

IMPORTANT

NORMAND GARAGE Cash Deposit includes tax, insurance and all charges to make car ready for the road.

7 h.p. AUSTIN ... £145
£30 down. 24 payments of £5: 19: 8

12 h.p. AUSTIN ... £275
£60 down. 24 payments of £10: 17: 2

10 h.p. RHODE ... £198
£45 down. 24 payments of £7: 19: 6

10 h.p. TROJAN ... £125
£25 down. 24 payments of £5: 8: 3

ANY CAR SUPPLIED ON SIMILAR TERMS.

NORMAND GARAGE LTD., 489, Oxford Street, W.I.

Come out of your shell this Easter with an

11'4h.p. CITROËN

Delivery NOW
Works at Slough

FOUR DOORS

£190

AS ILLUSTRATED

11'4 h.p. Saloon, 4 doors, F.W.B .. £210

Supreme Closed Car Value!

Send for the Citroen Book 18.

CITROËN CARS, LTD., CITROËN BUILDING, HAMMERSMITH, LONDON, W.6.
Showrooms: Devonshiro House, Piccadilly, W.1.

F)'A' 364

Motoring—Makes Life Worth While

Our agencies for 1927 include:

Austin
Citroen
Clyno
Jowett
Peugeot
Rover
Singer
Swift

We have also a selection of used and demonstration cars in stock Any one can be bought for cash or deferred payments. The Carrunning smoothly—stretches of England's beautiful countryside all around you—the tonic of Spring air—everything in perfect harmony (your own singing perhaps excluded). Who would deny that motoring is the most popular pursuit?

No House has done more than The Service Co. towards bringing a Light Car within the reach of the man of moderate means. Pioneers of the Deferred Payment System, this House offers one of the most attractive schemes for supplying a car "out of income." YOU PAY A FIFTH DOWN AND THE BALANCE IN 12, 18 or 24 MONTHLY PAYMENTS. Accessories, Tax and Insurance may be included.

We invite you to call and view our extensive selection of all the leading makes; you can try out any one and our knowledge gleaned through years of experience is at your service.

Because of our

Remarkable Easy Payment Scheme; Our Generous Exchange Terms; Our Wonderful Selection; Our Service before and after sale; Our Years of Experience and; Our Central Location

we claim to be THE FOREMOST LIGHT CAR HOUSE. A visit will convince.

такивания

Service-Our Name and Aim

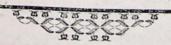
273-274, HIGH HOLBORN, LONDON, W.C.1

R.H.

THE SAFEST IGNITION

magneto

- **I** Magneto Ignition is the only independent self-contained system of ignition.
- **2.** Magneto Ignition is the only system not affected by accumulator trouble, nor involving elaborate service facilities. And it is foolproof.
- **3.** Magneto Ignition requires no electrical knowledge on the part of car owners.
- 4. Magneto Ignition is used on over 95% of the cars sold in Great Britain.
- 5. The world's record is held by a car which depends on Magneto Ignition
- The high quality of British Magnetos has taught motorists to expect ignition perfection. If through the use of inferior substitutes they experience ignition trouble it is the car maker's reputation which suffers.
- 7. The use of substitute ignition systems, most of which are of foreign origin, affects a vital British industry and the welfare of thousands of skilled British workers.



proved when reliability meant life or death

THE car that holds the world's speed record used Magneto Ignition. So does every British aircraft engine to-day, and every British motorcycle. So did all the motor-boats, airships and aeroplanes which have won big trophies recently. So do over 95 per cent. of the cars built in this country.

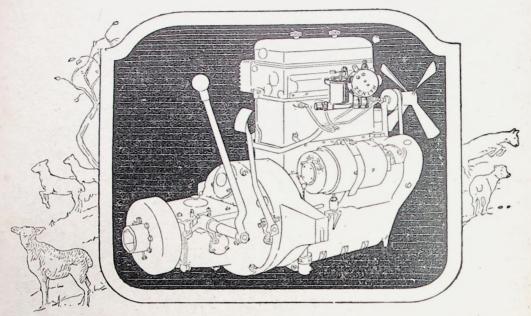
British car manufacturers know that British motorists put reliability first—that they have been taught by the high quality of British magnetos not to worry about ignition.

Every other ignition system puts car users entirely at the mercy of their accumulators, makes ignition failure an ever-present fear, and is an effort at supposedly cheaper production which they do not view with enthusiasm.

BRITISH MAGNETOS

THE SAFEST MAGNETOS

BUY A BRITISH CAR WITH A BRITISH MAGNETO



A Spring-time feeling for your engine!

SPRING is the time when all good motorists look to their cars and their carburetters. If a magneto is the heart of an engine, then surely the carburetter is its lungs! Correct carburation is essential to the smooth running of an engine. An inferior or badly adjusted carburetter is not only prodigal in petrol, but is the cause of erratic running—lack of power on hills—difficult starting and a score of other ills.

This year, therefore, decide to instal a Zenith carburetter and enjoy anew the pleasure of trouble-free motoring. Get to know the indescribable joy of possessing

an engine responsive to the slightest pressure on the throttle pedal—the satisfaction of being able to shoot ahead from a traffic tangle the moment the policeman drops his arm.

But it must be a Zenith—no other carburetter has such a system of compensating jets which automatically provide the correct mixture of petrol and air under all running conditions. No moving parts—nothing to wear out—a Zenith is simplicity itself. Many an engine has been transformed from an incorrigible sluggard to an indefatigable worker by the aid of a Zenith carburetter.

Any of these Zenith Service Stations will help you!

BEVERLEY, Gordon Armstrong Ltd.
BLACKPOOL, Imperial Garage,
CHESTERFIELD, Caw ndish Motors Ltd.
CLACTON-ON-SEA, A. CLARK, Ltd.
DARLINGTON, Cleveland Car Co., Ltd.
DERBY, City, Strvice Garage, Ltd.
DOVER, The Dover Autocar Co.
DRIFFIELD, Geo. Dowson & Sons.
EDINBURGH, Mr. Stephen Wallace,
GLASGOW, Mr., Proseer.
GREENWICH, S.E.JO. Fry Bros., Ltd.
GRIMBEY, Mr. D. H. Bloomer.
GUERNSEY, K. Millard & Co., Ltd.
HOVE, Mr., M. P. Stoneham.

HUDDERSFIELD, Rippon Bros.
1PSWICH, Egertons (Ipswich) Ltd.
JERSEY, St. Aubens Motor Coach & Car Co.

Car Co.
LEEDS, Mr. J. Mortimer.
LEEDS, Frank H. Dutson (Leeds) Ltd.
LEWES, Mr. E. K. Collins.
LIVERPOOL, Theo & Co.
MANCHESTER, Lookers Ltd.
MANSFIELD, Mr. Reg. Luteas.
NEWARK, C. E. Ford & Sons.
NEWARK, C. E. Ford & Sons.
NEWCASTLEON-TYNE, R. E. Hale & Co.

NEWPORT, MON, Premier Garage NOTTINGHAM, R. Cripps & Co. NORTHAMPTON, Mulliners Ltd. NORWICH, Bussey & Sabberton Bros. Ltd.

OSWALDTWISTLE, Grainger & Co. RHOS-ON-SEA, County Garage. SHEFFIELD, Sheffield Supply Co., Ltd. SOUTHAMPTON, Lowther's Garage. SOUTHSEA, Marmion Metor Co. SWANSEA, Electher's Garage. WESTCLIFFE ON-SEA, Mrt. Wm. Butler. WIGAN, Proud & Williams.

Special Free Trial Offer The common sense way to find out how greatly a Zenith Carburetter will improve your engine is to try it. Fit it to your engine—and use it for a whole month. Check up your consumption carefully—seek out some steep hills—step on the throttle and you'll feel the engine respond immediately. A Zenith Carburetter will make your car run like a 1927 model. But—if for any reason you arn't entirely satisfied—you can have your money back at any time within 30 days.

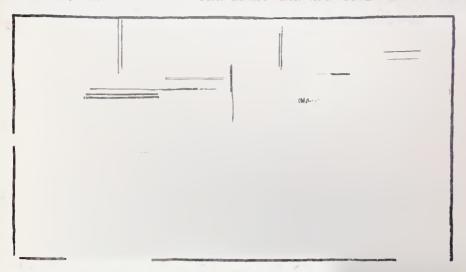
Zenith Carburetter Co.

40-42, Newman Street, W.1. Also 120, Wellington St., Glasgow.

ZENITH

—the dependable British Carburetter

Gilbert Ad. 86.9.



Lift it the easy Enots way

Hydraulic power instead of perspiration

THE key to the amazing ease with which the Enots Jack lifts any car is in the word "Hydraulic." I his jack relies on no chains, cogs or back-breaking effort on the part of the user. If you have never used a hydraulic jack, you will be astounded at the ease with which it operates. Using only one hand you can lift a chassis weighing two tons in ten seconds, and you stand right away from the wheels the whole time. You hardly bend your back, you run no risk of smashed fingers. There is only one thing more remarkable than the easy way the Enots Jack lifts a car and that is its automatic lowering when the job is done. Just slip the end of the rod on to the lowering valve peg, give a half turn and the car comes gently down. The Enots Jack weighs only 6½ lbs., it will go into any tool box. Price only 50/-, including 2-piece handle where desired for easy stowage. This is the best jack value obtainable.

This is the lowering value. It enables the car to belowered

Compact and neal weighs only 63 lbs. Minimum height 73. Lift, 43. Exten ion, 4". Immensely strong nothing to go wrong nothing to go wrong

ENOTS

From your dealer or from

BENTON & STONE LTD., C. Dept., ENOTS WORKS, BIRMINGHAM.

HYDRAULIC JACK

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.

A5

DON'T FAIL TO VISIT the OFFICIAL USED MOTOR SHOW for the World's — GREATEST CAR BARGAINS. AGRICULTURAL HALL, Islington, N. Open Daily until April 30th From 11 a.m. to 9 p.m. Admission: 2/- up to 6 p.m. 1/- after 6 p.m., plus tax. CERTIFIED MOTORS TO SUIT ALL POCKETS. NO RISK to run because every Car, Motor Cycle and Commercial Vehicle entered for Sale which passes the Experts' Tests will be Hall-marked by the Official Show Certificate. Do YOU Want To Sell Your Car, Commercial Vehicle or Motor Cycle? If so, bring it to the Royal Agricultural Hall (Barford Street entrance) between 9 a.m. and 8 p.m. any day and enter it for Sale. Exhibition Offices:—ROYAL AGRICULTURAL HALL. Clerkenwell \$201.

3.45 miles per minute Aero"

-When Major Segrave created a world's record of 207 m.p.h. on his 1,000 h.p. Sunbeam, "Aero" had the most terrific test ever imposed.

-and they came thro it successfully — every spring on the 96 valves gave unfailing service—proving that "Aero" has wonderful consistency. Specify for your new car engine, or for fitting when overhauling. We make for all engines. "1X on Springs" post free.

HERBERT TERRY & SONS, LTD., Manufacturers. REDDITCH, ENGLAND



WELL ON THE ROAD TO SUMMER PLEASURE IN

A light car for light and brighter Summer days from Homac's, backed with Homac's genuine service that guarantees trouble-free motoring. Homac's specialized knowledge and advice is impartial—free—and yours for the asking. Investigate this now and let Homac's put you on the road to real motoring pleasure.

MORGAN PRICES REDUCED

STANDARD Model - £89
DE LUXE, air-cooled - £110
FAMILY, air-cooled - £111
DE LUXE, water-cooled - £120

FAM.LY, water-cooled - £121 AERO, water-cooled - £127 AERO, 10 40 h.p., Racing £140 SELF-STARTER £10 cgtra.

Immediate deliveries of CITROËN & ROVER

DEFERRED TERMS ARRANGED WRITE FOR CATALOGUE.

REPAIRS and OVERHAULS BY MORGAN EXPERTS.

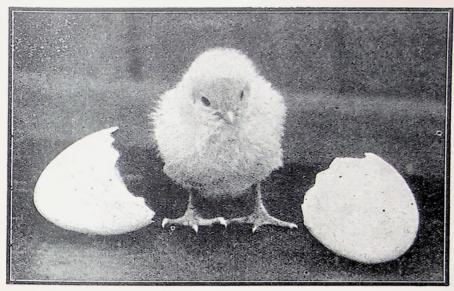
Full Stock of Genuine MORGAN SPARES Trade Supplied.

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

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



This Freedom!



The chicken from the egg enters into a new world and so does the man who buys a Jowett. He receives not the Freedom of the City, but freedom from the city, the freedom of the countryside. the seaside. The Jowett owner has freedom from breakdowns because the Jowett design ensures reliability. He has freedom from financial worries because Jowett design ensures economy. The cheapest car to buy and the cheapest to run. There is no skimping. Real hair, real leather, aluminium panelling, Smith's automatic wiper; where will you find these on a car at anywhere near the price? Shall we send you our catalogue, "This freedom"? A post-card will be sufficient.

"The little engine with the big pull."

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

Dunlop Balloons and Stewart Speedometers standard.

JOWETT CARS LTD., IDLE, BRADFORD

Specially designed to suit each make. Exact fitting instructions supplied.

MORGAN
JOWETT
CLYNO
ROVER
SINGER
AUSTIN
HUMBER
STANDARD
TALBOT
FIAT
LEA-FRANCIS

3 Sizes.

52/6

63/-

72/

Per Axle. Brackets included Care Exten.

Pleasure

must have good control of your car and feel that it is steady and "holds the road." There is no need to be bounced about on bad roads. You can drive confidently over them if your car's springs are controlled by B & D Stabilizers. There are good reasons why you should choose them as the best value in shock absorbers. They save you money by reducing wear and tear.

EASILY FITTED. You can fit them your-self as easily as you change a wheel. The brackets clamp on,

LOW PRICED yet first-class design, work-manship and finish.

EFFICIENT. Have stood the test of time. Let us send you the testimony of users,

GUARANTEED. You can purchase under our guarantee that you only keep them if you are satisfied.

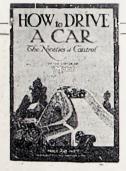
Write to-day and start the season ready to face good and bad roads with-

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

'Phone: Avenue 3029.

'Grams: "Bendrapic, Fen, London."





A Guide to Safe and Efficient Driving.

Obtainable from all principal booksellers and bookstalls, ordirect from the publishers 2/9 past

NINTH

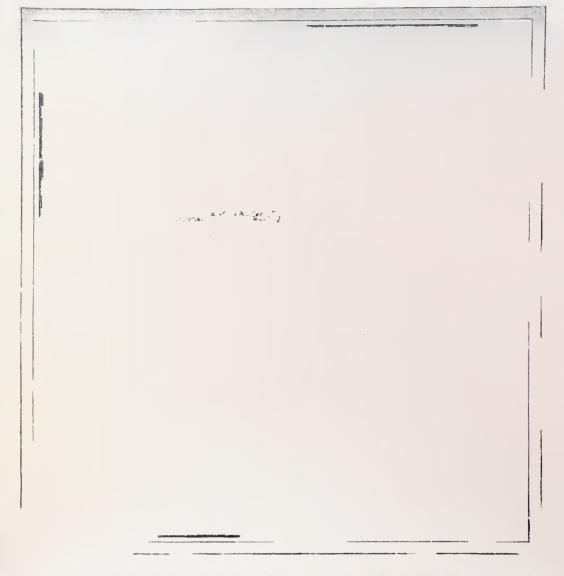
2/6 NET.

TEMPLE PRESS LTD.

7-15, Rosebery Ave., London, E.C.I. Wholesale Agenta: E. J. Larby, Ltd., 30, Paternoster Rov, E.C.4. The instructions are carefully graded, so that the learner progresses step by step in the art of driving.

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

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



Test your tyres every Friday

Calibrated in 1 lb. units—10 to 42 lbs. Made with ball foot—easy to use on any type of wheel. Price 6/10.

BETTER car balance comes from keeping both front tyres and both rear tyres evenly inflated to their correct pressures.

The way to be sure that they are kept up to the pressure your dealer recommends is to test them every Friday with the Schrader Tyre Gauge. We suggest Friday because

most tyres get their hardest work over the week-end.

In addition to better car balance, the correct pressure gives you more riding comfort, easier steering and longer tyre service.

Schrader products are sold by more than 100,000 dealers throughout the world.

A. Schroder's Son, Inc.
Offices and Main Distribution Stores;
26-29, New Street, Westminster, S.W. I.

BE SURE IT'S A SCHRADER: LOOK FOR THE NAME

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

۸9

Your Spring Run will be all the better WITH THESE ON YOUR CAR.



CUSHION.

The Gaiter with the Wick Tube and the One-hand Oil Gun.

MOTOR RUGS.

Splendid value, fringed, reversible, made of pure wool in a large variety of rich colours and beautiful designs 58" x 68". 22/6 A heavier, fringed rug with different design on reverse 42/6 A particularly refined quality rug in delicate colours with silk hem. Combines the utmost warmth with least weight 88/-

When ordering state approx, colours preferred,
If your Garage cannot supply you, send direct (cash with order).
Satisfaction guaranteed or money returned. Prices for Sets. complete with Oil Gun.

Citroen (11'4) £4 - 10 - 0

Jowett (8) . £4 - 4 - 0

Hillman (11) £5 - 10 - 0

Lea-Francis (8, 9 and 12) £4 - 5 - 0

Prices for any Car On Application. Write to Dept. L for New Spring Catalogue of Accessories to—

Price 8/6

Brings driver comfortably near to controls. Size 17" x 17" x 43". Made in coloured waterproof leather. If your Garage cannot supply you send direct (cash with order).

RAMSDENS (HALIFAX) LIMITED, Station Works, HALIFAX

London Office & Service Depot: 147/9, GT. PORTLAND STREET, W.1.

ELEPHANT SERVICE

Always insist on ELEPHANT replacements. PARTS IN STOCK FOR

A-C, AUTOCRAT, CALTHORPE, CALCOTT, CASTLE 3, ENFIELD, ERIC CAMPBELL, HAMMOND. HORSTMAN, LAGONDA, MARSEAL, MERCURY, METEORITE, SINGER, STELLITE, SWIFT, WARREN-LAMBERT, DUPLEX, LITTLE GREG, etc. etc.

WE ARE ACTUAL MANUFACTURERS.

BELSIZE-BRADSHAW SERVICE

Sole Makers of all parts for these cars. Send for Instruction and Improvement Book - 2/6

SERVICE DEEMSTER

All parts for all models with improvements at lower prices than Deemster official prices.

WORM WHEEL SERVICE

All makes from stock in special Phosphor-Bronze. Special Worm Wheels made in three days.

Gear Cutters, Machinists, Founders & Engineers.

Elephant Motors Ltd.

ELEPHANT HOUSE,

97-101, Newington Causeway, London, S.E.1.

Phone-Hop 7076-7-8.

'Gram .- "Multimart, Sedist, London."

Being Different

"SAMENESS" is a curse in the motoring world-its offspring is mediocrity.

Outstanding achievement is attained only by pioneer research work and-

As the Oldest British Firm of Carburetter Manufacturers we claim-and can prove -to have produced

A Carburetter that revolutionises all hitherto-accepted principles of car-

That is a big claim, but we prove it-

(1) In our explanatory (2) By the actual improved literature (sent free on request) that shows the why and wherefore of B & B design.

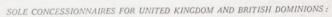
performance of your Car under the terms of our 30 DAYS FREE APPROVAL

We claim nothing that we cannot PROVE. Why not transform your old Car into a new one — fit the B & B and note the amazing difference!

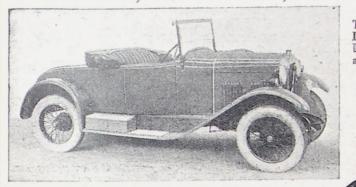
Write for our Car Book-FREE ON REQUEST.

BROWN & BARLOW LTD., Carburet Works, Witton, Birmingham.

London Service Agenis: Dartford Eng. & Carriage Co., Ltd., 23/24, Hythe Road, Willeaden, N.W.10.



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



The Two-seater De Luxe with large Double Dickey, Balloon Tyres, and F.W.B.

£199

There's still time

to select

your

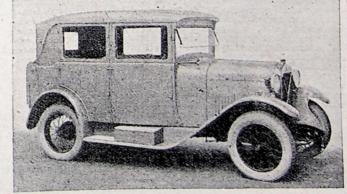
and

take delivery

Before Easter.

The Four Door genuine Weymann Saloon, Balloon Tyres, and F.W.B.

£275



A complete range of models is always on view at the Showrooms of The Sole London Distributors:

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

Make every day a holiday

BRIEF SPECIFICATION.

Fitted with 8 h.p. J.A.P. Twin Engine, 27x4 Dunlop Tyres, quarter Elliptic springing front and rear, Electric dynamo lighting by 5 lamps, double adjustable windscreen, smart dummy radiator, all controls in body, foot accelerator, completely weatherproof with hood, side curtains, and screens. Handsomely finished, with full car equipment, and ample leg room.

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

Write to-day for full catalogue.

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

ie Call of Spring

the open road. Why stay at home envying your hbour? You can purchase an Omega, if necessary, easy terms. Get away from the everyday humdrum tence into the health-giving countryside. The Omega eewheeler affords the most comfortable and economimeans of attaining your desire, and remember she take a good load at less than a penny a mile. Let us you on the right road to-day by making your choice an

"The threewheeler that runs like a four."



N.B .- No false or exaggerated claim is made for CHEKKO.

S a motor owner you are fully aware of the A importance of Braking, but perhaps are bewildered somewhat at the claims of the various brake linings. Why not send for the CHEKKO free booklet? It will give you a great deal of information, and will settle the Brake Lining problem for you for ever.

Ining problem for you for ever.
The undoubted superiority of CHEKKO lies in the fact that alone of all brake linings it contains NO COTTON or other inflammable adulterant that can scorch or burn out. Consequently it is incomparably safer and lasts longer than any other brake lining.

Relieve your mind-use CHEKKO. Specify and insist on CHEKKO through your garage or any of our stockists.

CRESSWELL'S ASBESTOS CO., LTD.

WELLINGTON MILLS, BRADFORD. 'Phone: 950 Bradford. 'Grams: CHEKKO, Bradford.

London Stores: 27, Perce Street, Tottenham Court Road, W.1.
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Manchester Stockists: Manchester Machinists Co., 14d., 30, Queen Street.
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FIT YOUR

first of all with the BODELO BRAKE ATTACH-MENT and then with the BODELO PETROL SAVER, they are two accessories which will make the handling of your Austin 7 very much simpler.

THE BODELO BRAKE ATTACHMENT for Austin 7 Cars enables all four brakes to be operated by the foot pedal without interfering in any way with the existing hand brake

mechanism. Thousands are in use alls over the coun-PRICE try, therefore 30/fit one to-day.

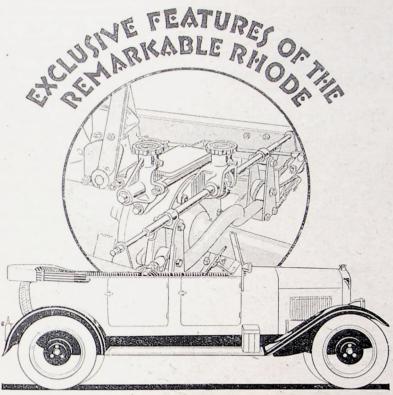
Turn off the petrol from the dashboard, it ensures clean hands, it stops the drip from your carburetter, thus reducing the risk of a fire to a minimum.

THE BODELO PETROL SAVER works automatically, you pull the control knob out to

turn it off, you push it in to turn the petrol on. PRICE 12/6

LLOYD & DEELEY, 177, Broad Street, BIRMINGHAM.

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.



FULLY COMPENSATING FOUR-WHEEL-BRAKES

What is probably the most dramatic improvement in car construction since the advent of Four-wheel Brakes and Balloon Tyres is the 1927 Rhode braking system. With the patent system we have adopted all brakes can be automatically adjusted from the driver's seat by means of two small knurled knobs, as illustrated, and which can be operated by hand while travelling if required, and which will automatically compensate all four brakes, thus ensuring perfect safety under all conditions.

Individuality; that's the keynote of the popularity of the new Rhode 10'30—individuality in construction, in design, in appearance, and in—the intimacy of its appearance to you once you are its lucky owner.

It is a 4-cyl. all-gear engine, water cooled by Thermo-Syphon Treasury rating 10.8 h.p. B.H.P. 30. Bore 65 mm. Stroke 90 mm. Engine capacity 1,232 c.c. Tax £11. 5 to 55 m.p.h. on top gear. 40 m.p.g.

England's first-truly fine small Car.

Tw:-seater with large double dickey and four-five seater models. Cellulose finish in Blue or Muroon.

£198

Your local Agent will arrange a demonstration for you or we shall be pleased to forward the fullest information on request.

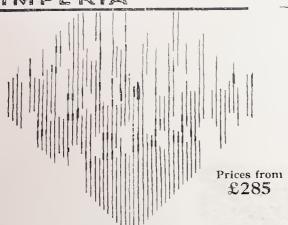
RHODE MOTOR

SELEY . BIRMINGHAM.

London and Home Counties . Normand Garage Ltd., 489, Oxfo d St., W.1 Mancheste, and Licerpool : J. Bluke & Co., Ltd.

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

IMPERIA



The "Imp" chats with A Motoring Beginner.

"Do not get a second-hand car" to begin on." You want your earlier motoring to be pleasant-and safe. Get a new Imperia. Anybody who can move a lever can change gear neetly on this

SLIDE VALVE" CAR

Always a pleasure to drive.

The 11/25 h.p. Imperia is a pleasure to handle. The four speeds enable you to climb anything where there is a grip for the wheels. And gear changes, up or down, can be made quickly and silently. Even a novice will do this every time, without double de-clutching.

IMPERIA MOTORS, Ltd. Cordwalles Works, MAIDENHEAD.

Imperia Distributors:
Connaught Moter & Carriage Co., Ltd., 34-36, Davies Street, Berkeley Square, London; P. J. Evans Ltd., 81-91, John Bright Street, Birmingham (Warwickshire, Worcester and Stafford); Alten Simpson & Bros., 374, Deansgate, Manchester (Lancashire, North Wales and Cheshire); Cooden Beach Auto & Eng. Co., Ltd., Cooden Beach, Bexhill (South Sussex).

THE "SLIDE VALVE" CAR



SOMETHING MUST PERHAPS TOMORROW OUR OUTFIT



simplifies solderin

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

SECURITY FIRST



TOTAL FUNDS £33,924,094

EQUITABLE LOSS SETTLEMENTS

There are few things more important to a motorist than prompt but equitable loss settlements. The "Royal's" reputation is known throughout the world.

IT IS NOT WHAT YOU PAY THAT COUNTS BUT WHAT YOU GET FOR WHAT YOU PAY.

IVERPOOL: lorth John Stre Picase advis		CATION			LONDON: LOMBARD STREE Daily Policy.
Car, Cycle, Com. Vehicle.	Make.	H.P.	Year of Make.	Value.	Purposes for which used.
Name					

Pleased with the change to COIL IGNITION—

Gentlemen.

10th March, 1927.

Re Delco-Remy Coil Unit fitted to - Car.

You will probably remember in December last sending me a Delco-Remy Unit for my Car.

I promised you I would write and tell you how the car behaved after I had had the coil running for some time.

I would like to say how pleased I am with the change from magneto ignition.

The engine, which is an overhead valve one, is now much more flexible than before, and starting is now oute an easy matter.

and starting is now quite an easy matter.

I notice the advantages of coil ignition particularly on corners. There are two corners in my neighbourhood which I go round very regularly, and both are on a gradient. Formerly I always had to change down from top to third speed in taking these corners, now with the coil ignition by retarding the spark I can get round quite comfortably without straining the engine on top gear.

The other day my wife (who also drives) found that the self-starter had suddenly failed, and although she had never been able to swing the engine in the days when it was fitted with magneto ignition, she was able to start it up at the first pull of the

handle now that your coil has been installed.

Yours faithfully,

(signed) B. W. F.

(Original letter may be seen at our offices.)

The DELCO-REMY COIL IGNITION SYSTEM
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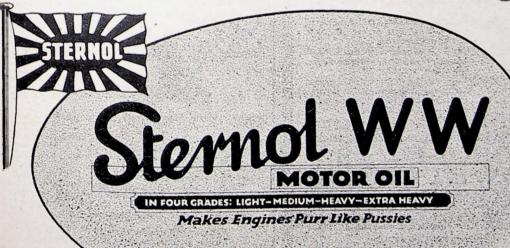


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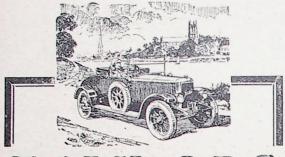
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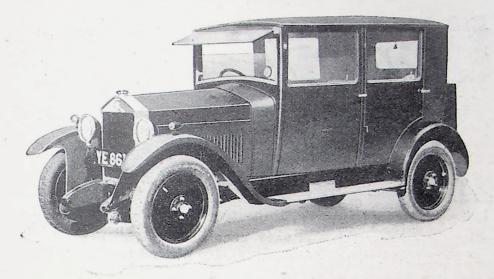
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THE WOMAN WHO DID-

Her husband, however, had more to say-quite right -he was paying for it-and he wanted to know why he could get so many more gadgets on other cars for the same price. His wife asked him what about all the gadgets that he had at one time and another and how soon he got tired of them-and anyhow, a flower vase or a corpulent policeman on the radiator cap wasn't going to help him or her on a dark wet night on a moorland road when something went wrong with the works—which after all is what you pay for, you know. "When I buy a frock," she said, "I don't expect the dressmaker to give me a gold bangle and a diamond safety pin to wear "with and in it—it's the material in and the cut of "the frock that I pay for—not the ornaments—and "when you buy a motor car, buy a good chassis "and a comfortable body, and choose your own accessories if you want them." Every penny spent on accessories means less for the chassis and body.

make up her mind after she had tried the 10 h.p. Mathis Weymann Saloon that this was the car for her—showed her good sense. She didn't argue—she didn't want to—for the car's appearance and performance put argument out of the question.

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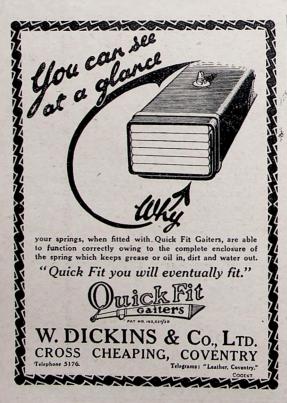
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THE SECRET OF SECOND SE

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Special Maps and Holiday Information.

NEXT WEEK!

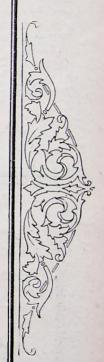
THE WORLD'S BIGGEST MOTOR TRIAL, Fully Illustrated Report of London-Land's End Run. BROOKLANDS BANK HOLIDAY MEETING. Illustrated Report.

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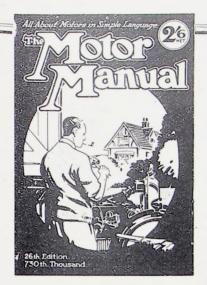
4 oz. Tin 1/-. Postage 2d. extra. Fiat eval shape for tool bag. 8 oz. Tin 1/9. Postage 3d. extra. 32 oz. ., 6/-. Postage Free.

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

How does the differential work?

What's inside the gearbox?

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What is the principle of the timing gear?

Of what does electrical equipment consist?

Why does an engine 'knock'?

How does a twostroke engine work?

What is the operation of a sleeve-valve engine?

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

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Pages from the Diary of an Austin Owner



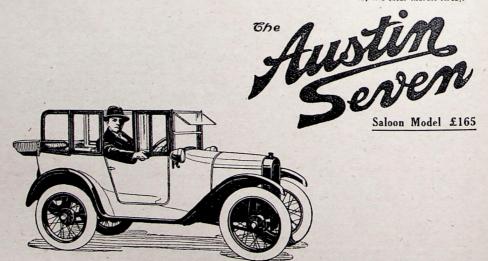
Page Ten.

It really is astonishing how very little one's journeyings cost when one is the happy possessor of an Austin Seven. Yesterday's performance was one of my best yet, when I covered the 150 odd miles between here and Portsmouth, with one grown up passenger and three kiddies, in only $5\frac{1}{4}$ hours actual running time. The return journey same evening was done in the same excellent time, an average of very nearly 29 m.p.h. The consumption of petrol was just 7 gallons—over 43 miles to the gallon—and whereas railway fares for the whole party would have amounted to £6:13:0, our total running costs were only 25/4, a clear saving of £5:7:8!

PRICE of TOURER at Works:

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THE AUSTIN MOTOR CO., LTD., LONGBRIDGE, BIRMINGHAM. LONDON SHOWROOMS - 479-483, OXFORD STREET, W.1 (near Marble Arch).



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WHERE ENTHUSIASTS FORGATHER.

The first B.A.R.C. Meeting of the season takes place at Brooklands on Easter Monday. Our picture shows a typical scene at the track—enthusiasts watching the start of a light car race.

NOTES, NEWS & GOSSIP The WEEK

ON OTHER PAGES

A Sabbath Industry.

THE PERSON NAMED IN

Large numbers of people spend their Sundays in watching the police traps in operation on the London Road, Bromley, Kent, and on Bromley Common. The traps work all day and, usually, only outward-bound traffic is timed.

Australian Petrol Prices.

Reuter announces that the price of petrol throughout Australia and New Zealand has been reduced to 2s. per gallon—a reduction of 2d.* This standardizes the prices of all the Commonwealth oil refineries.

A Petrol Tax!

A London evening paper suggested last week that Mr. Churchill has been toying with the idea of leaving the existing horse-power tax in force and imposing a tax on notor spirit in addition. The writer of the article in question stated that Mr. Churchill believed that motorists would not object to a petrol tax in view of the recent petrol-price reductions!

This Week.

We believe that our centre pages this week will prove invaluable to everybody who intends to witness the performances of the cars in the London-Land's End Trial. Full details and a map of the course are given, together with a list of all the car competitors with their official numbers. The article on foundry work is the second in a new series, and it should prove to be most instructive, as it deals with a subject which is little understood by most owner-drivers. Our correspondence pages this week contain many letters of quite exceptional interest.

No. 749. VOL. XXIX.

Cyclecar Comments Across Europe in a Trojan Light Cars in the Making: Foundry Work 564 566 Foundry Work New Lea-Francis Coachwork Rich Mixture. Topics of the Day Giving a Helping Hand Exploring an Old Village All About the Land's End Richmond Cartle 570 573 574 578 581 Richmond Castle Our Readers' Opinions 584 LIGHTING-UP TIMES (Rear Lamps) for Saturday, April 16th. Edinburgh 8,49 Liverpool ... 8,42 Bristol ... 8,86 London ... 9.26 Newcastle .. 8.39 Birmingham 8.35 Moon-Full, April 17th.

Cyclecar Sportsmen.

No fewer than 26 three-wheeled cyclecars are due to start in the Motor Cycling Club's London to Land's End Trial. This is surely a very fine entry in view of the comparatively small number of three-wheelers in use.

R.A.C. Observed Tests.

It is rather singular that, in view of the present lack of open competitions, manufacturers do not avail themselves more frequently of the services of R.A.C. official observers to report on long-distance runs and similar achievements. The official R.A.C. certificates rightly carry a great deal of weight with private motorists, and they should go far to back up a progressive sales noticy.

Important Motorcycle Trial.

The Auto-Cycle Union Stock Machine Trial starts on May 2nd, the first day's run being from Birmingham by devious routes to Buxton. A team of Morgan cyclecurs is taking part. This is an event in which they have shown marked superiority over sidecar machines in the past.

Income-tax Allowances.

The Automobile Association is receiving inquiries from members which indicate that many doctors and other users of cars for professional purposes are unaware of the advantages accorded them by the Finance Act, 1925. The Association draws attention to the fact that under this Act the depreciation allowance on account of motorcars used in the course of professional duties is claimable as an annual deduction from the assessment for income tax. Motorists needing any information on this point should communicate with the Secretary, the Automobile Association, Fanum House, New Coventry Street, London, W.1.

Next Week.

We shall publish as usual on Friday, and our issue will contain graphic reports of the principal Easter events, including the Loudon-Land's End Trial, in which members of our own staff are competing, and the Bank Holiday Brookland's meeting, which is the first car meeting of the year and which promises to be particularly interesting. If space permits, we shall include the third article in our new feature, "Light Cars in the Making." This feature, incidentally, has met with a very enthusiastic reception.

I.M.T. Ideals.

The Institute of the Motor Trade, in its efforts to raise the general standard of garage business throughout the country, has just issued a printed eard for hanging on the walls of garage premises, laying stress upon the importance of cleanliness and businesslike methods.

Wayside Snacks.

To enable motorists to pick up luncheon boxes, sandwiches and so on a concern with the appropriate title of Motorsnax intends to establish depots on main roads. No. 1 depot—the present headquarters of the concern—has already been opened at Ripley, Surrey, on the Portsmouth Road.

Police on Pedestals.

An accompanying photograph shows a new scheme which is being tried out in Paris to facilitate the work of point-duty constables. A small movable platform is used to overcome their natural lack of stature, and the experiments have proved so successful that it is proposed to put the scheme into operation in the near future.

"The More We Are Together—

New readers should familiarize themselves with the advantages of joining one or both of the two recognized motorists' organizations. A card to the secretary, Royal Automobile Club, 83, Pall Mall, S.W.1, and another to the secretary, the Automobile Association, Fanum House, New Coventry Street, W.1, will ensure full details being obtained by return of post.

Renault Price Revisions.

Renault, Ltd., announce the following price revisions relating to the 9-15 h.p. models:—Standard two-seater with double dickey £159 10s.; standard four-door four-seater £167; de luxe model £179; standard four-door metal panelled saloon £207; de luxe model £224; de luxe Weymann-type saloon £229; folding-head two-seater single-dickey coupé £225; fixed-head double-dickey folding-head coupé £239; sports torpedo three-seater £265.

New Tyre Treads.

The Dunlop Co. is not alone in having introduced a tyre tread with a considerable amount of rubber at the point where the tread proper joins the walls. This plan is favoured to-day by a number of tyre manufacturers.

Kentish Road Subsidence.

On Friday last part of the main Bromley-Eltham road subsided and all traffic had to be diverted via the Sidcup by-pass. Further subsidences are feared, and the repairs will occupy several weeks.



HARPER RUNABOUTS. These unusual-looking but practical machines at one time seemed likely to become very popular. Our contributor "Shacklepin" refers to them in "Cyclecar Comments" this week.

Cheaper Electric Horns.

Owners of cars fitted only with a bulb horn should investigate the displays of electric horns now being made by many accessory dealers. Some very cheap and serviceable patterns are available.

Motorine.

The manufacturers of Prices' oils announce that they are relinquishing the trade name "Huile de Luxe" for their motor oils in favour of the word "Motorine," which has been used by Prices for many years. The three grades in common use are now styled Motorine B de luxe (heavy), Motorine C de luxe (medium) and Motorine D de luxe (light). Quart containers of the round type are now being used.

"A Spare" for Touring.

One of the items often overlooked when getting a car ready for a long run is the need for carrying a spare lamp bulb. One suitable for a side or tail lamp will do, as it will replace a head-lamp bulb in case of need and will give a reasonable light in that position.

Once a Week.

A correspondent suggests that "Friday Night's Inflation Night" would be a good slogan for the manufacturers of Schrader tyre-pressure gauges who have adopted the catch-line "Test Your Tyres Every Friday." We imagine that the manufacturers of a well-known shampoo would not feel very pleased if our correspondent's suggestion were adopted.

French First-aid Stations.

The Touring Club de France has decided to install 30 first-aid stations along the Paris-Deauville road, which during the summer is always crowded with motorists. The stations will be equipped with the necessary personnel and material to come to the aid of all motorists involved in accidents. If the innovation gives good results, the plan will gradually be applied to all the main motor roads of France.

A.-C.U. Silencer Trials.

The observers' report and list of awards in connection with the motor-cycle silencer trials conducted by the Auto-Cycle Union in January and February have now been published. Gold medals have been awarded to the manufacturers of the Howarth, Premier and Woodvan silencers, silver medals having been given to the Carbjector, F.M.L. Premier (small pattern), Sunlight (large and small patterns) and Union. The observers' report that the results of the test indicate that "the difficult problem of silencing a motorcycle engine is being attacked successfully."

A HERO'S STAND. Those who know the traffic conditions in the streets of Paris can hardly envy the point duty policemen. The lot of these men is now to be made lighter by providing them with pedestals on which to stand. (See accompanying paragraph.)

The Aldershot Tattoo.

The nights of June 14th to 18th inclusive have been chosen for the Aldershot Command Searchlight Tattoo this year. These dates fall, as hitherto, in Ascot week.

Closed Car Popularity.

It has been noteworthy during the past three or four weeks—which are considered to be the most suitable time for selling new cars—that a large number of manufacturers and agents have been "pushing" closed models, in spite of the promise of warmer and drier weather.

Kingston By-pass Opening.

As the result of a further decision regarding the Kingston by-pass, we understand that three sections will be open by the Easter holidays. These sections are from Robin Hood Gate, on the Portsmouth road, to Coombe Wood Farm, on the Merton-Kingston road; from the Raynes Park-Kingston road to the Surbiton-Leatherhead road; from the Merton-Kingston road to the Grand Drive.



The hanging boards on this picturesque Hastings sign-post give information concerning local attractions.

It is erected on the parade.

A London-Exeter Echo.

Mr. E. Hillary, who drove a Frazer-Nash in the Motor Cycling Club's London-Exeter Trial at Christmas-time and who was awarded a bronze medal, writes to inform us that following an appeal to the stewards of the R.A.C. in connection with the admissibility of a baulk on Salcombe Hill he has been awarded a gold medal.

Low-built Bodies.

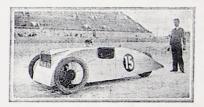
A very marked tendency is noticeable on the Continent to build very low saloon bodies, both for large and small cars. American designers are also working along the same lines. It is now by no means uncommon for a man of normal stature standing beside a 15 h.p. Continental saloon to be able to see right over the roof.

U.S. Vehicle Registration.

According to an announcement by the Bureau of Public Roads of the Department of Agriculture of the United States over 22,000,000 motor vehicles were registered in America during 1926, this figure representing an increase of slightly over 2,000,000 on the previous year. Of the total number 19,237,171 were private cars, taxis and buses.

Police to Control Pedestrians.

Orders have been issued by the Traffic Director of Mexico City that, in future, pedestrians must obey traffic signals in the same way as motorists, says Reuter. The reason for this edict is that, according to police reports, most accidents occur to pedestrians through their own carelessness in crossing the streets at points where the traffic is not under police control. In future they will be allowed to cross only at points where two streets intersect.



Mons. Menet in the Menet-special which he drove recently at Montlhery in the French T.T. Race.

R.A.C. Associate Membership.

A certain amount of misunderstanding appears still to exist regarding the various subscriptions for associate membership of the R.A.C. For owners of cars with engines over 1,100 c.c. it is £2 2s., for those with cars up to 1,100 c.c. £1 1s., and for motorcycles and three-wheelers £1. The subscriptions run for 12 months from the date of joining, there is no entrance fee, and in the case of motorcycles the badge is free.

Speed Trials Abandoned.

Owing to lack of support, the Yorkshire Automobile Club's Speed Trials, which were to have been held at Saltburn next July, have been abandoned. This meeting is one of the few authorized by the S.M.M. and T.



Moonlight picnics will become unpopular if other landowners adopt these drastic measures in their woods!

Useful Reference Books.

The publishers of The Light Car and Cyclecar issue a most attractive range of text books which are invaluable to all motorists, and particularly to novices. Details of them can be obtained on application to Temple Press Ltd., 7-15, Rosebery Avenue, London, E.C.1.

Road Repairs.

The R.A.C. is informed that the road from Chudleigh to Ashburton is being reconstructed. Motorists travelling to Plymouth via Exeter should use the Okehampton-Tavistock road. The North Dock drawbridge, Harbour Trust Road, Swansea, will be closed to all vehicular traffic for six weeks from April 19th.

THE USED MOTOR SHOW.

A SHOW devoted solely to secondhand motor vehicles opened on Monday last at the Royal Agricultural Hall, London, and will continue until April 30th, with the exception of Good Friday.

At a Press luncheon prior to the open-

At a Press luncheon prior to the opening Mr. William Glass, the organizer, who presided, said that the object of the Show was to relieve the present stagnation in the used-car market which has developed to such an extent that traders throughout the country are burdened by ever-increasing stocks of all types of motor vehicles, which are in most instances being taken in part payment for particle of the vehicles.

new or other vehicles.

Quite a number of the largest dealers and manufacturers in the country were supporting the Show, and an option had been taken on the hall for future events, and next year it was probable that the whole of the building would be occupied by traders.

Although the Prince of Wales had never visited a motor show, he (Mr. Glass) wrote to his secretary concerning the exhibition, and in reply he had received a letter from Admiral Sir Lionel Halsey,

in which he said that he was very interested to hear of the Used Motor Show and that his Royal Highness had consented to exhibit a car to be sold to the highest bidder above the reserve figure placed upon it.

He (the Prince) could not attend, owing to being away from England, but he wished the Show every success.

Mr. Glass pointed out that every vehicle in the Show, including the Prince of Wales's car—a 1924 40-50 h.p. Rolls-Royce cabriolet—was examined by independent experts who could thoroughly be relied upon, and purchasers could take it that the certificates issued by them and attached to every car were very nearly correct.

If, within 48 hours of purchase, the certificate proved to be materially incorrect, the purchase price will be refunded.

It was the aim of the management to run the Show on absolutely straight lines and, if desired, they would make a quarterly inspection of any car purchased.

The Show is open from 11 a.m. to 9 p.m., admission being 2s. up to 6 p.m. and 1s. after that hour.

CYCLECAR COMMENTS.

By SHACKLEPIN.

AN INTERESTING FRENCH THREE-WHEELER-TWIN TWO-STROKE ENGINE AND AR-TICULATED FRAME — THE HARPER RUNABOUT — A SOUND AND SUCCESSFUL DESIGN.

In the issue of The Light Car and Cyclecar dated August 20th, 1926, I described a rather original amateur-built French cyclecar, consisting of a motorcycle converted to a three-wheeler. This machine proved so successful that Messrs. Fehr and Rougouchin, 41, Avenue de la Grande Armée, Paris, decided to market similar three-wheelers, modified in certain details.

I have received further news of the machine in a letter from a Parisian colleague, who tells me that under the name of the "F.R." it has just reached the production stage, and he was able to examine one and make a short trip in it a few days ago. The design has been very con-

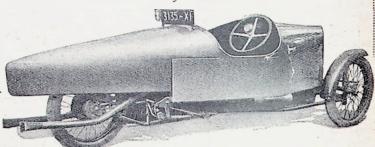
siderably modified, but the best features of the original conversion arrangement have been retained; these include the articulation of the rear portion and the suspension sys-

A light, pressed-steel frame is now used for the forecarriage arrangement. The rear portion, which includes a sub-frame of steel tubing, carrying the engine and gearbox, and the rear wheel, is articulated to the forward frame in a manner which allows a certain amount of movement to the rear wheel. This movement of the rear portion, which actually constitutes the whole driving mechanism of the cyclecar, is restrained by means of long, helical springs and frictional shock absorbers of the "compass" type.

Front suspension is of the type which may be described as classic in three-wheeled cyclecars; that is to say, vertical coiled springs. In the case of the F.R. the springs work in steel tubes.

The engine employed is a 500 c.c. vertical-twin Harrisard two-stroke. This engine is well known in France, as it is fitted to several quite successful makes of motorcycle. It has a bore of 63 mm. and a stroke of 75 mm. A multiple-plate clutch and three-speed gearbox are fitted. Final transmission is by chain to the rear wheel. The foot-operated controls are arranged exactly as in a car, whilst the hand brake and change-speed levers are placed centrally.

I understand that the first machines to be delivered are not B12



The "F.R." three-wheeler, which is being made in Paris. Its design is based largely upon motorcycle practice.

very attractive in appearance, but this matter is being remedied. The latest type has a flat-fronted dummy radiator and provides the comforts which all motorists expect, such as a windscreen, hood and so forth.

In trying the car on the road my colleague found it rather undergeared. The engine appeared to have ample power for any demands which might be made upon it, and the suspension arrangements proved excellent. The front portion, with the seats, being practically isolated from rear-wheel road shocks, the tricar was unusually comfortable on bad surfaces. The little Harrisard engine gave a very steady pull, almost like that of a four-cylinder unit, but there was no opportunity of trying the vehicle on a hill, as time did not permit, but it is hoped to test one of the improved models on the road shortly.

The bodywork and general appearance of the machine will need to be greatly improved if the F.R. is to make a genuine appeal to the public, even in France; and the French cyclecarist is by no means exacting in his demands!

I wonder if it was the appearance of the Harper Runabout which robbed it of the popularity which, in my opinion, it had every right to expect? Many readers doubtless will not remember these most intriguing little cyclecars, whilst their exceptionally good performance in long distance events promoted by the Motor Cycling Club had escaped even my memory until I happened to be chatting about them with some other cyclecar enthusiasts a few days ago.

The Harper Runabout was a three-wheeler with two wheels behind and one in front. The driver sat much as he would on a motorcycle upon a seat placed above the engine and a trifle forward of the back axle, and steered the machine with handlebars.

A pillion seat of a comfortable and

quite serviceable kind was arranged behind the driver, who gained some measure of protection from the elements from a windscreen and storm apron.

The manufacturers of the Harper Runabout secured its road worthiness and reliability by avoiding unconventional or needless elaboration in the layout of the engine and transmission. A two-stroke single-cylinder engine was used, the drive being on the G.N. principle employing three chains each providing a different gear. Dog clutches locked the required sprocket to the cross shaft, and the whole layout worked extremely well.

This little cyclecar is the only one in my experience which has proved to be a complete and proved success from the point of view of roadworthiness and reliability when driven hard in spite of a miniature engine being used. This must be attributed, of course, to the very light weight and low wind resistance of the machine.

A Harper Runabout apart from being a very nice little machine to own by itself would provide a first rate tender for a man who lived in the country and also owned a full-sized car. I should like to see this attractive little proposition reinstated with the backing and sales organisation of a well-known manufacturer behind it.

Although I confess to not being very fond of two-stroke engines, I am ready to admit that they are particularly reliable. These remarks are prompted after a visit to a friend who uses a 2 h.p. water-cooled two-stroke engine for driving his house-lighting dynamo. On an average the engine makes two non-stop runs of eight hours each per week, developing full power and using parallin fuel. During two years' use however, it has never given the slightest trouble and shows no signs of wear.

"LAND'S END" SATIRE.





THIS YEAR THE REGULATIONS HAVE BEEN ALTERED. IT 15 NOW A NICE ITTIF RUN FOR OLD GENTLEMEN, UP TO THREE LITRE CAPACITY!

TOUCHED 25 TWICE I DID

AN EARLIER START ENABLES "MECHANICS" TO GET THEIR CHARGES SAFELY SHUT UP BEFORE THE NIGHT AIR TURNS CHILLY.

AT DEVIZES WE TAKE A CUP OF GLAXO WHICH SUPPORTS US TILL BREAKFAST AT TAUNTO WHERE THE USUAL YARNS OF THE

RUN WILL BE TOLD OVER THE NIGHTS MORNING KRUSCHEN

NOW WE COME 10 THE REAL CHANGE "YR W THERES NO HURRY

> LYNTON AS USUAL BUT THERE 15 ALWAYS THE CLIFF RAILWAY.

BEGGARS OF COURSE GIVE A LITTLE BOTHER. IN ORDER NOT TO UNNERVE ANY OF THE YOUNGER DRIVERS UP TO 65, OUR PICTURE OF IT IS QUITE SMALL AND TAKEN AT NIGHT. RETER THIS TRYING

TEST -

ROOST

PORLOCK HAS NO 1 SECTION.

WHY NOT WALK ?

DRIVERS WILL BE PUT TO BED FOR HALF AM HOUR, WHILE MECHANICS EXAMINE COOLING SY5 - C

BY STARTING FROM HERE AT SCHEDULE TIME THE PRE-LUNCH-HOUR RUSH WILL BE AVOIDED

LAUNCESTON OLD ENG: LUNCH-TOWN FOOD FOR MAN AND CAR . DRIVERS SHOULD REPLENISH

A GOOD BRAND OF FROTH BLOWERS LUBRICANT TO STAY THEM TO LAND'S END. REACHED THIS YEAR





Uherske Hradiste, Moravia. St. Cyril and St. Methodius first preached Christianity to the Slavs in this neighbourhood.

O taste the pleasures of a trip across Europe in a car is a simple matter if one is a member of either the Automobile Association or the Royal Automobile Club. From both can be obtained the necessary carnets and triptyques with which to calm the fears of all apprehensive guardians of frontiers.

The car which we used for our trip was an ordinary pneumatic-tyred Trojan, chosen on account of its simplicity and foolproof qualities as well as for its economical running and its capacity for large quantities of

Our starting point was London, whence we travelled to Dover Pier. There, our tank being emptied, the A.A. agent transferred our car to the boat. His opposite number in Calais saw to the disembarking, relieved us of all formalities, and with a push and a cheery "Good luck!" put us on to the road to Abbeville via Boulogne. For 78 miles we spun gaily along Road N1, then passed a happy night in the 17th-century Hotel Tête de Bæuf. No exorbitant bill was presented to mar the pleasurable impression we had gained. By eight o'clock'next day we were already travelling towards Beauvais, where we found the abbey church of almost circular form, looking as if the architects had gone on strike and never returned to complete their work.

A Contrast.

We lunched in a pretty spot along the Compiègne road. It was a brilliant summer day and the peasants in Sabbath garb ambled peacefully along the roads. What a contrast from their panic-striken pace in 1914, when, laden with household treasures, they fled from the oncoming invaders!

Then on through Clermont de l'Oise and Compiègne to Rheims, the restoration of which is practically completed. Only the charred skeleton of that glorious pile, the Cathedral, remains to mock the passer-by with its gaunt multions and its hollow windows. On a small hill some two miles beyond the town, in the direction of B14

AN INTERESTING ACCOUNT OF A TRIP ALONG THE BACKBONE OF EUROPE UNDERTAKEN IN A LIGHT CAR.

Châlons, we wandered amongst the untouched trenches around the fort. After this we turned on to switchback roads into Châlons itself. All along the route we encountered an endless stream of motor cars and charsh-banes.

The road to Strassburg from this direction is one of the most pleasant in Northern France, and passes, as we found, through Nancy and Saverne, where we passed the night. J. Linden, the walking champion, passed us in this town on his record trip from Paris to Strassburg in 78 hrs. 47 mins.

Just beyond the bridge at Strassburg we left France and, traversing a few yards of no-man's land, arrived at the gateway to Germany. A green-clad Custom's officer, with a fair, fresh schoolboy's complexion, refused to look at our passports and laughingly examined our car instead of the luggage. Luggage was an every-day affair, but the unconventional Trojan was a chance of a lifetime. His colleague filled in our "steuer karte" in record time, and with a friendly nod we were off.

From Freudenstadt the same well-kept, fruit-lined high roads led us through dale and over rolling hills into glorious pine forests and then through Tüblingen and over the battlefield of Dettingen, where George II played a noble part. Thirteen miles farther on we commenced to rise again into forests, where sparkling streams bubbled along and where strolling tourists laden with bulging knapsacks sang lively folk-songs.

A Friendly Reception.

As the sun sank like a ball of fire behind a clump of pines we entered the streets of Urach, the quaintest, healthiest and most fascinating of South German towns. A 16th-century house of five storeys bore the name of "Hotel Korona," and within its portals we found not only an English-speaking evening-suit-clad waiter, but the most cordial, jolly host in Europe. This spirit of cordiality and friendliness was conspicuous on both our journeys through Southern Germany.

Each day saw us lunching in some forest upon the produce of the land—cheese, butter, fruits and the excellent wine of the country. Alfresco meals add a piquancy to motoring and leave the traveller free to choose his dining quarters for himself.

At Munich we spent a whole day rambling around its streets, which teem with 15th and 16th-century curiosities. We paid a visit to the gallery of old masters and saw examples of the works of Van Dyck, Dürer, Rubens, Tinterctto, El Gecco and many others, but nothing pleased us more than Goya's portrait of a Spanish Princess. No visitor to the gallery passes this picture without a burst of laughter—or, at least, a broad grin—it is so very ugly, so shrewish and so exquisitely human.

Going by way of Passau to the Czecho-Slovakian frontier, we crossed the Danube and found good roads all the way. The frontier guardians assured us we had chosen wisely to enter this new republic on the Pisek route.

The whole of Moravia from Pisek to Brunn (Brno)

bears witness to the fact that Czecho-Slovakia is a prosperous land. Every inch of land along our route was cultivated, either in strips or huge squares, and the road surface had received its due share of attention as well.

Bad roads were encountered all the way from Brno to Trencin-Teplice, which is well over the mountain passes leading to Slovakia. Hodonin, Uher-Brod and Trencin were passed on the way, and evening saw us

at Teplice.

Long-horned oxen, peasants in what to us is fancy dress, and flocks of geese were our constant companions as we journeyed onwards through one of the loveliest valleys in Europe, past Illava, with its two quaint skeleton castles on solitary rocks; through Ruzomberok, with its vast cotton mills, into Saint Mikulac, where the peasants dress in embroidered fur coats, and straight forward for 60 kilometres between two high ranges of mountains.

6,000-ft Above Sea Level.

We then turned sharply to the left into a pine forest, through which a road mounted for some ten kilometres. until we reached an altitude of about 6,000 ft. This was at Smokovec, a watering-place with gorgeous views and good hotels.

The road eastwards along the backbone is good, and

passes by way of Presov, Kosice, Michalovce, then over the Ruthenia frontier to Uzhorod. The Governor of Ruthenia advised us to take the only road across the province, going via Munkacevo, Huste, Tracovo, Aknaslatina to Jasina, and on our return journey to make trips up the tributaries of the Tisa. We followed his advice and were rewarded by journeys through picturesque, narrow valleys lined by hundreds of kilometres of dense forests.

Returning to Uzhorod, we climbed the Uzok pass towards Poland. Our presence at this eagle's nest was the cause of much amusement and excitement amongst the Customs officers and military guards. Three years had passed since they had been called upon to check a car, and 1920 had seen its predecessor-my own on

a former trip—draw up before the sentry-box. Ruthenia had given us good roads except at Bela Cverka, where 2 ft. of mud did duty as a village street, and the local inhabitants apparently hate motors. When we crossed the Polish frontier at Sianki we accounted for the lack of cars. The route to the Customs office was a prize specimen of bad roads. The foundation was made of tree-trunks and foot-deep ruts and huge boulders played hide-and-seek along its three miles of length.

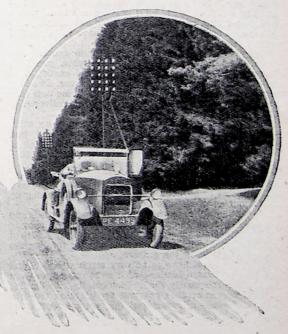
To reach the Customs office we had to descend this horrible track, and having completed the inspection of our documents the officials informed us that to ascend it was the only means of regaining the main road to Lemberg, on which we were obliged to travel.

Once on terra firma we celebrated our escape by sampling a bottle of choice Hungarian wine, the gift of Mr. Plotyni-the celebrated violinist and friend of Liszt and Wagner-who had been our guest the pre-

vious evening.

From Vrutky we cut across Slovakia by way of the Low Tatra range and their gentle, caressing forest lands, to visit the president at his summer palace at Topolcany, but the traveller can cross from Vrulky, our departure point, and go via Zilina to Olmone, where we regained the road to Prague. Prague is very prosperous, and is one of the gems of Europe. After 300 years of eclipse, it is now shining again as a European capital.

The journey homewards took us to Bayreuth, Würzburg and Luxemburg, along pleasant, well-kept roads. Fine weather favoured us throughout the westward trip. At Foret d'Ardennes we stayed the night at



(Left) A scene on the frontier of Hungary and Roumania. (Above) The Trojan, in which the trip was undertaken, on a road in the Black Forest.

King Leopold's old château, now an hotel with an excellent golf course and pleasant park. Charleroi and Mons showed us their very worst characteristics-a sun dimmed by black smoke, a dust-ladened atmosphere and grimy workmen-eloquent testimonies to Belgian prosperity, no doubt, but unpleasant on a motor trip.

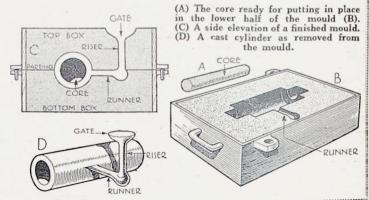
We entered France, and in Valenciennes located an excellent French hotel, where hot baths, perfect cuisine and a gentle-voiced giant in charge cheered our spirits.

From Valenciennes we crossed over the battlefields of Bailleul and Hazebrouck to Wissant, ten miles from Calais, to pass the last night of our trip along the backbone of Europe, facing the grand Atlantic. M.E.W.

Light Cars in the Making.

GLIMPSE FOUNDRY INTO

CASTINGS ARE NOW USED MUCH LESS IN CAR DESIGN THEY WERE A FEW YEARS AGO. BUT THEY STILL PLAY A VERY IMPORTANT LAST WEEK IN THIS SERIES THE PATTERN-MAKING SIDE OF FOUNDRY WORK WAS DEALT WITH. THIS WEEK THE FORMATION OF THE MOULDS AND THE POURING OF THE MOLTEN METAL ARE EX-PLAINED.



THE use of cast-iron in motorcar construction is growing less and less, its place having been usurped by the far lighter, but equally serviceable, aluminium alloys. For this reason the foundry attached to works in which cars are built is concerned mainly with the latter metal, and problems with which foundrymen of 20 years ago were not concerned have to be studied very closely.

In a previous article we dealt with the construction of patterns, instancing the simple pattern and core necessary to construct a short, tubular casting. To explain the processes which follow we cannot do better than take the same example, and we assume now that this pattern and core-box have duly been delivered to

the foundry.

Laymen understand-somewhat vaguely, very often that the moulds and cores are made of sand, but, associating its texture and composition with that of the seashore, and, remembering the difficulties they themselves may have experienced when attempting to build castles, they naturally wonder how sufficient strength can be obtained in a sand mould to permit molten metal to be poured into it without breaking up the formation of the sand.

The explanation is that special sand is used and that it is treated, as required, to resist the tendency to disintegrate, and some form of "green" sand with a natural clay binder is used extensively for forming the

impression made by the pattern.

Cores, however, have to be very much stronger, and some form of extra binder-such as sperm oil, or even sawdust-is frequently used. Incidentally, this binding material serves another purpose, for it makes the core slightly porous, allowing for the accommodation of gases, which otherwise cannot escape, whilst the burning up of the sawdust facilitates the breaking up and subsequent withdrawal of the core when the casting is removed from the mould.

Preparing the Sand.

Naturally, sand is not used in a perfectly dry state, and it is usual to sprinkle water on to a heap of sand hot from the mould in preparation for the building up of the next mould. This treatment is preferable to wetting the sand when cold, because the process of dampening or tempering, as it is known, is effected by

dampening or tempering, as it is all the steam and not by drops of water.

For small castings, such as the one with which we are dealing, two "boxes" are used, one called the top other the bottom box. The bottom box is loosely packed with sand, the pattern placed in position so that the parting lines will come exactly halfway up в16

The sand is then firmly rammed all round, and finally smoothed off so that it is flush with the top of the box. Parting sand of the bright-yellow seashore order is then sprinkled over the surface, so that when it comes to removing the top box there will be no tendency for the "green" sand in either box to stick.

Before filling the top box and packing it, a round iron bar or wooden plug is placed in a suitable position, so that when it is withdrawn subsequently an orifice will be left through which the molten metal can be powred, whilst the top box is accurately located in position by dowel pins. The top box having been filled and properly rammed, it is lifted off and turned over. so that the half impression which it carries can be

touched up and generally made ready for casting.

At the junction of the "riser" with the surface of the bottom box a channel is now formed, which communicates with the mould itself and is known as a "runner," whilst before the top box is put back the upper end of the "riser" will be scooped out to form a gate—known frequently as a "git." Returning to the bettern how in which the returning to the section. bottom box, in which the pattern is still firmly embedded, the moulder now drives a spike very lightly into the pattern, tapping it horizontally in all directions so as to loosen it slightly, when, by exercising due care, the pattern can be lifted out.

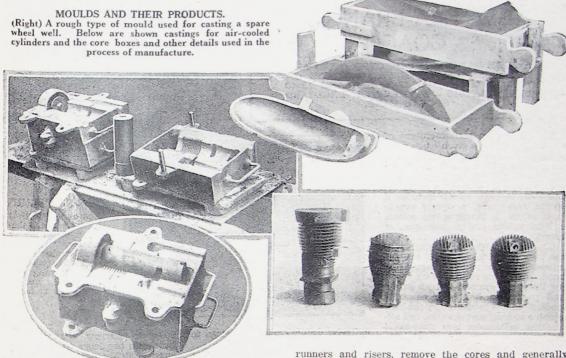
The Last Stage.

All that remains then is for the bottom box impression to be smoothed over and the core to be dropped in place, the top box to be lifted back in position and the whole loaded with weights, which usually take the form of rough bars of pig iron, when the mould is all ready for the recention of the molten metal.

The composition of a core has to receive special attention, because, as already indicated, it is trapped, as it were, inside the molten metal, and it must not collapse before the metal has cooled off and taken Special binding is frequently employed for this purpose, whilst wires may be introduced so as to strengthen it. Where cores have to bridge big gaps and would be otherwise unsupported, "chaplets" diminutive metal supports—are let into the mould. They are of such a shape that their edges will fuse into the molten metal and become part and parcel of the finished casting.

It should be pointed out that usually there are two systems of runners and risers, these being situated at opposite points of the mould. The one system enables the metal to be introduced, whilst the other serves as a vent and helps to free the casting of oxide or any

other dross collected by the metal.



They have other functions, as, for instance, to keep a delicate and isolated section of an otherwise thick casting in contact with a "live" column of metal, so that cooling is not too rapid and the possibility of fracture prevented, and to act as a reserve supply of metal, as it were, so that a head is given immediately after the metal has been run.

Cast-iron is usually allowed about twelve hours to set, but aluminium castings can be withdrawn from the mould almost at once; in fact, they are, as a rule, taken out as soon as possible so as to preserve the bright silvery lustre of which too long a "rest" in the mould would deprive it.

The rough casting is now passed on to the fettlers, or cleaners, who cut off the metal formed by the

runners and risers, remove the cores and generally clean up the casting in preparation for the next step, which may be either in the machine or assembly shop.

Only the fringe of foundry work has been touched on in this article, and it may be mentioned that the intricacies of successfully casting aluminium call for a very close study of the subject.

NEW LEA-FRANCIS COACHWORK.

A WIDE RANGE OF IMPROVED OPEN AND ENCLOSED BODIES NOW AVAILABLE ON THE WELL-KNOWN 12-22 H.P. AND 12-40 H.P. CHASSIS — ATTRACTIVE ENCLOSED SPORTS CARS.

OF late years manufacturers of light cars have given much more attention to coachwork than in the past, particularly with regard to enclosed sports bodies. We are now able to describe a fine now range of Lea-Francis cars, which includes a sports two-seater, a sports coach-built saloon, a fabric sports saloon, a light saloon and a three-quarter coupé.

The most noticeable features of the two-seater sports model are the adjustable seat and disappearing hood. Although built on very sporting lines, the comfort of both driver and passenger has been carefully studied; this is evidenced by the high squab and long seat cushion, full allweather equipment and four-panel sloping Vee-screen. The hood folds down into a recess immediately be-hind the driving seat and is covered

by two flaps hinged on the body sides. A Neat Dickey.

In the fairing for the tail a single dickey seat is formed, and the enclosing panel, which fits flush with the decking of the tail when the seat is not in use, hinges up to form a back rest. There are two doors. The price of this model on the 12-22 h.p. chassis is £285, on the 12-40 h.p. chassis £315, and on the Brooklands sports chassis (with a guaranteed speed of 70 m.p.h.) £325.

The fixed-head coupe has a capacious body, which is wide enough to accommodate in comfort two pas-Two doors are fitted, each having a winding window, and the quarter lights are fixed, likewise the sensible-sized rear window in the head. The interior furnishing is tastefully carried out, leather being used for the natively, walnut) for the facings to the doors and windows.

The body houses a concealed dickey of generous proportions, finished and upholstered in the same manner as the front compartment. This model is available in Lea-Francis standard colours-crimson, royal blue, saxe blue or mole-and, priced at £360, should make an attractive proposition for the driver who requires a comfortable two-three-scater enclosed car with a good all-round road performance.

One of the most interesting bodies of the new range is the light saloon, the general lines of which follow the normal Lea-Francis touring car, but in place of the hood a fixed fabric head of light construction is fitted. Each of the four doors are more than 2 ft. wide, so that entry or exit to both the front and rear compart-ments is particularly easy. The win-dows are of the-sliding type and are coachbuilt sports

(Above) The light saloon; note the thin pillars which permit excellent visibility. (Left) A view of the saloon showing how access is gained to the rear seats.

INTERIOR DETAILS.

fitted in narrow channel runners formed in the doors, and although no quarter lights are fitted, the rear passengers' view is quite satisfactory.

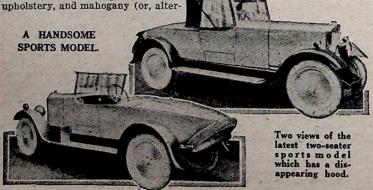
The front seats are individually adjustable over a range of several inches and are upholstered, like the rest of the interior, in antique lea-ther. The inside of the head is lined in Bedford cloth, and carpets are fitted to both front and rear compartments. The price, with full equipment, including luggage grid, speedometer, clock and so forth is £325 for the 12-22 h.p. car; this model can be obtained with cellulose finish.

Sports Saloons.

It is difficult to decide which of the two sports saloons is the more attractive—the coachbuilt two-door model or the Leafabric sports model. Both bodies are very pretty. but each would appeal to a different type of owner.

The fabric model has four doors (each of which has a winding light), a single-panel front screen and no quarter lights. The exterior of the body, including the bonnet, is covered entirely in fabric, the car being available in a two-colour scheme if desired. The vision of both driver and passengers is very good, despite the fact that no quarter-lights are fitted, the driver's forward view being particularly good, thanks to the deep single-panel screen. All the seats and doors are upholstered in red, pleated, furniture hide and the head is lined in cloth, while carpets are fitted to both front and rear compartments.

The equipment of this model is very complete, the walnut facia-



board being well stocked with instruments, and such items as shock absorbers to both front and rear axles and a luggage grid are standardized. The price is £440 for the 12-40 h.p. car or £480 for the 12-50 h.p. Brooklands sports model. It will be recalled that the Brooklands sports chassis has a two-port cylinder head, Dewandre servo braking, and a rev. counter, in addition to the ordinary equipment.

The coach-built saloon is attractively finished in a two-colour scheme. In this model the front screen is of the four-panel Vee-type

ATTRACTIVE ENCLOSED BODIES.

(Above) A near-side view of the Leafabric sports saloon which is available in a two-colour scheme. (Left) The new light saloon; it will be noticed that it closely follows the lines of the standard fourseater open touring model. (Below) The latest fixed-head coupe in which it is possible to seat three adults abreast.

set at a slight angle; as the rear of the head also slopes at about the same angle, the lines, when viewed from the side, are extremely well balanced. The two doors are exceptionally wide and are fitted with winding windows, whilst access to the rear seats is gained by folding the front squabs forward. The quarter lights are fixed, likewise the rear light in the head, which, inci-

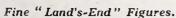
dentally, is fitted with a silk roller blind; the latter is one of those small points which is appreciated by discerning drivers.

cerning drivers.

The upholstery is carried out in grained leather of a light shade which matches the exterior paintwork excellently, the seat cushions and squabs being pleated, while the sides of the body and doors are plain. Armrests are formed above the rearwheel arches. In the Vee of the front screen a tray (above the faciaboard) is formed, which is useful for carrying small articles; in addition, a small cubby hole is arranged almost in the centre of the faciaboard. The interior woodwork is carried out in walnut. The cost of this saloon, mounted on the 12-40 h.p. chassis, is £450, and on the Brooklands sports chassis £490.

A pleasing view of the coach-built sports saloon which should make a distinct appeal to the discriminating motorist; it is fitted with a four-panel Vee-screen and has two doors. The price of the 12-40 h.p. chassis is £450 and of the 12-50 h.p. chassis £490.

B19



It is a rather wonderful thing that the Motor Cycling Club has secured no fewer than 153 car entries compared with last year's total of 185, in spite of the fact that the Society of Motor Manufacturers' and Traders' competition ban has prevented the trade men from taking part this year. From motorcyclists the club has also obtained a very fine measure of support, whilst the presence of 26 cyclecar competitors in the programme is another indication of how highly the run is esteemed by all sporting drivers.

The committee of the Club can take great credit to themselves for the immense popularity which their competitions have attained, whilst the trials secretary, Mr. F. T. Bidlake, is surely the best man at his job in the country. He shoulders a great deal of responsibility in connection with the M.C.C. long-distance runs and takes an active part

in them himself.

As Inscrutable as the Sphinx.

THE younger generation of sporting motorists whose names are beginning to creep into the lists of competition entries regard Mr. F. T.



Mr. F. T. Bidlake.

Bidlake with a certain amount of awe as he sits, inscrutable and Sphinx-like, ticking off the seconds in the time-keeper's car. They wonder, perhaps, just how "Biddy"—as he is affectionately known to the older hands—comes to be occupying such a position of importance.

The older hands will tell them, with a smile, that Mr. Bidlake was probably born with a

stop-watch in his hands, for he has been associated with timekeeping since the days when cycling events were all the vogue and motorcars did not exist. He still retains a warm affection for blcycles and often rides one.

Wanted-Social Rendezvous.

THE letter from Mr. W. H. Wells, captain of the Motor Cycling Club, which was published in last week's issue and which stated that the only reason why his club holds their social functions south of London is because no one has yet been able to suggest a suitable venue north, east or west, makes me wonder where those who live in Romford, Brentwood, Chelmsford, Hertford, Letchworth, Hitchin, Bedford, Luton, Dunstable, St. Albans and Watford hold their social gatherings.

All these places must have their sports clubs, Conservative associations and so forth which organize periodical gatherings. Cannot they be persuaded to disclose to our motoring clubs the secret venues where they hold them?

The Tar Season.

THE season has arrived when tar-spraying begins in real earnest, and, as every experienced road surveyor knows, the best time to do the job is on a Saturday morning, so that as much discomfort and inconvenience as possible can be caused to road users. For the benefit of those who are meeting tar on the roads from behind their ewn steering wheels for the first time this year, it would be well, perhaps, to mention that the golden rule is to go as slowly as possible and to keep a considerable distance behind any vehicles that may be in front.

If tar spots do get splashed on to the coachwork, gentle rubbing with a soft cloth and plenty of butter or lard will remove them without damaging the finish, whilst in the case of stovenamelled mudguards or cellulosed cars benzole

can be used with advantage.

Noisy Tyres.

I DO not know whether Professor Low has ever experimented in the matter, but it occurs to me that the noise made by motor tyres passing over various types of road surface would furnish interesting information on his audiometer. Moreover, a test of this character might reveal unsuspected causes of hum and resonance in small saloons. Everyone who has sat beside a main

highway along which cars travel at speed must have noticed the high-pitched whirr caused by the impact of the tyres with the road, and with some impact of the tyres with the road, and with some ears the sound can be heard for a considerable discars. On one car I used to drive I could always tell at night when I had passed from a smooth surface to macadam or a repaired portion which had not yet been tarred, whilst granite setts produced a note that was unmistakable.

Noisy Disc Wheels.

CARS with disc wheels are often the worst offenders; indeed, I think the discs are apt to magnify any sound that emanates from the chassis. I have noticed this particularly in connection with back axle and gearbox hum on cars of identical make, but fitted with different types of wheels. Possibly in the days of the ultra silent car we shall have tyre manufacturers claiming that their special tread is as noiseless as velvet!

Lowering the "Prop." Shaft.

COMMENTING on a recent paragraph of mine suggesting that small cars in the future will have a much lower seating position, a correspondent asks how, even if the under-slinging of springs can be conveniently arranged, the difficulty of the propeller shaft is to be overcome.

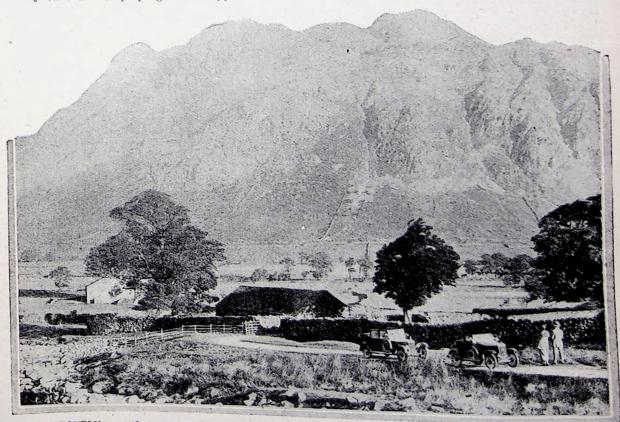
This is a problem which has faced builders of commercial vehicles for some years, and many of them have now got over it with various degrees of ingenuity. In America some designers of luxury cars are employing a new type of spiralbevel gear, which allows the pinion to be mounted at a point considerably below the centre line of the rear-axle casing, and they thus obtain a position for the back end of the propeller shaft almost as low as when an underslung worm gear is employed.

The forward end of the propeller shaft presents greater difficulties, but it is not inconceivable that in the future it may be offset from the centre line of the crankshaft with a silent chain or pinion reduction gear. After all, engine speeds are still increasing, and a reduction gear at the forward end of the propeller shaft, giving an "indirect" top-gear drive, may become almost essential in the future in order to prevent ground clearance being unduly curtailed by an exceptionally large rear-axle reduction.

Two-stage Axle Gearing.

THE difficulty, of course, would lie in the propeller shaft being still more heavily loaded than it is at present, but this is not a very serious matter, as fabric-disc universal joints are widely employed to withstand much heavier loads than are ever imposed upon them in light car work.

I cannot see any future for the type of final drive which many commercial-vehicle builders have found suitable for lowering the rear end of the propeller shaft by using a two-stage reduction in the axle and employing two spur pinions, or one pinion and an internally toothed ring for the rearwheel drive.



IN LOVELY LAKELAND.

Langdale Pyke and Harrison's Stickle, which is about 2,500 ft. high, seen from the foot of Blea Tarn Hause, a sandy mountainous ascent to the lake of that name.

Yoke-and-pin Joints.

CAN anybody tell me why it is that when the pins used for yoke-and-pin joints in brake rods and other controls are being "parted off" in the course of manufacture their leading edges should not be chamfered instead of being left square? I spent a few hours not long ago overhauling an obstinate f.w.b. system embodying a considerable number of yoke-and-pin joints, and every pin had to go into the vice and be laboriously filed around the edge before it could be comfortably reinserted.

Another point in the same connection concerns the size of split-pin used and the space provided between the pin hole and the side plate of the yoke when the pin is in place. In the case of the particular car under consideration the surplus space was negligible, so that a tiny piece of grit under the head of the pin was sufficient to prevent the split-pin being inserted.

A yoke-and-pin joint is very reliable and long lived; why not put the seal on the satisfaction which it gives by making it easy to dismantle and

reassemble?

F.W.B. Adjustments.

THERE is, by the way, a tendency to eliminate wing-nut adjustments at the end of brake rods, as some manufacturers have found that owners tinker with them and throw the whole braking system out of adjustment. It is commonly contended that the best way to adjust a properly designed f.w.b. system is by lengthening or shortening the rod between the pedal and the compensat-

ing mechanism, and that a convenient "bottle screw" in this position provides ample means for adjustment in conjunction with nuts and bolts or adjustable yokes on the brake-cam spindle arms themselves.

This may be the case, and I have no doubt that it is, but I feel rather sorry for those of us who could be trusted to adjust our brakes intelligently with thumb-nuts on the rods—it is one more instance of experienced drivers having to suffer for the lack of mechanical nous of the majority.

Pneumatic Upholstery.

A LAGONDA which I bought at the beginning of 1924 introduced me to air cushions for upholstery, and I have just taken delivery of my third car cushioned in this manner. I can therefore speak from fairly lengthy experience concerning the behaviour of air cushions, and I can speak in terms of unstinted praise. They are not so good, perhaps, as the costly down-stuffed seats of a 2,000 guinea limousine, but I have no hesitation in saying that they probably provide a greater degree of comfort than any other type of cushion at anywhere near the price.

They have the great advantage, too, that they are easily adjustable to suit one's own requirements, whilst, by varying the pressure, one can organize matters so that a seat is almost beyond reproach. I have been asked sometimes whether the cushions do not take "a lot of pumping up." My experience has been that, once set to the required pressure, they need no further

attention for about a year.



**MIDST THE The countryside at the foot of Langdale Pykes is exceptionally picturesque, whilst there is an exception picture.



Be Careful.

BEFORE each of the big holidays we make a point of cautioning everyone to drive with the greatest care for the sake of their own safety and for that of others. Of recent years each succeeding holiday has witnessed a very large addition to the numbers of people using the roads, and, although a considerable measure of relief has been afforded by the various road improvement schemes which have come

to fruition, our various wider, straighter and more modern highways have not played a very important part in reducing holiday accidents. This is because they are mostly what may be termed "trade" routes, whilst at holiday times motorists congregate in the more remote districts where few road improvements have been effected. We feel, therefore, that we are justified in repeating the rules for safety which we have given many times

in the past :-

First, leave nothing to chance. Secondly, do not presume that other drivers are as competent as yourself.

Newcomers to motoring need have no fears concerning their safety provided they behave in a rational manner, keep their speed low and observe the recognized precautionary measures. Those who are going on long runs should not be afraid to make an early start so that the need for high speed will be unnecessary, whilst everyone leaving big towns would certainly be well advised to rob themselves of an hour in bed in order to get clear of congested city exits before crowds of holidaymaking pedestrians, chars-à-bancs, buses and other traffic become too troublesome.

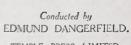
The Sporting Side.

No lack of interest is noticeable in the sporting side of motoring. The London-Land's End Trial, with a total entry of 527, of which number 26 are cyclecars and 153 cars, will have only three fewer competitors than last year, when all previous records were easily beaten, and this in spite of the fact that no trade cars will be taking part. In the north many well-supported events of all kinds are being held during the holiday, and from information which has reached us there are no grounds for complaint concerning the support which has been obtained. Brooklands, too, will witness a busy afternoon on Bank Holiday

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.

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opics of the Day



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Monday with a well-filled card and a fair modicum of new blood. The indications are that, in addition to programmes containing many, if not more, names than heretofore, the various events which are being held will be witnessed by very large numbers of spectators. In the case of the London-Land's End Run, many thousands of enthusiastic motorists have arranged to watch the performances of the cars on the hills. Their determination not to miss

the event has been reflected in the hotel registers of the North Somerset district, having for many weeks past been fully booked-up for the Easter holiday period. We ask all spectators to remember that for the sake of the competitors, the sport and their own safety they should-stand back, please!

The Budget.

THREATENED taxes of various kinds which have been rumoured during the past few weeks, and which, in our opinion, would have done a great deal of harm to motorists and the motor industry, fortunately did not figure in Mr. Churchill's Budget speech. Perhaps the most outstanding feature from the motorist's point of view is that the anticipated revenue from the horse-power tax is no less than £24,100,000, or something like 10s, per head of the entire population. This indicates the extreme importance of the industry to this country and emphasizes the enormous increase in the number of cars in use. Only a few years ago the revenue from motor taxation was considerably less than half the expected total for 1927. It is deplorable that half the revenue is to be deflected from the Road Fund to general purposes; it means that motorists alone are paying into the Exchequer about 5s. per annum for every living soul in the British Isles. The horse-power tax to-day is a luxury tax pure and simple and, in Westminster, is acknowledged as such.

The abolition of the Ministry of Transport is not likely to have an adverse effect upon the interests of motor users, as it is proposed to retain the Roads Department, with Sir Henry P. Maybury as Director-General. A tax of 331 per cent, is to be imposed upon foreign tyres, and this, doubtless, will go far to improve the lot of our own tyre industry, whilst we believe that competition at home is sufficiently strong to maintain prices at an economic

GIVING A HELPING HAND.

THE FREEMASONRY OF THE OPEN ROAD-DOES IT STILL EXIST?

ARE there any of us who have Anot on some occasion passed an apparently stranded motorist and wished a moment or two afterwards that we had slowed down and asked if he was in need of assistance? The regret has come too late, and we go on our way (for it would never do to turn back), stilling the little murmurings of conscience with the thought that the freemasonry of the road is said to be dead, and that, in any case, there are plenty of scouts and patrols about.

I think that most of us are willing to do all we can to help fellow-motorists, but I speak from experience when I state that often we only think about helping a person after we have passed.

The average motorist is apt to be somewhat bashful when in

difficulties. There is nothing more humiliating than to wave vigorously to an approaching car and then to see it sweep by with a dowager duchess glaring at you through her lorgnette and the chauffeur's nose in the air

In order to avoid soul-searing occurrences of this nature, the motorist in need of assistance often hesitates until it is too late to hail an approaching vehicle, fearing that his importunity may be considered an impertinence.

Some contend that if a driver in need of assistance cannot hail a car in a proper fashion, he does not deserve to be helped. This is an extreme view. It does not consider the nervous motorist, and it does not take into account the man who would like to be helped, but who really and sincerely does not care to worry strangers with his troubles.

I make a strenuous effort whilst driving to think of myself in the other man's shoes when I suspect a breakdown. Would I like myself to stop if I was the other man and not myself? In answering that question, I consider the circumstances rapidly. Is there a



"There is nothing more humiliating than to wave vigorously to an approaching car and then to see it sweep by . . ."

garage that is open just around the corner? If so, my assistance is probably not needed. I strongly object to being asked to perform minor repairs and adjustments which take away trade from a garage near-by.

Is there a road patrol coming along just behind me? If so, I leave the investigations to him, unless I am definitely hailed, when I always stop. Are there elderly people in the car? If so, I am more disposed to make enquiries, for perhaps I can give them a lift on the way, and save them a wait in the cold.

It is not only the motorist stranded miles away from anywhere who can appreciate help on occasion. I have been hailed outside a garage to know if I could give a man whose car had

broken down a lift to London. He was on his way to get married!

I was stranded myself in Horsham one Sunday evening, with a broken back axle, and the last train to London gone. I managed to get towed in by a garage breakdown lorry, but they were absolutely unable to hire me a car to finish the journey, and it was essential that my passenger and I should get back to town that night. I searched Horsham for an hour or more trying to find some means of conveyance, but without success.

Eventually, in desperation, I stood in the main road and hailed each passing ear. The first two drivers ignored me. The third stopped, and most kindly drove us right up to London.

The spirit of the open road still lives in most ownerdrivers, and if they take the trouble to think of themselves as being in the other man's shoes, they may often be able to give a real helping hand.

Even if they offer assistance and meet with a rebulf from seme boor, they can console themselves with the thought that they have done a sporting action.

J. L. C.

WHY EXHAUST FUMES ARE DANGEROUS.

A PERUSAL of the daily Press makes it obvious that the general motoring public are not fully aware of the dangerous nature of exhaust gases in a closed garage with inadequate ventilation.

It is quite a natural thing for an owner-driver intent on tuning to start up the engine, and possibly run it for some considerable time; and as this work is usually done on some wet, cold day, the chances are that the garage doors are closed. The effect of constant inhalation of exhaust gas is so gradual that the unfortunate victim is in a state of collapse before he can realize the cause.

The poisonous nature of these gases will be more clearly realized by a consideration of their composition,

The most usual fuels for automobile engines are petrol and benzole. These are both hydrocarbon fuels; in other words, they contain only hydrogen and carbon. These elements are denoted in chemical language by their capital letters H and C, which are taken as denoting one atom of the substance, or the smallest amount which will enter into chemical combination.

Fetrol belongs to what is known as the paraflin series of hydrocarbons, the general chemical formula for this series is $C_n H_{2n+2}$.

For instance, very light petrol such as the aviation grades may be considered as consisting of hexane, with a formula C_nH_{:4}.

This formula means that one molecule of petrol contains six atoms of carbon and fourteen of hydrogen, a molecule being the smallest amount of a substance which can exist alone.

If we consider the weight of an atom of H and C, we find that petrol contains about 84 per cent. of carbon and 16 per cent. of hydrogen. It is a fairly simple calculation to prove that 1 lb. of petrol requires about 15 lb. of air for complete combustion of the fuel. Most modern engines will work on mixtures of from about nine to one—i.e., rich—up to about twenty to one—i.e., weak.

Benzole, as commercially retailed, consists of a mixture of benzine with other spirits, such as tolucne and xylene. These belong to what is known as the aromatic



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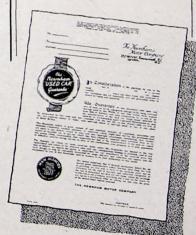
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The small advertisement columns of "The Light Car and Cyclecar" form a unique mart for the disposal of all goods of interest to small car users.

series of hydrocarbons, the general chemical formula being $C_n H_{2n-6}$; for example, the formula for benzine C. H., which shows that there are six carbon and hydrogen atoms in one molecule of the spirit.

Benzole requires rather less air than petrol for complete combustion; about 131 lb. of air per lb. of fuel although the engine will run on mixtures ranging from

about 11 to 1 (rich) to 19 to 1 (weak).

Obviously, the fairly wide mixture range on which the engine will function is bound to affect the composition of the exhaust gases, and this is found to be the case in practice.

As a matter of fact, analysis of the exhaust gas is a very valuable aid to correct carburetter tuning, and gives a ready indication as to whether the mixture is

rich or weak

Analysis of the exhaust gas from individual cylinders will also indicate defective combustion in one or more cylinders. The process of combustion in a petrol engine consists essentially of the combination of the constituents of the fuel with the oxygen (O) in the atmospheric air passing into the carburetter after the mixture has been ignited by the spark.

During this process heat is evolved, which expands the gaseous products, which are later expelled to the atmosphere on the exhaust stroke.

Now, hydrogen and oxygen have a great affinity for each other, and they will always combine to form water or steam, the chemical formula for which is HaO. All the hydrogen in the fuel is thus accounted for, and obviously has no poisonous effect. The product of the combustion of carbon with oxygen depends upon whether there is a limited or excessive supply of air or oxygen; that is, whether the mixture is rich or weak.

If the mixture is rich, a gas known as carbon-

monoxide is produced, the formula for which is CO.

Now, this gas has definitely poisonous effects on the human organism; its first effect is the production of headache and drowsiness, but as more gas is inhaled it attacks the corpuscles of the blood, with fatal effects eventually.

Other gases released are free hydrogen (H2) and

probably marsh gas (CH1).

As the mixture becomes weaker, less carbon-monoxide is formed and more carbon-dioxide or carbonic acid gas (CO2) until at the correct mixture of 15 to 1 all the carbon in the fuel is converted into carbon-dioxide, and no carbon-monoxide is formed.

Now, carbon-dioxide has less definitely poisonous effects, but it will cause trouble by displacing the air and so restricting the supply of oxygen to the lungs.

As the gas is heavier than air, it will collect in de-

pressions such as garage pits.

With the mixture on the weak side, carbon-dioxide is present in the exhaust, with water vapour and some

free oxygen.

As air is a mixture of oxygen and nitrogen, free nitrogen will always be present in the exhaust. From what has been stated previously it will be obvious that the greatest danger exists with the mixture on the rich

As the majority of carburetters are probably funed for idling with a somewhat rich mixture to facilitate easy starting and good acceleration, great care must be exercised when running the engine in an enclosed building.

It is a comparatively simple matter to lead a length of ordinary flexible tubing through the garage wall, and if this is pushed over the end of the exhaust pipe all danger from noxious exhaust fumes will be eliminated.

"MOUSE-TRAP." THE

HAD noticed that Jane seemed very preoccupied during the evening, and after supper I understood. why. Suddenly she produced a back number of *The Light Car and Cyclecar* and, pointing to the picture on its cover, exclaimed: "There, dear; that is what we

I looked-and agreed. picture showed two keen motorists putting the car away for the night in a "mouse-trap" garage, which appeared to fit it like a glove.

"If we had one of those, dear, we could keep the car at home, save all our garage expenses, and -oh, look how handy it would be for me if I wanted to go shopping!" she cried.

"Certainly, Jane, it has its advantages; I'll see what I can do,

I answered.

I studied the picture and the article which described it, and was very much taken with the idea. By what I could make out, you needed a wooden floor, with guide rails to keep the car in position; then above it all was fitted a box-like sort of arrangement, which was hinged at the back. Two arched-iron rods outside at the hinged end carried two

springs each, which at will enabled the garage to be either open or shut-in other words, up or down. Remarkably simple, I thought, and told Jane so.
"I'm so glad you like it!" she cried. "When shall

we have it?

Just as soon as I can make it," I replied firmly.

" Make it?" she asked doubtfully.

"Yes; it is quite a straightforward affair," I replied; "and I can buy the springs and the iron-hoop affairs."

She did not seem to have much faith in my ability: but, after three weeks of hard work, the woodwork was all completed—it only needed the springs and the iron hoops to finish the entire thing. Calling Jane outside, I showed her the fruits of my handiwork.

"There you are, dear," I said iumphantly. "You see I've triumphantly. "You see I'vo managed it. It is quite in work-ing order. I've only got to fit the irons and springs and it is complete.

Five minutes later she gave me an ecstatic kiss as I reached my hat from the hall-stand, saying: "Don't hurry back from Tom's" (a friend I was just going to see). 'I may have a little surprise for you when you return,"

Wondering, I left the house.

It was about an hour and a half later when I returned, and, like most men, I thought I would have a last look at my handiwork before turning in. As I came round the back of the house " muffled thumping and shouting emanated from the "mouse-trap."

My heart in my mouth, I dashed to it, attempting to pull it open. To a horrid sound of scraping mudwings it came upwards in re-

B29

sponse to my lugging-to disclose a near-to-tears and dishevelled Jane sitting in our car.

Between sobs the story came out. She had fetched the car round as a surprise for me, raised the "mousetrap," propped it up with a stick and then backed the car in.

Reversing is not a strong point of Jane's, with the result that the car touched the stick and the "mousetrap" caught—the owner's wife! C.E.T.M.



"'There you are, dear,' I said triumph-antly. 'You see I've managed it. It is quite in working order.'"

LD _ISH _AGE

Few of our old villages do not boast of interesting relics of the past, but they often lie hidden away. In this article the writer explains how motorists may spend a pleasant hour or two seeking them out.

O motorists who are in the habit of exploring the countryside nothing is more interesting than the old-world English village. With its old-fashioned cottages, its grass-bordered streets, its ancient church and village green, such a place recalls a wealth of pleasant memories of bygone days which, shadow-like, have vanished into the past, yet left the record of their innocent delights behind them.

Every old village has its interesting associations. From these country places men went forth in old days and laid the foundations of our far-flung Empire. It is, therefore, only natural that motorists are often filled with a desire to know more about some delightful and picturesque spot than can be gathered from a hasty survey as the car glides along the wide streets under the shadow of the grey stone church that has stood, sentinel-like, on guard over the village for hundreds of years

Local History.

The first thing to see in an old-world village is the church, for the whole history of the place is often written within its grey old stones; stories of bygone days may be read upon the walls, and the ancient church is rich indeed in historical associations, most interesting to those to whom these voices of the past appeal. The mural tablets erected to the memory of the various members of the land-owning families which for centuries have held the tenure of the lands surrounding the church, are sufficient in themselves alone to give one a very good knowledge of the history of the parish, providing, as they do, interesting information about the notable persons who have lived under the shadow of "yonder ivy-covered tower."

Many ancient village churches date back to Norman times—and earlier; but it is seldom that we find all parts of such an edifice contemporary, for in many instances the building would grow up little by little; first, perhaps, the main body being built, then the tower, and so on until the whole was completed.

One does not need to be an antiquary or an archmologist to read the story of a church in its walls; the different periods are easily picked out. It is not unusual to happen upon a village church with porch and doorway dating back to the 12th B30

century. The Norman arch is easily recognized by the semi-circular head and the massive mouldings, whilst the star, the lozenge, nail-head and sculptured medallions, together with the signs of the Zodiac, were frequently used by the masons of Norman times.

Interesting things to look for in the old church include the fragments of ancient sculptured work, effigies, incised crosses, and so forth, which are often found scattered about the interior. Many of these are of great interest to the visitor, for they kindle the imagination; but the past history of some of these sculptured fragments is as dim as the



"Generally, a village inn is a reliable information bureau, and it is here that we may obtain particulars of all the interesting places to be seen in the near vicinity."

musty, dusty corners in which they so frequently lie hidden.

The bells of many village churches are also worth seeing, and if one can gain access to the bell chamber much that will interest and instruct will be found. Many examples of fine ornamentation are hidden away in the gloom of the bell chambers of our village churches, together with the curious marks of the old bell-founders. There are some very old bells, but it is rarely that we come across one dating prior to the 14th century. King Henry VIII caused many bells to be taken down and melted to be sold as scrap-metal. Likewise during the Civil War bells were melted down and cast into cannon.

Ancient Ritual.

Inside many village churches the visitors will find a stoup—a small stone basin, usually carved out of the wall, and at one time used to contain holy water. The piscina, where the sacred vessels were washed, is still to be found in some ancient churches, generally situated on the south side of the altar. All these interesting relics of olden days, with others, are to be found in ancient village churches.

Having learned much of the history of the village from his inspection of its church the visitor will look for other interesting objects to which his attention may be drawn. Very rarely do we now find the village stocks, usually placed just outside the church gates; but occasionally we come across a hamlet in which this relic of the old-time punishment for wrong-doers still exists. Just as rare, too, is the old maypole that used to stand on every village green.

If there is a castle, or the ruins of one, in the village it will well repay a visit. An ancient manor

house will also appeal, and it is frequently possible to obtain permission to look round the house and gardens. Some of these places are open to the public on certain days or special occasions, and it is advisable to find out the dates. Guide-books generally give such information. Usually these old halls and ancient manors are the seat of some family which can trace its ancestry back to the Normans, and it generally has very interesting records.

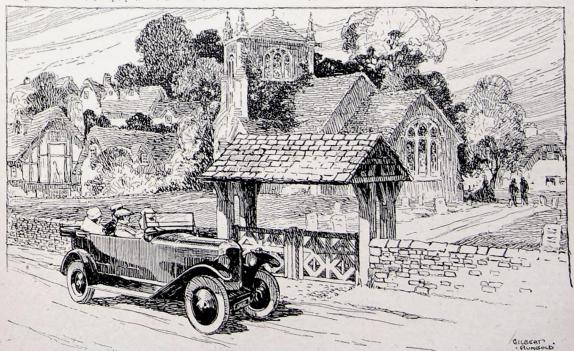
Many an old-world village can boast of an ancient inn still preserving its old-fashioned appearance, with its coaching yard—now thronged with motors—and archway entrance where in olden times the outside passengers had to duck their heads as the coach entered the yard. The very appearance of a picturesque village inn of this type is reminiscent of the days when Dick Turpin and many another bold highwayman lay hidden in some nook in the big yard, awaiting the departure of the coach he hoped to overtake and rob.

An Information Bureau.

Generally, a village inn is a reliable information bureau, and it is here we may obtain particulars of all the interesting places to be seen in the near vicinity. It is frequently a good spot to partake of lunch or tea in a sort of Pickwickian atmosphere. Here, too, is the garage where we may leave our car whilst we explore the village.

It is not possible to touch upon all the interesting things one may find in an historic, romantic and picturesque English village, but perhaps sufficient has been written to remind the reader that many of the country places that he may pass through on a tour are crammed with unique sights and redolent with memories of the hallowed past.

A.S.



"The first thing to see in an old-world village is the church, for the whole history of the place is often written on its grey old stones; stories of bygone days may be read upon the walls, and the ancient church is rich indeed in historical associations."

FULL DETAILS OF THE ROUTE AND THE AWARDS—SPECIAL NOTES FOR COMPETITORS—LAST MINUTE NEWS FROM THE HILLS.

A T approximately twenty seconds past 9 o'clock on the evening of Good Friday the official starter will raise his pencil as a warning, and at the half-minute past, obeying a well-recognized sign, the first competitor in the London to Land's End Trial, organized by the Motor Cycling Club, will speed away from the Slough Trading Estate, two miles west of Slough, his heart gladdened by the lusty cheer of all, which the leader of the 113-mile procession always receives; then with procession always receives; then with clock-like regularity the succeeding men will be despatched at half-minute intervals until the 234 solo machines, 114 sidecars and 26 cyclecars have commenced their journey.

Interest, which may have flagged slightly, is now revived by the appearance of the first four-wheeled car which rolls gently up to the starting line, and, in contrast with the comparatively noisy machine which has preceded it, waits, with engine gently ticking over, for the equivalent of the word "Go."

At the Start.

The cars start at one-minute intervals, and, until the spectators become accustomed to the longer pause, there appears to be a somewhat needless waste of time; but it gives far more opportunity for friends and well-wishers to wave good-bye to the driver and his passengers, offer to give them a push-off and generally indulge in those pleasantries so intimately associated with the start of one of the most important long-distance trials of the year.

The last man of all shares little of the glory, for, with plans carefully prepared for the morrow, which perhaps necessitate an early start, the majority

of the spectators have dwindled away and a new day has been born.

Those who have never witnessed the start of a Land's End or of a similar trial, or who have not stationed themselves at some point on the route to watch this seemingly endless procession of stalwarts, should make a point of rectifying their omission; it will give them an entirely fresh outlook on the sporting side of motoring, and will lead them to take a far kindlier interest in the fortunes of those who, for sport and not for gain, are undertaking this strenuous 19-hour ride through some of the most difficult country which the south-westerly corner of England has to offer.

At Porlock.

For 157 miles the going is comparatively easy, along main roads which pass through Reading, Devizes, Glastonbury and Taunton, but at Porlock competitors wake up physically and metaphorically, for there begins the difficult section of the course. Just before the right-hand bend which precedes the gradient of 1 in 4½ the machines will be stopped and will have to make a clean restart, finishing the climb non-ston.

Heartened, we hope, by their success, they will enjoy the run along the high ground practically on the edge of the rugged coastline, and descending Countisbury with caution will tackle the second test of the run—Lynmouth, which also must be climbed non-stop. Follows in a very short distance the climb of Beggar's Roost, which is the titbit of the trial, and which usually accounts for the greatest percentage of failures.

Approaching Bluehills.

There are willing helpers, however, to assist the halt and the maim, and given good luck the competitors will arrive at Launceston for the long-auticipated and well-deserved lunch halt. Then a 22-mile sprint across Bodmin Moor, 16 miles farther over picturesque roads and lanes and Perranporth, that delightful little village which nestles in a hollow of the Cornish coastline, will be reached.

Those who have carried all before them will not anticipate the ascent of Bluehills. Mine with trepidation, but the descent into the mine calls for very careful driving, whilst the hair-pin Porlock village and (left) the second bend of the famous hill.

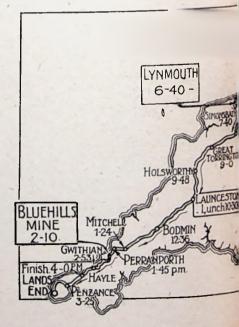
bend of the climb itself commands respect. With gaps here and there, accounted for by the dropping out of unfortunates, the procession will wind its way like some huge, sinuous snake along the twisting roads to Land's End, where mutual congratulations and speculations as to whether the coveted "gold" has been won will be exchanged.

Then to bed, and the world well lost until Boots knocks at the door announcing hot water.

The Awards.

Those who gain their gold medals will have complied with the regulations, which demand that a competitor shall not be more than ten minutes early or ten minutes late at any place; not more than five minutes late at the check entering Porlock village; not more than five minutes late at the check before Lynmouth hill, and not more than five minutes late at Perranporth. In addition, the rules call for non-stop climbs of the four named test hills

The requirements for a silver medal



performance are rather less trying, as a late margin of 10 minutes beyond the gold medal limits at any place is allowed, whilst one hill failure is per-mitted. Probably a fairly large number of silver medals will be won by competitors whose performances were beyond reproach except that they had a little bad luck (or maybe judgment!) on one hill, or were unable to reach the checks at Porlock, Lynmouth and Perranporth not more than five minutes late as required for gold medallists. It is really rather difficult to make the climb of Porlock Hill, cover the troublesome route along the top and effect a safe descent of Countisbury into Lynmouth and still be not more than five minutes behind the scheduled speed of very nearly 20 m.p.h.

m.p.h.

Continuous rain during the past week has made the surfaces of all the hills very loose. Even Porlock when we ascended it last Monday was very muddy and rutted, whilst the surface, except on the extreme left-hand side, was very loose on the second corner. Lynmouth Hill presents a surface composed for nine-tenths of its width of soft mud and loose stone, the only

of soft mud and loose stone, the only practicable path for solo motorcycles being, as usual, on the extreme right close to the wall.

Beggar's Roost is in very bad condition, the surface being strewn with large loose stones extending in places over its entire width. The smoothest part is, unfortunately, the steepest, which is known to Land's End enthusiasts as "the hump." It is doubtful whether this year it will be practicable to dodge "the hump" by steering to the left owing to the very loose condition of the hill at this point.

Last-minute Failures.

The corner of Bluehills Mine is not so difficult this year as it has been in the past, but higher up the road is rough and furrowed, whilst near the top there

is thick clay of considerable depth.

Last year and the year before quite a number of competitors lost their gold medals after safely negotiating the hair-pin bend on Bluchills Mine. Many of these failures were due to drivers being keen to impress the crowd by accelerating very smartly and discovering that the rough surface "found out" latent mechanical faults. Once round the corner, half-throttle will take most cars to the top, and it should be quite enough.

As regards the important business of meals en route, competitors will be specially catered for at the start, where the Peerless Restaurant on the Slough Trading Estate has obtained a special extension of licence until 3 a.m., so that

TIME TABLE.

SHOWING the time, to the nearest minute, of the first motorcycle, the first three-wheeled cyclecar, and the last car competitor at various points on the route.

points on the r			
	Motor-	Three-	Last
	cycle.	wheeler.	Car. Sat.a.m.
_			
Start	9. 0	11.54	2.40
	Sat.a.m.	Sat. a.m.	
Taunton	3.30	6.24	- 9.10
Porlock	6. 0	8.54	11.40
Lynmouth	6.40	9.34	12.20
Launceston	10.30	1.24	4.10
Bluehills Mine	2.10	5. 4	7.50
Land's End	4. 0	6.54	9.40

late starters as well as the early comers will have equal facilities for refreshment.

A special licence during the entire five hours in which competitors will be passing out of the town has been obtained by the Town Hall, Launceston, where Mr. E. Reed is providing lunch. caterer will also be in attendance beyond the summit of Beggar's Roost, near Lyn Cross, where a supply of coffee and hiscuits will be available for those waiting their turn to restart.

Breakfast arrangements are. the capable hands of course, in

Messrs. Dellers, Bridge Street Cafe, Taunton. In addition, by the fore-thought of the Marlborough Engineering Co., coffee will be available at the Marlborough check, whilst coffee will also be procurable at the filling station of the Mid-Somerset Motor Co., which is twenty yards past the railway bridge when extering the town. Linguly there when entering the town. Finally, there is the welcome tea at Healey's Garage, which is in Perranporth village. It is served by the ladies of Perranporth.

Petrol is available, of course, at the start before entering the Slough Trading Estate also at Marlborough, Shepton Maliet, Glastonbury, Taunton, beyond the summit at Beggar's Roost, South Molton, Great Torrington, Launceston and Penzance, whilst it can, of course, be bought from any garage along the route. The same natur-

ally applies to lubricating oil.

Competitors are specially reminded that the competition numbers must be removed before signing the checking sheet at Land's End, hence some form of quickly-detachable number-plate is desirable if time is to be saved at the end of the run.

THE ENTRANTS.

THREE-WHEELED CYCLECARS.

*S. Hall, 1,086 Morgan.
J. S. Thurlby, 1,096 Morgan.
H. C. Jacoba, 1,096 Morgan.
H. C. Jacoba, 1,096 Morgan.
B. Thurlby, 1,096 Morgan.
G. H. Marshall, 1,096 Morgan.
G. H. Marshall, 1,096 Morgan.
D. S. T. Morgan.
D. S. C. Macaskie, 976 Morgan.
D. S. C. Macaskie, 976 Morgan.
J. A. M. Carthy, 1,098 Morgan.
D. S. C. Macaskie, 976 Morgan.
D. S. C. Macaskie, 976 Morgan.
J. A. McCarthy, 1,098 Morgan.
J. A. McCarthy, 1,098 Morgan.
J. T. Saunders, 1,098 Morgan.
T. C. F. Stephens, 1,096 Morgan.
C. F. Stephens, 1,096 Morgan.
E. N. G. Cooke, 1,096 Morgan.
E. N. G. Cooke, 1,096 Morgan.
M. MacMahon, 1,096 Morgan.
M. W. Mares, 960 Morgan.
M. MacMahon, 1,096 Morgan.
M. MacMahon, 1,096 Morgan.
H. R. Taylor, 1,075 Morgan.
W. H. Wells, 1,096 Morgan.
W. H. Wells, 1,096 Morgan. 358 359 360 361 362 363 364 365

CLASS IV. CARS. (153.)

(Not exceeding 1,500 c.c. capacity.)

CLASS IV. CARS. (153.)

1V (a). (Not exceeding 1.500 c.c. capacity.)

375 *Hoaley, D. M. (9 Rever).

376 Jones, H. W. (8.9 Ariel).

377 Johnston-Smith, B. (9.5 Salarson).

379 Johnston-Smith, G. T. (10 A.B.C.).

380 Broomfield, F. (11.9 Lea-Francis).

381 Haward, W. J. (11 Bayliss Thomas).

382 Hutchauce, E. S. (11.9 A.C.).

384 Gripper, A. G. (12 Alvis).

385 Stevens, H. S. (12 Lea-Francis).

385 Glayton, C. L. (8.7 Amilicar).

386 Glayton, C. L. (8.7 Amilicar).

387 Millon, W. J. (7 Austin).

388 Anthony, C. (8.2 Senechal).

380 Anthony, C. (8.2 Senechal).

380 Cleeg, P. D. (8.2 Senechal).

381 Haward, W. (10.8 Riley Sports).

382 Eddy J. (7 Austin).

383 Needham, C. M. (10.8 Newton-Ceirano).

384 Dibon, R. M. (10.8 Newton-Ceirano).

385 Needham, C. M. (10.8 Newton-Ceirano).

386 Mortyn, S. E. (11.9 Bugatth).

387 Daniel, K. H. (12 Alvis).

388 Kamp, C. H. (11.9 Prazer-Nash).

400 Tominson, E. V. (7 Austin).

401 Wallace, J. (10 A.B.C.).

402 Richardson, G. (7 Austin).

403 Richardson, G. (7 Austin).

404 Reep, N. M. H. (9 Riley).

405 Martinean, L. (10 Salmson G.P. Special).

406 Mortall, O. R. (12 Alvis).

407 Martinean, L. (10 Salmson G.P. Special).

408 Martinean, L. (10 Salmson G.P. Special).

409 Chessum, F. J. (11.9 Frazer-Nash).

410 Wieland, G. B. (11 Newton-Ceirano).

411 Hamilton-Turner, C. F. (11.9 Frazer-Nash).

412 Walvan, (Lord) (11.9 Frazer-Nash).

413 Hoicroft, R. C. (12 Alvis).

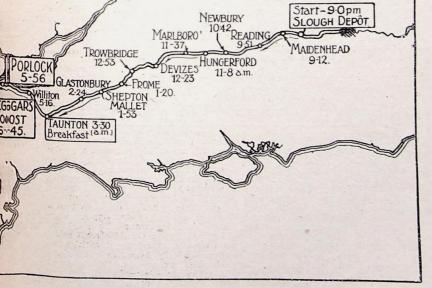
414 Hoicroft, R. C. (12 Alvis).

415 Morrall, O. R. (12 Alvis).

416 Ellis, G. H. S. (7 Austin).

417 Patick, C. V. V. (7 Gorden-England Austin).

418 Podinore, A. (11.9 Lea-Francis).



419 Harconet, B. W. (7 Austin).
420 Orlord, J. G. (7 Austin).
421 Stanley, S. C. (11.9 Aivis).
422 Ford, G. O. (10.8 Riley).
423 Berber, J. W. (10 Salinson).
425 Berber, J. W. (10 Salinson).
426 Parten, W. H. G. G. Decemster).
427 Prizeman, D. J. C. (7 Austin).
428 Berry, T. R. (9.5 Salinson G.P. Special).
429 Praney, R. (11 Clyno).
430 Richardson, J. (7 Austin).
432 Berry, T. R. (9.5 Salinson G.P. Special).
433 Berry, T. R. (10 Salinson G.P. Special).
434 Prizeman, D. J. C. (7 Austin).
435 Rass, J. S. (11.9 O.M.).
436 Richardson, J. (7 Austin).
437 Rass, J. S. (11.9 O.M.).
438 Bonthar, W. (7 Austin).
439 Prizer, R. J. O. (7 Austin).
430 Montago, T. C. E. (10 Rec.).
430 Montago, T. C. E. (10 Rec.).
430 Reffell, R. (9.9 Swilt).
440 Blackwood Murray, J. L. (7 Austin).
441 Smith, G. P. (10.8 Riley).
442 Clegg, H. (7 Austin).
443 Cornish, O. H. C. (11.9 Frazer-Nash).
444 Calegg, H. (7 Austin).
445 Schwalm, R. G. C. (11.9 Frazer-Nash).
446 Aidington, H. J. (1.9 Frazer-Nash).
447 Haptes, F. A. (1.9 Frazer-Nash).
448 Higgs, J. J. (10 Salinson Sports).
450 White, R. J. A. (8.5 Renault).
451 Marcopose, P. S. (8 Fial).
452 White, R. J. A. (8.5 Renault).
453 Mortago, C. D. (10 Salinson Sports).
454 Gilbert, S. (10 Salinson Sports).
455 Symons, H. E. (7 Austin).
456 Hyams, G. F. (10 Swilt).
457 Prans, E. T. (11.9 Frazer-Nash).
468 Balger, P. B. (10 Swilt).
469 Hillary, E. (11.9 Frazer-Nash).
460 Symonds, G. H. (7 Austin).
461 Marks, E. A. (7 Austin).
462 Rickwood, H. J. (10 Trojan).
463 Hyams, G. R. E. (10 Swilt).
464 Montago, H. R. E. (10 Swilt).
465 Hyams, G. R. E. (10 Swilt).
467 Waters, R. B. (10 Salinson).
468 Baker, F. B. (10 Salinson).
469 Hillary, E. (11.9 Frazer-Nash).
470 Knight, H. H. V. (12 A.B.C. Super Sports).
471 Bracky, J. V. (12 A.B.C. Super Sports).
472 Russell, H. G. (7 Austin).

Roberts, H. D. (8.2 Swift),
3 Cotton, O. J. C. (7 flowett),
1 Card. D. D. (7 flowett),
1 Card. D. D. (7 flowett),
2 Portor, R. C. (8.9 Amilear),
2 Portor, R. C. (8.9 Amilear),
3 Pritt, C. G. (7 Austin),
4 Piggins, B. W. (11 Biggath, 17 Cark, L. T. E. (11.8 Lea Francis),
5 Galikint-Holmes, C. W. (9.5 Donnet),
5 Strong, G. H. (7.8 Austin),
1 Kroomball, C. A. B. (9 Riley),
1 Kroomball, C. A. B. (9 Riley),
1 Kroomball, C. A. B. (9 Riley),
2 Ceidt, D. W. (11.9 Lea-Francis),
3 McGowyan, A. P. (7 Austin),
5 Driskell, J. A. (9.5 D.F.P.),
4 Watson, S. F. A. (11.5 Surrey),
7 Parman, E. (11 A.B.C.). 478 479 480 481 483 483 IV (b). (Not exceeding 2,000 c.c. capacity.)
496 *Chiesman, C. R. B. (13.9 M.G. Super Spots).

*Chiesman, C. R. B. (15.9 M.G. Super Spots).
Shephard, W. H. (11.9 Riley).
Ros. S. H. (11.9 Riley).
Ros. S. H. (11.9 Riley).
Ros. S. H. (11.9 Riley).
Scrogas, A. F. (10 Trojan).
Scrogas, A. F. (10 Trojan).
Scongas, A. F. (10 Trojan).
Scongas, A. F. (10 Trojan).
C. F. (15.9 M.G. Super Sports).
Landley, J. (11.9 Morris-Cowley).
Stevens, G. P. (12 Riley).
Stevens, G. P. (12 Riley).
Stevens, G. P. (12 Riley).
Bruce, V. A. (16 A.C.).
Manners, P. H. (16 A.C.).
Manners, P. H. (16 A.C.).
Steadman, J. B. (11.9 Riley).
Williams, F. T. (11.4 Humber).
Jackson, G. L. (12 Alvis).
Skepherd, J. A. (12 Galloway).
Wood, A. W. (11.9 Morris Special).
Matthews, F. G. (15.9 D. and M. Morrls).
Hall, J. J. (12 Galloway).
Listellyn, A. S. (12 Alvis).
Siem C. L. (15.9 D. and M. Morrls).
Listellyn, A. S. (12 Alvis). 498 499 5001 5002 5004 5005 5006 5007 5009 510 517 Llewellyn, A. S. (12 Alvis). 518 Sieep, C. J. (13.9 M.G. Super Sports).

IV (c). (Not exceeding 3,000 c.c. capacity.) (9.)

1V (d). (Not exceeding 3,000 c.c. c. 519 "White, P. W. (Armstrong). 520 White, R. H. (Armstrong). 521 Steele, J. S. (Delage). 522 Harding, N. (Sunbeam). 523 Gather, G. E. (Delago). 524 Cottee, S. W. (Bean). 525 Pidgeon, G. A. (Delage). 526 Handover, R. J. (Erskine). 527 Low, A. E. (Star). "Denotes travelling marshal.

SMALL CARS AT SOUTHPORT.

THE DEBUT OF A STRIKING MORGAN RACER.

DESPITE very wet conditions inso much of the day as mattered, when the Southport Saturday last, Motor Club held its third sand-racing meeting of the season.

The tide had left the sands hard for over two kilometres and the width of the track available was well above the average. A cold north-east wind made the spectators' lot a chilly one, but the enjoyment of the racing kept their thoughts away from such mundane

Eleven motorcycle classes were run off first, and the car men spent the off first, and the car men spent the time stripping off wings, removing silencers and doing some last-minute tuning. We noticed B. L. Byron's Brooklands-type Austin Seven as being particularly quiet. G. V. Oddy's Morgan had a beetle-like body of smart appearance, but the palm must be awarded to R. D. Coesar, of Bristol, for cricinality in the mechanical line awards. awarded to A.S. Coesar, of British to originality in the mechanical line among the three-wheelers. This competitor's Morgan gave a very good account of itself in one of the longer races, but was hampered at first by carburetter trouble.

The cyclecar in question appeared to have no back wheel, but we eventually found it enshrouded in the tail, the top of which had a cowl to allow room for the wheel to rise above what would be the highest point in the standard design. The rear springs were mounted below the wheel spindle, and this dropped the back of the body by over B34

The radiator was canted backwards and a pair of Brooklands "official receivers," one on each side of "official receivers," one on each side of the rear wheel, still further tended to camouflage that important component.

When racing, the car looked as though it was driver by the front wheels and the tail was skating along the sands. Its cornering was most impressive and exceptionally fast for a three-wheeler.

In the straight-mile races the first man home was, on all occasions, never

seriously threatened towards the finishing post, but some thrilling duels for the other places were seen and caused the judges more work than usual. Half a length frequently separated second and third or third and fourth, which kept the crowd entertained despite the chilliness of the day.

Although R. D. Coesar's Morgan was competing against some fast sidecars in the ten-mile race, it was easily first round on the starting lap and amazed the onlookers by the speed at which it took the hair-pin bends at each end of the course. It was faster on the corners than the sidecars and increased its lead throughout the run. When flagged off as the winner it was the best part of a mile ahead of the second man.

In the 1,100 c.c. car race over the 10-mile course G. V. Oddy kept the lead for two laps in his Morgan, but J. C. Ansonia forced his Amilear ahead on the third circuit and kept first place until the end of the race. B. L. Byron's Austin ran very steadily throughout and cornered without a trace of a skid; had it possessed more acceleration on the straight stretches it would have run the first two cars very close for a higher

RESULTS. Straight Mile Races.

RESULTS.

Straight Mile Races.

1.100 c.c. General.—1st. F. I. Carr (Morgan);
2nd. E. R. F. Mucklow (Frazer-Nash); 3rd. R.
C. Blones (Morgan). Novices.—1st. F. I. Carr (Morgan)? 2nd. M. B. Johnson (Amilear); 3rd. B. L. Byron (Austin).

1.500 c.c. General.—1st. B. H. Davenport (G.N.); 2nd. R. Mellor (Frazer-Nash); 3rd. F. T. Scarisbrick (Bugatti). Novices.—1st. F. R. T. Scarisbrick (Bugatti). Novices.—1st. R. T. Scarisbrick (Bugatti). Novices.—1st. R. T. Scarisbrick (Bugatti). Novices.—1st. R. T. Scarisbrick (Bugatti). S. T. Scarisbrick (Bugatti).

2,000 c.c. General.—1st. H. Spurrler. Jun. (Arab); 2nd. R. Mellor (Frazer-Nash).

3,000 c.c. General.—1st. D. Higgin (Vaux-ball); 2nd. R. V. Fontes (Bugatti). Novices.—1st. D. Higgin (Vaux-ball); 2nd. R. V. Fontes (Bugatti); 3rd. R. V. Fontes, Called R. V. Fontes (Bugatti); 3rd. R. V. Fontes, Called R. V. Fontes (Bugatti); 3rd. R. V. Fontes, Called R. V. Fontes (Bugatti); 3rd. R. V. Fontes, Called R. V. Fontes (Bugatti); 3rd. R. V. Fontes, Called R. V.

Ten-mile Races.

Ten-mile Races.

Cyclecars and Sidecars—1st, R. D. Coesar
(Morgan): 2nd. H. A. Harben (Norton s.c.);

7. A. B. Talbot (Dunelt s.c.).

1.100 c.c. Cars.—1st, J. C. Ansonia (Amilany): 2nd. S. A. Keay (Morgan); 3rd. B. L.

Byron (Austin).

Unlimited c.. Cars.—1st, R. V. Fontes (Bugatéi); 2nd. J. C. Ansonia (Amilcar).

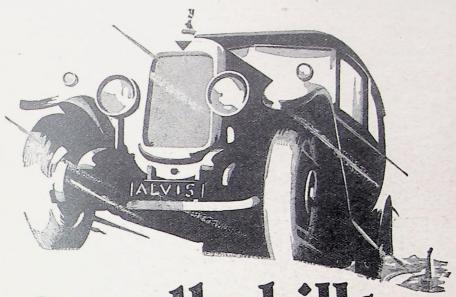
A £12,000,000 RAID.

BUDGET ITEMS WHICH AFFECT THE MOTORIST.

THE Chancellor of the Exchequer has dealt drastically with the Road Fund in his Budget. £12,000,000 will be taken out of the surplus of the Fund for purposes of general taxation. Secing that the Ministry of Transport is to be abolished during the present financial year, the administration of the Fund will be taken over by the Treasury. The assumption among members of the House generally is that under this arrangement the roads are not likely to fare so well as they did formerly, although the Roads Department of the Ministry is being retained.

Another important announcement made in the Budget speech was that the

Chancellor of the Exchequer is to impose a duty of 33¹ per cent, upon imported motor tyres. Empire tyres, however, will receive a rebate of one-third. Mr. Churchill said he had made some inquiries of a number of principal authorities in the trade as to the effect which such a duty is likely to have on prices. and the reports had been very encouraging. An important foreign firm, Messrs. Michelin (Mr. Churchill said). has already, in intelligent anticipation of such a duty, begun to build a considerable factory in this country. Therefore there is no fear of any lack of healthy competition in this essential and growing industry.



over the hills-

THE Alvis Sports Saloon will take almost every main road hill in its top-gear stride with as little effort as it will meander through the crowded city street. It will pass you at "sixty" with the same silence, grace and air of purpose as the hare taking the field, and at any speed it is perfectly tractable to the whims of its driver—ever subordinate to his desires.

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A9

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RICHMOND CASTLE, YORKSHIRE.

AN HISTORIC LINK WITH THE TWELFTH CENTURY. IT IS STILL USED FOR MILITARY PURPOSES.

THE wonderful situation of Richmond Castle, Yorks, is at all times impressive. Its picturesque ruggedness is stamped with medievalism and its loneliness and seclusion, apart from its commanding position, make it unique amongst English prospects.

The castle proper, including the keep, was not fully finished until the middle of the twelfth century. The keep is in the north ward of the enclosure, so placed to guard the town side, which is the weakest part of the position. For eight centuries the structure has braved the elements, and, unlike most Norman relics, it is still used for military purposes. The great banqueting hall could still serve its original purpose, but the remainder of the castle has

been in ruins for 400 years. The castle is encompassed by a high embattled wall, which is 6 ft. in thickness. At intervals were strong square towers, wherein the principal knights and esquires had their lodging.

In 1171 William the Lion, King of Scotland, was kept a prisoner there after his capture, and only liberated on the payment of a heavy ransom. David Bruce was also a captive within its walls for a short time after the battle of Neville's Cross.

Richmond has its legends, however, if it has not much exciting history. It is said that beneath the foundations of the great keep is a secret vault where lie King Arthur and the Knights of the Round Table in a deep sleep, from which, at a time when England is in dire peril, they will be awakened by the blast of



A view of Richmond Castle, which brings out its imposing position on the hill top in a striking way.

a horn. They will then rise and do such mighty deeds as the world has never seen.

In the chamber where they lie, so the story runs, hangs an enchanted sword and an enchanted horn, both embellished with wondrous stones, and any man drawing the one and blowing the other will awaken the sleepers and be "the luckiest man that ever was born."

From this story another one has arisen concerning one Thompson, a potter. By the river's steep bank under the castle walls he one day discovered a narrow opening in the rocks. He squeezed himself into the cleft and, passing on, he came into a large cavern lighted by a lamp from the roof.

On the table beneath the lamp he saw the enchanted sword and horn. All around reclined the knights in armour, the most magnificent being King Arthur, with his crown of gold.

nificent being King Arthur, with his crown of gold.

Potter Thompson seized hold of the sword and was about to draw it from its scabbard when there arose a murmuring and stirring among the sleepers, whereupon he fled for his life, pursued by a deep sepulchral voice which mocked him with the words:—

Potter, Potter Thompson, If thou had'st either drawn The sword or blown the horn, Thou'dst been the luckiest man That ever yet was born."

When the potter recovered from his fright he wished to re-enter the chamber, but he never could find that niche in the rock.

J.D.R.

THE CONSPIRACY OF THE ROAD.

PEOPLE learning to drive usually pass through three successive mental stages. There is probably no sensation in the world quite so joyous as that feeling of elation which the new driver experiences when, for the first time, he or she has successfully guided the car along quiet roads or streets.

This is all too often followed by depression after the first two or three drives through busy thoroughfares. Those gears which went in so easily when practising appear to get sticky as soon as one is in a traffic jam." It seems so easy, too, to mistake the accelerator for the brake pedal just at the wrong moment!

With the average driver that secondary state should not last very long, but before he reaches the third stage, when he does everything correctly and automatically, he usually goes through a period when everyone else on the road seems to have united together to make his life a perfect misery.

It is then that he feels there is a hidden but deadly conspiracy against him. Everyone and every little

thing is apparently trying to make it difficult for him to drive decently. Taxicabs, buses, pedestrians, policemen, even his fellow-motorists, all seem to have a positive grudge against him.

If he lives in town he has been warned about trams, tramlines, taxicabs and buses; if in the country, the dangers of cross-roads and concealed carriage-drives have been well drummed into him.

No one, however, can tell him—for no one knows—what emergencies he personally will run up against. Each day seems to bring a new difficulty to reveal a new aspect of the plot.

Who, for example, would have imagined that a huge 5-ton lorry would suddenly swing out of that deserted lane or side street? Which conspirator has employed these butcher boys on tricycles to do the Charleston from one side of the road to the other without the slightest compunction? How could he guess what that errand—and errant—lad would do next, when the latter apparently did not know himself?



Our friend Mr. New Light Car Owner will cleverly and correctly follow a taxi round a turning, to find that the hired vehicle pulls up sharp just round the corner, leaving him no room to pass and only just enough to stop dead. It is remarkable how often the destination of a taxicab happens to be just round an awkward corner! And what a fool he feels when he finds that the traffic block behind which he has been waiting is actually a cab rank!

Quite wrongly, perhaps, he becomes convinced that much that happens on the road is his fault—for instance, when that idiot tries to pass him on a corner and causes three cars to come abreast with approximately an inch to spare between them. Bus, taxi and chará-banes drivers seem to vent on his unfortunate head their pent-up spite against all private owners, until he really begins to believe himself the world's

worst wielder of the wheel.

And then, just when he feels that the whole universe has done its worst, and even then has failed to dampen his motoring ardour because of the faith within him, off from the kerb steps the prize-fool pedestrian, sudenly and without warning. Only a quick instinctive jerk of the wheel saves the situation, but if there had been anything on his off side . . . !

He feels that he can never become a competent driver—he was not cut out for the job; it is all very well for those mechanically minded men, but for him, whose

greatest engineering feat consisted of mending the garden roller, the whole thing is quite impossible. Perhaps he imagines he is too old; after all, he reasons, forty is a bit late to take up motoring, especially when one has not even ridden a bicycle and one's only previous experience of modern road conditions has been obtained from the top of a motorbus. Again, he may believe that his nerves are not sufficiently strong—every time he returns from a trip in traffic he feels depressed and his nerves are on edge. Yes, motoring is not for him; he must be content with occasional runs in other people's cars and with other people driving; how he envies the masterly way they handle the controls!

Monsieur or Madame New-Driver, if I have correctly related your own experiences up to this point, let me add one further word. That is the very time to decide to carry on with your motoring. You have got over the worst. Very soon will come to you that delightful sixth or motoring sense, when you do the right thing instinctively and without effort and when the vagaries and idiocies of other folks will cease to worry you one

iota.

In short, before you are aware of it, you will be the Compleat Motorist, careful and cautious, yet care-free and content.

The conspiracy will have ceased, and the open road, and even the crowded thoroughfare, be yours to enjoy for ever afterwards.

D.D.M.

AWKWARD STARTING HANDLES.

ALTHOUGH nearly every modern car has an electric starter, there are few owners who care to make use of it when the engine is cold unless they cover a fairly large mileage and are thus able to keep the buttery well charged.

keep the buttery well charged.

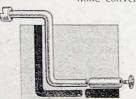
Our old friend the starting handle is therefore well worth keeping in good condition, whilst, if it happens to be of an inferior type, ways and means for making it more pleasant to use are well

worth investigating.

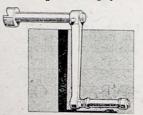
Most of the better-class cars have a "free" grip on the handle, but in the course of time this is inclined to wear rather badly, to rattle when the engine is running and to nip small pieces out of the hand when it is being used. A good scheme with a handle of this kind is to furnish it with a very liberal supply of graphite grease and then to slip over it a John Bull motorcycle kick-starter rubber. These rubbers are obtainable from all motorcycle accessory houses and are very comfortable to hold, whilst affording an excellent grip. It is useless, however, to fit one on a handle which has not a "free" grip, as the rubber has a roughened surface.

If the starting handle grip of a car has become very worn and decrepit and does not lend itself readily to being renovated, it is often possible to scrap the

grip altogether and to replace it with the centre part of a bicycle pedal. It will be necessary, of course, to remove the framework which supports the rubber pads of the pedal and to file down the projecting pieces at the ends, but the resulting grip is very serviceable, and, having ball bearings, will last indefinitely.



An easy method for providing a "free" grip.



The centre part of a cycle pedal makes a useful grip.

The attachment of the modified pedal to the crank may present difficulties. The best method, of course, is to have the starting-handle crank hole bored out and tapped for the appropriate thread. If this cannot be done conveniently, it is easy for the pedal boss to be turned down and brazed into the hole, or

turned down and brazed into the hole, or alternatively a new thread can be cut on it and the pedal secured with a nut at

the back of the crank.

There are some cars being supplied even at the present day with a starting handle which consists merely of a piece of bent round steel rod with no proper grip for the hand. These handles cause blisters on the hands if they have to be used very often and are well worth converting. One scheme consists of drilling and tapping a small hole in the end and fitting a piece of steel tubing over the grip, preventing it from slipping off by a setscrew and washer. Another scheme is to use a hardwood grip in place of the piece of steel tubing, whilst yet another plan, and one which commends itself on the score of simplicity, is to carry a short length of steel tubing in the toolbox or in the door pocket and to slip this over the grip when starting up.

A point worth bearing in mind in connection with starting handles is that they can often be made to call for far less effort if the dogs are removed

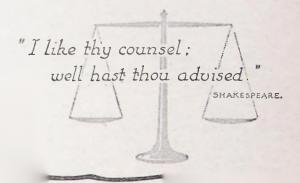
and refixed in a position where the compression of the engine is felt at a more favourable part of the stroke. About 15 degrees over bottom dead centre is the best position and it is really surprising how much easier the engine is to start when the compression is felt at this point.

A.K.C.



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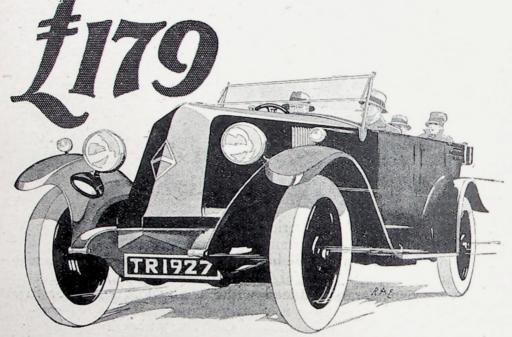


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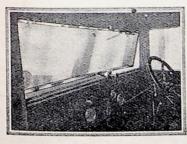
NTERESTING OCCESSORIES

A Novel Silencer.

HERBERT TERRY AND SONS, LTD., Redditch, England, the wellknown spring manufacturers, are now manufacturing a silencer embodying novel principles. The exhaust gas first enters a flexible tube which is actually a closed helical spring; the pressure opens the spring slightly, allowing the gas to escape in minute streams between each coil into the main chamber, whence it passes via spaces in the base to a pyramid-shaped chamber communicating with the air. The cylindrical steel outer case is 71 ins. in length and 21 ins. in diameter, and is fitted with a contracting clip for secur-ing the silencer to the exhaust pipe. Models are made to fit all sizes of exhaust pipe, the price being 14s. 6d.

An Attractive Front Screen.

ROTAX (MOTOR ACCESSORIES), LTD., Rotax Works, Willesden Junction, London, N.W.10. are marketing a very attractive front screen especially for saloon cars. of the single-pane type, permitting an unusually clear view of the road ahead. The panel is hinged at the top and opens from the base, its movement being controlled by a centrally placed double-extending locking device; thus the driver can readily open or close the screen with one hand, without taking his eyes off the road. As the joint is



The latest Rotax single-pane screen for saloon cars.

made between the metal edge of the pane and the body, draughts are eliminated when the screen is closed. The price of the complete screen is £9, and the locking device only is sold for £1.

Artistic Interior Illumination.

A NOVELTY in interior illumina-A tion for closed cars has been introduced by the General Electric Co., Ltd., Magnet House, Kingsway, W.C.2, in the form of artificial flowers having

small electric bulbs concealed in the blossoms. When unlighted it is claimed that the flowers are indistinguishable from natural blossoms; they are supfrom natural blossoms; they are supplied in sprays consisting of an iris, two roses, three Cape gooseberries, three daffodils or three fuchsias. The bulbs are standard Osram lamps and have a very small current consumption, the iris spray, for example, consuming only 2 amp, when fitted with a 12-volt bulb. The illumination provided is claimed to be quite sufficient for reading. These flowers can be supplied for either 6-volt or 12-volt bulbs.

583

The Auto ash tray, which can be obtained in three different finishes.

A Neat Ash Tray.

PHOTOGRAPH reproduced above A shows a very neat ash tray, which is being marketed by Mr. J. E. Bushell, 76, Tower Street (St. J. E. Bushell, 76, Tower Street (St. George's), Birmingham, at 7s. 6d. Owing to the shape of the bowl ash cannot easily be blown out; it is emptied by inverting the bowl, which is pivoted. Models can be obtained finished in bright silver. Florentine bronze or oxidized silver, fixing screws being supplied to match. The Auto ash tray, as it is called, is well finished and its pleasing appearance should make it very popular.

A Useful Washing Outfit.

K NOWN as the Ningara, a very serviceable combined water-fed cleaning brush and jet is being marketed by A. H. Hunt, Ltd., H.A.H. Works, Tunstall Road, Croydon, at Works, Tunstall Road, Croydon, at 25s. With the exception of an inside 208. With the exception of an inside spring every metal part is made of brass, to prevent rust, and the whole is of simple construction so that there is little to go wrong. For cleaning bodywork the water can be directed through the actual brush, whilst a powerful stream is available for machine. powerful stream is available for washing away caked mud from the undersides of the wings and so forth, an up or down movement of the handle being all that is necessary to change from one to the other. Three brushes are supplied with each outfit, one with soft bristles

for use on bodywork and two small, stiff brushes which enable spokes and springs to be cleaned. The latter are purposely made of cheap bristles and cost only Gd. to replace, so that the owner need not worry if they become greasy. The union usually supplied is for 3-in, bore hose, but unions for 1-in., in. and I-in. bore hose are available.

For Picnics.

MANY light car owners would make their picnics more elaborate—and more enjoyable—by actually cooking their food on the spot if it were not for their 1000 on the spot if it were not for the difficulty of carrying the average stove in a car. Those so placed should investigate the claims of the Meta, No. 80, travellers' cooker. It is designed to burn Meta solid fuel, which is supplied in handy little tablets. This fuel is non-explosive, burns with a smokeless flame and leaves no ash, whilst when desired the flame can be blown out and the remaining portion of the tablet reserved for further use.

To return to the cooker, this is made of aluminium and is arranged so that the burner and stand can be slipped inside the saucepan when not in use, thus effecting a considerable saving in space. The saucepan has folding handles and, when packed for carrying. handles and, when packed for carrying, the whole is about 3½ ins. in height and about 5½ ins. in diameter. The makers are Elmesan (London), Ltd., 66, Victoria Street, London, S.W.1, and the price of the cooker described is 7s. 6d., whilst a packet of 18 squares of Meta fuel costs 2s. 9d



Handy when picnicking—the Meta, No. 80, travellers' cooker.

A Puncture-proofing Preparation.

ALECITE is the name which has been given to a new solution for pouring into an inner tube in order to pouring into an inner tube in order to prevent loss of air when small punctures are suffered. The preparation is injected into the tube through the valve with the aid of a grease-gun or tyre pump after the "inside" of the valve has been represed and valve has been removed, and we are satisfied that small nail holes and so forth are dealt with effectively by it. A supply for a 4.4-in, balloon tyre costs about 7s., whilst one 16-oz. can costing 7s. 6d. is sufficient for two 31-in. tyres. The distributors are R. C. Foreman, 98, Woolwich Road, London, S.E.10.



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

MOTORISTS AND THE LAW.

Punishment for Offences—The Proposed Bill.

Fines by Post.

I am glad to read in The Light Car and Cyclecar that the Chief Constable of Liverpool is of the opinion that it

should not be necessary for minor technical motoring offences
to be tried in court. I think his
A Sound
suggestion that a small fine, fixed by
statute, should be sent to the clerk of the justices where an offence was not disputed is a very sound one, and I am sure much unnecessary

time and worry could be saved if his suggestion were put into operation. No injustice would be imposed by this system, for the motorist would have the chance of pleading "Not Guilty" and having his case tried in the ordinary way if he felt so disposed. I know from experience what a lot of bother can arise from a minor technical offence, and hope that conservatism will not stop the suggested system from being put into operation. E. L. F. Sprig. from being put into operation.

An " Idiotic " Suggestion.

"J.H." has put forward quite the most idiotic suggestion I have ever heard in his letter which was published last week. Whilst everyone admits that the 20 m.p.h. limit is

utterly farcical and ridiculous, he suggests that it should—provided one is "J.H." Gets Slated. sufficiently unlucky—be allowed to lead to licences being suspended. "J.H.", "If more than a given number of indictments were

recorded in a stipulated time, the licence should be suspended." An indictment, "J.H." should know, is merely a tormal charge of a crime or misdemeanour, and his suggestion that licences should be suspended for a given number of "formal charges" leads one to believe either that he does not understand the Euglish language, or that he holds the opinion that everyone charged with an offence is guilty of it.

Nephew, Nephew and Nephew.

Suspension of Licence v. Fines.

I certainly agree with "J.H." in his suggestion that fines should be superseded by suspensions of driving licences, but I see in it a number of "snags." For one thing, what will happen to the fund, whatever it is, that

our fines go to swell? It will be de-prived of its chief source of revenue. There is also the difficulty of the man Pros and Cons.

who lives by his car. For instance, the commercial travellers to-day rely entirely upon their vehicles, and a licence suspended for a week would probably entail more financial loss than would any fine likely to be imposed.

We must also remember that the figure of £50 is the maximum. It does not follow that we shall be muleted of £50 every time we are summoned, or even convicted. As time goes on more and more of our magistrates will be motoring men themselves and will consequently give judgment with far more consideration for the technical aspects of the case, the defendant's driving reputation, and his financial status, than they do at present.

M.C. they do at present.

Making the Punishment Fit the Crime.

The letter from "J.H." last week showed that I am not alone in believing that, contrary to the popular impression, there are excellent grounds for having one law for the rich and one for the poor. "J.H." is quite right. It is nothing to the owner of a changeur-driven limousine to be fined \$\vec{t0}\$, whereas to a cyclecar owner this weeks. The proper thing for magistrates to do would be to

weeks. The proper thing for magistrates to do would be to investigate the circumstances of all defendants and fine them in accordance with their apparent wealth, as based, for example, on the rateable value of their houses, if they are thouseholders, or upon the amount of their wages or salaries

The All-important P.C.

The letter from " An Absent-minded Man" emphasizes the

The letter from "An Absent-minded Man" emphasizes the fact that even when our use of the roads is governed by the new Road Traffic Bill (if ever) we shall still be largely in the hands of police constables. It will be their evidence which will decide whether one was driving negligently carelessly, or in an absent-minded manner, and it is therefore in our interests to press harder for the page complete education of the paging in motoring. for the more complete education of the police in motoring matters than for new legislation which would merely increase their powers and render us liable to more convictions

than we suffer from at present.

My own principal criticism of the proposed Act relates to powers which it is suggested should be vested in the Minister powers which it is suggested should be vested in the Minister of Transport. Why he should be allowed to permit enormous farm carts to meander about the roads without proper lights is really most difficult to see. We motorists do not grumble at having to pay £20 or so for our lighting sets; why should not farmers' carts be equipped with lamps to the tune of 20s. or so? This figure would be ample to cover a set of three oil or candle lamps designed to climinate the risk of fire in the away of inflampable profuce being carried. risk of fire in the event of inflammable produce being carried. J. J. G. WELLER.

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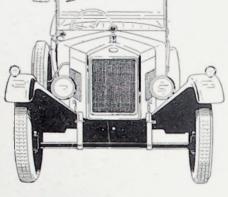
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OUR READERS' OPINIONS (contd.).

The "Land's End" Entries.

As a three-wheeler enthusiast, I was very pleased on reading your summary of the entries for the Land's End Trial to see that 26 cyclecars had been entered as against 20 last year. This, I think, is very

Three-wheelers v. satisfactory, as it represents an increase of 30 per cent.; sidecars, on the other hand, show only a slight increase, with an entry of 114 as against 108 in the 1926 event. Surely

this points to the fact that many former sidecar enthusiasts are being converted to the three-wheeler, which, after all, costs very little more to run, is equally sporting and vastly more comfortable.

A. T. Thompson.

To Reduce the Labour of Maintenance.

Can any reader tell me why it is that battery manufac-turers leave so little room for electrolite above the level of the plates in an accumulator? If, instead of there being

only about a quarter of an inch of free More space between the top of the plates and the base of the alling plug well, there was, say, a whole inch, surely it would request intervals.

frequent intervals. My own car has a 12-volt battery consisting of two 6-volt accumulators slung in brackets one on each side of the propeller shaft, and I find that the six cells As this need topping up at intervals of about a fortnight. means taking up the floorboards and getting distinctly greasy and dirty in the process, it would certainly be interesting to hear if there is not some panacea which would lay this bogy for keeps. A. R. WATSON.

 The sizes of batteries have been standardized, so that
 the provision of increased electrolite space would not be easy. Apart from this there is no electrical reason why a greater quantity of electrolite should not be carried .- ED.

Liability of Insurance Companies.

In the issue of The Light Car and Cyclecar dated April 1st a correspondent states that when the wiring of his car caught fire, owing to a dead short caused by the breakage of a blade in his electric horn, his insurance

Mechanical company fitted new wiring in place of that which was destroyed. In my own insurance policy it clearly states that, whereas the company are responsible for accidental damage, they are not responsible for mechanical breakages. It ap-

pears to me that the damage to his car was due to the latter.

I should like to know whether I have read your correspondent's statement correctly, or whether the liability of T.S.P.

different insurance companies varies. Mushroom Lighting-

The ideas put forward by Professor Low in connection with street lighting may be sound—and they may not. It would seem that the only way to test a scheme of this kind would be to illuminate a street in the

manner outlined and investigate the ad--Or Open vantages from practical experience. In Screens? putting forward the idea the professor

touched upon a subject which, to my mind, is of considerable importance. Scotland Yard authorities do not permit drivers of buses and taxicabs in London to look through glass. Two years ago I had an accident when driving a car in London at night, and was compelled to admit that the accident was entirely due to my not being able to see under the particular conditions prevailing nearly so well as if the windscreen had been open.

A do not suggest that the police should compel drivers in towns to open their screens and thus have uninterrupted vision, but I do think that every driver in his own interests and for the safety of others should make a rule not to look through glass when travelling in crowded streets after dark, particularly when it is raining. HUMPHREY HOLT.

Folding a Four-seater Hood.

The opening paragraph in "Rich Mixture" last week headed "A Chinese Puzzle," brings up a point which badly needs airing. We are all grateful to designers for the improved weather protection they have

given us during the past year or two, but with all due respect to their efforts I Designs Must Improve. think we are justified in asking a little

more from them. What we want is a hood for a four-seater car which is really of the "one man" variety. I know one or two proprietary hood manufacturers already market hoods which are above reproach in this respect, but the vast majority of car makers fit clumsy contrivances which are all right once they are up or furled, but very tiresome to raise or lower.

On my present car I usually drive for weeks on end during the winter with the hood up, simply because it takes such a long time to fold it and the job is almost an impossibility without the aid of a passenger. Actually, I am a "freshair fiend," and prefer to drive a really open car whenever it is not actually raining. With my old car, a 1924 four-seater Rover Eight, it was only a matter of a minute to raise or lower the head and the job was aften done three or four or lower the hood, and the job was often done three or four times in the course of a journey. Of course, the weather protection afforded was not so good as that provided on my latest car, but I am not sure that I do not prefer the old

Back Draughts in Open Cars.

I am glad to see that your contributor "Focus" has again brought up the subject of back draughts in open cars, and quite agree with him when he states that this fault

is largely responsible for the growing
Experiments Verypopularity of saloon cars. Personally, I
Much Needed. think this tendency to use enclosed cars
is a great pity, for I feel sure that for
pleasure purposes they are nothing like so healthy as a good

open car could be, were it not for troublesome back draughts.

Experiments are certainly necessary, and I think that by altering the angle and position of the screen the trouble could very largely be overcome. This idea is supported by my experience of a large number of cars, for in a few back draughts are noticeably absent, whilst in others which I have tried

Cumbersome All-weather Equipment—Back Draught.

they have been exceedingly troublesome. The curious part of it is, however, that some of the best and some of the worst had screens apparently in a similar position and tilted at a similar angle. This suggests that the general shape of the rest of the car has a lot to do with the problem and that the screen must be adjusted to suit individual cases.

I am afraid that manufacturers do not consider the matter

at all, but just design a body on paper and then proceed to make it, a fact which was borne out recently when I was



Friend: "I didn't know you'd bought a car, old boy. Find it expensive? Gay Young Owner: "Not too awful-a box of chocolates to the gallon ! "

driving a car with the screen tilted so that the headlights of following cars were directly reflected into my eyes. One would have thought that the manufacturer would have discovered this fault and altered the screen accordingly, but the fact that it has not been done shows that very few experiments can have been made.

H. CHARLES. B45



OUR READERS' OPINIONS (contd.).

Light Cars in the Making.

Allow me to congratulate you on your new series of articles under the heading of "Light Cars in the Making." Ever since I took up motoring a year ago I have taken a

great interest in technical aspects of the matter and have learned as much about the working of my car as I possibly can, but I have always felt that I should like

to have some idea of how my car was manufactured; if I can take the first of your new series as a typical example of what is to come, my wants will be satisfied.

Air-cooled Engine Condemned.

The letter from "Bebe" extolling the virtues of air-cooled engines suggests either that he has not had much experience with them or that he is unable through lack of acquaintance with both types to compare them with

Noisy and Troublesome. water-cooled engines. An ecoted and and are noisy, extravagant with oil and soon need their valve guides and similar about parts renewed. In addition they need decarbonizing about five times as frequently as water-cooled engines, they are more difficult to start and more troublesome to keep in good adjustment and repair. The air-cooling fetish has held too much sway in the past. Now the public has condemned it, let us allow it the enjoyment of its grave in peace.

JOWETT.

Aeroplane Elastic for Shock Absorbers.

There recently appeared in your columns an interesting hint with regard to the use of aeroplane rubber as a shock absorber, and my experience with this may be of value to your readers. I purchased 30s. worth

of elastic from the A.D. Aircraft Co., of Croydon Aerodrome, and fitted up A Complete Success. four springs on a 9-20 h.p. Rover foursenter and the back axle of a standard Austin Seven (the latter already had a Hartford slock absorber on the front axle). As this was only experimental, the ends of the elastic were merely wired together.

The result in both cases has been a complete success. Bucking, pitching and excessive rebound have been cured, and the clastic, after 1,000 miles' running, shows no signs of losing its resilience nor of pulling out at the wired ends. Incidentally, I have still a good length of elastic left out of my 30s. worth. B. C. DE W. SIFFKEN.

Learning to Drive.

The thought of the very large number of new drivers who

will be on the road at Easter prompts me to suggest that
some enterprising concern might construct a large "skidding ground" somewhere near London
Practise in so that drivers could practise correcting
Skidding. skids and sideslips. If the weather is fine throughout Easter the roads will be quite safe, but should it prove showery, I am sure there will be an appreciable number of accidents due to inexperienced drivers being unable to correct a skid.

The proper ways of correcting various kinds of skids were dealt with in a very clear manner in *The Light Car and Cyclecar* some time back, but the actual art can only be

learned by practice, and few owners are willing deliberately to provoke skids on a public road in order to practise correcting them. The result is they carry on driving and wait until the car begins to slide about unintentionally and then do their best to straighten it out. If they are lucky their first effort may be successful; if not, they crash into either a hedge or another car.

The trouble could be overcome by having a large concrete or asphalt ground on which car owners could practice skidding on payment of a small fee. Many drivers would, I think, take advantage of this scheme, and would, as a result, have far greater control over their cars when on the road. Possibly instructors could also be provided to help drivers in their initial efforts. This idea is used when teaching London omnibus drivers, and I am wondering whether any enterprising concern will lay out the ground on the lines suggested. Personally, I think it would pay. Windup.

CONDENSED CORRESPONDENCE.

Mr. J. J. Robson (Newcastle) writes in terms of praise of his 1927 10 h.p. Swift. He says that he has been a Swift owner since the days of the two-cylinder Swift cyclecar, and has never had the slightest desire for any other make of car. His latest model has just passed the five-thousand-mile mark and is averaging 38 m.p.g. of petrol and 2,000 m.p.g. of oil. So far there has not been so much as a puncture to mar Mr. Robson's enjoyment of his car.

A Sheffield reader, who asks to be allowed to remain anonymous, writes to say that he has converted an old Ford chassis to a three-wheeler, and that he has found the conversion a great success. A very considerable amount of work was required, he says, and many new parts needed. It was found possible to keep the weight under 8 cwt. and thus any out the publicage of public on weight product 25 hm and thus enjoy the privilege of using an engine rated at 23 h.p. and yet pay a tax of only £4 per annum!

"A Lea-Francis Owner" (Bridlington) writes to ask whether we consider the cost of spring gaiters is worth while. He says that a considerable amount of rust is ozzing out from between the leaves of his springs, but that in spite of it the suspension is much better than it was when the car was new and the springs clean and well lubricated. He cannot decide now whether to fit mitters clean and lubricate not decide now whether to fit gaiters, clean and lubricate the springs, or continue to run them in their present condition.

INFORMATION WANTED.

Wolseley .- Any reader who is willing to lend an instruction book dealing with the 1923 10 h.p. model is asked to communicate with H. Alexander, 18, Barfillan Drive, Half-

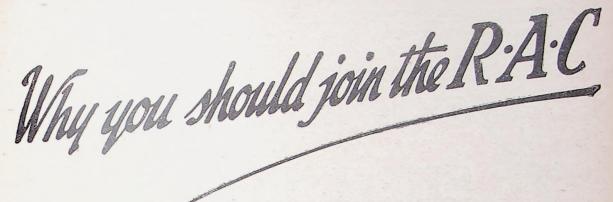
Swift.—The opportunity to buy an instruction book for the 1924 10 h.p. model would be appreciated; readers' experiences of this car would also be welcome.—H. W. Morris, Rose Dene, Rose Lane, Mosseny Hill, Liverpool.

Morgan.-Readers' experiences of the Aero model fitted with the S-45 h.p. racing J.A.P. engine, together with any hints regarding competition work with this car, and advice on the purchase of extra accessories and fittings, would be very much appreciated.—L. A. Cooke, Bradfield, Hill View Road, Orpington, Kent.

WANTED-EXPERIENCES OF A.C. OWNERS.

Prospective purchasers often write to us concerning the behaviour of certain makes of car in the hands of ordinary private owners, particularly with reference to such matters as reliability, maximum speed, ease of control, petrol consumption, and so on. We are, therefore, publishing in these columns readers' own experiences of popular cars, and we are devoting up to one page exclusively to this feature as regularly as possible. Preference will be given to the latest types, but earlier models will be dealt with if they are similar in essential details to the current models. In every case the year of manufacture must be given, and a mileage of at least 5,000 should have been covered. Letters should not be more than 200 words in length, and correspondents must give their names and addresses for publication. Actual facts-not opinions-are required.

The Writer of Every Letter Published will Receive a Six-shilling Sparking Plug.





FORGOTTEN

The Motorist who forgot to renew his Driving Licence.

This need never occur to an Associate-Member of the R.A.C. as, automatically and in ample time, he will be reminded by the Club when his licence is due for renewal. A small service which has saved inconvenience and possibly heavy penalties to thousands of members.

ROAD SERVICE IS NEEDED BY EVERY MOTORIST. The R.A.C. provides a complete service for the

motorist's every need. Beyond the many Guides on the Road always at hand with help and information, there is the "Get-you-home" Service—which alone is invaluable; then the Touring Facilities are of utmost use, so also are the Free Legal Defence, the Technical Advice and the Special Insurance Facilities. The Licence Reminder and Lost Property Services are in themselves special features, whilst the use of Local Offices and Reading Rooms is often extremely helpful. You know that you will undoubtedly require any one of these Services at some time—so become an R.A.C. Associate-Member now, and enjoy the most complete service whether on or off the Road. £2.2.0 per annum, without entrance fee Cars up to 1,100 c.c. pay £1.1.0 only.

Cut out, fill in in Block letters and post to: The Secretary, ROYAL AUTOMOBILE CLUB, 83, PALL MALL, LONDON, S.W I I would like to become an Associate-Member. Please send me illustrated booklet and full particulars free of charge.
Name

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SHELL MOTOR OIL

is just as dependable.

Scientifically blended to be quick-starting, non-wasting and heat-resisting.

Sold from sealed cabinets at bulk prices. Use the grade for your car—consult the chart on the cabinet.

"AS GOOD AS SHELL PETROL"





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

A Magnetized Screwdriver.

It is a good plan to magnetize a small screwdriver by stroking it several times across an ordinary horseshoe magnet, so that when handling small screws in awkward positions they will "stick" to the blade of the screwdriver. In the event of a screw being dropped into some place inaccessible to the hand it may be retrieved by the screwdriver.



How a cycle bell gong can be utilised to repair a mechanical horn.

A Mechanical Horn Repair.

Should the top of a hand-operated Klaxon horn become lost a useful repair can be made by utilizing the gong of a cycle bell and one of the screws used for securing cycle mudguards.

If the head of the screw is cut off a short-threaded stud is formed, one cend of which will screw into the hoss of the gong and the other into the hole in the top of the Klaxon plunger rod. A coat of black enamel will improve the appearance.

Greasy Brake Drums.

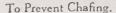
A render who inadvertently overoiled the back axle just prior to
setting out on a tour was dismayed to
find that the lubricant had found its
way on to the brake lining. No wheel
puller to remove the drums was available and the usual method of squirting
paraffin into the drums was ineffective.
He solved the problem by jacking up
the car, removing the wheels and holding a container of paraffin so that the
drum dipped well into the liquid. He
then rotated the drums so that paraffin
was splashed plentifully over the
linings, and finally drove the car for
some distance with the brakes applied,
after which they were found to work
with their former efficiency.

Cleaning the Engine.

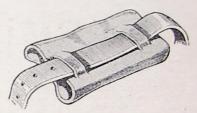
However good the condition of the bodywork, it is at the engine that the prospective buyer of a second-hand car first looks. Therefore, it will pay the owner to keep the "works" as clean as he can and to be prepared for the day when he wishes to dispose of his car. A marvellous improvement in appearance can be wrought if all the rust, oil and old paint are cleaned off the cylinder block and, after adjusting or renewing the radiator connections, tightening oil and fuel pipes and so on, the block is given a couple of coats of good quality liquid stove polish.

Curing Rattling Door Handles.

A drop or two of oil works wonders with parts of door-catch mechanism which develop rattles, but the difficulty, very often, is to gain access to the parts concerned. On some cars, for instance, there is an extension lever from the catch mechanism so that the door can be opened from inside by a slidablymounted lever about half-way along the door and this is frequently an offender. The only way to set to work is to take out the screws which, in most cases, are used to secure the upholstery to the door frame. Only the top row and, say, one or two down each side need be removed when the upholstery with its backing may be pulled gently away from the door frame, nuts or screws tightened up if necessary and lubricant applied where it is required. The writer carried out this treatment on a semi-sports Rover with great Success



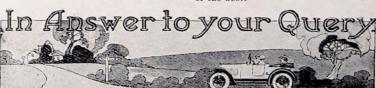
An accompanying sketch shows a simple but very practical means of preventing a suit-case or trunk, which is being carried on the rear luggage grid of a car, from chafing the back body panel. An old inner tube should be obtained and sections cut from it as shown. These can be slipped over the straps into the positions where the trunk touches the panel, thus providing a rubber buffer, which will eliminate the risk of any damage.



Pieces of an old inner tube can be used, as shown, to prevent luggage chafing the bodywork.

Door Pocket for Austins.

A pocket in one of the doors of an Austin Seven is a useful addition well worth making, for it can be conveni-ently used to carry maps and papers. It is not dishcult to make a pocket of this type, for it is necessary only to unscrew the aluminium beading from the top edge of the door, the pressstud and the leather-cloth loop. On re-moving the ply-wood panel, which forms the inner face of the door, a space will be found which will be sufficient to take at least two maps. A slot should be cut in the plywood and another in the covering leather-cloth, which should be glued to the wood so that the two openings coincide. fix the size of the pocket three strips of wood about 3 in. wide should be tacked to the inside of the panel. These form the bottom and the sides of the pocket, and care should be taken to make them a good fit, so that small objects cannot drop through into the lower part of the door.



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.

M.D. (Stalybridge).—No alteration to your magneto is necessary for fitting Mitchell "Hotsparks." The cost is 5s. for a set of four, and they can be obtained at most large necessories dealers.

R.R.G. (Belfast).—Thomas Black and Sons (Greenock), Ltd., of Greenock, Scotland, market the type of tent which you require. It completely covers the vehicle and a curtain divides the tent from the car. D.D. (Dover).—The address of the manufacturers of Sandford cyclecars is Messrs. Sandford, 72, Avenue des Ternes, Paris. We have not seen a recent price list, but, taking into consideration the present rate of exchange, the price of the open touring model would be somewhere about £100 in Paris. Yes, all three wheels are interchangeable.

A.N.E. (Boston).—The Bugatti engine you have is an eight-valve model if the carburetter is on the off side and the exhaust manifold on the near side of the engine. A further indication of difference between this and the 16-valve type is the maker's name cast on the camshaft casing on the eight-valve models. From the information given in



your letter we should say that the date of the car to which you referred would probably not be later than 1913.

L.C.M. (Edgbaston) .- Dark streaks down the outer wall of a piston are not necessarily a sign that the piston has become oval, but that the rings are gummed up and therefore the piston is not gastight. The marks are the result of the exploded mixture being forced down the cylinder wall and leaving a deposit on the piston.

(Stoke-on-Trent) .- You COcither remove the pedals and rough them up by indenting them with a centre punch, or you can purchase rubber pedal covers, which would be even more satisfactory.

G.B. (Stoke Newington).-We do not havise you to make structural alterations to the tail of your four-seater to overcome back-draught. As a matter of fact this can be countered to a large extent by using a rear screen.

CLUB NEWS.

SPEN VALLEY M.C. AND L.C.C.

The annual general meeting of this club wa held at the George Hotel, Cleckheaton, on Mon day, April 11th.

THE MID-WEAR AND D. M.C.

The fixture list includes a number of social runs, and amonast the sporting events are speed trials at Pruridge Bay on May 22nd and September 4th. Seven reliability trials and three hill-climbs also figure on the programme.

HONITON M.C. AND L.C.C.

HONITON M.C. AND L.C.C.

The weather conditions on the occasion of the club's second seem to the reason were the worst experienced for some time. A very cold wind, accompanied by continuous rain, marred the proceedings, but, in spite of this, a very encouraging number of entrants faced the starter. At Sidmouth the waves were well over the sea front, and some of the motor-cle riders experienced magneto trouble, which caused them to retire. Only a third of the original entries checked in at the mish. A clock, presented for the best performance by passeager machines, was won by H. Ricardo (Austin Seven), and F. W. Sansom, driving an A.C., won a silver medal.

LONDON M.C.

The London Motor Club will be holding a carnival dance on Thursday, April 28th. a the Addly Rooms, 449, Oxford Street, London, W.1, from 8 p.m. until 1 a.m. Tickets, which are 2s. 6d. each, may be obtained from club and the street of the control of the control

GRAND CUP TRIAL According to the provisional results of the State of the premier award, the Sopwith cup, was won by R. C. Porter (Amilcar). Silver medal H. J. Lornti, (Jowett). Bronze medal: J. P. Jingto Lovata (Jowett), Brown (Lea-Francis), R.A.C. PERMITS.

The R.A.C. has issued the following permits—Open, May 7th, Essex M.C., Brooklands meeting April 26th, Huddersheld and D. M.S.C., freak hill-elimbu Arril 17th and 18th North Liverpool M.C.C. reliability trial; April 18th Oswestry and D. M.C., reliability trial; May 27th and 28th, Ealing and D. M.C.C., London-Helyboad trial;

FRATRES VOLANTES M.C.

A sporting cramble over the northern beight around Hatfield was held on March 27th, and the course included much colorid coing, brake test, a slow hill-climb and tooling were divided into two classes regardless of horse-power, and the car results were as follow—1. F. C. Harrison (Citroen); 2, C. A. Johnson (Welseley).

WELSH 24 HOURS.



J. P. Dingle (Lea-Francis) negotiating "Slippery Sam," in the Grand Cup trial, and W. H. Oliver (Austin) interesting the spectators on Race Head Hill in the Travers Trophy trial. B50

900 is claimed to be the most authoritative, most enterprising,

the

motoring journals.

the most original

comprehensive

journal to use wireless SHE first motoring photographs to illustrate American news - to issue classified car price lists and other presenta-tion booklets — to adopt perspective illustrations of mechanical drawings-to publish a motoring-wireless feature—and to originate other ideas, since copied.

It is first with exclusive descriptions of new cars and all the NEWS by aeroplane and wireless services.

THE MOTOR calers for ALL MOTORISTS, from the small car owner-driver to the user of high-powered automobiles, and any statement suggesting that this is not the case is

LONDON MOTORISTS' RALLY.

The South Midland Centre of the A.C.U. requests clubs to note that the annual London gaily of motorists held on Whit Monday will not take place this year, on necount of a suitable ground being unavailable.

PENRITH AND D. M.C.

This club opened the season on April 3rd with a social run to Hesham. There was a falrly good turnout, which included a few non-members. The outward journey was by Hartside and Aiston, and after tea at the Royal Hotel, Hesham, the return journey was made in the evening by Haltwhistle and Brampton to Carlisle and then on to Penrith.

SHEFFIELD AND HALLAMSHIRE M.C.C.

SHEFFIELD AND HALLAMSHIRE M.C.C.
Over 70 nembers took part in a uccessful
opening run recently to Blackamill Hill. Derbwhite. The even proved to be a centre of attraction to motorists from all the surrounding
cistricts, and a large number assembled at Taddington. Mr. J. Harrison, I, Byron Road,
Sheffield, is the hon, secretary, and will be
pleased to give further information concerning
the club. pleased t the club.

J.C.C. (YORKS CENTRE).

J.C.C. (YORKS CENTRE).

The rally and slow hill-climb events were held on Saturday, April 9th, in pouring rain, at Oiley, the climb being up file there is a to on knoekout lines in heats of two cars, and the attendance was quite good considering the weather conditions, there being 15 cars and 11 entrants present. The results were:—1, E. 18. Slater (Yeadon), Clyno; 2, II. B. Shaw (Leeds), Morris-Cowley; 5, S. T. Carrier (Barnier). An impromptu speed hill-climb held after the main ovent resulted as follows:—1, S. T. Carrier (Amilear): 2, Capt. Trubic Moore (Talbot); 5, C. D. Wilson (Alvis).

NORTH LONDON M.C.

NORTH LONDON M.C.

Some 28 competitors covered the course in a reliability trial held recently under the joint organization of the North West Loudon and North London Motor Clubs, and, in spite of the continuous rain, an enjoyable afternoen's sport was obtained. Provisional results (subject to confirmation) are as follow:—Staley Cup: R. T. Bowen. Prevident's prize: J. Mann. Invitation prize: F. Calvert. Silver spoon: E. J. Davica. Ash trays: V. Tuson. T. Taylor and A. E. Field. On April 24th a social run de Ashridge Park will be held. Motorlats are forminded that the closing date for entries for the A.O.F.B. trial is April 20th, and the central run on novel lines and A. an opprtunity not to be missed, for the enhance fee levied on those plon are not Frotholowers will enrol them in the Ancient Order.



PENED last week at Manchester, this new Depot has been organised to provide our northern customers with exactly the same unique facilities and service which have enabled us to rise to the position of London's Leading Motor Agents.

Ideally situated at the corner of Deansgate and Peter Street, these spacious showrooms contain a wide and exclusive range of new and used cars, including Alvis, Austin, Swift, etc., at prices from £100.

Suitable service facilities are available. Our payment terms from £25 down are unique, simple, and strictly private. And we will definitely give the very highest price for any car in exchange.

Why not call and judge for yourself, or write for catalogues and lists?

It is with pride and confidence that we also announce that we have been appointed sole Manchester Distributors for the finest 12 h.p. car in the world—the amazing new Alvis. For a tax of only £12 it gives no less than 50 h.p. and the effortless power and comfort of cars which cost twice as much. Full range of models in dazzling coachwork and colour schemes on view. Beautiful catalogue sent by return.



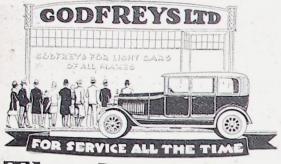


NEW NORTHERN DEPOT

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Thinking of a new car?

Perhaps you haven't quite decided which one best suits your purpose, and your pocket. Well, in our showrooms you will find the car that meets your requirements exactly. We are confident of this because we hold a comprehensive range of makes and models—saloons, coupes, tourers, two-seaters. Come and see the cars we have in stock. Compare them, and, if you wish, receive our opinion concerning their respective merits. At the same time take the opportunity of investigating our Deferred Payment System for the purchase of your car. You will find that our service is always at your service—unstintingly.

May we arrange a demonstration?

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Hours of business at Stamford Hill: 9-8. Thursdays 9-1.

AROUND THE TRADE.

St. Helen's Rubber Works, Slough, announce a 20 per cent, reduction in the price of the popular Everlastic inner tubes,

We have received from Boulton and Paul, Ltd., Norwich, a copy of their catalogue of motor houses, in which there are one or two new designs of an extremely attractive nature. One particularly interesting model is an asbestos house at prices ranging from £15 10s.

In view of the Easter holidays, A. W. Gamage, Ltd., Helbern, E.C.1, have been concentrating especially on aids to driving comfort, and their range includes excellent value in leather coats, rugs, gauntlet gloves and motor trunks, all of which are calculated to be of especial value to tourists who appreciate comfortable motoring.

We have to hand the March copy of The Accessory, the interesting publication issued by Brown Brothers, Ltd., As usual, it is full of information concerning useful motoring "gadgets" and the centre pages are devoted in a large degree to convenient and serviceable equipment for touring, picnic outfits being well represented.

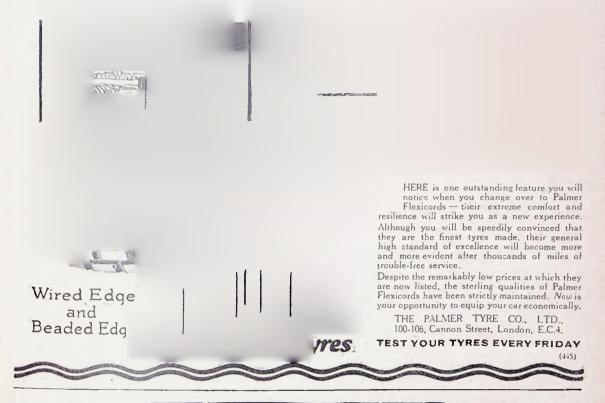


Major H. O. D. Segrave telephoning the news of his record-breaking feat to his wife. Note the wrapt expressions of hero-worship on the faces of his friends.

A leaflet, entitled the "No Sulphation" Felder, issued by Tungstone Accumulator Co., Ltd., 3 St. Bride's House, Salisbury Square, London, E.C.4, claims 96 per cent. ampere hour and 88 per cent. watt-hour efficiency for Tungstone accumulators, which are made to fit 95 different makes of car. The price of the six volt 50 amp. hour model is £4 17s. 6d.

It is interesting to note that the Osram Lamp Works at Hammersmith, where Osram lamps for every type of lighting are made, is a huge factory with over 400,000 square feet of floor space. Motorists will be interested to know that the lamps are inspected during their production to see that they are correct in over one hundred details before they are permitted to leave the factory.

We learn that Bluemel Bros., Ltd., of Wolston, Coventry, have now issued for the use of traders, in connection with their permanently white letters and figures for registration number plates, a neat instruction card fitted with a cord for hanging in the garage or workshop. It carries a diagram and reference chart which, it is claimed, make error in fixing impossible and ensure a neat, efficient job in a minimum of time. For motorists who prefer to buy the letters and figures separately and rivet their own plates, a leaflet is issued giving complete instructions and diagrams. Either of these publications can be obtained upon application to the manufacturers.





Warwick Wright Says



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

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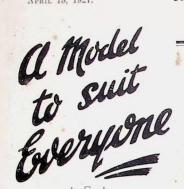
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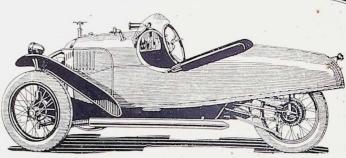


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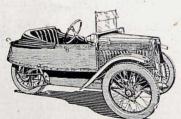
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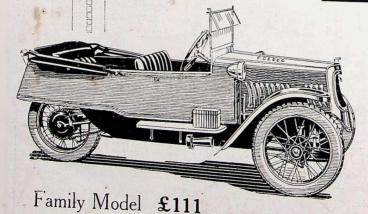
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