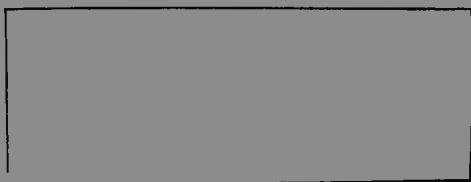

|||



See that every

PLUG

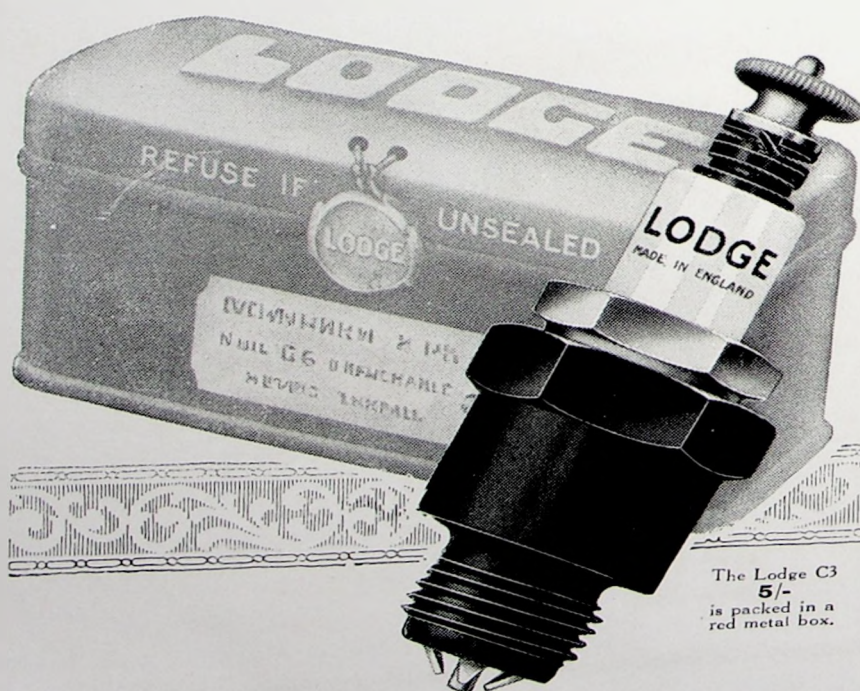
you buy is packed in
a sealed metal box.

The name "Lodge" on a plug is a trademark registered all over the civilised world as a protection to motorists.

Be sure that every plug you buy is so branded, and be careful also to see that it is packed in a metal box (as illustrated) sealed with a lead seal bearing the name "Lodge."

The correct patterns of Lodge plugs, recommended for motor car engines, and packed in their sealed metal boxes, are stocked by all regular dealers in high-class motor accessories.

Consult the Lodge Plug Chart at your garage when buying plugs.



*Every part of every model of
the Lodge plug is made in England.*

LODGE PLUGS LTD.
RUGBY.

The Lodge C3
5/-
is packed in a
red metal box.

The longer a Citroën is run
and the harder it is driven,
the better it becomes."

OWNERS' OPINION.

11.4 h.p. SALOON, 4-DOORS.
With F.W.B. - - - £210

Send for the Citroën Book 18.

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



Here are some new lines introduced by the makers of the famous Wefco Spring Cover. New lines which defy comparison with anything yet on the market—more efficient, better value, and absolutely reliable.

WEFCO" SPRING COVER

Supplied with the efficient Tecalemit Zerk force feed gun. Made in the best quality leather, shaped to the spring, lined with oil-proof material and sealed at the ends to prevent lubricant escaping.



"WEFCO" WINDSCREEN WIPER BLADE

Without continuous wiping keeps windscreen clear. Rubber wipes off the dirt and rain—felt puts on a chemical that keeps vision area clear for hours without continuous wiping.
7½ in. 2/6. 9 in. 3/

"WEFCO" REPAIR OUTFITS.

Patching Fabric embedded in two layers of Live Pure Para Rubber. Repairs permanently both tubes and outer covers (balloon or high-pressure). Plug rubber for use before applying patching to outer cover. Beveling knife which cuts a fine leather edge. Dill Standard Valve Insides and Valve Cap. A COMPLETE TYRE REPAIR SERVICE.
4/- and 2/-, Garage Kit 10/-

OTHER "WEFCO" ACCESSORIES

Write for particulars of the following:—

Rigid non-drip Oil Pump. Oil Draining Tank. Inner Tube Testing Tank. "Bristol" Foot Pumps. Cotter Pin Extractor. Dill Instant-on Combination Valve and Dust Cap. Dill Standard Tyre Valves, etc., etc.

**WILCOT (Parent) Co., Ltd.,
FISHPONDS BRISTOL.**

London Office:
Morley House (opposite Polytechnic), Regent St., W.1
Phone: Mayfair 1575 and 1576

A LEA-FRANCIS Owner says:—

"Re 10 h.p. Lea-Francis. I have now given your carburetter a good test, and I think it is a little better than any of the other makes. Starting I find is very good and slow running and power are also better."

Model "K" illustrated fits the following:—

ROVER 9	FIAT 9
SINGER 8	AMILCAR
SINGER 10	WOLSELEY
LEA-FRANCIS	

It Costs £3 - 10 - 0 only.

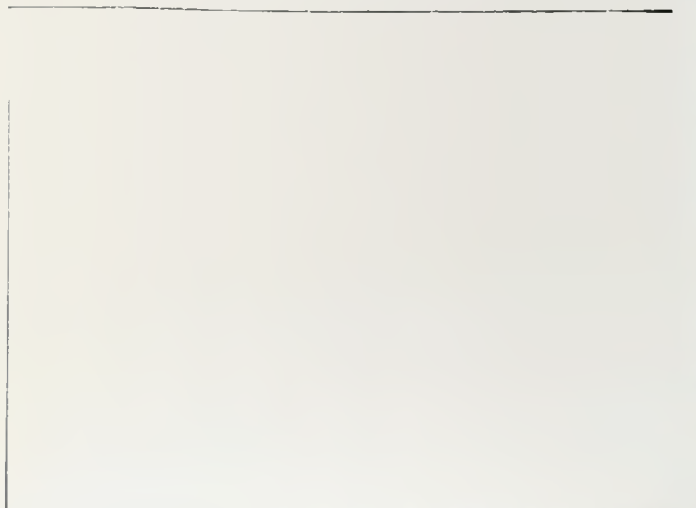
Compare the
IMPROVED ACCELERATION
BETTER PERFORMANCE
GREATER ECONOMY

Hundreds of your fellow motorists have proved our Claims to their satisfaction.

Why not try one on YOUR Lea-Francis?

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

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



It is a section of a Jowett Crankshaft, the magnification being 200. We do not consider it sufficient to buy the finest steels it is possible to produce, but we regularly have these micro-photographs taken to assure ourselves that the very vital process of heat-treatment has been carried out correctly. In this case the structure is perfect. It is by working on these lines that we are able to produce in the Jowett a car which, above all others, bears a name for long life and reliability. The Jowett design ensures economy and performance, and justifies a new dictionary reading of the word perfection, i.e. Jowett.

We hope we have not bored you by this departure from our usual style. We haven't? Thank you.

Jowett's provide the cheapest form of motoring, also the happiest.

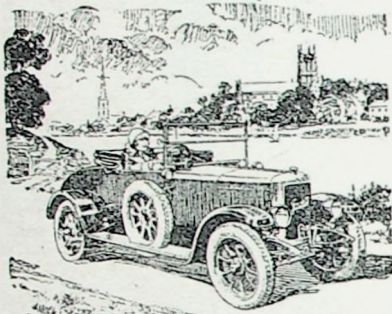
Short two, £139. Chummy, £145. Full four, £150.
Long two, £150. Saloon, £185.

Dunlop Balloons and Stewart Speedometers standard.

JOWETT CARS LTD., IDLE, BRADFORD

You get more
than a good car
at the right price
if you buy at

TAYLORS OF KENSINGTON



Taylor "Service" is Free
with every new car sold—it is a very
real and valuable service and far
too comprehensive to be dealt with
here. Our 48 page "Buyers' Guide"
tells you all about our Free Service.
May we send you a copy?

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

Here are some extra economical Light Cars
which we specially recommend:—

JOWETT from £139 to £185

AUSTIN from £145 to £650

ROVER from £220 to £625

MORGAN from £89 to £134

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

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

THIS WEEK'S SECOND-HAND SNIPS.

ROVER, 1920, 8 h.p. 2-Seater	£25
A-C, 1920, 11'8 h.p. 2/3-Seater	£65
SALMON, 1924, 9'5 h.p. 2-Seater	£65
AUSTIN, 1925, 7 h.p. 2/3-Seater	£95
CITROEN, 1924, 11 h.p. Coupe	£87.10
AERO MORGAN, 1927, 10 h.p. J.A.P.	£115

Full list gladly sent upon application.

H. TAYLOR & Co., Ltd.

49, 50, 52 & 53, SUSSEX PLACE, SOUTH KENSINGTON, S.W.7.
Phone: Kensington 8835/9 and 5540. Grams: "Dynametro, Southkents."

USE "BEST" ACCESSORIES FOR BETTER MOTORING

not designed for ornament,
reful attention is given to every
the finish. "Best" Accessories
ted to be of real service to the
hey are either new to fill a definite
an improvement on existing
its. Obtainable from your local
direct from the manufacturers.

The "CONCENTRIC" Petrol Tap.

The ideal petrol valve. Simple
and sound. Cannot leak or
stick like the old style metal-
to-metal taper plug, and any
obstruction can be cleared with
a piece of wire pushed through
the tap's length. A
perfect and inexpen-
sive tap.

Prices:

½ Gas. No. 5157.
1 .. No. 5414.

The "BEST" Dashboard Petrol Gauge.

A reliable gauge that can be fitted in any desired
position on the dash, irrespective of the position of
the petrol tap, and will then show at a glance the
exact amount of petrol in the tank. Model illus-
trated is supplied with heavy nickel-

Price: 8/- Post Free

including tube and fixing screws. If ..

Cambray Works, BIRMI
Monogram: BCM/BESTLLOYD.

REGISTERED

TRADE MARK.



THE PERFECT UPPER CYLINDER LUBRICANT
PUT IT IN YOUR FUEL.

WE GUARANTEE

ABSOLUTE LUBRICATION OF THE CYLINDER WALLS
AND ALL UPPER WORKING PARTS.
LONGER LIFE OF ENGINE. CURES KNOCKING.
MORE POWER, SPEED AND PICK UP.
INCREASED MILEAGE. EASY STARTING.
CARBON DEPOSIT REDUCED TO A MINIMUM.
NO GUMMING UP. NO SEIZE UP.
AFTER

USING MIXTROL A SHORT
TIME YOU CAN WIPE OFF

ALL YOUR OLD HARD

CARBON WITH A RAG.

WRITE FOR EXPLANATORY
BOOKLET, FREE.

THE RUBY COLOUR OIL IN
THE BLUE & YELLOW TIN.

The Principal Garages and Stores
Stock it.

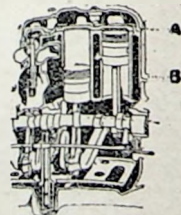
IF YOU ARE NOT SATISFIED
WITH THE RESULT, WE

RETURN YOU THE MONEY
IN FULL WITHOUT DEMUR.

THE MIXTROL OIL CO.,
43, Berners Street, London, W.1.

Telephone—
Museum 4014.

Telegram—
"Olmixtrol, Wcndo."



Mixtrol does its work between A and B,
which is where it is needed, and which
is not properly lubricated by the
existing method.

4 oz. Tin 1/- Postage 2d. extra.
Flat oval shape for foot bag.
8 oz. Tin 1/8. Postage 3d. extra.
32 oz. " 6/- Postage Free.

A 32 oz. Tin treats 64 gallons of Fuel.
Directions:— Pour half an ounce into
each gallon of petrol or other Fuel.
There is a half-ounce measure on each
tin. No stirring or mixing required.

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

Triumphant Success of WHITELEYS THE UNIVERSAL PROVIDERS NEW 'NO DEPOSIT' TERMS

First announced in the Public Press on May 9th, Whiteleys new NO DEPOSIT terms have been an amazing success, bringing us an enormous volume of business. We have set a new national standard for buying motor cars and it is particularly fitting that this should be so, as way back in the early days of motoring, Whiteleys sold the first motor car on the easy payment terms.

FIRST MONTHLY PAYMENT SECURES DELIVERY!

Never before were the Public offered the combination of such generous terms and remarkable values, for this system applies not only to every make of new car on the British

Market, but also to our stock of second-hand cars among which are some remarkable bargains, and a full list of which will be gladly sent you on application.

For this immense convenience of securing delivery of any car on payment of the first of twelve payments, 5% extra only is charged and the great simplicity of the scheme is shown in the examples given.

Every new customer is offered an opportunity of free driving tuition, and participates in that generous service before and after delivery of the car for which we are noted.

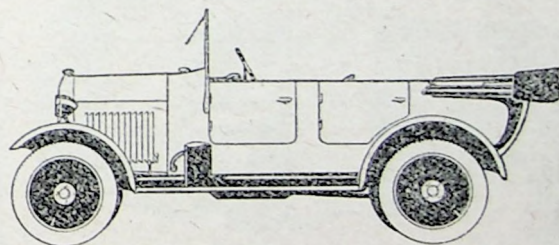
We invite you to visit our showrooms and inspect our remarkable collection of new and second-hand cars.

Expert opinion is available on any subject appertaining to motoring without the slightest obligation of any kind.

The reputation of this famous house inspires the confidence which is the bedrock of foundation of the joy of car ownership.

IF YOU WISH IT WE SHALL BE DELIGHTED TO ARRANGE SPECIAL TERMS FOR A PERIOD OF EIGHTEEN MONTHS, OR YOUR PROPOSAL FOR PAYMENT ON OTHER LINES WILL BE GLADLY CONSIDERED.

Wm. Whiteley, Ltd., Queen's Rd., London, W.2



SINGER JUNIOR, 8 h.p., 4-seater £148:10:0

Delivery on first payment of £12:19:11
and the balance in eleven similar payments

Four more typical examples:—

AUSTIN 7, Saloon £165:0:0

Delivery on first payment of £14:8:9
and the balance in eleven similar payments

CLYNO, 11 h.p., 2-seater £160:0:0

Delivery on first payment of £14:0:0
and the balance in eleven similar payments

FIAT, 9 h.p., 4-seater £200:0:0

Delivery on first payment of £17:10:0
and the balance in eleven similar payments

RENAULT, 9/15 h.p., 4-seater £167:0:0

Delivery on first payment of £14:12:3
and the balance in eleven similar payments

WHY NOT VISIT OUR SHOWROOMS?

Or write for our complete list of second-hand cars.

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.

BUY A NEW OR USED SALMSON

GUARANTEED USED SALMSONS

1926 Special Grand Prix,
very fast, obtained 2nd and
3rd in recent Brooklands
Meeting £225

1926 Sports 2-Seater, in new
condition £105

1925 Grand Prix, Four Speed
Box. Triplex Screen,
F.W.B. £110

1925, 10/15 h.p. 4-Seater,
splendid condition £125

1924 Sports 2-Seater,
two Spare Wheels £65

*Offered subject to being
unsold.*

FROM
THE SOLE LONDON DISTRIBUTORS
GORDON WATNEY & Co., L^{TD}.

NEW MODELS.

10/20 H.P.

SPORTS	SPORTS "SKIFF"	GRAND PRIX
£165	£175	£275
2-SEATER	4-SEATER	SALOON
£199	£199	£248

All models on view at our showrooms.

DEFERRED TERMS —————
PART EXCHANGES

31, BROOK ST., BOND ST., W.1 Mayfair
0267-8-9.

PRATTEN'S Duple-Joint Garage



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

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

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

PISTON RINGS

ON YOUR CAR

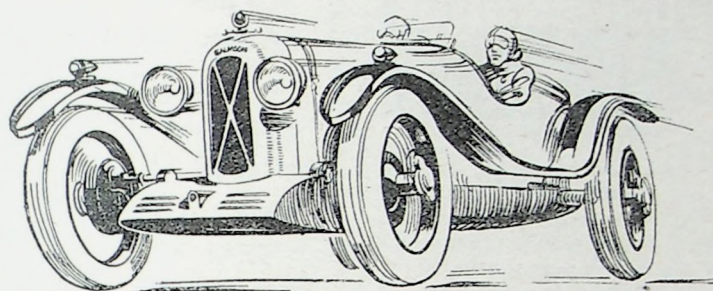
and thus save money on oil
and petrol. CLUPET patent
PISTON RINGS also give you
increased compression, extra
speed and more miles per
gallon, thus reducing your
running costs.

CLEWS PETERSEN PISTON RING
AND ENGINEERING CO., LTD.,
West Heath Works, Mill Lane,
West Hampstead, N.W.6.

Telephone: Hampstead 8691.

*Write us for
interesting
FREE pamphlet
to Dept. L.A.*

We Offer No Apologies—



for returning to the 6 HOURS ENDURANCE RACE at BROOKLANDS on May 7th when three absolutely standard SALMONS finished FIRST, SECOND and THIRD, in the 1,100 c.c. Class. It cannot be disputed that this was a feat worthy of even more praise than any in our long list of successes. Six hours at an average speed of 56 m.p.h., including all stops, with full road equipment! An achievement worthy of the name of SALMONS

The new fabric GRAND PRIX model costs only

£275

If it is too fast or too sporting, come and see the other models

at

The Sole London Distributors:

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

or at the

SOLE CONCESSIONAIRES FOR UNITED KINGDOM AND BRITISH DOMINIONS:

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

If only your car suspension was absolutely perfect you would glide along as though on air—no shocks, no vibrations, no swaying or bumping. Unfortunately it is impossible to design springs which will absorb all shocks at all speeds, therefore, to bring the suspension of your car as near perfection as possible you should fit STOTT ANTIBOUNCE CLIPS to the springs.

The STOTT ANTIBOUNCE CLIPS fit direct on to the springs themselves leaving sufficient free to take road shocks at low speeds. Once fitted STOTT CLIPS need no further attention.

STOTT ANTIBOUNCE CLIPS will be sent for a month's trial free.

Here is the experience of a new owner-driver:—

"I have much pleasure in enclosing
"a cheque in payment of Stott
"Antibounce Clips which I fitted to
"my Austin 7, as I shall be retaining
"them, and have no need to wait
"for the month's trial. I have
"already proved them a decided
"advantage. The improvement in
"cornering is most noticeable and
"the car does not pitch over bad
"roads as it used to."

PRICES from 11/6 per pair.

A postcard to the makers will bring their booklet giving full particulars and fitting instructions.

RICHARD BERRY & SON
(Department "A"),

**MAFEKING ROAD,
SMETHWICK.**

Phone: Smethwick 631. Grams: "Sprines."

"WELLINGTON" LIQUID METAL POLISH

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

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

TRY IT
and
PROVE IT.

In TINS, 3d., 4d., 7d. & 1/3; also in 1/2 & 1 Gallon Cans.

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

MADE

Delivery
of All Sizes.

**NO INCREASE
IN PRICES.**

SUPPLIED BY
ALL GARAGES.

Manufacturers:—

Stepney Tyres Ltd., Llanelly,
and Walthamstow, London, E.1

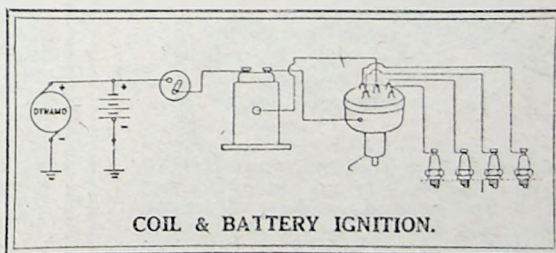
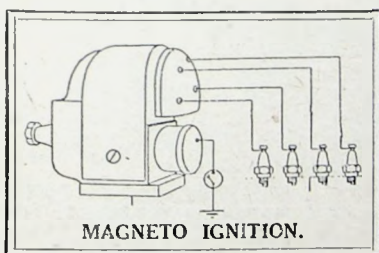
MENTION of "The Light Car and Cyclecar" when corresponding with advertisers assists the cause of economical motoring.



Why every car in the U.K. and Dominions should have magneto ignition

CARS must be built in accordance with the conditions under which they are to work. British motorists expect their cars to need very little attention after purchase. They do not expect to have to concern themselves with the electrical technicalities more than is absolutely necessary. Consequently, the ignition system used on British cars must be self-contained, reliable, and independent of other components.

The only method of spark production which does not rely for its efficiency on the correct care of batteries is the magneto. Other systems—mostly of American origin, designed for use in a country where "service" is a fine art—are put completely out of action if the accumulator happens to run down. This means that your car may be stranded miles from a garage, powerless to move an inch. It also means that if the owner forgets to turn off the ignition switch his car will be lifeless when next it is needed. Such systems do not suit motorists or motoring conditions in this country—still less in the Dominions.



These diagrams show how simple the magneto "layout" is—and in motor engineering simplicity means reliability.

95% of British cars are equipped with magneto ignition.

BRITISH MAGNETOS

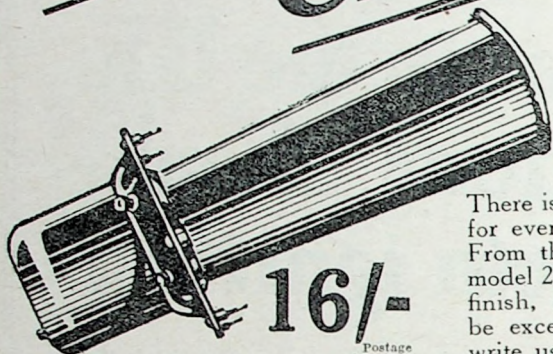


BUY A BRITISH CAR

WITH A BRITISH MAGNETO.

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

They clear the way



16/-

Postage
9d. extra.

only is the price of this Remy Model 8C Electric Horn as illustrated above. Length 10½" overall. When ordering state whether 6 or 12 volt.

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

REMY HORN

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

FOUR WHEEL BRAKES for

For the small sum of 30/- you can equip your AUSTIN 7 with four wheel brakes, you can link the front brakes with the foot pedal so that they will operate simultaneously, and at the same time in no way interfere with the mechanism of the hand lever. The first step is to send along to us for our leaflet on the BODELO BRAKE ATTACHMENT FOR THE AUSTIN 7.

The BODELO BRAKE ATTACHMENT is quite simple to fit and absolutely effective in use.

PRICE **30/-**

LLOYD & DEELEY,
177, BROAD STREET,
BIRMINGHAM.

Wholesale Stockists: Brown Bros., London and Branches.

n Wood or Asbestos

Guineas

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

Anyone can erect a Thornber Garage.

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

A Thornber Garage Saves you Pounds.

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

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

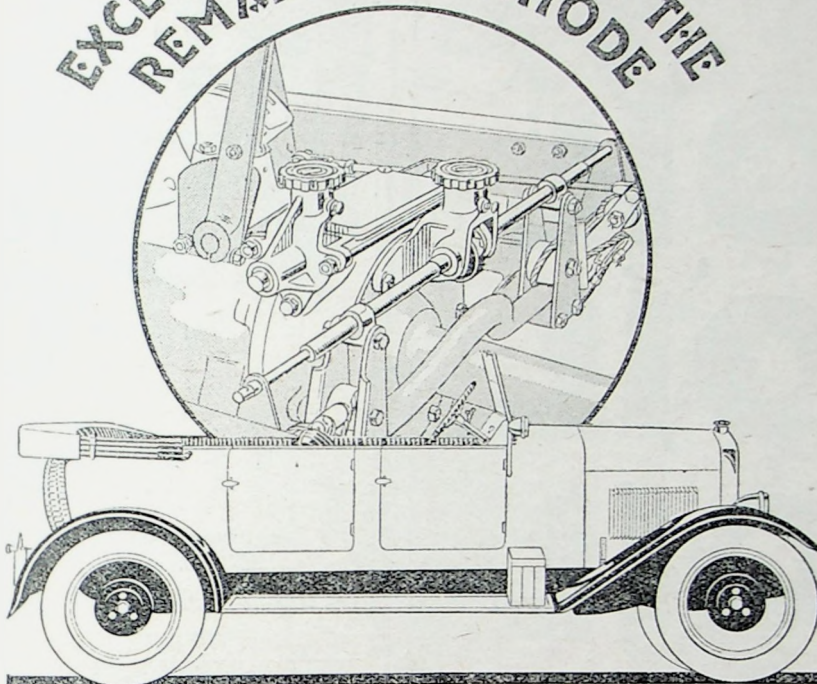
SEND FOR FREE FOLDER AND STATE REQUIREMENTS.

THORNBERS
For EVERYTHING in WOOD

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

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

EXCLUSIVE FEATURES OF THE
REMARKABLE RHODE



FULLY COMPENSATING FOUR-WHEEL-BRAKES

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

Individuality; that's the keynote of the popularity of the new Rhode 16*30 — individuality in construction, in design, in appearance, and in the intimacy of its appeal to you once you are its lucky owner.

It is a 4-cylinder all-gear engine, water-cooled by Thermo-Syphon. Treasury rating 10.8 h.p., b.h.p. 30, bore 66 mm., stroke 90 mm. Engine capacity 1,232 c.c. Tax £11. 5 to 55 m.p.h. on top gear. 40 m.p.g.

Two and Four-seater Models finished in blue and maroon with a beautiful cellulose finish. Your local agent will arrange a demonstration for you, or we shall be pleased to forward the fullest information on request.

THE NEW
Rhode 10.30 **£198**

THE RHODE MOTOR CO • TYSELEY • BIRMINGHAM

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

TAKING THE "S" OUT OF "SOIL"



Carbon. Soot. Coke. You'll get it all right. Road dust, for instance, will get in. The finest oil leaves a residue. BUT—use the right grade of Motorine and you get less of it. Much less. There's the simple fact.

To learn why, send a p.c. for the book "The Car" (or if you're a motor-cyclist, "The Motor Cycle.") Both are free and post free from Price's, the Oil People (Dept. EE6), London, S.W.11.

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

MOTORINE

very special oil

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



LOOSE COVERS for Seats and Upholstery

	A Quality. £ s. d.	B Quality. £ s. d.	C Quality. £ s. d.
Two-seater or Coupe and Austin 7	5 2 6	4 10 0	3 10 0
Two-door Tourer or Saloon	6 15 0	6 0 0	4 17 6
Four door, four to five seater Tourer or Saloon	7 15 0	7 0 0	5 17 6

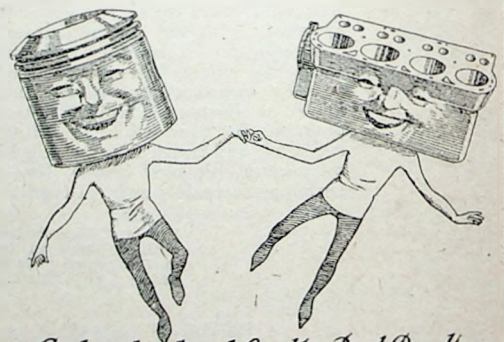
Write for full price list of Loose
Covers, Spring Gaiters, Rear and Side
Blinds, Luggage and Dust Covers.

OYLER & CO., THE CAR TAILORS,
35, New Cavendish Street, W.1.

Pattern book gladly sent on loan.

LAYSTALL DE LUXE LIGHTWEIGHT CAST- IRON PISTONS

LAYSTALL CYLINDER-GRINDING



Go hand in hand for the Best Results

De Luxe Pistons are now also made in
aluminium for Sports and Racing cars,
and are the lightest pistons in the world.

WRITE FOR FREE BOOKLET

LAYSTALL

EWER STREET, LONDON, S.E.1.
FONTENOY ST., LIVERPOOL.

Telephone
area 6100
(7 lines)

Telephone
area 6100
(7 lines)

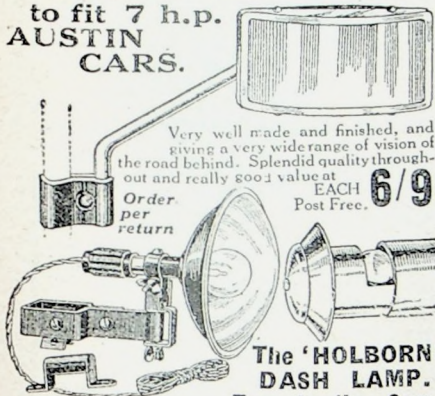
READERS, NOTE.—It assists the small car movement and the advertiser, and ensures you prompt attention, to mention "The Light Car and Cyclecar" in your enquiries.

A PAGE FOR AUSTIN "7" OWNERS FROM GAMAGES

We are now making a Special Display of the latest Accessories and Novelties for Holiday Touring.
GET YOUR NEW CAR ON EASY TERMS. NO DEPOSIT.

SPLENDID VALUE! DELIVERY ON FIRST MONTHLY INSTALMENT

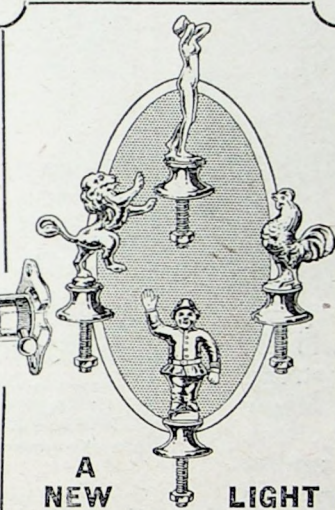
"SCOPE" MIRRORS
to fit 7 h.p.
AUSTIN
CARS.



"Spot-Light," Spot-light with self-contained switch, gives a very penetrating beam of light. Complete with 6 or 12 volt bulb. Post 6d. Sale Price

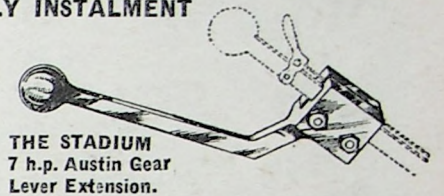
12/6

5/-



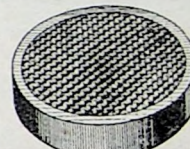
These are all modelled in Bronze and Silver Plated, the average height is 3½", they are beautifully finished and greatly add to the appearance of any car. Post 3d. Price

5/6



This extension clips on to the existing lever, and enables all forward gear changes to be made without having to lean so far forward, which greatly adds to the comfort of driving. Price

7/6



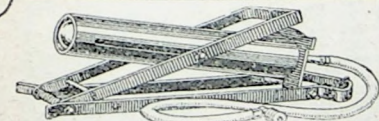
Good quality rubber. Prevents the feet slipping off pedals, making driving safe and more comfortable. Set of three. Price

3/-

Wonderful Offer!

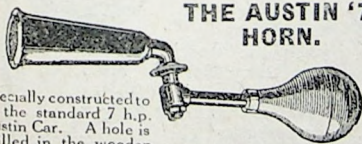
Oil Filler and Filter for Austin 7 Cars. Avoid all that waste of oil, easily filtered in a few minutes. Price Carriage paid.

6/6



Strong and well made, powerful, compact, inexpensive, and very greatly lessens the labour of tyre inflation. Price

12/6

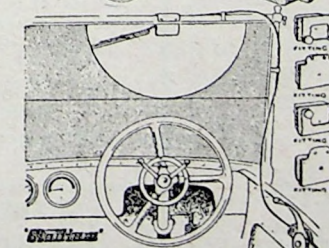


Specially constructed to fit the standard 7 h.p. Austin Car. A hole is drilled in the wooden stand immediately below and in line with the wind-screen. Barrel part of horn is then passed through the hole and tightened by nut on end. Bulb can be adjusted to any angle. Post free

12/6



For Austin 7 Cars, size 12½ x 9½ 12/- Also Water-proof ditto, strong, practical and well made

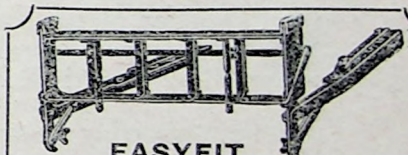


"STADIUM" MECHANICAL WINDSCREEN WIPER (Pro. Pat. 22367)

Special Austin Fitting. Operated from convenient position near driver's seat through length of Bowden wire. Lever supplied for screwing to inside of door, also to clip on steering column. Please state which when ordering.

NOTE.—One pull of the lever wipes a complete half circle, and on the release automatically gives a return wipe to rest parallel with the top of the screen—leaving a wide unsmudged space.

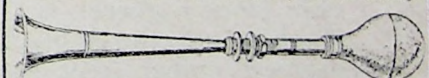
10/6



"Easyfit" Racks should be fitted to every car. An efficient luggage rack which also provides an excellent rear buffer and saves damage to car. To fit 7 h.p. Austin Cars.

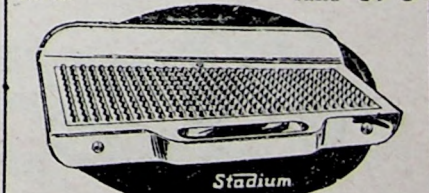
20/-

Other car fittings from 35/- State year of car when ordering.



Through dash fitting. Nicely made and finished. Gives a very uncommon and penetrating note. PRICE

6/6

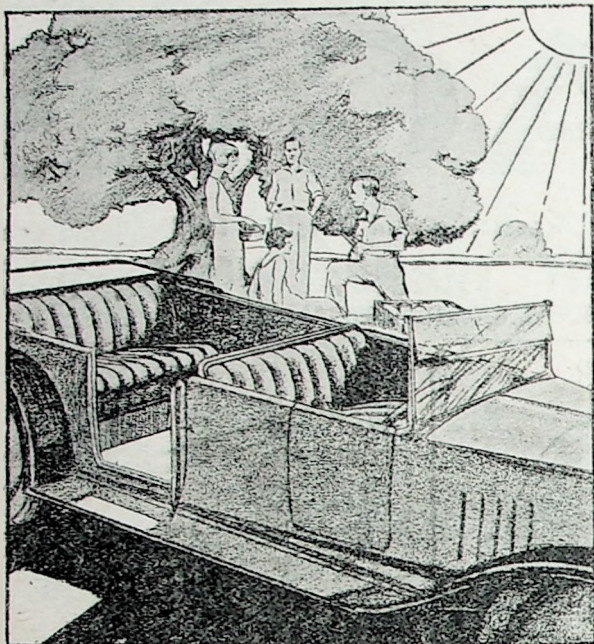


Well and strongly made and very attractive in appearance. Specially shaped to fit 7 h.p. Austin Running Boards. PRICE, per pair,

12/6

A. W. GAMAGE, Ltd., HOLBORN, LONDON, E.C.1
CITY BRANCH: 107, CHEAPSIDE, LONDON, E.C.2

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



"REXINE" upholstery will not fade—no matter how strong the sun—nor will a heavy downpour cause any ill effect. "Rexine" has fast colours and is absolutely waterproof, grease will not stain it, hard wear will scarcely show. There is no other material so suitable for motor car upholstery—none more durable and none so like actual hide.

Priced considerably below leather, "Rexine" is made in grains and colours to harmonise or contrast with any colour of bodywork.

For Hoods there is "Rexine" Rubbercloth, the jet black leather-grained fabric that keeps taut and trim and absolutely waterproof all the time.

"Rexine"
BRAND LEATHERCLOTH

REXINE, LTD., 70, SPRING GARDENS,
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LONDON: 60, WILSON ST., FINSBURY, E.C.
BUY BRITISH GOODS—SELL BRITISH GOODS.

M6

Garage Expense

Model No. B202
(as illustrated)

CONSTRUCTED of first-class materials and excellently designed, these 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

No. B216 MOTOR HOUSE

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Carriage paid to stations in England and Wales.

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Boulton & Paul Ltd

Telegrams: BOULTON NORWICH NORWICH NORWICH51 (Slings)
LONDON OFFICE 135-137 QUEEN VICTORIA ST EC
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Examples of H. & P. Standard Motor Houses can be seen at our London Showrooms 135, Queen Victoria Street, E.C.4.

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HAND PROPELLED AND MOTOR DRIVEN

INVALID CHAIRS

SCIENTIFIC
DESIGNS—
DEPENDABLE!

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

BATH CHAIRS, from 60/-

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

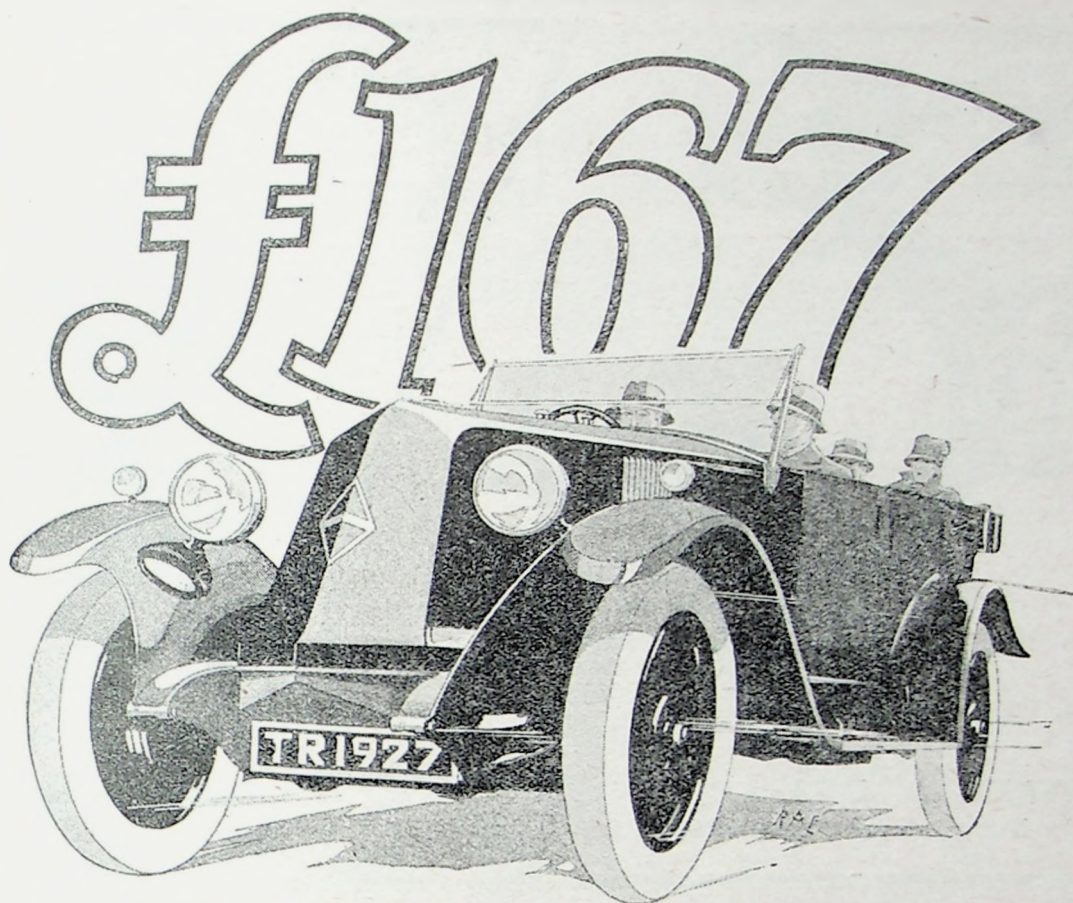
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From £12

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4 DOOR... 4 WHEEL BRAKES FULL FOUR SEATER

45 M.P.G. TAX £9 OVER 45 M.P.H.

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

Write to-day for illustrated literature and technical specifications of the 9/15 Models. 2-seater with double dickey £159-10. Standard Open Tourer £167. De Luxe Open Tourer £179. Four Door Saloons from £207. Coupes from £225.

Write for descriptive literature.

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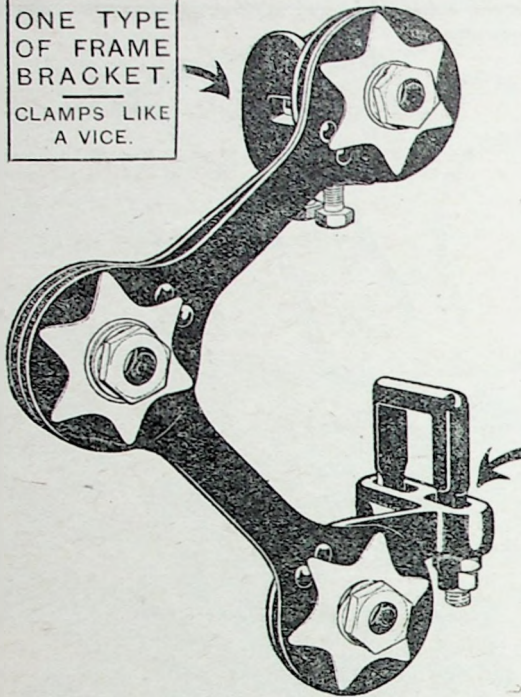
Showrooms: 21, Pall Mall, S.W.1. (Phone: Reg. 0974.)

RENAULT-BUILT TO LAST A LIFETIME

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



ONE TYPE
OF FRAME
BRACKET.
CLAMPS LIKE
A VICE.



ONE TYPE
OF AXLE
BRACKET.
CLAMPS WITH
SPRING CLIP.

EASY TO FIT WITH TOOL KIT SPANNERS WITHOUT FRAME DRILLING.

The Autocar, Jan. 25th, 1926, says, "For a considerable period we have been using a set of B & D Stabilizers. After 6,000 miles on the single-arm type, a change was made to the new duplex-arm type. Although the original type was highly satisfactory, and showed no visible signs of wear after 6,000 miles, the later type is a considerable improvement in many ways. Features which appeal strongly to owners of small cars, are their moderate price . . . and the fact that they can be fitted without alterations to the chassis or special tools."

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

A user, after a long Continental tour, writes:—
"The B & D's have given me great satisfaction, having greatly improved the riding of the car."

Further
Improved
for
1927.

3 Sizes.

52/6
63/-
72/-

per axle, including brackets. Carriage extra.

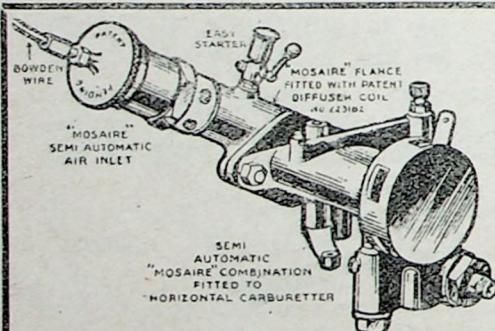
STEERING DAMPER
for MORGAN. . . 17/6
Postage 6d.

BENTLEY & DRAPER, LTD.,
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The **B&D STABILIZER**



THE SEMI-AUTOMATIC
Price 35/- Complete.

Fit The "Master" Extra Air Valve and obtain—

- 1.—More miles per gallon.
- 2.—Increased power, due to the admission of a larger volume of more intimately mixed gaseous fuel into the cylinders. A super charger in simple form.
- 3.—A sweeter running engine.
- 4.—Freedom from oily plugs and less oil consumption.
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Send for our 54-page Booklet giving the Opinions of Owner-Drivers under all sorts of conditions.

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Distributors for Birmingham and District:
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PRICE: Hand Operated,
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A "1927" MORGAN

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square deal at

HOMAC'S
MOTOR AGENTS

243/7, LOWER CLAPTON ROAD.

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

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

Repairs and Overhauls by
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DEFERRED TERMS ARRANGED.

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Works:
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CURRENT PRICES!

STANDARD Model ..	£89
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TO THE READER.—By mentioning "The Light Car and Cyclecar" when replying to advertisements, the progress of the small car movement will be assisted.

★ NEXT WEEK!

The **Motor**

ANNUAL
WHITSUN
HOLIDAY
NUMBER

Special Features:

HOW TO DRIVE ON CROWDED
WHITSUN ROADS.

WHY NOT TWO CARS PER
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The Appeal of the Low-powered.
High - efficiency Small Car as
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BUSINESS BEFORE PLEASURE.
Preparing a Car for the Holidays.

HINTS ON DECARBONISING
AND VALVE GRINDING.

On Tuning Multi - cylindered
Engines.

Special Features of this week's issue

The **Motor**
Tues., May 17th

SEEING REARWARDS FROM MODERN
CARS. Practical Points Concerning the Arrange-
ment of Rear Windows and Driving Mirrors.

TRANSMISSIONS AFFORDING TWO
TOP GEARS. Novel Design of Four-speed
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THE GREAT GARDENS OF ENGLAND.
Open to the Public on Certain Dates in May and
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Shock Absorber now Fitted to the Front Axle
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First Illustrated Description of an Interesting
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FLEXIBLE CHASSIS BEARINGS NEED-
ING NO OIL. Shackles Supported by Rubber
Bushings improve Riding Comfort.

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A Flying Visit to the Great Sahara. By the
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Offices :-7-15,
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OUR "ALL"
MORGAN WEEK,
 May 23rd to 28th.

W. H. ELCE & CO., LTD. *THE CITY LIGHT
 CAR SHOWROOMS,*

— are holding a —

**Special Exhibition of
 Morgan Runabouts**

From MAY 23rd to 28th.

COMPLETE RANGE OF NEW MODELS,
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SPECIAL DEFERRED TERMS (ASK FOR
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Avenue 5548.

NEXT WEEK—SPECIAL WHITSUN NUMBER

of

The Light Car & Cyclecar

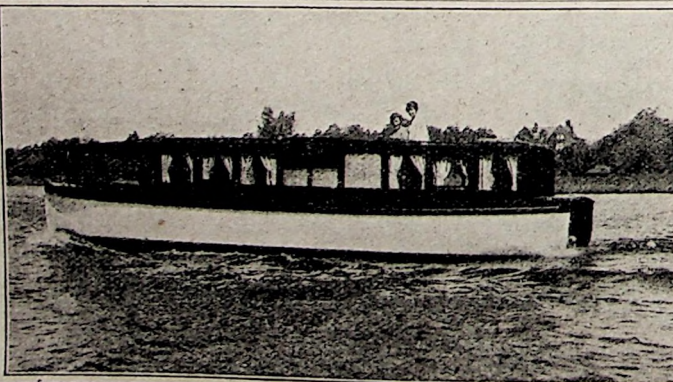
Friday, 27th May

PRICE
 3d.
 as usual.

This issue will contain many special and profusely illustrated articles dealing with the practical aspects of holiday touring, and much helpful advice to those who are contemplating a tour.

Order your copy to-day!

Offices: 7-15,
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**HOLIDAYS
 MOTOR BOATING
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Write for FREE ILLUSTRATED LIST, postage 2½d., of the largest and best equipped fleet of YACHTS, WHERRIES and MOTOR CRUISERS, completely fitted for cruising, for hire, and how to do this delightful holiday. Yachts and boats are easily handled by novices, or man can be supplied to manage boat and cook. Cost from 50/- each person per week. Months of May and June are best. Book early.

Apply **LEO. A. ROBINSON,**
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No Deposit! **GAMAGES**

*Announce Important Extension of
their Service to the Motoring Public.*

**Any Make of Car on Deferred Terms
First Monthly Payment Secures Delivery**

TYPICAL EXAMPLES:

7 H.P. AUSTIN	- - - -	Cash, £145	7 H.P. 4-SEATER JOWETT	-	Cash, £150
Delivery on Payment of First of			Delivery on Payment of First of		
12 equal Monthly Instalments of		£12:14:7	12 equal Monthly Instalments of		£13:2:6

Send Full Particulars of your Requirements.

A. W. GAMAGE, Ltd., HOLBORN, LONDON, E.C. 1
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A Gwynne Car Gained
Premier Award R.A.C.
Light Car Trials
and
"Daily Chronicle"
250 Guinea Gold Cup.

"Phone:
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THE NEW GWYNNE 10

HAS AN ASTOUNDING PERFORMANCE

THE GWYNNE RANGE INCLUDES:—

9 h.p. Grand Sports, Fabric Body,
70 m.p.h., F.W.B. - - - **£275**

10 h.p. 2 or 4-seater, F.W.B. - - - **£220**

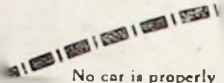
10 h.p. 4-door Saloon, Fabric or
Panelled, F.W.B. - - - **£260**

Dunlop Tyres are fitted to all Gwynne Cars.

GWYNNE CARS, L^{TD}.
CHURCH WHARF, CHISWICK, W.4

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

TEMPERATOR



No car is properly equipped without a "Knock-Out" Temperator.
Security—Reliability
Indicates the temperature of the water in the circulating system.
Warns the driver against overheating
Easy to read at a distance
Not only an ornament but a scientific instrument.
Every Temperator thoroughly tested in our laboratories.
"Cool," "Normal" and "Danger" ranges are clearly indicated in colour.
to fix.

In nickel-plate

THE BABY FIRE EXTINGUISHER

Reliable and efficient in action
Easy to operate
Projects a continuous and unbroken jet of fire extinguishing liquid, thus obtaining a perfect aim.
Attractive and small, 11 ins. overall
Handy and light, weighs 3 lbs. complete.
Can be tested without wasting fluid
Can be completely dismantled
Fluid is non-damaging, non-freezing, non-conductor of electricity.
Extinguisher, filled ready for use, complete with bracket for fixing

In nickel-plate

see that it's a

PROTECT
your car

Knock-Out Fire Extinguishers Ltd., 16-18, Bardwell St., N.7.

Phone: NORTH 3747.

FOR YOUR WHITSUN PICNIC.

MANUFACTURERS' OFFER OF
"BERKELEY"
COMBINED TEA AND
LUNCHEON BASKETS
AT HALF
SHOP PRICES!

Fitted with Best Quality Stainless Cutlery and every necessary requisite for both Luncheon and Tea.

THE "BERKELEY."

The Basket for two persons measures 18" x 11" x 7" and contains two Provision Boxes, Wicker-covered Beverage Flask, ditto Tumblers, China Cups and Saucers, Plates, Improved Pattern Quick-boiling Kettle with Screw Lid and Spout to carry water, Spirit Stove and Stand (see note below), China Butter and Preserve Jars, Tea and Sugar Box, Milk Bottle, Non-leaking Pepper and Salts, Linen Serviettes, etc.

PRICE
38/6
ONLY.

A THOROUGHLY SOUND AND PRACTICAL OUTFIT.

LARGER SIZES:—

For Four Persons (22" x 13" x 8") **63/-** Free Delivery London District.
" Six " (24" x 14" x 9") **82/6** Carriage Forward Elsewhere.

REALLY WONDERFUL VALUE.

MONEY REFUNDED IMMEDIATELY IF NOT ENTIRELY SATISFIED

NOTE.—Baskets may be had fitted with Vacuum Flasks instead of Kettle Outfit if preferred. Please state which wanted when ordering.

Send your order at once to the Actual Makers—**BERKELEY BROS. (Dept. F), 179, VICTORIA ST., LONDON, S.W.1.**

"BERKELEY" PICNIC BASKETS actually save their cost in a few outings.

HEALTHY, HAPPY, WEEK-ENDS!!

Make the most of your week-ends. Get where the healthful breezes blow. Take a KAR-KAMP Tent with you and camp where you like. Bathe where you like. Garage where you like. Get pleasure from your leisure, and save the cost and inconvenience of looking for accommodation.

DOUBLE
FELLED
SEAMS

KAR-KAMP

PATENT

DOOF

TREBLE STRENGTH

FASTENERS
NO TAPES

LIGHTWEIGHT

BRASS EYELE

ERECTED IN TWO MINUTES. Rustless PEGS.
MAY BE FASTENED FROM INSIDE OR OUTSIDE

HAVE LUNCH IN THE OPEN.

Find a nice spot, pitch your tent (with Extension as Fig. 2), and have your lunch in comfort while gazing on the surrounding country. You will find KAR-KAMP



KAMPS

everywhere. Can be supplied with Patent Extension at extra cost, 7/6 to 10/-, according to size, as per Fig 2

**KAR-KAMP
TENTS**

Made of strong Green Waterproof Fabric in five sizes, weighing from 10 to 16 lbs. Complete with jointed poles, pegs and ropes. Carriage Paid. Cash with order. 50/- to 72/6

Send for Illustrated Pamphlet, giving sizes and particulars, and samples of fabric.

KAR-KAMPS LTD., 29, Cannon Street, Manchester.

Manufacturers of Tents, Dustproof and Waterproof Motor Covers.



Now is the Time to fit Solex!

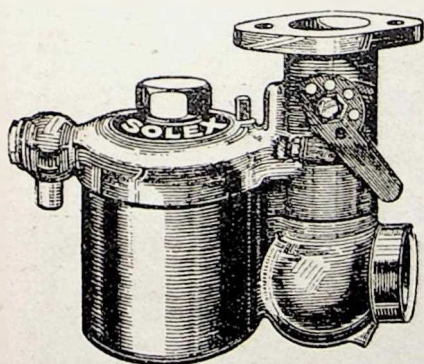
Before the season's touring commences in earnest, fit a "Solex" Carburettor to your car. More miles per gallon and better running are assured, whatever make of car you own. Fit "Solex" now—and enjoy "Solex" benefits all the season.

TEST THE "SOLEX" CARBURETTOR FOR 30 DAYS FREE.

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

READ WHAT "SOLEX" USERS SAY:

MORRIS.—"We certify that 'Solex' has improved our Morris by 20 m.p.g." A-C.—"Easier starting, better acceleration, greater climbing powers, increased m.p.g." 7 h.p. FIAT.—"Solex' gives us 6 miles more to the gallon, much superior to the previous carburettor." ROVER 9 h.p.—"Doing about 45 to the gallon. The engine is a pleasure to drive." CLYNO.—"404 miles on 10 gallons, and 248 miles on 6 gallons." 7 h.p. AUSTIN.—"Average 51 m.p.g." SINGER.—"52 m.p.g. with four up."



Our new and commodious premises offer ample facilities for tuning and fitting "Solex" Carburettors.

SOLEX

THE NO-TROUBLE CARBURETTOR

SOLEX LTD.

Director GORDON RICHARDS

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

Telephones: Paddington 8621, 8622, 8623, 8624, 8625.
Telegrams: "Solexcarb, Baker, London." and 862b.

Get Solex—and note the difference

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.

Goodall Ad.

"The Three-wheeler that runs like a four."

The choice is yours,

and you are now looking round before making your decision. Come along for a trial run on an Omega, which we will gladly arrange. Out on the road you will at once appreciate the wonderful stability of the Omega, the handiness of all controls, perfect springing, efficient brakes, an engine which likes hard work, and doing anything from 5 to 50 on top, running 50 to 55 m.p.g. Where can you obtain so much pleasure and satisfaction for so small an outlay? Arrange a trial run to-day.

PRICES:

POPULAR MODEL	£95
DE LUXE MODEL	£110
FAMILY (as illustrated)	£115
SPORTS (water-cooled)	£125

There is a model to suit you, write us to-day.

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

lation

We have a demonstration sports, with coupe body, going at an attractive figure, in excellent condition. Write us to-day.

We are privileged to say that
THE AUSTIN MOTOR CO., Ltd
approve and recommend
EXTRA HEAVY

**THE
AUSTIN SEVEN**

"A British Oil for a British Car."

FILTRATE WORKS, LEEDS.

Why you should join the R.A.C.



ROAD SERVICE IS NEEDED BY EVERY MOTORIST.

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

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

DROPPED

The Motorist who had no "Lost Property" discs

R.A.C. Associate-Members attach these discs to their spare wheels, luggage, and other articles liable to fall from the car, and by this means are placed into touch with the finder, through the Club.



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

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

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

Name.....

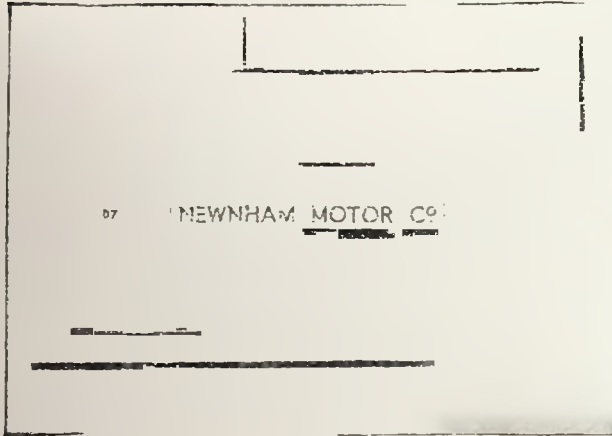
Address.....

"The Light Car."

"USED CAR" SHOW WEEK — at NEWNHAMS

Held in conjunction with the Allen-Bennett Motor Co., of Croydon,

MAY 23rd—28th
9 a.m. to 9 p.m.



Entrance to "Used Car"
Showroom and Private Park.

We cordially invite you
To a novel kind of show,
The first we think there's ever been,
At least folks tell us so.

Of "New" car shows you've heard no
doubt—

Praps visited a score,
But a "Used" car show *the like of this*
There's never been before.

The cars displayed are all for sale,
Our **GUARANTEE** they bear,
Whilst "Part Exchange" and "Credit
Terms"

You'll find extremely fair.

You may wander round the showrooms,
You may sit in every car,
And if you don't find what you want
There's no harm done so far.

We really hope you'll visit us,
And help our Show succeed,
For we shall spare no effort
To please—in word and deed.

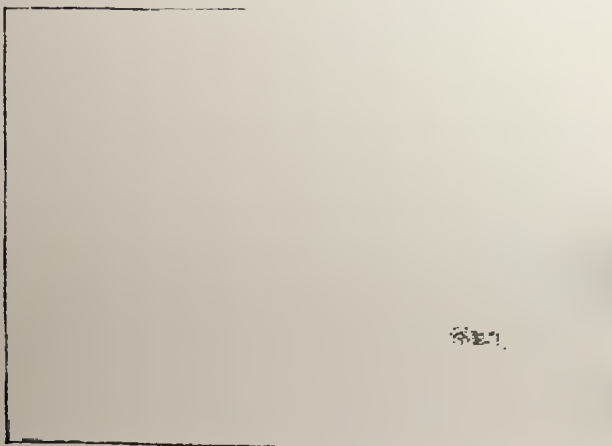
In order that the most varied selection of models
will be available, Messrs. The Allen-Bennett
Motor Co., of Croydon, have co-operated with
us by sending a considerable number of their
most attractive "Used Cars" to our showroom
so that the combined display will far excel any
previous selection of used cars offered in any
part of the country.

ESTABLISHED OVER 30 YEARS YOU KNOW

The Newnham
Motor Company.
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London, W.6.

Telephone—RIVERSIDE 4646 (Private Exchange).

A boy in the
"Used Car" Showroom.



Private Park for Customers' Cars.

150 CARS ON VIEW 150

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

The Light Car and Cyclecar

A ONE-MAKE RALLY.

Jowett owners are renowned for their keenness. Over 60 of them recently took part in an agent's rally at Huddersfield.



NOTES, NEWS & GOSSIP of the WEEK

White Sleeves.

The Home Secretary stated last week in the House, in reply to a question, that white sleeves for use by point-duty policemen at night had been tried, but the Chief Commissioner had reported that no luminous devices so far examined had proved satisfactory.

The Singer Expansion.

We mentioned recently that Singer and Co., Ltd., were about to double their capital. News has come to hand that very large extensions are in contemplation and the company has purchased from the B.S.A. concern a large factory on the Coventry Road at Birmingham. The Daimler Co., Ltd., are taking a large number of the new shares to be issued by Singer and Co., Ltd., and there will be a joint working arrangement between the two concerns. The shares of Singer and Co., Ltd., have risen to about 70s. The company is one of the few concerns of its kind which have paid a dividend consistently since the war. The Junior model, we learn, is in very great demand.

This Week.

Owners of 10-26 h.p. Singer cars who are keen to maintain them always at their utmost efficiency will be interested in an article entitled "Keeping the Singer Senior in Tune" which we publish this week and which explains how to get the best out of one of these cars. "Speed with Comfort," is the title of an article by our contributor "Focus," in which he gives his impressions of his latest car, a sports Lea-Francis chassis fitted with a Gordon England saloon body, whilst "Take Care of the Pence" will appeal to all who study economy.

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LIGHTING-UP TIMES (Rear Lamps) for Saturday, May 21st.

London ... 9.21	Birmingham 9.33
Newcastle... 9.44	Liverpool ... 9.45
Edinburgh... 9.57	Bristol ... 9.31
Moon—Last Quarter, May 24th.	

Deferred Payment Concessions.

The general practice amongst dealers with regard to hire purchase transactions has been to insist upon a first payment or deposit of not less than 25 per cent. of the purchase price of the car, the balance being paid by monthly instalments. Interest on the outstanding amount has been at the rate of 5 per cent. for 12 monthly payments and 7½ per cent. when the payments were spread over 18 months. The Council of the Motor Trade Association has now, however, passed a resolution to the effect that dealers may give delivery of a car upon payment of the first monthly instalment. In this way the buyer pays slightly more because a larger balance, upon which interest is charged, is left outstanding, but he has the advantage of not having to disturb so much capital in the first place. Many dealers have adopted the scheme.

Blackpool Speed Trials.

There are 15 classes open to all types of car in the series of speed trials over a half-mile course to be held on the Promenade, South Shore, Blackpool, on Saturday, May 28th. Mr. A. H. Hendley, care of Blackpool and Fylde Motor Club, Springfield Road, Blackpool, is in charge of the entry list.

Good Samaritans Wanted.

From time to time the R.A.C. receives requests from hospitals in London for a volunteer to take a patient, who is unable to travel by train and too poor to pay for a car, from the hospital to a convalescent home. There are many motorists who would welcome the opportunity to perform such an act of charity, and the R.A.C. therefore proposes to compile a list of car owners who would be prepared to help in any such emergencies. It is generally possible to give twenty-four hours' notice of what is required, and naturally no cases of infectious disease would be so conveyed. Motorists who are prepared to help in this scheme are requested to communicate with the Secretary, R.A.C., Pall Mall, London, S.W.1.

Next Week.

A special Whitsun number will be published next week. It will be greatly enlarged and will contain articles of a nature designed especially to appeal to and to help holiday-makers. As with all special numbers of *The Light Car and Cyclecar*, the full amount of attention will be given to the needs of novices, who may depend upon it that they will find this issue exceptionally helpful to them. Our full London-Edinburgh programme will not appear until Friday week, June 3rd.

Bridge Closed.

In consequence of repairs Convent Bridge, on the Braintree-Halstead road, Essex, was closed to all vehicular traffic on May 16th last and will remain closed for eight months. The alternative route is by way of Church Street, Becking.

Bridge-building Delay.

Several of the important arterial roads in and around London cannot yet be opened to traffic because of the delay which has been caused in building the necessary bridges. The case of the Kingston by-pass is already well known. In addition, work on the North Circular Road is held up by delay in the construction of a bridge over the London and North-Eastern Railway at Long Lane.

A Majority.

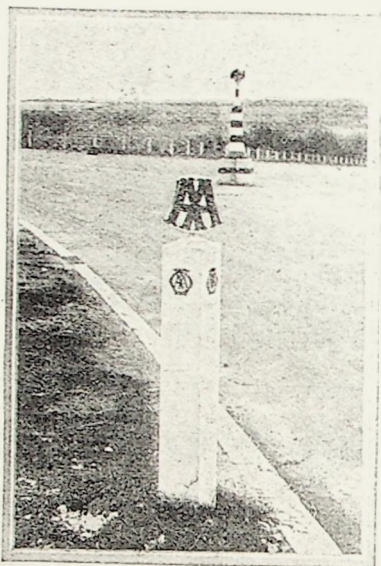
The ever popular Jowett car attained its majority this week, the first model having been made in 1906. This car had a 7 h.p. two-cylinder horizontally opposed engine similar to that used today. As an instance of the increasing popularity of the Jowett car, it is interesting to learn that in 1920 the output from the works was only three cars per week. This year the output is expected to exceed 5,000 cars, and the works have been very much enlarged.

New Paris Hire Service.

Donnet Motors, Ltd., have instituted a new hire department which should be of interest to intending visitors to France. The department is situated in Paris, and 10 h.p. Donnet cars are available for driving by the hirer at a cost of £8 per week, £14 per fortnight or £25 per month. These rates include insurance against all risk. If the hirer has no French driving licence, Donnet Motors, Ltd., will help him to obtain one. All communications upon the subject should be addressed to the English showrooms of the concern at 42, Albemarle Street, London, W.1.

Choice of Sparking Plugs.

Lodge Plugs, Ltd., point out that motorists cannot expect to obtain satisfaction from war "surplus" models which are being sold at practically scrap prices. These old plugs were made years ago to suit specific types of aero engines and are not considered suitable for motorear engines.



The safety posts being erected by the A.A. have reflex signs which are effective at 200 yards.

Reckless Motorists in Germany.

The Aachen authorities have closed the road from Duren to Nideggen in the Eifel district to motorists on Sundays until next October. This action has been taken as the result of many accidents having occurred on the road.

Another London Trap.

A speed trap operated at irregular times, but nearly always between the hours of 9 a.m. and 11 a.m., in a southerly direction, is in operation in Gloucester Place, London, W.1.

The Boulogne Meeting.

Several changes have been made in the regulations governing the Boulogne meeting, but all of them point to improved conditions both for competitors and spectators. The meeting this year will be the seventeenth of its kind and will be held from Tuesday, September 6th, until Sunday, September 11th.

Swiss Motor Regulations.

A referendum was taken in Switzerland last Sunday in accordance with the Swiss constitution on a new law already passed by Parliament for the uniform regulation throughout Switzerland of motorcar and bicycle traffic, and for the determination of the civil responsibility of motorists and their obligation to ensure against this responsibility. The law was rejected by a majority of 114,000.

Cars at the Derby.

The R.A.C. is making arrangements for a car enclosure in Woodcote Park for members and associate-members wishing to see the Derby or Oaks. The enclosure is in the grounds of the R.A.C. Country Club, and actually adjoins the Downs. Parking space for cars or motorcycles for any of the four days of the Epsom Summer Meeting may be booked in advance at the following charges:— Derby day, £1; Oaks day, 15s.; other days, 10s.

A car berth may be booked for the whole meeting for £2. All applications for space should be made to the R.A.C. Touring Guides Department, Room 123, 83, Pall Mall, London, S.W.1.

Special Whitsun Number.

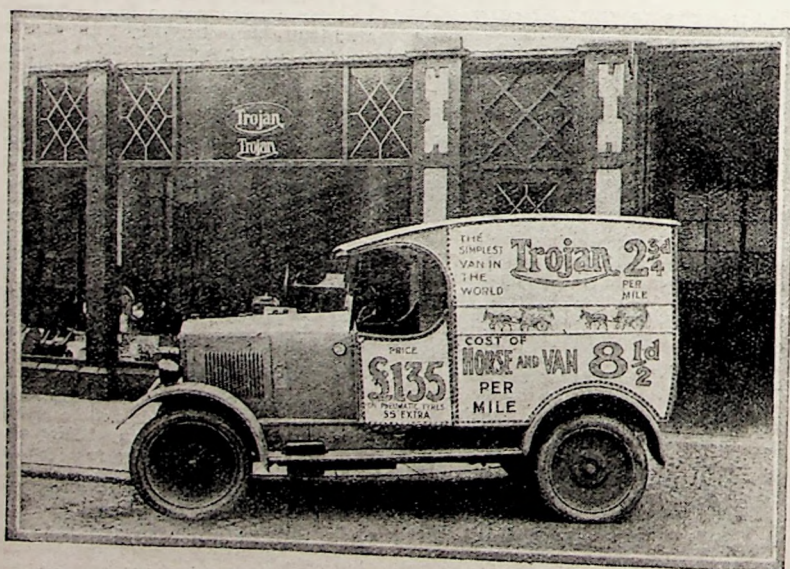
THE Light Car
AND Cyclecar

May 27th. Price 3d. as usual.

A Salmson Show.

Readers living in the neighbourhood of Brighton had an opportunity last week to inspect a special show of Salmson cars at the premises of Messrs. George Newman and Co., Ltd., Old Steine, Brighton. In these handsome showrooms, right in the centre of the town, about a dozen different Salmson models were on view and the attention they attracted was extraordinary.

The *pièce de résistance* of the display was the smart San Sebastian model in which Mr. George Newman won the 1,500 c.c. class in the Essex Motor Club's Six Hours Endurance race held a fortnight ago at Brooklands. Another interesting car was a beautifully designed streamlined fabric saloon on a San Sebastian chassis. This model well merited all the praise it received from visitors to the showrooms.

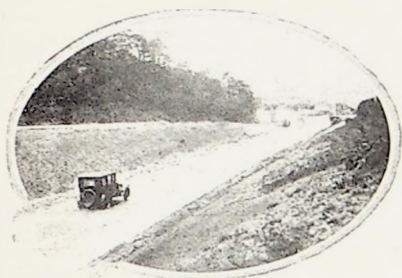


STRIKING PUBLICITY.

Every Trojan van delivered from the Kingston factory bears the striking poster depicted above. On the other side of the body errand boy and Trojan costs are similarly compared.

Congratulations.

The British Petroleum Co. has given notice that all the petrol pumps under its control are to be repainted in a colour which will conform more pleasingly with rural surroundings. The company is taking this step as the result of some remarks made in the House recently by the Minister of Transport. Nothing apparently can be done to improve the actual design of the pumps from an æsthetic point of view, but a pleasing colour will go a long way towards making them less unsightly. No doubt other petrol companies will lose no time in following this lead.



After two years' work the improvements to Bunny Hill, Nottingham, are now nearly complete.

Disabled Drivers' Trojan.

In our description of the control conversion for Trojan cars, which appeared in last week's issue, it was stated in error that the special parts were made by Trojan, Ltd., at Croydon. Actually, they are manufactured by Leyland Motors, Ltd., Kingston-on-Thames, the makers of Trojan cars.

Newnham's Used Car Show.

A Used Car Show which has been organized by Messrs. Newnham Motor Co. is being run from May 23rd until the 28th in conjunction with the Allen Bennett Motor Co. and should be an unqualified success. The show, we believe, is the first of its kind, in that every car will be the property of the organizers of the show, who will be pleased to accept other second-hand models in part exchange and to extend all the facilities which are normally given. In addition, the used cars sold will be covered by the Newnham Motor Co.'s well-known three months' guarantee, whilst deferred payment transactions will be welcomed. It is anticipated that at least 150 really good used cars will be on show. The exhibition is being held at the Newnham Motor Co.'s Showrooms at 237, Hammersmith Road, London, W.6, almost opposite the West London Hospital.

J.C.C. High-speed Trial.

The Junior Car Club has now issued the regulations for its third annual high-speed reliability trial, which will take place at Brooklands on Saturday, June 18th. As usual, the capacity limit for competing cars is 1,500 c.c. and there are four classes. Three of the classes are for cars which are standard productions in every respect, and the fourth is intended for the benefit of the many sporting amateurs who would like to compete with cars which they have tuned and altered to a degree which makes them non-standard. The course has been altered slightly, but the total distance is roughly 100 miles as before. The entry fee is £2 per car, and as the number of entries may have to be limited members are advised to send their entries in as soon as possible.

Council Opposes Buses.

Woolwich Borough Council is opposing the proposed institution of an omnibus service between Woolwich and Chislehurst on the grounds that the vehicles cause undue damage to the roads. Recently one of the roads under the control of the council subsided and its reconstruction proved very costly.



A. S. Crowther (Alvis) on Dalton Bank in the Huddersfield M.C.C.'s freak hill-climb.

Henly's Alvis Rally.

Henlys, Ltd., the well-known agents for Alvis cars, have again arranged this year to hold an Alvis race meeting and rally at Brooklands, and the event will take place on Saturday, June 11th. Alvis owners can obtain tickets for themselves and their friends free of charge upon application to Henlys, Ltd., 91, Great Portland Street, London, W.1, and a very interesting afternoon's sport should result. Owners who wish to enter their cars for any of the events may do so and there is no entrance fee. Incidentally, it may be mentioned that other makes of car beside Alvises can be entered for certain of the events.

MOTERING MATTERS IN PARLIAMENT.

THE Minister of Transport was amazingly cheerful when he made his last speech for his Department to the House of Commons. Far from giving any indication that the work upon the roads is to be slowed up as a result of their transference to a branch of the Board of Trade and of the Chancellor's raid upon the Road Fund, he outlined a considerable programme of prospective achievement.

After stating that the sum of £1,400,000 has been granted by the Government for rural roads this year, he remarked upon the developments which are taking place among the trunk roads. The London to Holyhead road has been dealt with in the Midlands; practically the whole of the big length of road from Bristol to Plymouth is under reconstruction, and it is hoped to have the road between Blair-Atholl (Perthshire) and Inverness finished by August or September.

The Minister claimed that his Department is doing everything possible to eliminate blind corners, as 50 per cent. of the cost of this work in the case of first-class and 25 per cent. in the case of second-class roads is paid by the Department. Apparently, however, much remains to be done, as Lieut.-Colonel Howard-Bury said that he had been horrified the other day, when passing through Hertfordshire, to

see the number of blind corners in that county.

Only one of the great roads of the country meets with the full approval of Lieut.-Colonel Howard-Bury. This is the Great West Road, which can carry several lines of traffic. But even there, he said, the congestion is very great on Saturdays and Sundays. His suggestion was that on all the great roads there ought to be a footpath for pedestrians on one side and a track for motorists on the other.

The same Member emphasized the need for uniformity of road signs all over the country, instead of each county having its own special signs as at present. Then every motorist would know, wherever he happened to be, what was right and what was wrong, instead of gaining that knowledge only when there is an accident or in the police courts.

Every motorist, he urged, should be warned, when he came to a cross-road, that it was a cross-road. There ought also to be standardized signs throughout the country so that motorists would know whether they were on a main road or a side road. He was also strong upon the abolition of tolls, and gave a diverting account of some of his experiences with these obsolete obstructions in Wales.

Another interesting contribution to

the debate was made by Lieut.-Colonel Moore-Brabazon, who was, until recently, the Parliamentary Secretary to the Ministry of Transport. There are three great warring interests on the roads, he pointed out. There are the gas interests, which are concerned with tar; the pitch and asphalt interests, with all the resources of oil behind them; and concrete interests, which are backed up by the Associated Portland Cement Co.

We must give up the idea, he declared, of building roads to withstand any kind of traffic. Heavy lorries are allowed to travel much faster than Parliament intended, and they do enormous damage. Action must now be taken by the Government to impose definite restrictions regarding the design of road vehicles, so that the roads may be saved. A suggestion which came from Mr. Ramsden was that signposts should be placed at such a level that the lights of motorcars would shine upon them and thus avoid the need for stopping.

It was an interesting and informative debate, and it remains to be seen how many of the suggestions made by Members will be taken up, if not by the expiring Ministry of Transport, by the Roads Department of the Board of Trade, which will shortly take over the control of the roads.

Light Cars in the Making.

MACHINE-SHOP PRACTICE.

EXTREME ACCURACY AND RAPID PRODUCTION CAN BE OBTAINED ONLY BY THE USE OF AUTOMATIC MACHINES. THIS ARTICLE DESCRIBES HOW CASTINGS AND FORGINGS ARE MACHINED IN A MODERN SHOP.

An automatic turret lathe in operation and a close-up view of the tool head



THE foregoing articles in this series have dealt with the first steps in the preparation of parts from raw material, and readers have been shown how castings are made, and they have also been given an insight into forging and presswork methods. The next step is to pay a visit to the machine shop and find out how the finishing processes are carried out, and nowhere in a works can more ingenious automatic machinery be seen, as the extreme accuracy demanded in car production requires that the machines themselves shall be perfect in design and operation.

Nowadays, when interchangeable parts are produced in quantities, automatic machinery has replaced the old type which was controlled largely by hand. Taking a lathe as an example, it is unusual to see one of an ordinary type in use on production work, excepting, of course, where only a few parts are required. Instead automatic multi-spindle types are in general use.

These lathes are fitted with special tools ground to a form which will produce the required shape on the finished article with the least number of movements, and because of the heavy cuts taken by these tools, the lathes are very heavily and rigidly built.

Where a part can be machined from a bar it is usual to feed the bars through a hollow mandrel upon which is mounted an automatic chuck. At the start of the machining process the bar is fed through the mandrel until its end butts against a stop. The chuck then closes and grips the bar when at once a tool or tools begin cutting the revolving metal.

At a given instant the tools, having performed their work, will be withdrawn from contact with the metal by the action of levers operated by cams; and then other tools will be brought into action to do the next part of the machining work. The final operation is

to part off the formed portion of the bar, and directly the parting tool is clear of the work the chuck will open, the bar will be fed through to the limit stop, the chuck will close and the entire cycle of operations will be repeated.

Still more rapid in operation are multi-spindle lathes. Some of these have six, or even eight, spindles or chucks, each of which grips a bar of metal whilst one or more machining operations are performed upon it, the operations being timed so that they are completed at the same instant, when the entire mechanism carrying the spindles is revolved one position as it were, and a further series of operations is then performed upon the eight partly machined bars. Thus, with eight movements, eight separate and distinct machining processes can be carried out simultaneously.

A very interesting machine-shop operation is that of cam milling and grinding, the cams, of course, in a modern engine being integral with the shaft. In the old days they were keyed on and often gave trouble by coming loose and upsetting the timing.

The shaft is first turned to various diameters, as shown on the blue-print or working drawing. Thus parts of the shaft which will become cams are left large, their diameter being in fact just greater than that of the highest point on the finished cam. The shaft is then passed to the cam milling machine, which is fitted with revolving cutters controlled by master cams, which are exaggerated editions of those to be formed on the camshaft, and they are made with extreme accuracy because upon them depends the accuracy of the finished shaft.

A roller running on the master cam is connected by means of levers to the slide upon which the milling cutter is mounted, and this cutter moves in such a manner that it shapes the disc on the embryo camshaft so that it takes the form of the master cam, but, of course, on a reduced scale.

A device attached to the machine ensures that each cam will be milled in correct relation to the others so that the proper sequence of lift will be given to the valves when the shaft is fitted in the engine. Sometimes the camshafts are used without grinding the faces of the cams, but in most good quality engines each cam is ground after hardening, the grinding wheel being guided over the cam face by a master cam similar to that used on the milling machine.

A number of operations have to be performed upon a cylinder-block casting before it is ready to go to the assembly shop. One of the first jobs is to mill a true

face upon it from which all subsequent settings on the various machines are made. Possibly the head face will first be milled. The block can then be bolted to the angle plate of a boring machine and, in the case of a four-cylinder engine, four boring bars can then be passed through each cylinder, removing metal until the diameter of the bore is a few thousandths under that of the finished size.

When grinding cylinder-blocks, it is usual to mount them horizontally on the table of a grinding machine. The abrasive wheel has a planetary motion; that is, it revolves at a very high speed, probably 20,000 r.p.m., and at the same time describes a circular path the diameter of which is equal to the required bore of the cylinder. More than one cut, however, is taken as a rule, and it will be only on the final cut that the full diameter circle is used. The cylinders are ground dry and powerful suction fans remove the cast-iron dust as it is formed by the abrasive wheel.

Special lathes are used to machine pistons, the ring grooves in which are cut by gang tools operating simultaneously; afterwards, of course, the pistons are ground to size.

Machining Piston Rings.

The production of piston rings is an interesting process. A hollow cylindrical piece of cast iron, not unlike a drain pipe and known as a "pot" is secured to the mandrel of a special lathe which is fitted with a boring tool for machining the inside of the pot. Other tools pass over the outside of the casting and reduce it to the required diameter plus an allowance for grinding. If the rings are to be of the eccentric type, the pot is, of course, set slightly eccentric on the mandrel.

When the internal and external machining has been finished a gang of tools is brought up to the casting automatically and fed into the metal, each tool being placed a distance apart from its neighbour equal to the required width of the ring. These tools are set just a little back from each other so that the rings are parted off one after another, starting at the outer end of the casting. If they were parted simultaneously they would tend to jam and break.

The next job is to slot the rings. This is done by mounting a number of them side by side and passing

a milling cutter across them. In this condition, when the rings are closed they are, naturally, oval. To correct this and to make them perfectly smooth they are mounted on a special mandrel and revolved between the centres of a grinding machine, the abrasive wheel of which cuts them truly concentric and perfectly smooth.

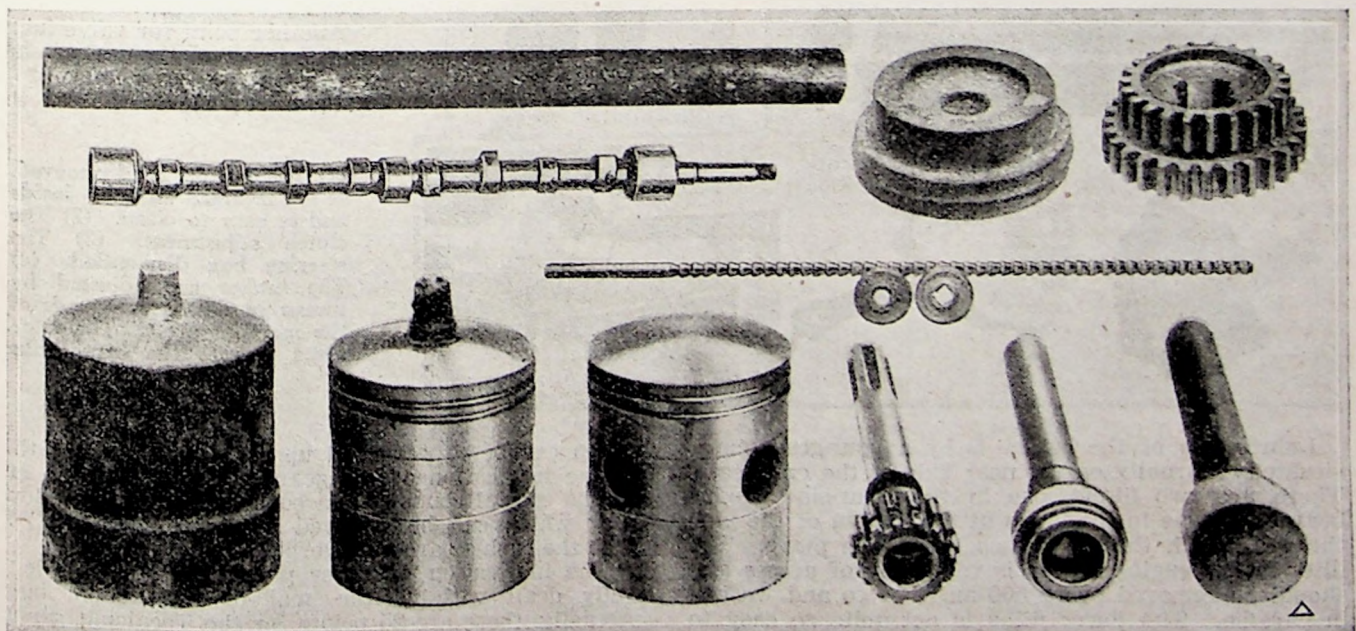
The sides of the rings are then finished on a surface grinder, where they are held in place during the process by means of a magnetic chuck. Quite often, before the grinding process, the rings are hammered in special machines. This increases their springiness and ensures that they bear upon the cylinder walls with an equal pressure round their circumference.

Broaching Holes.

A particularly interesting machine about which little appears in print is a broaching machine which is used for forming the splined holes through gear-wheels, or for cutting keyways through wheel centres and similar operations. Previously, irregular shaped holes of these kinds had to be cut in slotting machines after a rough hole had first been bored. The introduction of broaching machines, however, eliminated a large amount of work and resulted at the same time in increased accuracy.

A broaching machine has fitted to it a rigid stop, against which the part to be broached is secured. The cutter is in the form of a long toothed bar having a cross-section of the shape of the required hole. The first part of the broach is tapered slightly to give it a lead through the drilled hole in the gear-wheel, and each tooth is ground to a cutting edge. The broach, having been entered through the hole, is secured to the end of a ram, which is then drawn back mechanically, thus pulling the broach through the hole in the wheel and cutting the required splines. Each "tooth" of the broach is a few thousandths larger than the one before it; thus, when the whole length of the broach has been drawn through, the hole will be smooth and of exactly the required shape and size.

It is not possible, in a brief article, to describe all the machines in a modern shop. Multi-spindle drilling and tapping machines, gear cutters and hobs, and machines which form threads by cutting, milling or rolling are all in regular use and their working is extremely interesting.

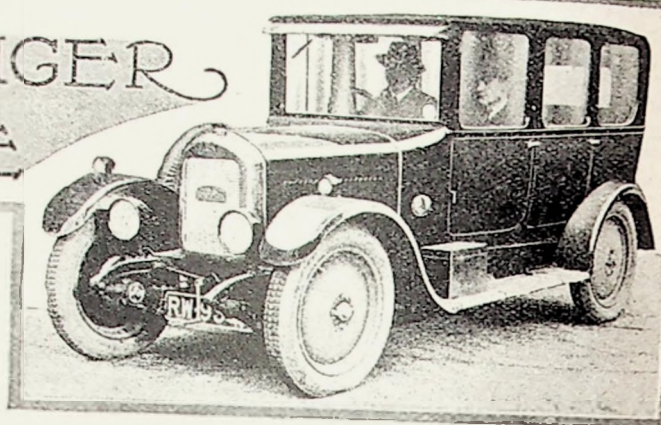


ROUGH AND
FINISHED.

A glance at these photographs will show that rough castings or forgings bear very little resemblance to the finished parts. Camshafts are machined from solid bars, gear wheels are made from forgings, whilst pistons are machined from castings. A broach for cutting splines in gear wheels is shown with a plain and a broached wheel.

KEEPING THE SINGER SENIOR IN TUNE

EXPLAINING IN CLEAR AND SIMPLE LANGUAGE HOW TO MAINTAIN EFFICIENCY, AND TO KEEP REPAIR BILLS DOWN.



FOR some years now the 10-26 h.p. Singer has been a car particularly favoured among owner-drivers. It is, therefore, only to be expected that the latest model should maintain the Singer tradition of keeping the time and trouble required for maintenance to a minimum. The maintenance of the chassis has been reduced to absolute essentials, and, apart from ordinary routine points of lubrication, there is really very little attention required at the hands of the owner.

Considering, first of all, the important question of engine lubrication, the oil recommended to be used is Singer Engine Oil, which is stocked by all Singer agents. There is no objection, however, to using any high-grade oil recommended by any reputable oil refiner.

After the first 500 miles it is desirable that the sump should be dropped and cleaned out with paraffin. To do this, the 14 nuts whereby it is held in position must be slackened off, and the oil pipe disconnected. The job is simple but dirty, and is for this reason as a rule turned over to the agent who sold the car. After this, the oil should be changed every 3,000 miles. Three quarts of oil are required for replenishment.

pressure gauge on the dashboard. The ordinary running pressure at 20 m.p.h. is 3 lb. to 4 lb. per sq. in., but reasonable variation from this is quite permissible. The pressure is naturally higher when the engine is cold and is also affected by the condition of the filters. The adjustment of the feed to the rocker arms, and other considerations.

Owing to the ingenious arrangement of the oil pipes, the oil pump should not in the ordinary way require priming—that is to say that after draining and replenishing the sump, normal and steady pressure should be indicated immediately on starting up the engine. It is a simple matter, however, if in any exceptional circumstances this does not happen, to remove the small hexagonal nut at the top of the pump and inject a small quantity of oil, thereby priming it.

The valve cover is easily removed and the arrangements whereby oil finds its way to the rocker pivots are then exposed. There is one rather important adjustment here, and that is the small screw controlling the quantity of oil allowed to pass. This adjustment is very delicate, but it is one that should not often need attention. The ordinary setting is about half of one turn open—a fraction of a turn will have a very marked effect upon the quantity of oil delivered. It is important that this screw should be securely locked by means of the knurled nut if ever it is moved.

Another point for valve lubrication is to oil the rocker ends occasionally by means of a hand oiler; the feed from the

- (1) The cylinder head removed. It is machined all over inside and is easy to clean.
- (2) The clutch adjustment.
- (3) The steering box dismantled.
- (4) The brakes are adjusted by means of nuts at the ends of the operating arms. The outer arms operate the hand-brake shoes.

Lubrication of the engine is by a spur-gear pump, situated externally on the near side of the crankcase. There are two filters, one in the near-side engine bearer and one in the sump at the bottom of the pipe through which the oil passes up to the pump. The filter in the engine bearer is very easy of access and should be removed every 500 miles or so and washed in paraffin. The lower filter is not quite so easy to get at, and, unless there is reason to suppose that earlier attention is necessary, it can safely be left alone until such time as it becomes necessary to remove the sump.

The overhead-valve gear is fed under pressure from the pump, a branch pipe leading from this pipe to the

pump cannot be depended upon to take care of this. The lubrication of the gearbox and back axle call for no special comment; in each case there is a level plug which can be removed when "topping up" so that the casings are not overfilled.

The lubrication of other points on the chassis is fully dealt with in the makers' instruction book. Actually, there are 25 points for the Tecalemit grease gun, in which only heavy oil or thin grease should be used. Points that are apt to be overlooked and which need an occasional drop of thin oil are the small oiler at the top of the steering column and the lubricator at the lower end of the speedometer cable. The two screw-down greasers on the back hubs should not be

neglected. Nipples for the gun are not provided here, as only a very little grease is desirable.

A point in connection with chassis lubrication that is not emphasized in the makers' handbook is the advisability of relieving joints of weight at the time that the gun is in action. This applies especially to the steering pivots and only one jacking up is needed if the jack is placed directly under the centre of the axle.

The springs should have a little graphite grease inserted between the leaves every six months or so. When this is done the gaiters will have to be removed and the springs relieved of weight by jacking up the chassis frame.

Removing the Cylinder Head.

Decarbonizing the Singer engine is a thoroughly straightforward job, but before making a start on it the radiator must, of course, be drained. It is then necessary to disconnect the carburetter, the upper water joint, the exhaust pipe and the oil pipe. There is no necessity to remove the exhaust manifold or to interfere with the carburetter beyond disconnecting it from the head. The valve cover must, of course, be removed. In ordinary circumstances it will then be possible to break the cylinder-head joint after the nuts have been slackened by giving a sharp pull up on the starting handle—the sparking plugs should be left in position to maintain the compression.

Very often, however, this method does not work, and in such circumstances the old advice never to attempt to drive a screwdriver between the gasket and the head should be remembered, as this results at the best in a damaged gasket, and at the worst in a damaged casting.

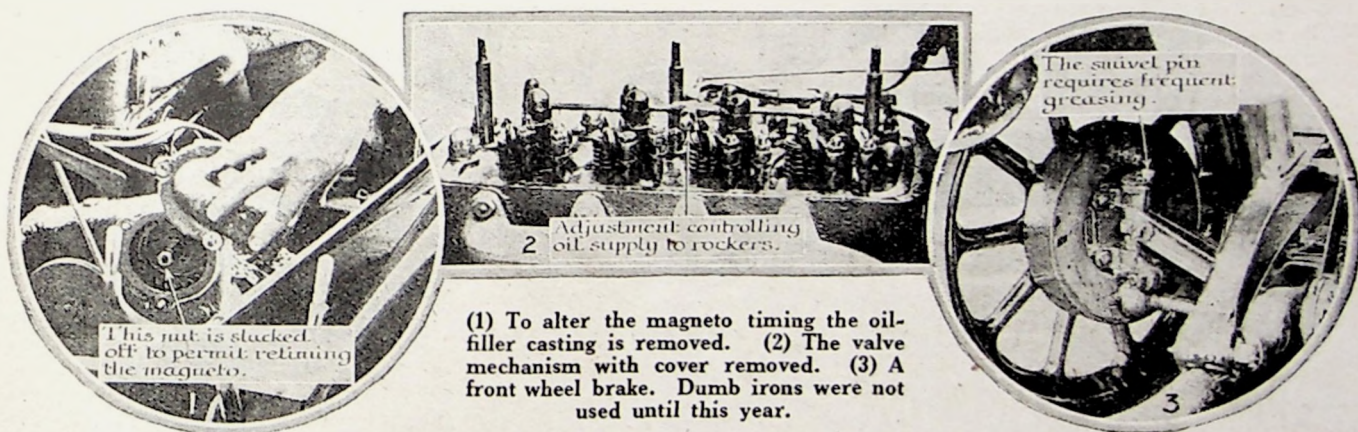
surfaces and an undamaged gasket, so that a sound joint will be obtained. Gold size or one or other of the proprietary jointing compounds can be used to make the joint. The usual precautions are called for in tightening up the holding-down nuts evenly. The procedure is, once the nuts begin to take a bearing against the head, to tighten up only about a quarter turn at a time, going from each nut to one diagonally opposite. The correct practice is to put the head on and get it screwed down, and then to put back the push rods, pressing down each valve in turn so that the rocker arm can be lifted and the rod inserted. Each rod must be put back in the place where it was found.

The proper clearances for the valves are .004 in. inlet and .006 in. exhaust when cold. After the engine has been run to warm it up and the cylinder-head retaining nuts finally tightened with a box spanner, it is safe to adjust the clearances with a hot engine so that the push rods are just free—but quite free—to turn when the valve is seating.

Valve Timing.

It is rarely necessary to interfere with the valve timing, but should it be so the operator can be guided by the marks on the flywheel indicating T.D.C. for each piston. There is a small inspection cover at the top of the flywheel housing to enable these marks to be seen. The firing order is one, three, four, two.

While on the subject of timing it may be mentioned that simple provision is made to check up or modify the magneto timing. The magneto is bolted in position by three long bolts, which also hold the casting carrying the oil-filler orifice. If these three nuts be removed, the casting can be taken right off, exposing the end of



The cylinder head is quite easily lifted clear, as one or two of the three knurled nuts holding the cover in place can be temporarily screwed back without the cover in position and a grip obtained on these. In obstinate cases it may be necessary for the operator to stand on the chassis members astride the engine, so that he can get the full force of the back muscles to work in giving a strong jerk to free the head. There are eleven nuts holding down the head, and it is obviously necessary to see that all of these are removed before any attempt is made to remove the head. A proper box spanner—not an adjustable spanner—should be used on these, as they are screwed down very tightly.

The head, once removed, is easy to deal with, as all the inside surfaces are machined so that a very clean job can be made in the minimum of time. Similarly, with the removal of the valves. It is quite easy to dismantle the valves when the head is on the bench, but a special tool which makes the job still easier can be obtained from any Singer agent for 4s.

In reassembling after decarbonizing, the usual precautions are necessary to ensure absolutely clean

the magneto shaft, with its driving pinion, which is secured to the shaft by means of a large hexagonal nut. There is no key or keyway, the drive being taken purely by friction between the tapered hole in the pinion and the tapered shaft. If the nut is slacked off, the armature can be turned freely relative to the driving pinion. The timing is, of course, checked in the ordinary way by noticing the exact position in which the platinum contacts just begin to separate.

The carburetter is a Solex, and, apart from occasional cleaning, requires practically no attention. If the nut in the centre of the float chamber is slacked off, the body of the float chamber comes away together with the projecting arm carrying the jets. The contents of this can then be tipped out and the whole cleaned out by means of a rag.

At the same time the needle valve, which is situated at the near side of the float chamber cover, is also exposed. It can be screwed out by means of a small adjustable spanner, and it is desirable that this should be done occasionally, as the orifice is small, so that any slight obstruction may easily cause a restricted flow of petrol.

To get at the main jet it is necessary to unscrew the main jet cover, which is a tubular fitting with a hexagonal rim at its lower end. With this removed, the main jet can be lifted out. The correct carburettor setting is 20 choke, 100b main jet and 50 pilot. After the engine has been run in—say, after about 500 miles—it is, as a rule, found possible to substitute a 95b jet without appreciably affecting performance. Rather better petrol consumption will then be obtained.

The clutch on the Singer Senior is of the fibre-plate type, and rarely requires much adjustment or attention. On the clutch pedal there is a stop which limits the forward travel of the pedal by coming into contact with the engine bearer. This should be so adjusted that excessive movement of the clutch pedal is avoided. At the same time, it is essential that there should be adequate travel.

Upon removing the cover plate from the clutch housing, it will be found that there are three operating levers disposed in the ordinary way at an angle of 120 degrees. At the outer end of each of these will be found a small screw with a locking nut. Should the clutch show any tendency to slip, it is probable that there is inadequate clearance between these screws and the pins that they operate. The correct clearance is 1/32 in. minimum, and, should this not be available, it is necessary carefully to adjust each one, making sure after the adjustment has been made that the screw is securely locked up by means of the locking nut on it.

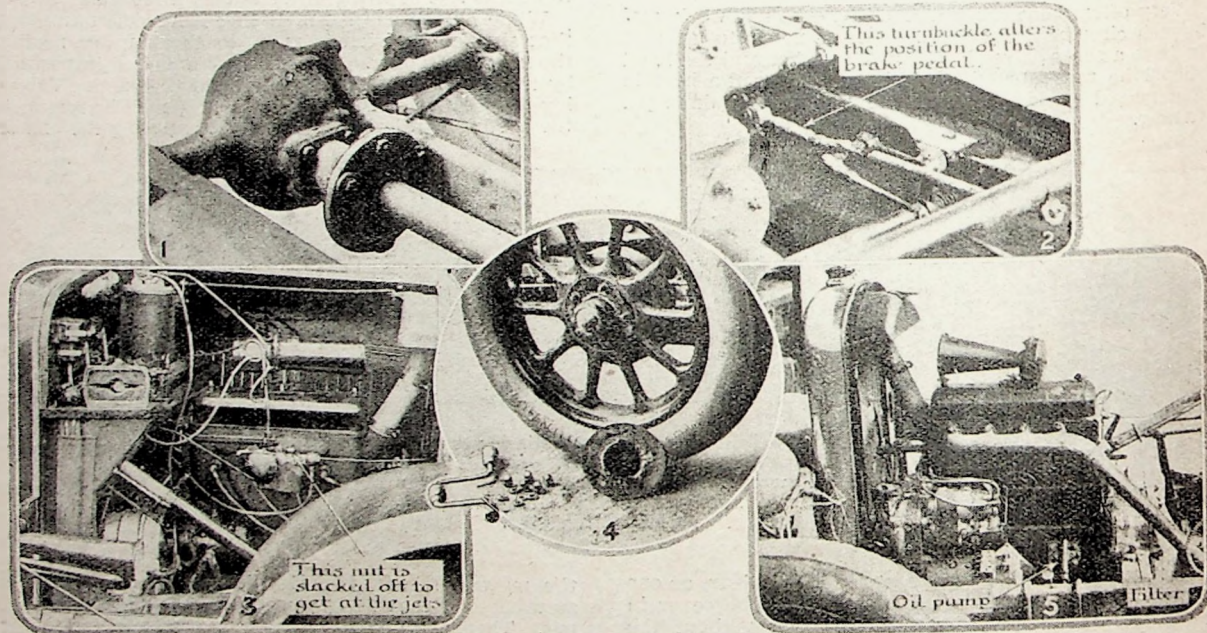
brakes worked by the pedal is carried out by the nuts at the ends of the four operating rods. It is very desirable, when adjustment of this kind is being made, that all four wheels should be jacked up off the ground. If this is not done, the operator is working to some extent in the dark and serious errors may result.

All four shoes can then be adjusted by means of the nuts at the ends of the brake-operating rods, so that perfect and even action is obtained. It is desirable, however, that there should be slightly less braking effect on the front pair of shoes than on the back. The important point to see to is that the two pairs of shoes give absolutely equal effects. There are, of course, two brake-operating arms on each back-wheel hub—one to operate each set of shoes. The inside arms operate the foot-brake.

Adjustment of the hand brake is made entirely by means of the two hexagonal nuts—one at the back end of each rod. Evenness of adjustment is necessary.

The steering is of the epicyclic type and requires little attention. The steering box is normally filled up with grease, so that very little wear ever takes place. The stops are cast on the inside of the steering box itself, so that it is not possible to adjust the amount of lock. In the event of much play developing in the steering box, it is possible to remove the central flange and turn it a half-revolution, thereby bringing new gear teeth into engagement.

The electrical system is by Rotax throughout, and



(1) The differential housing and rear fabric joint. (2) Brake compensating mechanism. (3) Power unit, off side. (4) A front hub cap removed. (5) Power unit, near side, showing the oil pump and filter.

Harshness of the clutch may be dealt with by putting a few drops of thin machine oil on the friction surfaces which are exposed when the cover plate is removed.

The final drive is by spiral bevel; provision is made to tighten up the meshing by the removal of washers. To do this it is necessary to disconnect the back fabric joint and remove the extension of the differential case.

The brakes require occasional adjustment, but the operation is a simple one. The foot brake works on all four wheels. The travel of the pedal is controlled by a simple turnbuckle which connects it to the compensating mechanism. This is easily got at under the floorboards, and should it not be found possible, owing to wear, to bring the necessary braking force to bear, it is necessary to take up this turnbuckle, thereby bringing the pedal slightly backward in the "off" position.

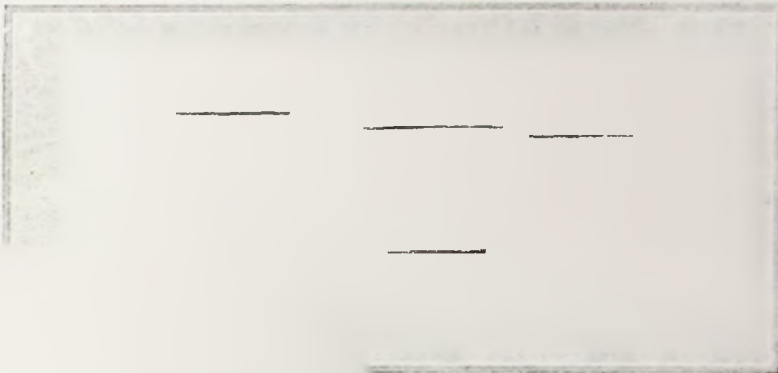
The final adjustment and compensation of the four

requires only ordinary treatment. The accumulator must, of course, be topped up from time to time with distilled water, and it is desirable occasionally to examine the brush and commutator gear of both dynamo and starter. To get at the Bendix drive of the starter, it is necessary to remove the motor completely, as there is no inspection plug.

Should the pinion tend to jam or stick, the starter should be removed and the entire worm and pinion thoroughly cleaned with petrol. Only a few drops of thin machine oil should be put on for the purpose of lubrication; ordinary engine oil will not do; it invariably causes jamming and sticking. All bearings on both starter and dynamo are packed with grease, and require attention only at times when a general overhaul is undertaken. A few drops of thin machine oil should be given to the magneto bearings occasionally.

IMPROVED BODYWORK for the 7-12 h.p. PEUGEOT.

SOME interesting improvements have been made recently in the bodywork of the popular 7-12 h.p. Peugeot models. The aim of the manufacturers is to provide a really roomy body which is, nevertheless, sufficiently light and compact to be used successfully on so small a chassis. The engine has a capacity of



only 719 c.c. and the tax is £7. To equip such a chassis with a body that can honestly be described as thoroughly weatherproof must indeed be a difficult undertaking, but the manufacturers appear to have made a conspicuous success of the task, as will be seen from the photographs reproduced on this page. It is at once obvious that there is no suggestion whatever of clumsiness or top-heaviness.

The four-seater and cabriolet models sell at £165. Both have wide seats, ample leg-room and rigid side curtains, whilst their specifications are in every way complete.

Both Peugeot models are attractive in appearance and economical to run.

CATERING FOR THE LIGHT CAR PARTY.

board plates and bamboo utensils which can be destroyed along with the cardboard box after use. For 1s. 3d. there is a sandwich box, the contents of which form quite a substantial and exceedingly appetizing meal. During the summer months, at any rate, these huts will be kept open until late in the evenings for the convenience

POT.

THE provision of suitable meals on the road, whether on business or pleasure bent, has always been a rather difficult problem for light car owners, especially when it is necessary to cater for a large family. Much has been done of recent years by leading catering concerns and by the large motoring organizations to meet this need, and the latest newcomer to the field is known as the Motorsnax organization. The first depot has recently been opened at what would appear to be an ideal spot for the purpose, just south of Ripley, on the main London-Portsmouth road. It is intended to establish a number of huts at other equally strategic points on the main roads around London.

A Motorsnax lunch box costs 2s. 3d. It is ready packed to be taken away

A wayside picnic meal and sandwich buffet at Ripley.

and contains a generous meal of meat, egg, salad, roll, cheese, biscuits, butter and fruit. The package is daintily and attractively got up and contains card-

of parties returning late—surely a very welcome relief from the distasteful task of having to set about the preparation of a meal when one reaches home.



The Performance of a Sports Lea-Francis with Saloon Body.

ADMITTING that a saloon body is desirable for a man who uses his car 365 days a year and who needs to go about dressed in a rational manner, the next question which arises is which of the various makes on the market is likely to prove most suitable.

I was faced with this problem shortly after Christmas, and have now covered some two thousand miles in the car which I selected. In the first place, I chose a sports Lea-Francis chassis, because I had had one before and had found that it possessed the characteristics which appeal to me, whilst I knew that the makers would be prepared to make any modifications which I required, as they specialize in fulfilling "special" orders.

Having decided upon the make of chassis, I found myself at liberty to choose one of three engines—the 12-22 h.p. with two-bearing crankshaft, the 12-40 h.p. sports with single-port cylinder head and three-bearing shaft, or the 12-50 h.p. sports, which is similar but has a double-port cylinder head. I chose the 12-40 h.p., realizing that it would be more economical and flexible than the 12-50 h.p. and knowing that the added h.p. obtainable from the two-port unit would be available only at very high rates of r.p.m., which are seldom attained on the road.

Deviations from standard were made in the shape of Rudge-Whitworth wheels instead of discs and the fitting of Hartford shock absorbers all round.

I had the choice of two saloon bodies, both of the four-door type, but one coachbuilt and costing £365 on the standard 12-22 h.p. chassis, whilst the other was of the Gordon England fabric type costing £325 on a similar chassis. With the sports engine, wire wheels and Hartfords, the former would cost £411 6s., whilst the latter would cost £371 6s. The cheaper car was chosen, first on account of the question of lightness

and, secondly, because one has a liking for the Gordon England principle. In addition, a fabric body is delightfully easy to keep clean and in good condition.

The resulting car, as the photographs show, has a distinctly attractive appearance, whilst its performance is very good indeed. The body is roomy, dead silent, provides exceptionally good visibility, and is very light and serviceable. In addition, the four sliding windows, adjustable double-panel front screen and gentle ventilator ensure coolness in summer and warmth in winter, whilst the three-point body suspension system should take care of silence and freedom from rattles for an indefinite period.

The performance of the car has proved to be something of a surprise. The wheelbase is longer than that of my last Lea-Francis, the compression ratio is 5.6 to 1 instead of 6 to 1 and the cams have a far more gentlemanly contour. In spite, however, of the car being rather heavier—it is just under 18 cwt., with all the equipment and the tanks full—its performance is nearly as good as the old Wizard.

On a good road one can carry on at a speed of 50 m.p.h. in third gear indefinitely without appreciable vibration, gearbox noise or other indications that the car is not perfectly happy; in top gear 60 m.p.h. is obtainable except against a very heavy head wind, whilst, with no appreciable headwind, 65 m.p.h. is quite a comfortable speed. With a fairly strong breeze astern 70 m.p.h. is obtainable and can be maintained so long as road conditions permit it. On second gear a remarkably good acceleration is obtainable, with a maximum speed of rather more than 30 m.p.h., whilst on bottom, Beggars' Roost is easily climbed, four up. The ratios are:—Top, 4.7 to 1; third, 7.36 to 1; second, 11.24 to 1; and bottom, 18.87 to 1.

I find with this car that it is possible to make even

better use of the gearbox than I could with my last Lea-Francis, as rather quicker changes can be made, whilst there is less tendency for the gears to "hang." This is rather difficult to explain, as no alterations have been made to the design of this box since it was first introduced, and one must therefore assume that the easier change is due to better alignment.

The engine has been improved in a number of minor respects since it was first designed. My previous engine of this type was one of the first of the series, and one is pleased to see that the small defects which it possessed have been removed. Perhaps the most important concerned the lubrication system for the o.h.v. gear. The valve for controlling the supply of oil was not entirely satisfactory and any surplus escaped at the joint between the valve cover and the cylinder head, swamping the entire engine with oil. On the new engine a rib has been formed around the top of the head, forming a shallow well so that surplus oil can easily return to the sump via the passages through which the push-rods pass, whilst a new type of control valve of a very much more serviceable pattern is fitted.

A noteworthy improvement to the chassis is the latest type of steering reduction gear. This is more massively constructed and gives a bigger reduction than the previous pattern and has considerably improved the steering, especially at very low and very high speeds. With a large wheel which I have fitted the steering is absolutely beyond reproach, which was not the case with the early 1926 models. It is pos-

sible, of course, that the wire wheels have played an important part in making me so enthusiastic concerning the latest steering gear; they also deserve a word of praise for being much more silent than the disc wheels, which are standard.

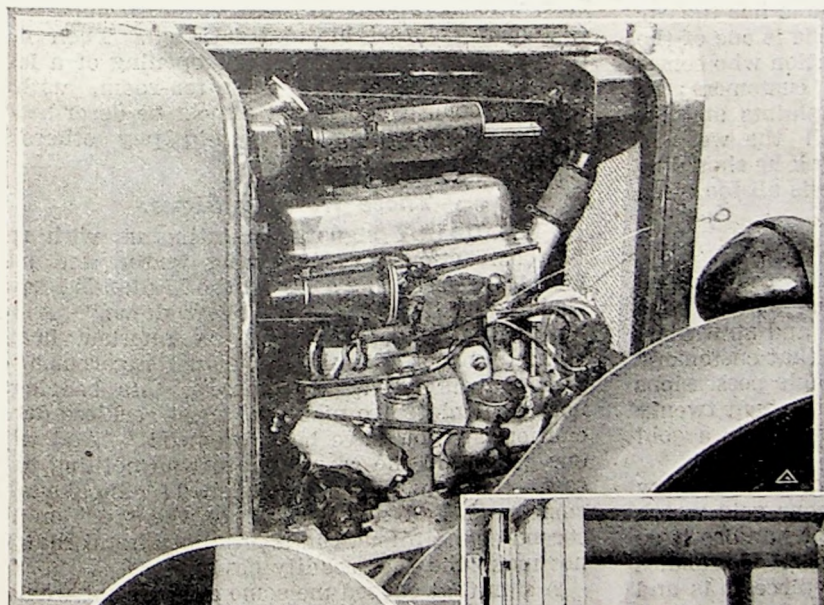
The chassis as a whole is hard to criticize. If one wanted to be hypercritical, one could say that a rather sweeter hand brake might be provided, that the reverse gear might have a notch of its own in the gate, that the springing might be a little less "hard," and that the provision of a larger petrol tank—preferably at the rear—might be given consideration by the manufacturers.

Turning to the bodywork, most practical owners would appreciate the use of thicker glass for the windows, with definite stops for locking them in any desired position, more convincing door locks and a more robust front screen. Apart from these points, and bearing in mind the comparatively low price, the coachwork calls for no unfavourable comment.

For really fast touring and hard every-day work, it would be difficult to find a more satisfactory car, whilst for those who appreciate sports car characteristics it provides them in full measure with the added advantage of giving exceptional comfort and complete protection from the weather.

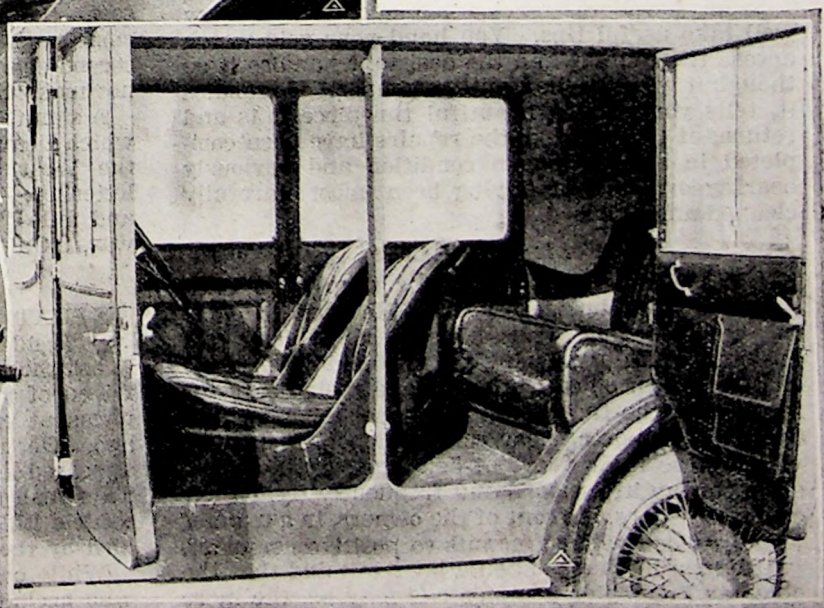
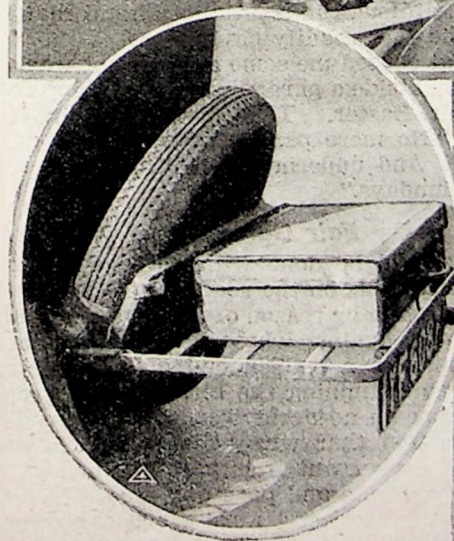
So far as economy is concerned there are no grounds for complaint. Petrol consumption is at the rate of 28 m.p.g. and oil at 1,200 m.p.g., these figures being an average struck after keeping a careful record for 2,500 miles.

Focus.



FEATURES OF NOTE.

The accessible magneto, Solex carburetter, oil filter and filler will be noted, likewise the massive steering-box. Attractive body details are the big adjustable bucket seats, the rear arm-rests and the wide doors. The folding luggage grid is of ample size and strength.





The Service Manager.

IF there is one man in the organization of a big car or accessory manufacturing concern who has more of my sympathy than any other it is the service manager. His is a particularly loathsome task. He is the butt of everyone. He is often—in my opinion—underpaid, and he seldom has the ear of the board. This is all wrong. He is one of the very few men in the whole organization who comes into direct personal touch with customers; he hears all their grumbles and complaints and he, more than anyone else, knows all the weakest points in the various models. I think he should be a superman, but in point of fact he is all too often quite the reverse.

An Analogy.

ONE forms this conclusion from the general aspect of most repair shops and service stations. Very often the manager and staff seem absolutely unable to grasp the fact that customers' cars are generally their most valuable possessions and therefore should be treated with about twenty times the care meted out by a jeweller to a gold watch.

From jewellers, service managers might very well take useful tips. You hand your gold watch across the counter and the assistant handles it as though it were worth a million pounds. He fondles it, tells you what a beautiful timepiece it is and returns it to you after the repairs have been completed in spick-and-span condition and obviously bearing evidence of having been most carefully cleaned and polished.

Contempt of Cars.

A WATCHMAKER keeps his shop open until well after business hours. He opens it early in the morning and always has plenty of assistants on duty during the two middle hours of the day when office workers leave their desks for lunch. In the face of this, is it not amazing that there are important car service depots in London which close their doors at 5.30 p.m., are not open on Saturday afternoons and frequently treat their customers' cars, in front of the owners, in a manner which reflects what amounts to positive contempt.

The men in charge should bear in mind that the older and shabbier a man's car may be, the more

he probably values it. They should remember, too, that he hates to be kept waiting and if delay must occur he appreciates a comfortable waiting-room, with reading matter or some other diversion available.

A lead has been set by the C.A.V.-Lucas-Rotax folk, who have gone to great pains to make their customers comfortable and satisfied. Their most recent innovation has been the opening of a large and comfortable lunch and tea-room, with a waiting-room, which might almost be described as a library, adjoining. It would pay others to follow suit.

Those Warning Signs.

GRADUALLY signs acquainting us with road obstructions are becoming terser and more laconic. Descending a hill in the Midlands I saw a warning: "Road repairs. Slow down." A few hundred feet farther on was another board: "Speed above four miles an hour dangerous." At a bend was yet another board, this bearing a notice calculated to make the most reckless driver cautious: "You have been warned!" And when one got round the corner there was nothing to be seen—the job had been finished! Incidentally, some wag had added "0" to the "4" on the second sign, although in a practised hand that did not make the fact readily obvious.

A sign that caused me some amusement was one which I saw outside a garage when returning from the West at Easter. This proclaimed in bold lettering:—"No more petrol for miles and miles and miles." And underneath, in tiny characters, was, "On Sundays."

Fair Game.

WHAT should be done with game which one accidentally kills on the road? I am prompted to ask the question by reason of the experience of a friend of mine, against whose bonnet a fine cock pheasant came to a sudden end a few evenings ago. He was examining the bird when a keeper appeared from an adjacent wood and claimed it. This man stated that when a person driving a vehicle kills a pheasant it is his duty to lay the bird by the roadside and pass on.

While on this subject I must warn car owners who accidentally run over a fowl not to be in a

hurry to pay compensation to the first person who puts in a claim. I heard recently of a driver who settled with a yokel for half-a-crown—to be confronted a few minutes later with an irate cottager, who demanded 4s. 6d. Needless to say, the yokel had disappeared—doubtless by devious routes to the "Pump and Bucket."

A story went the rounds of the Midlands last year of a motorist who ran over a porker and killed it. He paid the owner the value and then proposed to carry the pig away. The farmer objected, but the car driver insisted on his rights and departed with the carcass. A few miles farther on he was stopped by a constable, who impounded the body and threatened him with proceedings for moving an animal out of an area scheduled as infected under the Foot and Mouth regulations! Nothing more was heard of the matter, but I hazard that someone had a choice joint for his Sunday dinner!

One Way to Change Gear.

A PROPOS the article on gear-changing in a recent issue, a car demonstrator tells me that he had a very humiliating experience a few weeks ago. He had been instructing a customer who had bought his first car, but despite a very thorough explanation of the various operations in gear-changing the pupil made no progress whatever. But suddenly he began to change up and down with a commendable absence of noise, and the instructor somewhat plumed himself that his advice was bearing fruit.

"I said it would be easy if you did as I told you," he remarked as he finally handed over the car. The owner looked a little confused. "I'm afraid

that's what I have not been doing," he replied. "But I've been watching the speedometer, and I've noticed that when the hand is at certain figures the gears go in themselves!"

Out of the mouths of novices——!

Incidentally, the same demonstrator showed me a booklet issued by a famous firm of car manufacturers for the instruction of customers, and in the section devoted to gear-changing there is not a mention of releasing the clutch!

A "Knock-Out."

A CHANCE stop in the vicinity of a party out on a beanfeast a Saturday or two ago revealed to me how little modern education seems to penetrate. As I was making an adjustment, a youth and a girl strolled past. "It's a marvel to me how crows can carry nests up to the top of those trees," said the girl. "They've only got beaks."

Her swain was not helpful. He contemplated the birds for a few minutes and then ventured the opinion that it was a "knock-out." It was somewhat alarming to think that at the next General Election these two would probably vote.

A Parking Hog.

IT might be supposed that where common sense has no habitat in the grey matter of a motor owner, the Safety First booklet handed out with the driving licence and the advice which is repeated with monotonous frequency in the motor

columns of the daily papers would inculcate something like prudence, but there are, apparently, people who are impervious to counsel of any sort.

Take, for instance, the driver of a large saloon car whom I met the other day on the narrow, twisting road between Oxford and Dorchester. This gentleman had calmly pulled up for lunch just behind a sharp bend which is practically blind. What little vision is left on the bend was blocked by the bulk of the saloon, and, as a consequence, anyone overtaking it to pass found himself right in the path of approaching traffic, the drivers of which had their vision equally cut off.

For myself I had to do a quick turn behind the saloon to avoid a touring car, and in my rear a motorbus and a string of cars also had to pull up with considerable shrieking of brakes. The man at the wheel of the saloon must have been well aware of the trouble he was causing to all the other traffic using the road, but he steadily munched on. How I hated him!

A Look-out Astern.

UNTIL three or four years ago I always despised a rear view mirror and never had one fitted to my own cars. In those days there was, of course, far less traffic on the roads than to-day, when I find one feels quite at a loss when driving a car on which no mirror is fitted. The result is that a mirror is now included in the specification of nearly every car, and to save cost the bulk of closed cars and some touring models, instead of having a properly designed optical mirror secured to the off-side screen pillar, are provided with a small rectangle of glass fixed in the centre of the top-screen rail so that one's view of the road astern is obtained through the back window.

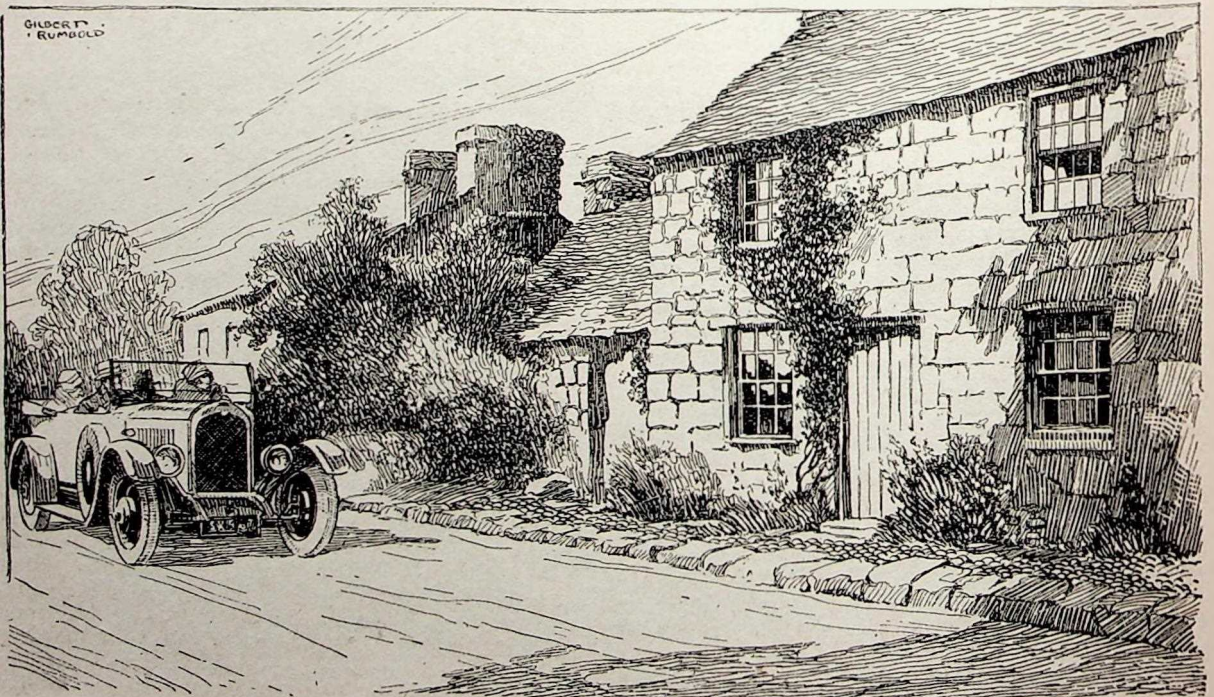
Mirrors of this kind I have found to be far from reliable, especially in cars which have a back window which soon gets dirty or is not large enough to provide a wide range of vision. I saw an accident very narrowly avoided last week-end by a man who placed too much confidence in one of these mirrors and discovered almost too late that, whilst it showed the road directly astern, it gave no clue to the fact that an overtaking car was on his quarter and just about to pass.

Wansford Bridge.

ALONG the whole length of the Great North Road I know of no more picturesque spot than Wansford, a Northamptonshire village with a beautiful old bridge crossing the Nene. On my last run North I was, therefore, very interested to note the progress that is being made with the by-pass which is under construction to avoid interfering with the bridge.

The new section will cut out Wansford very thoroughly, as it starts some distance away on the Stamford side and sweeps via a new bridge well to the south of the village. Probably the next generation of motor users will pass along the Great North Road hardly knowing that the place exists.

In some ways it seems regrettable that a village which has stood on a famous national highway for centuries should suddenly find itself side-tracked in this manner, but the old bridge is such a bottle-neck that traffic conditions made either its demolition or a new road imperative. Lovers of the picturesque will rejoice in the decision that has been made and I fancy that many of us on our journeys north or south will still visit the village to see the charming old-world picture that the bridge presents.



LOYD GEORGE'S
BOYHOOD HOME.

The cottage in Llanystumdwy, Wales, where Mr. Lloyd George spent his young days is still in an excellent state of preservation and is visited by many tourists who travel long distances to see it.

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

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

NORTHERN OFFICES:
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WITHIN THE SCOPE OF THIS JOURNAL.
THAT CAPACITY BEING GENERALLY
RECOGNIZED AND ACCEPTED AS THE
LIMIT FOR A LIGHT CAR ENGINE.

Insuring Cars "Doesn't Pay."

THE views on motor insurance which are held by *The Light Car and Cyclecar* are well known. Even so, however, we do not hesitate to repeat them. First, we are convinced that it is unfair and illogical that a "good risk" should pay the same as a "bad risk"; secondly, we see no reason why a no-claim bonus should be sacrificed when the only claim made has related to a mishap which has been—or could have been—proved beyond all question of doubt to be entirely the fault of the other party who has—or should have—footed the bill. It is the "knock-for-knock" agreement which robs innocent parties to an accident of their no-claim bonus, and it is obviously unfair that they should have to make this sacrifice simply for the convenience of the concerns with which they are insured. The insurance companies obtain an obvious benefit from this agreement, and it is essentially a cause for complaint that they benefit additionally by, in effect, fining a policy-holder when his car is damaged by another vehicle even when he is not on the spot.

It is now reported that motor insurance is not profitable business, and that an all-round increase in premiums or the introduction of a varied scale to take the nature of each "risk" into account are under consideration. We suggest that the insurance companies might go farther and discuss amongst themselves the feasibility of introducing an entirely new scheme under which car owners insured their vehicles under one policy and themselves against third-party claims under another.

Standardize Car Controls.

LAST week a number of letters appeared in our correspondence columns from readers who asked for standardized controls for light cars. Their demands are reasonable and it is hard to see why the trade cannot get together on this all-important matter. The two points of major importance relate to the position of the accelerator pedal relative to the foot brake and the arrangement of the gear-change gate. The latter is important more from the point of view of convenience than of safety, but the relative positions of the brake and accelerator pedal are a different matter. A man who has driven a car with the accelerator to the right of the brake pedal, and

has become accustomed to moving his right foot to the left for braking, may be the cause of a serious accident if he does the same thing when driving a strange car with the accelerator pedal centrally placed. So far as standardizing gear gates is concerned, it is obvious that if this were done it would be a measure that would tend to increase the sale of cars. It is the difficulty of gear changing which deters many people from buying cars, and actually has such

an effect upon the nerves of beginners that some go even to the extreme of giving up motoring altogether before they emerge from the novitiate stage. A standard gear gate would give some measure of relief to beginners; it would eliminate accidents caused by drivers inadvertently reversing when they wish to go ahead, and it would lead to our cars being handled with greater care and consideration when they are driven—for example, after an overhaul—by those who are not familiar with their intricacies.

Golden Eggs.

IN our nursery days we were all familiar with the story of the goose which laid the golden eggs and, in a vague way, we understood its moral. It will be remembered that the owner of the goose, impatient at having only one golden egg a day, killed the bird, expecting to find within it a vast store of golden eggs, which would at once make him a very rich man, but in this he was grievously disappointed. Possibly, when he heard this story as a child, the present Chancellor of the Exchequer appreciated the folly of the goose owner, but now that he has a goose of his own in the shape of the motoring community he is making just the same mistake with the Road Fund eggs.

Last year the golden egg taken from motorists for general purposes was of very considerable value, and this year, when again the Chancellor found himself short of money, his thoughts turned naturally to the goose. As a result another and larger egg was taken from the nest. This pillage, if the modern goose stands firm, should lead to there being an empty nest when Budget time comes round next year. Motorists have for too long been regarded as the goose of the fable by Chancellors of the Exchequer, magistrates and others who have the power to extract the golden eggs. Geese, however, are not immortal.

CYCLECAR COMMENTS.

BREAKING RECORDS WITH A £65 THREE-WHEELER—THE MACHINE AND ITS EQUIPMENT—SECOND-HAND CYCLECARS FOR REBUILDING—A SATISFACTORY CHAIN GREASE.

By SHACKLEPIN.

Mr. J. J. Hall in his 350 c.c. three-wheeler with which he set up new speed records recently.

SEVEN world's records taken with a three-wheeler costing only £65 is a very satisfactory bag for a day on the track. Mr. J. J. Hall is the sportsman who achieved this and his machine was an H.P. fitted for the occasion with a 350 c.c. J.A.P. engine instead of the usual 500 c.c. type. In all other respects the cyclecar was a standard model, even to the gear ratios.

The records taken are in Class II, for three-wheeled cyclecars with passenger. They are subject, of course, to official confirmation, but otherwise they stand as follow:—

5 kilos. ...	52.18 m.p.h.
5 miles ...	51.64 m.p.h.
10 kilos. ...	49.99 m.p.h.
10 miles ...	49.98 m.p.h.
50 kilos. ...	50.35 m.p.h.
50 miles ...	45.55 m.p.h.
1 hour ...	46.73 m.p.h.

The J.A.P. engine used was one of the air-cooled single-cylinder, o.h.v., two-port type fitted with a B. and B. carburettor and an M.L. magneto, and lubricated with Sternal oil. Other accessories included a Sturmev-Archer gearbox, Brampton chains and Palmer 700 mm. by 80 mm. tyres. The weight of the H.P. was 520 lb. and the weight of the crew totalled 320 lb.

Track conditions were not ideal, as there was a rather strong wind blowing, but no trouble of any kind was experienced, and the petrol consumption worked out at 75 m.p.g.

In the course of a chat which I had with Mr. Hall a few days ago, he told me that he felt confident of being able to improve upon his speeds shortly as the engine was overgeared and was running with a reduced compression ratio when he lowered the records. With suitable gear ratios and a higher compression, Mr. Hall suggested that a maximum speed of over 60 m.p.h. should be possible.

H.P. (three-wheelers are sold, at present, with a 3½ h.p. engine, but if such good running can be obtained with a 2½ h.p. unit, I suggest that the makers might think it worth while to consider fitting this type as an alternative. The demand should be brisk.

B24

Looking through the small-advertisement columns of this journal recently, I was particularly struck with the low prices asked for some quite sound makes of cyclecar, and it occurred to me that many amateur cyclecar builders would do far better if they bought one of these and spent their time thoroughly overhauling and rebuilding it.

Further, it occurred to me that, provided there was no difficulty over garage accommodation, it would be a very good plan to buy two identical models, and, choosing the best components from each, to build one sound cyclecar; the remaining parts could be kept for replacements. This plan would not be practical for readers who have to pay 5s. or more a week for garage, because it would mean doubling their garage expenses for several weeks at any rate.

The difficulty might, of course, be overcome by deciding on the best model and immediately dismantling the other; the parts could then be carefully stored until required in a cellar or other suitable place at home.

My idea of buying two cyclecars when only one is required may seem very extravagant, but, bearing in mind the prices asked for the types I have in mind, I do not think there is any real objection on this score. In a recent issue of *The Light Car and Cyclecar*, for instance, a 1920 G.N. was advertised for £9, whilst other similar models were available for £14 or so. Setting aside an additional £5 or £6 for the replacement of parts which were defective in both models, an enthusiast could, therefore, build a really good cyclecar which should stand up to several years' wear for about £30 and he would have a large stock of spare parts on hand as well.

Unless the owner proposed to keep the car for three or four years,

the plan I have outlined would not, I admit, be successful; after all, a 1920 G.N. is a 1920 G.N., no matter what its condition may be. If the owner wished to sell it in a few months' time he would probably find it difficult to secure a customer who would pay the true value of the re-conditioned model.

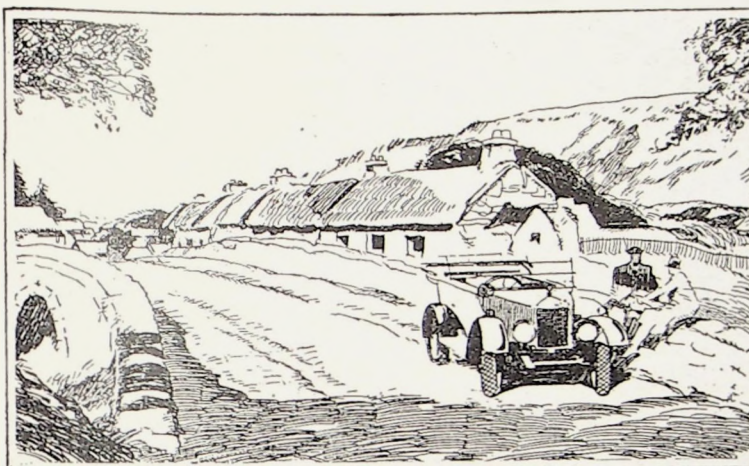
I have recently been using a lubricant known as Greaso for the chains of my Omega with very good results. It does not look at all like ordinary grease, having an almost crystalline or separated appearance. This gave me the impression that the grease would be of very little use, for I imagined that it would quickly be thrown off the chain; in this I was quite wrong.

I treated each of my chains before a 200-mile run recently and examined them at the end of the journey; they appeared to be quite well lubricated and had picked up very little dirt, although I had been over several miles of very dusty roads. Greaso is quite economical to use, for a small quantity smeared on the chain in two or three places with a piece of wood or stiff brush is quite sufficient, the preparation distributing itself automatically.

The makers of Greaso are Pavyers and Bullens, Ltd., 119, Cromer Street, London, W.C.1, and it is supplied in tins of various sizes. The No. 2 size, which contains about 1 lb., sells for 3s., or 3s. 6d. post free.

Several inquiries have reached me during the past few weeks concerning number-plates for three wheelers. These, let me emphasize, must be car size; motorcycle size will not do. Admittedly, a three-wheeler is a motorcycle in law, but we all know that what the law gives with one hand it takes away with the other.

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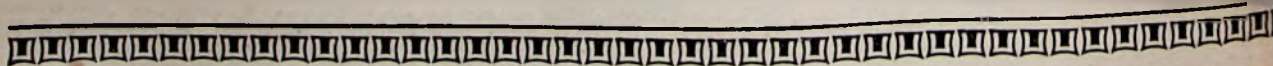
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B27

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HIGH SPEEDS AT LEWES.

GOOD SPORT BEFORE A LARGE CROWD.

IN spite of a rather cold cross-wind a large and enthusiastic crowd of spectators lined the whole length of the course on Race Hill, Lewes, Sussex, last Saturday, when open-to-centre speed trials were held there by the Brighton and Hove Motor Club. There were 15 car competitors, whose entries were divided among the six classes, and some very good times were recorded. Electrical timing was employed, and the course was 501 yards long with a rolling start of 20 yards.

The events started with two motor-cycle classes, and at about three o'clock a class for standard touring cars up to 1,500 c.c. was run off. Only two competitors ran, and R. Chadwick (Lea-Francis) proved the winner, his time being 31 secs.

There then followed the 1,100 c.c. standard sports car class, in which there were six entries, the times all being fairly close. As, perhaps, was to be expected, George Newman put up the fastest time (24½ secs.) in his San Sebastian Salmson.

F. A. Boggis (Aero-Morgan) was ¾ secs. slower, and R. Brookman (Amilcar) was third. J. Ridley (Austin Cup Model) made a clean run, and was well ahead of J. Bingham (Morgan), there being 1½ secs. difference between their times.

In the 1,500 c.c. standard sports car class there were seven entrants, and this time Boggis improved his speed to 22½ secs., beating E. Hillary (Frazer-Nash), and Newman, who was



G. Newman (Salmson) showed magnificent acceleration from the starting line.

third, his time being a second slower than Hillary. A. Linsley's Bugatti and O. Cornish's Frazer-Nash tied for fourth place, both taking 27½ secs., while Bingham's Morgan clocked 34½ secs.

The class for standard sports cars up to 2,000 c.c. contained three entrants, whose cars were all under the 1,500 c.c. mark. Hillary proved to be the winner this time, taking 23 secs., and Linsley and Vos were second and third respectively. What perhaps was the most interesting class of the afternoon was the one for racing cars up to 1,100 c.c., and in this no one was surprised when George Newman's time was put up as 19½ secs., for he was

driving an exceedingly smart supercharged white and red Salmson.

Boggis (Morgan) was easily second, there being a difference of 1½ secs. between his time and that of Lewis Humphries (G.N. Kim 2), who was third. Boggis's time was 21½ secs.

It remained for the last class (for racing cars up to 1,500 c.c.) to produce the fastest time of the day, and this was credited to N. G. Asprey (Frazer-Nash), whose time was the remarkably good figure of 19½ secs., an average of a little over 50 m.p.h. Newman's supercharged Salmson was second, being only ½ sec. slower, but for third place Lewis Humphries's time was very much below that of these two cars.

BEACH RACING AT WALLASEY.

THE annual race meeting of the Liverpool Motor Club, which was held at Harrison Drive, Wallasey, on Saturday last, attracted about 5,000 spectators, although the day was anything but fine.

The first car races began at 3 p.m., which was half an hour later than the scheduled time, as considerable difficulty was experienced in keeping the crowd off the course, although mounted and foot police proved most helpful. In spite of their efforts, however, so soon as the competitors had passed the crowd surged over the course and caused much waste of time before they could be marshalled back to safety.

Capt. Brown-Bowley, clerk of the course, had picked the best mile stretch

of sand available, but unfortunately at Wallasey this does not mean much.

The meeting was characterized largely by the remarkable performance put up by B. H. Davenport in his twin-cylinder 1,493 c.c. Frazer-Nash "Spider." He had entered the car in four events and he won them all. His acceleration was remarkable, and cars having engines of two and three times the capacity of that in the "Spider" were left far behind. His most dangerous rival was D. Higgin (2,996 c.c. Vauxhall), but Davenport could not be caught.

After a number of straight-mile heats had been run off five cars were lined up for a 20-mile race in which there was no engine capacity limit. Of the five starters there were four finishers, as

F. E. Roberts (4,225 c.c. Vauxhall) retired early in the race after having nearly turned over. D. Higgin (Vauxhall) was left at the start, but made up for lost time to such good effect that soon after the first lap he was leading by half a mile, and his spectacular cornering made him the photographers' hope and the schoolboys' friend.

Of the four cars running, only one, Mr. M. Joynton's 1,096 c.c. Amilcar, was a light car, nevertheless, it came in second. It was driven by J. C. Ansonia. Full results of the meeting are given among "Club Items."

Start of the one-mile race for any car up to 3,500 c.c. It was won by B. H. Davenport.



WHERE TO SEE THE ECLIPSE.

AUTHORITATIVE DETAILS OF THE FORTHCOMING TOTAL ECLIPSE OF THE SUN—A UNIQUE OPPORTUNITY FOR TOURISTS.

"WHERE and when shall I go for my tour next summer?" is a question which occupies the thoughts of many motorists to a greater or less extent all the year round. This year it is well worth while to associate the question with the solar eclipse of June 29th, and readers who can include this date in their summer holidays would be well advised to arrange their tours accordingly.

On six occasions only during the last thousand years has a total eclipse of the sun been visible in England. The last occasion was in 1724 and the next will be on August 11th, 1999. Thus the opportunity for seeing the eclipse of this year is one which cannot be lightly passed over with the promise of more attention next time!

Before setting out particulars of this year's eclipse, it will be well to consider briefly the cause of the phenomenon. The moon, being a relatively small body, casts a long conical shadow into space on the side opposite the sun, and it is only when the earth passes into this shadow that a total eclipse of the sun is possible. The distance from the earth to the moon being, roughly, equal to the length of this cone of shadow, it is never possible for much more than the very apex of the cone to reach the earth.

As the earth rotates, this tiny speck of shadow is trailed out into a path a few hundred or, perhaps, thousand miles long. Only to those situated within this narrow path is the total eclipse visible.

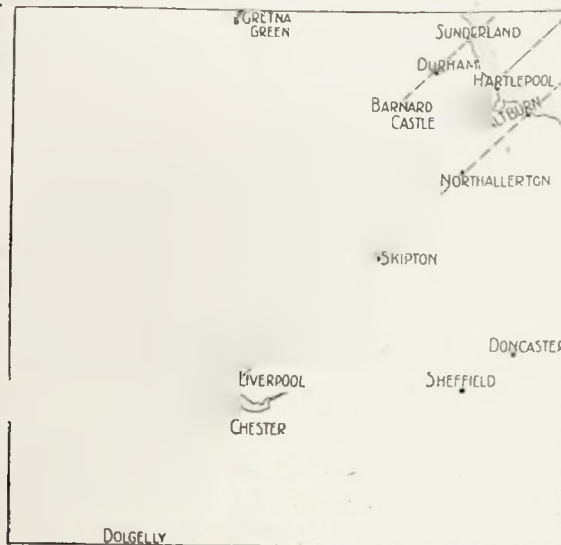
This year the path of the shadow is rather less than 30 miles wide. Its central line enters this country at Criccieth, in North Wales, and follows a straight line to a point very slightly north of Hartlepool, where it passes across the North Sea and enters Norway. The line passes over Snowdon and through Southport, Clitheroe, Giggleswick, Richmond and Darlington. It is within five miles on each side of this line that the best view of the phenomenon will be obtained.

Of Short Duration.

The track of the shadow is shown on the accompanying map, from which it will be seen that it extends north of the central line to a line joining Lancaster and Sunderland, and south to a line joining Liverpool and Salthurn. Motorists will be able to mark the central lines and the limits of totality on their own maps. It may be added that the duration of totality is maximum on the central line, being about 21½ seconds at Criccieth and increasing to about 24½ seconds at Hartlepool.

Unfortunately the time of the eclipse is rather early in the morning, being at 5.25 a.m. G.M.T., or 6.25 a.m. Summer Time. This means that the altitude of the sun will be rather low for observation, being only 12

B30



A map showing the path of the total eclipse; the best view will be obtained at points within five miles of the central line.

degrees. In selecting a suitable point for observation, therefore, it will be necessary to secure an unobstructed view of the horizon to the north-east. The top of a hill or the roof of a high building will obviously form excellent vantage points, although any spot where one can obtain an unobstructed view will be quite satisfactory.

A total eclipse of the sun is one of the most majestic spectacles with which nature provides us. There are two points to which special attention may be paid. As the moment of totality draws near, the shadow of the moon is seen approaching at the alarming speed resulting from the earth's rotation. Even in these latitudes this amounts to approximately 600 m.p.h. To those

who do not realize that this material-looking object (which is visible even in the air) is only shadow, this part of the phenomenon is apt to be very terrifying.

The second point is the view of the sun's corona during the few seconds of totality. The corona frequently exhibits huge tongues of flame shooting out from the surface of the sun. Their presence is not, of course, due to the eclipse, but they are only visible to human eyes when the latter are relieved of the intense glare of the sun's disc.

An Awe-inspiring Sight.

The following is a description of a total eclipse given by the late Sir J. Norman Lockyer, who was a pioneer among leaders of eclipse expeditions:—

"A total eclipse of the sun is at once one of the most awe-inspiring and grandest sights it is possible for man to witness. As the eclipse advances, but before the totality is complete, the sky grows of a dusky, livid or purple, or yellowish-crimson colour, which gradually gets darker and darker, and the colour appears to run over large portions of the sky, irrespective of the clouds. The sea turns lurid red. This singular colouring and darkening of the landscape is quite unlike the approach of night, and gives rise to strange feelings of sadness. The moon's shadow is seen to sweep across the surface of the earth, and is even seen in the air; the rapidity of its motion and its intenseness produce a feeling that something material is sweeping over the earth at a speed perfectly frightful. All the sense of distance is lost, the faces of men assume a livid hue, fowls hasten to roost, flowers close, cocks crow, and the whole animal world seems frightened out of its usual propriety. A few seconds before the commencement of the totality the stars burst out; and surrounding the dark moon on all sides is seen a glorious halo, generally of a silver white light; this is called the corona."

Such a description is surely sufficient to fire the imagination of the most jaded of novelty hunters. In any case the phenomenon is so unique that all who can possibly spare the time should make a point of reaching a district not far from the central line. Since this includes the Welsh mountains, the Yorkshire moors, several manufacturing towns, and a few seaside resorts, there is something to satisfy all tastes, and all that is needed to secure a life-long impression is a cloudless north-east sky, and this it not too much to hope for on a June morning.

It may be worth mentioning for the benefit of those who find it impossible to avail themselves of this opportunity to witness a great spectacle, that the eclipse, although only partial in other parts of the country, will be of sufficient interest to repay a little trouble to see it. In London, for example, the sun's disc will be covered to the extent of 96 per cent. of its surface, and only a very thin crescent of "new moon" appearance will be visible. The uncanny grey twilight only experienced during an eclipse will be associated with the usual fall in temperature and sensation of dampness. Of course, there will be no view of the

corona, or of the oncoming shadow, except within the actual path indicated on the map.

London motorists who cannot arrange their holidays to include June 29th, but who can secure a day's leave on this date, will be able to see the total eclipse if they are prepared to undertake an all-night run. Leaving London at about 6 p.m. on the previous day and making a fast run up the Great North Road, it should be quite easy to reach a vantage point by six o'clock on the following morning. After seeing the eclipse and having breakfast, the homeward run could be commenced, London being reached some time in the evening. This, admittedly, would be a strenuous run, but it would be well worth while.

The following data, calculated for Greenwich, will not differ very much in other parts of the country:—

First contact takes place at	5.26 a.m.	Summer Time.
Maximum	"	at 6.29 a.m.
Last contact	"	at 7.17 a.m.

The first contact will be observed on the right-hand side of the sun at a spot about 60 degrees from the highest point.

A NEW LAFITTE COUPÉ.

THE latest Lafitte model is a most attractive coupé of the "faux cabriolet type" so popular in France at the present time. This car is exceedingly well turned out, and as the price of the coupé model, in France, is the equivalent of £100 only, it has made an immediate appeal to the French public. There are a number of little refinements, such as horizontally sliding windows, a handsome instrument board, and so forth, quite unusual in so cheap a car, and the new model appears to give excellent value for money.

The ordinary open touring Lafitte has also been improved in many ways. A door is now fitted, whilst the body is roomy and comfortable, a practical chummy seat being arranged at the rear. Both closed and open models are finished in imitation leather, the leather being carried over the bonnet. The dummy radiator of the latest model is fitted with close mesh wire netting of a special type, which greatly improves the appearance of the car.

Electric starting, as well as lighting, is now standard on all Lafitte models, as also are balloon tyres. Chassis improvements include very much stouter front springs. The front suspension of the Lafitte is by coil springs working in steel tubes, and the springs are now of much larger diameter and heavier section than those formerly employed.

The rear axle has been made rather more substantial, and Gleason spiral bevel gearing is now used. This, in conjunction with the friction drive, makes the Lafitte transmission exceptionally silent. An open propeller shaft, with a large-diameter Hardy joint at the rear end, is fitted to the latest models, and a pressed steel radius-arm takes the place of the original torque tube. Another improvement consists in making the rear brake drums larger, both in diameter and section.

The fitting of a self-starter on an engine which swings bodily every time that a change of gear is made naturally presented difficulties, but has been accom-

plished successfully by bolting the dynamo and starter together and mounting them on the crankcase, so that they swing with the engine. An oil radiator is another interesting feature of the latest Lafitte models.

A belt from a pulley on the fan shaft is used to drive the dynamo. The carburetter is fitted to the end of the near-side engine pivot, and as the flange is bolted to the pivot bearing the carburetter remains vertical irrespective of the movement of the engine; the pivot itself is hollow and forms an induction pipe.

In France the Lafitte is steadily fighting its way to success by sheer merit, against a good deal of prejudice caused by its very unorthodox layout. The main lines of its very original chassis remain the same as when it was first produced.

A three-cylinder air-cooled radial engine is used, the cylinders having a bore and stroke of 62.5 mm. and 80 mm., giving a total engine capacity of 736 c.c.

The flywheel forms one member of a friction gear combination, whilst the other member consists of a ring of compressed paper bolted up to a steel plate on the forward end of the propeller shaft. The face of the flywheel is convex and that of the friction disc is dished and cut

away at the centre. Gear changing is accomplished by tilting the engine over in its cradle. The horizontal axis on which the engine pivots is situated at the centre of a circle, of which the curved surface of the flywheel forms a part.

Intermediate and low gear positions are obtained by canting the engine over so that the point of frictional contact approaches nearer to the centre of the flywheel, and top gear position is arrived at when the centre line of the crankshaft is in line with that of the propeller shaft. In this position, the gear acts as a simple direct clutch. Reverse is obtained by tilting the engine over until the centre line of the flywheel passes the bottom edge of the friction ring. The tilting is accomplished by means of a centrally placed gear lever.

EVERY light car owner is anxious to keep the running expenses of his car as low as possible, but it is surprising how many drivers neglect to take what one would think were fairly obvious precautions against waste. There are many little ways in which a few shillings a year can be saved, and when totalled up they come to quite a respectable sum. To readers who have to limit their motoring expenses the matter is of no little importance, and it is far better to keep down the annual cost by taking a little care than to do it by cutting down the mileage.

With the present low price of petrol, a five-pound note represents quite a considerable distance—something like 2,000 miles, in many cases including petrol, oil, tyres and incidentals. If, by a little economy, an owner can reduce his annual bill by this amount, it means, therefore, that he can cover an additional 40 miles or so a week without added expense.

It is not suggested that readers should become slaves to their cars—this would simply mar the pleasure obtained by increased use—but there is a host of little jobs which no one who took an average interest in his car would grudge doing; many of these can be de-

LOOK AFTER I

HOW TO OBTAIN THE MAXIMUM PLEASURE
EXPENSE—PREVENTING UNNECESSARY WA

DO'S A

(1) Feel the brake drums occasionally after a run: if they are warm the brakes are binding. (2) The proper way to test tyre pressures. (3) A little attention with an oil-can is well repaid.

veloped into habits which, once cultivated, will become quite automatic.

Turning off the petrol when a car is left for any length of time is a good example. Even with a carburetter in good condition, there is always the chance of grit preventing the needle valve from seating properly. The result is that the carburetter floods slightly and quite an appreciable amount of petrol can be lost during a night.

Another point in connection with petrol wastage is faulty pipe unions; the leak may be only slight, no more in fact than to cause the union to feel moist to the fingers, but in the course of a year the amount of petrol wasted is considerable. The cure, of course, is to tighten up the union nut, but, if this is not effective, the pipe should be disconnected and the cone seating ground in. Ordinary metal polish is excellent for the purpose. A float chamber needle valve which has worn can often be made petrol-tight in the same way.

Another form of waste which is often overlooked is caused by brakes which bind slightly; this results in higher petrol consumption and more rapid wear of the linings. If this trouble is suspected it is a good plan to stop after a few miles' run, during which the brakes have not been used very much, and to place a hand on each of the drums in turn; if any are found to be warm, it is a sure indication that the brakes are not "freeing" properly.

The obvious cure is to adjust them, but if the trouble still persists, the drums should be taken off to

see whether the pull-off springs on the shoes have become weak, in which case they must be renewed. Lack of oil in the joints of the operating gear is another likely cause of binding brakes.

Every owner knows that he should inspect his tyres periodically, removing flints and stopping up the cuts with a sealing compound, but few are as careful to carry out this counsel of perfection as they might be, and tyre bills go up in consequence.

"Test your tyres every Friday" is a slogan which has come to the fore of late, and it should be taken to heart by every reader who studies economy. A few

THE PENCE—

OWNING A LIGHT CAR AT THE MINIMUM
E—AVOIDING THAT "SECONDHAND LOOK."

hood sticks. It is a good plan to avoid folding it so that the creases come in exactly the same position each time. This may not always be possible, but if it is the little extra trouble does not represent time wasted.

Another thing to remember in connection with hoods is that much harm can be done by leaving a wet hood folded. If, on a showery day, the driver decides to fold the hood after a shower, it should be put up immediately on arrival home so otherwise the fabric may rot.

Sidescreens do not call for much attention, but when they are cleaned care should be taken to use a good supply of water so as not to scratch the celluloid. After wiping dry with a chamois leather they may be polished with a suitable liquid metal polish. If a crack appears it should immediately be patched with a strip of celluloid, and sealed with an adhesive.

Any scratches on the paintwork should also receive immediate attention, or the bare metal will become coated with rust, which will gradually find its way under the enamel, causing it to peel. If this starts

DO NOTS.

- (4) Do not pull on the windscreen wiper—lighting—it was not intended for it. (5) Kicking is a very unreliable way of estimating tyre pressure. (6) A sure way of straining door hinges.

extensively, repainting of the whole of the affected part is the only satisfactory cure.

When considering the matter of keeping the body in good condition, it must not be forgotten that a car which presents a spick-and-span appearance will always fetch a much better price in the secondhand market than one which bears obvious signs of neglect. For this reason care in washing and the use of a good polish are advisable.

It is quite a good plan thoroughly to clean the plated parts and then to give them a coat of transparent lacquer. This will save further cleaning for a matter of some months and prevent the possibility of the plating being worn through in places by frequent cleaning.

So far as the mechanical parts of the car are concerned, an owner cannot do better than to let himself be guided by his instruction book. Much of the advice given may seem a little superfluous, but manufacturers have studied the question and have no wish for owners of their cars to waste a lot of time on unnecessary maintenance work.

A point to bear in mind is that vibration invariably results in wear, and for this reason, if for no other, rattles should be cured at the first opportunity. If they are not, wear may take place to such an extent that the only way of silencing them is to fit new parts—obviously an expensive course.

The owner may say to himself, "I can put up with

shillings spent on a good pressure gauge will very soon be saved by increased tyre life. Tyres which are under-inflated are liable to wear very quickly, whilst if the pressure is too great the whole car will have to stand up to unnecessary vibration.

A few minutes spent every week on the bodywork of a car is well worth while. A small tear in the upholstery, for instance, is very likely to become enlarged beyond repair if not attended to immediately. The same applies to the hood. While on the subject of the hood, it should be pointed out that careless folding will often cause the fabric to be cut by the

a few rattles; they are not worth bothering about," but in taking up this attitude he completely overlooks the fact that when the time comes to sell and he takes a prospective buyer out for a trial run, these same rattles will create a bad impression, and reduce the price which he will obtain for the car.

In considering the question of rattles and loose parts, it must not be forgotten that a part which can vibrate is subject to far higher stresses than it would be if it were tight, so that apart entirely from the question of wear there is always the possibility of actual breakage resulting.

Parts which are always liable to set up obtrusive rattles after a car has seen three or four years' service are the yoke ends of the brake rods, the ratchet mechanism of the hand brake, and so forth. It is, of course, merely the natural result of wear, but a few minutes spent with an oilcan when the chassis is being lubricated will do much to put off the time when these noises become inevitable. When an oilcan is at hand do not forget such points as door locks and hinges, throttle and ignition controls, bonnet catches and so forth.

When looking round to see how he can effect small savings an owner must always beware of false economy. Cheap lubricating oil, for instance, may save several shillings in the course of the year, but if expensive repairs become necessary as the result of using inferior oil, the owner will find himself very much out of pocket over the transaction.

Buy It In Bulk.

Quite an appreciable sum can, however, be saved by buying oil in bulk. To take one well-known grade of engine oil as an example, the price per gallon, if a five-gallon drum is bought, works out at 6s. 6d., whereas the price when purchased in quart tins comes to no less than 10s. 4d. per gallon—a somewhat striking difference.

A five-gallon drum admittedly is rather bulky, and to those who have to keep their cars in a public garage the difficulty of storing it sometimes prevents them from buying their oil in large quantities. It is nearly always possible, however, to keep a drum in the cellar or scullery at home, filling up with an old jug when the car is outside the house. Many owners buy their oil loose and thus obtain it practically at bulk prices,

but unless one can be quite sure that the oil is the genuine grade asked for this is a mistaken policy.

Similarly, much money can be wasted on buying cheap accessories, and the fact that the cheapest article may not necessarily be the most economical should be appreciated. A peep into most home-garages will show an assortment of oddments which have been purchased only to be discarded because they are practically useless; a matter of an extra shilling spent on these items might have resulted in lasting satisfaction.

Costly Delays.

Another way in which a good deal of money is wasted is by procrastination. One often hears a motorist say, "I cannot be bothered to get this repaired to-day, I will have it done next week, perhaps." The part in question may in the meantime become seriously worn or damaged, with the result that the repair which would have cost him, say, five shillings previously will now result in a bill for perhaps a pound or more.

Finally, every owner who studies economy should lose no opportunities to learn more about his car; one cannot know too much. A novice will often drive for a considerable distance before he notices a trouble which has been developing for some time, whereas an experienced and knowledgeable driver will discover the fault almost at once. As we have just pointed out, the cost of curing a trouble is often trebled, or even quadrupled, if not taken in hand at once. There is no satisfaction in owning a car which is economical so far as petrol and oil are concerned if it costs a larger sum every year in repairs.

Do not use a quart tin of oil, except as a spare; it works out far cheaper to buy a drum. (Top and bottom right) Results of neglect. A little attention at the outset would have avoided these troubles.

**For your own garage-install a
5 GALLON DRUM
of the correct grade of
SHELL OIL**
it's convenient
and economical

PEOPLE

By buying a 5-gallon drum you pay much less for your Shell Oil—and at the same time ensure the most efficient lubrication.

Shell Motor Oil, blended to be quick-starting, non-wasting and heat-resisting, also produces less carbon.

Exhaustive tests with every well-known brand of motor oil on the market prove conclusively that other motor oils deposit up to 100% more carbon than does Shell Oil.

SHELL

The Anti-Carbon Oil

GOOD AS SHELL PETROL

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.

HERE'S LIFE! Real Life!!

What can equal the joys of a camping week-end in the heart of the countryside!

Up in the morning with the lark to a day of untrammelled pleasure, with the cares of the past week cast lightly from one's shoulders down on the pillow at night with the blissful satisfaction of a well-spent day behind one this is Life Life lived to the full!

And what easier, more convenient, to the owner of a Peugeot? Power and speed in plenty to carry you where fancy wills to set up camp an unfailing reliability that makes breakdowns unheard of and, withal, a roominess that allows you to take with you as much equipment as you reasonably require.

When you are reckoning up the pleasure that a Peugeot can give you, remember also its remarkable economy. Fifty miles to every gallon! Only seven pounds to pay for tax!

Call at our showrooms and inspect the range of models. In addition to the Saloon illustrated, there is a Peugeot Cabriolet with Dicky Seat, including electric starter and Lighting Set, for £165 also.

New 7 h.p. Saloon Type All-Weather with Four-seater Silent Fabric Body.

£165

Tax £7.

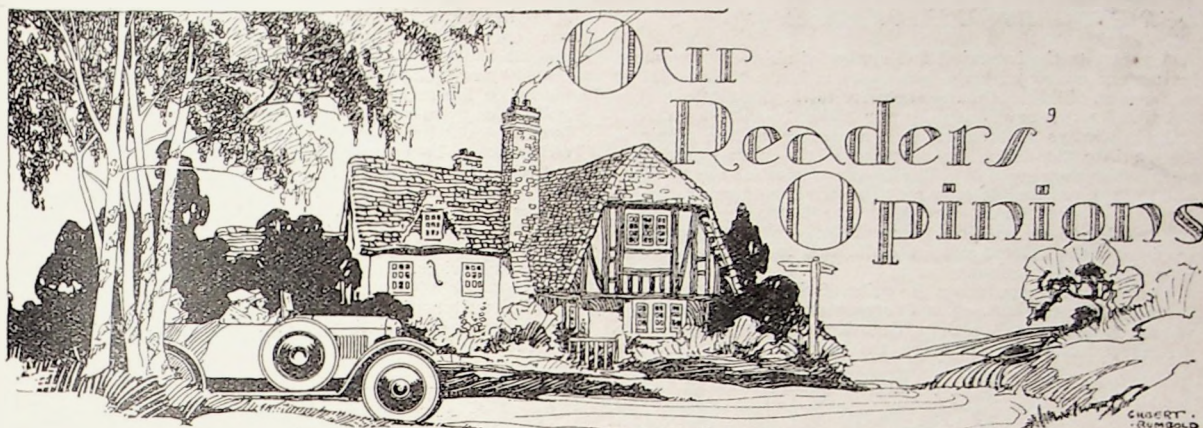
Peugeot
(PRONOUNCE IT PUR-JO)

50 Miles per Gallon. 50 Miles per Hour.

PEUGEOT (ENGLAND) LTD.

78/80, Brompton Rd., London, S.W.3.

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



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

EXTRA-AIR VALVES.

Are They Worth While?—A Test Proposed.

What are Their Drawbacks?

In a recent issue of *The Light Car and Cyclecar* there appeared a very interesting article entitled "Extra-air Valves in Theory and Practice." The writer stated that, although in his opinion extra-air valves are a distinct advantage, yet carburetter manufacturers are almost unanimous in their condemnation of them. We have heard one side of this interesting question, and perhaps some carburetter manufacturers (or anyone else capable) will give us the other side.

Carburetter Makers' Views Wanted.

CURIOUS.

As an Aid to "Tuning."

I have read with interest the article in a recent issue on the subject of "Extra-air Valves in Theory and Practice." There is no doubt that the fitting of an extra-air valve does assist in keeping the engine clean by reason of the fact that when descending hills the valve can be opened and so reduce, if not completely eliminate, the suction of the pistons on each down stroke. This reduces the tendency for lubricating oil to be drawn past the pistons.

Additional Uses.

I would, however, venture to suggest that there are two further advantages, neither of which is mentioned by you. On the one hand, the extra-air inlet is most useful in tuning the carburetter. By opening the extra inlet a fraction, one can tell from the feel of the engine whether the mixture which is being fed from the carburetter is too rich or too weak. If it is too rich, there is immediately a feeling of acceleration. If, on the other hand, it is too weak, directly the air inlet is opened the least little bit there is a marked falling off in speed. The use of the extra-air inlet in this way enables the adjustment of the carburetter to be tested and, if need be, corrected.

The other advantage of the extra-air inlet lies in the ability to introduce extra air into the induction system after starting up from cold. It is well known that when starting up from cold a portion only of the fuel from the carburetter is vaporized. The other portion remains as liquid in the induction pipe and cylinder casting. As the temperature of the engine rises this liquid fuel tends to vaporize, so making the total fuel mixture received by the engine too rich. This is proved by the fact that if, when the engine is warming up, the extra inlet be opened, the revs. increase tremendously; the extra-air inlet provides the extra air necessary to give a correct mixture.

If no extra-air inlet is fitted the mixture conveyed whilst the engine is warming up is too weak at first, and subsequently too rich, and continues to be too rich until the sur-

plus liquid fuel in the induction system be evaporated. Intelligently used, the extra-air inlet conduces to cleanliness of working. I hope I have made my points clear.

J. W. G. BROOKER.

Modern Carburetter Design.

The controversy in your columns concerning the merits or otherwise of atomizers and extra-air valves gives food for reflection. One thing we should like to know is whether the modern automatic carburetter really requires any extra instrument to make it more efficient, and incidentally more expensive. Some 25 years ago a well-known authority described an automatic carburetter as "an instrument which gives an imperfect mixture at all speeds."

To my own knowledge this was substantially true at that time.

In 1927 surely modern carburetters require no accessories, for if they did require any such device the carburetter manufacturers would undoubtedly have incorporated them in their designs. Some of the best brains in the motor world—especially French—have been for years engaged in perfecting carburetters, and the public are well able to judge the conspicuous success they have achieved. Obviously, engine makers, in their own interests, select the carburetter best suited to their engines, so that if extra fittings were really necessary they would have been fitted as standard before delivery. I feel sure that we should all like to have the reasoned opinions of those who design our modern carburetters and to hear what they advise.

C.B.M.-B.

Messrs. Aldam and Co. Reply.

We note with interest the comments of the patentee of the Arc extra-air valve upon our recent advertisement and offer the following details for consideration:—The Mosaire covering the spiral-coil diffuser was patented in 1924. The Arc covering only the combined air inlet and flange in 1922; the perforated ring does not appear in the claims of the patentee because prior claims already existed. Our first patent, No. 22157, covering the easy-starting device, embodied perforations similar to the Arc, but three rows of smaller holes instead of one row, which must be accepted to give better results than a single row of holes. We discarded the perforations in 1924 for the spiral coil covered by our Patent No. 223182, and no perforations, however small, can give the knife-edge sprays of air that pass through the closely wound coil diffuser. Also, the air passes into the induction chamber in a spiral form.

OUR READERS' OPINIONS (contd.).

which assists the incoming fine sprays of air to become more intimately mixed with the gas vapour; hence the success of our device. This method is exclusive to the Mosaire, whereas small holes can be adopted by any maker of extra-air valves.

It is always understood that a greater volume of air is drawn into the induction chamber if the extra-air inlet is open when slowing down, due to the closing of the throttle, and it is unreasonable to expect the driver to operate the air lever so as to synchronize with the throttle. Our semi-automatic, when set, does this without any attention whatever from the driver, and we claim this to be an advantage over the hand-operated type.

Our reason for reducing the price of the hand-operated air inlet to 30s. is because, in our opinion, the semi-automatic device is better, and, although much more costly to produce, we have decided to put it on the market at 35s. We feel

sure that ultimately this type will be preferred, because it cuts out the one and only drawback that can be brought against the use of extra-air devices. The reductions mentioned by us took place several months after the Mosaire was placed on the market, and not before.

We are quite prepared to agree to a test providing this is carried out by an experienced technical engineer, without either party being present, the method of test to be left entirely to the discretion of the engineer, and we will pay half the cost. We suggest as the most suitable person the writer of the article on extra-air devices which appeared recently in *The Light Car and Cyclecar*, who certainly understands and appreciates the various points relating to extra-air devices.

J. W. ALDAM,

ALDAM AND CO.

* *The writer of the article has, of course, the necessary technical qualifications and would be prepared to carry out tests.—ED.

Air v. Water-cooling.

Experience of Both Types in—

I have followed the controversy on air v. water-cooling with interest, but up to now your various correspondents have apparently been comparing totally different cars.

—an Identical Car.

Perhaps my experience with identical cars would be of interest. Three years ago I bought a de luxe model Morgan, fitted with an air-cooled J.A.P. engine, and after running it for six months exchanged it for a water-cooled model, which was exactly the same (weight, gears, and so forth), except that it had a water-cooled J.A.P. engine and a proper radiator. The reason why I did not like the air-cooled model was that to keep it running really sweetly I had to decarbonize it at least every 1,000 miles, and I have found that on hills the engine would "tire" after a time—a criticism which does not apply to the water-cooled type. I, for one, shall never have another air-cooled engine.

PF 6673.

Disadvantages of Air-cooling.

The letters from various supporters of air-cooling leave me unconvinced. The points which your correspondents make in favour of air-cooling are very insignificant, and amount only to reduced complication

and freedom from frost risks. Surely nobody will agree that water-cooling is in itself unreliable. Why your correspondent "Rover Eight" should never have gone out in his water-cooled car "except in fear and trembling" is impossible to understand. Of what was he afraid? That he had no grounds for fear on the score of being let down through some fault in the water-cooling system is shown by the fact that in the R.A.C. census of causes of breakdown the number due to cooling troubles was shown to be so small as not

to be worth quoting. One might even presume that there were no breakdowns due to this at all.

It cannot be denied that air-cooled engines are more expensive, noisier, use more oil and need more frequent decarbonizing than do water-cooled engines, and it is for this reason, as I pointed out in the first instance, that I have no use for them. I notice that a number of correspondents believe that because many aero engines are air-cooled the principle is necessarily good in relation to cars. They do not appreciate, apparently, that air-cooled aero engines need entirely dismantling after every hundred hours' running, and that they have the advantage of a continuous and very efficient draught of cool air during the whole of the time they are at work.

JOWETT.

DISCRIMINATING TASTE.

The owner of this Singer, Mr. M. W. Stranack, of Shanghai, recently tried to obtain a snapshot of three Chinese aeroplanes at a neighbouring aerodrome. A Cantonese soldier would not allow this, but informed Mr. Stranack that he himself had no objection to being photographed, and when this was agreed to, insisted on posing in the car.



Essex Motor Club Six Hours
Endurance Race a triumph for

Wakefield Castrol

Barnato and Pass & Joyce Cups Mr. George Duller, SUNBEAM
Autocar and Henley Cups - Mr. S. C. H. Davis, ALVIS
Essex M.C. Cup - - - Mr. C. Durlacher, DIATTO
Essex M.C. Cup - - - Mr. George Newman, SALMSON

*—the first two home in every class and
12 out of 14 Gold Medals on CASTROL*

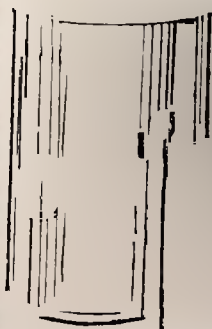
Every Car Race at Brooklands this year has been won upon this famous lubricant. The irreproachable lubricating qualities which dictate the choice of Castrol by those who achieve feats of speed, endurance, and reliability will also enable your engine to give of its best.

Wakefield CASTROL, although an Aristocrat, will mix with other brands of oil, though naturally 100% CASTROL gives best results. For economy order a drum (sent carriage paid to your door) or on the road buy from the Wakefield Branded Cabinets. Our recommended price for a quart of CASTROL "CW" or "AA" is 1/6, and CASTROL "XL" 1/10, so there is not the slightest reason why you should not ensure satisfaction by following the advice of over 200 Leading Motor Manufacturers and insist on—

WAKEFIELD

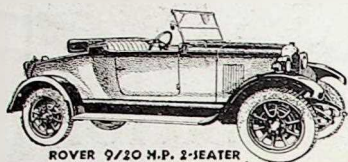
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MOTOR OIL

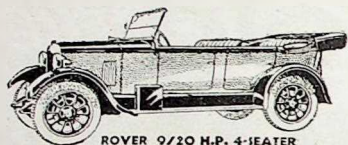


FACILITATE BUSINESS, and ensure prompt attention to your enquiries, by mentioning "The Light Car and Cyclecar" when writing to advertisers. They will appreciate it.

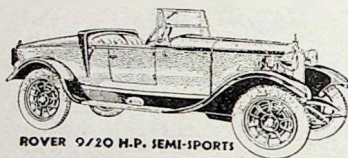
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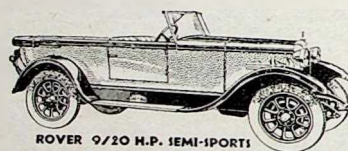
ROVER 9/20 H.P. 2-SEATER



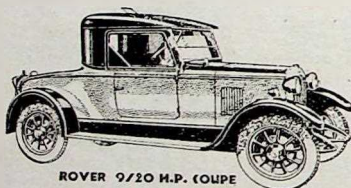
ROVER 9/20 H.P. 4-SEATER



ROVER 9/20 H.P. SEMI-SPORTS



ROVER 9/20 H.P. SEMI-SPORTS



ROVER 9/20 H.P. COUPE

MEBES & MEBES

Ever since the Early Nineties, as the first Light Car Specialists in Gt. Portland Street, we have had a whole-hearted respect for Rover cars. We have supplied so many Rovers to the Man-in-the-Street, members of H.M. Forces and Civil Services and Colonials on leave, that we have a wealth of experience to guide us and convince us that the Rover is as sound as the British Constitution. Perhaps this is why so many Rovers are used by the Nation's men of action, those in high places; those who know intrinsic values use Rover cars. Does it not point to the fact that your next car should be chosen from the Rover range? Our assistance and Service is yours upon request. If you have not tried a Rover car, we will, upon request, arrange matters and discuss the allowance for your present car; arrange convenient purchase terms, and help in every way.

The Rover is All-British. It deserves your interest, and with 34 years' experience to guide us we insist that to purchase a Rover is equivalent to investing in gilt edged stock. Why not see us at once about your next car?

The Original Light Car Specialists—Established in 1893.

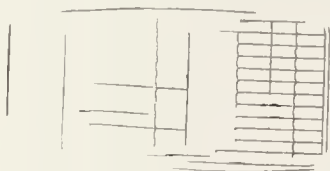
MEBES & MEBES

THE LEADING LONDON MAIN AGENTS
Rover House, 144, Gt. Portland St., LONDON.

Used Rover Car Depot: 154-6, Gt. Portland St. Service Station, Fitzroy Mews.

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

FOR ROOMINESS



ROVER 9/20 H.P. SALOON

Read what "The Light Car and Cyclecar" said about this new 9/20 h.p. Rover Saloon on May 6th:—"So far as external appearance is concerned, the body conforms to all the latest ideas in enclosed coachwork, i.e. the waist line is high and the roof comparatively low, yet there is plenty of head room even for a tall passenger. There is sufficient width in the rear seat to accommodate three normal passengers quite comfortably. . . . A 6 ft. driver can be accommodated at the wheel without feeling cramped in the slightest. . . . The front seat is adjustable over a range of several inches. . . . The four wide doors are as wide as can be expected on a car rated at twice the horse-power of the Rover, yet the body does not look disproportionate in any way. . . . The seats are upholstered in grained leather. . . . Each door has a sliding panel glass window. . . . A single-pane front screen can be swung open by a conveniently placed knob in the centre of the car and slightly above the fascia board. . . . There are two cubby holes in the fascia board; both front doors have pockets, and a blind to the rear light is operated by a cord from the driver's seat. . . . There are also lady's and gentleman's companion sets."

This is absolutely the finest value in Saloons on the market: smart (choice of three colours), superbly finished, wonderfully roomy, and very speedy and reliable.

Full particulars with pleasure on request to the Rover Company, Ltd., 61, New Bond Street, W.1, or Coventry.

9/20 h.p. ROVER MODELS

2-seater touring	£220
4-seater touring	£225
Coupe (detachable head)	£235
Saloon	£250
Semi-Sports, 2-seater ..	£260
Semi-Sports, 4-seater ..	£260

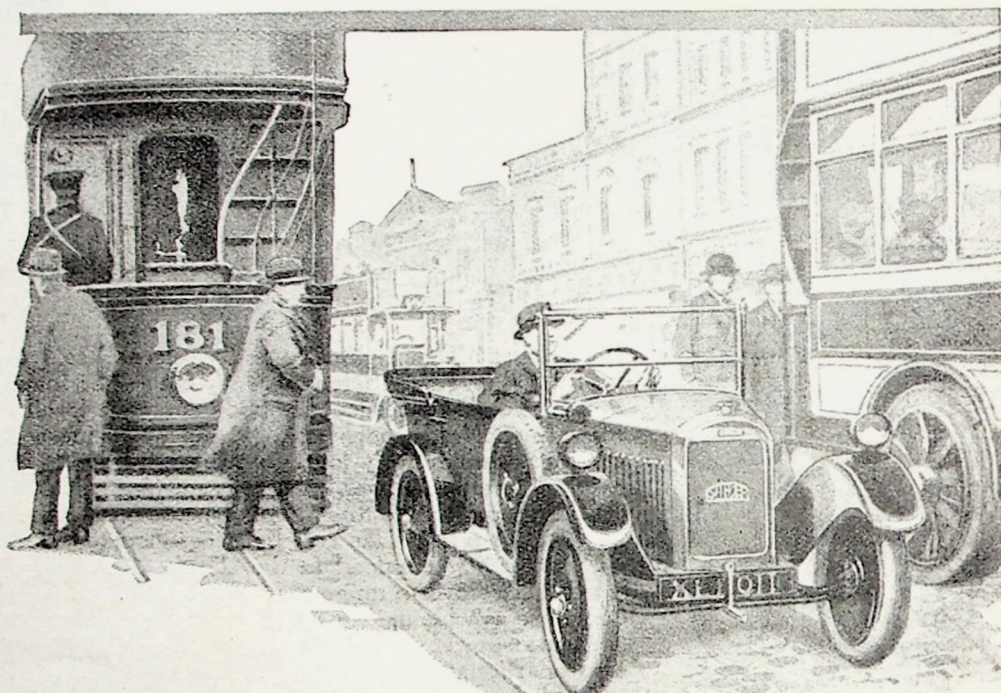
9/20 H.P.

ROVER CARS

"STURDY AS AN OLD SEA ROVER"

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.

CRUSH—OR COMFORT?



EVERY DAY the same old struggle from early morning until late at night—a fight for bus or train or tram. Late at the office—late home again. Cut such troubles out of life's daily round—buy a trouble-free Singer "Junior" and enjoy every moment of life. Catalogues from Singer & Company, Ltd., Coventry. London Showrooms: 202, Gt. Portland Street, W.1.

SINGER

from £148-10-0

H.P.

OUR READERS' OPINIONS (contd.).

7-12 h.p. Peugeot Owners' Experiences.

13,000 Miles with a Cabriolet.

My 7-12 h.p. cabriolet Peugeot, delivered on March 31st, 1926, has now covered 13,300 miles, having been used daily in the City as well as for evening and week-end runs and holiday tours of the Lake District and Devonshire; it has given every satisfaction, the sum total of road troubles amounting to three punctures and a broken fan belt.

The average petrol consumption for 12,221 miles was 39.4 m.p.g., and the oil consumption 1,700 m.p.g. (including all wastage and emptying the sump). On the level the maximum speed is 43 m.p.h. and hill-climbing is all that can be expected of a car with a power-weight ratio of $\frac{1}{2}$ h.p. per cwt. Braking and steering are excellent and the all-weather equipment is the last word in comfort and convenience. The original tyres are still in use and (if one new cover is bought) should give another 12,000 miles at least. The engine was decarbonized after about 7,000 miles and was dismantled by myself and thoroughly decarbonized and tuned at 12,221 miles. The running cost, including my A.A. subscription, etc., and about 16 spent on extra accessories, equals 1.44d. per mile. The car's best feature, however, is its reliability, and it now runs better than when new.

183, Westminster Bridge Road, J. BLEMENTHAL.
London, S.E.1.

Praises the Suspension System.

The first outstanding impression on taking delivery of my 7-12 h.p. Peugeot coupé in May, 1926, was the remarkable comfort given by the suspension system, even over really rough roads, a feature, however, usually found in vehicles designed for use on French roads. Clutch, foot and hand brakes are smooth and effective, whilst the absence of a differential does not appear to cause undue wear of tyres, which, after 6,000 miles, still show plenty of tread.

The power unit, although not perhaps so silent as some might deem desirable, is well up to its work, the speeds in gears being: top 45 m.p.h., second 25 m.p.h., and bottom 12 m.p.h. The petrol consumption averages 48 m.p.g. and the oil consumption is almost negligible.

The central quadrant gear change is not difficult once the "feel" has been acquired, and provided double-declutch downward changes are made sufficiently early, good climbs are possible. In my opinion the wing-mounted head-cum-side lamps could well be replaced by the more conventional five-lamp system, whilst an ammeter in the dynamo circuit gives a sense of security not afforded by the standard "on charge" indicator. The fan-assisted siphon cooling is quite efficient, and, for winter work, a portion of the radiator requires blanking off, as the engine is one of those which appear to deliver most power at fairly high temperatures.

38, Auckland Road, H. ANDERSON-STUBBS.
Ilford, Essex.

"Excellent Value."

I bought an all-weather 7-12 h.p. Peugeot in July, 1925, the engine and chassis being the same as on the present cabriolet model. The car has nearly 8,000 miles to its credit and tours in it have included North Wales, Cornwall and Devon, where the Dartmoor hills and those of the North coast road were tackled. During these tours the brakes were well tried out and found sufficiently powerful to hold the car on ordinary hills without the assistance of the lower gears.

For such a small horse-power the car is reasonably speedy, 40-50 m.p.h. being obtainable on the level with two up. Its best touring speed is 30 m.p.h., allowing an overall average of 20 m.p.h. on long runs. The fuel consumption (National Benzole mixture) is 50-55 m.p.g., whilst the oil consumption is about 1,500 m.p.g. (I use Mobiloil "B.B." in summer and "A" in winter). The car is always easy to start on the self-starter.

The original Michelin Comfort tyres still have plenty of

life in them and the lack of a differential has caused no abnormal wear on either back tyre. The plugs which were originally fitted burnt away very quickly, so a set of K.L.G. H.S.1 replaced them and are still going strong after 7,500 miles.

The steering is steady and the car holds the road at any speed and on any surface. In fact, reliability, comfort and stout construction are the keynotes of this little car, and the average owner-driver who wants to be able to get anywhere at any time at a moderate speed, but whose purse is light, will find the 7 h.p. Peugeot excellent value for the outlay and economical in running costs. P. V. FEARON.

141, Park Road, Loughborough,
Leics.

"Poor Man's Car with Rich Man's Comfort."

I took delivery of a 1926 7-12 h.p. four-seater Peugeot in April, 1926, and have no hesitation in saying that it has given every satisfaction. Up to the present I have done about 8,000 miles, a great amount of this on business. I have not experienced the slightest trouble on the road and the car has always run very sweetly.

The average petrol consumption is: in town, 38-40 m.p.g.; long runs, about 45 m.p.g. Oil consumption works out at 1,500 m.p.g.

The car is fitted with Michelin balloon tyres, which, after 8,000 miles, show very little sign of wear and should easily last another 8,000. The steering is very easy, the springing is good, and the car is a good hill-climber if proper use is made of the gears. I find that the best average speed on the road is from 30-35 m.p.h., and one can continue at this pace indefinitely, even with four up.

It is a very reliable car, which does great credit to the makers, and with reasonable care should last a number of years. The upkeep is very little, tax being £7 per annum, whilst insurance is about £9 (all in), so it is essentially a poor man's car with almost a rich man's comfort. Needless to say, I have not the slightest connection with the makers, but just give my unvarnished experience.

In conclusion, I wish every success to *The Light Car and Cyclecar*, a veritable mine of information to all light car owners. TOM E. PARKES.

5, Boston Road, Horfield, Bristol.

On West Country Hills.

Up to the time of writing my four-seater 1926 Peugeot has covered 6,500 miles. It will do 50 m.p.g. with a normal working load of four adults, but in winter this figure drops slightly, due, no doubt, to the fact that the engine becomes overcooled. During a tour in Somerset, Devon and Cornwall last summer Lynmouth Hill was encountered and ascended with great success, as were, indeed, many other formidable ascents, often with four up. The pulling powers of the car are remarkable, and 48 m.p.h. has been attained with a full load, while it will hold a steady 40 m.p.h., but 30 m.p.h. is its most comfortable touring speed. So far as springing is concerned, the car holds the road like a leech.

The all-weather equipment has proved quite satisfactory, apart from rain splashing in between the top and bottom panes of the windscreen; this was overcome by fitting wind-shield rubber, as supplied by Messrs. Dunhills, Ltd. The lighting is very satisfactory, 30 m.p.h. being quite a safe speed at night.

The seating accommodation is very good indeed, journeys of 200 miles having been covered in one day with less fatigue to the woman passenger and driver than would have resulted from a railway journey of equal length—a good tribute to the steering and suspension, as some of the route was over notoriously rough West Country roads, while some very difficult bends had to be negotiated. On several occasions other (unknown) Peugeot owners have hailed me, showing thereby how keen they also are on this excellent little car.

18, Rosebery Road, H. K. COMPTON.
Culmsford.

Light Car
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OUR READERS' OPINIONS (contd.).

Paraffin or Petrol Suitable.

With reference to the paragraph in last week's issue of your journal under the heading "Costly Paraffin," it may be interesting to your contributor to know that the Stanley steam car uses either petrol or paraffin with equal facility, so that the owner is not confined to either fuel, but can use that which he can obtain most easily and at the lowest price. **BRAMCO (1920), LTD.**

100-mile Sand Race at Southport.

May I thank your correspondents for the help they have given the Southport Motor Club with suggestions as to the conduct of the above race? A large number of gentlemen have written to me direct on the subject and their views have all had a hearing in committee, with the result that we have decided definitely to hold this event on June 4th. I have been criticised for asking advice as to how a sand race should be run, the contention of these critics being that if the Southport Club do not know how to do it—who does? Your readers, in their replies, have amply proved that clever as my committee are, they have lots to learn—in fact, we have a day and night service for the reception of ideas to brighten the sport!

T. HARVEY KELLY,
Chairman, Southport Motor Club.

"The Light Car & Cyclecar" PHOTOGRAPHS

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The School of Experience.

As an owner-driver who does most of the running repairs and adjustments to his car I was particularly interested in your article, "The Log of an Ordinary Owner." I also have followed the makers' instruction books and have profited by being a regular reader of *The Light Car and Cyclecar* for some years. One or two points I have found out by experience that are not unusually emphasized.

The first is the necessity, when replacing the cylinder head after decarbonizing, of seeing that the metal surfaces which are to be in contact with the gasket and the gasket itself are scrupulously clean. The smallest particle of grit will make a permanent indentation on the gasket and pave the way for leaks. I usually wash my hands free from grit before this operation and then clean the surfaces with petrol and a clean rag, smearing each side of the gasket with clean graphite grease before replacing it.

My second discovery was that excessive force must not be used in tightening nuts and studs, particularly studs. I sheared off two of the studs holding the sump in place, necessitating the removal of my car to a garage to have the broken ends drilled out—a lengthy and difficult business. Also, although not of hefty physique, I have hopelessly bent a tommy-bar, "spread" two box-spanners and stripped the threads of three nuts in an over-zealous attempt to get the last millimetre of movement out of the cylinder-head nuts.

When superficially overhauling the dynamo, as recom-

mended in many instruction books, I found that care must be taken, when holding back the little spring arms to remove the brushes, that the arms do not slip out of one's fingers, strike the brushes a sharp blow and most probably smash them to pieces.

Lastly, great care must be taken in tightening up nuts securing aluminium induction pipes or cast-iron exhaust manifolds. These castings are easily fractured if the nuts are tightened unevenly or one is tightened up hard before the others are touched.

Perhaps some others of your readers will allow us to profit by their mistakes. **NORMAN H. SMITH.**

Standardization of Controls.

The danger of the present-day variations of control layout was pointed out by me in your journal in December 1924 and January 1925, when I suggested a method of control by two pedals only. This arrangement, which was described and illustrated in detail in your issue of July 17th, 1925, has been in use upon my car

Two Pedals Only.

up to the present time and has never given the slightest trouble.

If standardization is to be accomplished I venture to suggest that a scheme of this kind would be far better than either of the arrangements now in use, for it cuts out any possibility of the novice pressing the wrong pedal and at the same time overcomes the difficulty recently ventilated by your contributor "Focus" of having "two jobs for one foot." Apparently nothing but a definite demand by motorists will cause manufacturers to consider these points, so it has now been decided that the device shall be put on my car as an accessory. **A.M.I.E.E.**

CONDENSED CORRESPONDENCE.

Mr. J. Rodger Brown (Chelmsford) writes to ask if any readers have covered 500 miles in a day in an ordinary touring car; he feels sure that he could do it himself in his 1924 de luxe model Alvis.

Mr. W. E. Maffey, 101, Tower Gardens Road, Tottenham, N.17, writes to say that he has had a set of dust caps, which cover the whole visible parts of the tyre valves, fitted to his 1927 Austin Seven, and finds the appearance of the car much improved. The caps and nuts were made by a friend of his, who would be prepared to supply other readers if desired, the price for a set of five working out at 5s. Readers interested should communicate direct with Mr. Maffey.

Mr. A. W. Ellis (Sidmouth) writes to express his appreciation of the generous treatment he has received from the Theale Motor Works, Theale, Berks. He owns an old Pilot car, fitted with friction drive, and recently sent the friction disc to the above concern for a new cork lining to be fitted. In reply they informed him that the lining was by no means worn out and only needed truing up. This they did, the charge being 3s. 6d., whereas the cost of relining would have been 35s. To quote our correspondent: "This attitude to a client who had never been to them before is most praiseworthy."

INFORMATION WANTED.

STANDARD.—The opportunity to buy or borrow an instruction book for the 1923 9.5 h.p. model would oblige.—**P. G. Edwards, 61, Whitbread Road, Brockley, London, S.E.4.**

CASTLE THREE.—Any reader who is willing to lend or sell an instruction book for the 1921 model is asked to communicate with F. Guy, the Black Lion Welding and Motor Works, 24, St. Peter's Grove, Hammersmith, London, W.6.

JOWETT.—Owners' experiences of the full four-seater model, particularly with regard to reliability, economy and power and speed with a full load, would be much appreciated.—**T. Varley, "Hazeldene," Bishop's Road, Whitechurch, Glam.**

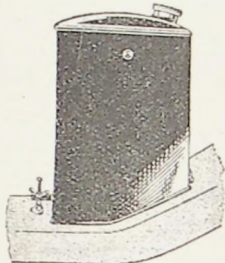
FOUND.

FOUND.—A hood cover, near Chester, on Sunday, May 8th. The owner should apply to W. Wilkinson, 31, Queen Street, Cheetham Hill, Manchester.

FOUND.—A suede cushion dropped from an Austin Seven in Streetly, Birmingham, on Sunday, May 8th. The owner should communicate with A. Scragg, 262, Slade Road, Edington, Birmingham.

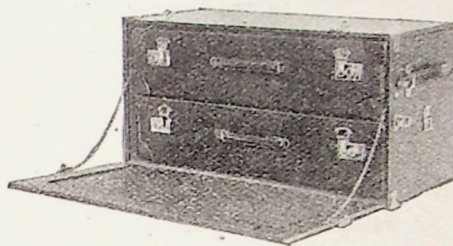
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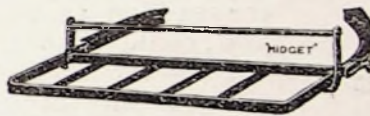
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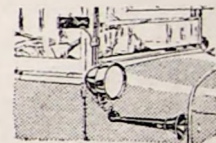
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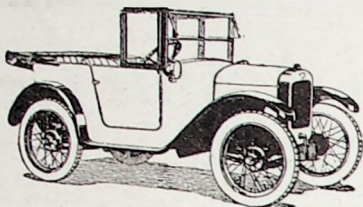
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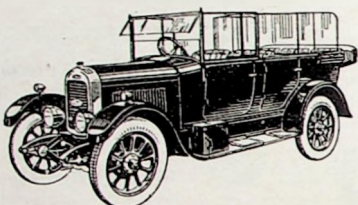
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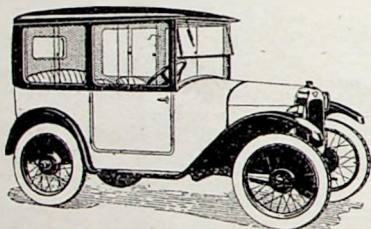
Austin Seven £145



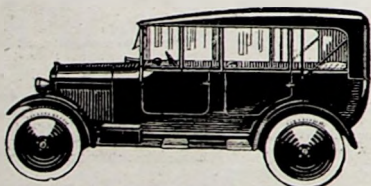
Citroen, 11.4 h.p. Saloon, £190



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Austin Seven Saloon .. £165



Singer Junior .. £148/10

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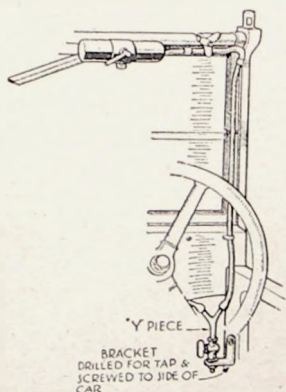
MENTION of "The Light Car and Cyclecar" when corresponding with advertisers assists the cause of economical motoring.



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

For Entering the Garage.

When entering a small garage, particularly at night, it is sometimes difficult to prevent the front wings scraping along the wall on one side or the other. This possibility may be eliminated by making a small cement, or even wooden, beading along the edges of the floor, tapering at the front ends. As the car is driven in, the wheels touch the tapered part of the beading and are deflected away from the wall into the straight and the wings remain undamaged. The width of the beading depends upon the amount the wings overlap the track of the car.



Showing how an extra-air valve can be arranged to work in conjunction with a windscreen wiper.

A Simple Extra-air Valve.

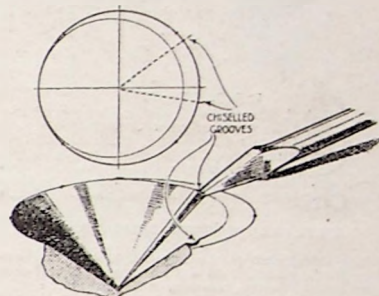
An easily made extra-air valve can be fitted to any car which is equipped with a suction-operated windscreen wiper. It is necessary only to cut the tubing where it comes inside the car near the instrument board and to insert a Y or T-piece such as is used for acetylene lighting, and lead from the "tail" or branch another short piece of tubing connected to an ordinary gas tap having a plain nozzle to take the tubing. The tap nozzle should be secured to the fascia board. The opening of this tap, when coasting down hills, will result in a considerable saving in petrol and, of course, it can be adjusted to control the richness of the mixture supplied to the engine. The tap should be closed when the screen wiper is needed, but some wipers are not affected in their efficiency if it is set half open.

Drilling True Holes.

Often when it is necessary to drill a hole in an exact position difficulty is experienced owing to the drill "running out," but by adopting the method about to be described amateur mechanics will find no trouble in drilling true holes. First, the exact position of the hole must be marked out and centre-punched, after which the full diameter of the required hole is scribed with a pair of dividers. Very light centre-punch marks are now made on this circle—about eight, equally spaced, will be enough.

Drilling can now begin, but after a small amount of metal has been removed the countersink made by the drill should be examined to see if it is concentric with the scribed and centre-dotted circle. If it shows signs of "running out" it can be corrected by making a groove with a fine round-nosed chisel down that side of the countersink which is farthest away from the circle. A glance at the accompanying illustration will make this operation clear. The groove will have the effect of causing the drill to run a little to that side, thus correcting the error.

Sometimes two grooves, spaced a little apart, may be necessary, but it must be remembered that holes can be corrected only when they are in the countersunk stage. So soon as the parallel part of the drill enters the metal it is too late to make corrections.



Grooves cut down the countersink made by a drill will "draw" the hole if it has run out of centre.

Mounting a Vice.

The majority of jobs undertaken by an owner-driver make a vice almost indispensable, and one large enough to meet the requirements of most amateur mechanics can be obtained, either new or second-hand, from any tool or machinery dealer for a sum ranging from 10s. to £1.

Very few people seem to have any idea of the correct height at which a vice should be mounted. Actually the top of the jaws should be in line with the forearm when the latter is raised horizontally, the upper arm remaining vertical at the side of the body. At this height sawing and filing can be done without undue fatigue, and the work will be executed more accurately.



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.F.H. (Somers Town).—The correct inflation pressures for the tyres of your Singer Junior are 21 lb. front and 27 lb. rear.

W.M.B. (Dublin).—As a general rule the angle of a valve face is 45 degrees. So far as we are aware there are no modern engines fitted with flat-faced valves.

K.S.P. (Brixton).—Certainly the cylinders of your Clyno can be decarbonized with oxygen. The process is perfectly satisfactory, and no doubt the repairer who suggested it to you is experienced in operating it.

J.T.C. (Ongar).—Aluminium can be softened by heating it until a piece of yellow soap rubbed on its surface turns brown. When cool it will be quite soft.

A.A.E. (Stirling).—To find approximate horse-power by the R.A.C. formula multiply the square of the cylinder bore in inches by the number of cylinders and divide by 2.5. When the bore is given in millimetres divide by 1,613.

H.H. (Shanklin).—The engine of the 1914 Humberette you have bought has a bore and stroke of 84 mm. and 90 mm. respectively, giving a capacity of 997 c.c. The R.A.C. rating is 8.7 h.p., therefore the tax will be £9 per annum.

L.C.T. (Watford).—As you find you need an unusually large auxiliary jet to get reasonably slow running it is almost certain that there is an air-leak in the induction system. You should pay attention to the manifold joints and examine the inlet valve stems for wear.

CLUB ITEMS

Reports and Announcements of Sporting and Social Events.

R.A.O. PERMITS.

The R.A.C. has issued the following permits:—
Open: May 28th, Blackpool Corporation's race meeting. Closed: May 22nd, Rochdale and D. M.C., reliability trial; May 28th, Bradford and D. M.C., break hill-climb; July 2nd and 3rd, Sunbeam M.C.C., reliability trial; July 6th, Essex County and Southend-on-Sea A.C.'s general efficiency trial.

LAYSTALL SOCIAL CLUB SPORTS MEETING.

The social club of the Laysall Motor Engineering Works, Ltd., held a well-organized and very successful sports meeting at the Herne Hill track on Saturday, May 14th. There was a large number of events open to Laysall employees of both sexes and to visitors, and a very encouraging number of entries was received. Probably the most popular events of the meeting were the cycle races.

CARSHALTON M.C.C.

We have received a copy of the prospectus of the Carshalton Motor Club's Walsley-Carshalton 24-hour reliability trial, to be held on May 21st and 22nd. The event is open to cars and three-wheelers in the South-Eastern Centre A.C.U., but the R.A.C. permit is closed. The start will be from the Greyhound Hotel, Carshalton, at 12 p.m. A strictly limited number of late entries will be accepted to within one hour of the start, and such entrants will be allowed to start in the class of their own choice. Competitors, the late entry fee being 10s. per single entry and 10s. per team. The awards include the Beart and Co. Cup for the best performance in the three-wheeler class, and the Ward Cup for the best amateur performance irrespective of class. For the best aggregate team performance there will be the President's Challenge Trophy and a replica. There will be silver cups for competitors retaining 100 per cent. marks, silver medals for 90 per cent. marks, and bronze medals for 80 per cent. marks.

MIDDLESEX COUNTY A.C.

An attractive and interesting programme of events has been arranged for Saturday, May 21st, at the Bracknell track. The proceedings commence with a speed-judging competition at 2 p.m. Entrants in this event will have the opportunity of judging their rate of progress at high speed with speedometers and watches covered. This will be followed by a short handicap race (open), a starting and stopping race, and a long handicap race (50 miles). The afternoon will conclude with a hill-climbing test. A large number of spectators are invited for all these events, and entrants in the open races include such well-known competitors as Dr. J. D. Benjafield, the Hon. Victor and Mrs. Bruce, E. Burt, A. Bovier, Capt. Malcolm Campbell and Mrs. Campbell, J. C. Douglas, J. Dunfee, Basil and G. E. T. Eyston, G. Fairrie, Capt. A. G. Miller, Ian MacDonald, George Newman, R. F. Oats, G. W. Olive, L. C. Rawlinson, R. De Reuter, W. Scott, Mrs. Scott, H. E. Tatlow and others.

SHACKERSTONE SPEED TRIALS

A very successful meeting was organized last Saturday at Shackerstone by the Sutton Coldfield and North Birmingham Aero Club. At Coventry Aero M.C. jointly. Competitors were given 10 yards flying start and times were taken over a distance of 800 yards. There were five classes, and the results were as follow:-
Cars under 750 c.c.: J. D. Barnes (Austin), 31 4-5 secs. **Cars under 1,100 c.c.:** H. C. Lones (Morgan), 27 1-5 secs. **Cars under 1,500 c.c.:** F. B. Taylor (Bugatti), 29 4-5 secs. **Cars (unlimited):** 1, H. C. Lones (1,096 c.c. Morgan), 27 1-5 secs.; 2, F. B. Taylor (1,496 c.c. Bugatti), 29 4-5 secs. **Fastest novice,** C. Nicholson (1,996 c.c. Bugatti), 35 3-5 secs. **Racing Cars:** If C. Nicholson (1,996 c.c. Bugatti), 26 4-5 secs. **Three-wheeled Passenger M.C. machines (unlimited):** H. C. Lones (Morgan), 26 4-5 secs.

WALLASEY RACES RESULTS.

One Mile, Any Car.—Unlimited Expert: 1, B. H. Davenport (Frazer-Nash); 2, E. L. F. Mucklow (Vauxhall); 3, C. Stephens (Sunbeam). **Unlimited General:** 1, D. H. Igglin (Vauxhall); 2, G. L. Jones (Bugatti); 3, M. Joynson (Amilcar). **3,500 c.c. Expert:** 1, B. H. Davenport (Frazer-Nash); 2, D. H. Igglin (Vauxhall); 3, M. Joynson (Amilcar). **3,500 c.c. General:** 1, A. J. Barnaby (Vauxhall); 2, G. L. Jones (Bugatti); 3, M. Joynson (Amilcar). **5,000 c.c. Expert:** 1, B. H. Davenport (Frazer-Nash); 2, E. L. F. Mucklow (Frazer-Nash-G.N.); 3, M. Joynson (Amilcar). **2,000 c.c. General:** 1, G. L. Jones (Bugatti); 2, A. K. Norris (Amilcar); 3, C. Stephens (Sunbeam). **1,500 c.c. Expert:** 1, B. H. Davenport (Frazer-Nash); 2, E. L. F. Mucklow (Frazer-Nash-G.N.); 3, M. Joynson (Amilcar). **1,500 c.c. General:** 1, G. L. Jones (Bugatti); 2, A. K. Norris (Amilcar); 3, C. Stephens (Sunbeam). **1,100 c.c. Expert:** 1, T. T. Ansonia (Amilcar).

20 Miles Any Car.—Unlimited: 1, D. Higgin (Vauxhall); 2, M. Joynson (Amilcar); 3, C. Stephens (Sunbeam). **3,500 c.c.:** 1, D. Higgin (Vauxhall); 2, M. Joynson (Amilcar); 3, C. Stephens (Sunbeam). **2,000 c.c.:** 1, M. Joynson (Amilcar); 2, C. Stephens (Sunbeam); 3, D. Gelderman (Ansaldo). **1,500 c.c.:** 1, M. Joynson (Amilcar).

FORTHCOMING EVENTS

May 21.

Middlesex County A.C. Brooklands
Meeting.
Liverpool M.C. Parbold Road Races.
Kent and Sussex L.C.C. Reliability
Trial.
Cumberland County M.C.C. Alan
Trophy Trial.
Leeds M.C. Post Hill climb.
Carshalton M.C.C. Carshalton-Mal-
vern Trial.

May 22.

Kent M.C. Trial.
Morgan Club. Mystery Event.
Oxford M.C. Social Run.
Wood Green and D. M.C. Run to
Midhurst.
Rochdale and D. M.C. Reliability
Trial.

May 24.

Archery M.C. Trial. Open-to-Centre 24-hour

May 28.

Blackpool Open Speed Trials.
 Surbiton M.C. Maude's Team Trial.
 Huddersfield and D. M.S.C. Paper-
 chase.
 Brighton and Hove M.C. Treasure
 Hunt.
 Sheffield M.C. Gymkhana.
 Leicester and D. M.C. Night Trial
 Start's.
 Riley Club Rally at Deepdene, Dorking.
 Bradford and D. M.C. Freak Hill-
 climb.

May 29.

Middlesbrough and D. M.C. Trial.
Southern Jowett L.C.C. One-day Trial.
Hove M.C. Sporting Trial.
Morgan Club. Run to Wadesmill, Herts.
Leeds M.C. "100" Cup Trial.

May 30.

Indianapolis Grand Prix.

June 2.

Sunbeam M.C.C. Reliability Trial.

June 3.

**M.C.C.'s London-Edinburgh Run Starts.
Sunbeam M.C.C. Trial Finishes.**

June 4.

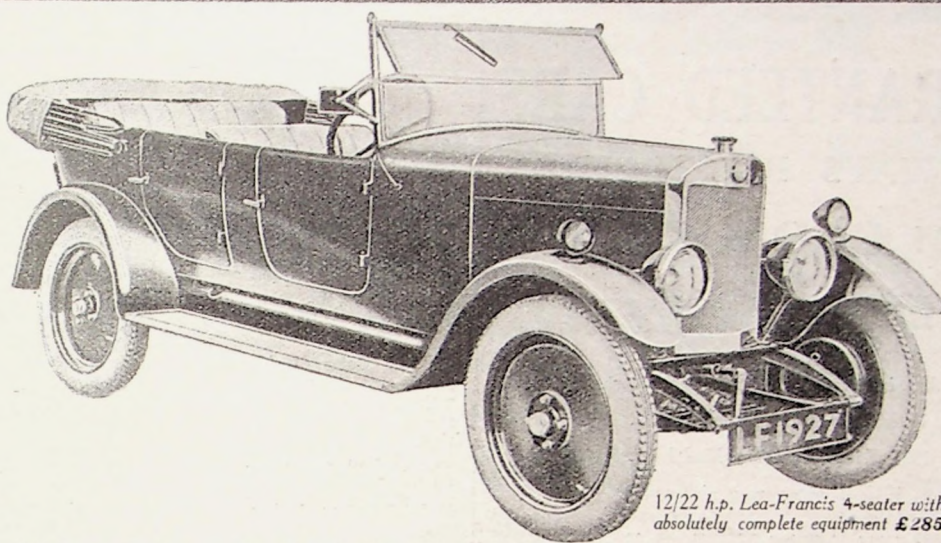
Southport M.C. Open Race Meeting.
Bristol M.C. and L.C.C. Gymkhana.
North Manchester M.C. Half-day Trial.
West of England M.C. Trial.

The speed events at Wallasey (above) and Lewes (left), provided excellent sport.

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

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

On Saturday, May 14th, this club held their annual Sidmouth 12-hours' trial. A good entry was received, and the first man left Colledge Green, Bristol, at 8.30 a.m. The route was chiefly over main roads, via Taunton and Honiton, and, as usual, the three-hour lunch control at business, for the pleasure time for those who Sidmouth allowed sufficient time for those who so desired to take a day in the sea. The return journey lay through some charming scenery in Devon and Somerset, the tea control being at Honiton. Following the club's usual practice, secret checks were eschewed, but checks were taken at one or two places mentioned on the route card. Following the official results—First-class Awards: H. Clegg (Austin Seven) and W. H. Goodenough (Bean). They received silver cups.



12/22 h.p. Lea-Francis 4-seater with absolutely complete equipment £285



Notes and Diversions of a Lea-Francis Owner.

A Car fails of her ideal purpose if one does not grow to love her as a rider loves his horse. She must have that quality which makes one think of her as a living thing. She must be friendly, reliable, responsive; not a cold piece of machinery. It is the wizardry of design that makes the Lea-Francis like that. Her reliability has been established by a series of trials so long that it bores me to read about them—and I don't need to, for I know she is an engineer's job and I don't have to worry.

But the vitality's the thing. The Lea-Francis is like an Arab mount; seems to know where you are going and what you want to do—she doesn't need spurring. Just a touch on the accelerator and she leaps ahead, glad to do your bidding. Of course she has all the gadgets that make the little pleasures of driving, but they are like manicuring; you would miss the little refinements if they were not there. But the engine is the heart of her, and that beats to do you service. You get fond of her and are very faithful to her.

You have only to ask for an illustrated Catalogue—a rather jolly book—and you get it by return.



10 h.p. Models
from £210

12 h.p. Models
from £285

LEA-FRANCIS

12/40 h.p.
SPORTS MODELS
from £370

Deferred Terms.
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100

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REMEMBER! *They all carry our well-known written guarantee*

A-C, 1925, Aluminium and Red Sports 2-seater ..	£185
AUSTIN, 1926, 7 h.p., Chummy Model	£110
„ 1925, 7 h.p., Chummy Model	£98
BUGATTI, 1923, 4-seater, very nice order ..	£95
CITROEN, 1925, 11'4 h.p., 3-seater	£95
„ 1925, 4-seater, in very good order..	£95
„ 1925, 7 h.p., 3-seaters, from	£85
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FIAT, 1926, 7 h.p., 2-seater	£160
„ 1925, 2-seater, Special Body	£185
„ 1922, 10/15 h.p., 4-seater	£85
ROVER, 1926, 9 h.p., 4-seater	£155
SALMSON, 1926, Grand Prix Sports, 2-seater ..	£195
SINGER, 1925, 10/26 h.p., 4-seater	£120
STANDARD, 1924, 11'4 h.p., 2-seater	£85
WOLSELEY, 1926, 11/22 h.p., 4-seater	£110
„ 1925, 11/22 h.p., 4-seaters, from ..	£98
„ 1922, 10 h.p., 2-seated Coupe with dickey	£75

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on any make of New or Used Car.*

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

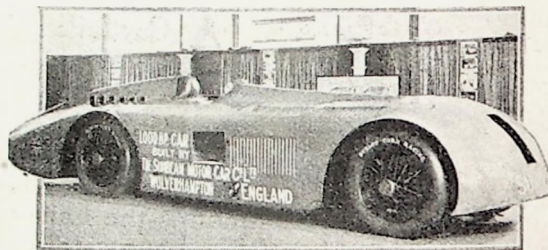
AROUND THE TRADE.

The Metropolitan Police have just placed an order with Lea-Francis, Ltd., Coventry, for a number of 12 h.p. Lea-Francis cars.

Fort Dunlop informs us that of the six events at the Junior Car Club's Spring Meeting, users of Dunlop tyres secured four first places, three seconds and two thirds.

A very striking window bill, issued by David Moseley and Sons, Ltd., Manchester, depicts a British workman holding forward a Moseley silent-running non-skid tyre against a background composed of the Union Jack. This calls attention to the British origin of the concern's products and is, we think, a very effective and decorative sales help.

From Solex, Ltd., 223-231, Marylebone Road, London, N.W.1, we have received a very useful little booklet, entitled "Engine or Carburetter?" Being aware of the fact that the carburetter is almost invariably blamed for every engine fault, Solex, Ltd., have produced this helpful publication in order to assist car owners to distinguish engine faults as distinct from carburetter trouble. They will be pleased to send a copy to any interested reader.



A total of £225 4s. was collected by Rootes, Ltd., at their Devonshire House showrooms as a result of the small charge made to view Major H. O. D. Segrave's record-breaking Sunbeam. The money went to Queen Mary's Hospital and the Invalid Children's Aid Association.

Ransome and Marles Bearing Co., Ltd., Newark-on-Trent, have produced a very fine catalogue describing their products, with particular reference to roller and ball bearings. Much useful data regarding the manufacture and application of these bearings to motorear design is given, in addition to which several types not previously listed by this concern are included. Ransome and Marles bearings were fitted to the 1,000 h.p. Sunbeam car in which Major H. O. D. Segrave broke the world's speed records at Daytona.

The Rover Co., Ltd., Coventry, have sent us a copy of a new garage chart which they have recently issued in conjunction with C. C. Wakefield and Co., Ltd. It measures 29 ins. by 20 ins., and clearly indicates the points which require lubrication, so that an owner who hangs one of these charts in his garage should have no difficulty in locating all the greasers and oilers. The chart, which refers to 9-20 h.p. cars numbered between 47,001 and 53,000, can be obtained by applying to The Rover Co., Ltd., Publicity Department, Coventry, enclosing a stamped addressed envelope.

In accordance with the prevailing fashion of one-make shows it is interesting to note that H. W. Elce and Co., Ltd., 11-15, Bishopsgate Avenue, Camomile Street, London, E.C.3, are conducting a special "Morgan Week" during the week commencing May 23rd. This concern has inaugurated a special hire-purchase scheme in connection with Morgan three-wheelers, whereby any new model can be supplied on payment of a nominal deposit, the balance being spread over a period of 12, 18, or 24 months. A copy of a brochure setting forth the terms will be sent post free to any reader interested, and a visit to the showrooms during next week should be well worth while.

Warwick Wright Says

**If your problem is your
old car—**

**And you want to buy a new
car—**

Consult us.

Mayfair 2904.

"CAR ENGINES ALLOWED TO LOSE TONE."

**Court Complaint In New
S.P.C.M. Prosecution.**

MANUFACTURERS ANNOYED.

A new aspect of the prevalent unthinking cruelty of car owners to their engines was revealed at the Provincial Court yesterday when a number of motorists appeared before Mr. Justice Speed at the instance of the Society For The Prevention Of Cruelty To Motors.

Counsel for the Society said that he was empowered by a number of car manufacturers to register a formal protest before dealing with what he termed the "regular queue of defendants." It appears that every year a great deal of goodwill is lost by manufacturers of reputable cars in view of the poor performance of car engines which are normally "household words" for efficiency. In the great majority of cases where

piston rings were gummed up and exhaust valves warped and burnt, the trouble was due almost entirely to the use of poor grade or unsuitable oil, the first causing heavy carbon deposits and the second resulting in unnecessary wear and tear on the moving parts.



"A REGULAR QUEUE OF DEFENDANTS."

"To allow any engine to lose tone through such inadvertence is not only foolish," said the learned Judge, "but I am not sure whether it is not bordering on mechanical libel. Here are all these defendants deliberately

causing themselves trouble, annoyance and expense, and at the same time acting as the very reverse of an advertisement for the cars they drive. Surely it is common knowledge that there is a grade of ADCOL New Process Oil to suit every conceivable make of car. In fact, most good garages show a lubricating chart setting forth these grades of ADCOL. It is my duty here to see that engines of all types are easy to start, that they be allowed to run smoothly and with even power, and that carbon troubles are abolished. I will therefore bind you all over to use only ADCOL in future." (Applause.)

MR. W. HEATH ROBINSON.

A remarkably interesting and informative booklet on lubrication and other problems for car owners is specially issued by Messrs. Alexander Duckham. It is entitled "Technical Talks" and is illustrated by Mr. W. HEATH ROBINSON, the world-famous humorist, in his own inimitable style. A copy will be sent on receipt of a postcard addressed to Messrs. Alexander Duckham & Co., Ltd., 6, Broad Street Place, London E.C.2.

MAY 20, 1927.

Pages from the Diary of an Austin Owner

Page Sixteen

Driving cosily yesterday in a heavy and continuous downpour, I realised more than ever how stout an ally is British weather to the Austin Seven salesman. Looking back on my motorcycling days, I really can't imagine how I stuck it: the comparatively adequate protection provided for the sidecar passenger only makes the disconsolate driver's misery yet more miserable. But the Austin Seven, costing very little more to buy and but a-penny-a-mile to run, gives both driver and passengers the weather-proofness of the most luxurious cars. And as for reliability, in my own experience of the "Seven" I have never had a single moment of anxiety.

The
**Austin
Seven**

Prices at Works:

TOURER £145 SALOON £165

THE AUSTIN MOTOR CO., LTD.,
LONGBRIDGE, BIRMINGHAM.

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