be represented at Olympia, but who may participate in the "200," will, of course, benefit at the expense of their trade rivals, which, again, is hardly fair. The trouble is that the Brooklands fixture list is somewhat overcrowded, and it seems likely that the J.C.C. may have to consider the advantages of the Brighton track in future years, unless a more satisfactory arrangement can be concluded with the Brooklands authorities.

### Roads for Business Men.

IT seems rather paradoxical that, in giving us the finest new roads in the world, modern road engineers should be the direct cause of one of the most severe criticisms levelled against arterial highways—namely, their monotony. It is the very accomplishment of the high ideals to which engineers now aspire which is responsible for this, because, in the reckoning of those who rule the world of levels and theodolites, roads must be straight and of easy gradient—modelled, in fact, upon the lines of railways, in the case of which perfection was attained years ago. Yet it is hardly fair to blame the road engineer, and when we look at the wonderful results of his labours we must surely agree that he has done his work well.

A salient feature of the present situation is not always recognized. It is that main roads are rapidly becoming the business man's route and that those who wish to enjoy the beauties of the countryside must take to the by-roads. After all, to the business man, who is now as dependent on his car as he used to be on trains, straight, smooth, fast highways mean a saving of both time and money and are recognized as an inestimable boon.

To be behind the scenes when up-to-date road-work is in progress is an education in itself. Elsewhere in this issue we endeavour to give our readers a glimpse of the "scene-shifters" at work.



## CYCLECAR COMMENTS

BY SPACKLEPIN

DYNAMO BELT  
TROUBLES—WHY  
NOT FRICTION  
DRIVE?—CURING A  
LEAKY RADIATOR—  
AUXILIARY LUBRI-  
CATION—MORGANS  
IN RECENT TRIALS.

MANY of the Morgan drivers in the "Exeter" suffered from the old trouble of lost dynamo belts, in spite of various precautions which had been taken to overcome this annoying trait.

Why the belts should give trouble is a mystery to me, because the drive is perfectly normal in all respects; the gear ratio is not unduly high, the pulleys are correctly grooved and their centres are reasonably close, whilst, in addition, the size of the standard belt gives it more than enough strength to drive the six-volt dynamo.

If we neglect losses and assume the normal current output to be 5 amps. we find that the dynamo rating, in watts, is 30, that is, about .0402 h.p. Why, then, with only such an infinitesimal amount of resistance to overcome does a large belt break or stretch as though it were badly overloaded?

I confess that I cannot speak with very much authority on the matter, because I have never suffered from a broken or lost belt—touch wood! My Aero-Morgan, so far as the dynamo-driving arrangements are concerned, is perfectly standard, and I am using an ordinary leather-link belt. A friend of mine, who owns a similar model and who does no greater mileage, has lost many belts.

At present he is using a Webb belt, which consists of metal links, on the sides of which are leather cheeks, and he reports that it is giving complete satisfaction. I understand that these belts are stocked by most accessory dealers.

I wonder if it would be practicable to eliminate belts entirely and resort to friction drive? In the early days of motorcars it was a common practice to mount the water pump alongside the flywheel and arrange a leather-faced wheel on the pump spindle to press against the flywheel rim. The pump was slung on a spring-loaded, hinged bracket, and a quite satisfactory drive resulted.

B24

It would not be difficult to rig up a Morgan dynamo for driving in this manner, and I offer the suggestion to anyone who would care to experiment. A suitable bracket could easily be made and a friction wheel of a diameter which, when in contact with the flywheel rim, provided the same gear ratio as that now given by the pulleys would not be expensive to have made. If I were not so singularly blessed with freedom from belt troubles I should certainly carry out the idea myself, and I should expect it to be thoroughly satisfactory.

Whilst on the subject of troubles, I may mention that recently my radiator sprang a leak which was large enough to demand immediate attention. I could not afford the time, however, to remove the radiator and solder the hole, so I decided to try the efficacy of Radiator Neverleak, a compound marketed by Fassett and Johnson, Ltd., 86, Clerkenwell Road, London, E.C.1.

The Neverleak is poured into the radiator when the water is warm and allowed to circulate for about 10 minutes, the engine being kept running so that the temperature is high enough to promote a steady thermosiphonic action. The engine is then stopped, and should not be started again for some hours. It is a good idea to do the job in the evening, and leave the compound to do its work during the night.

This was the plan I adopted, and on examining the radiator in the morning I found that the leak was completely and, apparently, permanently cured. Anyway I have had no further trouble, and the cooling efficiency of the radiator is in no way impaired.

I suppose that with the solution still circulating, any further leaks which may develop will be sealed up automatically—a pleasant thought to one who hates dismantling radiators!

I sometimes receive letters from cyclecar users asking what I think of the idea of mixing oil with petrol for upper-cylinder and valve-guide lubrication. In general I believe it to be a good scheme, but—although ordinary engine oil is quite satisfactory—it is advisable to use one of the special brands of oil sold for the purpose.

A drawback of this system of auxiliary lubrication is that it is rather messy, for if the carburettor floods, a film of oil is left on it when the petrol evaporates. Similarly, evaporation sometimes causes an overdose of oil to remain in the float chamber, thus giving rise to difficult starting.

In my opinion a better idea is to fit up a small auxiliary oil tank and connect it to the inlet pipe by means of a length of small-bore copper tubing, in which is a tap or, preferably, a needle valve controllable from the driving seat.

In this manner the oil is drawn directly into the cylinders with the mixture, but without first passing through the carburettor; furthermore, the amount of oil being used can be regulated to a nicety according to speed, load and so forth, or the supply can be shut off entirely.

I was glad to see that Mr. H. F. S. Morgan had won a premier award in the London-Gloucester run. The course was, admittedly, difficult; witness the fact that five of the twelve competing Morgans retired—a very unusual percentage of "casualties." In addition to Mr. Morgan's award, three Morgans won silver spoons, one a bronze medal and two received certificates. Thus it will be seen that the aggregate result was very good.

Again, in the "Exeter" these three-wheelers proved their reliability. As the list of awards published in last week's issue showed, there were 11 gold medal winners amongst the 21 starters, the remainder being made up of 3 silver and 1 bronze medal winners. There were 6 "no awards."



### "New Car" Showroom.

NEW CARS or USED CARS with a written guarantee are best obtained from Newnham's. Our brochure, "Cars of Beauty," the most artistic and comprehensive car catalogue ever published, together with our current stock list of over 100 guaranteed "Used" cars will gladly be sent FREE on request, and it should be particularly noted that our "Part Exchange" and "Deferred Payment" facilities, which incidentally are unique in their simplicity and generous application, are operative in any part of Great Britain.

Why not get in touch with us at once and let us tell you how we can help you personally?

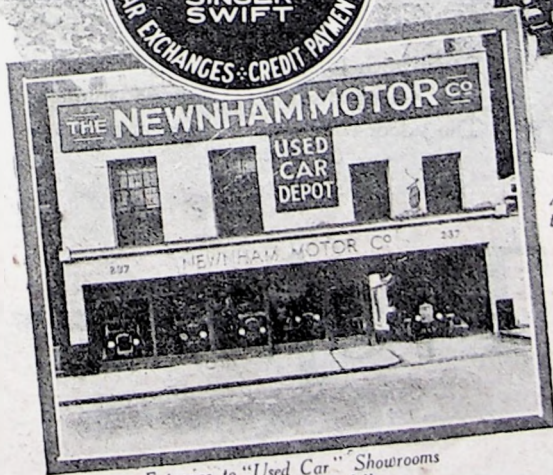
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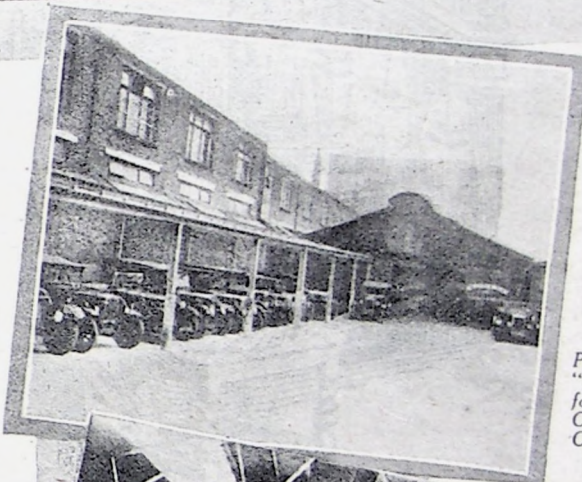
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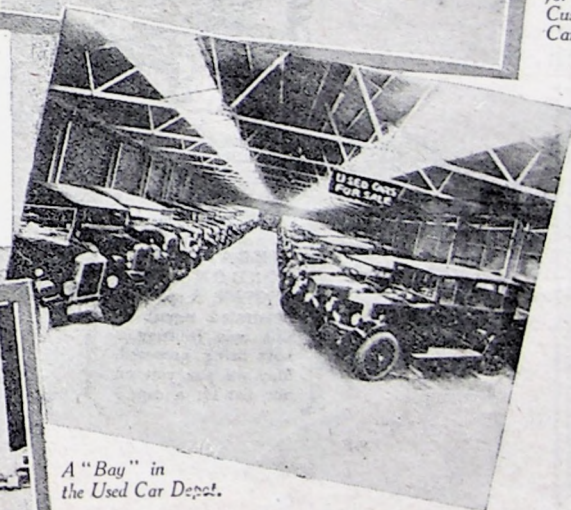
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Telephone: RIVERSIDE 4646 (Private Exchange).

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

# Minor Operation looking in



SINGAPORE TO LONDON IN A TROJAN. A specially illustrated report of this epic Journey is now being prepared. May we put you on our list for a copy?

The price of the TROJAN **£125**  
complete on solid tyres

Fitted with full pneumatic equipment ... £130

The 3-door 4-seater model on solids ... £140

The 3-door 4-seater model on pneumatics ... £145  
(as illustrated)

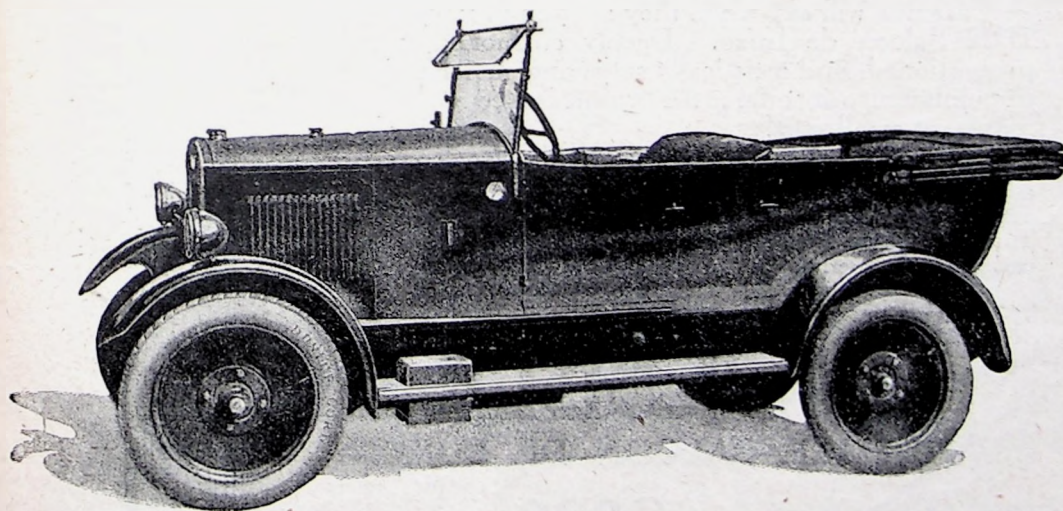
## Try a Trojan - The

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

# on Grandpa—before his face for the time

Such a "Grandpa" would soon lose the family goodwill, if adjustments were required with the frequency of many cars. But then motorists didn't look to their cars for clockwork service until the TROJAN set the fashion.

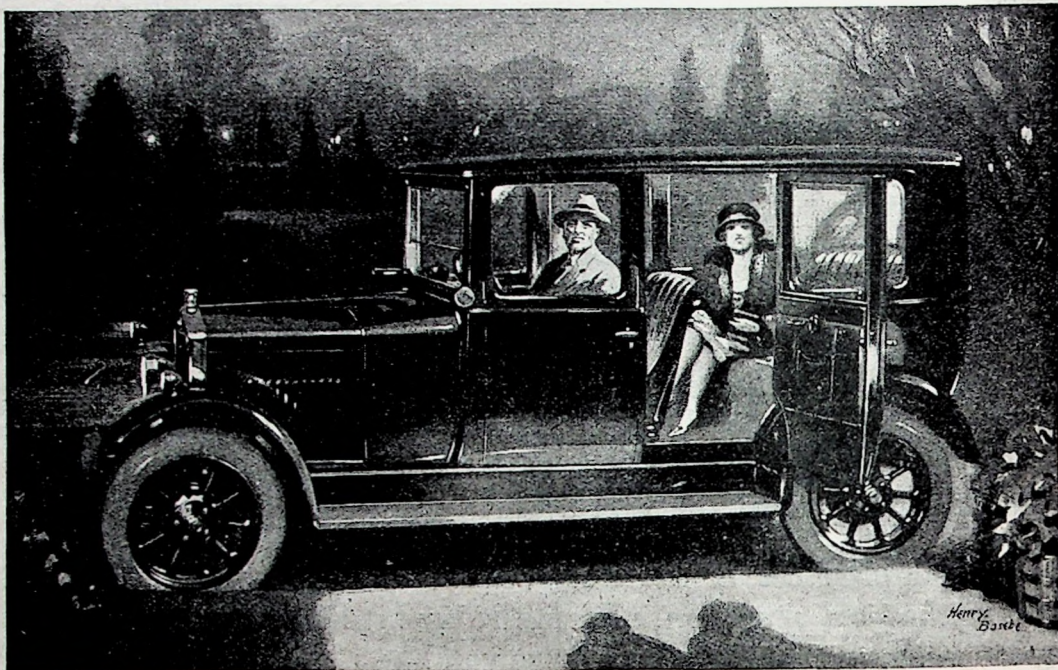
Being the simplest car in the world, the *Trojan* does not require mechanical attention. From the time it leaves the Kingston Factory it is destined to serve you like a "Slave of the Black Lamp"—yours for personal transport service *always*—a mere pull of the starting lever galvanising into life the fidelity of a family retainer and the mobility of a Magic Carpet.



## Simplest Car in the World

MADE BY LEYLAND MOTORS LTD · LEYLAND · LANC'S

FACILITATE BUSINESS, and ensure prompt attention to your enquiries, by mentioning  
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## “Motoring Luxury”

“DON'T they look comfortable?” That is what your friends will say when they see you in your Wolseley 11/22 Saloon de Luxe. Deeply cushioned, perfectly proportioned, and artistically satisfying in its finish and appointments, it offers the quintessence of motoring luxury at small cost.

Four wide doors, plenty of head and leg room, and independent adjustable front seats. The “all-gear” engine is remarkably silent and efficient, with an astonishing reserve of power when required. The controls are simple and easy, and the four-wheel brakes are effective and powerful.

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



## AN INGENUOUS ROTARY ENGINE.

NARROWLY APPROACHING THE IDEALS OF AN INTERNAL-COMBUSTION TURBINE, THE INVENTION DESCRIBED BELOW IS OF MORE THAN USUAL INTEREST. IT IS KNOWN AS THE DELSO ROTARY ENGINE.



**I**N certain articles which have recently appeared in *The Light Car and Cyclecar* reference has been made to the possibilities of the internal-combustion turbine. Many attempts have, of course, been made to produce such a machine, but, as we have already pointed out, almost all of them have failed, either through an inordinately low efficiency which made them unable to compete with an ordinary engine, or else owing to the impossibility of finding materials which would stand up to the high temperature and erosive action of the products of combustion.

It is due to these difficulties that a turbine of the vane type—so widely used in power stations and for ship propulsion, with steam as the motive power—has never proved a success when driven by the products obtained by burning petrol with air.

Attempts have been made to carry out the combustion of the petrol with air in a separate chamber, leading the gaseous products at a high temperature and pressure to a circular casing containing wheels fitted with vanes set at an angle. Invariably, however, the materials were found to suffer very severely in a short space of time, and trouble was also experienced with the lubrication of the bearings. Furthermore, in order to run efficiently, the rate of revolution of such a turbine must be extremely high, so that its application to a motorcar would necessitate the use of gearing giving a reduction of round about 20 to 1; it is also doubtful whether any reasonable degree of flexibility could be obtained with such a device.

For these reasons many inventors have concentrated upon a type of power unit which, while called a "turbine" for the want of a better name, does not employ the "windmill" principle; it utilizes, instead, parts corresponding, in some ways, to the pistons of the ordinary engine but controlled by cams, so that the driven shaft receives a far greater number of impulses per revolution than are produced in a four-cylinder engine or even a six-cylinder engine of entirely orthodox type.

### A 90 h.p. Unit.

We have recently seen on paper a good example of this class of power unit, known as the Delso rotary engine. The inventor is a fully qualified engineer who has gone to a great deal of trouble in producing a full set of detail and general arrangement drawings for an engine of this type, which, according to his calculations, should develop 90 h.p. at 1,000 r.p.m. The engine is circular in form, the overall diameter being about 2 ft., while the length would probably not be any greater.

Arrangements to manufacture this unit, which was primarily intended for aircraft, were cut short by the termination of the war, and since that date the inventor has not been able to arrange for further experimental work. Owing to limitations of space, we cannot attempt a complete description of what is rather an intricate design, but the principle can be understood from the following notes, which should be read in conjunction with the part-sectional elevation of the engine reproduced on this page.

Mounted on the central shaft is a rotating drum, bored radially for the reception of seven lengthy pistons. The outer end of each piston constitutes a vane against which explosions take effect, and is provided with spring packing bearing against the inner surface of a fixed circular housing. This surface is formed in a series of undulating curves—four in all—

so that as the drum rotates the pistons move inwards and outwards evenly and alternatively.

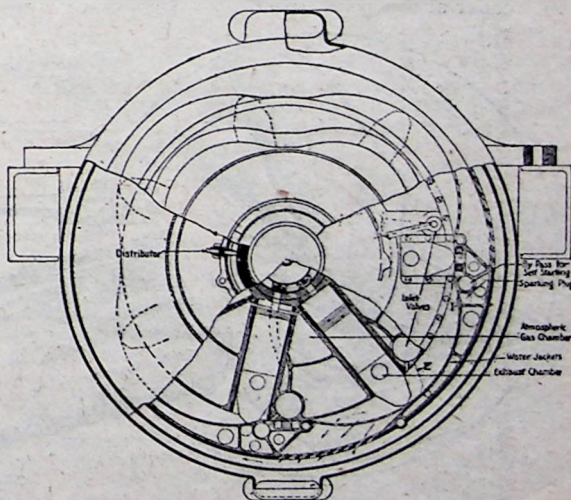
In order that this movement shall occur smoothly and without undue pressure (due to centrifugal force) against the outer casing, the inventor provides each piston with a pair of trunnion bearings running in a cam groove, the shape of which corresponds exactly with the curved contour of the casing.

The inner face of each piston constitutes a pump, drawing the mixture from a carburetter through the hollow central shaft and delivering it, under a pressure of 105 lb. per sq. in., through a non-return valve to a receiver. From this receiver the mixture flows to a series of inlet valves of the rotary type, one being mounted adjacent to the outer end of each piston.

### The Firing Stroke.

When a piston reaches the position indicated by the dotted lines marked "I" on the drawing reproduced, the rotary inlet valve is opened automatically by a cam and the small space behind the piston is rapidly filled with mixture flowing under pressure from the receiver. The next instant the valve closes and the mixture is fired, the pressure acting upon the face of the piston, which is driven forwards. The space behind it increases in volume, the gases continuing to expand and lose pressure.

When the piston reaches the position marked "E," the gases have fallen to a pressure of about 20 lb. per sq. in. and the piston commences to overrun a series



In this part-sectional elevation, the general layout, including the disposition of the pistons and cylinders, may be seen.

of ports formed in the casing; exhaust then follows. As there are four undulating surfaces in the outer casing and seven pistons, no fewer than 28 power impulses are obtained per revolution of the drum.

Ignition, incidentally, is effected from a rotating distributor in the style usually employed for rotary aircraft engines. One of the several advantages claimed by the inventor is that positive self-starting can easily be arranged, the vane-like pistons being driven round by compressed gases from the receiver so soon as the throttle is opened.

## A USEFUL PORTABLE GRINDER.

SIMPLE MOTOR-DRIVEN APPARATUS WHICH WILL PROVE A VALUABLE ADDITION TO AN OWNER-DRIVER'S GARAGE EQUIPMENT.

WHEN an engine is being tuned for maximum efficiency it is always an advantage to smooth, or even to polish, the valve ports, the inner surface of the inlet manifold and the cylinder heads. With some engines it is not uncommon to find unduly thick valve-guide bosses and awkwardly shaped passages which restrict the flow of gas, whether it be inwards through the inlet valves or outwards through the exhausts. No amount of carburettor tuning or other adjustments will offset these defects; they must be remedied by practical means—that is, by chipping, filing or scraping.

In general, however, this is more easily said than done. It is often risky to use a hammer and cold chisel on cast-iron, as this metal is rather brittle and, therefore, easily cracked. On the other hand, although cast-iron can easily be cut with a file, the very short strokes which must be taken when cleaning out valve ports cause the work to become so monotonous and laborious that all but the most enthusiastic and determined give it up as a bad job.

There is a way, however, of making the work easy, pleasant and rapid; this is to scrap files and chisels and to resort to grinding.

The first objection which will arise in the mind of the reader at this point is that the necessary apparatus

A full-size view of the actual motor which, it is suggested, should be used to drive the abrasive wheels.

toys, as they are proper engineering jobs and of very compact shape, measuring, as a rule, about 5 ins. long and 2 ins. in diameter. When connected to a 6-volt accumulator or, alternatively, through a resistance from the public mains, a motor of this type will run at about 3,000 r.p.m. and develop a reasonable amount of power.

The idea is to use one of these motors for driving an emery button which is mounted on the end of a short spindle forming an extension of the armature shaft. The accompanying illustration shows clearly the shape and dimensions of a spindle designed to be used on the E.E.C. electric motor, which also appears in the illustration.

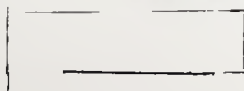
The motor in question is manufactured by Economic Electric, Ltd., 10, Fitzroy Square, London, W.1, and is known as type 58/15, its price being 35s. The armature shaft is 7/32 in. diameter, running in plain bronze bearings of ample dimensions.

Reference to the illustration will show that the motor must be fitted inside a casing which can conveniently be made from an empty can-tin, the rear end of the motor being secured to the sides of the tin by means of two small L-shaped brackets screwed to the end plate of the motor and to the sides of the tin. The lid of the tin passes over the armature spindle before the extension piece is fitted. In this manner the motor is protected from emery and cast-iron dust—a very essential precaution.

The abrasive wheels can be bought at most good tool dealers, and a selection should be obtained with varying diameters up to about 1 in. In mounting a button on the grinding spindle it is advisable to use washers of blotting paper or thin sheet rubber against each face of the button. This allows slight flexibility and obviates the risk of cracking the

button, which, incidentally, is rather brittle. The outer paper or rubber disc is backed up by a plain steel washer.

With the grinder made and assembled as described, it will be obvious that by holding the casing in the hand and with the motor connected to a source of current supply, the abrasive button will be revolving at a very high speed and it can then be worked over the rough surface of the port or other part to be cleaned up. Deep cuts cannot, of course, be taken, but it is surprising how rapidly the button removes the surplus metal, and,



In the above composite sketch the dimensions of the spindle and so forth are suitable for the motor mentioned in the text. The method of using the grinder is shown on the left.

will be of an elaborate and very costly nature; far more so, indeed, than the desirability of having polished valve ports would appear to warrant. It is admitted that grinding apparatus of the kind used in well-appointed workshops is costly, but very simple equipment, which will prove quite effective in practice and need cost no more than about £2, can readily be made up by any amateur.

No doubt most readers are familiar with the small electric motors which are sold for driving model boats and "locos." These motors must not be confused with

of course, there is no real manual labour attached to the process of removing surplus metal.

The objection may be raised that a speed of only 3,000 r.p.m. is not nearly high enough for a  $\frac{1}{2}$ -in. abrasive button as, according to machine-shop practice, 26,000 r.p.m. is a fairly usual speed. This is perfectly true, but such very high rates of revolution are not possible with a simple apparatus of the type described, and it is necessary, therefore, to be content with a lower speed, the only disadvantages of which are that the button will not cut so quickly and that it will tend to wear away more rapidly.

It will be interesting here to mention that the advantages of grinding over filing, from the labour saving point of view, were proved in a test a few years ago when, in a given time, an emery wheel removed 7 lb. 12 oz. of cast-iron, whilst only  $5\frac{1}{2}$  oz. were removed by filing.

The motor which has been described is one which is particularly well suited to the purpose in view. There is no reason, however, why any similar type of motor should not be used; the general principle will remain the same, the only alterations necessary being those which govern the size of the grinding spindles and the arrangement of the casing for the motor.

Instead of using a self-contained grinder, it would

be possible, of course, to use a motor of any other type or even a treadle gear and to drive the grinding spindle by means of a length of speedometer cable. In this case, the grinder spindle would have to be mounted in bearings and provided with some form of combined housing and handle.

A convenient arrangement would be a short length of steel tubing, each end being provided with a plain or ball bearing to support the grinding spindle shaft which would pass through the centre. One end of the shaft would be adapted to take the grinder spindle extensions, whilst the other would be connected to the speedometer cable, the casing of which could be secured to the steel tubing. Similar arrangements for fixing the cable and casing would be made at the motor end and, with cable of the flexible wire type, no difficulty would be experienced owing to the high speed at which it would revolve.

Whichever form of apparatus is decided upon it will be obvious that it can be put to other uses besides actual grinding. By substituting a small mop for the abrasive button the plated work of a car could be burnished with a minimum of labour, and by using suitably shaped "bobs" awkward corners and interstices of windscreens and so forth could easily be kept polished.

## BRIGHTON TRACK SCHEME TAKING SHAPE.

A CLUB NOW BEING FORMED  
—HOW THE SCHEME HAS  
BEEN EXTENDED SO AS TO  
PROVIDE A LONGER CIRCUIT.

**T**HERE is every indication that the efforts of those who planned the Brighton racing track will be crowned with success, for increasing interest is being taken in the scheme and men whose names are prominent in the motoring world have identified themselves with the Brighton and Hove Motor Club, which is intimately associated with the project.

Viscount Curzon, M.P., has agreed to become president of the club, whilst members of the Racing Committee include Col. Sir Walter de Frece, M.P., Professor A. M. Low, and Messrs. T. B. André, C. L. Clayton, K. Lee-Guinness and Harry Preston.

Founder members, limited to 250, will be admitted to membership on payment of two guineas per annum. All applications are being taken in strict rotation, and if the full complement of founder members has already been accepted, applicants will be asked to become ordinary members. Founder members will pay £2 2s. per annum, members 3½ guineas.

Members will be entitled to use the track for practice purposes subject to such conditions as may be imposed by the Brighton and Hove Motor Racing Club, Ltd., on all days other than those on which big meetings are being held or when the track has been leased to another motor club or other sporting body. This means that it would be available on practically every weekday, with the obvious exception of Saturdays.

Further details can be obtained from the Secretary, the Brighton and Hove Racing Club, 10, Prince Albert Street, Brighton, Sussex.

Since we last dealt in detail with the track itself, the scheme has been vastly improved by the acquisition of more land enabling a long circuit of  $4\frac{1}{2}$  miles

to be introduced. It will be possible, however, to use the short circuit of  $2\frac{1}{2}$  miles—that is, the western loop—if it is desired.

The layout of the course can be seen from the accompanying plan, which is also interesting in that it shows the various approach roads and their distance from the main roads. It will be observed that Dyke Station, on the Southern Railway, is within easy walking distance of the track, whilst by road, the course is very easily reached.

We understand that Messrs. Clayton and Black, architects and surveyors, of Brighton, planned the course so that the greatest advantage was taken of the natural formation of the ground. Mr. C. L. Clayton, one of the partners of the firm, is a well-known motorist, who is frequently seen in motor reliability trials.

Some confusion has arisen as to the nature of the track, and it would be well to explain that it is not, quite obviously, intended to be a second Brooklands. It was conceived as a road track pure and simple, with the object of introducing in this country the conditions for racing which have existed abroad since motor racing was introduced. The land is ideal for the purposes of a track and provides good facilities for viewing the racing, as the course is flanked, as it were, by hills, from which an excellent all-round view can be commanded.



INTEREST in the great arterial roads of the country is rapidly on the increase, yet how many motorists have taken the trouble to find out how they are built? "It is rather surprising how the public takes things entirely for granted," said an engineer connected with the development of one of London's new concrete roads, to the writer recently.

"They do not appear to notice what is going forward," he continued, "until the road is opened, and then, very often, they are mildly surprised that the work has been done so quickly. Only a few of those who use the magnificent new highways which are being laid down everywhere realize the enormous amount of thought, labour and, one might almost say, science, which is necessary to work things out on paper in the first place and then to carry them out afterwards."

Bearing these words in mind, it was with added interest that we recently examined the section of the London North Circular road now under construction which runs from the Finchley Road to "The Green Man" on the North Road, about 1½ miles distant.

The process adopted represents that now being commonly used for roads of all-concrete formation, and a brief résumé of the operations from start to finish should interest every motorist.

### The Road—on Paper.

Apart from obtaining the necessary permission, work really begins when the surveyors get busy planning the course which the road shall take, for it is not always possible or convenient to choose a route which is as straight as the crow flies. This having been settled and duly "plotted" on special plans, cross-sections of the contour of the ground have to be taken at regular distances—about 66 ft. is a common figure—and a longitudinal section along the centre line of the proposed roadway also has to be made.

By careful calculation gradients are now schemed, the main idea being to use the earth excavated in forming cuttings to provide the necessary filling for embankments. The surveyor and his staff next have to mark out the permanent centre line of the road by means of pegs, also the side widths of the land acquired, the latter dimensions obviously varying owing to the greater width required by an embankment or cutting compared with the width of the road where it traverses level ground. Within a very short time a small settle-

## MODERN ROADS IN THE MAKING.



### FROM MEADOWLAND

(1) The task which faces the contractor can be gathered from this photograph, which shows the beginning of the excavation work. (2) Here we see the building up of the foundation with clinker, which is well rolled and brought up to within 7 ins. of the true road level. (3) Steel reinforcing grids ready for laying in the soft concrete.

SCIENCE OF UP-TO-DATE HIGHWAY CONSTRUCTION  
SIMPLIFIED BY A BRIEF INSIGHT INTO THE WORK  
PROCEEDING ON A SECTION OF THE LONDON  
"NORTH CIRCULAR."

ment of huts, reigned over by the resident engineers of the local authority and the surveyors, springs up, an army of workmen arrives with tackle consisting of steam-rollers, tip-wagons, rails, concrete mixers, shovels, and so on ad infinitum.

The various stages in the construction of the road are clearly shown in the accompanying photographs, from which it will be seen that, first of all, the virgin soil is excavated or the ground banked up to the required height, then the foundation is topped with clinker and thoroughly rolled. After this the kerbing is laid and templates conforming with the curve or camber of the road are fixed at intervals of about 14 ft. Alternate bays are concreted in, the lower layer of concrete being of a fairly rough consistency, the upper layer of finer stuff, but all, usually, in the proportions of seven parts of "aggregate" to one of cement. Three inches below the surface steel reinforcing bars are embedded, the rods being brought to the job in the form of grids ready for laying.

### The Strengthening Medium.

The introduction of this reinforcing medium raises a rather interesting point, for at first sight it would appear to be problematical as to whether it is better to place the reinforcement near the surface or embed it close to the bottom of the concrete, so that it resists the tensional stresses caused by the tendency of the concrete to crack under load where voids have occurred in the foundation.

A more practical theory seems to be that, providing the foundation is well rolled, the stresses, if anything, are reversed, the upper face of the concrete tending to crack. As the placing of the reinforcement in the higher position guards against this and serves to prevent surface disintegration as well, it would appear to be the ideal way. The "hit-and-miss" method of laying down the concrete sections allows for expansion joints.

There are, at the present time, two types of cement used for road construction, one being of the slow and the other of the rapid-setting type. When the former is used the road is not fit for traffic until three or four weeks after the concrete has been laid down, but in the case of the latter a matter of days is sufficient.

It should be pointed out that many local authorities favour a surface coating of asphalt or some similar product with a bituminous content; others prefer to make the concrete substance itself the actual road surface. The former waterproofs the foundation, the latter gives a firm grip in wet weather.

### TO PERFECT HIGHWAY.

(4) Kerbs laid and templates—or surface gauges—in position ready for concreting. A layer of rough concrete 4 ins. thick is first deposited. On this the metal grids are spread, then the final layer of fine concrete 3 ins. thick is added. (5) Alternate bays in a finished state. (6) The "blanks" filled in with concrete and the road complete.

## A WOMEN-ONLY TRIAL.

How the Fair Sex Fared in a Trial All Their Own.



**T**HE Wood Green and District Motor Club held, last Sunday, a reliability trial confined entirely to women drivers, and there is little doubt that had it been possible for them to have arranged the event on a weekday widespread interest would have been aroused.

As it was, 60 entries were obtained, of which 18 were cars and the balance motorcycles. Of the 18 entries, three, however, failed to start, including a 1.480 c.c. Panhard, which would have been making its debut in an English competition.

The competitors started from the Alexandra Palace, North London, and followed main roads through Elstree, Watford and Berkhamsted to Tring (31½ miles). Here they turned left for the ascent of Waterworks Hill, which is a comparatively simple climb, presenting little difficulty to modern cars. The only failures were Miss M. G. Corbett (A.C.) and Miss M. Abrahams (Clyno).

Continuing from the top of the hill along narrow lanes the competitors were led to Whyteleafe Hill, some 10 miles farther on, where they were called on to undertake what was perhaps the most difficult task of the day—a stop-and-restart test. They were required to come to a standstill on a 1-in-6 gradient, restart and cover the ensuing distance of 20 yards within 15 secs. in the case of cars under 1,000 c.c. and 10 secs. if of unlimited c.c.

The organizers had cunningly chosen a spot thickly carpeted with fallen leaves for the scene of operations, and as a result most of the cars suffered from wheelspin.

Miss Walker (Singer) took 17 secs., suffered considerable wheelspin, but managed to keep going, while Miss Milne (Austin 12) took 9 secs. and made a good getaway. Another 9-secs. performer was Miss Corbett (A.C.), who handled her car well, as did Miss Woods (Lea-Francis), in 11 secs., and Miss P. W. Ingram (Morris).

The two best performances—one in fact and the other by comparison—were those of Miss B. M. Ramsey (Oldsmobile) with 8½ secs. and Miss Mack-

intosh (Austin 7) with 10 secs. The latter's effort was perhaps the more praiseworthy, having regard to the size of the engine.

The remainder were not conspicuously successful, but only one competitor—Miss Bennett (10.5 h.p. Charron-Laycock)—actually failed.

Kop Hill, once the scene of thrilling hill-climbs, was then descended, a brake test being held on the steepest portion. The competitors ran 30 yards in neutral with all brakes free and then had to

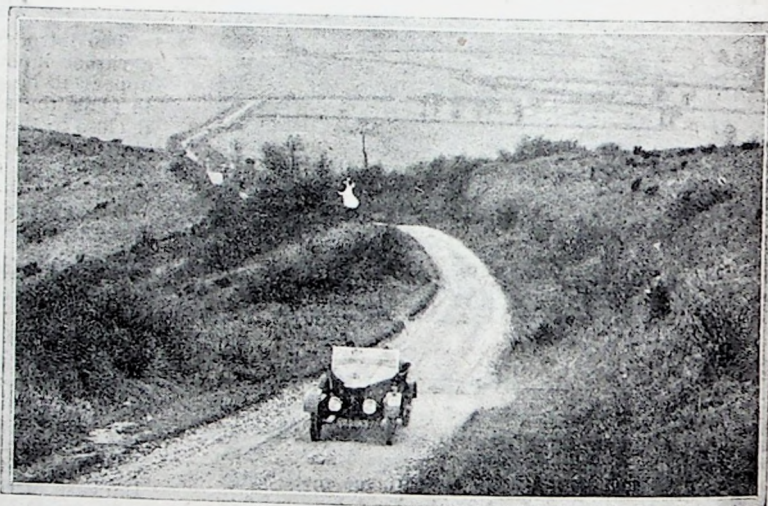
penalty being incurred by competitors who took less than six minutes to cover a measured half-mile on the once-famous gradient.

Generally speaking the girls had little difficulty in keeping below 5 m.p.h. average speed, as is proved by the fact that only four of them were penalized. Those who failed to comply with the conditions were Miss Woods (Lea-Francis), who lost 6 marks; Miss Bennett (Charron-Laycock), 5 marks; Miss M. Abrahams (Clyno), 5 marks; and Miss J. M. Gilbert (Renault), 5 marks.

The run home from the top of Kop was uneventful save for the presence of a secret check at Apsley End.

The car results (subject to confirmation) are as follow:—

Gold medals: Miss M. V. Milne (Austin Twelve), Miss A. J. Randall



**"KOP" ONCE AGAIN.** A brake test took place on Kop, the once-famous venue of sporting hill-climbs, whilst, after lunch, it was the scene of a slow hill-climb. The car is Miss M. G. Corbett's A.C.

pull up in nine yards or forfeit five marks. It proved a severe test.

Princes Risborough (44½ miles) lies at the foot of the hill, and lunch was taken there prior to returning to Alexandra Palace over the same route that had been followed in the morning.

The only test during the afternoon was a slow climb of Kop Hill, a

(Austin Seven), Miss B. M. Ramsey (Oldsmobile), Miss B. M. Mackintosh (Austin Seven).

Silver medals: Miss L. M. Seifow (Windsor), Miss P. W. Ingram (Morris), Miss Hampton - Weekes (A.C.).

Bronze medals: Miss M. G. Corbett (A.C.), Miss N. E. Woods (A.C.).

## SOUTHPORT CLUB'S OPENING MEETING.

Poorly Supported Owing to Bad Weather.



**D**ISMAL weather prevailed on January 8th, when the Southport Motor Club held its opening race meeting of the season on the foreshore. In consequence, the spectators were few and far between—a contrast with the crowded foreshore which is usually a feature of the club's popular meetings.

In the one-mile events for cars not exceeding 1,100 c.c., C. W. Orford (Morgan-Blackburne) beat J. Hepworth (Jowett) by a few lengths in the general class, but the Jowett was the only runner in the novices' section for cars of

the same capacity, and so scored a walk-over. As was expected, B. H. Davenport proved the winner of the 1,500 c.c. class in his Frazer-Nash in the general category, beating G. Meysey-Thompson (Hodgson) by a small margin; but the Hodgson took the premier place in the novices' division, E. T. Scarisbrick (Bugatti) being second and Hepworth (Jowett) third. Davenport again scored in the 2,000 c.c. class (general), but in the novices' class G. Meysey-Thompson had to be content with second place, being beaten by a

2-litre car. In the unlimited event, Davenport again won and Scarisbrick's Bugatti ran third.

Over the ten-mile course there were only two runners, F. N. Crossley (1,100 c.c. Amilcar) and G. Meysey-Thompson (Hodgson). The former was entered in both the 1,100 c.c. and 2,000 c.c. classes and secured a walk-over in the first division, but ran second to the Hodgson in the 2-litre category.

The course was very wet, as intermittent rain fell throughout the meeting, and the last event was finished only just in time, as the sea was encroaching on the course and at points the competitors ran through the deepening puddles caused by the incoming tide.

The next meeting takes place on March 12th, succeeding events being fixed for May 7th, June 4th, August 20th, September 17th (Championship Meeting) and October 22nd.



## Why Walk ?

**T**HERE is really no need to go without the comfort of a car nowadays when a pioneer firm like Singer & Company present a full range of models varying in price from £148.10.0. A Singer Saloon, an ideal car for the Winter months, only

costs £260 and is complete with every possible refinement conducive to comfort. Dunlop tyres are fitted to all Models. May we send you full particulars? Singer & Company Limited, Coventry. London Showrooms: 202, Gt. Portland St., W.1.

# SINGER

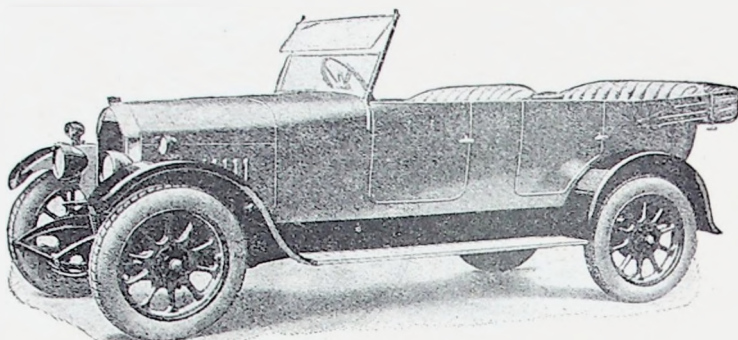
## SALOON

*A Car for Comfort*

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.

H.P.

B35



9/20 H.P. 4-Seater Tourer.

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Tourer.  
9/20 H.P. 4-Seater 3-Door  
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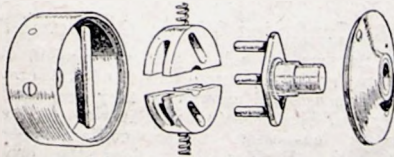
### For Forgetful Drivers.

An original accessory is the Delville muff indicator, which has just been placed on the market by Messrs. C. H. Sowerby, 22, Ely Place, Holborn Circus, London, E.C.1. Its object is to prevent a driver from inadvertently running with the flap of his radiator cosy closed. The indicator, which is fitted on top of the cosy, is a small red disc controlled by a cord. The latter is attached to one of the straps of the flap, and when the flap is closed the disc is upright, whilst on rolling up the flap the disc is pulled down; in this way the driver has a visible means of telling the position of the flap. The price is 2s. 6d.

### Automatic Ignition Advance.

A very ingenious automatic ignition advance, known as the S.A.M., is being made by A. M. Denton and Co., Ltd., 10, Lanark Place, Maida Vale, London, W.9. It is designed to be incorporated in the magneto drive and can be fitted to any existing type of magneto. The price, which does not include fitting, is 37s. 6d. As will be seen from the accompanying illustration, only three working parts are used, these being the two weights and a fork member. The weights are carried in a casing which is coupled to the magneto and are capable of sliding along two rods, one of which can be seen in the drawing. Oblique slots are cut in the weights and into these fit the two outer prongs of the fork member, the centre prong forming a shaft which has a bearing in the casing. The fork member carries a spigot, which takes its bearing in a bush in the centre of the cover plate and is driven by the engine.

It will be seen that when the device is in action centrifugal force tends to



The S.A.M. automatic ignition advance, showing its component parts.

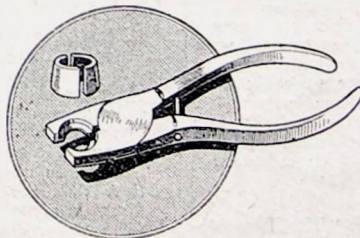
force the weights apart and so advance the ignition timing; at the same time, however, the resistance to rotation of the magneto armature tends to keep them together. When the engine is ticking over these forces balance, the weights then being close to one another and the magneto retarded. As the speed rises the increase in centrifugal force becomes proportionately greater

than the increase in resistance to rotation, with the result that the weights move apart and advance the spark. Deceleration of the engine has the opposite effect, the weights gradually coming together. By suitably designing these weights the distance they move radially is made to correspond with the range of engine speed, so that the timing is automatically altered to suit varying conditions.

The mechanism actually runs in oil, and this, coupled with its simplicity, should make for long life.

### Simplifying Valve Assembly.

Difficulty is generally experienced in fitting split cones where this method of locating valve springs in their appropriate cups is used. In the case of an overhead-valve engine the cones fall naturally into position and remain there while the tool used to compress the valve spring is being released, but the exact opposite applies when a side-valve engine is being dealt with. The usual method of overcoming the difficulty is to retain the split cones in position by means of thick grease, but a very much easier way is to use Scriveners' cone pliers, made by Messrs. Scriveners, 43, Fleet Street, Swindon. These have specially shaped



Scriveners' cone pliers, which greatly facilitate valve assembly.

jaws, which hold the split cones while the valve spring is being released and incorporate a pin which shows the operator whether the cones are correctly placed or not. The price is 3s. 9d. per pair, and the tool is now made in several patterns to suit different engines. We recently used a pair when reassembling an Austin Seven engine and found them very helpful.

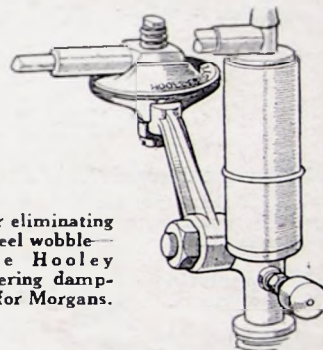
### For Signalling at Night.

Messrs. Allardstown and Co., 51, Westow Street, Upper Norwood, London, S.E.19, are marketing a luminous signalling device intended to be fitted over a glove to make hand signals more easily discernible at night. It takes the form of a rectangular strip of white rubber composition on which are six circular patches of luminous paint. An

elastic loop which surrounds the fingers and a strap of similar material, which is secured round the wrist by a hook fastener, hold it in position. By reason of its colour it shows up well in the headlamp beam from a following car, and the makers claim that, should the light not fall upon it, the luminous paint makes it still visible. The price is 6s. 6d.

### Morgan Steering Damper.

A very useful accessory which is specially designed for Morgans is the Hooley steering damper marketed by Hooley's Garage, 14a, Upper College Street, Derby Road, Nottingham, at 12s. 6d. The damping is effected much in the same way as in the case of the conventional friction shock absorber or the steering damper fitted to many motorcycles. It is designed to fit the joint between the near-side steering arm and the track rod. It is quite easy to fit, and the



For eliminating wheel wobble—the Hooley steering damper for Morgans.

average owner should be able to do the whole job in about 20 minutes.

We tested one of these dampers on a staff Morgan and found that the added comfort it gives to the driver is surprising. If correctly adjusted, every suspicion of wheel wobble is completely damped out, while the steering is not made appreciably stiffer. In addition, that annoying "kick back" in the steering wheel associated with reversible steering is eliminated.

### Hood Renovator Paint.

It is surprising how much the appearance of the average two-year-old car can be improved by giving the hood a coat of good paint. In addition the paint helps to make the fabric or leather waterproof if it has become porous. We have recently treated the black twill hood of one of our staff cars with Osco flexible renovator paint, which is manufactured by Owen Bros. and Co., Ltd., Hull, and the result has proved very satisfactory.

This paint is quite easy to apply, the fabric needing no preparation other than a thorough brush to remove dust. The hood in question had been in use for a considerable time and in addition to being stained was slightly porous; but both these defects have been rectified, the fabric now being an even shade and quite waterproof. Dark and light khaki, grey, black and navy blue shades are available, the price for a quart tin—suitable for hoods of two-seater and small four-seater cars—being 9s. 3d. For leather or imitation leather Osco glossy leather paint should be used. This is marketed in black, dark green and navy blue, the price being the same as for the flexible paint.



We take no responsibility for the opinions expressed by readers. Correspondents may use a nom de plume, but every communication must be accompanied by the writer's full name and address. Letters for the next issue should reach us by Monday morning and 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.

## THE TYRE SIZE MUDDLE.

### Too Many Types—Simplified Nomenclature Wanted.

#### A Garage Proprietor's Point of View.

May I thank you for putting so clearly and concisely the arguments in favour of standardized tyre sizes? The general public has no idea of the trouble and confusion which the present system involves. I am in business as a garage proprietor in a small way, and I endeavour to keep a stock of tyres in order that I may supply my customers promptly, but I find it impossible to lay in a supply adequate for the very varied requirements of owners of modern cars.

**Disappointing Customers.** Naturally, I concentrate mostly on the sizes fitted to the more popular cars, but there are so many variations and so few car manufacturers employ the same sizes, that I am continually being compelled to disappoint my customers. I lose valuable trade, for most of the motorists who come to me for tyres are anxious to be served at once, and cannot afford to wait while I order for their requirements.

There is another point—the present-day sizes are so complicated that I dare not allow my employees to deal with tyre orders, and I have to give my personal attention to any matters dealing with tyres. There are probably hundreds of other small garage men in the same boat, and I know I am speaking for them when I heartily endorse your suggestions for a revolutionary standardization of tyre nomenclature.

GARAGEMAN.

#### Too Many Types.

I was very pleased to read your article, "The Tyre Size Muddle," drawing attention to the chaos which exists in the nomenclature of modern tyres. That such a situation should have arisen is the natural result of the rapid development of new types of tyre; the past few years have seen

**Better Nomenclature Wanted.** balloon and medium-pressure tyres spring into general use, whilst further complication has been added by the introduction of straight-side and well-base patterns. The difficulty of finding a simple system of naming the many types and sizes which exist to-day does not, however, justify the present confusion.

Time was when, if a certain tyre was mentioned, I knew exactly what rim it would fit and could picture it in my mind's eye. No one but a tyre expert could do this at the present time. Again, if a motorist experiences trouble on the road and decides to buy a new cover or tube, it is often necessary to call at three or four garages before his requirements can be met unless his tyre happens to be a very popular size. The average garage cannot stock every type and size, and this brings me to another point. When the particular tyre required is not in stock it is very difficult, with the present system of designation—or lack of it—to know which others will fit the same rim, and this often results in lengthy and unsatisfactory discussions.

It is high time that tyre manufacturers got together and,

in the first place, reduced the number of sizes—there cannot be any real need for them all—and standardized, say, four in the case of each type of tyre. Secondly, it does not seem to me that so many types are necessary for ordinary use, and these also could be reduced, thus bringing the total number of different tyres to about 20—a reasonable figure. This would greatly simplify the situation from every point of view, and would permit an all-round reduction in prices. Finally, some better method of stating the size of tyres should be adopted; your suggestion of giving the circumference of the tyre in inches and the cross-sectional area seems a very good way out of the difficulty.

E. R. JOHNSON.

#### Simplify Tyre Sizes.

The writer of the article headed "The Tyre Size Muddle" is to be congratulated upon raising a question which does, indeed, need ventilation. I do not know that the matter affects me personally, because I am a very ordinary owner-driver who uses the tyres supplied on the car until they are worn out, and then buys a new set of the same size and make. I can appreciate, however, that a large section of the motoring community would benefit by a standardization of tyre dimensions on the lines suggested in your article.

#### Mathematics Not Wanted.

There is one point which strikes me very forcibly, and that is the need for expressing the dimensions in inches and decimals of an inch. The metric system is very convenient for cylinder dimensions and capacities, but it is a nuisance to the average Englishman when used for expressing tyre sizes.

J.F.C.

#### Confusion Worse Confounded!

Surely you are not serious when you recommend the measuring of a tyre by its circumference and its cross-sectional area? Things are bad enough as they are, and if your idea were adopted it would merely be confusion worse confounded—or bosh! Besides, how does the cross-sectional area of the cover give any indication of the amount of air held by the tube? There is, of course, a grain of promise in the idea, but it would be far better to give the diameter of the cover, outside and in, and the total air capacity of the tube. For example, 19 × 28 × 8,000 c.c.

#### Biassed Reader Says "Bosh!"

I think that gear ratios should be left alone; we have become accustomed to them and anything in the nature of a change would be very upsetting.

STABILITY.

\* The second dimension we quoted was the cross-sectional area of the inside of the tube, not the cross-sectional area of the cover. For the rest, we leave "Stability" to the tender mercies of our readers.—Ed.

# Here's a choice of smart bodies!

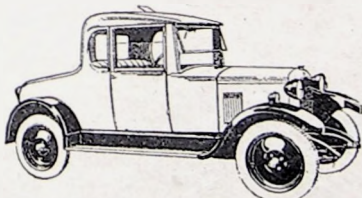
Below we illustrate the complete range of 9/20 h.p. Rover models for 1927 — beyond doubt the very smartest light cars on the road. Remember, there is a wide choice of body colour, and an extensive range of "dual-tone" colour



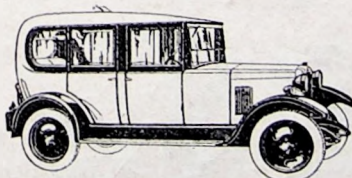
finishes is available. The "Nippy Nine," with its speedy overhead-valve, pressure lubricated, four-cylinder engine has proved itself the most economical full-sized car to run that you can buy.



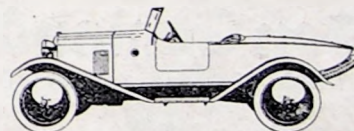
*The 4-Door Weymann Saloon, £285*



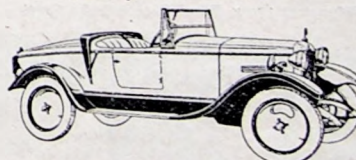
*The Coachbuilt Coupe, £285*



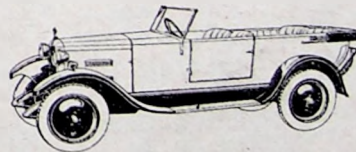
*The 4-Door Coachbuilt Saloon, £295*



*The Sports Model, £240*



*The Semi-Sports 2-Seater, £260*



*The Semi-Sports 4-Seater, £260*

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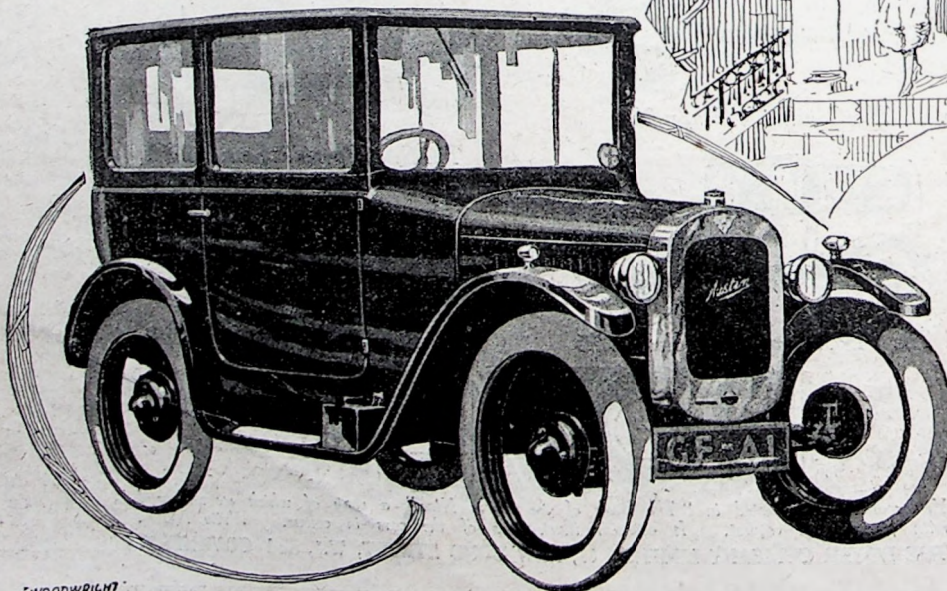
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## OUR READERS' OPINIONS (contd.).

**Aeroplane Elastic for Shock Absorbers.**

In a recent issue you recommended the use of aeroplane elastic as a cheap form of rebound damper, and I am wondering whether it is fully realized how really good this simple form of shock absorber can be.

**Worlds Well in Practice.** We used it as a shock absorber for the first time in 1922 on the Spyker car, when Mr. Edge made his double 12-hour record. The Spyker was a fearfully uncomfortable car on the track at Brooklands, but by liberal use of aeroplane elastic we made it, comparatively speaking, extremely comfortable, and doubtless more extensive use will be made of aeroplane elastic for this purpose in the future. It is light and cheap, easily replaced if anything goes wrong, and a coil can so easily be added or taken away. Your note and sketch, therefore, will be very helpful in bringing this important little detail into the limelight.

SYDNEY SMITH.

**Man-handling Cars in Garages.**

I wonder how many of your readers are alive to the risks they run when leaving their cars in public garages to be "man-handled" by mechanics who appear to have no interest whatsoever in safeguarding their customers' property. Only last week, when waiting to steer my own car into position in a garage of repute, I was moved

to protest against the rough treatment meted out to another vehicle which had to be shifted to allow me to pull in.

I did not know the owner of the car in question, but as a fellow-motorist, and one of those who endeavour to assist their "owner-driver" brethren, I pointed out that the wrenching and twisting of the steering wheel of a light car was the outcome of negligence and laziness on their part, and would without doubt ultimately result in damage to the steering mechanism. After my accepting and winning a challenge to prove the front wheels on any car could be moved easily by one man who knew his job without touching the steering wheel, the men admitted my contentions, but qualified their remarks by saying that it was "too much trouble," and if any owner found his steering mechanism weakened through this treatment, he would experience some difficulty in proving that it originated out of rough handling in the garage.

R. D'ARCY SWAINSON.

**Solids or Pneumatics.**

The suggestions which are being made of a tax rebate as a means of encouraging the use of pneumatic tyres hit the nail on the head. As Mr. Dunnico has stated, it is the only thing, short of making pneumatics compulsory, that would bring about their widespread adoption on really heavy vehicles. It is an economic and business proposition, and it would result in a saving to everybody concerned. Consider the case of a commercial-vehicle owner who has been converted to pneumatics. To begin with, he will be saved a part of his yearly tax. His vehicle will have an improved petrol consumption and he will have considerably less to pay for chassis maintenance, for there will be less wear and tear on springs, shackles and so forth. Finally, he will have a smoother riding vehicle for his passengers, which is an attraction and advertisement for his coaches.

**The Suggested Tax Rebate.**

The local authorities will also save, for roads will last longer without attention. Then, of course, the private motorist would benefit by having smooth roads, which, in addition to providing extra comfort, would reduce repair bills. Reward pneumatics—it will pay.

Cecil Finlayson.

**A Rover Nine in Scotland.**

I enclose a snap of my Rover Nine taken during a 1,500-mile trouble-free tour in Scotland last September. The car has now covered nearly 6,000 miles, and I am very pleased indeed with its behaviour. It speaks

**Its "Nippiness" Praised.** well for the "nippiness" of the Rover Nine that, although my previous bus was a cyclecar of larger engine capacity and

less than half the weight, I have not found the Rover sluggish by comparison, whilst on many roads its superior springing and road-holding qualities actually make it speedier. I find the engine so silent that when ticking over in traffic it is necessary to glance at the oil gauge to satisfy myself it is still running.

Petrol consumption is just over 40 m.p.g., and oil works out at 1,600 m.p.g., without allowing for refilling after draining the sump. Neither engine, gearbox nor back axle leak oil, as is the case with some cars.

I was annoyed at one time by a vibrational noise at certain speeds, which was eventually traced to the throttle controls. A cure was effected very simply by stretching a rubber band round the threaded vertical rod and the horizontal rod affixed to the scuttle.

R. E. HOLMES.



IN BONNY  
SCOTLAND.

A delightful view of Loch Duich from the hill above Dornie; the car is a Rover Nine and its performance is dealt with in a letter on this page.

B41

## OUR READERS' OPINIONS (contd.).

### Another Use for Old Tyres.

In connection with Mr. A. L. Minchin's letter regarding uses for old tyres, the following may be of interest. When in Oregon, U.S.A., three years ago I had occasion to build two reinforced concrete columns to support a viaduct about 4 ft. high and Building Concrete Columns, 2 ft. 6 ins. across. Having no half-circular frames for the outside shuttering, we built up a column of old motor tyres, at that time very plentiful on the main roadsides. I poured the concrete mixture inside, allowed it to dry and then cut away the old tyres. It made a very serviceable and cheap form of low column building.

KL 3340.

### The Best Radiator Position.

Your correspondent "G.H." in a letter in your issue of December 31st, quotes the Jowett car, which has a horizontally opposed two-cylinder engine, as being most adequately cooled under practically all conditions. I have proved for myself that the Jowett does not boil—it would be strange if it did, considering the well-known cool-running properties of this now uncommon type of engine. My letter, which appeared in the December 24th issue of *The Light Car and Cyclecar*, was not so much to suggest that fairly adequate cooling could not be obtained with the radiator in the normal position, but to point out that, in my opinion, an engine could be more effectively cooled by having the radiator at its rear end.

In addition, the following advantages would accrue:—  
(1) There would be no need for an auxiliary drive from the engine for a fan, as the flywheel would be utilized for this purpose. (2) Less dirt would find its way to the carburettor air intake. (3) The radiator would be in a less vulnerable position. (4) The accessibility of the power unit would be increased. (5) Manufacturing costs would be less. (6) More scope would be available to the bodybuilder in his search for a more streamlined effect.

G.E.H.

### Fires Which Follow Crashes.

I read with interest the remarks by "Focus" in a recent issue regarding risk of fire in air craft and car-crashes. Having studied this matter somewhat closely, I have formed the opinion that the usual cause of fire immediately following a crash is that petrol from the carburettor is spilt over portions of the hot engine and readily vaporizes. At the same time, some portions of the car or engine probably strike a flint or stone which causes a spark, with the result that the petrol vapour is ignited.

I am of the opinion that the chances of fire from accumulator gases are remote, and the fact that fires with crashed machines which carry no electrical apparatus except the magneto show that this is not the primary cause.

N. KNOPH.

### English Motorists in India.

The paragraph which appeared on page 810 of your issue of November 26th, under the heading of "Where You Do As You Please," is calculated to give the impression that it is the usual practice of Englishmen in India to neglect the ordinary courtesies of the road when meeting native bullock wagons on narrow roads

### Road Manners.

and deliberately to drive so as to upset the wagons. As an Englishman who has lived in India for nearly 30 years, and who has driven motorcycles and cars in India for nearly 25 years, I desire to give the most emphatic contradiction to any such idea. There may possibly be a few isolated cases of this nature (there are black sheep in every land), and there may also at times be unavoidable accidents in some of the more out-of-the-way places, owing to the bullocks in these parts not being accustomed to motor traffic, but it is totally incorrect and most unfair to the good name of Englishmen in India that any impression should be given that such incidents are usual, or that they are in any way approved or countenanced by the self-respecting Englishmen in India.

S. A. FAIRWEATHER.

Calcutta.

## The Art of Advertising—Pre-war Cyclecars.

### Two Classes of Prospective Buyers.

In asking for readers' views of motor advertisements which appeal to them, I think you are doing a great service to the manufacturer. The views expressed recently have interested me, and I am in agreement with most of the facts. Manufacturers have two classes of potential buyer—those who have never had a car and those who have—and if one thinks a few moments it is evident that two distinctive types of "copy" and "media" are necessary.

### Studying the Reader.

Take those who are unacquainted with the joys of motoring and know little of it. The majority do not read the purely motoring journals, so have to be "got at" through other channels of publicity, which the manufacturer must decide will bring the best results (such as popular dailies and weeklies and other periodicals with large circulations), and this is one of the complications which makes it a thoughtful and interesting study if haphazard and wasteful advertising is to be eliminated.

The advertisement must be arresting by the use of a good display (which should contain actual photographs of cars and happy users, alluring reading matter, price and performance, etc.) that will create a "pride-of-possession" feeling in the mind of the reader. Take him into the country for an outing; show the healthy enjoyment derived from such outings and the ease with which the car is handled, combined with its economy and reliability.

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The Lea-Francis advertisement in the December 31st issue of *The Light Car and Cyclecar* is a fair example of what might appeal to the beginner through the non-motoring Press. Of course, I am aware there are non-motoring readers of your excellent publication, but they are in a great minority. With regard to the second class and the seasoned motorist, the purely motoring journals are the best media of approach. He wants facts attractively and convincingly depicted. He also looks for long-wearing qualities and economy, performance and comfort, etc. This class of buyer is more discriminating than the first class, but he is a buyer when he sees the car that meets with his requirements.

n42

Successfully advertising one's goods is a great psychological study, and another very important point that manufacturers should thoroughly understand is to advertise regularly and not periodically, as this is wasteful. Far better, as I know from experience, to take half a page regularly than take a whole page once a month. Have a fixed policy of sound, truthful and regular advertising, and seek to eliminate wasteful and useless publicity which is often noticeable in motor advertising.

P. WARDEWORTH.

### The 1913 Grand Prix.

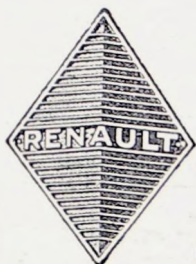
"Shacklepin," in the latest of his always interesting contributions, recalls the Grand Prix of 1913—a classic race, for it was the first race in which cyclecars competed. Three-wheelers were officially included in the

### "A Classic Race."

classement générale, and the race was won by Mr. McMinnies in a Morgan, which, in spite of delay from a burst back tyre, defeated the next cyclecar, the Bedelia, in the last lap. There was a special award for four-wheeled cyclecars, and it is interesting to note that in those days it was debated in England whether the three-wheeler was a cyclecar at all! A Violet obtained third place in the classement générale and then came the Sphinx-Globe, Rentiex, Duo, Super, Violet, Mathis and Rentiex. Two of these, however, were disqualified, leaving eight survivors out of an entry of 29. It is remarkable that no sidecar survived in this race. The Duo, as "Shacklepin" says, was fourth in the four-wheeled class, but fifth in the classement générale. The writer of a remarkable article in *The Birmingham Post* observed that "it is likely that the result of the race will be that greater attention will be paid by British builders to the simpler and cheaper type of air-cooled belt-driven cyclecar, the Morgan of course, being in a class by itself, an enviable distinction." Unfortunately, that prediction was not fulfilled; that class of cyclecar has for the present practically disappeared (if anyone can revive it, it will be "Shacklepin"), although the Morgan survives with a very much larger production than in 1923.

H. GEORGE MORGAN.

# A LIGHT CAR WORTHY OF THE BEST RENAULT TRADITIONS

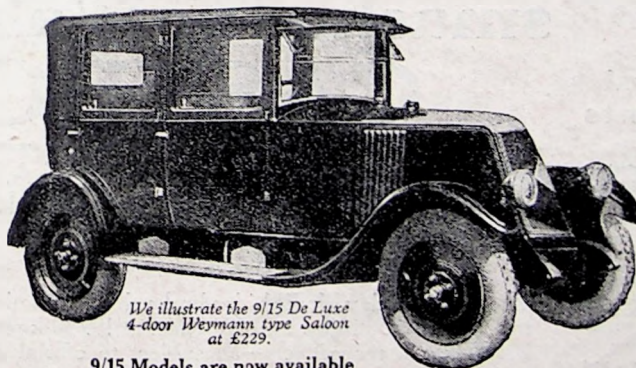


The new Renault 9/15 represents truly wonderful value. At such a price as £155 no other car in the world can reproduce its sterling qualities.

And, in spite of the modest figure, nothing has been omitted that ministers to motoring comfort, peace of mind, and real security. The 9/15 has a roomy body on a strong substantial chassis. Its road speed is over 40 m.p.h., with consumption of 40 m.p.g. It is a trouble-free car, as the dust-protecting bonnet keeps repair costs down to zero and reduces carbonization by a third. Full details will be supplied free on request.

Four door, four wheel brakes. Open Tourer. **£155**

Other models: Standard Four door Saloon, £197; De Luxe Four door Open Tourer, £179; De Luxe Four door Saloons, from £224; Coupé, £225.



*We illustrate the 9/15 De Luxe 4-door Weymann type Saloon at £229.*

9/15 Models are now available for immediate delivery.

# RENAULT

RENAULT LTD., Head Office and Works, 14, SEAGRAVE ROAD, WEST BROMPTON, S.W.6  
Showrooms: 21, Pall Mall, S.W.1. (Phone: Regent 0974)

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* ❖

**“You want the Best Price—  
We quote it!”**

One of *your* Resolutions will have been to get rid of that old light car and have something really up to date and economical in its place.

One of *our* Resolutions is to devote special attention to Light Car Part-Exchange transactions. We can handle any make, and give the most favourable terms.

Drop us a line and find out—if only for the sake of curiosity—the Real Value of your Present Small Car.

*Warwick Wright, Ltd.*

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

(Mayfair 2904 )

## Three Coveted World's Records smashed on Wakefield **CASTROL**

### The Principal Achievements of 1926

have all been accomplished  
on Wakefield CASTROL!

The British, European, Spanish, Italian and German Grand Prix Races, every class in the J.C.C. 200-Miles Race, as well as the Rudge-Whitworth Cup and Belgian 24-Hour Races, were all won by users of Wakefield CASTROL, in addition to numerous smaller events.

Maximum efficiency and reliability are no less important in everyday motoring than in the competition field. CASTROL from the pump costs no more than the host of inferior oils marketed—sometimes less—so insist on the product of an all-British Firm.

C. C. WAKEFIELD & CO., LTD.,  
All-British Firm,  
Wakefield House, Chesapeake,  
London, E.C.2.

At Montlhery, on December 31st, Mr. E.A.D. Eldridge, driving his 2-litre Miller Special, broke World's Records for—  
100 Kiloms . . . . 126'73 m.p.h.      100 Miles . . . . 127'185 m.p.h.  
1 Hour . . . . . 126'59 m.p.h.

The previous day Mr. Eldridge broke the International Class E Records for 50 Kms., 50 Miles and 100 Kms. at 199'50 k.p.h., 124'83 m.p.h., and 201'35 k.p.h. respectively—all subject to official confirmation.

The coveted Hour Record has thus been put up by nearly five miles—and on a car of only 2 litres! Mr. Eldridge now holds all World's Records from 5 Kms. to 1 Hour, except the 50 Miles, and all were made on a standard grade of—

**WAKEFIELD**

**MOTOR OIL**

## OUR READERS' OPINIONS (contd.).

### The Rover Eight Oiling System.

We notice your reply to "T.T." of Brighton, under the heading, "In Answer to Your Query," in last week's issue. Special instructions regarding conversion to two-drip lubricators are available, but the majority of owners of 8 h.p. Rovers, rather than have the two, want to get rid of both of them, but are quite unaware that the last few thousand Rover Eights were equipped with an alternative form of lubrication system. The data sheets which we are advertising in your journal deal thoroughly with this question, and we can give all the necessary technical information. Unless *au fait* with the construction of this engine, the fitting of drip lubrication to the off-side cylinder will probably prove a failure.

JOHN POLLITT AND SON.

### CONDENSED CORRESPONDENCE.

A number of correspondents ask us to point out that it is the diameter and not the circumference of a bicycle wheel which is taken into account when calculating the "gear." In our article entitled "The Tyre Size Muddle," which appeared last week, a somewhat erroneous impression was conveyed.

Prices' Patent Candle Co., Ltd., write to point out that the useful hint which they gave in a letter published last week concerning the injection of their cycle lamp oil instead

of paraffin for freeing gummy pistons was directed, of course, to owners of big air-cooled engines which call for the use of rich lubricant of good body. Four-cylinder water-cooled engines need never "gum up" if a suitable grade of lubricant is used.

On the subject of filling grease cups and guns, the company points out that their Hub Lubricants (both in Soft and Stiff grades) are very suitable for the purpose, and have the merit of becoming fluid without harm if gently heated. Belnoline A, B and C should not, however, be heated.

### INFORMATION WANTED.

ARIEL.—The opportunity to purchase an instruction book dealing with the 9 h.p. model would oblige.—E. Crankshaw, "The Book Shop," London Road, Poynton.

ERIC-CAMPBELL.—Any reader who is willing to lend or sell an instruction book for the 1924-5 model is asked to communicate with Laurence Evento, 88, Leslie Road, Leytonstone, London, E.11.

JOWETT AND TROJAN.—Readers' experiences of the four-seater models of these makes of car would be much appreciated.—Tristan Pinches, 3, Crown Buildings, Crown Street, Camberwell, London, S.E.5.

PEUGEOT.—Readers' experiences of the 7 h.p. model, with particular reference to its reliability, wearing qualities, hill-climbing powers and general performance, would be appreciated.—F. B. Price-Heywood, The Rookery, Roe Lane, Southport.

## CLUB ITEMS AND SPORTING EVENTS.

### SUTTON COLDFIELD CLUB.

"May all your Roads be Smooth, and may you never Skid in 1927," is the seasonable wish expressed by the Sutton Coldfield and North Birmingham A.C. in the January issue of its bright little journal, *News and Prices*.

### ULSTER AUTOMOBILE SPORTS CLUB.

The committee has decided to hold the annual dance and distribution of prizes at Thompson's Restaurant, Belfast, on Thursday, January 27th. The arrangements being left in the hands of Messrs. H. A. Bryson (hon. secretary), J. Coulter, and A. R. Shillington and W. Noble. A die is being obtained for the medals which are to be presented to last season's winners, and in connection with the Magilligan speed trials four trophies have been secured. The annual meeting will be held in February or March.

### WEST KENT M.C.

The date of the West Kent M.C.'s Wilson Cup Trial (which was postponed from November 14th, 1926), has been fixed for January 23rd. The trial will be open to all clubs in the S.E. Centre of the A.C.U., and will consist of two circuits of approximately 35 miles, starting and finishing at the Three Horseshoes Hotel, Knockholt, Kent. The awards will comprise the Wilson Cup for the best performance by a West Kent member, a cup for the best performance by a non-member and a cup for the best car performance. In addition, there will be the usual silver cups and silver and bronze medals. There will be no secret checks, observed splashes or "frame-smashing" sections. Route cards will be issued as soon as possible on receipt of the completed entry form and the requisite fee of 5s. All communications should be addressed to the hon. secretary, Mr. P. Wilson Smith, 32, Hammetton Road, Bromley, Kent.

### CATFORD AND D. M.C.

The annual general meeting of the Catford and D. M.C. was held on Friday, January 7th, at the Crown Hotel, Burnt Ash Hill, London, S.E. Despite the difficulties encountered during the past year the reports, both of the treasurer and the general secretary, showed that the club was in a very sound position and that extremely satisfactory progress had been made. A very full programme of social and sporting events had been carried out and an even more ambitious one is in course of preparation. When the full agenda had been dealt with, the meeting closed after a hearty tribute had been paid to the assiduous work of the retiring captain, Mr. G. J. B. Millett.

Following the very successful whist drives that have been held recently, a further one of the series has been arranged to take place at 7 p.m. on Saturday, January 22nd, at the Crown Hotel. Tickets (price 2s. 6d., including refreshments) may be obtained from the social and general secretary, Mr. G. J. B. Millett, 1, Hazelbank Road, London, S.E.6, or from any member of the committee.

### FORTHCOMING EVENTS.

#### January 14.

Essex M.C. Annual Dinner and Dance.  
Sutton Coldfield and N. Birmingham  
A.C. Annual Dinner and Dance.

#### January 15.

Catford M.C. Annual Dinner.

#### January 16.

City of London M.A. London-Stratford.  
London Trial.  
Wood Green and D. M.C. Social Run to  
Reading.

#### January 17.

Woodford M.C.C. Annual General Meeting.

#### January 21.

J.C.C. Yorks Centre. Annual Dinner and  
Dance at Leeds.  
Belsize-Bradshaw L.C.C. Annual General  
Meeting.  
Morgan M.C. Annual General Meeting.

#### January 22.

Catford M.C. Whist Drive.

#### January 23.

Wood Green and D. M.C. Social Run to  
Leighton Buzzard.  
West Kent M.C. Wilson Cup Trial.

#### January 26.

J.C.C. Annual General Meeting.

#### January 27.

Wood Green and D. M.C. Annual  
General Meeting.  
Ulster Automobile Sports Club.  
Annual Dinner and Prize Distribution.

#### January 28-29.

Cardiff M.C. and C.C. Cardiff-Leicester.  
Cardiff 24-Hour Trial.  
Combined M.C.s. Charity Dance at  
Alexandra Palace.

#### January 29-30.

Woking and D. M.C. and C.C. Winter  
Trial Starts.  
Southampton and D. M.C.C. and L.C.C.  
Annual Night Trial.

#### February 1.

J.C.C. Yorks Centre. Annual General  
Meeting.  
N.E. London M.C.C. Annual Dinner  
and Prize Distribution.

#### February 19.

J.C.C. Yorks Centre. Hatted and  
Masked Event.

### ESSEX M.C.

The annual dinner and dance of the Essex M.C. takes place to-day, January 14th. It will be held in the Throne Room at the Holborn Restaurant, W.C., at 6.30 p.m. for 7 p.m. The president, Mr. S. G. Cummings, will take the chair.

### WOOD GREEN AND D. M.C.

On January 2nd, 35 members of the Wood Green and D. M.C. turned out to follow the chairman on the occasion of his surprise run. A number of interesting and amusing tests of skill and observation were set, including a slow hill-climb (which was mistaken for a race by a local policeman), a slow crossing of a water-splash, and sundry guessing competitions. The run for January 16th is to Reading, starting from the Alexandra Palace at 10.30 a.m. The annual general meeting of the club will be held at the Alexandra Palace on Thursday, January 27th, at 8 p.m.

### PUBLIC SCHOOL M.C.

In view of the unavoidable inactivities last season, the committee has decided that all those members who have paid their subscriptions for 1926 will be considered as having subscribed for 1927. The club hopes that all members will attend the annual dinner and general meeting which will be held on February 11th, at 7 p.m. for 7.15, at the Comedy Restaurant, 38, Pantons Street, S.W.1, the charge per head being 6s. 6d. A serious effort will be made to draw up an interesting and original programme for the coming season, and it is hoped, with the co-operation of all members and the committee, to regain the club's former prosperity.

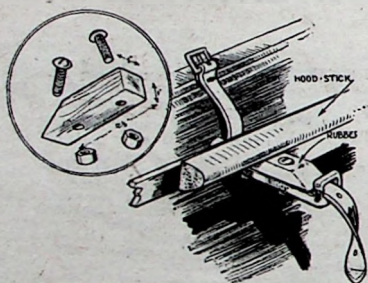
### KENT AND SUSSEX L.C.C. LUNCH.

A pleasant, although not very well attended, lunch preceded the general meeting of the Kent and Sussex Light Car Club, held on January 8th, at the club headquarters, the Spa Hotel, Tunbridge Wells. The business of the meeting consisted mainly in the presentation of the balance sheet and the election of officers for 1927. In reviewing the past year's happenings the chairman, Mr. F. H. Chimes, said that the cause of falling off in membership had been traced directly to the S.M.M. and T. trade ban. The club was very largely a sporting one, although the social side was by no means neglected, and the four speed trials held on the Race Hill at Lewes during last season had been well supported by members and had proved profitable to the club. Continuing his remarks, the chairman said he thought the balance sheet was very satisfactory and it proved the club to be in a sound financial position. He appealed for more members, and mentioned that the Mayor of Tunbridge Wells had offered a prize of one guinea to the member who introduces the most new members during the coming season. All the existing officers were unanimously re-elected for 1927, and a hearty vote of thanks was passed to them, with special reference to Mr. Lewis Humphries, the hon. secretary, to whose zeal the good fortunes and success of the club were said largely to be due.

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.

### For Clyno Cars.

Owners of Clynos will have noticed that the rear hood-stick gets chafed where it rests on the brackets when the hood is furled. This can easily be remedied by cutting two pieces of rubber to the shape shown in the accompanying drawing. They should be bolted to the top side of the brackets where they will act as buffers and prevent the sticks from being cut. A length of rubber tyre, such as is used on horse-carriage wheels, will serve very well.



A piece of rubber may be used to prevent the hood-sticks of Clynos from chafing.

### Citroen Fog Lamps.

How many owners of 7.5 h.p. Citroëns realize that their headlamps are adaptable for use in fog? By loosening one nut at the base of each lamp they can be turned downwards and outwards at once, as they are mounted on the wing valances. By this means the headlamps will pick out both sides of the road and the driver will be enabled to steer a central course with comparative ease.

### Garage Thermometer.

A reliable thermometer can be purchased for 1s. 6d., and at this time of the year one will prove very useful if hung up in the garage—preferably close to the window where it can be read from outside as well as in. Providing a car is taken out every day and the doors of the garage opened only when absolutely necessary, the temperature inside will seldom fall more than two or three degrees below freezing—even when an outside temperature of 10 or 12 degrees of frost is registered. If the thermometer shows anything more than four degrees of frost when the car is driven in at night, the need for using a radiator lamp is clearly indicated.

B46

### Driving Comfort.

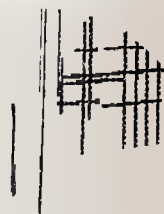
It frequently happens that an unusually long period at the wheel makes an owner-driver aware of shortcomings in driving comfort which previously he did not suppose to exist. An ache in the small of the back, for instance, will mar an otherwise enjoyable run. The usual remedy for this, the purchase of a special driving cushion, is both expensive and unnecessary. An ordinary rubber hot-water bag filled with cold water and placed between the driver's back and the squab will ensure a drive in comfort. A still greater degree of luxury is obtainable in cold weather if the bag is filled with hot water.

### An Auxiliary Toolbox.

Although modern cars seldom require attention on the road, it will be found very handy if an ordinary motorcycle toolbox (obtainable in various sizes and shapes from about 3s. 6d.) is bolted to the front of the dash, or anywhere under the bonnet where space allows. In this box may be carried a couple of spare plugs, a plug-spanner, a small adjustable wrench, a screwdriver and a pair of pliers, all being firmly wedged into the box by some clean "mutton cloth." Thus, in the event of minor adjustments being necessary, the emergency tools are always available without recourse to the sometimes inaccessible toolbox having to be made.

### Hand Signals at Night.

For hand-signalling purposes strips of ordinary white tape stitched along the backs of the fingers of the right-hand driving glove make the hand more easily seen at night by those following.



Showing the method of arranging a length of rubber tubing to keep water from the radiator away from the front axle and so on.

### Radiator Vent Pipe.

At their lower ends radiator vent pipes frequently terminate flush with the bottom of the radiator and any water that overflows, or vapour that issues, causes a rusty deposit to form on surrounding parts, such as the axle, track rod and so on. It takes but a moment to slip a piece of rubber tubing over the end of the pipe, the tubing being of a sufficient length to keep water or steam clear of the parts mentioned. If necessary it should be held on by wire and anchored at the outlet end by a second length of stiff wire secured by a nut and bolt to some convenient part of the frame.

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.D. (Marlow).—To adjust the dynamo belt on your A.C. slacken the nut nearest the engine on the off-side bearer arm. Loosen the other nut a little and the whole dynamo can then be swung until the correct tension is obtained.

D.B. (Leeds).—Constant oiling up of the sparking plugs and a consumption of one gallon of oil in 600 miles' running seem to indicate that your engine needs new piston rings, or, alternatively, that the cylinders are scored. You cannot cure the trouble by fitting new plugs.

B.H.K. (Greenwich) and others.—Aeroplane shock-absorber rubber cord for making rebound dampers as described in "Ideas for Owners," (issued dated December 17th), can be obtained from the Aircraft Disposal Co., Ltd., Regent House, Kingsway, London, W.C.2. It will be found that 1-in. diameter elastic is suitable.

F.A.B. (Hastings).—The best route from Bexhill to London is not, as you suggest, through East Grinstead and Croydon, but via Lamberhurst, Tonbridge, Bromley, Lewisham and Catford. The distance is approximately 70 miles.

A.N.B. (Malvern).—A car should not normally need a complete overhaul in less than 15,000 miles running. If lubricated regularly, minor repairs and adjustments being made promptly and the car driven at moderate speeds it should last from 20,000 to 25,000 miles before a complete overhaul is necessary.

## For Fast Touring under Arduous Conditions

The successes gained by standard Lea-Francis cars in the principal reliability trials in this country have proved that even over freak courses the Lea-Francis car is capable of a high efficient performance with comfort to driver and passengers.

No evidence of Lea-Francis reliability is so conclusive as the awards that Lea-Francis have consistently won. No enthusiasm is so well founded as that of every Lea-Francis driver for his car; whilst the lady owner has the additional satisfaction of possessing a car with graceful lines that make it distinctive amongst others.

Why not take a trial run? It can be arranged with any of our agents or direct from

LEA & FRANCIS LTD., COVENTRY.

London Showrooms: 118, Gt. Portland St., W.1.

Quality Cars from **£210**

10 and 12 h.p. Four Cylinder Models. Two-seater, four-seater, coupé and saloon coachwork.

DEFERRED PAYMENTS AND EXCHANGES MAY BE ARRANGED.

### SPECIAL AWARD

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



# LEA-FRANCIS

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

B47

## STOP HERE !! ALL CHANGE !!

for KIRK & CO. This is no railway terminus, but, nevertheless, this is where you should change, yes, change your mind and visit KIRK & CO. This should be your destination. The firm you have been seeking for years, probably the whole of your motoring career, the firm that gives satisfaction. Buy your next car from KIRK & CO., and enlist on the SCROLL of SATISFIED clients. The following is an extract from a letter received by us from one of our clients in COLOMBO:—

"Dear Sirs,—Last December I purchased a Morris Chummy model from you, and I want to tell you what an excellent car it has proved. I believe you have treated me as well as though I was in your showroom instead of 7,000 miles away. I shall always recommend you to my friends," etc.

**CAR SHOWROOMS** cover nearly 10,000 super feet. **Finest array of LIGHT CARS in London.** **ALL GUARANTEED. EXCHANGE allowances the FAIREST. DEFERRED TERMS the BEST.**

*A few examples from our stock of nearly 100 LIGHT CARS and MORGANS:—*

- CITROEN, 1925, 7.5 h.p., 3-seater** Cloverleaf, starter and lighting, nicely equipped, mileage under 3,000. Guaranteed indistinguishable from new ... £95
- JOWETT, 1925, 4-seater, dynamo lighting, starter, all-weather equipment, beautifully finished** Fiat Blue ... £92-10
- RENAULT, 1925, 8 h.p., 3-seater** Cloverleaf, dynamo lighting, starter, balloon tyres, all-weather equipment, really grand condition ... £92-10
- WOLSELEY, 1925, 11 h.p., 2-seater, sunken dickey, starter, lighting, original balloon tyres, guaranteed indistinguishable from new** ... £92-10
- Choice of another at ... £87-10
- JOWETT, 1925 model, 4-seater, dynamo lighting, carefully used** ... £85
- SWIFT, 9 h.p., 1923/4, Chummy, 4-seater, starter, lighting, all-weather equipment, very carefully and little used, only one owner since new, an unrepeatable offer** ... £82
- HILLMAN, 1923/4, 11 h.p., semi-Coupe, adjustable seats, starter, lighting, beautifully finished** Crimson Lake, ideal winter car ... £78
- MORGAN, 1925, family model, J.A.P. water-cooled engine, Lucas Magneto lighting, low mileage, beautiful condition** £78
- A-C, 1921/2, 11 h.p., 4-seater, attractively finished, all-weather equipment, cord tyres** £76
- CITROEN, 1923/4, 11.4 h.p., 4-seater** tourer, starter, lighting, exceptionally smart, carefully used ... £65
- A-C, 1921, 11 h.p., tourer, dynamo lighting, starter, nice equipment, splendidly coach finished, practically new tyres** Bargain ... £64
- ROVER, 1924/5, 8 h.p., full 4-seater, dynamo lighting, self-starter, all-weather equipment,**

- original tyres, smart, and carefully used ... £64
- Another at ... £57-10
- ROVER, 1924/5, 8 h.p., 2-seater, double sunken dickey, dynamo lighting, splendidly finished, low mileage** ... £62-10
- Choice of another ... £57-10
- WOLSELEY, 1923, 11 h.p., 2-seater de Luxe, starter, lighting, leather upholstery, Real bargain** ... £62-10
- CITROEN, 1923, 11.4 h.p., 4-seater, dynamo lighting, starter, extremely nice condition** £59
- MORGAN, Grand Prix, 1924/5, 8 h.p., J.A.P., fw-c., Lucas dynamo lighting, electric horn, clock, speedometer, rigid side-screens, finished Plum Red, exceptionally nice condition, very attractive and sporty car** £59
- WOLSELEY, 1921/2, 2-seater and dickey, dynamo lighting, starter, nicely equipped, good appearance and in fine condition throughout** ... £44
- BELSIZE-BRADSHAW, 1922/3, 8 h.p., 2-seater, dynamo lighting, starter, good tyres, splendid coach finished** ... £39-10
- BELSIZE-BRADSHAW, 1923, 8 h.p., 2-seater, sunken dickey, practically new tyres, smart and reliable** ... £38
- ROVER, 1922, 8 h.p., 2-seater, dynamo lighting, all-weather curtains, very attractive little car** ... £35
- BELSIZE-BRADSHAW, 1922, 8 h.p., 2-seater, dynamo lighting, in good condition** ... £33
- COVENTRY PREMIER, 1922, 8 h.p., 2-seater, sunken dickey, dynamo lighting, spare wheel, very nice condition, smart appearance** ... £32
- ROVER, 1921/2, 8 h.p., 2-seater, dickey, dynamo lighting, speedo, very attractive** ... £32
- ROVER, 1921, 8 h.p., 2-seater, dynamo lighting, Genuine bargain** ... £27-10
- SINGER, 10 h.p., 2-seater, dynamo lighting, good tyres, excellent condition** ... £20

# KIRK & CO.

22 & 29, Praed St., Paddington, W.2.

Phones: Padd. 6040 & 6592. 4 minutes from Marble Arch and Paddington Stations. Open until 8 p.m. every night. We remind the novice that all roads leading to our premises are clear Sunday mornings, call between 10 and 1 p.m.

## AROUND THE TRADE.

We have received a copy of a clearly printed and useful calendar issued by Matthew, Wells and Co., Ltd., Manchester, the makers of Wellsalene lubricants.

The Triplex Safety Glass Co., Ltd., notify us that the London Metropolitan Police are standardizing Triplex glass in all their vehicles, which number several hundreds.

We have received a useful 1927 office calendar from Soler, Ltd., 223-231, Marylebone Road, London, N.W.1, who will be pleased to supply any reader with a copy on request.

A working partner is required by the principal of a small concern manufacturing a three-wheeled cyclecar. A small amount of capital is necessary. Communications should be addressed to H., care of the Editor.

A very fine catalogue indeed, dealing with the various models produced by Lea and Francis, Ltd., Coventry, has been issued recently, and copies will be gladly sent to interested readers who apply for them.

It is interesting to note that Mr. A. H. A. Paterson, of the British Oil and Turpentine Corporation, was one of the first men in the trade to realize the possibilities of motorcycle football. He is still assisting the movement in every possible way.

We are advised that Messrs. Small and Parkes, Ltd., Hendham Vale Works, Manchester, have opened new depots in Cardiff and Bristol. The addresses are: Small and Parkes, Ltd. (C. A. Besley Bailey and Co., Ltd.), Hope Street Lane, off Custom House Street, Cardiff, and Small and Parkes, Ltd., 153, Hotwell Road, Bristol.

Although the Capital Motor Co., Ltd., Remington Street, City Road, London, N., advertise that they re-cover a hood in 24 hours, they make arrangements whereby a car left at their works in the morning for this job to be done can be ready for collection the same evening. Celluloid screens are repaired with equal facility by this concern.

The latest catalogue issued by Thrupp and Maberly, Ltd., Devonshire House, Berkeley Street, London, W.1, is one of the most attractive of its kind. Various types of body are shown, the illustrations being reproduced by an entirely new colour process, whilst opposite each coloured picture of a complete car is a line-drawing showing the special features of the body.

Owners of Rovers will be interested to know that they can obtain a very neat buttonhole badge, at the moderate cost of 6d., on application to the Rover Co., Ltd., Meteor Works, Coventry. The badge takes the form of an enamelled gold, blue and white shield bearing the word "Rover." There will shortly be a supply of brooches also; these are 3 ins. long and will cost 1s. Both are post free.

Messrs. C. G. Vokes and Co., 3S, Conduit Street, Regent Street, W.1, bring to our notice the fact that they have obtained the sole selling rights for the Pines automatic radiator shutter. This is generally known as the Pines Automatic Winter Front, and it can be fitted to any make of car that has a front radiator. Its action is entirely automatic, there being a thermostat to control the vanes.

Lagonda, Ltd., write to inform us that as Eustace Watkins, Ltd., have taken over the distribution of Lagonda cars for the London area, they have decided to close their London showrooms at 195, Hammersmith Road, on January 31st, after which date all repairs and service usually carried out at the London depot will be dealt with at their works at Staines. Spare parts for Lagonda cars will not be available at 195, Hammersmith Road, W.6, after January 22nd, but can be obtained from the Staines works after that date, or from Eustace Watkins, Ltd.

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

# WHERE ELSE?

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A.B.C., 1922, Regent 2-seater, sunk dickey, dynamo, starter, 4-speed, 2-door body, excellent throughout £43  
A.B.C., 1922, special sports 2-seater, 4-speed close ratio, recently repainted, engine overhauled, exceptionally fast sports car .. £48  
A.B.C., 1921, de Luxe 2-seater, dynamo, specially deep 2-door body, sunk dickey, countless extras, 1926 engine, new hood, excellent throughout £45  
A.C., 1921, Anzani, 2-seater, dynamo, full equipment, balloons on rear, paint, etc., excellent .. £68  
A.C., 1921, Anzani, 4-seater, dynamo, starter, double screen, clock, speedometer, adjustable front seats, very smart, distinctive .. £75  
CALCOTT, 1921, 11.9 h.p., full drop head English Coupe, dynamo, starter, balloons, special body, antique leather, frameless windows, just completely overhauled .. £68  
CALCOTT, 1922, 10.4 h.p., 2-seater, recently overhauled and repainted, dynamo, good tyres, exceptionally sound, reliable .. £55  
CALCOTT, 1922, 11.9 h.p., de Luxe all-weather 2-seater, sunk dickey, dynamo, starter, 3 new tyres, leather upholstery, paint and plating perfect, speedometer. Many extras £65  
CALTHORPE, 1921, 10.4 h.p., 2-seater, special body, sunk dickey, starter, specially tuned engine, very sound, economical .. £48  
CALTHORPE, 10.4 h.p., 1922, 4.5-seater, semi-sports, dynamo, starter, excellent tyres, morocco upholstery, very smart, fast .. £53  
CALTHORPE, 1921, special sports, 10.4 h.p., 2-seater, dynamo, full equipment, clock, speedometer, Mulliner body, bulbous back, very smart .. £48  
CALTHORPE, 1924 model, all-weather 2-seater, sunk dickey, dynamo, starter, 4-speed, morocco upholstery, point, etc., perfect, double screen, rigid equipment, special hood £68  
CALTHORPE, 1924 model, all-weather 2-seater as above, only with leather upholstery and painted maroon £75  
CITROEN, 1925, 7.5 cloverleaf 3-seater, starter, speedometer, balloons excellent, small mileage, full equipment, very sound and economical .. £78  
CITROEN 7, 1924, full drop head Coupe, dynamo, starter, balloon tyres, clock, speedometer, frameless windows, leather upholstery, original paint and plating excellent, exceptionally sound, reliable .. £78  
CITROEN, 1922/3, 7.5 h.p., 2-seater, specially tuned engine, upholstery, paint and hood perfect, very economical .. £58  
CLYNO, 1924, 10.4 full 4-seater, starter, rigid all-weather equipment, excellent paint and hood, all accessories, roomy and reliable .. £75

CWYNNE 8, 1924/5, de Luxe 4-seater, dynamo, starter, balloon tyres as new, upholstery, paint and hood excellent, tip-top mechanically, many extras .. £98  
HILLMAN, 1921, Van den Plas 2-seater, sunk dickey, dynamo, starter, excellent tyres, new hood, very roomy, sound and reliable £48  
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 dickey, dynamo, leather upholstery, all extras, new hood, exceptionally sound .. £68  
MATHIS, 8.3 h.p., 1923, sports, 4-seater, dynamo, starter, excellent tyres, 4-speed, rear screen, clock, speedometer, upholstery, paint and hood perfect, very economical £63  
MATCHLESS, 1925 model, 9.5 h.p., 4-seater, dynamo, full equipment, flat twin engine, central gear change, four wheel brakes, very roomy and economical .. £55  
ROVER 8, 1923, de Luxe 2-seater, clock, speedometer, excellent tyres, leather upholstery, tip-top mechanically .. £48  
ROVER 8, 1924, 4-seater, rigid side-screens, full equipment, upholstery, paint and hood excellent, very roomy .. £68  
ROVER 9, 1924/5, de Luxe 4-seater, rigid equipment, speedometer, many extras, upholstery, paint and plating excellent, very smart, economical £95

"OVER 8, 1921, 2-seater, dynamo, four tyres almost new, good upholstery, paint very sound, economical £28  
ROVER 8, 1925, 2-seater, sunk dickey, dynamo, full equipment, rigid side-screens, balloon tyres, exceptionally smart, economical, reliable .. £65  
ROVER 8, 1924, full 4-seater, dynamo, original tyres excellent, rigid equipment, speedometer, upholstery, paint and hood perfect .. £65  
SALMON, 1925, 9.5 h.p., English 2-seater, sunk dickey, dynamo, starter, detachable wire wheels, excellent tyres, full all-weather equipment, very little used, very fast £88  
SALMON, 1926, special sports two-seater, starter, countless extras, including clock, speedometer, dash-light, screen-wiper, spotlight, luggage carrier, etc., etc., specially tuned and exceptionally fast, smart .. £98  
SALMON, 1924 model, 9.5 h.p., light 4-seater, dynamo, adjustable front seats, good tyres, excellent bodywork, exceptionally fast sports £88  
SALMON, 1923, 9.5 h.p., English 2-seater, concealed dickey, wire wheels, excellent tyres, good hood, very fast, comfortable .. £65  
SALMON, 1924, 9.5 h.p., special sports 3-seater, good tyres, all extras, enamelled cream with red wings, exceptionally smart sports £78  
SINGER 10, 1923 (C.P. Model) de Luxe 2-seater, sunk dickey, dynamo, speedometer, excellent tyres, new hood, very smart, roomy .. £61

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SINGER 10, 1924, de Luxe 4-seater, dynamo, starter, full equipment, excellent tyres, adjustable seats, countless extras .. £83  
SINGER 10, 1923, de Luxe 4-seater, dynamo, starter, leather upholstery, paint excellent, rigid equipment, many extras .. £75  
SINGER 10, 1922, de Luxe 2-seater, sunk dickey, dynamo, starter, good tyres, leather upholstery, excellent paintwork, good hood, exceptionally sound and economical .. £55  
STANDARD, 1921/2, 11.6, 4-seater, starter, rigid equipment, clock, speedometer, leather upholstery, very smart, exceptionally sound £75  
STANDARD, 1924, 11.4 h.p., Canley 2-seater, sunk dickey, dynamo, starter, leather upholstery, paintwork, etc., excellent, speedometer, full all-weather equipment .. £89  
STANDARD, 1924, 11.4 h.p., Canley 2-seater, dynamo, starter, 3 new tyres, extra large headlights, full all-weather equipment .. £85  
STANDARD, 1923, 11.4 h.p., Canley 2-seater, dynamo, starter, rigid equipment, speedometer, clock, good tyres, original paint, exceptionally sound throughout .. £78  
STANDARD, 1924, 11.4 h.p., Canley 2-seater, dynamo, starter, sunk dickey, 3 tyres almost new, upholstery, paint and hood perfect, exceptionally smart, roomy .. £85  
SWIFT, 1922, 10.4 h.p., 2-seater, sunk dickey, dynamo, starter, 4 new tyres, upholstery and paintwork excellent, good hood, very roomy, reliable £55  
SWIFT, 1923, 9.5 h.p., de Luxe 2-seater, sunk dickey, dynamo, starter, good tyres, brown antique upholstery, paintwork excellent, very smart, and economical .. £75  
TALBOT, 8/18, 1922, 2-seater, sunk dickey, full equipment, speedometer, good tyres, small mileage, excellent throughout .. £75  
TALBOT, 8/18 h.p., 1923, de Luxe 2-seater, sunk dickey, dynamo, starter, excellent tyres, double screen, all extras, smart and economical £83  
TALBOT, 1923/4, 10-23 h.p., de Luxe 4-seater, dynamo, starter, all extras, upholstery, paint and hood perfect, right-hand gear change, tip-top throughout .. £98  
TALBOT, 8/18 h.p., 1923, de Luxe 2-seater, sunk dickey, dynamo, starter, excellent tyres, double screen, clock, speedometer, upholstery, paint and hood unscratched, excellent throughout .. £98  
WOLSELEY 10, 1923, popular 2-seater, sunk dickey, dynamo, paint and hood as new, full equipment, very smart, serviceable £58  
WOLSELEY, 1923/4, 2-seater, sunk dickey, dynamo, starter, speedometer, clock, dash and spot lights, screen-wiper, countless extras, 4 new tyres .. £75

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Daily List of 100 Small Cars.

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

JANUARY 14, 1927.

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**It costs**

only £145 to buy and  
a penny a mile to run.

**It carries**

a family of two adults and  
two to three children.

**It gives**

complete weather protection  
for every passenger.

**It lasts**

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