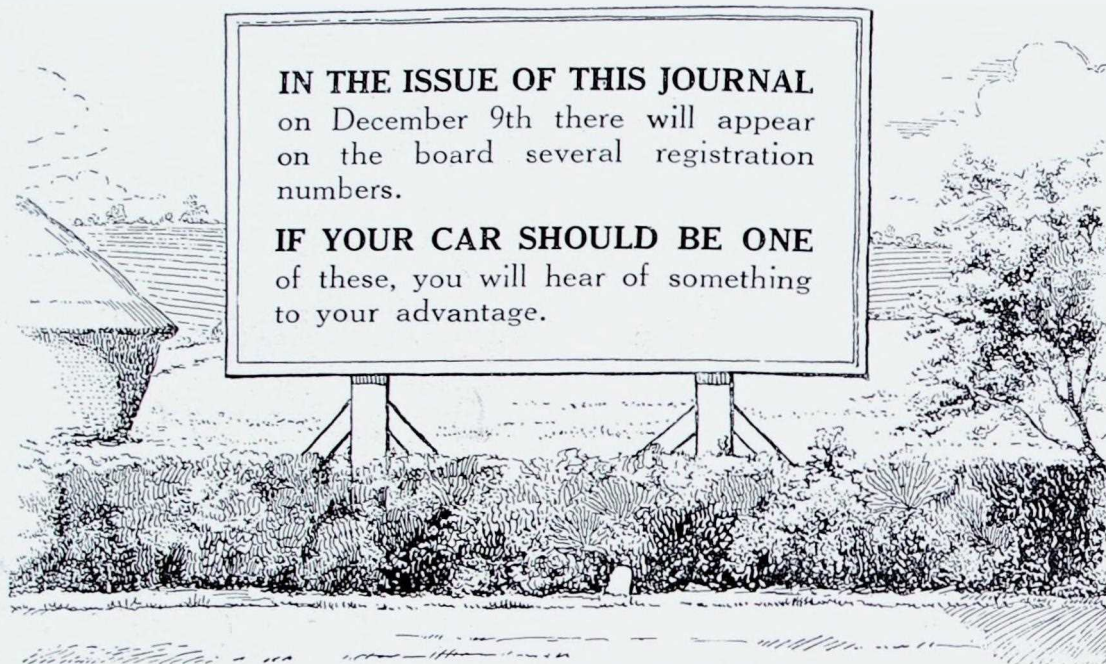


The only Small Car Journal

A SECOND-READ
NEW ZEALAND
Light cars have real fun

WATCH THIS BOARD



ARE YOU THINKING OF CHANGING YOUR PRESENT CAR
with its out-of-date, draughty, and rather unsatisfactory side curtains
for an up-to-date model with real, good all-weather equipment, or
perhaps a Saloon?

If you are, we can supply for Immediate Delivery a car to suit your
requirements and your pocket.

AUSTIN CITROEN CLYNO	Low Deferred Payment Terms	HUMBER ROVER TROJAN
NORMAND GARAGE LTD		

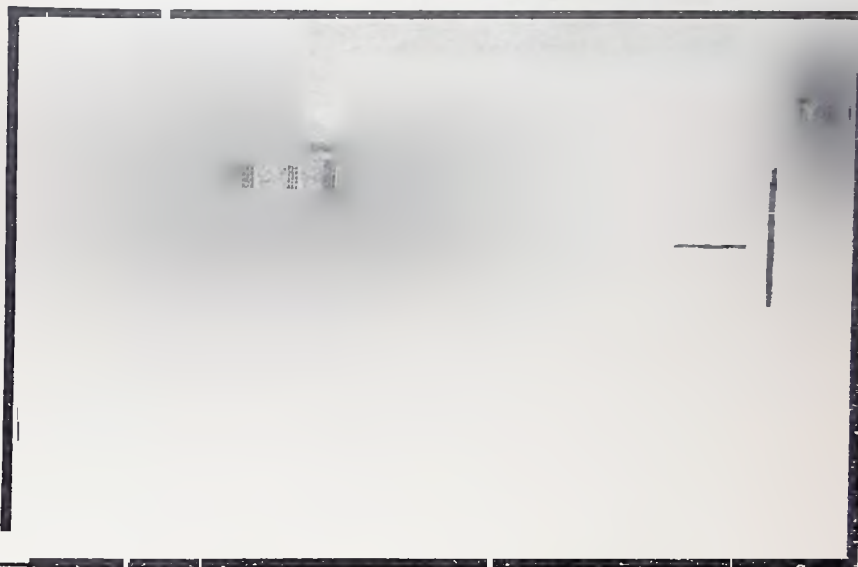
92,
Gloucester
Road, S.W.7.

NEAR MARBLE ARCH.
489, OXFORD STREET, W.1.
OPEN UNTIL 6 p.m. ON SATURDAYS.

7 and 8,
Fairmeadow,
Maidstone.

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

The pull of an elephant



Hazelville Road,
Hornsey Rise,
London, N.19.

Dear Sirs, Re 1925 Jowett full four.

"I am proud to tell you that on Sunday last with my '25 full four I towed my friend's 2-seater ——— (which I believe is a much heavier car) all the way from Beachy Head (Eastbourne) to North London, which is a fairly hilly road most part of the way..... Incidentally, I have convinced the ——— owner (who was previously sceptical) of the pulling power of the Jowett, and I think his next car will be one of your production, and for a certainty my next car will be a Jowett again."

- A car with twenty-one years' experience behind it merits your attention, because experience counts very heavily in motor car production. The Jowett gives a maximum performance at a minimum expense.

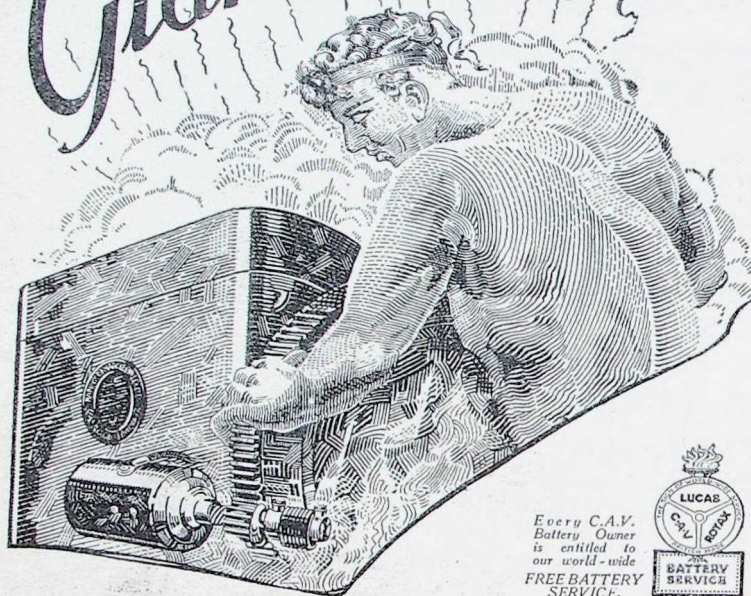
Its reliability is world renowned. Allow us to send you our literature, including running costs folder, which tells you exactly how you stand.

Prices from £134, each car fully equipped.

Dunlop Balloons and Stewart Speedometers standard.

JOWETT CARS LTD., IDLE, BRADFORD

Giant Energy



C.A.V.

BATTERIES

A touch of the starter switch releases tremendous starting current from a C.A.V. Battery which will awaken to life the most sticky engine as though by giant energy.

Such performance is the well merited achievement of unceasing efforts for improvement in battery manufacture, extending over a period of 36 years.

Super refinements in the design and construction of every single part provide wide margins of electrical efficiency and mechanical strength, ensuring reliable, vigorous and trouble-free service to every owner of a C.A.V. Battery.

There is a C.A.V. Battery for your car, which will fit—and a Service Agent near you who will supply it—let us send you his address.

C.A.V. Vandervell & Co. Ltd.
ACTON, LONDON, W 3

Telephone: Chiswick 3891.
Telegrams: "Vanteria, Act, London."

SALES AND SERVICE DEPOTS AT
Belfast, Birmingham, Bristol, Coventry,
Dublin, Glasgow, Leeds, Manchester, and
Newcastle-on-Tyne.

Battery Service Agents in every important centre throughout the country.

Every C.A.V.
Battery Owner
is entitled to
our world-wide
**FREE BATTERY
SERVICE.**



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

DEEMSTER SERVICE

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.

'Grams—"Multimart Sudist, London."



IT MAY BE TO-DAY IT MAY BE TO-MORROW

Where will you be
when it happens?
Be safe and pack

FLUXITE

it simplifies soldering

**FLUXITE SOLDERING
SET - - Complete 7/6**

All Hardware and Ironmongery Stores
sell FLUXITE in tins, price 8d., 1s. 4d.
and 2s. 8d. Another use for Fluxite—Hardening
Tools and Case Hardening. Ask for
leaflet on improved methods.

FLUXITE LTD.
(Dept. 420), Rotherhithe, S.E.6



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

DO NOT MISS this week's issue of

Tuesday, Nov. 22nd

The Engine: Special Winter Precautions.

The Importance of Maintaining a Reasonably High Working Temperature. Allowing the Engine to Warm Up on Cold Mornings.

Unique Springless Suspension System.

Ingenious System which May Displace Leaf Springs. A New and Novel Use for Rubber.

Two New Infinitely Variable Gears.

Ingenious Device in which Swash Plate Controls Epicyclic Gearing, and a Novel Friction Drive.

Overhauling the Electrical Equipment.

How to Get the Utmost Efficiency in Winter Months.

Great Britain's Part in Future Motor Racing.

Further Opinions by the Earl of Cottenham, Mr. J. W. F. Crouch and Mr. G. E. T. Eyston.

World Motor Transport Congress.

Special Motor Speedways Discussed. Foreign Touring Facilities. Traffic Congestion and Road-making Problems.

Masked Valves: Their Construction and Purpose.

Interesting Expedient for Improving the Efficiency of the Valve Gear Explained.

Road Racing in Ireland.

The Proposal to hold a Real Grand Prix in the British Isles.

The Inter-Varsity Reliability Trial.

No Competitor Successful in Negotiating the Complete Course.

What Next? Cars Developed on Rational Lines.

Combining the Latest Ideas to Build Safer, Faster, and More Useful Vehicles.

Some features next week Tuesday, Nov. 29th.

Road Vehicle Lighting.—The Principles of Traffic Illumination. Modifications and Exemptions in the New Lighting Bill and why They are Opposed.

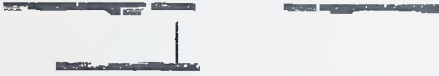
Inter-Connected Braking Systems.—Growing Popularity of the Arrangement in which the Hand Lever is coupled with the Pedal-controlled Brakes.

ALL THE NEWS AND NEWS PICTURES.

*The
National
Motor
Journal*

venue, Lond

IN THE BIG-LIGHT



1928 "BIG LIGHT" 10/24

h.p. Weymann Saloon. Four-cylinder, four-door, four-wheel brakes (Tax £9). Finished dark grey or dark red, real Weymann body. Every modern refinement in equipment.

40 m.p.g. petrol. 1,500 m.p.g. oil. 1,500 miles per set of tyres. Complete freedom from mechanical troubles.

"No-expense" bodywork.

as shown



The manufacturers of MATHIS cars have never sacrificed Comfort at the altar of Economy—which fact is convincingly evident in the 1928 "BIG LIGHT" models.

OWEVER fastidious of your comfort you may be, you cannot justly find anything but enthusiastic praise for the MATHIS 10/24 Weymann Saloon. The passengers in the back seat are treated with the same consideration as the driver—the same roomy seat and velvety springs, and the same easy leg room.

And the body is *REAL* Weymann—not the fabric imitation that marks the obviously cheap cars of the moment. Write or phone for a trial run.

25, Basil Street, Knightsbridge,
London, S.W.1
(Near Harrods).

*Phone : Sloane 6118/9. *Grams : Aumarshano, Knights, London. **

Glasgow Agents: D. McNeil, Ltd., 144, Buchanan Street.

Hear broadcasting at its best

"Open type

Other models
from

37/6

Ask your radio dealer to demonstrate the

AMPLION CONE SPEAKER

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



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

RENAULT

**45 M.P.G. over 45 M.P.H.
4 WHEEL BRAKES, TAX £9
FULL EQUIPMENT—
£169**



TO an almost unbelievable extent the Renault 9/15 is free from the ordinary limitations of the low-priced car. Its speed capacity of 45 miles per hour is linked with a high-strung acceleration immeasurably superior to others of its class. Its substantial four-door body provides deep, comfortable seating and ample leg room at front and rear. Write for fully descriptive literature, or allow us to demonstrate these facts by a trial run.

9/15 MODELS.

PRICES: 2-seater with double dickey, £179. Standard 4-door Tourer, £169. De Luxe 4-door Tourer, £179. Standard 4-door Weymann Type or Metal Panelled Saloon, £182. De Luxe 4-door Weymann Type or Metal Panelled Saloon, £199. Coupe, £224.

MONASIX MODELS.

PRICES: 4½-seater 4-door Tourer, £279. 4-door Weymann Type or Metal Panelled Saloon, £299. 4½-seater fixed head all-weather, £324. Folding head Coupe with a double dickey, £324.

*Also
the new*

RENAULT LTD., Head Office and Works,
14, Seagrave Road, West Brompton, S.W. 6.
Showrooms: 21, Pall Mall, S.W. 1. (Phone: Reg. 0974.)

RENAULT MONASIX

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

Player's please!



NCC/173.

Not a heater only, but
a lamp with "101" uses,
absolutely safe in all.

start with a swing on the frostiest morn

Winter cold is a bug-bear to motorists. It makes starting difficult and, if proper precautions are not taken, a freeze-up may result, cylinders and jackets be cracked, and the bus be out of commission whilst undergoing costly repairs.

And all because you do not use a

PROTECTOR[®] PATENT SAFETY LAMP

*Approved by the leading Insurance Companies
and used by H.M. Government.*

Place a lighted "Protector" overnight in the bonnet of your car. The warm air it circulates keeps the engine warm and the oil from solidifying, making starting-up easier on the coldest morning. It eliminates all necessity to drain the radiator, prevents a freeze-up and all possible injuries from frost, and being the only lamp of its kind absolutely safe against fire or explosion, it is the only efficient alternative to a costly heating and lighting installation in the garage.

You will need a "Protector" badly this winter.

Get it NOW

It has 101 other uses absolutely safe in all.

The "Protector" burns petrol, 30 hours, one filling, costing less than 4d. Gives 1 C.P. light (adequate for inspection purposes), is clean, free from smell. Turned in solid brass, British made, weighs 3½ lbs., measures 10" x 3½".

Sold by Garages and
the sole makers.

Carriage Paid in U.K.

20/-

**PROTECTOR LAMP &
LIGHTING CO., LTD.,
Eccles : Manchester.**

Place lamp in bonnet over-
night and ensure easier
starting in the morning.

LONDON MORGAN SERVICE DEPOT ANNOUNCE NEW 1928 PRICES

Aero, O.H.V., J.A.P. Model	£132
Super Aero O.H.V., J.A.P. Model	£145
Aero Model	£119
Air-cooled Family Model	£102
Water-cooled Family Model	£112
Air-cooled de Luxe Model	£100
Water-cooled de Luxe Model	£110
Standard Model	£85

Self Starter, £8 extra. Geared Steering, £2 extra.

DEFERRED TERMS. TRADE SUPPLIED.

Write for Catalogue.

HOMAC'S

MOTOR AGENTS

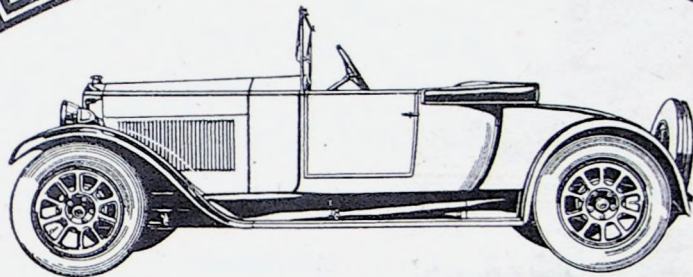
Phone :
Clissold
2403.

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

Send
for
Lists.

FIAT

SENSATIONAL NEW PRICES



Representative example
of Fiat Value

9 h.p. 2-Seater

English Coachwork. Cellulose finish. Upholstered in real leather. New type carburetter with easy starting device.

Roomy dickey.

Four-wheel
brakes.

Tax £8.

£190

Gradual Payments
— Arranged

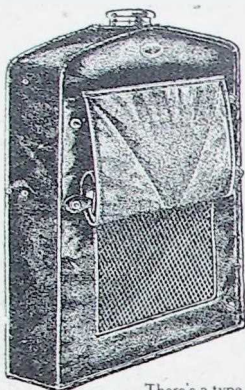
4-cyl. Models:—9 h.p., 12 h.p. Warning. With every Fiat Car a full guarantee is issued by this company. Every purchaser should obtain this guarantee and see that it bears the chassis and engine numbers of the machine purchased. The public is warned not to purchase a car without this guarantee.

Registered Office and Showrooms
43-44, Albemarle Street,
London, W.1.

Phone: Gerard 7946 (4 lines).
Wires: Fiatism, Piccy, London.

For everything pertaining to
spares, service, etc., communi-
cate direct with the Works,
Wembley, Middlesex.
FIAT (England) LTD.

Facts on Thermal Efficiency



There's a type of "Midland" Muff to suit every make of car.

NOTE THESE PRICES:

Austin 7	10/-
Clyno	11/-
Singer 8	11/-
Swift 10	11/-
Citroen 7	12/6
Jowett	12/6
Riley 9	12/6

The MIDLAND Radiator Muff

has been produced in consultation with eminent Motoring Engineers—to conserve heat, not at any given point, but over the entire radiating surface.

The flap is made to roll upwards, enabling the temperature of the top of the radiator to be maintained at a higher degree, thereby increasing the temperature of the whole water system, a very desirable feature during winter running.

To merely protect the bottom of the radiator, leaving the top portion exposed, does not attain this object, as by this method *valuable heat units are dissipated.*

The Midland is a sound engineering job built upon *practical* knowledge of thermal efficiency.

MIDLAND GEAR CASE CO., LTD.,
Allcroft Works, Hall Green, Birmingham.

A B. & P. Motor House will save Garage Expense

Model No. B202
(as illustrated)
£50.



CONSTRUCTED OF first-class materials and excellently designed, B. & P. Motor Houses are a sound proposition at any time. Start saving your garage bills now. These houses are tenant's fixtures and may be easily erected or dismantled by any handy man. High grade finish in every detail.

Prices of other Standard Designs

No. B217 Urban Motor House
Size 14' x 8' x 6' 6" high
to eaves, for two-seater **£15 : 5**
Size 16' x 8' x 6' 6" high
to eaves, for four-seater **£17 : 10**

Carriage paid to stations in
England and Wales.

No. B216 MOTOR HOUSE
Size 14' x 8' x 6' 6" high
to eaves, for two-seater **£15 : 0**
Size 16' x 8' x 6' 6" high
to eaves, for four-seater **£18 : 10**

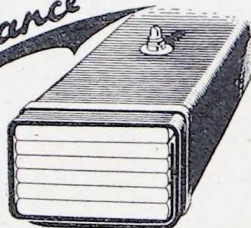
Ask for Catalogue No. 629.

Boulton & Paul Ltd

Telegrams: **NORWICH**
BOULTON NORWICH NORWICH (Sines)
LONDON OFFICE 135-137 QUEEN VICTORIA ST. E.C.
Telegrams: Boulton Cent London Telephone 4642 Cent

Visit our Show-rooms at Norwich or London where examples of B. & P. Standard Motor Houses can be seen.

You can see
at a glance



Why?

the "Quick Fit" Gaiters are made standard Equipment on Daimler, Swift, Alvis, Humber, Triumph, Singer, Rover, Standard, Riley, and many other well known cars.

"Quick Fit you will eventually fit."

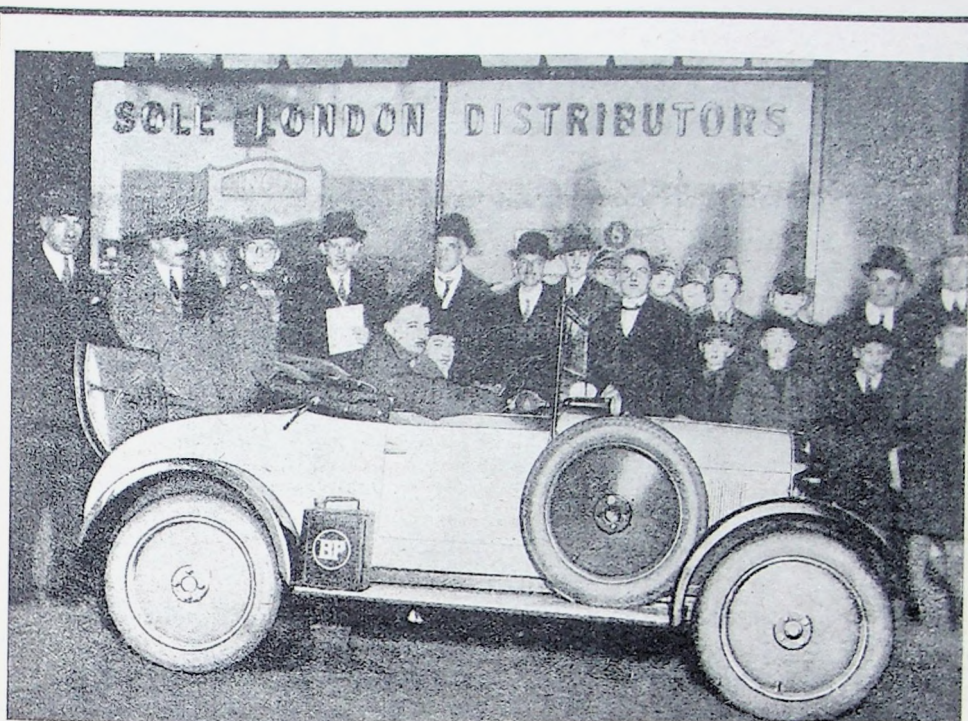
Quick Fit
Gaiters

W. DICKINS & Co., LTD.
CROSS CHEAPING, COVENTRY

Telephone 5176.

Telegrams: "Leather, Coventry."
COVENT

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



"SINGER JUNIOR"

Mr. E. W. Deeley at the wheel after
786 Miles in 24 hours and 55 minutes
LONDON TO EDINBURGH AND BACK

MEDIUM
"Filtrate"
REGISTERED
OIL

WAS USED
ON THIS WONDERFUL RUN

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.

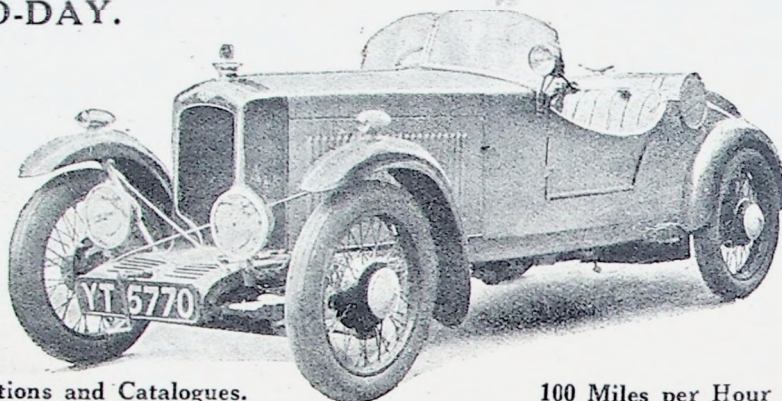
What does this stand for ?



This is a question we are frequently asked.

IT STANDS FOR THE CHEAPEST, BEST AND MOST COMFORTABLE SUPERCHARGED SPORTS CAR OF TO-DAY.

**SPORTS
MODELS
from
£240**



**SUPER-
CHARGED
MODELS
from
£300**

Demonstrations and Catalogues.

100 Miles per Hour Guaranteed.

Sole Concessionaires Great Britain, Ireland and Colonies:

BOSTON AUTOMOBILE ENGINEERING CO.,

SHOWROOMS:—

103, FULHAM ROAD, S.W.3.

Phone: Sloane 5906.

THE DESMO HYDRAULIC JACK

The strong man of the Desmo family. It will lift 2 Tons easily and smoothly and only costs

Undoubtedly the finest value ever offered in Hydraulic Jacks.

DESMO RADIATOR MUFFS

The Standard muff is a quality muff made for any make of car. The "Popular," made for the most popular types of cars, such as Morris-Cowley, etc.

"POPULAR" .. 12/6
STANDARD .. 18/6

DESMO LTD., STAFFORD STREET BIRMINGHAM.

Phone: Cen. 6547 (4 lines, Private Branch Ex.)
Grams: "Desmo, Birmingham."

Scottish Depot: Oswald Chambers, Oswald St., Glasgow, C.I.
Phone: Cen. 8090.
Grams: "Desmolite, Glasgow."

8 WEEKS FREE MOTORING!

**THE £50 CAR
HAS ARRIVED!!**

GENUINE SALE OF CARS

Taken in part exchange for New Ones.

25 CARS at £50 EACH AND UNDER

MOST OF THEM CARRYING OUR WELL-KNOWN WRITTEN GUARANTEE.

30 CARS from £55 to £100 EACH

ALL CARRYING OUR WELL-KNOWN WRITTEN GUARANTEE.

Full Price Paid will be allowed on any of these cars if you purchase from us a new car within two months.

Best Exchange and Deferred Terms in London.

Special Agents for Austin, Standard, and Wolseley Cars.

**YOU NEVER TAKE A RISK WHEN YOU
BUY A CAR FROM**

The Light Car Co.

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

Phones—Museum 3081 and 2122 (3 lines).

Kennington, S.E.11.

"I am gratified to know that you are pleased with the way I have carried out my part of the business done with you, and can only add that you have treated me in a like and business manner, and on this experience you may depend that I shall place any further business I wish to do in your hands. I have already recommended two people in you, with whom you have done business. This is sufficient proof of my good business relations with you, and in closing my letter I wish you success and the Compliments of the Season."

Yours faithfully (Signed) W. F. D.

READ WHAT OTHERS SAY.

These letters, coming from keen motorists, give some indication of the extent of our Service.

Carlisle.

"I wish to thank you very much for your kindness in the matter, and also for sending such a courteous and capable representative. We all thoroughly enjoyed his company, and his very illuminating lectures on motor matters. He certainly did his best to make me understand, and if I have failed it was through no lack of teaching on his part."

Yours faithfully,
(Signed) T. H. B.

Derby.

"I should like to thank you for the way you have met me over the transaction, and perhaps you will thank your representative for his kindness in explaining the details of the car."

Yours faithfully,
(Signed) T. O. M.

Redcar, Yorks.

"I should like to take the opportunity of expressing my appreciation of the courtesy and attention given me by all the members of your staff that I have had the pleasure of meeting in our transaction."

Yours faithfully,
(Signed) A. E. S.

Scarborough.

"I have to thank you for your courtesy in reminding me of the renewal date for my driving licence. It is by such useful service to its clients that The Service Company abundantly justifies its name."

"The booklet, 'Service and Sales,' is most interesting and those who have had the pleasure of dealing with the Company will gladly testify to the generous manner in which you interpret the word 'Service.'"

Faithfully yours,
(Signed) F. H.

A BAD START

The proportion of people who recover from bad starts—at anything—isn't great. With motoring it's the same; get off the mark the wrong way and in a very short time you will be grimaing at every toot of a horn. Come to The Service Co. for your car and get a flying start. You've read what others say about us. We have a customer who told us once that "If there were Houses that offered better terms, selection and general service to the average man... then the Motor Industry must be a back number—in Mars." This customer selected his car from our stock tried it, included Tax, Insurance, Accessories and Equipment in the account, paid a fifth of the total cost down and was given immediate delivery. Come to The Service Co. or write for a copy of "The Diary of a Car Tester." It is sent post free with pleasure.

FAMOUS MAKES

Our Agencies for 1928 include the following:—

AUSTIN	CITROEN	CLYNO
JOWETT	PEUGEOT	ROVER
SINGER	STANDARD	SWIFT

You can see the latest models in our Showrooms. **TERMS** — Cash, Part Exchange, Extended Payments and "No Deposit" (12 monthly payments).

SOME OFFERS IN USED & DEMONSTRATION CARS

ROVER, 10 h.p., 1928 "Paris" Saloon. Demonstration Model. Taxed and Insured	£225
ROVER, 9 h.p., 1926 "Super" Model, 4-seater, perfect condition. Insurance paid	£118
ROVER, 9 h.p., 1927 "Super," 4-seater. Tax paid	£148
SINGER, 1927, 4-seater "De Luxe" Maroon. Demonstration car	£148
SINGER, 1924, 4-seater, splendid condition	£65
SINGER, 1926, "De Luxe" Model	£110
SWIFT, 1927, 2 seater, as new	£150
CLYNO, 1926, "Royal" Saloon, many extras	£115
AUSTIN, 7 h.p., 1926 "Chummy" Models (2)	£92.10
CITROEN, 1926, Cloverleaf Model	£65
GWYNNE, 1924, 4-seater, very fine condition	£62.10

This list is typical of the many used bargains we have in stock, all of which are backed by our jealously-guarded reputation. Best Possible Deferred Payment Terms arranged.

Cardiff, has so far

and I should like to take this opportunity of expressing my appreciation of the attention and courtesy extended to me by the staff at your London showroom when I came to take over the car."

Yours faithfully,
(Signed) J. F. O.

Yours faithfully

Birkenhead.

As regards your letter I can only endorse what I wrote to you in my last letter, and I would like to pass a comment on the exceedingly polite and courteous interest which you showed. I could not hesitate to recommend you to anyone after experiencing such service as that. Therefore I wish you every success, and remain a contented patron."

Yours truly,
(Signed) J. B.

Established as long as the Industry

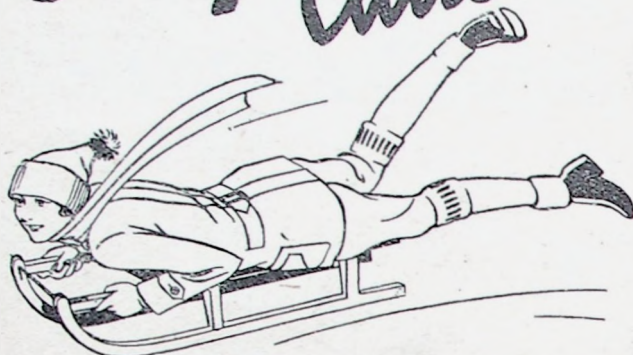
Telegrams:
"Admittedly
London."

Telephone:
Holborn
0664-5-6.

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

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

Switzerland! Calls!



The complete enjoyment of your holiday depends entirely upon your kit. Choose your Winter Sports Outfit from Gamages, the specialists with pioneer experience. Come and see the wonderful selection and avail yourself of our expert Service.



GAMAGES FAMOUS SKI-BOOTS

For Ladies or Gentlemen. The Original Norwegian Pattern Ski-Boots.

Uppers of Waterproof Black Zug Leather and best quality Brown Chrome Leather, absolutely waterproof. Made with two soles, the Outer and Middle cut from Oak Bark Tanned English Butts. Soft and pliant, yet absolutely snow-proof. In all sizes for Ladies, black from 3 to 8 and Men's sizes, 6 to 12. Postage free.

Price per pair.
Also supplied in better qualities at proportionate prices.

50/-

GAMAGES WINTER SPORTS CATALOGUE

32 Pages of value for the Winter Sports Enthusiast. Embraces Kit for everyone—Adults and Juveniles. Send for your copy or telephone **HOLBORN 1484**.

DO YOU KNOW

there are 50 Authorised Parking Places in London where cars can be left without risk of breaking the law?

DO YOU KNOW the distance between over 600 of the more important towns throughout the country?

DO YOU KNOW the correct time to light your lamps throughout the year?

DO YOU KNOW the meaning of all Road Signs and the correct hand signals to give?

DO YOU KNOW the prices of all makes and models of cars upon the market?

DO YOU KNOW what real "Service after Sale" means?

DO YOU KNOW that our Kensington Showrooms alone occupy over 10,000 sq. ft. super and are stocked with scores of all the most desirable makes of cars?

DO YOU KNOW that our 1928 44-page "Buyer's Guide" gives the correct answer to all the above interesting questions and in addition contains vast amount of information of special value to motorists?

TAYLORS

Buyer's Guide is FREE.

Make sure of your copy by sending for it to-day. ALL MAKES SUPPLIED FOR CASH, EXCHANGE, OR UPON OUR FAMOUS "RIDE WHILE YOU PAY" EASY PAYMENT PLAN.

The following cars give both excellent and economical service:
AUSTINS ... £135 to £775 CLYNOS ... £160 to £250
SINGER ... £148-10 to £350 JOWETT ... £134 to £170
Motor Cycles or used Cars taken in part payment for New Cars:

This Week's Snips supplied on 7 Days' Trial.

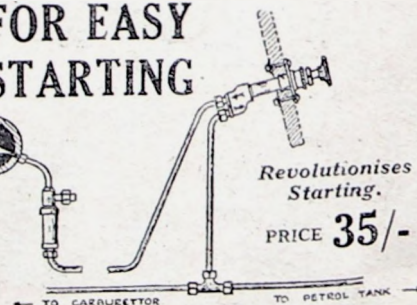
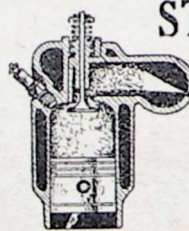
FIAT, 10 h.p. 2-seater ... £75 WOLSELEY, 1925, 2-seater ... £70
ROVER, 9 h.p. 2-seater ... £99 AUSTIN 7, 1925 ... £79

H. TAYLOR & Co., Ltd.,

49, 50, 52 & 53, SUSSEX PLACE, SOUTH KENSINGTON, S.W.7.
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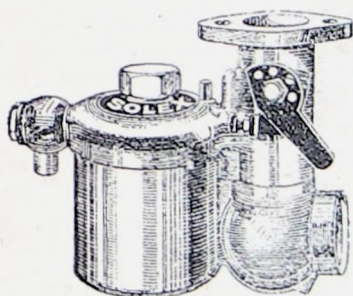
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THE *England* Cup Model Austin 7 would not make a good soldier. It does not stand still well enough. For when forced to wait, it appears ever impatient to be off and away somewhere. And when at last it is given the rein, what a shooting away there is, what a steady effortless rise towards the crescendo of speed, and what an eager annihilation of distance!

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England Austin 7's, comes to you free if you write to Gordon England Ltd. *England* bodies can be built for any chassis. Their patent light-weight but rigid construction means increased speed, quicker acceleration, better hill-climbing, lower running costs, freedom from body noises, and elimination of driving fatigue.

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The *England* Cup Model Austin Seven holds four World's Records up to 12 hours; and a special Austin Seven with a Cup Model body, driven by Mr. C. K. Chase, won the 1927 J.C.C. 200 Miles Race at Brooklands on October 15th.

The *England* Cup Model Austin Seven does 50 m.p.h. with ease, and will average 35.45 m.p.h. up hill and down dale. Petrol consumption 50 m.p.g. Real leather pneumatic upholstery throughout. Unsplinterable safety glass screen. All-weather equipment, with rigid side curtains opening with doors, packs in boot with spare wheel and baggage when not required. Automatic wind-screen wiper, electric horn, carpet, aluminium step mats, etc. Price complete

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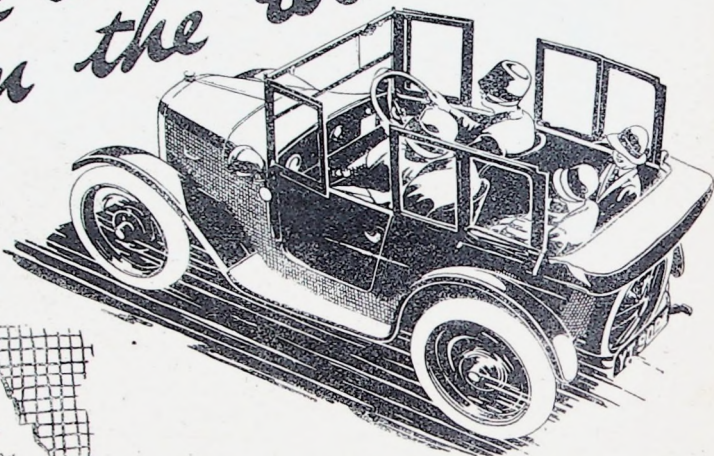
SERVICE! Our new SERVICE STATION at the PALACE OF INDUSTRY, WEMBLEY (Phone: Wembley 2381) is equipped to do any work required on Austin Sevens in the shortest possible time. A complete range of Austin Seven spare parts is kept in stock and a large staff of Austin Seven repair specialists retained.

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



For 1928
choose "the best small
car in the world"



RELIABILITY AND ECONOMY

We learn that Mr. Philip Seabrook recently successfully completed a notable reliability trial, driving a Standard Austin Seven Tourer at Auckland, New Zealand. The car carried 20 gallons of petrol in a sealed tank, and the radiator, engine, sump and tool kit were also sealed. The trial was conducted under the official observation of the Auckland Automobile Association, and the final figures were:—Mileage, 955 1/2; miles per gallon, 49 1/8; water, 3 pints. All less than half a pint; the performance was a remarkable one in view of the mountainous nature of the route covered.

—THE AUTO.

DECIDE on the Austin Seven and the New Year will mark the beginning of new pleasures for you and your friends. A compact edition of a large car, the Austin Seven carries two adults and two children in comfort, answers every demand of the driver, and costs a bare penny a mile to run. Your local Austin Agent will gladly tell you more about this famous car and demonstrate its remarkable powers of performance.

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4^d Get the AUSTIN MAGAZINE Every month 4^d

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

The Light Car and Cyclecar



THE LAND OF
BIG FLOODS!

Although heavy rains have fallen recently in various parts of this country, conditions are not yet so bad as those depicted in the above photograph, which shows a main street in East Hartford, U.S.A. hidden under about 4 ft. of water.

NOTES, NEWS & GOSSIP *of the* WEEK

ON OTHER PAGES

Important Insurance Points.

Readers are referred to several very important insurance points which are discussed in detail in this issue under "Topics of the Day."

Grand Prix Winners for Sale.

M. Louis Delage has decided to offer for sale the complete team of straight-eight racing cars which won the four chief Grand Prix Races this year.

This Week.

Does it pay to "lay up" a car during the winter? The answer to this question will be found in our centre pages, where, it will be seen, the writer takes the view that the old adage, "Penny wise, pound foolish," applies with particular force. An extremely interesting test run report deals with the Renault Monnax—a car of outstanding merit both in specification and performance. Many questions referring to motoring have been discussed in the House of Commons during the past week. They are dealt with under the heading, "Motoring Matters in Parliament."

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LIGHTING-UP TIMES (Rear Lamps) for Saturday, November 26th.

London .. 4.27	Edinburgh .. 4.18
Newcastle .. 4.16	Liverpool .. 4.26
Birmingham 4.29	Exeter .. 4.37
Moon—First quarter December 2nd.	

Death of Mr. Henry Edmunds.

We regret to announce the death of Mr. Henry Edmunds, one of the founders of the Royal Automobile Club and a pioneer motorist. He had financial interests in branches of the industry, including the Parsons chain.

Writ Sarcastic.

"The only way to pronounce the word automobile is to call it a motor-car," said Mr. George Bernard Shaw recently.

How Much Does It Cost?

"How much would it really cost me to run a car?" is a question which every prospective motorist asks. A definite answer is impossible, as so many factors have to be considered, but considerable light is thrown on the matter by letters published in our correspondence columns this week.

Next Week.

"How Interchangeability is Secured" is the title of an article which will appear in two parts—the first next week. It will reveal how the perfection of standardization methods—which enables one part of a car to replace another, often without special fitting—has been obtained. Jigs, of course, play a large part in this highly specialized branch of engineering work, and the writer of the article will deal with their many varied uses in detail.

No Reduction on Quantity!

"I am not prepared to recommend any concession in taxation in cases where an owner keeps more than one car," said the Minister of Transport when approached on the matter recently.

A Trade Question Discussed.

An inquiry as to whether imported wheel rims for cars and motorcycles should bear an indication of origin is to be held by the Standing Committee (General Merchandise) appointed by the Board of Trade.

Torquay Traffic Control.

At the request of the Torquay road authorities, the R.A.C. has arranged for four road guides to be stationed at congested traffic centres in the town. Other towns where R.A.C. guides are now acting as official traffic controllers are Grantham, Lincoln, Weston-super-Mare and Yeovil.

Autumn Bonfires.

Numerous complaints are being received by the Automobile Association of the danger caused by bonfire smoke being blown across main roads. It should be noted that under the Highway Act of 1835 it is an offence to make a fire within 50 ft. of the centre of any highway.

London-Exeter Closing Date.

December 9th is the closing date of entries for the Motor Cycling Club's annual London-Exeter run. It is, of course, necessary to be a member of the club in order to compete, and the last day for applications for membership—to be in time for participation in the run—is November 28th. All applications should be addressed to Mr. J. A. Masters, 22, Norland Square, London, W.11.

Touring in Portugal.

The same international regulations exist with regard to Portugal as are in force for other Continental countries such as France, Belgium, Spain and so on. The International Travelling Passes cover all that the Portuguese authorities require with reference to the import of a car or motorcycle for a short period, and both of these can be obtained from the R.A.C. Touring Department in the ordinary way.



WEEKLY WISDOM.

Remember ye that a policeman's lot is not a happy one. Approach, therefore, the arm of the law with patient understanding.

The A.A. Badge.

The Automobile Association recently successfully sued a Liverpool motorist for the return of a badge which he had retained after cessation of membership.

Examining the Bargain.

Following the Olympia Show the Engineer's Department of the R.A.C. has been inundated with requests for expert examination of second-hand cars.

A "Safety First" Hint.

Yet another "safety first" hint was seen attached to the rear number-plate of a car in London recently. On the plate appeared in quite small letters the inscription "Brush By Big Boy, Cemetery Ahead."

Checking the Fourteen Days.

By the sanction of the Ministry of Transport the police will in future carry out a careful scrutiny of licences at the beginning of the new licensing quarters, as it is believed that many motorists exceed the 14 days' grace allowed.

Radio Car Control.

When any passer-by places his hand over a marked spot on the window of a certain New York car showroom a car inside proceeds to run backwards and forwards on rails until the shadow of a hand is again passed over the spot. This "radio" control is effected by means of a new type of glow discharge tube acting as a light-sensitive cell.

A New Forest Danger.

Motorists are asked by the Automobile Association not to draw off the road on to the grass in the New Forest during the present outbreak of foot-and-mouth disease: the infection may easily be carried, and the disease spread over a wide area, resulting in loss and hardship to farmers. In conjunction with the local officials of the Ministry of Agriculture notices appealing to motorists are being posted along the forest roads.



ON LAND AND SEA!

These two views give an excellent impression of the general conditions encountered by the competitors in the Inter-Varsity Reliability Trial last Saturday. (Above) P. J. Uriwin Smith (Oxford) steering his Amilcar through Redbournebury splash. (Left) Something of a "traffic block" at Duncombe Farm.

Six-hour Race.

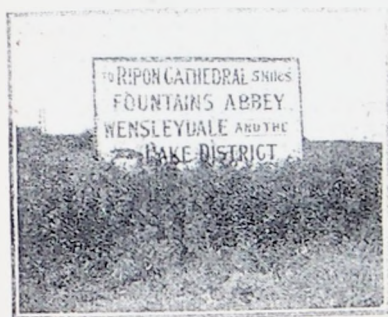
The Essex Motor Club's 1928 six-hour race will be held at Brooklands on May 12th.

Another Autostrada.

Work has begun on the new autostrada connecting Milan with Turin, a distance of approximately 90 miles. Permission has also been granted by the authorities for the construction of further motor roads from Milan to Verona and from Verona to Vicenza.

New M.C.C. Award.

A novel competition award has been originated by the M.C.C. It takes the form of a relief map of England in silver mounted on a plaque 10 ins. high, and is to be given to any M.C.C. member who qualifies for a gold medal in the London-Exeter, London-Land's End, and London-Edinburgh runs in one season.



An outsize in sign boards. This large and comprehensive sign is to be found near Ripon, on the Great North Road.

Caution Through Abergele.

We are informed that special caution is necessary through Abergele, North Wales, as a 10-mile speed limit is in operation in the town, and the police are very strict in enforcing its observance.

Another Concrete Road.

A new all-concrete road between Upper Warlingham and Titsey Hill, near Westerham, is becoming increasingly popular with motorists wishing to journey between Croydon or Purley and Sevenoaks, instead of using the old route through Godstone and Caterham.

Waterloo Bridge.

That there have been no further subsidences of Waterloo Bridge was stated at a recent meeting of the L.C.C. A committee of engineers is to report concerning the schemes for dealing with this bridge and on a scheme for a new bridge at Charing Cross.

Tea—Old and New.

Many motorists have recently discovered a delightful venue for a weekend afternoon run in the Old Barn at Hildenborough, near Tonbridge. The Old Barn is neither a hotel nor a tea-shop, but it is a charming combination of the old and new, for one big room is formed from an ancient barn, while another is an up-to-date ballroom. The barn is heated by three big braziers.

Home-made cakes, cream and fresh

country butter are the chief constituents of the teas served, and an old Kentish "gaffer" in his smock has a busy time marshalling the cars outside on a Saturday or Sunday afternoon.

I.M.T. President.

At a recent meeting of the council of the Institute of the Motor Trade, Mr. Walter Royle was unanimously elected president of the Institute.

Kingston By-pass Repair.

Although officially opened only about three weeks ago, a part of the new Kingston by-pass road is already under repair. At the approach to the bridge crossing the railway near West Barnes a subsidence has occurred. This part of the by-pass does not carry the major part of the traffic.

More Tyre "Cuts."

The Dunlop Rubber Co., Ltd., announce a reduction of 7 per cent. in the price of car tyres as from November 23rd. Goodyear car tyres are reduced 10 per cent., from the same date.

Motorcycle T.T. Races.

The competitions committee of the A.C.U. has decided that the programme of the T.T. races for next year shall consist of three events for solo motorcycles of 500 c.c., 350 c.c. and 250 c.c. respectively. The question of a sidecar race was considered, but it was decided that no race for passenger machines should be held in 1928, as the same reasons which caused its abandonment in 1926 are thought still to be valid. Briefly, these are the confusion arising from holding a multiplicity of races and the bad effect created in the public mind by the sensational pictures of incidents in such an event published by the non-technical Press.

Ilford Tram Troubles.

The Ilford Corporation is protesting against a proposed new bus service, because, it is said, it will compete with

the tramways; but do not motorists who know the tram tracks in the neighbourhood of Ilford prefer buses?

Gilbertian.

When, according to a contemporary, a certain judge arrived at the New York Traffic Court to answer a summons for leaving his own car unattended in the street there were about 1,400 other summonses to be heard, and the clerk of the court prevailed on the judge to hear fifty of them himself. Being in a bad

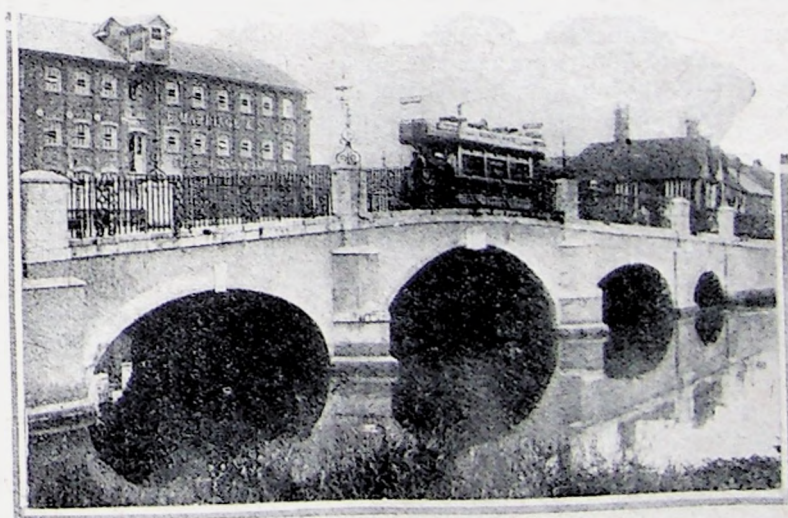


A new use for old plates. An American motorist has used a large quantity of disused number plates purchased from the local traffic authorities to surface his garage walls.

humour, he sent seven men to prison for the same offence with which he was charged! His licence had already been endorsed twice, and there was such an uproar in court that the judge was compelled to leave the court and the cases were re-heard.

Horsham One-way Traffic.

Horsham Urban District Council has decided permanently to retain the one-way traffic scheme in certain main thoroughfares, despite protests made by one or two local tradespeople that shopping facilities are decreasing.



A COLCHESTER DANGER SPOT.

The well-known humpback bridge over the River Colne is being reconstructed at a cost of £11,000. The "hump" is to be removed by filling in the roadway on each side of the bank.

ON the TAPIS

THE EDITOR DEALS WITH PLANS AND
POSSIBILITIES IN THE WORLD OF
LIGHT CARS.

FOR a week recently we went about our business in an Austin Seven—the world's smallest motorcar. This was not by any means our first experience of the car, or even of the latest model, but, as usual, it left us marvelling—marvelling that the ideal for which *The Light Car and Cyclecar* has always stood could have been so closely approached, if not overtaken and passed. We remember the car well when in 1922 it made its bow to an almost scornful public, and we have followed its all-conquering history with the same interest as the genius who conceived it. The embodiment of all that is best in small-car practice, this young kinsman of one of the most distinguished car families in the kingdom deserves all the praise that can be bestowed upon it. We learn with pleasure that the tide of its popularity shows no signs of ebbing.

We will be pardoned, we hope, if we refuse to allow discussion on free wheels to drop. First advocated by *The Light Car and Cyclecar*, they began to receive really serious consideration only a few months ago, and the fact that the Show is over for another year must not be allowed to let them escape from the public eye. In our opinion one of the most promising ideas of the past decade, transmission free wheels extend a lively prospect of reduced fuel consumption, sweeter running and foolproof gear changing. There is no "catch" in them. Their sponsors are ready to demonstrate them to the public, and engineers can find no faults. The arguments against their use are well known, and it might be said that identical contentions were advanced against steam by the stick-in-the-muds of 100 years ago. There are always those who condemn novelty or novel applications of old ideas, and it is so with free wheels. We have little doubt, however, that they will repulse the attacks which are launched against them.

Inventors are very busy at present in devising automatic road signals suitable for "guarding"



cross-roads and other danger points. The progress made since the installation of flashing beacons several years ago has been very rapid, and every encouragement should, we think, be given to those who are endeavouring to solve the cross-roads problem.

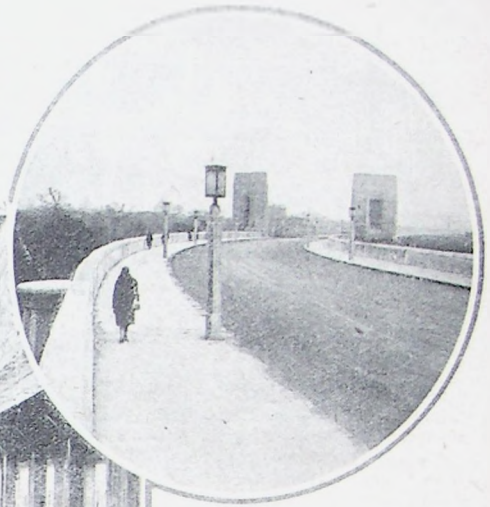
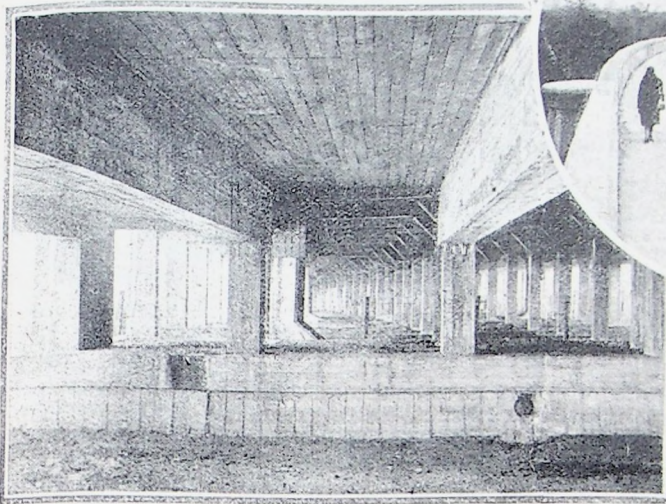
Developments are pending in another direction, namely, the perfection of the automatic policeman—the Robot which takes on the responsibilities of traffic controller at each end of a road-up section. It would, it is generally agreed, be undesirable for the human controlling element to be entirely absent, but the possibility of one policeman controlling a stretch where three may be required under normal conditions is one worthy of close consideration.

An interesting situation is developing in connection with next year's International Grand Prix races. The official ruling will almost certainly allow for cars of unlimited capacity, but the weight of a complete car must be between 500 and 750 kilograms. The alternatives offered to designers by the new regulations are causing a good deal of anxious thought, for, although on the one hand the opportunity to fit an engine of, say, two litres presents itself, care will have to be taken to keep within the prescribed weight limit, whilst, on the other hand, the already highly perfected 1½-litre job might be still further improved and "stiffened up" to meet the additional strains imposed. Apparently, what designers gain on the swings they lose on the roundabouts, and we cannot help thinking that it would have been better either to have maintained the capacity limit of 1,500 c.c. or to have lowered it to 1,200 c.c.

Our impressions of the Renault Monasix—given elsewhere in this issue—lead us to suppose that six-cylinder light car will be seen in increasing numbers and that they will catch the fancy of the public. The market exists in all phases of motoring, but particularly when a car has to be used a good deal under busy traffic conditions. Here the superior torque and pick-up of the "six" put it in a class by itself and extend an appeal that ensures its popularity. To drive a Monasix is to experience something closely akin to the ideal of everyone who seeks maximum luxury in the 1½-litre class.

THE LEA VALLEY VIADUCT.

MAGNIFICENT ARTERIAL ROAD CONNECT-
ING LINK OPENED ON WEDNESDAY—THE
SECRET OF REINFORCED CONCRETE.



AN ENGINEERING ACHIEVEMENT.

(Left) The Lea Valley Viaduct viewed from beneath, showing the deep box-section "girders" which carry the load, and the impression left on the concrete of the planks used in the shuttering. (Circle) One of the approaches to the viaduct. Note the concrete lamp-posts.

THE opening of the new Lea Valley Viaduct once again draws attention to a form of general building construction which is becoming familiar to motorists, but its advantages, disadvantages and the methods used when it is employed are still wrapped in mystery so far as hundreds and thousands of those who use reinforced concrete bridges and so on are concerned.

Briefly, the advantages are that concrete is practically everlasting, it possesses a great reserve of strength and it needs no form of maintenance, such as the periodical scraping and repainting required by steel structures. Offsetting these advantages is the fact that, by virtue of its indestructibility, alterations to existing works are, of course, extremely difficult, although this has, in a measure, been overcome by scientific methods of "house-breaking."

The origin of reinforced concrete or ferro-concrete, as it is sometimes called, is generally attributed to a French gardener, who, many years ago, evolved the idea of bedding metal rings in flower-pots to prevent them becoming broken; stage by stage the idea was developed until the system became generally recognized as a very practical departure for all forms of building.

The principle adopted when constructing a reinforced concrete building is very similar to that employed in the making of an ordinary blanc-mange; that is to say, a mould is prepared into which the concrete is shovelled, and after the concrete has set the mould is taken away. Herein, of course, lies one of the biggest expenses, because timber has to be used for the mould—usually alluded to as shuttering or centering—and unless use can be made of this timber again and again, as it can be, of course, in the case of the repetition work provided by bay after bay of a viaduct like that which spans the Lea Valley, the cost of providing new timber, and perhaps of altering the shuttering to suit variations in the design, is almost prohibitive.

Over 20 years ago it was predicted that reinforced concrete would make such strides that it would spell the doom of the bricklayer, for it will be appreciated quite readily that carpentry plays a far more important

part than bricklaying; the laying in and bending to shape of the steel reinforcements is a specialized job, whilst the actual mixing and distributing of the concrete can be done largely by unskilled labour.

In most districts reinforced concrete construction is fairly cheap, because there is usually a gravel pit quite close at hand, but, for all that, large quantities of cement, timber and steel have to be used.

A structure is built to very carefully prepared plans, in which the steel content has been used to the greatest advantage, and here it might be pointed out that it is used as a means of providing against all tensional stresses, concrete itself being enormously strong in compression, but having practically no strength in tension.

The steel-workers have their own shed, in which hand-operated machinery may be used for bending the rods, and immediately the shuttering is finished for, say, one bay of a viaduct, the steel is placed in position—being firmly held in place by stirrups and distance-pieces—and the concreting gang commences to "fill in."

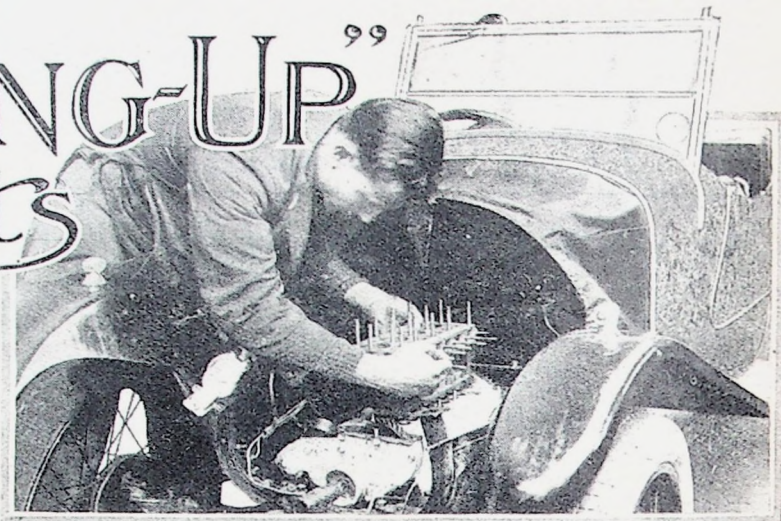
The accompanying photograph of the underside of the Lea Valley Viaduct is interesting, in that, apart from showing the general form of construction utilized, it gives an impression that the structure itself is faced with planks; but these marks are simply the true reproduction in the concrete itself of the planks used in the shuttering and subsequently removed.

The underside of the viaduct makes no pretension to being beautiful, but at each approach to the viaduct there are plinths which reveal clearly that reinforced concrete can be as decorative as it is useful; even the lamp-posts are made in this material.

The viaduct is a magnificent example of engineering skill; it represents a continuation of the North Circular Road from Walthamstow to Edmonton and spans no fewer than five stretches of water. There are 600 supporting columns and, to guard against the effects of expansion and contraction, the viaduct has been built in sections, suitable "joints" being provided so that slight movement can take place. The cost of the job was £115,000 and the work was carried out by Sir William Prescott and Sons.

66 "HOTTING-UP" 99 Secrets

HOW "SUPER" PERFORMANCE IS OBTAINABLE FROM STANDARD CARS.



MODERN light car engines are so soundly constructed that a number of private concerns advertise that for the matter of a few pounds power units may be "hotted-up" to give better acceleration and from 5 to 15 m.p.h. above standard maximum speeds.

Such claims at once raise two queries in the minds of interested people, namely, why are the advertised nippiness and better acceleration not given in the first place by the makers, and does the "hotting-up" place undue strain on the engine which, presumably, is not designed to give the extra output? In other words, is there not some "snag" in the process which would make it inadvisable in most cases?

The answer to the first question is that certain engines are tuned to give the maximum output performance regardless of cost, but others are designed to provide an entirely satisfactory performance consistent with low initial cost. It is on this latter class of car that the fastidious owner may spend a pound or two to obtain a higher power output and better acceleration which the average owner of such a car does not need, and which the makers do not therefore provide.

The answer to the second question is decidedly in the negative. There is certainly no "snag" in trying to obtain better engine performance, provided, of course, that the work is done by men who understand this highly specialized business.

It should be noted that no "hotting-up" is usually attempted until a car is properly run in. Obviously, it is useless attempting to obtain ultra-efficiency in an engine from which the "rough spots" have not been removed. Running-in is comparatively a lengthy and expensive business, which is one reason why cheap cars are not super-tuned.

When a car has run some 1,000 miles on the road, and has been treated with the usual care, it may be sent to the hotting-up depot. The engine is then decarbonized and carefully dismantled, valves are ground in and care is taken to ensure that they work freely in their guides without being slack enough to

cause air leakage. In tuning touring cars it is not, for obvious reasons, usual to fit larger exhaust valves; within reason a small valve will run cooler than a large one—another argument against expensive alterations.

Lighter inlet and exhaust valves may be fitted, however, with advantage. Valves and seatings are ground to ensure gas-tightness and the ports are polished, as a rule, to give an easy flow to both incoming and outgoing gas. For the same reason it is usual to polish as much of the intake passages as possible, also the inside of the exhaust manifold.

In many instances, despite accurate valve-grinding, a slight loss of power results at high speeds owing to valve bounce. This is corrected by fitting stronger valve springs or, better still, dual springs to each valve. The two springs in each pair are arranged to have different periodicities, so that each tends to damp out the periodicity of the other. When two sets of springs are fitted it is usual to arrange the coils left-hand and right-hand respectively so that it is impossible for them to jam together.

If the valves are adequately protected against bounce and if the passages are cleanly polished to give free gas flow, very great advantage is to be gained by fitting cams

which give higher lift, longer duration of lift, and quicker opening. This is a rather costly business, however, and the cost of a specially made camshaft with accurately formed cams prohibits the use of a refinement of this sort on anything but expensive racing cars. Apart from the actual cost of the camshaft, it would require accurate balancing. Moreover, the crankcase bearings in which it runs and the lubrication system provided would doubtless require alteration. These items would add materially to the cost of the conversion.

Light reciprocating parts are essential for high-speed work. Special light pistons may be fitted, and incidentally an additional benefit is obtained in the way of better cooling. The special aluminium alloys of which most light racing pistons are made gives improved heat conduction from the piston crown to the cylinder walls and prevents undue concentration of heat at any one point. The fitting of lighter pistons may upset the balance of the crankshaft if

Inlet and exhaust manifold passages are carefully filed to ensure a free flow of gas.

each throw of the shaft, with its con. rod and piston, has been balanced individually in the first place; as a rule, however, lighter pistons can be introduced without in any way affecting balance.

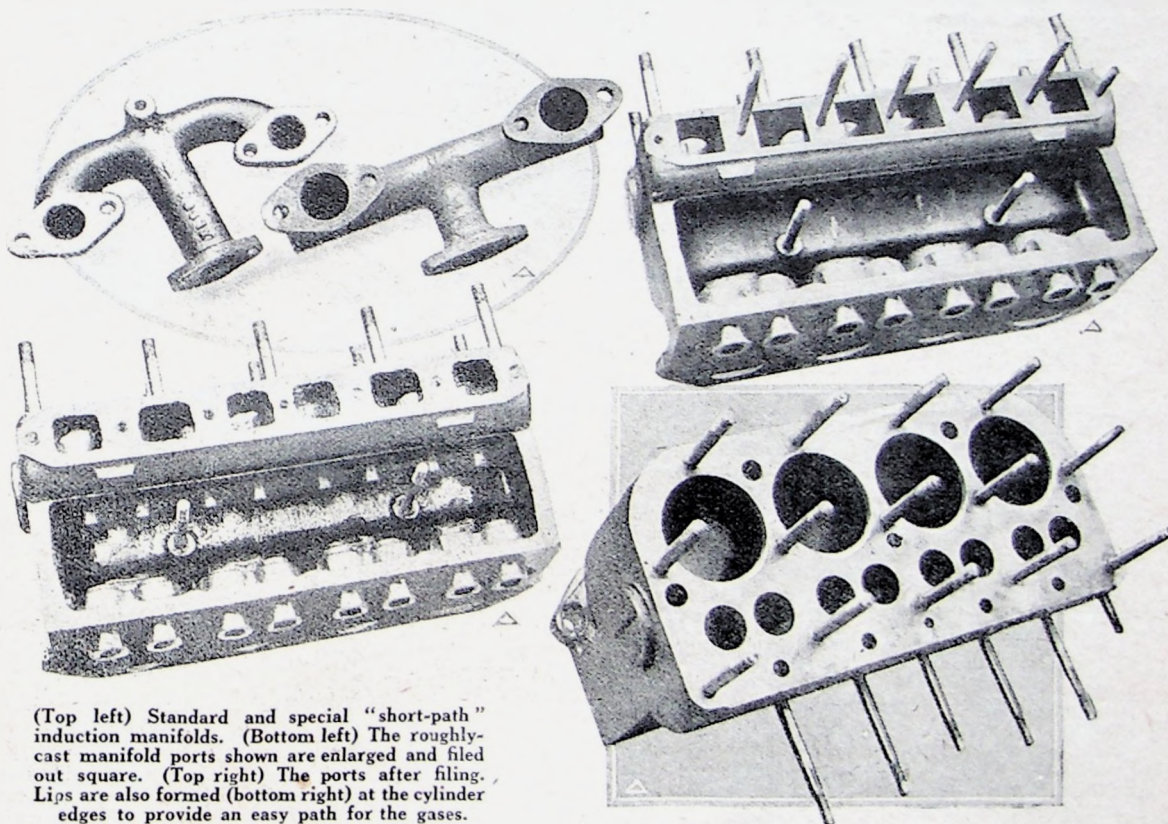
If new pistons are fitted it is usual to raise the compression at the same time. It will be clear that a piston with a higher crown—measured from the gudgeon-pin boss—will increase the ratio between the volume of gas contained in the cylinder when the piston is at the bottom and the volume when the piston is at the top of its stroke. It should be noted that an increase in compression means a simultaneous increase in explosion pressure and a resulting increase in the power obtained on each firing stroke. Compression ratios varying between $4\frac{1}{2}$ to 1 and 5 to 1 are usual on touring cars, and by the fitting of high-crown pistons these may be raised to $5\frac{1}{2}$ to 1 or 6 to 1. This latter ratio is nearly the limit for hotted-up standard cars, although even higher ratios are used in racing cars designed to run on special fuels.

To cope with increased rate of engine revolution it is necessary to advance the ignition timing slightly. This alteration brings with it a disadvantage—for touring cars, at least—in that the ignition control lever has to be made use of during the course of a run, and used with intelligence, whereas with the standard ignition setting it was possible, perhaps, almost to forget the presence of ignition control, it being set at

with no small amount of skill, in cutting down reciprocating weight in this way, for it is easy to overstep the limit and seriously to weaken important parts by haphazard drilling and lightening.

So far no mention has been made of carburetter tuning. Special carburetters are supplied for racing purposes, but for general hotting-up standard instruments can be made to give greater power and better acceleration, although generally at the expense of fuel economy. "Streamlined" intake manifolds may be obtained and are sometimes fitted in cases where polishing the standard fittings would be a very laborious business.

An accompanying photograph shows a standard intake manifold by the side of a special "short-path" manifold. This latter is of cast-aluminium and can easily be made in large quantities and saves the long time necessary to polish out the interior of the standard fittings. Incidentally, in the case of the two particular manifolds shown, if an owner does not want to go to the expense of fitting the short-path manifold, a noticeable speed increase may be obtained simply by increasing the diameter of the long central passage of the standard manifold. Although the diameter of the two limbs is not increased, the bigger central passage seems to exercise an "injector" effect upon the gas flow, and the manifold as a whole presents less obstruction to the flow than does the standard fitting.



(Top left) Standard and special "short-path" induction manifolds. (Bottom left) The roughly-cast manifold ports shown are enlarged and filed out square. (Top right) The ports after filing. Lips are also formed (bottom right) at the cylinder edges to provide an easy path for the gases.

full advance and scarcely ever moved. In the case of high-revving engines of small capacity better results are, of course, obtained if the ignition control is used skilfully when required.

When the absolute maximum power output is desired the process of lightening reciprocating parts may be extended to drilling the flywheel, con. rods and pistons or replacing steel connecting rods with others made of duralumin. Great care is necessary, together

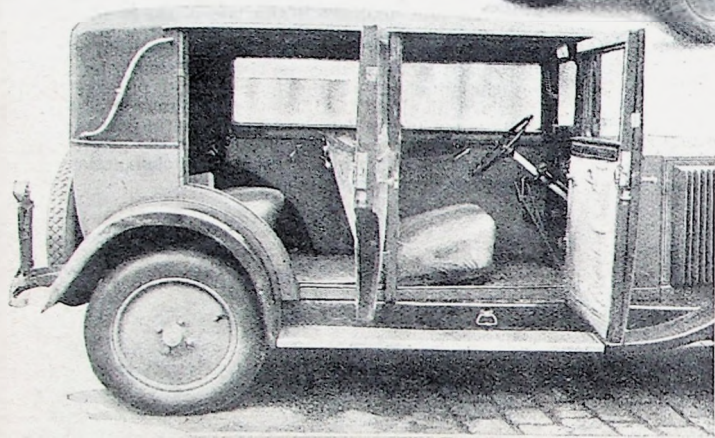
As the final stage in the hotting-up process the whole chassis is given at least a general overhaul. It is of little use attempting to obtain extraordinary engine output if an undue amount of power is absorbed by wear or stiffness in the gearbox, rear axle gearing, or by reason of some other important chassis fault.

We are indebted to Messrs. Boyd-Carpenter and Thompson, Ltd., 47, West End Lane, London, N.W.6, for facilities provided for taking the photographs.

Road Tests of 1928 Models.

The RENAULT MONASIX

Two views of the Weymann-type four-door five-seater saloon.



The introduction of this car marks, we believe, the beginning of a general tendency towards the use of six-cylinder engines for the more luxurious light cars, and the fact that Renault, Ltd., have entered the field with such a low-priced and generally desirable model must be regarded as of great importance. We found it to be a car that was most difficult to criticise.

PERHAPS the most notable of all the recent arrivals in the light car world, the Renault Monasix, although by no means the first six-cylinder light car to be built, might be said, by reason of its numerous distinguished ancestors and its exceptional performance, appointments and value, to introduce to light car enthusiasts something which is entirely new.

Priced at £279 for a four-seater open touring car, £299 for a Weymann type or metal-panelled saloon, and £324 for other two and four-seater closed models, the range of cars offers amazingly good value for money.

The model illustrated on these pages is the four-door Weymann-type five-seater saloon, which, as equipped, costs £299. Last week-end we were given the opportunity by Renault, Ltd., Seagrave Road, London, S.W.6, to try this model, and during two very wet, cold, wintry days we covered some 400 miles in a degree of comfort which very few other light cars could offer.

Coachwork Details.

The body is really roomy and really luxurious. The front seat will seat three normal-sized people abreast, whilst the rear one is designed to seat three and does so with ease. The cushions and squabs, which are cloth-upholstered and provided with loose covers, are very deep, very soft and very luxurious, whilst generous floor coverings, a Teddy-bear material inside the roof and walnut mouldings in excellent taste complete the air of refinement which dominates the interior of the car.

For the convenience of the driver and passengers the front screen is hinged along the top and opens outwards from the base, the windows in the four doors all have quick-action winders and the back and quarter-lights are fitted with spring roller blinds. An automatic screen wiper looks after the driver's comfort in bad weather and a scuttle ventilator helps him to keep

cool in summer. A rug rail is fixed behind the front seat. Those who seek a practical note will find that the designer has struck it, so soon as they sit at the wheel. First, the facia-board; on this the instruments are neatly grouped together and illuminated by lamps at the back, which light up all the instruments with diffused light and throw a dim beam on to the floor. They can be used at night without dazzling the driver in any way. The next thing which is noticed is the provision of central gear and brake levers, which are admirably placed. A hand dropped from the wheel falls naturally to either of them and both are robust and convincing.

Mounted on the steering column are convenient controls for the strangler and the throttle, whilst on top of the wheel there is a little lever which operates a signalling device at the rear. To the right of the instruments on the facia-board is the starter knob, and also very easily reached from the driving seat is a screw-down petrol tap.

A Silent Starter.

The starter of this model, like that of its 9-15 h.p. brother, is of the combined-unit type, direct driven from the front of the crankshaft. In action it is dead silent and it is capable of turning the engine briskly and giving an immediate start from cold. It is helped by the ignition, which is of the coil variety and automatically controlled.

If the driver wishes, he can start off in top gear, the flexibility of the six-cylinder engine and a really excellent single-disc clutch taking care of the sweetness of the get-away. Alternatively, if one starts in first or second a beautiful get-away is obtainable, and the consummate simplicity of the gear change and the silence of the box make gear-changing an absolute pleasure. Once under way, the car will crawl in top at a walking pace and accelerate briskly without any snatching or

jerking, whilst if use is made of the gearbox a quite "snappy" performance and unusually rapid acceleration is available.

The car is not, however, by any means a sports model, the best speed in first gear being about 15 m.p.h., in second 30 m.p.h. and in top gear 54 m.p.h. These speeds are attained without vibration or any other signs of the engine being worried, and there are no periods throughout the range of speed. At 40 m.p.h., with a full load, the car is almost dead silent and runs in a most convincing manner, whilst even at 50 m.p.h. there is little indication that the engine is hard at work, and this speed can, in fact, be maintained so long as road and traffic conditions permit.

On hills the top-gear performance is all that one could expect, whilst changing down is child's play and the second-gear performance beyond reproach. It is hard, indeed, to refrain from superlatives in describing the performance of this car. If it cost half as much again it would be most difficult to find any feature which could be criticised, apart from the fact that the petrol tank capacity might be greater. With a consumption of 30 m.p.g., which we found to be the average figure, replenishment is needed after covering about 150 miles.

That Transverse Spring.

From an examination of the chassis, it might be thought that the employment of a single half-elliptic spring at the rear was a measure of economy which would react upon comfort, but the springing, like the steering and brakes, could not be commented upon in anything but fulsome terms. The brake pedal, like that of the clutch, calls for a bare minimum of effort on the driver's part, and the response to it is immediate and convincing.

In detail requirements, as in the fundamentals of the design, the car also makes an appeal which is undeniable. A single instance can be quoted. From the

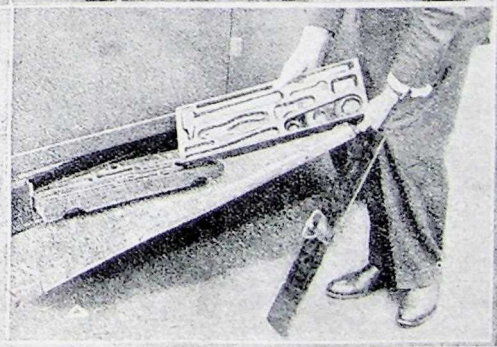
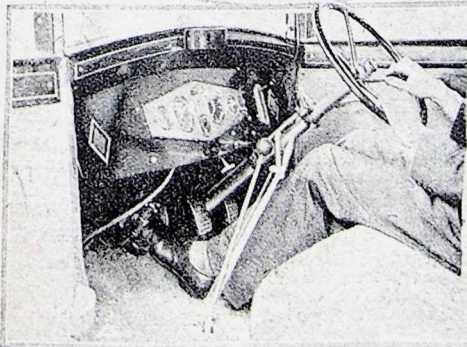
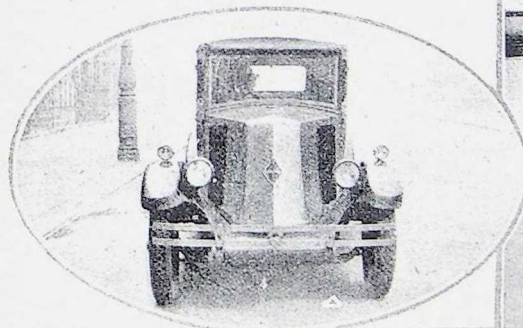
near-side valance, just beneath the near-side front door, a handle protrudes. When this is pulled, part of the valance comes away and discloses a locker, from which one can slide out two trays, each of which, as one of the illustrations shows, contains specially shaped partitions, in which the tools are housed. Another locker in the off-side valance houses the jack, wheel brace and pump. Similar indications of a keen desire to provide every device likely to be a convenience to the owner are to be found in numerous other characteristics of the car.

Features of Note.

It will not be amiss, in the case of the Renault Monasix, which made its first appearance before the British public at Olympia, to say a word or two concerning the specification. The six-cylinder engine, with a bore of 58 mm. and a stroke of 93 mm., is rated at 12.5 h.p. (tax £13). It has side valves, a detachable head, a four-bearing crankshaft, and water cooling on the well-known Renault principle. A disc clutch drives to the gearbox, which is mounted on the forward end of the torque tube, thence to a spiral bevel rear axle.

Amongst items of equipment which may be mentioned are a five-lamp 12-volt starting and lighting system, a complete set of shock absorbers, back and front bumpers, and a comprehensive variety of accessories.

As we drove the car almost as much after dark as in daylight, we can write from practical experience concerning the admirable lighting equipment provided. On the dash there is a switch, which controls all the lamps in the usual manner. In addition, however, it provides an alternative position, in which one headlamp is cut out, whilst a subsidiary switch, in the form of a pedal operated by the left foot, allows one to do the same thing. This, it was found, was a great convenience when driving along busy country roads at night.



THEY SPEAK
FOR THEMSELVES.

— These photographs call for little explanation. They show a few of the outstanding features of the Renault Monasix and are worthy of careful study.



COMFORT AND CONVENIENCE. — How the Leveroll sliding seat works. (Left) Seat in the normal position. (Right) Seat slid back so as to provide plenty of room to swing the legs through the door.

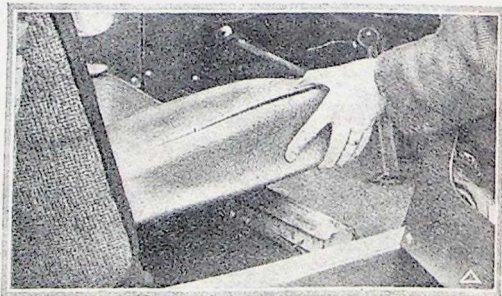
Do you emerge from the driving seat stiff and cramped, or unduly fatigued, at the end of a journey? If so, assimilate the useful advice given below by an old hand.

MOTORISTS who have to spend many hours at the wheel soon realize that the various attributes which go to make driving comfortable are well worth studying, for few things are more tiring than a long spell at driving in a cramped position, or having to put up with little inconveniences which, perhaps, would not be noticeable if the car were used for short runs.

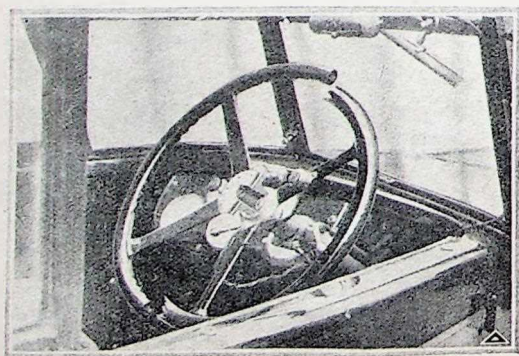
Take, for instance, the case of a man who has constantly to enter and alight from his car when making business calls. If entry and exit are at all difficult the manoeuvre will become thoroughly tiring. An invention of more than ordinary merit designed to overcome this drawback, where it exists, is the Leveroll sliding seat. It is comparatively inexpensive to fit and can be applied to practically all makes of car without difficulty.

The photographs in the heading of this article clearly show how it works and what are its advantages. The seat slides backwards and forwards and can be locked

in the forward position by means of a simple automatic catch. Thus, when it is desired to alight, the catch is released, the seat slides backwards noiselessly and the feet can be swung clear with plenty of room to spare. When returning to the car one draws the seat forward—an almost effortless operation—and at the end of its forward run it is automatically locked in its original position. Another advantage of the Leveroll sliding seat is that by removing a simple security stop the seat



How to pack up a driving seat so that more support for the legs is provided. A wood packing piece is used.



A composite photo, showing two types of Bluemel steering wheel. (Left) The 18-in. "spring" wheel. (Right) The rigid type of smaller diameter.

can be lifted out in a few seconds to give instant access to the floor of the car for cleaning or for removing the floorboards. Moreover, the seats can be reversed for lunch, cards, and so on, and for an alfresco meal can be removed from the car completely and used "arm-chair" fashion on the grass.

The standard "mark III" mechanism is priced as follows:—One set of Leveroll attachments suitable for one single or one double seat, £2 12s. 6d.; complete set for two single seats, £3. They can be obtained in a range of movements from 6 ins. to 20 ins., and it is worthy of note that the ease of their control depends largely upon the ball-bearing runners which are used.

These seats are handled by the patentees and manufacturers, A. W. Chapman, Ltd., Ranelagh Gardens, Hurlingham, London, S.W.6.

At one time motorists were satisfied with tiller steering, but since those early days great strides have been made in steering mechanism, whilst the tiller has given place to the more conventional wheel. On long journeys, however, even a steering wheel may prove to be a source of discomfort, and in this connection "spring-arm" steering wheels may be recommended.

An outstanding type is that made by Bluemel Bros., Ltd., Wolston, Coventry, the principle employed being similar to that which is used to isolate the occupants of a car from road shocks. It is claimed for this sprung wheel that it absorbs engine vibration and road shocks, whilst the rim itself is constructed so as to provide a comfortable grip. It is made in one size only, namely, 18 ins. in diameter, and its construction employs twin transverse steel leaves for the arms, which are securely held at the centre by a wide flange on a boss surmounted by a steel cap, the whole being firmly riveted together.

The rim is made of oval weldless-steel tube covered



The Stadium easy-reach gear lever extension (Etienne and Cie) for Austin Sevens, showing how it is fixed.

with celluloid, and from personal experience we can vouch for the fact that the claims made for this wheel are well warranted. The price is 45s.

Another type of shock-absorbing flexible steering wheel is known as the Sportif and is made by the Patent Motor Products Co., 20, Store Street, London, W.C.1, the price being 40s.

A gear lever which is too short can be a source of very great discomfort, particularly when traversing difficult country in which gear changing is necessarily frequent. At the present moment gear lever extensions can be obtained which make all the difference between comfort and discomfort, but when ordering care must be taken, of course, to state the make and model of car. Gear-lever extensions are obtained from R. Cadisch and Sons, 5 and 6, Red Lion Square, London, W.C.1, Etienne and Cie, 61, Eastern Street, London, E.C.2, and Dunhills, Ltd., of Euston Road, London, N.W.1.

We may now turn to more general features concerning comfort at the wheel, and of some importance is the angle of the seat and its height from the floorboards. Where no adjustment is obtainable either for the angle of the seat or for leg-room, an uncomfortable seat can often be converted into one giving arm-chair luxury by interposing packing under the forward edge of the cushion, experiments being made until the right height is found, when a permanent packing piece

can be employed. Incidentally, the space thus formed under the seat can be used for storing the grease-gun or even a small tool-roll.

For wet-weather driving in comfort an efficient screen wiper is essential, but as the blade-operating mechanism is seldom very sturdy it is possible to upset the functioning of a wiper very easily, especially if the blade is carelessly swung from side to side by hand, thus bending the operating arm, perhaps, and altering the pressure which the squeegee exerts on the glass.

If the squeegee is flat it will prevent effective operation, because the blade will not "turn over" or reverse at the end of each stroke. If correctly adjusted, it



Another composite photo which clearly indicates the handiness of securing a horn button to one of the steering-wheel spokes.

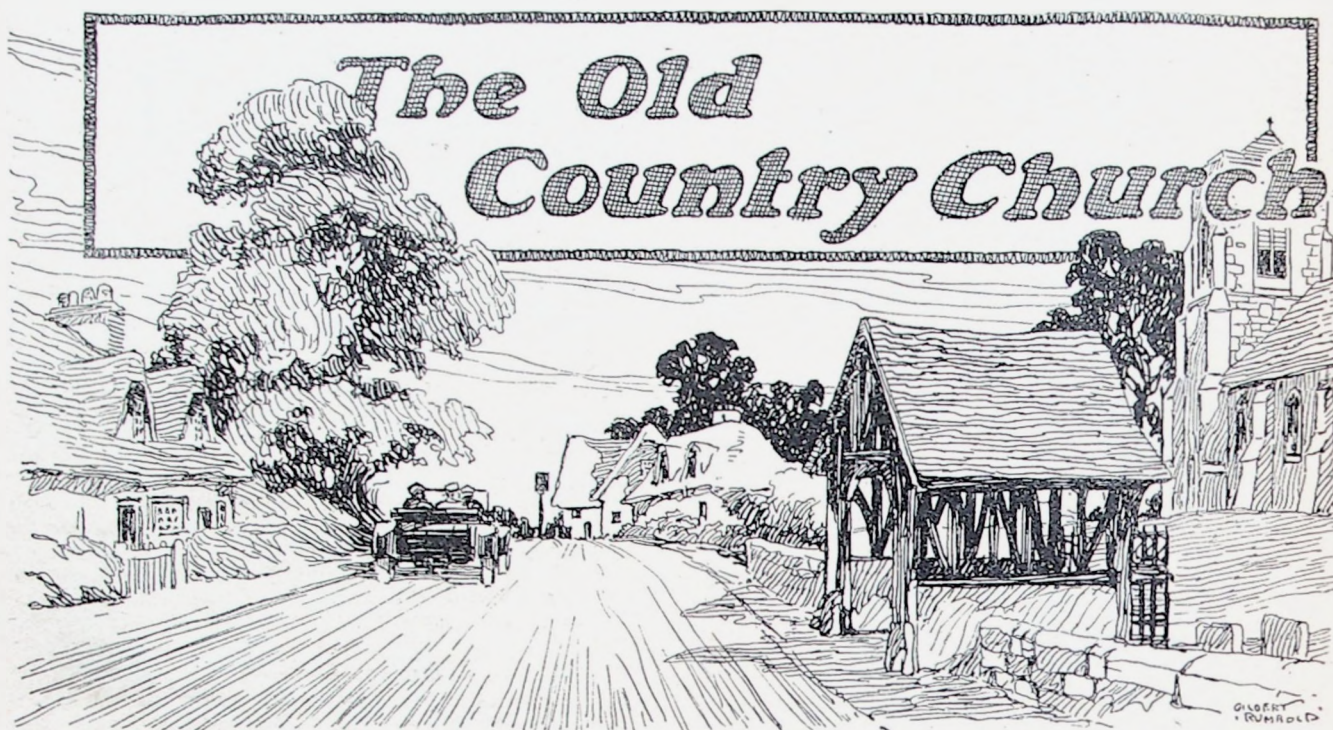
will be noticed that the squeegee lies at an angle against the glass. Adjustment is provided for altering the pressure of the blade and so forth, and sometimes the necessary very small amount of adjustment can be made by bending the operating arm slightly. Incidentally, where the needle valve which operates the screen wiper is not very accessible it is a good plan to introduce a separate valve in the pipe line, say, at the base of the screen, where it can easily be reached.

Adjustable pedals are still not found on a number of light cars, but most manufacturers seem to have arrived at a happy medium in leg reach which more or less suits people of varying stature. If, however, the leg reach is unduly long it will require only a cushion of moderate thickness to make all the difference to comfort.

Ability to give audible warning of approach without shifting one's arm from the wheel is of very great benefit, particularly if one's journeys take one repeatedly through busy districts. So far as ordinary electric horn push-buttons are concerned it is largely a question of individual taste, but it will be found that if the button is clamped to one of the steering-wheel spokes in such a position that it can be pressed by the thumb without removing the fingers from the spokes it will result in less fatiguing driving than if the hand has to be removed from the wheel to, say, the side of the body in order to sound the hooter.

The principle of easy electric horn operation in a deluxe form is represented by the Eural wheel switch, the contacts of which are operated by means of a ring concentric with but of smaller diameter than the steering wheel and mounted just above it.

For night driving a good fascia-board lamp is essential, and very few makers are sending out light cars nowadays without them. Incidentally, one of the latest Lucas types, whilst having the appearance of a festoon lamp, carries a bulb of the bayonet type which can be used as a spare in the event of a tail or side light failing.



A visit to one of the fine old churches which are to be found in all parts of the country forms a worthy objective for a run at this time of year, when the countryside has lost its summer charms.

OUR English villages are particularly noted for their architectural beauties. Embowered in foliage are quaint old manor houses and beautiful ancient churches that have lifted their battlemented towers above the smiling cornfields while king after king has reigned. Harmoniously attuned to their environment, every harsh outline softened by the hand of time, these grey village churches seem to have grown out of the very soil, and to have become as much a part of the landscape as the crags and tors on the wild moorlands or the escarpments across the valley.

To motorists who are fond of "potter" runs and can appreciate all that is old and the beautiful, the time-stained walls of country churches contain much of interest. The man who speeds through an old-world village without first glancing at his guide book in order to see what kind of a place it is, misses much that helps to make motoring worth while. It is true that some villages—and their churches—are quite commonplace, but here and there one meets with a rare jewel, and when this happens one should linger awhile and make the most of it.

Local History.

As a rule, the discerning visitor seldom passes through a quiet, secluded village without a glance at its church. The whole history of the place is written within its walls, stories of bygone days may be read on the stones. An antiquarian or an architect can tell us many interesting things about these old buildings, but the majority of us are to some extent ignorant of things of a bygone age, and when we essay to explore a country church we frequently overlook items and details of architecture which are well worth seeing. Yet, with just a little knowledge, how differently do our eyes look upon the place! Without any deep antiquarian learning, there are numerous interesting things that we may easily find for ourselves. In most villages the church door is unlocked during the day, and we can take a peep inside, and then go on our way with something, perhaps, worth thinking about.

B20

One thing that will surely impress itself upon a visitor on approaching an ancient country church is the solidity of its construction. Sometimes, in gazing upon such a substantially built edifice, one wonders if the art of building has been lost. Few modern structures bear comparison with the old that were raised in days when the builder had begun to love his work for its own sake, and put the very best into each detail, no matter if it were hidden from sight.

Firm and sturdy as a rock, ornamental and picturesquely situated, the designers evidently considered beauty and strength in combination, and the result is that we find many ancient churches, dating back to Norman times, and even earlier, in an excellent state of preservation.

Very Old Towers.

It is seldom that all parts of a country church are contemporary, for in many cases the building grew little by little, through addition. Frequently the oldest parts will be the tower and belfry. Often, where the body of the church has been rebuilt and added to from time to time during the passage of centuries, we find the tower little touched except by the hand of time. But all of our very old village churches have interesting features which attract even the casual passer-by.

Naturally, in exploring such a building, one approaches the porch first—usually on the south side. In quite a number of these ancient buildings the porch and door are of more than ordinary interest, for it is not unusual for one to find a porch and doorway dating back from the twelfth century. The Norman arch is easily recognized by the semi-circular head and the massive mouldings—the star, the lozenge, the nail-head, and sculptured medallions, together with the signs of the Zodiac, frequently used by the Norman masons.

Inside many church porches a "stoup" will be found. This is a small stone basin, usually carved out of the wall, and was at one time used to contain the holy water. The piscina, where the sacred vessels were washed after the communion, is still to be found in

some old churches, and is generally situated at the south side of the altar. Some of these vessels are decorated with carving and ornamentation of a choice character.

In a few village churches we may come across an example of an old Norman font; but in a great number of cases the ancient fonts have been taken out and used for all kinds of secular purposes. There is one now in a village church in Nottinghamshire which for many years did duty as a trough under the inn pump; then it was used as a flower stand in a garden and held the soil that nurtured a rose tree. Subsequently it was restored to its rightful place, and is to be seen in its original abode, with the tale of its vicissitudes written upon it, for the top has been used by generations of villagers as a whetstone in the days when it stood in the yard of the village inn.

Examine the Bells.

If you can gain access to the belfry you will probably find one or more very old bells. It is, of course, rather doubtful if any of the bells now remaining in country church towers are of a date prior to the fourteenth, or, at most, the thirteenth century, and where the most ancient are concerned the age can be ascertained only approximately, for it was not until about the seventeenth century that the practice of inserting the date in the inscription came into use.

The oldest bells are to be recognized as they expand more gradually from crown to rim than modern ones, which splay out abruptly towards the mouth. Then the inscriptions on the more ancient bells are usually in Lombardic and black-letter characters, the former probably the older; the black letter inscriptions were succeeded towards the end of the sixteenth century by ordinary Roman capitals. You may also gain enlightenment of the age of a church bell by examining the foundry marks or stamps, which are very quaint and interesting, and well worth looking for when exploring an ancient belfry.

Much fine ornament is hidden away in the gloom of the old bell-chambers, together with the marks of the bell-founders, many choice examples of which may be found on bells cast in the seventeenth and eighteenth centuries. Many of the older bells, which

were cast by the mediæval monks, were inscribed with Latin prayers and wording. A bell in St. Michael's church, Alnwick, says, in quaint lettering on a belt ornamented with studs; "Archangel Michael, come to the help of the people of God." Legends and wordings, and in some cases the coats of arms of the donors, are found on many old bells.

In some few village churches one may see examples of the family pews introduced in the seventeenth century, many of which were elaborately furnished and had richly panelled ceilings with the family's coat of arms thereon. There also exists, here and there, old oak pewing, richly polished by the hand of time, and giving a wonderful tone to an old church. These old pews have very straight backs, and are generally entered by a door, which may be secured on the inside after one has entered.

Scattered about many country churches we find fragments of sculptured work, incised crosses, and so forth. These may be of great interest, but usually their history is lost and we can only guess their origin and meaning. The mural tablets erected to the memory of the landowning families that for hundreds of years have held the tenure of the lands surrounding the church are also of more than ordinary interest, being, in some instances, almost as good as historical documents, giving the visitor much information about the notable persons who have resided in that particular parish.

Quaint Gargoyles.

On the outside of country churches we may note very quaint gargoyles, many extremely grotesque and fantastic. These gargoyles were used in old days, before fall-pipes came into being, to carry off the rain-water from the roof clear of the walls. Exactly what they are supposed to represent architecturally we may only surmise, but probably the idea they were intended to convey to the illiterate people was that they represented evil spirits or devils fleeing from the sacred precincts.

There are, in addition, the old stained glass windows, rood-screens, and other details too numerous to mention. Nearly every country church, no matter how remote and tiny, has its own individual characteristics and its own striking beauty. A.S.



A PICTURESQUE EXAMPLE. — The fine old country church and porch which are to be found at Speldhurst, a pretty village within easy distance of Tunbridge Wells.

Utilizing the Useless!

"In every household a large number of disused articles are thrown away each year as valueless, but any motorist who uses a little ingenuity can find a useful purpose for many of them. In this way he cuts down his annual running costs, or, alternatively provides himself with conveniences which he would not otherwise enjoy."

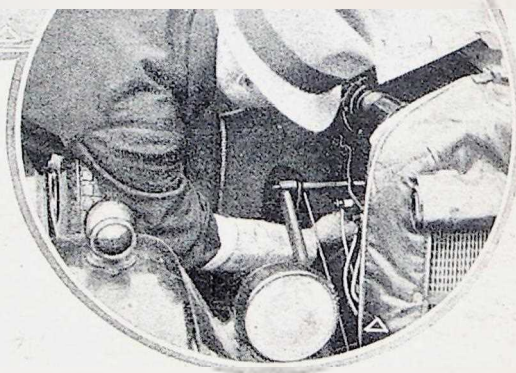
(Above) A few sheets of newspaper spread over the wings protect them from scratches during engine overhauls. (Right) Paper sleevelets, secured with elastic bands or string are handy for roadside adjustments.

TO obtain the maximum amount of use and enjoyment from a car at the minimum expense is the aim of practically every reader of this journal, and many whose means are only just sufficient to allow them to run a car go to considerable trouble to achieve this object. There is, however, one avenue of economy which is seldom fully explored; in every household a large number of disused articles are thrown away each year as valueless, but any motorist who uses a little ingenuity can find a useful purpose for many of them. In this way he cuts down his annual running costs, or, alternatively, provides himself with conveniences which he would not otherwise enjoy.

The use of discarded clothes for cleaning rags and so forth forms an excellent, if somewhat obvious, example of how household waste can be of service to motorists, but even here few take full advantage of the idea. Most owners cut up old shirts for cleaning or polishing cloths, but how many realize that a long strip of cloth taken from a "worn-out" pair of trousers forms a very serviceable tool roll or that satisfactory leather washers for filler caps and so on can be cut from the uppers of a pair of boots which have finished their normal life?

A raincoat or macintosh which suffers from no other fault than that it has become shabby and threadbare should never be thrown away. Its proper place is in the garage, where it is handy for slipping over one's ordinary clothes when carrying out the usual maintenance jobs such as oiling, greasing and so forth. For really dirty jobs an old suit and a proper set of overalls are, of course, preferable.

Luggage carried on the rear grid or on the running board of a car is apt to get very dusty, and if the cases are not of good quality the contents are liable to be



damaged by rain. Here, again, an old macintosh can be pressed into service, for it is usually possible to cut a sufficient quantity of good material from it to make a very serviceable dust and rain cover.

It seems a great waste to throw away oil drained from an engine crankcase, and, incidentally, used oil is sometimes difficult to dispose of. Once again cast-off clothing comes to the rescue, for by filtering old crankcase oil through a discarded soft felt hat it can be used for chassis lubrication, for which purpose it is quite satisfactory.

In practically every household a large accumulation of old newspapers is to be found, but a motorist can find many purposes for them. When carrying out repairs or adjustment to the engine, for instance, a few thicknesses of newspaper spread on the running-board convert them into serviceable shelves and, at the same time, prevent them from being scratched or stained. Similarly, dismantled parts can be placed on a newspaper spread on the floor of the car, where they will be out of the way and where, moreover, they will do no damage.

Newspapers, too, can be spread over the front wings to prevent them from being scratched when one is

working on the engine, whilst if the job is being carried out at night with the aid of an inspection lamp only a sheet of paper attached to some part of the engine will often make matters easier by reflecting light on the parts receiving attention.

Although a few motorists take the trouble to keep the floors of their garages clean, the majority do not, with the result that it is impossible to work underneath a car—as when draining the sump, for example—without getting one's clothes very dirty and greasy; by spreading a newspaper out on the floor the job becomes much less objectionable.

It may seem that the use of newspaper has been a trifle overstressed, but the writer has found it so convenient that a pile of old papers is always to be found in his garage.

Not only does it come in useful in the garage, but it is also very handy on the road. Cars are very reliable nowadays, but times do occur when it is necessary to carry out a messy adjustment at the roadside, and many a suit of clothes has been ruined by the sleeves being badly stained. If one happens to have a newspaper or two handy, this can be prevented, for by wrapping a few sheets round the forearm and securing them in position with string or elastic bands, the coat sleeves will be protected.

Proper armlets can, of course, be obtained for this purpose, and are much more satisfactory, but newspaper serves the purpose in an emergency.

Again, if one does have to "get out and get under" at the roadside, a newspaper can be used as suggested in connection with lying on the floor of the garage when working under a car.

Petrol gauges and two-way taps providing a reserve supply of fuel have largely done away with the bugbear of running out of petrol, but a driver does occasionally get stranded, and when this happens he usually finds himself without a funnel. If the filler orifice happens to be in the scuffle, filling up from a two-gallon can is no easy matter, but a rough-and-ready funnel made by rolling up a newspaper will help matters considerably.

It will be seen, therefore, that it pays to carry a couple of old newspapers tucked away in an odd corner of the tool locker, where, incidentally, they may often fill up an otherwise empty space and thus prevent rattle.

Tins, used to-day as containers for every conceivable commodity, are often thrown away in large numbers. They can, however, be used for many purposes by car owners; cigarette tins, for instance, form excellent receptacles for nuts, bolts, and so forth, whilst large tins are handy for cutting up into packing-pieces and washers.

An old fruit tin may, with little trouble, be made into a very serviceable oil "measure" for transferring lubricant from a drum to the engine sump; one has only to tap down the ragged edges where the top has been cut away and to bend the rim into a point in one place to form a spout. It is quite easy to solder on a handle, but this is hardly essential.

A garage bucket often has a very hard life, and a new one is quickly reduced to a very sad state. For this reason it is not a bad plan to use an old household bucket which has been discarded owing to a faulty bottom; the leakage can be rectified by filling the bottom to a depth of an inch or so with a layer of cement. A bucket so treated will stand, as a rule, a good deal of hard wear.

Kneeling on a hard garage floor to carry out some adjustment on the chassis is very unpleasant, and if the floor happens to be of concrete its effect, in the form of stiff joints, may be felt the next day. Quite a good kneeling pad, which will prevent this trouble, can readily be made by sewing together a few thicknesses of old carpet.

A brush of some sort is necessary when one is cleaning rusty parts with paraffin and an old toothbrush is excellent for the job. As a rule, toothbrushes are thrown away because their bristles have lost their initial stiffness, but this does not matter for the purpose mentioned.

For keeping the garage floor as clean as possible a drip tray is essential, and an old metal kitchen tray makes a very serviceable one. Should the bottom be a little faulty, a few sheets of paper can be laid on it; the paper will absorb oil and can subsequently be used for fire-lighting.

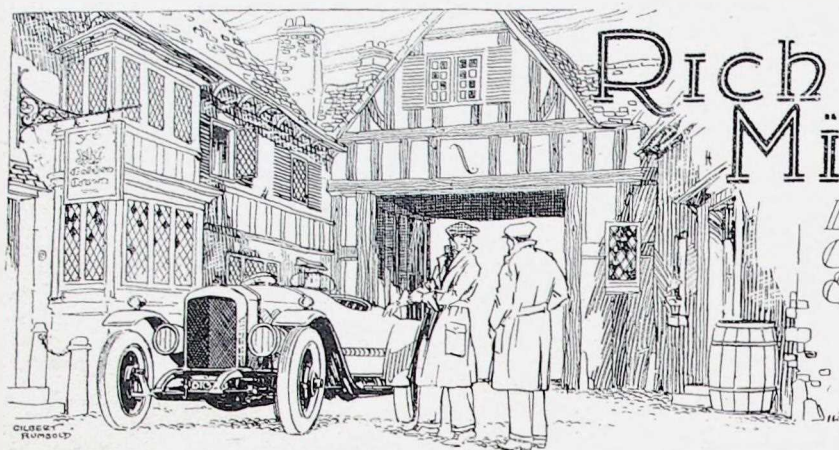
The ideas which have been put forward in this article for saving both money and trouble by no means exhaust the subject, but sufficient has been said to indicate how useful household surplus can be to economically minded motorists.



A strip of cloth cut from a discarded pair of trousers makes a very serviceable tool roll.



(Left) Newspaper will protect the clothes if it is necessary to crawl under the car during a journey. (Above) Excellent leather washers can be cut from an old pair of boots.



Rich Mixture

LIGHT CAR
COMMENT
& ADVICE

By
Focus

Unperturbed by Us Moderns.

THE way in which wild life becomes accustomed to modern conditions is somewhat remarkable—a fact which one can see without going far from a town. On a new by-pass near London the other afternoon the following sight presented itself. An endless stream of cars, lorries, motorcycles and other traffic was going in both directions; overhead, two aeroplanes were speeding and manœuvring; in a field adjoining the road there was a large flock of plover feeding—and calmly flying across the road, unperturbed by the roar of engines above or below, one noticed a couple of well-gorged herons.

A few Sundays ago I saw a flock of wild duck heading southward over Barnet, their V formation in flying forming an unmistakable mark in the sky.

Fathers Should Note.

THE unfortunate experience of a young friend of mine should serve as a warning to parents whose sons show a bent for motor engineering. In reply to an advertisement, this young man's father was induced to part with a sum of money to a motor firm which offered to teach the boy the business. The tuition in engineering was practically nil, nor was there any effort to teach salesmanship. Instead, all through the summer the youth was made to drive hire cars, often in somewhat humiliating circumstances.

At the end of twelve months he had received back the premium—and no more—in wages and the firm had had his services for nothing. Such experiences emphasize the need for employing a solicitor or other agents to make inquiries when conducting negotiations from a distance.

Their Waterloo.

WITH my road to town becoming increasingly foggy a few mornings ago, and with the prospect of crawling out through a "pea-souper" in the evening, I abandoned my car at a garage adjoining a main-line station 25 miles from London and continued the journey by rail.

The fog, of course, dispersed—it always does on such occasions!—but it gave place to an exceptionally keen frost, so that when I again made the acquaintance of my car it was being leaned against by two unhappy gentlemen whose cars

were alongside it in the same garage and who found their starters were unequal to the task of combating the efforts of Jack Frost upon the oil in their engines. They were both flummoxed, for the garage was merely a lean-to behind a hotel, and there was nobody to tell them what to do next. Neither of them had ever used a starting handle, nor had they the slightest idea how to get a start.

Their Starters' First Lapse.

WHEN I offered to give them a hand, after having brought my own engine to life with a little vigorous cranking, they were overjoyed. Since they had bought their cars in the early months of the year their starters had worked infallibly, and the idea of getting the hang of starting an engine by hand simply had never occurred to them. In addition they were quite unaware of the fact that an obstinate engine is easily started by pushing the car with one of the higher gears engaged, a plan which would have been simple on this occasion, as there was a favourable gradient just outside the garage.

There seem to be good grounds for suggesting that there are many owner-drivers who might do worse than acquire some little ability at hand-cranking, for I gather that the two unfortunates I mentioned above are by no means alone in having no knowledge or experience of it.

Thoughts on Grub.

DURING my jaunts about the country I have often been puzzled to know why what may be called old English fare survives and maintains its position in some areas, but is practically nonexistent in others.

Take the country lying east and west of Watling Street for a distance of about 70 miles north of London. It will be found that east of this line food has little or no special feature. Large towns and whole areas are without a single distinguishing dish. You will search in vain for one at Northampton or Bedford or Peterborough. Other towns are equally barren, and the only contribution of Cambridge is a proprietary sausage! Diet generally seems to be on a uniform level, and in this respect differs in no way from that of London, "mass feeding" being the rule.

Counties for Gourmets.

DIRECTLY, however, one passes west from Northamptonshire the subject of food appears to assume more importance to the individual. In Oxfordshire, Berkshire and Wiltshire meals lose their somewhat mean monotony and take on a variety good to see. At inns, fine roast ribs of beef and the lordly sirloin—veritably Sir Loin—appear, and at supper there is the huge cheese put down with an ample loaf to cut at as the pleasure wills. Often at breakfast the rasher of home-cured bacon is too generous for town appetites, and there is generally an abundant supply of preserves.

As one goes farther west this feature becomes even more pronounced, but, of course, the traditional dishes of Somerset, Devon and Cornwall are well known. There must be some reason for this marked difference between one part of the country and another. One wonders how far the "commercializing" effect of those two great highways, Watling Street and the Great North Road, is responsible.

Battles Lost and Won.

FOR a long time now all has been quiet on the front on which protagonists of plugs, carburettors and other components used to wage such long and vigorous battles. In these contests the fortunes of many exploded with their claims; others reached a position of stalemate; whilst some captured salient points and held them. It was an exhilarating period, and by comparison the present is dull indeed.

We have reached a stage when research has solved most of the mysteries that gave opportunity

to the booster to exploit his wares, and an invention would need to be revolutionary indeed to be accepted nowadays. All the same, one misses the variety of a decade or more ago when almost every week something new and epoch-making was launched upon us. It is growing a prosy world, my masters.

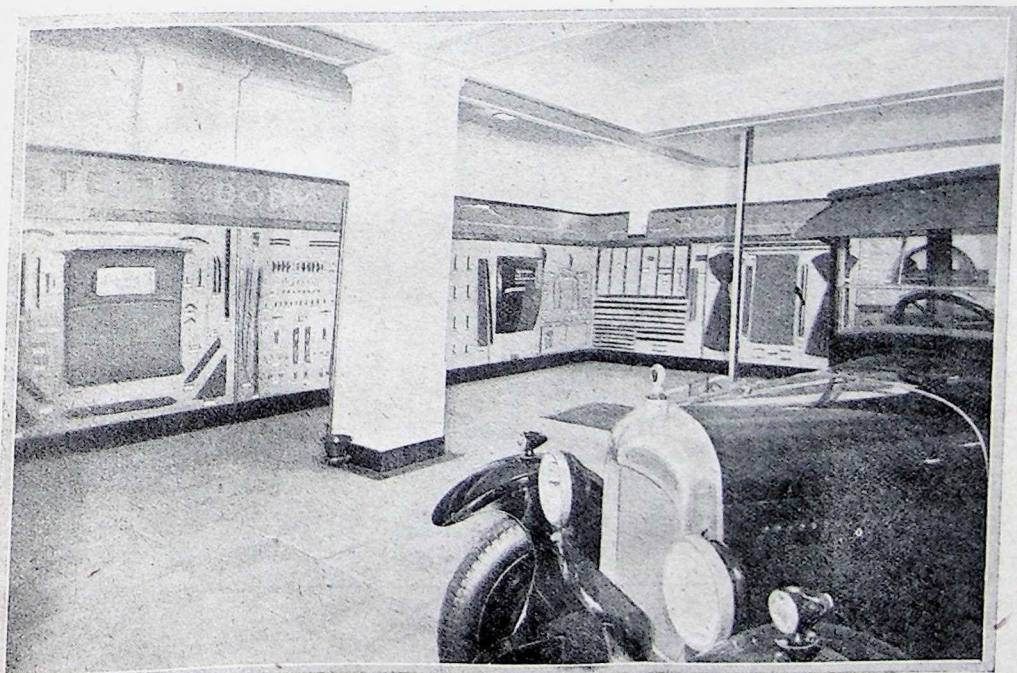
Clutches Designed to be Slipped.

WITH the petrol engine so lacking in flexibility it is somewhat surprising that so little attention has been paid to the possibilities of a variable grip clutch. No good driver ever deliberately slips his clutch, but there are heaps of occasions when he would very much like to.

The subject is perhaps of greater interest to owners of light cars than those possessing more powerful vehicles, for, with a small engine, changes of gear in traffic or when negotiating awkward corners are frequently necessary only to avoid "judder" or snatching. Some device to obviate this would be very welcome. I believe a French firm has successfully experimented in this direction; but why should we go to France for such benefits?

On Giving "Lifts."

FROM time to time I have commented upon experiences I have had when giving "lifts" to casual wayfarers. Sometimes I have been able to recount most interesting conversations, and often a dreary lonely run has been made most entertaining by a "down-and-outer" who has regaled me with his quaint philosophy of life. Do not imagine the knights of the road are all illiterate wasters. They may be ne'er-do-wells, but all of



A MOTORCAR "MUSEUM." — At the wonderful Citroën showrooms in Devonshire House, Piccadilly, London, the walls are covered with showcases displaying the 12,000 parts of which a Citroën car is made.

them certainly are not either brainless or uneducated. I have discussed politics, religion, literature, psychic matters and even Einstein with tramps whom I have picked up along main roads, and their views and opinions have been most advanced.

Experience Bought—and Paid For.

FOR the benefit of others who, like myself, find the gossip of the casual wards and the theories of the destitute not only amusing but a definite mental tonic I am prompted to sound a warning note as a result of a recent misfortune experienced by a friend.

He was asked by a working-class young woman to give her a lift to a town a few miles along the road and consented. On their arrival he pulled up and said, "Well, here we are," or something of the kind, but the young woman refused to budge. Instead she vowed that if he did not instantly hand over a pound note she would "make a scene." My friend, wisely in my view, paid up. The moral seems to be that female birds of passage are best left to Shanks's pony.

"Back-yarders" Neglected

IF modern light cars were not such miracles of reliability one might view with something like apprehension the possibility of the six-cylinder engine supplanting the four. As it is, I fear that manufacturers are tending to move farther and farther away from the requirements of the "back-yarder"—the man who keeps his car at home and has no wish to pay garage charges for simple maintenance jobs.

Let it be said at once that the great majority

of owners of small cars are not wealthy men. Many are of modest rather than moderate means, and those who are buying their cars by instalments have every reason for tackling such tasks as decarbonizing and keeping the engine in tune themselves. No great skill is needed, and a person of average intelligence is fully capable of undertaking them, but can it be said that manufacturers in recent years have done much to improve the lot of such people?

To Avoid Confusion.

MANY accidents are due to indecision. I have seen two car-owners in full view of each other at cross-roads come into collision through neither being able to make up his mind whether to stop or go on. In this connection it might be useful to point out that all doubt as to one's intention can be solved by pointing one's way with a movement of the hand. The other driver seeing this will, as a rule, pull up to let one pass.

Hundreds of drivers make a signal when indicating their direction to a man on point duty, yet never think of using it in the circumstances I have described.

After-dark Runs.

IT is curious that many people who do not mind being on the road after dark when returning from Sunday or Saturday afternoon runs dismiss from their minds any possibility of starting out for a short trip after dark on an ordinary evening. Yet night driving, even in winter, can be very fascinating, and the fact that there is a cosy fire awaiting one on return imparts additional zest to the run.



**GOLD HILL,
SHAFTESBURY.**

— A picturesque old town on a hill 101 miles from London, Shaftesbury's history goes back to the dim ages. In the past the town was known as "Palladour" and later as "Edwardstow."

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Insurance.

A RECENT decision by Mr. Justice McCardie should serve as a useful reminder to motorists of the care they must take in filling up proposal forms when they wish to insure their cars. The plaintiff in the case in question sought to recover from some Lloyd's underwriters, who had issued to him a policy of insurance, the damages he had been compelled to pay in respect of a third-party claim. The Lloyd's underwriters, by their defence, repudiated the policy on the ground that certain answers given to questions in the proposal form were untrue, and also on the ground that he had failed to disclose material facts to them.

So far as the latter defence is concerned, readers must remember that in a contract of insurance the utmost good faith is required by law.

The proposal form contained in conspicuous type the words, "Please answer each question fully," and one of the questions asked was, "What accidents have occurred in connection with your motor-cars during the past two years, including cost?" The answer given was simply, "Damaged wings." It was suggested by the plaintiff's counsel that the question was an ambiguous one, but the learned Judge held that no honest and intelligent man could doubt the meaning of the question. "Now, the answer 'Damaged wings' conveys to my mind," Mr. Justice McCardie went on, "the clear impression that the plaintiff had suffered during the two years mentioned one accident, and one accident only, of a trivial character—an accident that could rightly be described as one which had resulted only in the unimportant injury of damaged wings."

Grounds for Repudiation.

THE plaintiff had, actually, had no fewer than seven accidents in the preceding year; but, although in each of these accidents damage was done to the wings, there was, in addition, damage to the steering gear in one case, while a claim for injuries to a woman was made in respect of another. That claim was settled by the plaintiff's then insurance company, to whom he had handed the writ. Upon these facts the learned Judge held that the plaintiff's answer was wholly untrue and that the plaintiff must have known it

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Topics of the Day

to be untrue. As the proposal form is the basis of a policy of insurance, that untrue answer alone was sufficient ground for the underwriters to repudiate the policy altogether. In fact, there were two other answers to questions which were held to be untrue, and, in addition, the learned Judge also held that material facts had been concealed from the underwriters by the plaintiff. On all these grounds the underwriters were held to be justified in repudiating the policy, and judgment was given for them, with costs; but, as has been indicated, the one untruthful answer, "Damaged wings," was, in itself, sufficient to entitle them to judgment.

It is not suggested that many motorists will make such inaccurate statements as were made in this case, but it is essential for all would-be policy holders to remember that the filling up of a proposal form is not a thing which is to be done lightly in a moment, at any rate if they wish to be indemnified by the insurance company when an accident occurs. Each question must be answered carefully and accurately, and the answers must be in no way misleading.

Accidental Inaccuracies.

A REALLY good insurance company will, no doubt, not take advantage of a small accidental inaccuracy, but motorists must bear in mind that companies of somewhat lesser repute will be quite likely to make use of such an inaccuracy for the purpose of trying to annul the policy. When a claim is contested—even if the policy holder wins the case when it comes to Court—he is put to a great deal of expense, trouble and delay in getting his money; or, again, he may be well advised to settle for a lesser sum than his real due in order to avoid litigation. To make certain, then, that he will be covered by his policy if an accident should occur, the wise owner will see to it that no opportunity is given to the insurance company to raise any technical point in order to evade its liability.

In the case referred to the underwriters would no doubt have refused to issue a policy if they had known the full facts, and the plaintiff gained nothing, and lost a great deal, by obtaining a policy in these circumstances.

CAMBRIDGE THE WINNERS (PROVISIONALLY) FOR THE FIRST TIME IN THE THREE YEARS' HISTORY OF THE TRIAL. OXFORD'S HOPES OF A "HAT-TRICK" THUS DASHED TO THE GROUND.

UNIVERSITY motoring men are very hardy fellows, and they had need to be last Saturday on the occasion of the Inter-Varsity Reliability Trial for the *Motor Cycling Challenge Cup*. For the third year in succession rain fell heavily throughout the entire day, and just put the finishing touch to a course which was stiffer than on any previous occasion. The Cup was provisionally won by Cambridge, who upset Oxford's hope of a "hat-trick."

The start was at Dunstable at 11 a.m. Bonner's Farm was the first serious impediment to be encountered in the 63-mile course, but so far as the cars were concerned it was of no account, for after one or two attempts had been made the marshals decided to send passenger vehicles round by a loop road back on to the course. This road brought them out just before the Smalldene Farm section, which was an observed muddy cart-track with a sharp right-hand turn in the middle, followed by wet grass and deep pools. Keeping to the track spelt wheelspin for nearly everyone, but the grass on either hand was moderately firm.

An Early Arrival.

The first arrival was R. J. Lockett, an Oxford man in a Fiat Nine. He rather startled the marshals at this point by arriving long before he was expected. This was due, of course, to the fact that Bonner's Farm further back on the course had been deleted from the route. He bounced his way along with his passenger sitting on the tail and successfully completed the section. P. J. Urlwin-Smith (Amilear) and M. J. E. Morgan ("Cup" Austin), both Oxford men, made easy passages, but another "Cup" Austin, driven by F. E. Buckland, also from Oxford, was fast and furious.

W. D. Chisholm (Austin) showed that Cambridge could also make claims to speed, and P. H. Manners (A.C.) also did his best to uphold Cambridge's honour by making a creditable performance. C. F. Hamilton-Turner (Frazer-Nash) and C. T. Hope (Bugatti)—both Oxford—were steady and sure, as also was J. P. Dowson (1,096 c.c. Morgan). D. W. Geidt (Lea-Francis, Oxford) was extremely cautious and made a faultless "crossing."

By devious routes, and through much mud, the competitors arrived at a water-splash at Redbournebury. In spite of the rain, however, it was not excessively deep and nearly all the cars came successfully through it. C. T. Hope and his passenger spent an uncomfortable quarter of an hour wading about in a

MUD AND MORE MUD—

—was the chief characteristic of the trial. E. H. McIlwraith (Cambridge) is shown piloting his quaint-looking Austin Seven through the Smalldene Farm section. This photograph gives a good impression of the state of the course.

splash near Markyate Street, with the water nearly to their knees whilst trying to coax their engine into life. With a loud report it finally started and they were able to resume the trial.

Woodhall Lane followed soon afterwards and here not one car succeeded in covering the half mile or so of rain-sodden ground. A number attempted it

third of the distance, but he slipped back on the chalky surface so treacherously covered with leaves. After one or two had suffered the same fate the marshals directed the remaining competitors around a loop road and cut out the hill entirely.

At Duncombe Farm confusion reigned. At the foot of the hill—actually in the farmyard—there were at one time as many as eight cars bogged in the thick mud, all of them unable to move one way or the other. It seemed as though they stood little chance of ever getting out of the farm itself, let alone climbing the subsequent hill with its leaf-strewn chalky surface.

A Sporting Attempt.

One Austin driver made a sporting attempt and got a very considerable way up. Then he and his passenger simultaneously leapt out of the still-travelling vehicle and ran alongside heaving for all they were worth. By dint of much muscular exertion the "traffic block" in the farmyard was finally relieved and once again the order of the day was "back to the main road."

Some more by-roads and a great deal more mud constituted the remainder of the journey, and at about half past three in the afternoon, the following soaked and bedraggled car drivers checked in at Dunstable:—

J. P. Dowson (Morgan, Cambridge), P. J. Urlwin-Smith (Amilear, Oxford), J. B. Robertson (10-23 h.p. Talbot, Cambridge), M. J. E. Morgan ("Cup" Austin, Oxford), R. J. Lockett (Fiat Nine, Oxford), E. H. McIlwraith ("Cup" Austin, Cambridge), C. Winslow Taylor (Frazer-Nash, Oxford), W. D. Chisholm (Austin Seven, Cambridge), R. A. Beaver (Austin Seven, Oxford), D. W. Geidt (Lea-Francis, Oxford), C. F. Hamilton-Turner (Frazer-Nash, Oxford), F. E. Buckland ("Cup" Austin, Oxford), C. T. Hope (11.9 h.p. Bugatti, Oxford). Buckland was Oxford's best performer, and of the Cambridge team Chisholm made the best show.



Two Morgan drivers, A. H. Taylor (right) and J. P. Dowson (left), at the start at Dunstable.

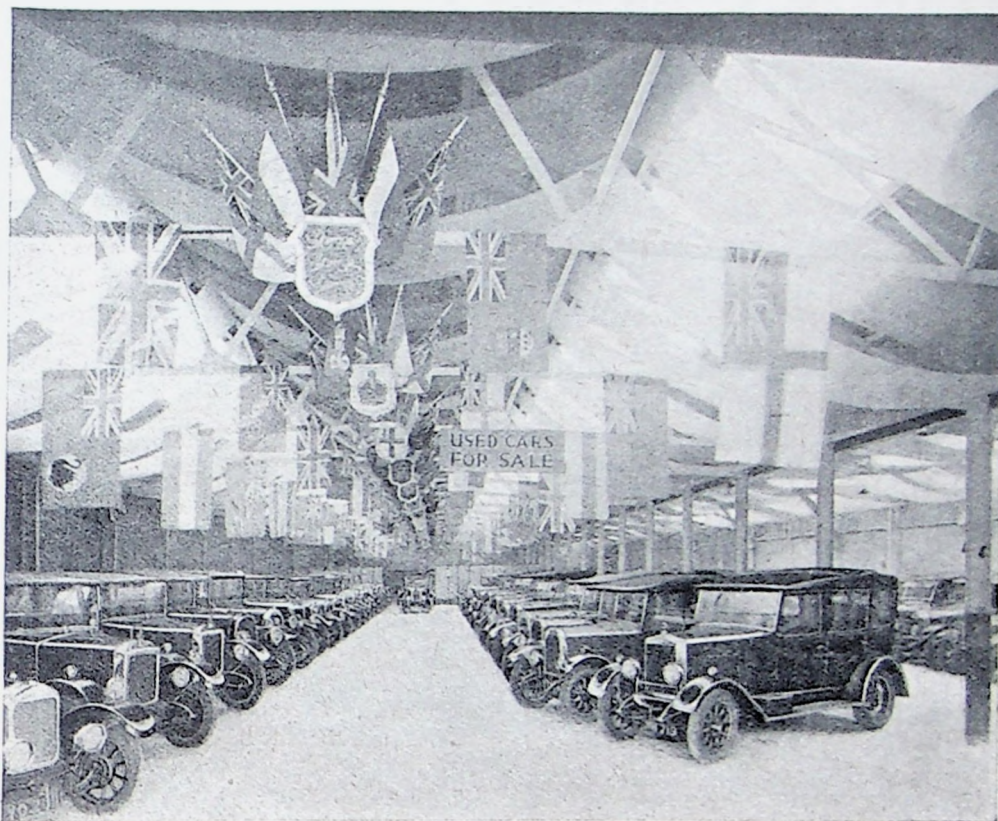
and, after much help from a few on-lookers, managed to extract their cars from the mud which enveloped them well over the hubs. The wiser ones took the marshals' advice to turn back and carry on along the main road.

That old terror, Tunnel Slide, is no longer considered so formidable an obstacle and all cars succeeded in climbing it, except R. A. Beaver's Austin Seven.

Tring Park can only be described as impossible. Had there been no rain one might have expected a motorcycle to climb it, but for a car without non-skid chains it was far too severe. Several sporting spirits made the attempt, among them being Morgan ("Cup" Austin), who managed to cover about a

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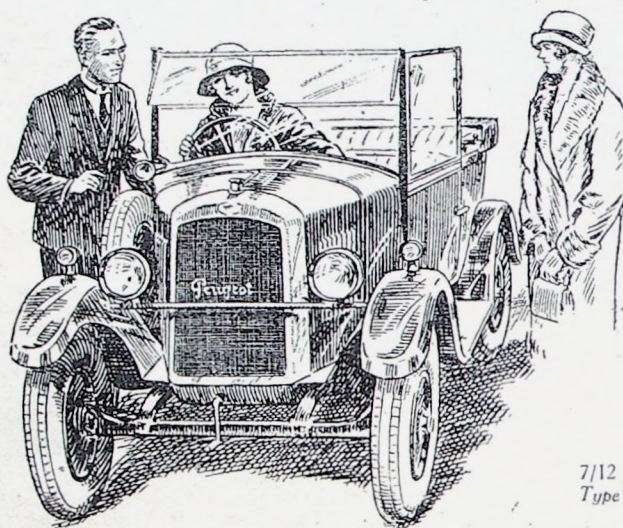
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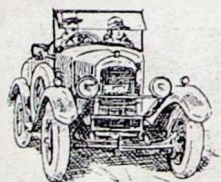
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TWO NEW MORGAN ACCESSORIES—A SILENCER AND A BUMPER BAR—COMMERCIAL THREE-WHEELERS—THE NEW CYCLECAR CLUB.

SAFE AS THE BANK! — This all-steel German three-wheeler is used by a big Berlin bank for conveying money through the streets of that city.

THE silencers fitted as standard to Morgans are sufficiently effective to meet the requirements of most owners. In the case of Aero models, however, a little super-tuning is apt, sometimes, to cause rather more exhaust noise than can safely be made in certain districts. On the other hand, a dead silent exhaust, even if it can be obtained without back pressure, seems out of place on a sports model. The ideal to aim at, therefore, is a perfectly free exit for the gases, but with a pleasant burble which will not offend official ears.

A silencer which approaches this ideal very closely has recently been put on the market by Messrs. V. W. Derrington and Co., 159, London Road, Kingston-on-Thames. The expansion chamber is 2 ft. long and 6 ins. in diameter, with the inlet ports from each cylinder arranged tangentially so that the gases are swirled towards the centre of the chamber. The outlet pipe, which has a bore of 2 ins., is also fitted tangentially below the centre and projects rearwards, the end being set to right or left of the rear wheel according to the wishes of the buyer. The full length of the pipe is 8 ft. 6 ins.

I have had this silencer demonstrated to me under normal running conditions, and it struck me as being very efficient; appreciable back pressure is impossible and there is just enough noise to be pleasant. The silencer costs £3 10s. complete and is very easy to fit.

Another interesting fitting made by Derringtons is a front bumper for Morgans. It is illustrated on this page, together with the silencer described above. The bar is mounted on two horizontal plungers which slide in tubes clamped to the framework of the machine. Each

tube is provided with two springs, one weaker than the other.

The weaker springs take the first shock of any collision, and if the impact is heavy enough they close up fully, thus bringing the strong springs into action. The bumper bar itself is of T-section steel and very strong, whilst the whole assembly can easily be attached to a Morgan by the owner, as no structural alterations are necessary. The bumper is priced at 39s.

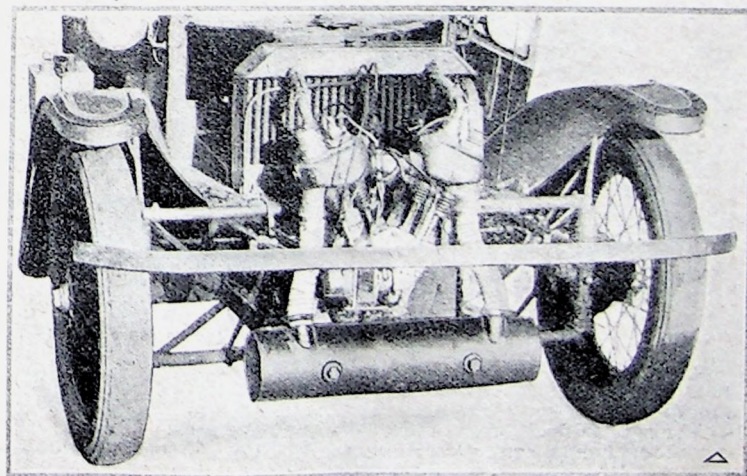
The fitting of a commercial body on to a three-wheeler is, I am aware, not by any means new, but the photograph at the top of this page shows a very original adaptation of the idea and is, incidentally, a strong tribute to the popularity of three-wheelers abroad. If a responsible bank will trust bullion, specie (or whatever hard cash in large quantities is called) to transport in a three-

wheeled vehicle, I can see no reason why English tradesmen should not avail themselves of the opportunity provided for them by all the cyclecar manufacturers who exhibited at the Motor Cycle Show.

It appears to me that the up-to-date British tradesman has only two ideas about the proper distribution of his wares—either a large commercial motor or a motorcycle and box side van. The former is, of course, ideal for the man with a large clientele, but for the small trader with ambitions to get bigger, the side van seems to me a little inadequate.

A three-wheeled delivery van will cost him no more to run, will carry more, need less attention and will, of course, enable two roundsmen to travel under cover. The initial cost is only a matter of some £25 or £30 more. As very learned people say—*verb. sap.*

Elsewhere in this issue will be found an account of the New Cyclecar Club's annual dinner, so I will not allude further to it on this page, but I should like to make a small announcement in connection with the club. Mr. H. Beart has been elected to the racing committee of the Council; Mr. E. G. Oxenham and Lieut. G. B. F. Recce, R.N., have been added to the trials committee, and Mr. D. C. Lorkin to the social committee.



The new Derrington silencer for Morgans normally is hidden by the number plate. The bumper bar is spring loaded and arranged for easy attachment.

IN the days when windcreens were an "extra" and hoods the exception rather than the rule, it was a common thing for motorists to store their cars for the winter, and a number of owners still do so, but they become a smaller and smaller minority as time goes on. Indeed, the proportion of motorists who have their cars out of commission for six months of the year is decreasing so rapidly as to prompt the question "Is it really worth while to store a car for the winter?"

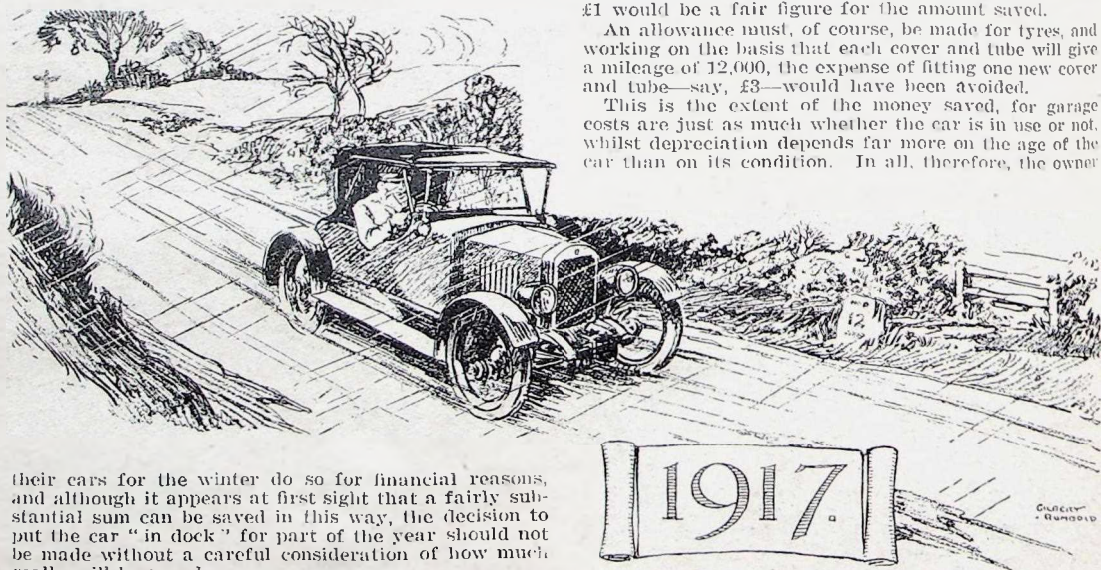
The reasons for this gradual change of attitude towards winter motoring are not far to seek. The high degree of reliability attained by modern cars has played its part, for a very large number of people now use their cars for business purposes, a thing which they could not do when there was any doubt as to whether or not they would "get there." Business, of course, goes on just the same all the year round, and these folk consequently have their cars in service for 12 months of the year.

Another important point is the really excellent all-weather equipment now found on practically every car—with the exception, of course, of out-and-out sports models—no matter what the price. This development, together with the advent of low-priced saloons, has robbed winter motoring of all its old terrors, and even those who are not in the best of health can enjoy a winter run. A few years ago it was only the more hardy individuals who dared venture out in cold or stormy weather, and then only in gigantic leather coats, thick gauntlet gloves and the like.

In addition, there is a number of contributory factors, such as better roads, front-wheel brakes and easier starting. Admittedly, these have improved motoring conditions all the year round, but their benefit is felt most in wet or cold weather.

Healthy Winter Runs.

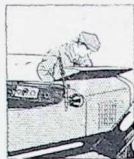
Any motorist can enjoy pleasant and health-giving runs even in the depth of winter; indeed, a trip on a cold, windy day is very bracing and invigorating. Thus, owners who use their cars merely in the summer months cannot justify the practice with the excuse that motoring is enjoyable only in the summer. This being so, one is led to assume that those who store



their cars for the winter do so for financial reasons, and although it appears at first sight that a fairly substantial sum can be saved in this way, the decision to put the car "in dock" for part of the year should not be made without a careful consideration of how much really will be saved.

Let us take the case of a 10 h.p. car, and assume that its owner decided to store it from November 1st to March 24th. In the first place, there would be a saving

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IS IT PENNY WISE

in tax for the six months, but this would be only £4 10s. (not £5), owing to the extra charge made for short-period licences.

By notifying his insurance company that the car will not be used on the road for a given period, it is possible for a motorist to have his policy extended for one half of the period during which the car is laid up, fire and theft being risks covered during the whole time; thus the saving in the case under consideration would be equal to a quarter of the annual premium, say, £2 10s.

In passing, it should be noted that this concession to policyholders will not be granted if the car is out of commission for repairs, although most insurance companies have no objection to an owner taking advantage of the car being laid up to overhaul it, provided that this is not the main reason for suspending use of the car.

The Saving in Petrol.

The next point is petrol, and assuming that 3,000 miles would have been covered had the car been in use, the cost of 86 gallons of petrol would be saved, if the car were given a consumption figure of 35 m.p.g. At current prices, the saving would be somewhere in the region of £5. The exact figure cannot be given as there are different grades of petrol, and even the well-known grades of No. 1 spirit vary in price in different parts of the country.

Lest it be thought that 3,000 miles is an inadequate estimate for running during the six winter months, it should be pointed out that the case of a man who uses his car for pleasure only, and not for business, is being considered. So far as oil and grease are concerned, £1 would be a fair figure for the amount saved.

An allowance must, of course, be made for tyres, and working on the basis that each cover and tube will give a mileage of 12,000, the expense of fitting one new cover and tube—say, £3—would have been avoided.

This is the extent of the money saved, for garage costs are just as much whether the car is in use or not, whilst depreciation depends far more on the age of the car than on its condition. In all, therefore, the owner

Ten years ago there was some justification for motorists complaining that winter runs were only for the more hardy individuals, but—

"DOES IT REALLY PAY TO STORE A CAR DURING THE WINTER MONTHS?" IS THE THEME OF THIS ARTICLE. THE WRITER WEIGHS UP THE PROS AND CONS IN A VERY STRAIGHTFORWARD MANNER AND OFFERS SOME HELPFUL SUGGESTIONS.



Is in pocket only to an amount of about £16. On finding that this is the extent of the money saved, the motorist who is not too well blessed with this world's goods might be slightly disappointed, but he would, nevertheless, think that £16 is £16, and as he does not use his car so very much during the winter it is well worth his while to store it. So far so good; but he must remember that the absence of a car will bring its train of extra expenses in other directions.

Possibly he was in the habit of combining his runs with shopping expeditions, purchasing his goods at the most economical prices. This will have to stop, and he will be forced, metaphorically speaking, to buy his daily bread at the local bakers, where he may have to pay slightly more.

Again, he was probably in the habit of visiting friends living at some distance from his home: these visits will have to cease or he will have to spend considerable sums in railway fares. It must not be forgotten, too, that every man must have recreation and entertainment of some sort, and whereas his car provided him with almost all that he wanted in both respects, the man who lays his car up will have to seek his pleasures elsewhere—and pay for them.

Thus, that £16 which seemed so enticing has now dwindled very considerably, if it has not disappeared altogether.

Christmas Shopping

A final argument against closing the garage doors for six months when the licence expires on September 30th can be summed up in one word—Christmas. This season is always associated among other things with shopping, and the horror of trams, trains or buses, when one is laden with parcels, is too well known to need emphasis. Then, again, there is the question of Christmas parties, and the like: how much pleasanter it is to leave a friend's house on a cold and wet night and step into the snug comfort of a car than to be compelled to walk home, or to leave early to catch a train.

From the foregoing it seems clear that, except in to store a car for six

months of the year. There is, however, an alternative plan, and that is to lay up a car from January 1st to March 24th.

The weather is usually at its worst during this period, and there are no public holidays when the absence of a car would be missed. Admittedly, an owner is not going to save much money directly in this way, but during those three months it will be possible for him to "go over" his car thoroughly and make it in tip-top condition for the spring and summer.

A man who motors for pleasure only will not miss the use of his car very greatly at this time of the year, and the knowledge that he has three months at his disposal when the car will not be used will allow him to undertake overhauls which he would not have been able to carry out had the car been in use. In other words, much of the work that he will do would have been entrusted to his local garage proprietor, who would not, of course, forget to send in the bill.

Hence, while it is very questionable whether it pays to store a car for the whole of the winter, there is much in favour of laying it up for the first quarter.

Safe Storage.

A number of readers will already have allowed their licences to lapse, and to these a few words of advice on storing a car may be addressed. First and foremost, make sure that your garage is weatherproof, for although the effects of, say, a slight leak in the roof are not very serious when the car is in constant use, much damage can be done to a car lying idle.

The water should, of course, be drained from the radiator and water jackets, to eliminate the risk of cracked cylinders through freezing.

A thorough wash and polish of the whole car is advisable, because caked mud is very harmful to paintwork. All bright parts should be evenly coated with vaseline, or some other suitable grease, whilst it is just as well to go over the whole chassis with a grease-gun, giving each lubricator its quota.

The battery requires special treatment, because if left out of use for much longer than six weeks it is likely to be seriously damaged. can be



day and
day—
contrast in
winter
spring
conditions.



—to-day even an invalid can enjoy a run on a cold day, whilst wet weather has lost most of the terrors it once held.

used for wireless work so much the better; otherwise, after giving it a good charge, the cells should be emptied and flushed out with distilled water.

It is advisable to erect the hood, as if left furled the fabric may be damaged by creases. So far as tyres are concerned, the best method is to jack up the whole car, so that they do not have to support any weight. If covered with a large dust sheet a car stored in this way will not come to much harm.

Another Motor Show

SPORTS AND TOURING
CARS OFFERED AT
RIDICULOUSLY LOW
PRICES

THERE is now in progress in London another Motor Show, and it is one about which the Society of Motor Manufacturers and Traders are totally unconcerned; yet it is being held in a large building in the centre of the Metropolis, and the visitors, although they pay no admission fee, number many thousands daily. The exhibitors are displaying hundreds of cars, most of them bearing the names of world-famous makes. There are Rolls-Royces, Renaults, Packards, Citroëns, Sunbeams, Morrisies, Alfa-Romeos and a number of entirely new vehicles which bear no resemblance to any model yet seen in this country.

This Show is different from any other, in that trial runs are actually allowed in the building at any time during the day and, in fact, a number of cars are in almost continual use.

One of the most interesting exhibits is an Alfa-Romeo racing car built on really unique principles, although to the outward eye it is almost exactly similar to this concern's standard racing productions.

The body is made from a single thin sheet-steel pressing, and the seats are staggered in the orthodox manner. A staggered and cowed scuttle completes the long bonnet and a round-nosed radiator fitted with a wire stone-guard

perieneced eye the fitting of shock absorbers is certainly paradoxical.

The motor is actuated by a starting handle bearing a striking resemblance to an eight-day clock key. The price of this remarkable car is 25s.

Lovers of *le sport* may also obtain for the paltry sum of 15s. a replica of Segrave's 207 m.p.h. Sunbeam finished in a striking shade of red with the details of his remarkable record at Daytona painted on the side. A rather startling innovation is that this price also includes the driver!

The Rolls-Royce model is priced at 35s. and has full electric lighting equipment, reverse gear and brakes. There

are three Citroën models, a four-seater with electric lighting at 12s. 6d., and 10s. 6d., less the lighting, while a two-seater is priced at 16s. 6d. An open touring Renault costs 10s. 6d. and a saloon with electric equipment, 12s. 6d., while a big Renault saloon with let-down sidesccreens and electric lamps costs 55s.

In a different department of this interesting exhibition is another replica of the famous "Mystery" Sunbeam, which might be described as a half-man power model; it is priced at £15 15s. Pneumatic tyres are fitted as standard.

There is a third Sunbeam, strangely reminiscent of the 32 h.p. car in which Segrave established records about three years ago; in fact, this driver is said to have had a hand in the design. It is painted green, has a radiator cowl, outside exhaust pipes and pneumatic tyres, and costs £14 14s. A similar model with an aluminium body and red chassis and wings, disc wheels, external

A racing Sunbeam and two smart two-seaters. The balloon tyres on the lower one look extremely comfortable.

bears the maker's well-known badge. A point which will interest students of racing design is that rack and pinion steering is employed, and another notable feature is the use of solid rubber tyres of remarkable resiliency.

This springiness is, however, intended to be counteracted to a great extent by the use of Hartford-type shock absorbers on the front axle. The latter is mounted on somewhat original springs; they are stamped from sheet tin and are absolutely rigid, so that perhaps to the ex-

contracting brake, five lamps and an adjustable screen, is marketed at £10 10s., while a touring model in two-seater form with spare wheel, luggage grid, folding dickey, hood and envelope, bumper, horn, licence holder, driving mirror and a well-equipped dashboard is priced at £13 18s. 6d. There are many other smaller models from £1 1s. upwards, so that small visitors to the Christmas Bazaar of A. W. Gamage, Ltd., Holborn, London, E.C.1, are afforded plenty of choice in the purchase of their 1928 models.

*The
New
Trojan
Saloon*

**10 h.p. roomy
Four-seater
SALOON**

On pneumatic tyres

£175



**WRITE TO-DAY FOR
Illustrated Catalogue
"L.C.4" showing
full range of
Trojan Cars with
prices and
particulars.**

**LUXURY AT
LITTLE COST!**

FOR appearance, comfort and performance, the new Trojan four-seater Saloon is a car to be proud of. It is fitted with roof light, sliding windows, speedometer, dash lamp, rug rail, internal lighting, pneumatic tyres, etc., and upholstered to be the epitome of comfort, and the class and workmanship of the engine is of a very high standard.

The purchase price and cost of maintenance are among the lowest on the market to-day.

Trojan LTD.

*Sole Concessionaires for Sales and Service
of Trojan Vehicles throughout Great Britain.*

**PURLEY WAY,
CROYDON.**

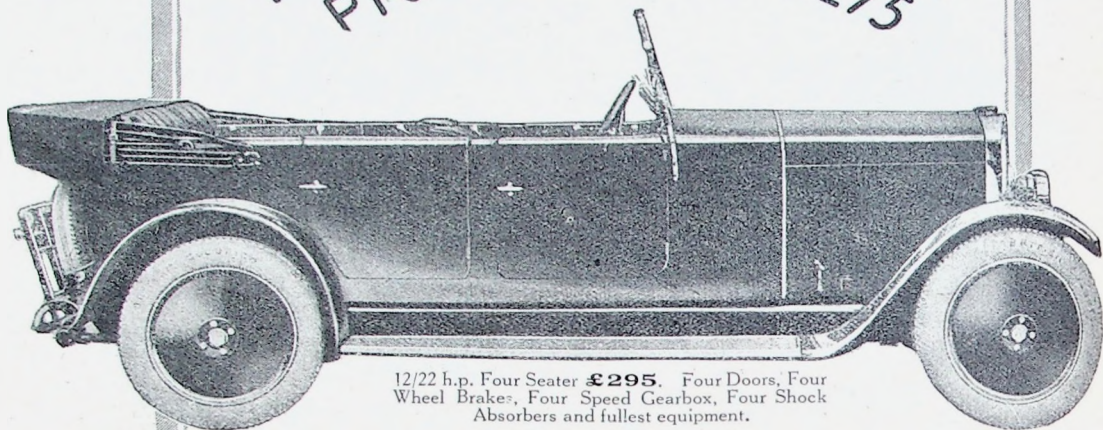
(Flynn)

MANUFACTURED BY LEYLAND MOTORS LTD.

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.

B35

THE CAR OF 1928 PRICES FROM £275



12/22 h.p. Four Seater **£295**. Four Doors, Four Wheel Brakes, Four Speed Gearbox, Four Shock Absorbers and fullest equipment.

AFTER the storm of attractions and counter attractions of the Motor Show comes the calm of thoughtful selection, in which proved performance, reputation and value are the real guides to your final purchase.

Such thoughtful comparison will show that the Lea Francis is undoubtedly the car of 1928.

The 10 h.p. models from £275 and the 12/22 h.p. models from £295 are of outstanding merit. In addition to Four Wheel Brakes, Hartford Shock Absorbers and Four Speed Gearbox, they incorporate every modern detail of equipment with a luxurious comfort, ease of handling and a performance on the road which has made them world famous.

It is our great ambition that every prospective purchaser should try a Lea-Francis. Our experience is, that personal trial is the greatest proof of Lea-Francis superiority. May we give you a demonstration run?

10 h.p. from £275. 12/22 h.p. from £295. 12/40 h.p. Sports from £325. 12/50 h.p. "Brooklands" £425. 1½-litre Hyper-Sports Supercharged £495.

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

MOTORING MATTERS IN PARLIAMENT.

"**H**OME still remains!" said the Minister of Transport, when he was asked whether he thought that his long-postponed Road Vehicles Bill will become law during the present Parliament. Even the fate of his own Department is not yet decided, as the Government, apparently, have not yet determined whether the Ministry of Transport is to remain as a separate Ministry, or to be merged in the Board of Trade. His mood was, therefore, all the more optimistic.

This exclamation was made at question time, when several members expressed anxiety as to whether a scheme of compulsory insurance, applying to motor vehicles generally, is to be introduced soon. Mr. Wardlaw Milne stated that an increasing number of people are suffering loss and damage as a result of accidents, particularly from motorcycles, in cases where the motor driver is uninsured.

Compulsory Insurance Difficulties.

The Minister replied that, while he favoured the principle of compulsory insurance, a general scheme of this character would involve great difficulty, and he was very doubtful whether it would be possible to reach an agreement with the insurance companies. He reminded the House, however, that

insurance proposals were contained in the draft Road Vehicles Bill which he circulated last year.

It was then that, in response to an ironical remark from a Labour member, he uttered the variant on the common phrase, "While there is life there is hope."

Kingston By-pass Delay.

The Minister was also questioned on the subject of the arterial roads round London, and especially as to the delay in completing the Kingston by-pass road. His explanation was that the new arterial roads were more or less hurriedly put in hand as a means of finding employment for the workless, and there was not an opportunity, in all cases, of carrying out the "preliminary investigations."

The disadvantage of these hurried methods was revealed most of all, apparently, in the Kingston by-pass road. There, said Colonel Ashley, an unusually large number of engineering difficulties, such as the necessity for constructing bridges, were revealed. Nobody, he declared, was responsible; it was all a matter of "the circumstances of the case."

Suggestions for reducing taxation on motorists are not popular in Ministerial circles, and Sir Frank Sanderson could not have really hoped for a favourable answer when he asked whether the

Government would consider the question of making a special reduction of motorcar taxation to people who own more than one motorcar, provided that only one car is taken out at a time. The Minister of Transport made it plain at once that he was unprepared to recommend such a concession, and he backed up his refusal by a statement that the administrative difficulties involved in giving effect to such remission would make it impracticable.

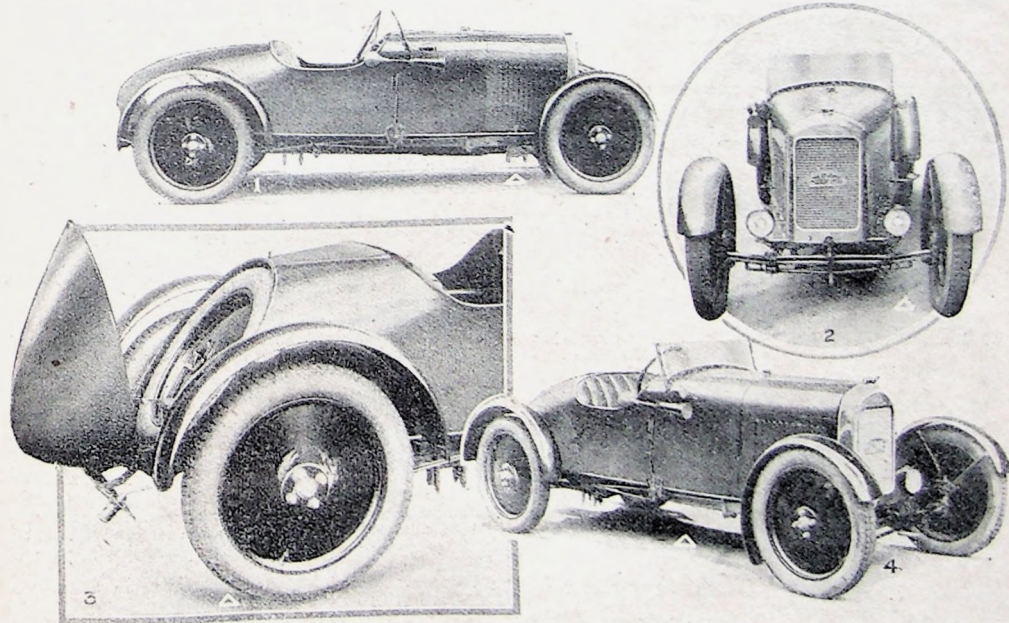
Very shortly, the President of the Board of Trade announced, draft regulations will be issued by him with regard to roadside petrol pumps. Patterns of petrol-measuring pumps have already been sanctioned by the Board of Trade, and many local authorities are testing the pumps. The new regulations will be based upon the Weights and Measures (Amendment) Act, 1925.

Another announcement of interest to motorists was made in the House of Commons. It was that work is to commence immediately upon the bridges which are necessary on the new Glasgow-to-Edinburgh road, an indication that at last progress is to be made with this scheme.

Parking Points.

Members showed curiosity with regard to the respective roles of police and licensed attendants at the motor-parking places which have been established under the Ministry of Transport regulations.

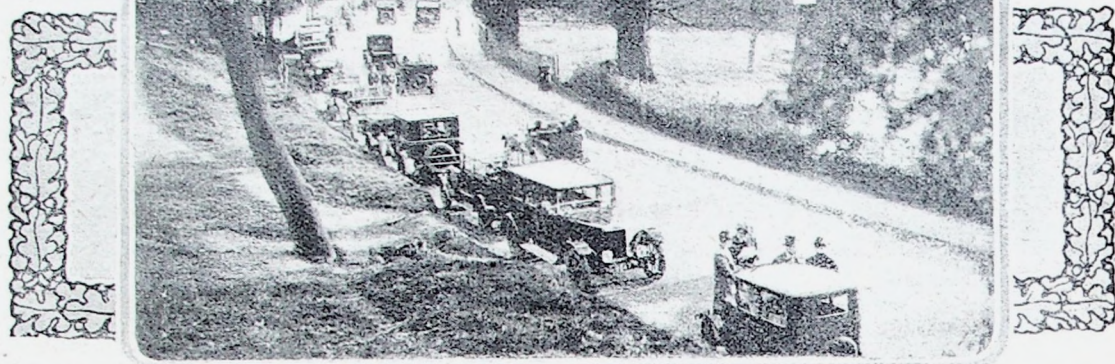
The Home Secretary, who was asked for information on this subject, explained that the function of the police at such places is to regulate the motor traffic, while the duty of the attendants is to take charge of the cars and see that they are not stolen.



SINGER JUNIOR
SPORTS MODEL.

To meet a demand for a sports Singer a limited number of cars similar to that shown above are being marketed by the Standard Automobile Co., Alfresco and Turf Garages, Frizinghall Road, Bradford. A speed of from 55 to 60 m.p.h. is obtainable, and the price is £195. Further details will be given by the concern named above.

Our Readers' Opinions



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," 5-15, 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.

WHAT DOES IT REALLY COST?

Some Instructive Accounts of Light-car Running Expenses.

Two Years with an Austin Seven.

As the question of running costs has again cropped up, perhaps the details given below of the cost of running an Austin Seven for two years will be of interest. The mileage was 4,938.9 for the first year and 5,070.2 for the second, making a total of 10,009.1 for the whole period. It is only fair for me to point out, however,

that on three occasions the speedometer belt broke, and some time elapsed before I had it repaired, with the result that a certain proportion of this mileage has had to be estimated. The actual details are as follow:—

	£	s.	d.
Tax	16	0	0
Driving licence	0	10	0
Insurance	12	0	8
Oil (six gallons)	1	17	5
Grease	0	6	7
Petrol (240 gallons)	16	5	1
Repairs	10	10	2
Extras (plugs, etc.)	1	9	4
Tyres (estimate only)	6	6	0
Depreciation (estimate only)	50	0	0
Interest loss (estimate only)	14	0	0
Total	£129	5	3

The petrol consumption has worked out at over 40 m.p.g., whilst the cost per mile, including everything, is just over 3d. It will be noticed that garage has been omitted, and this is due to the fact that I am able to lodge the car in an old coach-house. The figure of over £10 for repairs was largely due to a broken gudgeon pin during the second year. This resulted in a scored cylinder, and the cylinder bores had to be reground and oversize pistons fitted. The car has been in daily—and often nightly—use in a hilly district, and a large proportion of the runs have been punctuated with frequent stops. The only involuntary stops have been due to punctures or oiled-up plugs.

I have no wish to mislead would-be motorists, so I will state here that all ordinary running repairs and adjustments have been done by myself. It would be interesting, incidentally, to hear what it costs an owner who never soils his fingers to run a car.

ENTHUSIAST.

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Gwynne Eight Details.

The following details of the cost of running my 1925 model Gwynne Eight for two seasons should prove of interest to our readers. It will be seen from the table appended below that the total running costs for 25,000 miles are £173, which works out at approximately 1½d. per mile. This, I think, is not far from a record, especially as I "push" the little car along pretty hard. It is still capable of a genuine 60 m.p.h., and has done 67 m.p.h. on several occasions. Incidentally, the speedometer is accurate.

Interesting Figures.

	£	s.	d.
Running Cost.			
Petrol (consumption 40 m.p.h.)	42	0	0
Engine oil (consumption 800-1,000 m.p.g.)	8	5	0
Tyres (five covers, one tube)	10	10	0
Repairs and Renewals.			
Relining brake shoe	0	17	6
Plugs (one set K.L.G.)	1	4	0
Magneto overhaul	1	0	0
Valve grinding (on two occasions)	1	0	0
Radiator cap and bonnet clips	0	17	6
Electric lamp bulbs	0	6	0

	£	s.	d.
Overhead Charges.			
Tax and insurance (two years)	32	0	0
Garage (two years)	40	0	0
Depreciation (10 per cent. of first cost)	35	0	0
Total	£173	0	0

I may add that the compression is still good, whilst the main bearings, gears and back axle, when examined after 23,500 miles, were found to be in excellent condition. This, I think, speaks volumes for the workmanship of small British cars.

*It must be pointed out that the figure allowed for depreciation by our correspondent is very small, and we think that if he came to sell the car he would find that its value had depreciated by very much more than £35. In addition, no mention is made of loss of interest on capital, which is a point which should be included when calculating the cost of running a car.—ED.

"Tell me about this 'Nippy Ten'"

Why do you call it "The Nippy Ten"?
Because the adjective "nippy" very ably sums up the car's road performance.

What is its real title?
The 10/25 h.p. Rover car.

What does "10/25" mean?
It means that the engine develops 25 h.p., although only nominally of 10 h.p. rating.

Exactly what is its official rating?
The R.A.C. and Treasury say it is 9.8 h.p., because the bore of each cylinder is 63 millimetres.

Then what is the yearly tax?
£10, or £2-15s. per quarter.

What is the stroke and the total engine capacity?

The stroke is 95 millimetres, and the total engine capacity 1185 cubic centimetres.

How many cylinders has the engine?
Four, cast in one block.

In what order do they fire?
1-2-4-3.

What is the compression ratio?
Five to one.

How are the valves located?
They are "overhead," i.e., contained in the cylinder head.

What is the advantage of overhead valves?
They enable the combustion chamber to be made compact and free from pockets, which would allow remnants of the explosive mixture to remain in the combustion chamber and so dilute the next charge of new gas.

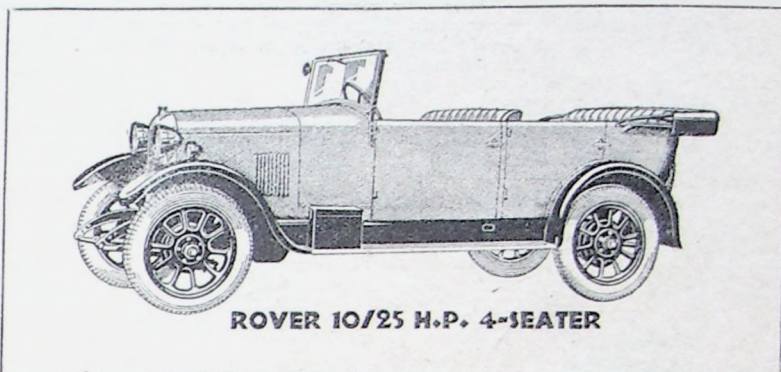
Is that why the overhead valve type of engine is more efficient than the other type?
Yes, and also the reason why overhead valves are regarded as being more up to date.

How are the valves of the Rover operated?
By means of long push rods from the camshaft in the crankcase.

How is the camshaft driven?
By silent chain from the crankshaft.

Has the camshaft only two bearings?
No, the 10/25 h.p. Rover engine has a 3-bearing camshaft.

How is the overhead valve gear lubricated?
The shaft on which the eight valve rockers are mounted is hollow and oil is forced through it under pressure. Each rocker is fed through this hollow rocker shaft, and the rockers themselves are drilled so that some of the oil passes down the rocker and out on to the cup-shaped top of the long push rod.



ROVER 10/25 H.P. 4-SEATER

Extreme roominess characterises the latest Rover models. The 4-seater illustrated (£225) is no less than 48 ins. wide inside.

Then there is always oil in this cup-shaped head of the push rod?

Yes, and that accounts for the silence of the Rover valve gear, and for the fact that the valves so seldom need adjustment.

Tell me then, what happens to the rest of the oil after it has passed through the valve gear as you have just outlined?

It returns to the sump, is filtered, and is again circulated through the engine.

How about the lubrication of the remainder of the engine bearings?

All the big end and main bearings on the crankshaft are likewise lubricated under pressure.

Is the crankshaft, then, hollow?

Well, "hollow" suggests flimsiness to the lay mind: the Rover crankshaft is drilled internally, and oil is forced through it. At each bearing the oil is fed into the inside of the bearing itself.

Surely this lubrication of the bearings from the inside is vastly superior to the system of dipping the bearing into a trough of oil and trusting to luck as to how much lubricant finds its way into the actual bearing surface?

Oh, rather! It makes all the differ-

ence in the world. Why, that is one of the reasons why the 10/25 h.p. Rover engine will keep up such a high speed without any danger of bearing trouble. You can run a Rover "all out" for as long as you like, you know.

But how about cooling the engine?

Well, the radiator is amply large, and the water is circulated by a pump, not merely by thermo-syphon. That's another feature of the Rover you should not overlook.

There are a lot more questions I want to ask, but we haven't the space now. Tell me briefly, what does the Rover cost?

There are seven models in all—the touring 2 and 4 seaters at £220 and £225 respectively; the detachable head coupé at £235, the "Paris" and "Riviera" (folding head) Weymann saloons at £250 and the 2 and 4 seater semi-sports at £260 each.

Who makes Rover cars?

The Rover Company, Ltd., of Coventry. Their London address is 61, New Bond Street, W.1.

When will you tell me some more about the "Nippy Ten"?

Suppose we meet on this page in a fortnight's time?...Right.

THE RELIABLE, NIPPY

ROVER

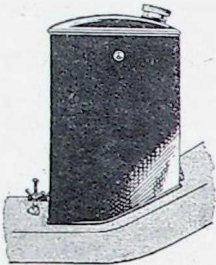
TO THE READER.—By mentioning "The Light Car and Cyclecar" when replying to advertisements, the progress of the small car movement will be assisted.

Christmas presents for the motorist

Give your motorist friend a gift combining utility and comfort. Illustrated on this page are only a few of Dunhills vast range of motor accessories. Send for the complete catalogue.

MOTOR GAUGE—No. 29.

Contains gauges for correctly setting: Spark Gap, Contact Breaker, Inlet Valves on Side Valve Engines, Exhaust Valves on Side Valve Engines, Inlet and Exhaust on Overhead Valve Engines, and Plug Cleaner. 2/9 each. Post free.



"DESMO" PETROL CAN CARRIER

Specially designed for Austin 7 cars. The can fits up against the front of the off-side mudwing, the capacity being one gallon. Finished black enamel with nickel-plated carrier and cap. Price 8/6. Post free.



LEATHER CUSHION.

A charming Cushion of chrome patch pieces in brown, green, grey. Price 12/6 Post free.

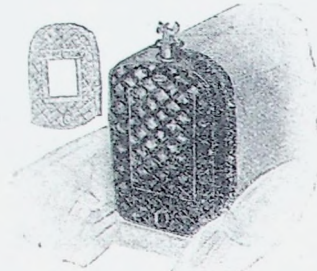
DRIVING CUSHION.

To fit over squab and prevent strained position when driving. In plain Leatherette, in green, brown, blue and black, 22/6. Antique, in brown, blue, red and grey, 25/-. Post free.



"STADIUM" "STADIUMOID" ASH TRAYS.

In many beautiful shades of colours to harmonise with the coachwork or interior decoration of the car. The range of colours includes red, mahogany, fancy mauve, fancy rose, fancy green, green, mauve, fancy light blue, fancy fawn, rose, brown heather, and blue heather. Size 4 1/2 in. x 1 1/2 in. 7/6 each. Post free.



DUNHILLS LATEST RADIATOR MUFFS. Fulfil their function in every way. Smart and neat. The efficient method of keeping the water warm in the radiator when driving or standing still during the winter months. When ordering Radiator Muffs it is absolutely essential to give Make, Model, H.P. and year of Car.

In black good quality leather cloth, lined wool, quilted (to give extra warmth)

"Resistal" (specially prepared to resist rot or grease, or water), lined and quilted as above.

Muffs in above materials can be supplied to order with lightning fastener. Prices on application.

FUR TRIMMED FELT FOOT MUFF.

In blue or grey Felt, trimmed and lined fur. Price 17/6. Post free.

"STADIUM" SPOTLIGHT. Complete with "Stadium" Anti-Fog Disc.

Combined Search Light, Fog Light, Inspection Lamp, and 3 1/2 in. rear view Diminishing Mirror. Any one of the following fittings can be supplied:

(A) Clip fitting for round, square or oval section windscreens.

(B) Bracket fitting for bolting or screwing to woodwork.

Model 555.—Black and Nickel-plated, complete with 6 or 12 volt bulb, Anti-Fog Disc and Flexible Cable.

4537 80 25/- each

THE "PRIMA" DIPSTICK PETROL GAUGE. Austin 7.

Specially designed to avoid guesswork in filling petrol tank, top specially shaped to register accurately, holding fibre rod at the correct angle to ensure accurate measurement.

PLUG TESTER.

Combined plug, tester and pencil, can be carried like a fountain pen. 2/- Post free.

ARMLETS.

Light, strong, waterproof. Come high up the arm, fold into compact case. As necessary as a pair of pliers. Sleeves are vulnerable; when doing a job on the car, a careless movement may, in a second, ruin your coat. With these armlets and a pair of old gloves, attention may safely be given to the engine or tyres. Made in the best quality "Judiana" for lady or gentleman.

8/6 Post free



MUTAX DRY CLEANING BRUSH.

Cleans while you brush. Price 10/- Post free.

HEEL GUARD.

Your friend who wears smart shoes will be pleased with a smart little pair of heel protectors. In black, grey and tan, 3/6. Fancy colours, 4/-. Post free.

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GLASGOW : : 72, St. Vincent St.

OUR READERS' OPINIONS (contd.).

The Ruined City of Suffolk.

In your issue of November 11th "V.H." pays adequate tribute to the charm of Suffolk's ruined city of Dunwich, but those who go there expecting to find on the cliff edge the remains of the last of her ancient churches will be disappointed. Chancel, nave and aisles successively crumbled away until nothing was left but a single buttress, and this was taken down a few years ago and re-erected in the churchyard of the modern church which—warned by bitter experience—the inhabitants have built well inland.

Incidentally, gradual erosion, potent as it is all along the Suffolk coast, was not the cause of the greatest disaster which befell Dunwich. A terrific storm which lashed the sea to fury in the reign of Edward III was responsible, and in a single night much of the greatness of that wealthy and flourishing city was swept away; it is only the ruins that have slowly crumbled away in the ensuing years.

GEORGE R. POCKINGTON.

**Swept Away
by Storm.**

Motorists and Fox-hunting.

Foxes Allowed to Live—

Surely every intelligent motorist knows that the fox is allowed to live only for and because of hunting. If he were not hunted the fox would be exterminated by the farmers at once. As it is he is allowed to live, and his depredations on fowl runs are paid for by the hunt, and everyone is satisfied except the few kill-joys who pretend to bemoan the "poor" foxes' fate and mope about mouthing sob stuff.

Any decent man or woman would stop for a few minutes to help the enjoyment of others. I can imagine nothing so fine as to be on a good horse after Reynard.

RICHARD W. WHITE.

Live and be Hunted or—

Having recently spent several weeks in the hunting counties of Devon, Somerset and Worcestershire, I have inquired what would be the result of the termination of fox-hunting in this country. I am informed on all sides that within a few years foxes would cease to exist altogether. At present they are preserved only for hunting, and the damage done by them in killing fowls and so forth would quickly result in their being poisoned or shot.

In these circumstances the important question appears to be—Would the fox fraternity rather enjoy their present existence with the chance of being hunted and one day killed or prefer not to live at all? If I were a fox I think I should have no difficulty in answering this question.

STANLEY B. BOND.

"Farrard Away" Replies.

"Evans on the Field" says that our standards are higher than in our grandfathers' time, therefore fox-hunting must stop; 1914-1918 is a sufficient answer to this. Further, our grandfathers faced their problem of the railways far better than we have done with motors. Would our grandfathers have forced women and children to walk the roads with such little protection as we give them to-day? I did not "defend fox-hunting because motoring also results in injury and death." I suggested that the humanitarian attitude was insincere so long as motorists' own sport caused injuries and death to so many humans.

"Sero Sed Sero" says fox-hunting is admitted to be everything that is bad by all except those who practise it; why, then, do so many thousands of motorists follow hounds in their cars and on motorcycles? No reflection was cast upon "Common Motorist's" ability to ride a horse; he said upon "Common Motorist's" was shown by fox-hunters, and my reply was he would require both if he were to follow hounds on horseback across country. He seems to approve of "the homely sport of fishing," but is there no cruelty in hauling a fish about for an hour or so with a hook in its throat?

FARRARD AWAY.

The Term for a French "Bobby."

The wonderful accuracy of all your statements makes it all the more striking when now and again a slight error creeps in. I am referring to the common mistake which everybody in England seems to make regarding the French name for the "Bobby." A French policeman is not a gendarme. The term is agent de police, sergent de ville or officier de paix, in order of popularity. When you address a policeman you say "Monsieur l'Agent" and not either of the other two names.

**A Common
Mistake.**

A gendarme is an entirely different official. Gendarmes are a semi-militarized body of men to be found only in rural districts, where their job is to arrest deserters and carry out duties corresponding to those of the English "red-caps"; also, they act as gamekeepers, and they normally are a mounted body. They live in barracks known as gendarmeries.

There are no gendarmes to be found in towns or small agglomerations at all. Point-duty work is carried out only by agents de police, whose position is pretty much that of the English policeman.

CEVRE.

Intolerance Not Justifiable.

I must correct a misconception for which I take the blame, as I did not express myself clearly. My reference to noms de plume was not intended to suggest that there is anything discreditable in a correspondent not giving his name, but was intended merely to identify the group of correspondents whose letters were first published. I am afraid that this has rather obscured my point. Many sports involve some brutality—fox-hunting, shooting and perhaps fishing—but there are perfectly reasonable people who pursue these sports and consider that their benefits outweigh their disadvantages.

It is questionable whether over-civilization is desirable. "A Lover of Nature" and "One of the Common Motorists" have a perfect right to hold the opinions which they have expressed regarding fox-hunting, but my contention is that intolerance which goes so far as to interfere deliberately with the lawful pursuits of persons who hold different views is not justifiable.

H. O. DANKWERTS.

The Social Side.

As usual, the polite but misguided request from a fox-hunting fan has degenerated into abuse and acrimony from both sides, and a general loss of sense of proportion. Surely, if people want to hunt an utterly useless animal, which causes a certain amount of damage to poultry, game, etc., they are perfectly at liberty to do so.

Besides, look at the other side of the question. The said sport provides countless opportunities for give and take on both sides. The lads of the county can preen their feathers in red garb, the De Vere-Smythes can deceive themselves into thinking that they matter, the farmers allow their fields and crops to be slightly damaged in return for some privileges from the local M.P., and the hunt ball is responsible for the coming out and subsequent marriage of countless farmers' daughters, apart from an unexcelled opportunity for everybody to toady and show off, as the case may be, and generally take part in variegated farcical stunts without which county life would cease to be COUNTY LIFE with all that it implies.

But for goodness' sake do not talk about pluck in respect of this kind of amusement and trot that out as an excuse, for, after all, bull-fighting requires far more skill and courage than fox-hunting; but does that make it any more excusable?

As for motorists going out of their way to facilitate other people's indulgence in a sport, they may do it if they fancy so, but then we would soon see a request from some enthusiastic shove-halfpenny merchant to the effect that it would be desirable to shut off our engines and coast in neutral past all public-houses lest the vibration from our engines might inconvenience players in the middle of a tournament.

THE SECOND MR. THACKERAY.

Many letters are unavoidably held over.—Ed.
B41

OUR READERS' OPINIONS (contd.).

Is Interest in Competitions Waning?

I have read with considerable interest, and, I must confess, some amusement at times, articles and letters appearing in your very interesting journal with reference to clubs and competitions. I note your recent remarks, under the heading "On the Tapis," regarding clubs and affiliation to the R.A.C., the reason why competitions

Questions of Affiliation Fees. are not better supported being stated as due to would-be competitors having to pay affiliation fees twice over when only wishing to join a club for competition purposes.

I am afraid I cannot altogether agree with your contention. The Kent and Sussex L.C.C., of which at present I am acting as hon. secretary, has never been affiliated to the R.A.C., the founder, committee and members preferring to run it as an independent body principally for sport. Our experience has been that clubs founded for sport and affiliated to the R.A.C. always attract a lot of "drones," who do not desire sport in any shape or form, but only require R.A.C. benefits. Such people, incidentally, are greatly incensed and take the first opportunity of censuring the secretary should sports notices not be sent them regularly.

I maintain that this class of member is not worth having in a club and constitutes a load on the club's back. Hence our reason for non-affiliation. Possibly we are not such a large club as we might be were we affiliated, but I am certain we can show a higher percentage of competing members in our frequent speed trials than any affiliated club.

Our membership fee is a guinea (no entrance fee), and this

is surely not a large sum for a man who runs a car for sport. We have a good crowd of sporting members and are a happy and well-organized club; but I, as secretary, have not experienced any noticeable rush to join because there are no R.A.C. affiliation fees to pay. If our membership fee were 5s. I venture to say that matters would not be very different, although we can claim to run some of the fairest, best-organized and most successful speed trials in the South.

As one who has had considerable and varied club experience, who has given an amount of thought to the question, and who has obtained the opinions of a number of well-known competitors, I have come to the conclusion that the poor support of competitions at present is due principally to three reasons—lack of means, apathy, and the ban on trade drivers and cars, the first two being the most important.

With the exception of track racing and one or two isolated events, support of competitions is on the wane, and it would appear, in some cases, that if their fees were paid for them some members would not run.

LEWIS HUMPHRIES, Hon. Sec.

The Kent and Sussex Light Car Club.

* * Mr. Humphries's views are interesting, but they do not, in our opinion, alter the fact that one of the reasons why competitions are poorly supported by amateurs is that these people are disinclined to pay for "social" benefits and so on when their chief aim in joining more than one club would be to take part in the events promoted by that club.—Ed.

Overseas Motorists Visiting England.

As there are probably many others who are contemplating a visit to England, and are in a similar position to myself, perhaps you will be good enough to publish this letter and reply through your columns. We proceeded to England next year on four months' leave, but as this includes our sea voyage both ways we shall have, actually, a matter of only about seven weeks to spend in England.

Queries and Replies.

Our ambition is to tour England and Scotland in a light car, but we are, at present, at a bit of a loss to know how things are going to pan out. Please do not imagine that because we come from Africa that we arrive with our pockets bulging with gold, for we shall land with just sufficient money to buy one of your cheapest light cars. I presume I shall be able to walk into one of your motor works and depart in an hour's time? The biggest delay, as far as I can see, is the question of number plates. Is it possible to take out a licence for two months or is the minimum half a year? What if I pay my annual motor tax in this territory and carry my licence with me? May I have my Beira numbers painted on my plates and use them, and register them for the seven weeks, or shall I have to register the car in England?

Will an insurance company give me a policy for two months, possibly an inclusive one for the sea journey back to Beira?

I have another rather important question to ask:—Will the R.A.C. take us under its wings for this short period? I fully realize that we would never be able to make the tour without the Club's assistance, and we should, incidentally, be proud to have the R.A.C. badge adorning the radiator cap of our car.

Is driving through England as hazardous as painted, or can one of 13 years' driving experience in Africa enter "the ring" with more than the feeling of a novice? After being a reader of *The Light Car and Cyclecar* for so many years, I am very much afraid my chief trouble will be with the parking regulations and dodging the police. Fortunately my wife is also a licensed driver, so when shopping has to be done one of us can always remain in the car and, as the "man in blue" comes along, move the car round the corner, then take a run round the block and come back again! This seems to be a fairly simple way out of the difficulty.

As I appear to be the only one who receives *The Light Car and Cyclecar* in Beira, it may interest you to know that it passes through many hands, both Portuguese and British, and, should I keep my friends waiting a little

longer than usual after the mail has arrived, you would be surprised to see the way I am pestered for the latest copy.

G. MATHIESON.

Beira.

* * We presume that our correspondent intends to buy a new light car, and that he will take it back to Beira with him on his return. If this is the case it is possible that some delay may occur in delivery should he choose a new car of popular make, and for this reason we strongly advise him to make up his mind which car he intends to purchase and place a definite order through a suitable agent beforehand.

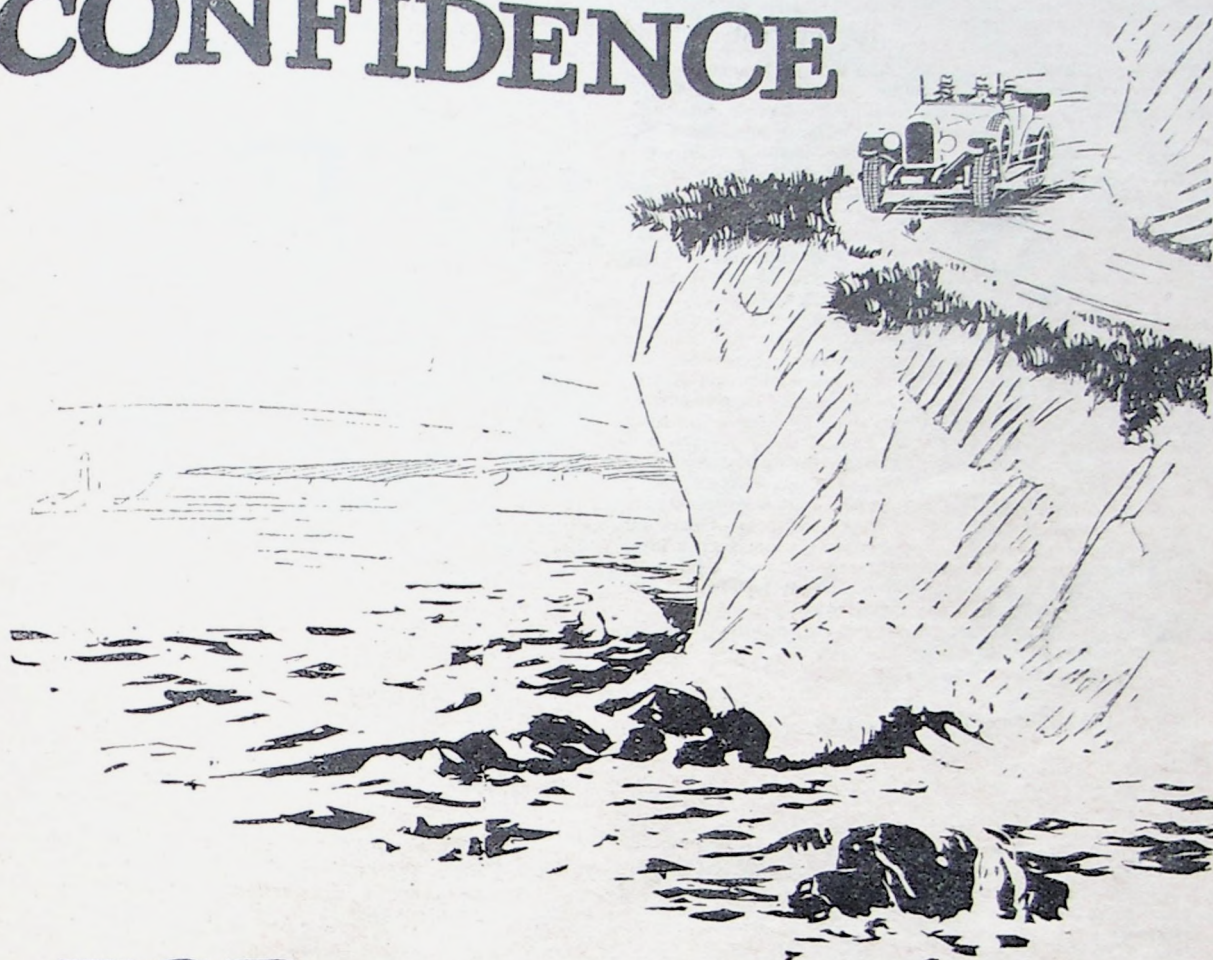
As to registration, Mr. Mathieson can arrange to have the car licensed by the agent and the numbers painted ready for him taking delivery, when the licence will be transferred to his name. A car which is bought in this country must be registered here, so that the idea of taking out a licence in Beira must be ruled out. The minimum period of a licence is normally a quarter, but it is possible to take out a licence for the last two months or one month of any quarter. It should be noted that all licences expire either at the end of a quarter or at the end of the year, and it is not possible to take out a licence from, say, February 21st to May 21st. Mr. Mathieson should note, however, that should he wish to leave England in the middle of a quarter it is possible to surrender the licence and obtain a rebate for every complete month of the unexpired period.

So far as insurance is concerned, it is possible to obtain short-period policies, but the charge in these cases is always at a considerably higher rate than for annual policies.

We think Mr. Mathieson would be wise to become an associate member of the R.A.C., applying for membership before he sets out. In passing, it should be noted that the annual subscription for an associate member is two guineas (or one guinea if the member's car has an engine of under 1,100 c.c.), whilst a charge of 10s. 6d. is made for a light car badge and 1s. 6d. for the club's guide and handbook. If Mr. Mathieson adopted this course he would be able to obtain valuable advice from the club regarding all matters on which he is likely to be puzzled, including touring, legal and insurance questions. In addition the club will simplify shipping formalities for him.

We do not think that driving in England will be found at all difficult for one who has had 13 years' experience of motoring, whilst, provided that common sense is exercised and the advice of a police constable is sought when there is any doubt about parking, little difficulty should be experienced with "the man in blue."—Ed.

CONFIDENCE



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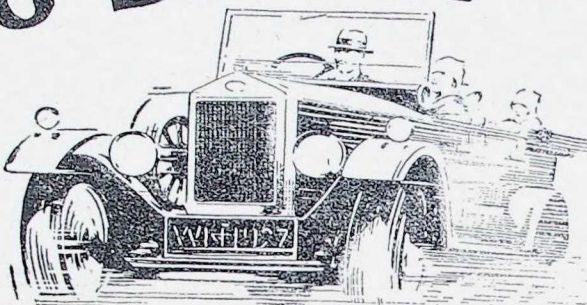
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D.A.S.

OUR READERS' OPINIONS (contd.).

Right-hand v. Central Control.

With reference to that hardly annual, "Right-hand v. Central Control," may we, as a firm selling many new and used cars every week, join in the discussion? We do not find that central control is prejudicial to a sale except, perhaps, in the case of a real "die-hard." The argument about three people in the front seat rather than two, does it not, as manufacturers of small cars do not design them for three people, so that if customers persist in overloading their cars they have no right to "kick" if they find the seat uncomfortable.

A Dealer's Views.

Mechanically, central control must be correct, the lever being right over the job, but the greatest advantage of the system is surely to be found in the fact that a really usable off-side door is made possible. With a right-hand change arranged to clear the door as much as possible, the lever is difficult to reach, and if the lever is arranged so as to be within easy reach, then it gets in the way of the door.

After all, one has only to look through the names of a few well-known cars selling at medium and high prices to see that manufacturers are not adopting central control on account of its cheapness.

R. M. VIVIAN,

Per pro R. M. VIVIAN AND CO.

Superchargers for Touring Cars.

Mr. C. P. Devaney raises all-important questions concerning distribution difficulties in inlet-manifold design, and there is much interesting and constructive criticism in his recent letter. It is doubtful whether his conclusion regarding the benefits derived from supercharging at moderate pressure is correct, in so far as these are by no means confined to the solution of induction problems.

From a Prominent Designer. From the ordinary user's point of view, the advantages of a supercharger will be found fully to outweigh considerations of extra complication and cost, remembering that a relatively low-compression motor may be employed without sacrifice of performance, this being the only known method of obtaining extreme flexibility. In other words, the characteristics of a supercharged engine, as compared with those of the atmospheric induction type, are high compression at high revolutions, which do not produce vibration, as opposed to high compression at low speeds necessitated by a loss

in volumetric efficiency at the power peak and accompanied by less flexible operation.

An engine of the non-supercharged type, consequently, will not pull a car up a gradient on top gear at slow speeds without "pinking" should any carbon be present in the combustion heads, subject, of course, to an efficient compression being employed from a power point of view.

It is not quite correct to assume that, because the fitting of a supercharger undoubtedly minimizes distribution difficulties, better acceleration and performance will not be obtained by still adhering to the best principles of constant velocity, smooth bends and separate inlet ports in conjunction with pipes equidistant from the carburettor, all of which are advocated by Mr. Devaney in preference to the induction system at present in vogue.

Where non-supercharged engines are concerned, I cannot agree with his third contention, "No hot-spots or other mechanical devices may be employed." The system of assisting the vaporization of fuel by heat permits the use of a large induction pipe and choke without adversely affecting the slow-speed running and with a gain in power at high speeds; at the same time, with this relatively large hot pipe, the motor responds sooner after being started up from cold. These are important considerations from the designer's and user's point of view.

C. AMHERST VILLIERS.

INFORMATION WANTED.

AUSTIN SEVEN.—The experiences of readers who have fitted Specialind pistons to this car would be appreciated.—R. Davey, Hazelbrae, 39, The Drive, Roundhay, Leeds.

HUMBER NINE.—Readers' experiences of the fabric saloon model, with particular reference to performance, cost of running and ease of upkeep, would be appreciated.—BM FPR, London, W.C.1.

DEEMSTER.—Any reader who has an instruction book dealing with the 1921 9.8 h.p. model which he is willing to lend or sell is asked to get in touch with—T.P., 404, Finchley Road, London, N.W.2.

JOWETT.—The experiences of any commercial travellers who have used a saloon model would be welcome. Information regarding its reliability and cost of upkeep is specially required.—S. R. Gravett, 82, Deakin Road, Erdington, Birmingham.

CLUB ITEMS AND SPORTING EVENTS.

ESSEX M.C.

The annual general meeting will be held in the R.A.C. committee room on December 8th. The club's annual dinner and dance will take place on Friday, January 13th, at the Holborn Restaurant. The hon. secretary, Mr. E. J. Ross, 40, Chancery Lane, W.C.2, will supply tickets at 12s. 6d. each.

SCOTTISH MORGAN CLUB.

The club is making extremely satisfactory progress and there are now over 40 members. A club run was held on November 13th, and Loch Lomond was the venue. Over a dozen Morgan owners turned out, and Mr. Frank Spouse, the captain of the club, very kindly placed an Aero-Morgan at the disposal of a representative of *The Light Car and Cyclcar* in order that he might take part.

J.C.C. LIVERPOOL AND NORTH WALES CENTRE.

Nearly a hundred members and friends attended the first dance held by the Centre at the Yamon Cafe, Liverpool, on November 4th, and there is a general desire that the next should not be long delayed. Dancing took place from 7.30 to 12. A novel scheme for awarding "spot prizes" was devised. Around the room were several discs bearing the names of the "secret checks" on the recent Liverpool-Brooklands Trial. During the evening time signals were arranged, and as these occurred the lights went out, the hand stopped and one of the discs was illuminated. The prize was awarded to the lady nearest the check taken.

After the interval Mrs. Simpson presented Mr. Jivock with the Simpson rose bowl awarded to the novice making the best performance in the Brooklands Trial. Mrs. Lister received a J.C.C. cup as a consolation prize for the only lady competitor. Much of the success of the evening was due to the hard work put in by the sub-committee. Mrs. Lister, Miss Wilson and Mr. Hareington. Their reward has been the general expression of thorough enjoyment made by all who attended. A good orchestra is essential to a successful dance and the Andy band fulfilled the most exacting requirements.

LIVERPOOL M.C.

Three-wheelers are eligible to compete in the club's Percy Butler trial, to be held on December 11th. The start will be from Booth's Garage, New Chester Road, Rock Ferry.

FORTHCOMING EVENTS.

- | | |
|---------------------|---|
| November 26. | Car-halton M.C. Trial. |
| November 27. | Jowett Club Rally (Godstone).
West Kent M.C. Reliability Trial.
Uxbridge M.C. Winter Sports. |
| December 2. | M.C.C. Annual Dinner. |
| December 3. | Brighton and Hove M.C. Annual Dinner. |
| December 4. | Kent and Sussex L.C.C. Annual Dinner.
Woolwich Plumstead and D. M.C. Championship of Clubs Trial.
London M.C. Social Run. |
| December 9. | J.C.C. Annual Dinner. |
| December 10. | London M.C. Dance.
Uxbridge M.C. Midnight Run to Mar-gate. |
| December 27 and 28. | M.C.C. London-Exeter Run. |

SOUTHERN JOWETT L.C.C.

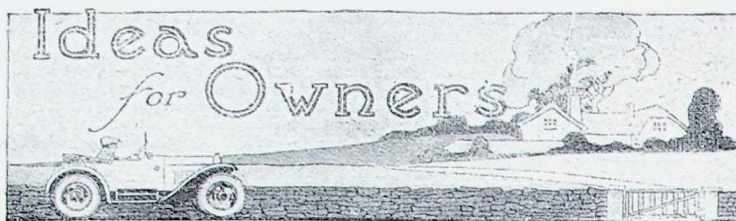
The Southern Jowett Light Car Club will hold a rally on Sunday, November 27th, at the Clayton Arms, Godstone; members should arrive not later than 12 noon. After lunch the principal awards gained during the season will be presented.

KENT AND SUSSEX L.C.C.

The annual dinner and prize distribution will be held at the club headquarters, the Spa Hotel, Tunbridge Wells, on Saturday, December 3rd, at 7 p.m. The committee has made every effort to ensure an enjoyable evening for all, special artists have been engaged and a musical programme has been arranged, while for those who desire it dancing (inclusive in dinner ticket) will take place in the ball-room until 11.45 p.m. The Mayor of Tunbridge Wells (Alderman S. Parnegay, J.P.) has accepted an invitation, but members are reminded that the occasion will not be complete without them. Tickets, including dancing, are priced at 7s. 6d. each, and may be obtained from Mr. L. Humphreys, 12, Malling Street, Lewes.

THE NEW CYCLOCAR CLUB.

The first annual dinner, held at the Hotel Cecil, on Tuesday last, was an unqualified success. Over 200 members and friends dined under the chairmanship of Prof. A. M. Low, M.C., A.C.C.I., who was supported by the club's president, Mr. H. E. S. Morgan. Among the guests was Mr. F. W. Loughborough, A.M.I.A.E. (secretary of the A.C.C.I.). The chairman, "toasting 'The Club,'" recalled many humorous experiences he had had with cyclocars which, he said, were to be enjoyed in as every way as a means to cheap and economical motoring in addition to the fact that there was something happy and cheery about them. Responding for the club, Mr. W. E. Norman announced that three reliability trials had been arranged and a date reserved for a race at Brooklands in 1928. Mr. Loughborough replied for the visitors and advised the club to follow the example of its president and not to try to do too much or to go outside the limits it had set itself. It to the club decided to run under the flag of the A.C.U. every possible assistance would be given them, for he personally considered that the economical phase of motoring had been neglected too long. An amazing exhibition of thought-reading was afterwards provided by "The Marvelous," two entertainers from Maskelyne's Theatre. Dancing from 12.2 a.m. concluded a most enjoyable evening.



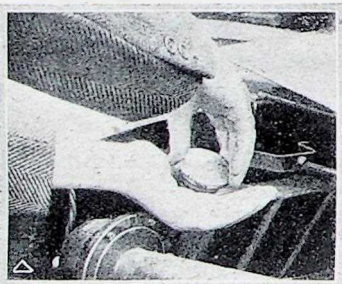
We invite readers to send us hints gained from their own experience for inclusion in this feature. Five shillings will be paid to the sender of any hint published, but we cannot undertake to return contributions not used.

Cleaning Bulb Horns.

Particles of dust finding their way between the tongue and the face of the reed of a bulb horn are frequently the cause of the horn losing its tone. Dust at this point can be easily removed by passing a thin piece of paper between the tongue and the reed. The paper used should not be too thick or it will open the reed unduly.

Cracked Celluloid.

When a crack develops in a celluloid side screen it will, unless care be taken, quickly spread across the surface. To prevent a crack growing in this manner a small piece of celluloid may be stuck with a little amyl acetate to the screen at the extreme end of the fracture. Another cure is to drill a small hole at each extremity of the crack.



The left hand should be used as a guard when unscrewing a filler cap placed immediately over the engine.

A Rover Hint.

Owners of Rover Nines are advised to take particular care when making adjustments in the neighbourhood of the clutch, for small parts, such as nuts, split pins and so forth, which slip through the fingers, may quite easily find their way into the clutch pit. When unscrewing the petrol tank filler cap it is a good plan to use the left hand as a guard, so that in the event of the cap spinning off it can be caught. It should be noted that the clutch pit has an opening underneath, however, and it should be possible quite easily to retrieve any small parts that fall into it. If the engine were running, however, considerable damage might be done.

D-46

Eliminating Mudguard Rattle.

When refitting mudguards it is quite a good plan to place ordinary household tap washers between the guards and the brackets to which they are clamped. The washers separate the two metal surfaces and thereby prevent the possibility of rattles and squeaks.

Tyre Lever Misuse.

When removing high-pressure tyres with the aid of levers it is not always easy to prevent the enamel on the rims from being scratched, particularly if the covers are new or stiff. For this reason it is advisable to use the levers on the side of the wheel which usually faces the chassis. In this way any scratches on the surface of the enamel will not be so readily obvious.



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.

L.M. (London, W.10).—Stoppings of soap and so forth should be regarded as temporary measures only in repairing a bad radiator leak. Your garage should be able to effect a proper repair in a day or so.

J.K.S. (Penzance).—It is quite unnecessary and indeed inadvisable to attempt to shorten the cable operating the front-wheel brakes of your Morgan by twisting it. To effect adjustment, the brake-lever quadrant should be moved along the propeller-shaft housing.

C.D.T. (Basingstoke).—We suggest that you pack the space between the inside of the scuttle and the top of the petrol tank with brown paper or cotton waste, as this will tend to damp out the resonance which is very likely the cause of the drumming experienced.

K.T. (Brixham).—The noise of which you complain, heard immediately after starting up your Trojan, is due to the fact that you do not push the starting handle back to its normal position. The noise is a purposely arranged indication that the ignition is retarded, the timing being automatically altered by movement of the starting handle in order to prevent the possibility of a back-fire.

A Screwdriver Improvement.

When handling small screws it is sometimes convenient to support the stem of the screwdriver with the fingers of the left hand while the handle is being operated by the right. A good finger-hold on the stem may be obtained by slipping a short length of rubber tubing over the blade and up the polished metal stem. The bare metal is apt to get greasy and may cause the left hand to slip, but this will be prevented by gripping the rubber tubing while the screwdriver is rotating.

Tracing Slow Punctures.

Difficulty is sometimes experienced in tracing minute punctures, even when the inner tube is removed from the wheel and immersed in water, owing to the fact that the tube cannot be pumped up hard enough to show the leak. The proper article to use in such an event is a puncture net, which is firmly secured around the tube and enables it to be pumped up hard without fear of bursting. When a puncture net is not at hand, however, the tube may be bound with strong string, and it may be pumped up quite hard without any possibility of a burst. The tube may then be immersed in water and the leak traced.

K.V. (Worthing).—Between 4,000 and 5,000 miles are considered suitable intervals for draining the gearbox and replenishing.

J.M.P. (Bideford).—The ignition switch of the Trojan is coupled to the petrol tap so that one movement of the lever simultaneously switches off the ignition and cuts off the fuel supply.

J.H.K. (Woodford).—There is a removable plug on the top of the rear axle casing of your 10 h.p. Swift and this acts as an air vent when the axle casing is being drained or filled with oil.

D.R. (London, S.W.19).—You will find a small plug provided over the head of No. 1 cylinder of your 8.3 h.p. Renault, and through this plug a wire may be passed to give an indication of piston position when retiming the magneto.

E.N.R. (Rochester).—A choked oil filter gauze may be cleaned by boiling it in a fairly strong solution of caustic soda; it should afterwards be thoroughly rinsed and wiped dry. If the meshes of the gauze are not badly choked, simply washing in paraffin may prove effective.

D.V.A.N. (Bournemouth).—We are afraid it would not be possible for manufacturers to provide "standardized" focussing of lamps in the way you describe, as it is very difficult to make car-type bulbs having filaments at equal distances from the ends of the "foot," as the glass supports on which the filaments stand are called. Therefore each bulb needs separate focussing adjustment.

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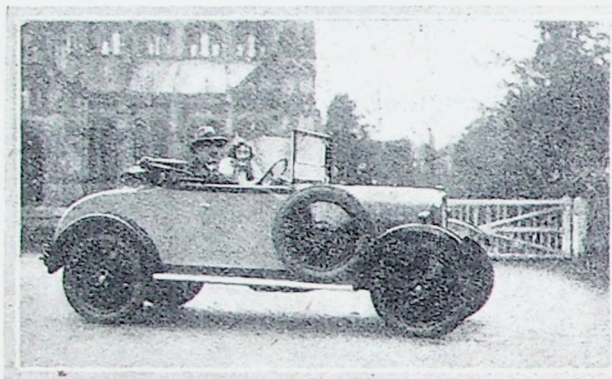
H.P.

B47

AROUND THE TRADE.

A booklet has reached us from Silvertown Lubricants, Ltd., Norway House, Cockspur Street, London, S.W.1, containing 52 recommendations of Speedolene motor oil which have appeared in the technical Press and in the motoring features of the lay Press since this oil was introduced to the English market.

A useful accessory for any garage is the "Comfy" inspection cradle manufactured by Frank Ashby and Sons, Ltd., Stirehley, Birmingham. It consists of a metal cradle, strongly made of angle iron and steel lathes, mounted at the four corners on castors. The head-rest is padded. The price is 17s. 6d. retail.




Singers are as popular in the West Country as anywhere. The photograph shows Mr. A. F. Edwards of Messrs. Edwards Bros., Salisbury (Singer agents), with his daughter, in a new Junior.

The November issue of *The Accessory*, the monthly journal published by Brown Bros., Ltd., Great Eastern Street, London, E.C.2, contains an interesting article entitled "A Business Man's Philosophy," by R. T. Nicholson, M.A., and also some very useful notes on cylinder lapping, which should be of especial value to readers in the service and repair trade.

Owners of A.B.C. cars will be interested to learn that they can obtain a number of fittings and so forth which will bring their models up to date. These include a new oiling system, enclosed rocker gear, cast iron cylinders, light alloy pistons and double-roller crankshafts, and they may be obtained from the makers, A.B.C. Motors, Ltd., Walton-on-Thames. The concern also undertakes to carry out repairs, conversions and renovations with a 12 months' guarantee.

The Normand Garage, Ltd., 489, Oxford Street, London, W.1, sole distributors for London and Kent of Trojans, announce an interesting scheme of benefit to their customers. A certain number of registration numbers—which will be "spotted" by representatives of the above concern on the road—will be published, and if the owners of these cars apply to the Normand Garage, Ltd., giving their whereabouts on a certain date and at a certain time they will receive a gift which will be found to be useful on their cars.

Considerable interest has been aroused by the film which has been prepared by the Champion Sparking Plug Co., Ltd., showing the life history of a Champion plug. The film starts by showing the sillimanite mines in the Sierra Nevada mountains where the material for the electrode insulator is obtained. The huge factories at Toledo and Detroit are very well filmed and the carefully developed process of manufacture is strikingly portrayed. Various car manufacturers, motor clubs, factors' establishments and schools of motoring have already expressed their keen appreciation of the film which will be gladly loaned to those interested. If necessary, the company will send out their own operator.




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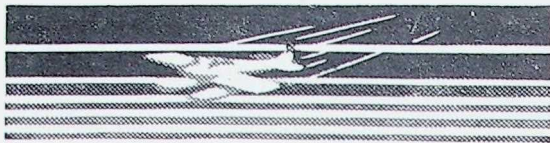
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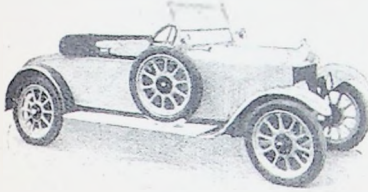
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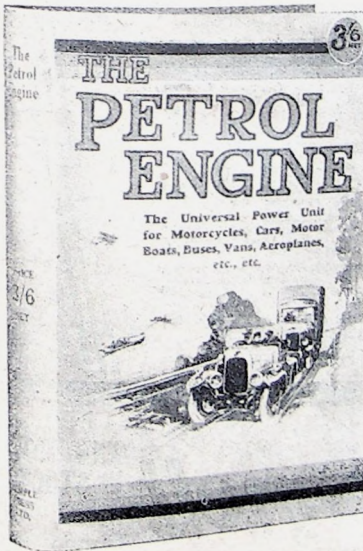
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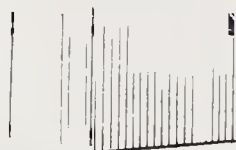
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