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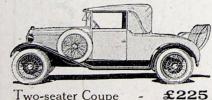


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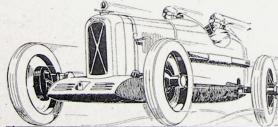


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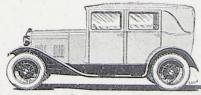
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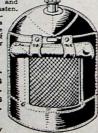
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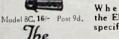
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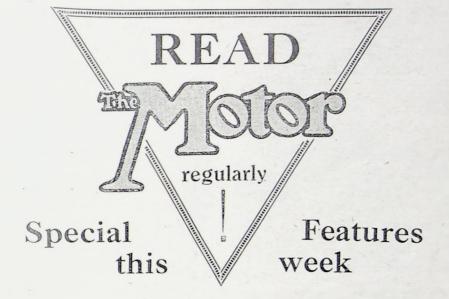
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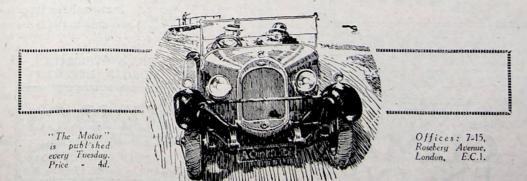
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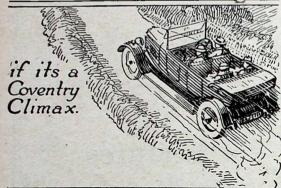
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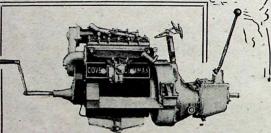
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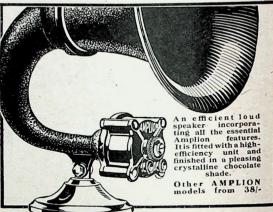


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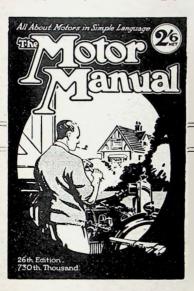
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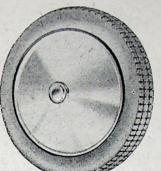
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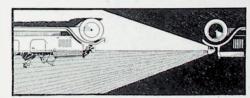
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1925, de luxe, Blackburne wc.	
engine, dynamo	78
1925, Special Sports, 2-str., F.W.B., Hartfords	165
1925, 11 h.p., 4-seater, very nice order	175
1927, 10 h.p., 4-seater, F.W.B., small mileage	205
1926, 10 h.p., 2-str., F.W.B., absolutely as new	175
1926, 10 h.p., 4-seater, F.W.B., perfect order	165
1926, 10 h.p., 4-seater, in guaranteed order	150
We have 53 GUARANTEED Singers in stock,	
including saloons, 2- and 4-scaters.	
RD. 1926, 11 h.p., 4-seater, maroon, equal to new.	170
1925, 11 h.p., 4-seater de luxe, balloons	128
1924, 11 h.p., 4-seater de luxe, excellent order	90
1925, 10 h.p., 2-seater, very nice condition	120
1924, 10 h.p. Coupe, good order	95
1923, 10 h.p. Chummy, 4-seater	70
1727 To Ti.p. Calaming Tachter	

140 USED CARS ACTUALLY IN STOCK.

WOLSELEY. 1925, 11/22 h.p., 4-seater, repainted ... 1923, 10 h.p., 2-seater de luxe...

STANDARD. 1926, 11 1925, 1

RILEY SINGER.

SWIFT.



USED CAR DEPOT: 237, HAMMERSMITH ROAD, W.6. Telephone: RIVERSIDE 4646 (Private Exchange).



Amateur drivers may enter for anything and everything, but the trade must bow to the rulings of the S.M.M. and T. Here is a glimpse of the recent "London-Gloucester"—a banned event. On our centre pages this week we give details of the "approved" fixtures for the coming season.

NOTES, NEWS & GOSSID The WEEK

The "Land's End."

Sportsmen are already talking of the "Land's End." As usual, it will be the first big "new year" trial of the Motor Cycling Club, and is sure to attract a large entry.

Home-made Fuel.

A French motor coach, fitted with gas-producer plant, has made a 25-day tour to demonstrate that "home-made" fuel is available for motor vehicles in that country.

This Week.

Owing to the generous support they events approved by the and T. for trade participation naturally rank as of primary importance in the forthcoming season. As a general guide to these fixtures we give a resume of the 1927 programme in our centre pages. The first syticle of the new series "Motoring for the Beginner" deals with the construction and working of modern cyclecars. The very clear drawings are well worth careful study, and the text has been written so as to give the essential information which every novice or new driver should

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g 1/2000			

LIGHTING-UP TIMES (Rear Lamps),

for Saturday, January 29th.					
London 5.10	Edinburgh 5.05				
Nowcastle 5.02	Liverpool 5.14				
Birmingham 5.13	Bristol 5.13				
Moon—New,	February 2nd.				

Interesting Figures.

The total number of cases dealt with under the R.A.C. "Get You Home" service during 1926 was 7,515, and the distance travelled by R.A.C. relief cars in towing in broken-down cars or motorcycles, or in conveying motorists to their homes and so on, exceeded 100,000 miles.

Road Construction Record.

Road construction in America during 1926 broke all previous records, an expenditure of over £1,500,000,000 being

Col. Moore-Brabazon.

Now that he has left the Ministry of Transport will Col. J. T. C. Moore-Brabazon, an old-time motor racer himself, throw still more weight into the argument for road racing in this country?

Next Week.

The problems connected with earburation are many and varied, but one of the most troublesome is that which deals with supplying an efficient mixture, free from flat spots, throughout the throttle and speed ranges of small high-speed engines. This difficulty will be explained next week in an authorita-tive article entitled "High-speed Eu-gine Carburation." Dealing with the problem in general terms the article will form an introduction to a further instalment in which the methods adopted by various well-known carburetter makers will be explained. Road Fund for Hungary.

A new law is being drafted in Hungary to provide for the imposition of a special tax on motor vehicles, the proceeds of which will be devoted to the upkeep and improvement of roads.

Another New Jowett.

Our contributor " Focus " commented recently on the rather humorous de-scription of a Jowett which appeared in a Colonial paper. A reader now calls our attention to an advertisement which appeared in a Midland newspaper and read as follows:—"Jewett, 18 h.p., six-cylinder saloon, shop-soiled, £325."

Light Car Scores Again.

Driving a standard 9-15 h.p. Renault light car. says Renter, Lieut. Estienne covered the distance from Paris to the Niger in less than eight days. journey, which was undertaken without any claborate preparations, included crossing the Sabara—a feat hitherto supposed to require the use of enterpillar tracks or six-wheeled chassis driven by high-powered engines.

A.A. Questionnaire.

The replies to the questionnaire, tecently issued by the A.A., asking owners of private cars to give their views on certain important questions concerning taxation and so forth, are now being summarized. Motorists who have not yet completed their forms are requested to do so without delay, and to send them to Fanum House, New Coventry Street, London, W.1.

Only a Rumour.
Following a rumour that the
Zelandia Motor Co., Loveridge Road,
Kilburn, London, N.W.6, were considering the production of a £100 car, we called at the works and were informed that the company entertains no such plan. We learned, however, that the company takes a keen interest in simple-type machines, and that a two-cylinder, friction-drive car, which they built, is giving every satisfaction.

Halford-Special for Grand Prix.

As we announced in last week's issue, Mr. G. E. T. Eyston has entered for the French Grand Prix, and we are now able to state that he will probably drive the Halford-Special which showed such a fine turn of speed in the hands of Major Frank B. Halford last year. A number of improvements has been

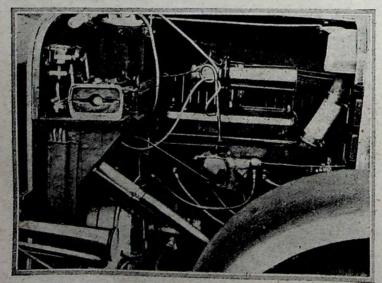


Mr. G. E. T. Eyston, who may drive the Halford-Special in the French Grand Prix.

made, including the redesigning of the gearbox, and the car should be ready in March for competition work. Major Halford himself has not given up racing, but owing to pressure of work in connection with aero-engine design and production his time is limited. At present he is busy on the design of a new racing car, but plans have not yet been completed for its construction.

German Citroens.

Progress in the erection of the new Citroen works near Poll, Germany, has been so rapid, says Reuter, that mass production of the cars is expected to begin in a few months. The entire staff, numbering about 400, will be German



CONVENIENT TOOL STOWAGE. B10

On Singer Senior cars the jack, pump, wheelbrace and so forth are carried in clips on a shelf secured to the engine side of the dashboard.

Mounted Ambulance Men.

Members of the St. John's Ambulance Brigade, mounted on cycles and carrying first-nid outfits, are patrolling certain of the main roads near London.

Busy Inventors.

During 1926 the number of patent applications received by His Majesty's applications received by this alapsay a Patent Office was very close to the figure for 1925. It is interesting to note that motoring inventions headed the list a few years ago, but they have now been outnumbered by wireless patents.

New Warning Sign.

The R.A.C. has designed a new danger sign, intended for use only where the danger is of an exceptional nature. It will be issued free to road authorities who satisfy the club that a special warning is really needed at the proposed spot, but it is expected that its erection and maintenance will be undertaken by the road authority concerned



The new R.A.C. danger sign, for use only in special cases. The background is of bright red enamel.

Javanese Motoring Troubles.

Motoring in Java, we learn, presents many difficulties, chief amongst these being the risk of being charged by a herd of cows pastured by the roadside! Another trouble is due to the huge twowheeled ox-carts, which not only ruin the roads but present considerable danger to other road users, as the native drivers are nearly always asleep.

Canada's Oil Resources.

Intensive prospecting for oil in the region of the Turner Valley, Alberta, indicates possibilities for the future discovery of natural oil in great quantities. Attention is also being directed towards the bituminous sand deposits of Alberta and to the oil shale areas of the Maritime Provinces, from which it is estimated that sufficient motor spirit to supply the world's demands for many years would be forthcoming.

Cardiff Traffic Increase.

The annual amounts collected in Road Fund licences in the city of Car-Road Fund licences in the city of Car-diff during the past six years are as follow:—1921, £51,575; 1922, £54,313; 1923, £71,968; 1924, £84,474; 1925, £94,866; 1926 (to November 30th), £101,040. It will be seen that there has been a remarkable growth in me-chanical road tradic in Cardiff—an in-crease which is considered to be in greater proportion than in any other provincial town.

An Unsolicited Testimonial.
"So snug and warm does your radiafor cosy keep my engine these very cold nights that I had to stuff snow into the radiator one morning before I could obtain an easy start. Anon.

Lafitte Improvements.

The Laslitte is now equipped throughout with Tecalemit greasers and in place of the outside door handle, a top lever handle and special lock are in-corporated. For an extra charge of f6 10s., a starter motor can be supplied from stock. Hallands, Ltd., 3-4. Clement's 1nn, Strand, London, W.C.2. inform us that deliveries of the car cau be given immediately.

1921 Issue Wanted.

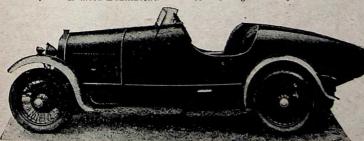
The National Automobile Chamber of Commerce, New York, ask if we can supply them with a copy of *The Light Car and Cyclecar* dated January 22nd, 1921, for their library. This issue is out of print, and if any reader who happens to have a spare copy would care to forward it to us, he would earn the gratitude of a very useful and important United States organization.

The Monte Carlo Rally.

Cars from all parts of Europe converged upon Monte Carlo to take part in the International Motorcar Rally. According to Renter, one competitor en route from Athens, calculated to cover over 2,000 miles by the time he arrived. There were a number of departures from Gibraltar, whilst Capt. F. H. B. Samuelson, well known in English competition circles, started from Doncaster.

Amusing Menus.

The idea of couching the menus of club dinners in humorous terms is rapidly increasing in popularity: the latest to come to our notice is particularly amusing. The following were some of the "obstacles to be consumed or circumvented at the Woodford and District M.C.C.'s First Annual En-durance Contest," which was held at Buckhurst Hill on January 13th. Fog Soup-thick and clear, Piston Slap en Casserole, Minced Ferodo dans Discol Sauce, Chinese Gorgonzola in Chains (Parsons) and Braised Bonniksens.



A RECENT INTRODUCTION.

This new two-seater sports body has been standardized by Messra. Ettore Bugatti on the four-cylinder type 40 chassis. The complete car is finished in two shades of red and costs £425. A hood is available at £10 extra.

"It Pays to Advertise."

Speaking at the World Motor Transport Congress in America recently, a delegate stated: "A large percentage of prospects to-day are pre-sold through advertising before ever a salesman sees

Meeting of the I.A.E.

A joint meeting of the Institution of Automobile Engineers and the Royal Automobile Engineers and the Royal Aeronautical Society will be held on Tuesday, February 1st, at the Royal Society of Arts, Adelphi, London, when Mr. A. H. R. Fedden will read a paper entitled "The Supercharging of Aircraft and Motor Vehicles.

A British Peugeot?

It is rumoured that the 9-20 h.p. Pengeot is to be made in this country, and that the manufacturers are now looking round for a suitable factory. It is emphasized that the car will not be merely assembled in this country, but will be manufactured in practically every detail by British labour.



TO WHAT BASE USES.

One side of the authorized car park in Red Lion Square, London, cannot now be used by motorists as it has been turned into a "workshop" in connection with adjacent tramway repairs. No other parking accommodation has been provided.

No Wonder We Meet Them!

Mileage charts submitted to the editor of Cycling by enthusiastic wheelmen show that 12,000 miles per annum is quite a fair average distance covered by cyclists. A slightly more energetic band covers anything between 16,000 and 17,000 miles in twelve months! Cycling, by the way is just commencing its 37th year.

The car which figures on our front cover this week is a sports model Omega fitted with a special coupé body. Δ test run report of this three-wheeler appeared in last week's issue.

Our Front Cover.

Proposed Road Improvement.

Proposed Road Improvement.

A scheme which will, roughly, halve the journey between Talybont and Merthyr in South Wales is being energetically pushed forward. The proposal is to build a road along the old tramway track from Talybont for 3½ miles and to continue the highway across Pencelly Manor for a further distance of 3½ miles to Dolygaer; here it will join the new road constructed by the Merthyr Valley Water Board. Tourists will welcome this improvement.

The A.S. Indicator.

The Anglo-Sphinx Engineering Co., 87, Mortimer Street, London, recently gave a demonstration of the A.S. direction indicator. The well-known principle of the illuminated frame is used, but two frames are employed. one showing towards the front and the other to the rear. By means of a suitable tumbler switch red and green arrows, denoting a turn right or left, appear. At the back only, the warning "Slow" (operated by the brake pedal) and the instruction "Pass" can be given while to the form the signal he given, whilst at the front the signal "On" can be used. The back indica-"On" can be used. The back indica-tor costs 2 guineas, back and front indicators 31 guineas complete.

This Year's Motorcycle Show.

The 1927 Olympia Motorcycle and Cycle Exhibition will open to the public on Monday, October 31st, the Show continuing during the week, as usual. This exhibition will therefore follow the Motor Show instead of preceding it.

FOUR-THE MAGIC NUMBER.

WE HAVE FOUR DOORS

FOUR WHEEL BRAKES ____

FOUR GEARS ____

L HOUR SEATS __

FOUR POINT SUSPENSION

YOUR CYLINDER ENGINES.

ALL THAT IS NOW NEEDED TO COMPLETE

EVOLUTION OF --

FOUR ARMS FOR DRIVERS .AND

BETTER STILL FOUR EYE

Motoring for the Beginner, No. 1. A New Series. ALL ABOUT WHAT THEY ARE AND HOW THEY WORK-THE FUNCTIONING OF A TWO-CYLINDER ENGINE-CYCLECARS. THE LUBRICATION SYSTEM AND SO ON. GEAR LEVER STANDARD HAND BRAKE FRONT WHEEL A BRAKE BEVEL BOX LOW GEAR CHAIN **ENCLOSED PROPELLER SHAFT** FRAME TUBE. acting also as exhaust pipe HIGH GEAR CHAIN

> A typical cyclecar chassis the Morgan-in which a two-cylinder engine, shaft and chain drive figure. References make the lay-out clearer.

JUDGING by the correspondence we receive, it is becoming increasingly common for novices to begin their motoring career by buying a three-Juheeled cyclecar. Again, many new drivers cut out what might be called the elementary stage and go in right away for a four-cylinder light car. In either case, however, their knowledge is often sadly lacking; the majority learn to drive in a friend's car, but they do not obtain anything more than the knowledge of what to move and how to move it so as to drive with a reasonable degree of skill and safety. In this new series we shall endeavour to tell such novices only the essentials about cars, how to look after them and how to drive them: we do not propose to confuse their minds with deep technical descriptions. Our aim is to give them sound and practical advice which will enable them, first, to understand the principle of the whole machine, secondly, just what they must do to keep it in good running order, and, thirdly, how they should be about the source of the whole machine, secondly, just what they must do to keep it in good running order, and, thirdly,

how they should handle it. For fairly obvious reasons, it is necessary to divide the series into two sections, the one dealing with cyclecars and the other with light cars, for there are essential differences, and the general advice which would apply to the one type might not necessarily apply to the other. In this, the first section, therefore, we shall deal with cyclecars alone.

N the early days of the economical motoring movement there were many makes of legitimate cyclecar. Essential points in their specifications were motorcycle-type engines and transmissions, but they grew up, and nowadays there are several makes of light car

which were pioneers of the real cyclecar movement.
At present the cyclecar field—
apart from home-built machines—is made up almost entirely of threewheeled vehicles, which are popular for three main reasons. The first is the low annual tax of £4, the machine being classed for licensing purposes as a tricycle; the second is the ease with which motorcycle-type transmission can be incorporated when there is a single driving wheel at the rear; and the third, because it is a light and economical form of construction, which employs only three wheels, tyres and tubes.

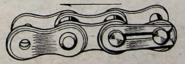
It might be mentioned here that, because a vehicle has three wheels-quite apart from sidecar combinations, of course—it is not necessarily a cyclecar; as an example we may quote the Castle Three, employing a four-cylinder engine and epicyclic gearbox, which came before the public several years ago; another exception is the French D'Yrsan, which has a four-cylinder engine. For the purpose of this article, however, the term "three-wheeler" will be used to denote a cyclecar, and vice versa.

Two-cylinder power units are almost universally enployed for cyclecars, but they can be either of the air or water-cooled type. Each has its advantages—air because the complication and additional weight of the radiator and water jackets are dispensed with, whilst

the possible effects of frost can be disregarded; and water, because in operation the engine is usually quieter, whilst it is often considered to be more efficient.

The four-stroke principle is the more popular, for, although it results in a power impulse per cylinder only once in every two revolutions of the flywheel, high engine speeds are possible, slow running is even and the power output throughout the range of engine speeds is high. As a rule the cylinders are arranged in V formation, the angle between them varying according to the particular design. As an alternative horizontally opposed cylinders are used.

A very brief reference to the actual cycle of operations may be made. At the outset it should be undertions may be made. At the outset it should be understood that each of the pistons which slide up and down in the cylinders is coupled by a connecting rod to a common crankpin. The crankpin turns the crankshaft—like the pedal of a bicycle—and power is thus transmitted to the clutch, and so on. The cycle of operations is the same in each of the two cylinders, so it will be sufficient if one cylinder alone is dealt with.



A chain spring clip which facilitates joining or "breaking" a chain. Note the direction in which the chain is moving (shown by an arrow) relative to the direction in which the open jaws of the clip are pointing.

Assuming that the piston is at the top of the stroke, that is, at the highest point in the cylinder, and that the induction stroke is about to begin, the inlet valve, which seals the passage between the interior of the cylinder and the carburetter, opens, and, as the piston descends, petrol drawn from the jet of the carburetter, and air which is being sucked past the jet, rapidly fill the cylinder in the form of what is usually called gas," or "mixture."

At the bottom of the piston stroke the inlet valve closes, and, as the piston ascends-the interior of the cylinder being sealed-the gas is compressed. the piston reaches the top of the cylinder-at the end of one complete revolution of the flywheel-a very hot spark jumps across the points of the sparking-plug and

fires the mixture, which expands with incredible swiftness and forces the piston down. At the bottom of this stroke the useful of power the burning gases been has expended and the exhaust valve opens, thereby placing the inside of the cylinder in direct communication with the atmosphere and allowing the burnt gases to escape.

Two complete revolutions of the flywheel have now been made and the cycle of operations that is, induction, compression, firing and ex-haust—is ready

to recommence. Actually the two valves do not open and close exactly at the highest and lowest positions of the piston travel, and if the reader is sufficiently interested he can consult the timing diagram of the engine fitted in his cyclecar to see exactly how this

is arranged so as to give the best results. This diagram is usually included in the instruction book concerning the engine.

Each valve is lifted off its seating at the appropriate moment by a cam in the timing case, which lifts a slipper, the latter, in turn, transmitting the motion through a tappet to the stem of the valve in the case of a side-valve engine, or to a push rod and rocker arm where overhead valves are used.

The meaning of the term "compression" should be fairly obvious from the foregoing, and, as it requires a certain amount of physical effort to overcome it when a certain amount of physical chort to overcome it when starting up, an easy starting device, known as a valve or exhaust lifter, is usually employed. As its name implies, it lifts two of the valves—that is, both exhausts—slightly off their seatings and enables the crankshaft to be rotated vigorously, so that when the valve lifter is released sufficient momentum will have been attained to enable the operator to keep on swinging until the engine starts.

The valve lifter is usually connected by a Bowden cable to a handle or lever so placed that it can be grasped with the left hand, whilst the right hand is

used to swing the starting handle.

Lubrication, of course, plays a very important part in the proper functioning of an engine, and novices should bear in mind that failure to understand exactly how the system works and, more important-still, whether it is working, may result in serious mechanical derangement, usually taking the form of a seizure between a piston and the cylinder walls surrounding it.

Frequently, also, bearings will be ruined, a condition, so far as the connecting rod is concerned. generally described as "a big-end gone."

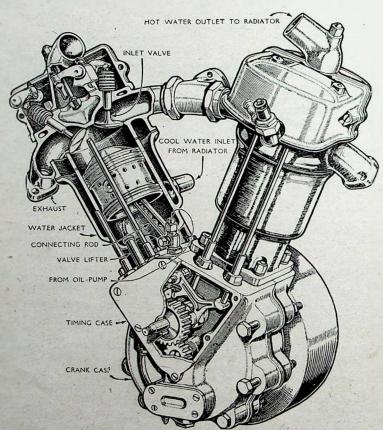
The principle adopted is that of the wet sump, the sump being the base of the chamber in which the crankshaft revolves. Oil must be supplied to this chamber, so that a constant level, sufficiently high to submerge the lower edges the internal flyrims wheel is maindiscs. tained. By this meansoilis splashed into the bearings and so on. Usually some form of oil sight feed is fitted to the facia board. so that the driver has the functioning of the oiling system always under observation. In one design oil is forced into the main bearings by the air pressure caused by the descending pistons.

distinct types of

There are two pump. One is worked mechanically and can be set to deliver a predetermined number of drops per minute, whilst the other consists of a barrel which has to be fed from an oil reservoir by operating a hand plunger. and which then works automatically until the barrel The exudence of oil from the barrel depends is empty. on the action of a spring-loaded piston, and the drops per minute can be regulated by the driver.

The speed of the engine is, of course, governed by the throttle lever, which controls a kind of valve in the carburetter and regulates the amount and quality of the gas sucked into the cylinders.

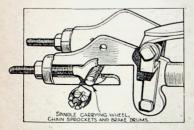
The next step in the transmission of power is the clutch which is usually incorporated with the flywheel, and may take the form of a cone lined with friction material engaging with the flywheel or a "flat-plate



Without depicting any proprietary make of engine, this part cut-away sketch clearly shows the principal working parts of a two-cylinder unit and how they are arranged. It will be seen that it is water-cooled and has overhead Compare it with an actual working drawing on the next page. valves.

clutch," in which a central floating member faced with friction material on each side and connected with the propeller shaft is gripped between two metal discs, the one being the face of the flywheel and the other a secondary plate, also keyed, as it were, to the flywheel itself.

Bearing in mind the need for simplicity, two speeds forward are usually considered sufficient, and on the Morgan, Coventry-Victor and Omega these are attained by the use of sliding dogs, which, in effect, cause one or the other of two chains to drive the rear wheel. The sizes of the sprockets are so arranged that different ratios are obtained, 8 and 4 to 1 or 10 and 5 to 1 being being common figures. As a rule, the chains are interchangeable. One make of three-wheeler, the H.P., employs a motorcycle-type gearbox.



This sketch shows the general arrangements of a rear wheel spindle anchorage. The wheel is removed through the slot in the lower member of the fork.

The foregoing paragraph outlines roughly the general principle of the transmission and change-speed mechanism, but the need for a more detailed explanation is indicated.

The rear end of the propeller shaft is carried in a bearing formed in the front side of what is called the bevel box. At its extreme end it carries a bevel wheel which meshes with a larger bevel—known as the crown wheel, thus converting the drive from longi-

tudinal to transverse. The shaft driven by the crown wheel projects through the box on each side, and upon it are slidably mounted dogs—one on each side of the box—both of which, however, must turn with the cross-shaft. They can be moved sideways—left or right—by forks connected with the gear lever. Mounted adjacent to these driving dogs are the driven dogs connected with the driving sprockets. Each driven dog and sprocket is free to revolve on the cross-shaft, but cannot slide endways. Neutral is obtained by having both driving dogs disengaged; by sliding the driving dogs left or right, either one or the other is securely meshed with its adjacent driven dog and either high or low gear obtained.

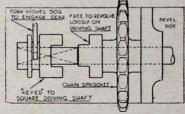
The bugbear of removing a rear wheel has been overcome largely by employing a slotted fork, and the principle of the construction is shown in an accompanying sketch. Exactly how to tackle such a joh will be explained in next week's article.

This is necessarily a very brief résumé of the principles embodied in a cyclecar, but it should be sufficient to enable the prospective owner to study an instruction book with an amount of first-hand knowledge which will enable him easily to grasp the layout of the machine and how it works. The next article will deal with the maintenance of a cyclecar and special attention will be given to lubrication, the carburetter and the magneto.

As a fitting conclusion to this article we cannot do better than outline points in the specifications of the three principal makes of cyclecar.

The Morgan is, of course, the oldest established; in fact, the set policy which the manufacturer has pursued for many years is in a large measure responsible for the popularity of cyclecars to-day. Four models are made—the Standard (£89), de Luxe (£110), Family (£111) and Aero (£127). There is an extra charge for a different engine to that fitted as standard.

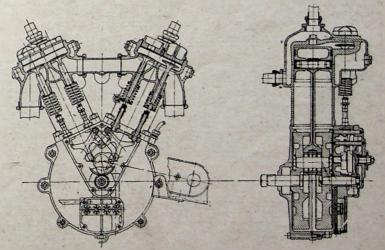
Dog-clutch mechanism shown semi-diagrammatically. There is an assembly like this on each side of the bevel box of a two-speed cyclecar.



Either air or water-cooled units may be obtained; ignition is by M.-L. magneto and the transmission by cone clutch to bevel box and two-speed dog-clutch gear with final drive by chains, as already described. The standard gears are 8 and 4½ to 1, or 10 and 5 to 1 for hilly districts.

The wide choice of engines which is at the disposal of customers is a feature of the Morgan. The Standard model, for instance, has an 8 h.p. air-cooled J.A.P., but the de Luxe and Family models can be supplied with the 8 h.p. air-cooled J.A.P., 8 h.p. water-cooled J.A.P., or the Vulpine (Anzani) o.h.v. model. The Aero can be had with either the water-cooled o.h.v. Vulpine or side-valve J.A.P. as standard, £140 being charged for the car if it has a 10-40 h.p. Blackburne or J.A.P. o.h.v. racing engine. The Morgan also stands out pre-eminently, as it has brakes on all wheels with the exception of the Standard model.

The Omega is made in four types, the Popular at £95, de Luxe at £110, Family model at £115 and Sports



From an original tracing supplied by J.A.P.'s: two sections of the J.A.P. 980 c.c. side-valve, water-cooled twin, which figures in many cyclecars. With the aid of the drawing on the previous page, the reader should find little difficulty in understanding this working drawing.

at £125. An extra charge is made in the case of the first three named for a water-cooled engine. The twin J.A.P. engine is used on all models.

The Coventry-Victor differs somewhat from its prototypes in that a horizontally-opposed water-cooled Coventry-Victor engine is used, and that a dry-plate clutch is employed, but the final transmission is on the same lines as that of the Morgan, the top-gear ratio being 5.2 and the bottom-gear ratio 10.6 to 1. The price of the two-three-seater to a standard specification is £90 15s., the chassis price being £85.

SAVING TIME, MONEY and TROUBLE.

A SUGGESTION THAT MANUFACTURERS SHOULD COME INTO LINE WITH REGARD TO MANY LABOUR-SAVING IDEAS INCORPORATED IN INDIVIDUAL DESIGNS.

"The side issues of maintenance jobs, which might be avoided, and could be avoided if designers got do in to their tasks, are in the front rank. We refer to the kind of job which takes far more time than it deserves owing to the amount of preparation that has to be made. . . . "

> A no-trouble finish car, the Singer Junior. It has all-black parts and cellulos?

HEN motoring was mainly a hobby, time, money and trouble mattered little, but nowadays a car is usually a very definite means to an end, and motorists grudge the time they have to spend on maintenance or repair jobs, the trouble that is incurred and the money that has to be paid out as a direct result in one way or another.

Realizing this, manufacturers have endeavoured to meet the requirements of their customers, but opinions differ, and for this reason we find—often to our surprise-that a particularly good feature is confined to one or two individual makes.

In this article we shall deal very briefly with the more obvious points of the subject under consideration, a suggestion being thrown out here and now that manufacturers might well come into line.

The side issues of maintenance jobs, which might be avoided, and could be avoided if designers got down to their tasks, are in the front rank. We refer to the kind of job which takes far more time than it deserves, owing to the amount of preparation that has to be made and to the difficulty of obtaining easy access to the parts concerned. Money enters into the question because, to the busy man, any unnecessary job on his car is taking up time which he might use more profitably.

The advent of high-pressure grease-guns eliminated one of the most undesirable features of maintenancenamely, the slow, laborious and generally messy operation of filling grease cups—but there is a regrettable tendency to make grease guns of far too small a capacity and of such design that they cannot be filled expeditiously.

Easier Lubrication Wanted.

Apart from the introduction of guns, no serious endeavour has been made to reduce the labour of chassis lubrication. We do not plead for central lubrication in its most literal sense, but we do think that local groups could be formed so that one instead of, say, six applications of the grease-gun would serve.

If the feeding points, whenever practicable, were arranged so that they were not exposed to the full effects of mud or water thrown up by the road wheels, time and labour would be saved by not having to clean

INSTANT ACCESS TO THE TOOLS.

(Left) The clean lines of the Newton-Ceirano make the body easy to wash and leather, whilst the tools are carried in the let-down tail. (Above) A running-board toolbox is formed integral with valance and wing on the Bianchi.

them before applying the gun, whilst the risk of minute particles of grit being injected with the grease would be almost certainly avoided.

Screw the Floorboards Down!

Removing floorboards to gain access to the gearbox, cross-shafts, universal joint and so on should not only be unnecessary; it should be taboo, for it is the cause probably of quite half the neglect to which the components we have referred are subjected. It should be possible to replenish the gearbox through an orifice above the level of the floorboards, whilst a quick-release cap incorporating a dipper rod should form part of the design. Straggling assemblies are the cause of infinite trouble, and there are now on the market very neat self-contained gearbox-clutch units which call for a minimum of attention.

The cost of carrying up small-bore pipes above the floorboards—these pipes being connected at their lower ends with normal oiling points—should not be great, and would result not only in a saving of time but in far more frequent attention being given with the oilcan to cross-shaft bearings and so on.

Thank goodness we have arrived at a time when clutch spigots are lubricated automatically; but there is unfortunately an idea in some quarters that the best place for a sliding-block universal joint is immediately behind the gearbox. We suggest that it is equally good practice to place such a joint at the rear end of the propeller shaft, and we cannot see any reason why it should not be lubricated direct from the axle by forming a cored oilway in the short final-drive shaft which carries the bevel pinion.

This, naturally, raises the question of overfilled axles and consequent leakage on to the brake drums; but that is another subject, and surely the solution lies in providing more efficient oil-retaining washers. To return to the main issue, it is obvious that if all the foregoing suggestions were carried out the floorboards could be screwed down permanently.

Incidentally, the practice of housing the more frequently used tools under the bonnet deserves encouragement. This applies more particularly to the pump, jack and wheel brace. For obvious reasons it would be inconvenient to store all the tools under the bonnet, but there is absolutely no excuse for allocating them to the most inaccessible part of a car,

We do not object to having the accumulator box on the running board, because we appreciate the advantages which it offers when it comes to topping up and so on. Why, then, should we take exception to a running-board tool locker?

There is no reason why a locker of this sort should not be made part and parcel of a running board or wing instead of looking as though it had been added as an afterthought. If the accumulator were housed in a similar box on the opposite running board there would be no need for any outside wiring at all, and the general effect would be very neat.

An alternative with regard to the toolbox is to form a locker integral, say, with the fail of a car, access being gained to it from without and not from within the vehicle.

It will be a source of great disappointment to many would-be purchasers if at the next Olympia Motor Show there is not a far greater proportion of cars with a standard cellulose finish, and here a unique opportunity presents itself of making the colour and finish of all hitherto plated parts match the general colour scheme of a car.

Not Forgetting Cellulose.

Cellulose finishes cannot be dismissed without emphasizing the enormous advantages which they offer from the owner-driver's point of view. The lubour of cleaning the car is cut down by at least half, and, what is quite as important, the appearance of the vehicle at the end of, say, 12 months is as good as, or better than it was on the day it was delivered. This is one of the biggest money-saving items in a motorist's yearly

bill, for few cars are sold second-hand to advantage nowadays unless £10 or £12 is spent on repainting.

It has been pointed out that although some manufacturers are in favour of cellulose lacquer, they confine it to the bodywork proper, the wings and valances being coachfinished in the ordinary way. Of course it appears to be a vexatious policy, but, in support of the idea, it must be pointed out that it is a comparatively simple matter to "make

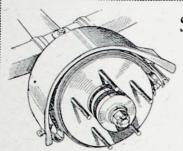
Unit construction of engine, clutch and gearbox automatically cuts out several points which otherwise demand attention. (Top) A Moss gear unit. (Above) A combined sump-filler cap and dipstick. Several other cars beside the Calthorpe shown include this feature. Why not all? Easily accessible contact breaker and distributor mechanism is also exemplified by the Calthorpe and (left) the Swift.

Despite the almost continuous criticism which is fired at nickel-plated parts by owners who, through reasons of economy, have to look after their cars themselves, manufacturers continue to adorn their products in this way. It is true they glitter at Olympia or in a show-room, but when used every day in winter a car thus handleapped frequently looks nothing short of disreputable. Some owners object to a black finish, in which case is there any reason why the body of every lamp should not be finished in the predominating colour of the care.

good" a scratched wing when black paint and varnish are employed, whereas, with a cellulosed wing the repair is far more complicated and may call for the removal of the damaged component.

When all is said and done, however, this advantage hardly compensates an owner for the expense and trouble involved by having the wings repainted at the end of, say, two seasons' running. What a contrast: dull and lifeless looking wings and a glistening cellulose body! So let us have cellulose all over, and take greater care to prevent minor mishaps.

B17



SHIELDS FOR JOWETT BRAKES.

A SIMPLE SCHEME FOR IMPROVING THEIR EFFICIENCY IN WET WEATHER.

One of the recommended sheet metal shields in position,

TN very wet weather Jowett brakes sometimes suffer I from mud and water draining off the rear mudguards on to the brake drums and external bands, so reducing their efficiency until the heat generated by friction is sufficient to keep the parts temporarily dry. A simple pair of shields which will keep the bands and drums much drier and help to overcome the trouble can be made by any owner who has a pair of tin snips and a drill or punch. The cost of the material should not be more than a few pence, whilst if an old oil drum is available there will be no need to buy sheet metal, as a portion of the body of the drum will serve the purpose admirably.

First cut out two strips of stout sheet metal, each 7 ins. by 16 ins., and then cut away two parts, as shown in the accompanying diagram, leaving an "ear" for attaching to the centre bolt of the spring. A hole should be made in the ear and the shield fixed roughly in position, the next job being to find the places for the front and rear fixings; these can be marked out

with a pencil. The front one consists of a hole or slot through which the outer grease nipple of the brake-operating shaft passes, whilst the rear one is a hole through which the band-retaining bolt passes.

A 2-in, longitudinal cut has to be made at the forward end of the strip, to allow part of it to be turned up to clear the brake-operating toggles. Next fix the shield famly at all three points, bending it to give only a

diagram showing how to cut the metal to the correct shape.



small clearance when the brake band is in the "off" position; an upright flange, which will just clear the wheel spokes, should then be formed on the outer edge with the aid of a pair of pliers.

When the "fit" is satisfactory, take off the shields

and clean up the edges with a file or emery wheel and smooth out the flange by hammering. The application of a coat of paint is the final job before mounting.

THE CRIMINAL AND THE CAR.

OFTEN wondered whether inexorable fate would overtake me; whether Nemesis would descend on my head and seal my fate on some lonely road in the dead of night far, far from human habitation. I suppose I deserved it, for I have never done the things

To begin with, I purchased my car after hearing the make reviled by a bosom friend who complained that the gear change was awkward and the road springs weak; but I liked the car and being inherently

obstinate I bought it.

When I took delivery I treated it as though it were Sevres china until, on a moderately long hill, I was challenged by the driver of what I consider to be a vastly inferior make. As I breasted the summit the speedometer registered 42 and an odour of something warm assailed my nostrils, but the rival car was 100 yards behind. Alas! we were on a main road and I know just what the vanquished driver felt; to be passed by him now?—never! I kept my foot hard down and saw no more of him. The odour of remonstrating newness vanished, the oil gauge showed a steady 15 lb. (pressure feed to all bearings) and the car appeared to be revelling in the fact that it had so soon been freed from the leash. I threw caution to the winds, arrived home two hours before I was expected and found that a kind friend had sent Mrs. Vandal two tickets for the Frivolity. Just time to feed and dress-fortune favours the bold!

Of course, we went up West in the new car. It was left in a public parking place for 3½ hours with the side and tail lights on, and when we came back to it I punched the starting knob defiantly. The engine sprang into life instantly and ticked over as sweetly as an alarm clock the first time you put it on your kitchen

mantelpiece.

On the way home it rained, and you might conjure up a picture of an industrious new owner vigorously leathering down the coachwork. To my shame I admit that there was no such picture to be seen in my garage. I put the car to bed, treated myself to the same kindness and slid into the land of dreams with a perfectly easy conscience.

For the next fortnight I carried on the work of running the car in-brutally. Thus far I had not even taken the trouble of unearthing the tools, and I had no idea as to what type of grease-gun-if any-was in-

The instruction book remained undisturbed in its neat buff envelope. I decided to refer to it when-and not until-I experienced a longing for light literature.

Returning home one evening, I had the rank misfor-tune to experience a sudden flattening of the off-side front-wheel tyre. I ran at half speed for a quarter of a mile on the rim, and, arriving home, found I had providentially missed my mother-in-law, who had not the time to wait for me and had left a minute before I turned up. Subsequently I discovered that the valve only was at fault. The tube was not removed, but was given its due quota of air, and the tyre gave no more trouble. As for removing flints, it is, in my opinion, akin to weeding-and I hate gardening!

Of course there came a time when I simply had to don a pair of old gloves and tackle the greasing problem. I had progressed as far as producing the grease and donning the gloves when who should drive up but my wife's brother complete with sixteen-year-old male

child and golf bag.

Would I like a round? (Would I not!) I sighed deeply and shrugged my shoulders; then I fixed the

male child with a repronchful eye.
"One of these days, Richard," I said sternly, "You'll



have to grease a car; then perhaps you'll learn." Richard looked surprised—and pained, "Who said I couldn't?" he demanded truculently.

"I do, and, what's more, I wouldn't think of letting you touch a grease-gun—or a spanner"—I added the

last with a flash of genius.

"Try me," he demanded stoutly. The rest is obvious. Richard knows more than I do about greasing, and he proved it. I proved that I could hole out in three on the seventh.

After that it was ever thus. I coupled periods of fiendish neglect with spasms of assiduous attention-

obtained gratis from Richard and his ilk.

Last week I sold the car to a man—one in a million, but I have proverbial luck—who wanted "a well-tested British product to take with him at once to Africa." At first I denurred. It was such an exceptional car, the show model for aught I knew to the contrary, I had never had cause to use a spanner on it (shades of Richard), it was not the sort of car with which anyone with experience would part without strong inducement, but—

With a sigh I let it go for £5 less than I gave for it.

Yet in fairness I must explain a few points. The firm from which I purchased the car believe in delivering their products in a-finished state; they believe in a 12-volt lighting and starting set, cellulose finish, oil-less bushes and everything else of an up-to-date nature; so perhaps I am not such a vandal after all. But if manufacturers put us all down as vandals, would it not be better for "the breed"?

A last word, to forestall enquiries: If any reader wants to know the make of the car which I selected with such astuteness, let him look up all the specifications he can obtain. If he is lucky he will find it!

VANDAL.

RECLAIMING USED ENGINE OIL.

THE process of reclaiming used oil has recently been materially improved by the invention of the Stream Line oil renovator by Dr. Hele-Shaw. It will be recalled by those who have followed the correspondence on this subject which has appeared from time to time in *The Light Car and Cyclecar* that the main difficulty was caused by the very finely divided nature of the foreign matter, which enabled it to pass with the oil through all the normal types of filter.

With most processes of reclamation it is necessary to remove the oil from the engine and submit it to treatment before it is fit for use again. The only exception, so far, has been the Skinner oil rectifier, which, however, is expensive and not easily fitted to an engine which has not been designed for its reception.

Dr. Hele-Shaw's apparatus appears to be free from these objecwhilst leaving no doubt of its efficiency and simplicity. The apparatus consists of a few thousand paper discs of the shape shown in the accompanying sketch. Having been impregnated with Bakelite or similar material, to make them oil and waterproof, they are strung on a rod of square section and spring-loaded. The oil is pumped under pressure in the direction shown by the arrows, so that it approaches the column of discs on the outside, and, having passed between them, escapes downwards along the clearance between the circular hole in the discs and the sides of the square rod on which they are strung.

The dirt which is present in used engine oil consists of innumerable

particles of matter, so small individually that a first-class microscope is necessary to resolve them and so numerous that they cause the oil to appear black and opaque. Analysis shows that the amount of this solid matter usually lies between 3 per cent, and 5 per cent, of the whole and that it is composed chiefly of charred oil and metallic dust. Fine as this matter is, it is unable to pass through the spaces between the paper discs, and, in practice, it is found that the dirt never penetrates beyond a depth of 1-100th in.

It will readily be seen that such a filter can be made small enough and simple enough to be put in circuit with the oil pump of many light car engines. It will be recalled that in one light car engine at least the oil is drawn from the sump through a gauze strainer in the usual way and is then forced through another and finer gauze strainer placed in such a position that it can be withdrawn for cleaning without disturbing the oil in the sump.

A slight modification of such a system would enable the Hele-Shaw renovator to be inserted into the circuit.

As the dirt is retained on the outer surface of the column, it is readily cleaned by removing the outer cover and connecting a tyre pump to the oil outlet, when the dirt can be blown off in a cake. It is recommended that the filter should be cleansed in this way at intervals of about 2,000 miles' running.

In the description of a process for reclaiming used oil which appeared recently in *The Light Car and Cyclecar* it was stated that the oil so treated was superior to new oil. Exception was taken to this statement, and it is therefore of interest to note that the same claim is made for this process, which is based on an entirely different principle.

May I draw the attention of

May I draw the attention of any dissentients to two points which cannot be overlooked with impunity, (1) The record of Dr. Hele-Shaw, whose name is a household word among engineers, and (2) the results of a test which is summarized in the following table:—

	New oil.	Used oil.	Reclaimed oil.
App ar. ce	Light rad and		Dark red and
Specific	0.885	0.895	0.889
Flash point— des F.	390	370	394
Viscosity— at 60 deg. F.		1,207	1.089
at 70 deg. F.	643	823 126	740

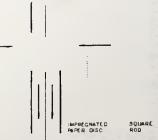
For the determination of the viscosity a Redwood viscometer was used and the high readings given by the used oil were, no doubt, due to

the used oil were, no doubt, due to the presence of suspended solid matter. It is readily seen that very muddy water would give a high viscosity reading, with no relation whatever to the viscosity of water. Such readings are, of course, worthless when the viscosity of the liquid constituent of the mixture is under consideration.

One of the most valuable assets of a lubricant is its power to retain its lubricating properties under prolonged usage. The readings given in this test certainly appear to indicate that the less stable constituents of the oil are destroyed in the initial use and removed by the renovating process so that the reclaimed oil may quite reasonably be supposed to have at least some points of superiority over the new off.

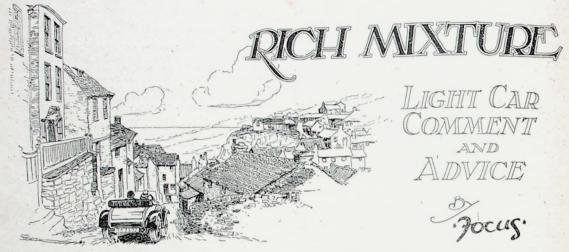
It is not suggested, of course, that the reclaimed oil could be used over and over again throughout the life of the car, but, rather, that the periods between which the sump must be drained and refilled with fresh oil would be considerably extended. Occasional "topping up" would, of course, still be necessary.

A.H.S.



This diagrammatic sketch shows the arrangement of the paper discs in Dr. Hele-Shaw's oil filter which could be used on light car engines.

в19



Not Yet.

ON the way back to town from the provinces a week or two ago I paused towards evening to listen to the thrushes which were piping melodiously from almost every tree. A bat was hunting flies, and from somewhere near-by there came the unmistakable bleat of lambs. I brought a gnat home in the car, and altogether there seemed every indication of the approach of spring. Alas! next morning the air was thick with raw mist, which developed into rain, and a vile day ended with sleet. It is too early yet to grow lyrical about a change of the seasons!

A 50-m.p.h. Novice.

CHANCE overhearing of conversations frequently shows why accidents happen. I was at a garage the other day when a new 14 h.p. saloon came in. "How is she running?" queried a friend of the owner. "Fine!" was the reply. "I've just come down from London (60 miles) in two hours. It's remarkable how these saloons travel. It was not until I looked at the speedometer that I realized she was doing fifty. Not bad, seeing I had the wife and three children with me, was it?"

I learned that this man bought his first car-an S h.p. Rover-so recently as last September, and he had done less than 500 miles in the new one. Knowing the road from London to the particular town in question very well, I can only say that for a man with so little experience to have averaged thirty miles an hour was little short of criminal.

A Little Learning . . .

NFORTUNATELY, the ease with which modern cars are steered and controlled tends to give a novice the impression that after a few weeks' driving he is an expert. As a consequence he often takes risks without knowing it. one day he finds himself in an emergency that would tax the ability of a seasoned driver, and we hear of another disaster.

I heard last week of a man who bought a car last spring and paid for a course at a school of driving. Somehow, he gained the idea that this instruction had made him superior to other drivers who had graduated in the hard school of experience, and he did actually claim to be an expert. His first season's record was lamentable. knocked down a motorcyclist, overturned the car once, ditched it in attempting to reverse in a narrow road and, finally, was injured in trying conclusions with a lorry.

Did he blame his own driving? Not a bit. He cheerfully dismissed all the mishaps as "incidents of the road." Doubtless in the coming season be will find himself driving more carefully; but he would have saved himself many pounds had he been less cocksure of his ability at the start.

Unnoticed Improvements.

A FEW nights ago I switched on a very handily placed little dash lamp on the facia board of my Singer saloon, and found that, with all the lamps going, the ammeter still showed that the battery was reversing the accepted order of things and finding it more blessed to receive than to give.

As I went on my way, I found myself meditating on several similar improvements to cars which have been made of recent years, yet which, in many cases, have received little or no publicity, and have, in fact, passed almost unnoticed.

Lighting and starting equipment has, I think, We have spread ourbeen specially neglected. selves out in fulsome terms concerning super-efficient engines, peg-in side curtains, pneumatic upholstery and four-wheel brakes, but we have allowed the steady unobtrusive development of dynamos, batteries and starters to pass unnoticed and unappreciated.

Real-iability.

So far the Singer has not called even for the replacement of a lamp bulb; the "Wizard" which preceded it covered many thousands of miles without the electrical gear giving me the slightest anxiety, whilst my Ariel Ten—one of the best light cars ever produced—carried me through the 1925 season in an equally faultless style.

The lighting set on the Singer is a 12-volt Rotax. the Lea-Francis had a 12-volt C.A.V. and the Ariel a 6-volt Lucas, so that my experience is not confined to any one make or type of equipment. addition to having satisfactory results with my own cars, I can remember only one lighting failure



occurring of recent years with a borrowed car, and that was the fault of a careless mechanic who had not tightened the bolt which earthed the battery negative of a Trojan. Seeking the trouble with the aid of a box of matches on a cold, windy night made me thankful that such occurrences today are happily few and far between. I am touching wood.

The Breakdown Bogy.

I CANNOT remember how many years have passed since I was last stranded by the wayside with a breakdown which I was not able to remedy unaided in the course of a few minutes, whilst I have not had an accident since 1915 which was caused by a mechanical failure.

This you may think is because I am a frightfully clever mechanic who drives only new or newish cars and handles them with consummate care. You will be wrong, however, for all kinds of cars come my way. I have followed a Scottish Six Days in a G.N., taken part in a Land's End at the wheel of a cheap cyclecar, and hammered many far from. sturdy machines round really difficult trials' courses often without having had time even to oil and grease them before starting. Furthermore, as a mechanic I know men who make me feel like a firstyear apprentice. Have I been lucky or have breakdowns of a serious nature really passed into the limbo of forgotten things?

Are Steering Gears too Weak?

WE have all been brought up to believe that it is wrong to endeavour to steer a car when it is at rest, as the force which has to be used on the steering wheel is likely to strain or damage the

steering gear. The writer of a letter which was published in a recent issue mentions this in connection with the man-handling of cars in garages, and the impression which his letter left on my mind was that, garage men being incorrigible, the time has come for steering gears to be made so robust that any amount of treatment of this kind will not overload them or cause premature wear and tear.

Clutch-withdrawal mechanisms are really in much the same position. We are told in our instruction books not to coast with the clutch out, as this will overload the thrust race. The proper plan, I think, in these enlightened times would be to fit larger and better-lubricated withdrawal thrusts. which would not object to performing their allotted tasks however much they were misused.

Coach Finished with a Watering Can.

ALWAYS think that the truly great are those who tackle big tasks in a simple manner. The following story is a true one. The hero is the production manager of a big factory who rigged up a special flow-painting outfit at a moment's notice.

In this factory, as in numerous other large works, bodies are painted by having the paint flowed on to them with a hose. The body is mounted on a trolley which is pushed into the centre of a Ushaped trough. Above the body is a tank full of paint and this is connected to the hose from which the paint flows over the body.

drippings are caught in the U-shaped trough, filtered and pumped back to the overhead tank.

One day the Powers That Be sent through an order for a large number of bodies to be painted a special colour. Paint-brushes there were none, and every tank was full and at work on the standard bodies. A weaker manager would have tendered his resignation, or, at the best, wasted time in ordering another tank. But our production chief was of sterner stuff.

He had a rough U-shaped tank knocked up in the packing department out of planks and lined with sheet iron. In this he fixed a standard engine oil filter and an ordinary domestic water-supply tap. He then sent the boy out for a couple of watering cans—the sort of things that may be found in the tool-shed of any suburban garden. These cans were filled with paint and emptied over the bodies. They were then refilled from the improvised tank—to which the surplus paint drained—through the medium of the tap. In the course of an hour's work the painter had learned so to regulate the tap that one can filled while he was emptying the contents of the other over a body.

I am more than ever convinced that the truly great are those who tackle big tasks in a simple manner.

Quite Safe!

I WAS billeted in France with a man who steadfastly refused to eat margarine. One day I asked him why. "I used to make it!" was the reply. I was reminded of this a few days ago when in a garage settling an account. Just inside was a car with the bonnet up. The undershield was simply awash with liquid, and I concluded that a water connection had broken.

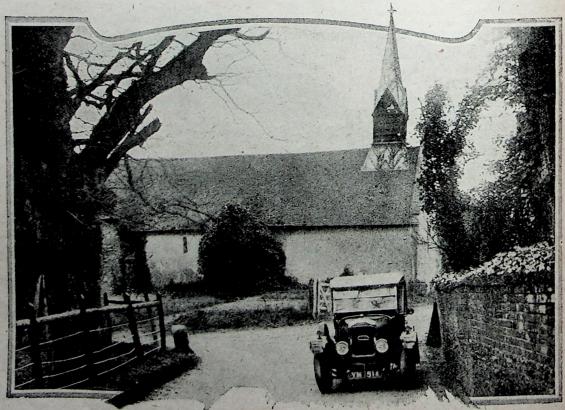
It appeared, however, that a petrol union had fractured in the garage and almost the entire contents of the tank had been lost before the fact was discovered by the owner. To my astonishment, as I stood talking to him across the car he pulled out a cigarette and lit it with a match. He saw my look and laughed. "It's all right," he said, "there's no danger, really."

I discovered later that he was travelling for a notoriously heavy brand of spirit!

To Prevent Accident.

On some single-line railways an engine driver cannot start on his journey along a section unless he holds the one and only "token." In this way the possibility of a collision between two trains is eliminated. Much the same sort of principle can be adopted by motorists.

On one car I owned it was impossible to remove the floorboards without putting the gear lever into first and, realizing the obvious risk attendant on a fit of forgetfulness, I devised a simple token of safety. When I engaged the gear I laid the petrodepth stick on top of the ignition and lighting switches in such a way that, with the depth stick in position, it was impossible to switch on the ignition without seeing it. On more than one occasion it served as a very useful reminder.



ANOTHER BERKS

In this little church at Aston Apthorpe tradition has it that King Ethelred attended Mass before the battle of Ashdown and the defeat of the Danes.



Car Insurance.

THE rumours with to increased car insurance rates which have been current during the past few weeks, and which have been alternately denied and given fresh currency, certainly have some basis of fact. We understand, however, that only the cheaper policies will be affected and that comprehensive cover will cost no more. The publicity which the matter has received brings into the limelight once more the injustice

of the present system, whereby an experienced and careful driver pays exactly the same as a novice, who may make very big claims during his first two

or three seasons on the road.

It is well known that there are no fortunes to be made from motor insurance, but better profits unquestionably could be earned with less discontent on the part of policy holders if premiums were based upon a sliding scale which took into account the carefulness or otherwise of the driver. Any schemes calculated to do this would naturally have to embrace a revision of the present no-claim bonus system, which everyone agrees is far from fair. Under its operation at the present time the man with a blameless career as a driver finds when his car is run into, even although at the time it may be stationary and he himself perhaps making a business call, that he must either proceed against the other party himself to recover damages or, if he puts the matter in the hands of his insurance company, sacrifice his title to a bonus.

The Credit Balance.

PESSIMISM is given a severe blow in the report on the present position of the motor industry in this country, which was extensively commented upon last week. The report, which is based upon figures for the year 1926, shows that for the first time in history the export of British motor vehicles has exceeded, both numerically and in value, the import total. This record was achieved despite the disturbing effects which necessarily followed upon the recent labour troubles.

In 1925 there was a surplus of 18,000 motor vehicles imported as against those exported, and there was, in consequence, an adverse trade balance of well over £1,000,000. The corresponding figures for 1926 show a very different state of affairs, as exports exceeded imports by some 11,400 vehicles, and the total value of our exports was

"THE LIGHT CAR AND CYCLECAR WAS FOUNDED IN 1912 TO CATER FOR THE NEEDS OF USERS AND POTENTIAL PURCHASERS OF LIGHT CARS AND CYCLECARS, AND IT HAS CONSISTENTLY ENCOURAGED THE DEVELOPMENT OF THE ECONOMICAL MOTORING MOVEMENT FOR OVER FOURTEEN YEARS.

NO CAR WITH AN ENGINE CAPACITY EXCEEDING 1,500 C.C. (1) LITRES) COMES WITHIN THE SCOPE OF THIS JOURNAL, THAT CAPACITY BEING GENERALLY RECOGNIZED AND ACCEPTED AS THE LIMIT FOR A LIGHT CAR ENGINE.



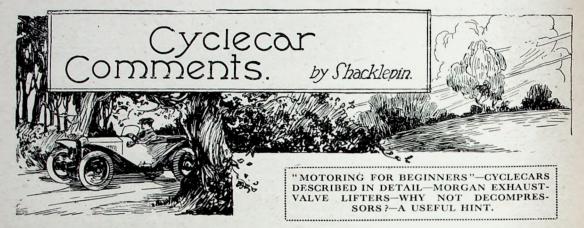
£7,301,000—m ore than double the value of the vehicles imported and showing a trade balance on the credit side of nearly £4,000,000. If further proof of progress be needed it may be found in the fact that, in addition to more vehicles being exported in 1926 than in 1925, their average value was better. This was due to the general lowering of prices—made possible by increased production.

So far as the future of our export trade is concerned

there is every indication that the prospects are very bright. Large orders for export were placed with British manufacturers at Olympia last year, and deliveries under these contracts have already begun. Unless calculations are upset by some unexpected industrial calamity, it will be surprising if the total exports for 1927 do not exceed those of 1926 by at least 30 or 40 per cent. The greater the volume of export business the lower the price for the home market; that is the interesting point.

The Beginner

THE series of articles which begins in this issue THE series of articles which begins the rapidly is intended to render a service to the rapidly or growing band of those who are about to motor, or who have acquired their first car. From our own experience we know that, all too often, a new driver takes control of a car with little knowledge to help him, and only too frequently he has to learn in the bitter school of experience. It would not be reasonable to argue that before a man takes the wheel of a car he should have as much experience and knowledge as a locomotive driver before he is permitted to place a finger on the throttle; but, bearing in mind the importance attached to the training of the latter, it is surely not asking too much of the former to suggest that he should have something more than a passing acquaintance with the construction and functioning of valves, piston, clutch, gearbox and so on. Some people plead that they are unmechanical, and prove that they can drive quite as well as those to whom the intricacies of a car are as an open book: they are the fortunate few. The majority would do well to realize that a general knowledge of the subjects intimately associated with driving a car is not only very desirable in itself, but will enable them to drive with far more polish; further, it will enable them to get the very best out of the mechanism they command without ill-using it.



It is only right and proper that any treatise entitled "Motoring for Beginners" should start off with a clearly written and well-illustrated description of cyclecars, and I hope that my readers will appreciate the care which has been expended in the preparation of the series to which I refer. The first article, in this issue, explains just how a cyclecar works. Modesty forbids me saying too much with regard to the text because I had a finger in the pie, but I can say, without a blush, that the drawings are, in my opinion, quite the best that have been done so far.

Amateur constructors will glean many useful hints from these articles, which reveal the methods employed by prominent cyclecar manufacturers. One fact stands out pre-eminently: it is that a specification which includes a two-cylinder engine, shaft and bevel, two speeds and final drive by chains, wants a lot of beating. As a pioneer of this layout, Mr. H. F. S. Morgan deserves all-round recognition. The success which has attended his efforts speaks for itself.

Having paid these compliments my next remarks may seem rather illitimed because I am now going to find fault with Morgans, or, rather, with one small but important detail of their design. I refer to the inadequacy of the exhaust-valve lifter mechanism. At one time or another nearly every Morgan owner has probably been troubled with a broken wire, bent lever or dented body panel, and when the engine is fitted with extra-strong racing valve springs these troubles are apt to occur rather frequently.

I flatter myself that I am something of an expert where Bowden wire mechanism is concerned, but in spite of all my skill and care I cannot achieve a continuously reliable exhaust-valve lifter by adhering to the standard arrangement.

For this reason I am thinking of acapting the principle used by Mr.

H. F. S. Morgan on the machine he drove in the London-Gloucester trial. He had fitted a large motorcycletype Bowden clutch lever on the side of the body, arranged so that it was pulled backwards to raise the valves instead of being pressed against the side of the body, like the standard type of lever. With this arrangement and by using heavy-gauge Bowden wire, I imagine that a reliable and satisfactory lifting gear would result.

It must be borne in mind that neither Mr. Morgan nor anybody else can guard against carclessness and neglect, and these faults, I know, are very often the direct cause of Bowden wire troubles. The strands are allowed to rust or to fray until, at last, a breakage occurs—generally at an awkward time and place. When the wires are fitted at the works they are lubricated thoroughly and the nipples are properly soldered. Is this the case with any wire subsequently fitted by the owner? I doubt it.

More often than not the wire is threaded dry through the casing, which probably is kinked here and there and should be renewed; then the nipples are soldered on sometimes with the use of a blowlamp, which draws the temper from the wire and reduces its strength by 50 per cent. or more.

In cases of this kind it is unfair to blame either Mr. Morgan or the Bowden people when a failure occurs, but I do submit, with all due deference, that the standard exhaustlifter arrangement is capable of improvement.

Would it not be possible to scrap the lifter entirely and fit a decompressor to the engine? Devices of this kind are perfectly satisfactory on motorcycles and it should be quite practicable to fit a decompressor to any of the engines used in Morgans. The idea, of course, is to arrange an additional cam, which, when brought into action by the driver, slightly lifts the exhaust valves towards the end of the compression stroke, thus reducing the pressure in the cylinders and making it easier to swing the starting handle.

The initial cost to the engine makers involved in carrying out this modification, might run into many pounds, as, amongst other things, their cam milling and grinding machines would have to be altered slightly, but, in the long run, I think the outlay would be justified.

I came across an old friend recently in one of the two-cylinder water-cooled Crouch cars of immediate post-war days. It looked undeniably shabby, but appeared to be in excellent mechanical condition. Its proud owner had but one fault to find—it concerned the oil consumption, and he asked whether there was any way of reducing it.

Readers will remember that dripfeed, regulated by hand, is employed, and, of course, the obvious reply was: reduce the supply, but this would not do, for some 40 to 50 drops a minute are imperative. Here, however, is a very useful tip: I passed it on to my chance acquaintance and I repeat it here for the benefit of others.

Fit even the most primitive form of crankcase relief valve-i.e., one that allows the compressed air to escape when the pistons descend but creates a partial vacuum on the return stroke. This helps to prevent the exudence of oil from the outer ends of the bearings, and to check the tendency of the oil to pass the piston rings on the induction stroke or when using the engine as a brake on hills, because it creates and maintains a partial vacuum in the crank-case. The system has, of course, been applied with success to several twin-cylinder engines, but it is advisable to have as large a valve as possible so that the compressed air can escape without undue resistance.



"It runs as sweetly now as when I purchased it —before Easter, 1923"

Read this letter from an A-C owner who has done nearly 25,000 miles:

57, Goldsmith Road, Friern Barnet, N.W. 4th October, 1926.

Dear Sirs,

... I purchased the car before Easter 1923. The mileage to date is 24,750 miles, no mechanical adjustments have been made to the engine, and it has not been taken down for decarbonising. I, only, occasionally use Johnson's decarboniser fluid, which I find absolutely satisfactory... The engine ticks over beautifully and runs as sweetly now, as when I first purchased it. I have no difficulty in starting.

I find I get on an average 30 to 35 miles per gallon, according to whether I have one or two passengers, and I do a lot of town driving. On first set of tyres I ran only 7,750 miles,—on next set 15,200 miles, and have now my third set of tyres, Dunlop Cord.

I consider the car perfectly satisfactory in every way, a pleasure to drive, and I know of no other 2-seater car that I would exchange for mine, which after nearly four years' wear, has such smoothness, reliability, speed and appearance. The original coachwork is unscratched, and it is often taken for a new car.

Yours faithfully

(Signed) A. F. THOMPSETT.



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

in the "

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THEY WERE BOTH ON A LONG RUN; said the owner of the beautiful four-figure car to the Trojan owner: "I thought I wouldn't see you again after Coventry—how have you managed to join me here?"

SAID THE *Trojan* OWNER: "I've not only got your number by heart, but I admire your beautiful car—and the way it roars away from me on the straight—but, you see, at hold-ups and round corners, my little Trojan is so easy to hold on the road and to pull up that I can gain on you quite a lot, and it's fine fun to average nearly as much as your expensive machine."

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

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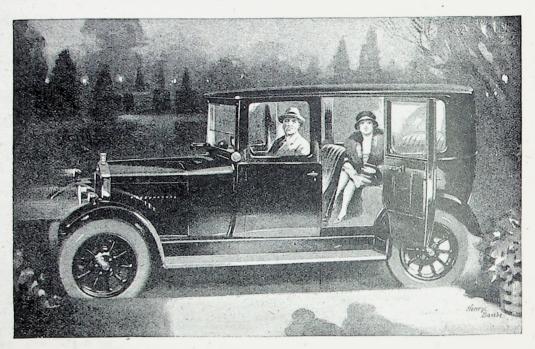
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Simplest Car in the World

MADE BY LEYLAND MOTORS LTD . LEYLAND . LANCS

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



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

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Famous French Factories.-II.

THE HOME OF THE PEUGEOT.

A BRIEF HISTORY OF A SUCCESSFUL VENTURE WHICH STARTED SO FAR BACK AS 1889.



THE connection of the firm of Peugeot with the automobile industry dates from 1889. The firm at that time was already an old-established concern manufacturing bicycles, coffee grinders and domestic utensils. In 1888 the new Serpollet boiler and light steam engine was attracting a good deal of attention in France. Messrs. Peugeot purchased a Serpollet power unit complete, and the following year they exhibited the first Peugeot car (with Serpollet engine and generator) at the Paris Exhibition. At the same Exhibition the Daimler gasolene engine was exhibited. Peugeots adapted this engine to a quadricycle in 1890. This experimental quad was very successful, a number of further cars were built, and the design steadily improved. In 1896 M. Armand Peugeot decided to form proved. In 1830 M. Armand Pedget Ger Co.," to increase the business and build motorcars only. The company the business and build motorcars only. The company built a factory at Audincourt, in the Department of Doubs, and with the rapid growth of the industry, this factory was soon strained to its utmost. It could not be enlarged beyond a certain point, owing to lack of labour in the district. A second large factory was, therefore, built at Lille. In the meantime the old company (Les Fils de Peugeot Freres) continued to build cars under the name of the Léon Peugeot. One particular model of Leon Peugeot was a highly successful light car quite well known in England a few years before the war. This car had a rather curious four-cylinder monobloc engine. The cylinders, instead of being in line, were disposed two and two across the chassis, making a square cylinder block. Each pair of connecting rods worked on the same crank pin.

Nine Large Factories.

In 1910 the Peugeot Car Co, and the parent firm joined forces and from this fusion arose the vast concern which exists to-day, the Société Anonyme des Automobiles Peugeot. Peugeots, at the present time, have no fewer than nine large factories, situated in various parts of France. Five of the factories are grouped in the neighbourhood of Belfort, on the Swiss frontier. Out of this group two are stamping works, one is a foundry, one a body works, and the fifth, at Sochaux, on the road between Montbeliard and Belfort, deals exclusively with the manufacture of the 5 h.p. (called

7 h.p. in England) chassis. The output of these cars amounts to about 1,100 per month. The present 5 h.p. car is a lineal descendant of the famous Baby Peugeot of pre-war days, "the smallest car in the world." The latter vehicle created amusement when first seen in London, but it soon gained a wonderful reputation for speed and hill-climbing, winning medals at many British sporting events. It may be remembered that this tiny car was taken up with great keenness by the late Sir Charles Friswell. Many of the original Baby Peugeots are still running in France; several may be seen in daily use in the suburbs of Paris.

Influenced the Movement.

A large car in miniature, there is no doubt that its introduction into England had a great influence upon the light car and cyclecar movement, which was at that time in its infancy. During the war the various Peugeot factories were engaged upon munitions and the manufacture of army motor vehicles. The first Peugeot voiturettes produced after the Armistice had a somewhat unconventional appearance. They had a very narrow rear track and a tandem-seated cyclecar type of body. This little vehicle behaved splendidly, and most of its salient features, with the exception of the narrow rear track, are retained in the present-day 6 h.p. Peugeot—as, for instance, gearbox mounted on the rear axle, transverse front springing, and so on.

Peugeot prosperity in recent years is due in a very large measure to the present able and energetic head of the concern, M. Lucien Rosengart. M. Rosengart, has made a careful study of American automobile practice on the spot, and he has introduced many of the best American machine-shop ideas into the Peugeot factories. In the domain of finance M. Rosengart is equally active. His latest achievement in this direction is the carrying through of a great merging deal under which Peugeots acquire the world-famous firm of De Dion-Bouton and also the big Bellanger factory in Neuilly.

(Right) M. Lucien Rosengart, the present head of the Peugeot Company.

(Left) Where the smaller Peugeots are made,—a fine aerial view of the Sochaux factory. The body and chassis erecting shops do not appear in the photograph.

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THE Smith family spent their Christmas holidays at Aunt Eliza's place at Puddlecombe. Smith Minor drove them down in the Dragon. The manner of intimating their arrival at the house was typical of Smith Minor's schoolboy methods. As they swept up the drive, he blew a raucous fanfare on the bulb and electric horns. Leaning towards his sister, he whispered: "That'll tell the old geezer we've come, anyhow."

The resultant fit of giggling on the part of Joan did not help matters. Aunt Eliza seemed to regard it as an outrage that Smith Minor should be allowed to drive the car. "Robert," she said to her young brother, Smith Minor's father, "I cannot imagine for one moment how you can entrust a mere schoolboy with a task of such responsibility." "Oh! that's all right!" replied Mr. Smith. "Jim can drive better than I can. You must come out with us and then you will see how capable he really is."

"Certainly not. John has driven me in the brougham for the past 23 years and I am not likely to rush about at undignified and dangerous speeds at my time of life. But come along; tea is ready and I am sure you must be frozen."

Beneath her somewhat pompous dignity Aunt Eliza was genuinely kindly and she did her best to entertain her guests. It is true that the indoor games did not prove too engrossing for her nicee and nephew. Halma, ludo and draughts belonged to an age which was past. So indeed did her favourite pastime of "Word Making and Word Taking," at which she considered herself an expert. But she was rather annoyed when Smith Minor introduced words unknown to her. For instance, she had worked as far as CHAS hoping to improve the shining hour by a discourse on

The progress through the village aroused much comment and the news spread like wildfire.

SMITH MINOR MAKES A CO

SHOWING HOW THOSE WHO ARE MOST PREJECTION CARS MAY BE MADE TO CHANGE THEIR By "BEAK."

some such word as CHASTISE, but when her nephew put another another "S" on and finished up with CHASSIS, she called it "not playing fair." She insisted on looking up such words as "carburctter" and "magneto" in her somewhat ancient dictionaries and failing to find them there would only accept them on their being pointed out in print in *The Light Car and Cyclecar*.

But Christmas itself passed very pleasantly. A little too much "Church parade" Smith Minor complained, but as the parson was a "decent stick and a bit of a motor maniac" it was not so bad. Still, there were two events which the Smith family would always remember in connection with their 1926 Christmas holiday. The first was, to use the family title, "The Adventure of the Parson of Puddlecombe"; the second was always referred to as "The Conversion of Aunt Eliza." It is the latter which shall be told here.

Aunt Eliza's objection to motor cars was deeprooted. She had steadily refused to ride in one and during the past few days she had repeatedly and emphatically stated that nothing would ever induce her to be driven in a car by her nephew. But her sense of duty triumphed over her dislike.

The Gauntlet Thrown Down.

One afternoon Smith Minor was bringing the family back from a lengthy run. In front was a long, straight hill and about half way up a one-horse carriage was toiling slowly and painfully. Smith Minor recognized his aunt's brougham. The spirit of mischief entered into him, and turning to his sister he said, "We'll make the old bird sit up and flutter-you watch." He pressed down the accelerator and the Dragon swept up the hill at a great pace. As he overtook the brougham he sounded a discreet warning, which gave no indication of the speed at which he was travelling. They flashed by, and Smith Minor caught a glimpse of the startled face of his aunt and the still more startled look on the coachman's. As he slowed down to top the crest of the hill, his father leaned forward and tapping him on the shoulder said, "Did you know that was aunt's carriage?"

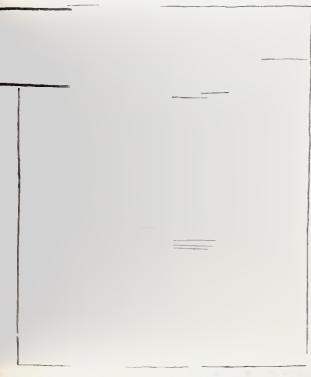
"Yes, pater," said the son.

"Then you can look out for squalls when she gets back. Be it on your own head, my lad." But the pater's eyes were twinkling povertheless

pater's eyes were twinkling, nevertheless.

The squalls came as predicted. It was a gloomy Smith Minor who watched the carriage roll up the drive and who a moment or two later stood up as his aunt swept into the room. She was magnifreent. Contrary to custom and expectation, she spoke but little, but her manner was that of one of high degree delivering a considered judgment.





In front was a long, straight hill and about halfway up a one-horse carriage was toiling slowly and painfully.

"James," she said "while you are my guest I am responsible for your safety. As far as possible I make myself responsible for the safety of the villagers. In future, therefore, at infinite cost to myself. I will accompany you on the front seat whenever you take the car out during the rest of the holidays." Without

further ado she stalked out of the room.
"You've done it now, my boy," said the pater.
"Three miles an hour, three miles an hour!" sang Joan, as she danced round her despondent brother, who sought consolation by going to the stables to clean

and commune with his beloved Dragon.

The next morning at breakfast Aunt Eliza announced her intention of going out in the car. "It will be very painful for me, but I feel that it is my duty," she pronounced. In due course, she settled herself beside Smith Minor. The others found that driving did not appeal to them that morning-it would be too painful, they felt.

The First Drive

The progress through the village roused much comment, the news that Miss Eliza Smith was actually in a motor car and was being driven slowly by that young mad scamp of a nephew spread like wildfire. down the main street shopkeepers came to their doors to see the great sight. Aunt Eliza sat very upright with set lips and such a hostile gleam in her eyes that there was no trace of a grin upon the features of the villagers when they saluted her. They knew better than to offend one who, though a despot, was yet quite

Once outside the village, Aunt Eliza said, "I think you might go a little faster, James—but only a very little. You must stop the instant I tell you. Be careful! here is a cart coming."

After six miles of about ten miles an hour, Smith Minor increased the speed imperceptibly to 15 m.p.h. Aunt Eliza began to talk. "I will say that this is

a very comfortable car. I had no idea that motoring was so comfortable. You may increase the speed slightly, James, but remember my instructions.

Smith Minor, becoming somewhat cheered, began to talk about the scenery, and his aunt, also growing more amiable, again praised the comfort of the car. She even asked for more speed, a request with which her nephew instantly and gladly complied. Suddenly she looked at her watch, and exclaimed, "James, it is half past twelve. I had no idea it was so late. We shall be late for luncheon-a thing which has never happened before. Phillips will be quite alarmed. must turn back at once and hurry.

Smith Minor reversed in a convenient side turning and while driving carefully managed to maintain a good average speed, and much to Aunt Eliza's surprise deposited her on her own doorstep five minutes

before the gong sounded.

No reference was made to the run in Aunt Eliza's presence, but the next day she herself suggested a run to Sylvan Glen, a beauty spot some distance away. 'The winter setting should be wonderful," she said, "I have not been there for many years now."

Joan was ousted from her seat beside her brother and had perforce to sit with her parents. Smith Minor drove very slowly and had to be urged to drive more Therein he showed much wisdom! It was quickly. always Aunt Eliza who asked for more speed. Moreover, she actually began to take an interest in the instruments which lined the facia-board. Her hazards at the use of some of them were amazing. For instance, she blamed Smith Minor for having a clock which showed five past one instead of twenty past

"I Must Insist."

It was explained that she was looking at a speedometer, and on being informed of the meaning of the word demanded to know the speed at which they were travelling. "Thirty-five miles an hour!" she exclaimed, "I must insist on your going more slowly—but wait, the road is clear and the car seems quite steady. I must confess that the experience is interesting.

Her nephew cleverly changed the subject, and even talked with interest about his work at school. Aunt Eliza congratulated him on at last taking his studies

On their return home, Miss Smith openly acknowledged that she had enjoyed the run, and day by day she insisted on the whole family driving for the greater part of the afternoon. "So invigorating this frosty weather," she was wont to say. She was obviously sorry when the holidays came to an end.

After dinner on the last evening Aunt Eliza called

Smith Minor to her room.
"James," she said, "you are not to say anything to your father. But I shall do away with my carriage and buy a Dragon. John shall be taught to drive. Now I want you to tell me the different types of body. I think you said something about a coupe or was it a saloon?

Smith Minor said quite a lot about both. In fact, of the many subjects he had discussed with his aunt, ranging, as they did, from worms and white mice to the Scriptures, he had never been on more congenial

ground. And the old lady was a good listener, too, although she understood little.

The Dragon agents, Smith Minor says, are jolly good chaps. Perhaps he found them more kindly disposed to his jargon than are his family circle, but it was, to say the least, significant that for a few weeks after the completion of the deal Smith Minor was, to use his own expressive phraseology, somewhat flush of dough.





T is common knowledge that trade support, which prior to last year was relied upon to supply the major part of the entry in sporting events, is now confined strictly to fixtures which have been approved by the Society of Motor Manufacturers and Traders.

The only events approved by the Society for the coming season are Saltburn Speed Trials, Shelsley Walsh Open Hill-climb, two events in Northern Ireland, two in the Irish Free State and all Brooklands meetings.

This means that nearly all the principal fixtures in which the trade are entitled to take part will be staged at Brooklands, and it is not surprising, therefore, that the fixture list of the Weybridge track is overcrowded.

The year of sport opens in earnest on Easter Bank Holiday. April 18th, with a B.A.R.C. meeting. This is usually one of the best supported and best attended of the whole season, whilst it is of more than usual interest because new cars frequently make their debut.

interest because new cars frequently make their debut. Next on the calendar comes the Junior Car Club's Brooklands spring meeting, fixed for April 30th. This is a closed event, the entry being confined to members of the Club. Last year the J.C.C. introduced a novelty in the shape of a start-and-stop race, and there is no doubt that at the forthcoming meeting an even greater effort will be made to give the public rather more than the ordinary straightaway races.

Shelsley Walsh needs no introduction to our readers. This year it will be the venue of two hill-climbs; the first, fixed for May 7th, is not an approved event, and so is described as "for amateurs only." A month will elapse before the real Shelsley Walsh climb, which—for obvious



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THIS YEAR'S "APPROVED" EVENT!

reasons—has gone up one hundred-fold in importance. The date is July 16th and the entry list will undoubtedly be very full. The atmosphere surrounding "Shelsley" savours somewhat of that which pervades foreign racing events; the public attends in very large numbers, and there is that spirit of "all for the sport"—which is not surprising in view of the fact that those participating in the climb represent the cream of British drivers, whilst their cars are the pick of the bunch.



TRADE SUPPORT IN COMPETITIONS IS USUALLY SYNONYMOUS WITH BIG ENTRY LISTS, BUT THE SPHERE OF THE TRADE IS LIMITED. BELOW ARE SET OUT THE PRINCIPAL "APPROVED" EVENTS FOR 1927.



The Essex Motor Club will hold a Brooklands meeting on May 7th, and on June 6th the B.A.R.C.'s Whitsun Bank Holiday meeting takes place; less than a fortnight later—June 18th—the Junior Car Club's always popular high-speed trial will be run off. The last-named event provides an infinite amount of fun for the participants, but, as it is not intended to be a race, it naturally falls short of the expectations of spectators who are looking for sensational cornering and so forth. To the keen-sighted motorist the trial

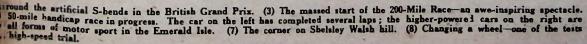
provides a wealth of data, and an investigation of the results enables fairly accurate conclusions to be formed concerning the staying powers and general efficiency of the better-known makes of light cur.

Promoted by the Middlesbrough and District Motor Cycling Club, the Saltburn Speed Trials are down for decision on July 22nd and 23rd—Friday and Satarday. This is the only sand racing event approved by the Society and, like Shelsley Walsh, the entry list should, as a result, be very extended.

The B.A.R.C. August Bank Holiday meeting is the next important fixture, whilst on August 20th, the Essex Motor Club will stage its second Brooklands event.

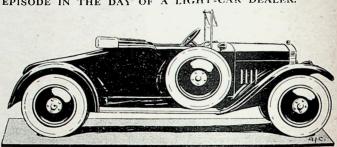
September will be a quiet month, but there will be a revival of interest in the following month, which contains three important fixtures. The first is the R.A.C. Grand Prix on October 1st. Considering the importance of a race of this sort, it is a little disappointing to find it is relegated to such a late day in the season, but the Junior Car Club is even more unfortunate in having its classic 200-Mile Race fixed for October 15th, There was a possibility of this date being altered to one in August, but it is now considered unlikely that any change will be made.

The concluding event of the season is the Motor Cycling Club's high-speed trial (October 22nd) in which, however, there is no road course, competitors having to cover a given number of miles on the track in 60 mins. Last year there was an extraordinary number of entries and the trial had to be divided up into various classes which were run off at different times of the day.



EASY MONEY.

AN EPISODE IN THE DAY OF A LIGHT-CAR DEALER.



HE dealer produced a jet key from his near-side waistcoat pocket, an adjustable spanner from the off-side one, and began operations on the carburetter. The customer began to fill his pipe. He was a regular frequenter of this particular garage and a pretty fair hand with a King Dick himself, but the carburetter on his car was so placed that he was always willing to let someone else bark his knuckles over the removal of the main jet.

"Car trade's looking up," he remarked, with a jerk of his head in the direction of the showroom, where three of the four cars on view exhibited a large "Sold"

"Looking up!" grunted the dealer. "Fat lot of profit to come out of those. To do a deal at all I had to allow 'em about ten pounds above the market value for their old cars, and now I shall have them wasting my time three or four times a week for the next six months over what they call 'service' and I call cheek. Not one of 'em reckons to spend a penny on anything but oil and petrol until he's about due for another

"I've locked up about four hundred quid," he continued, "in old crocks that'll hang about here using valuable space until they fall to pieces; that's what I've done, with me having to pay on delivery for the new models. Some day I'm hoping to see a man come in, choose a car out of stock, buy it without wanting a tour of the Home Counties by way of a trial run, pay for it on the nail with a banker's draft, take the darned thing away, and never let me see it again."

A Customer Arrives.

At this moment a girl paused outside the window. She was of the blue and silver sports type; you know the marque-clean, long and slim lines, nice warm coat to keep out the cold and grey silk stockings to let it in: like putting up the hood and opening the windscreen. Her attention was focused on the unsold car on viewa small two-seater with coachwork apparently in the last stages of jaundice. A ticket bore the inscription, "1926 Stowit, 9-15."

" ejaculated the customer Speak of an angel-

tritely but enthusiastically.

"Some hopes!" was the ironic reply. "That thing's been sitting in the showroom since last March. The makers had just changed their finish. Blue or biscuit that was the choice, according to the catalogue. Biscuit! I ask you! Still, it sounded a nice, quiet colour to me, so I ordered one on spec. When the lad drove it in from the works I thought it was a new stunt of the National Benzole people and began collecting my empty cans. Nobody'll look at it and I'll have to knock twenty pounds off the price to get a buyer at

The girl entered. She came towards the dealer, who

attempted, in the manner of all those who sell patent cleaners, to remove the dirt from his hands by means of an even dirtier piece of cotton waste."

"I want to buy the yellow car," she announced

decisively.

"Certainly, Miss. You could hardly do better. the latest improvements. Wonderful little bus! Fiftyfive on top easy, all on a smell of petrol and about half as much oil as I've got on my hands. And no need of any special device to pick that car out in a parking place. No doubt you would wish me to take your present one in part exchange?"

'Indeed, no. I have never had a car of my own. Until now I have never seen one I really wanted.

Cash or Credit?

"Possibly you would find it convenient to pay a small deposit and spread the remainder over a period of suggested the dealer with growing suavity.

"No; Dad has given me a birthday present, and I'm going to spend it on this. I'll pay for it now and get my brother to fetch it away this afternoon."

"Will the gentleman require any lessons?"

"Lessons! Jack has had his licence endorsed three times already," was the scathing reply.

She turned to the car.

"Isn't the colour just too sweet! It's given me such an idea. I belong to the Society of Bright Young People. My friends will say: 'Whatever made you choose that colour?' I shall simply reply: 'Have you never heard of the Mustard Club? I'm the new vice-president, but I'm never passed.' Won't it be amusing?' ing?

She produced a bag-one of the fabric-covered breed, lots of silver-plate and no body room-and began to

fumble in it.

"Tell you what, Miss," said the dealer in a sudden burst of philanthropy, "that car is a bit shop-soiled-not that you'd think it from the way the colour hits you-I'll knock five pounds off the price for you; we'll make it a legal hundred and feer." make it a level hundred and fifty.

The ten-pound note crackled like a crisp exhaust as

the holder started.

"A hundred and fifty pounds! Is that the price? Then what do you mean by putting on a notice that says nine pounds fifteen?" She pointed with an accusing forefinger.

The dealer followed the direction of her glance. "That, Miss," he explained, wearily, "indicates the horse-power, not the price."

"Thought there was a catch in it somewhere," was his sole comment.



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CHOOSEA

H.P.

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To appreciate this price you must examine and test the car. Its substantial roominess will impress you very favourably. It is worthily built to sustain the reputation of a great name. It has adequate power, considerable speed, and is very thrifty with both oil and

petrol. For the utmost in motoring comfort and economy during 1927 choose a RENAULT 9/15.

Four door, four wheel brakes.
Open Tourer £155 Other Mode's: Standard Four door metal panelled De Luxe Four door Open Tourer £179 De Luxe Saloons, from - -Coupe - - - -

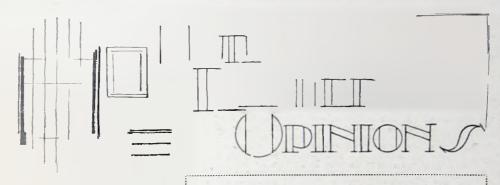
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MENTION of "The Light Car and Cyclecar" when corresponding with advertisers assists the cause of economical motoring.





We take no responsibility for the opinions expressed by readers. Correspondents may use a nom deplume, but every communication must be accompanied by the writer's full name and address. Letters for the next issue should reach us by Monday morning and should be addressed to the Editor, "The Light Car and Cyclecar," 7-15, Rosebery Avenue, London, E.C.I. We reserve the right to make any alterations or deletions which we deem necessary.

THE DANGER OF CROSS-ROADS

How Can It be Eliminated?—Interesting Suggestions.

Mirrors Recommended.

You are doing splendid work by emphasising the danger of cross-roads. No matter how careful we older motorists may be, there is always "the other fellow" and as a result, we come near to disaster only too fre-The "Off-side" quently. My view is that mirrors are Rule Condemned, the only really practical remedy for the magnated crossing, but, realizing the

unguarded crossing, but, realizing the disadvantage of their becoming blurred in rainy weather, I would suggest that they be boxed in so far as is possible without cutting out the essential reflections. The "offside," or similar, rules are, in my opinion, utterly useless, and the S-curve is but a half-hearted and very expensive form of cure. I believe I am right in saying that a minor ace dent has already occurred at Cross Hall, a spot employing S-curves, mentioned in your article. Mercury.

* * The minor mishap at Cross Hall to which our corre-

spondent refers is, apparently, one which came under our notice also; but it was of the ordinary main-road order: there was no vehicle emerging from either of the S-roads.

Forcing Drivers to Slow Down.

Your article, "The Danger of Cross-roads," interested me very much, because the whole subject is one on which I hold rather strong views. It has always seemed to me that the

A Drastic Method.

problem of climinating danger at these points has never been tackled in a straightforward manner. It has been proved over and over again that a cer-

tain small proportion of drivers will not slow down for cross-roads, and the only course, therefore, is to make them do so; driving tests, about which we hear so much nowadays. are useless in this case, for many owners who handle their cars with real skill are among the worst oftenders

We cannot have a policeman stationed at all points for obvious reasons, and the most simple alternative way of making cars check their speed is to place some obstruction in their path. The scheme I have in mind is to form a shallow trench or gully across the rondway just before each danger point and to place a warning sign so that a driver would should be of such a depth that, if taken at 10 m.p.h. or under, no inconvenience would be felt by the occupants of a car other than a slight bump; if crossed at any greater, pace, however, it would give a car a very severe shaking and possibly cause a broken spring.

Drivers would see the warning sign, which could bear the tords, "Slow College or Story College roads" and they would words, "Slow—Gully and Cross-roads," and they would know the certain consequences of not reducing their speed. The "I-don't-think-anything-will-happen-if-I-don't-slow-up" attitude would attitude would automatically disappear and every road user would benefit. The scheme I have outlined has, I believe, been adopted. been adopted in some parts of Europe to prevent motorists

"blinding" through villages, and in my opinion it is the only certain practical way of ensuring safety. Unfortunately it would not be suitable for towns, as buildings situated near n

cross-road would very soon collapse with the vibration.

I cannot, however, see why it should not be absolutely successful in the country. The scheme is quite sound in theory and the cost of putting it into practice would be reducing cross-road dangers.

The suggested ways of reducing cross-road dangers.

E. L. F. Turner.

Where is the Problem?

I read your article concerning a cross-roads problem (?) with interest; but wherein lies the problem? I think, if one exists, it is simply in the imagination of incompetent drivers, who seem to need spoon-feeding

"Spoon-feeding at every bend and twist in the road.

They want white lines to show them where the middle of the road is, "stop" constables and patrels to help them over crossings, and all manner of comic warning signs and notices to apprise them of road conditions which one would think any intelligent man could see and deal with himself

If all these fetishes could be done away with and traffic allowed to look after itself-as it is in France-the standard of driving would soon improve beyond all recognition, with a consequent saving of money and a pronounced diminution

in the number of accidents.

The way to solve all our alleged road problems is to teach road sense in the schools; it should be regarded—next to swimming—as the most important item in the curriculum. E. R. THOMPSON.

Trouble at Cross-roads and-

Your article, "The Danger of Cross-roads," should prove very helpful to those who wish to drive with a maximum of safety and, if the suggestions which you made regarding in-swept side roads and carefully placed

mirrors were to be adopted by the authorities concerned, the lot of many -Those Who Cause It. of us would be much improved.

snag of the whole business, however, is that those who give most trouble to others at cross-roads are the drivers of small tradesmen's vans and lorries.

These youths probably do not read The Light Car and Cyclecar, their reading being confined, as a rule, to "picking winners" in the sporting papers: therefore, in spite of your recommendations, we shall still have to be fully on the alert at cross-roads, whether they are situated in town or country.

A favourite trick of the type of driver I have in mind is to leave his van well on the corner, generally on the wrong side of the road, and, if it is night-time, with the headlights on. Cutting corners at high speed also finds favour with those individuals who, if everybody had their due, would not be allowed to drive at all. T. Gregson. be allowed to drive at all.

OUR READERS' OPINIONS (contd.).

receive any signal, so proceeded on my way

The Police Attitude Towards Motorists.

" A Large High-powered Touring Car."

May I intrude upon your valuable space to relate my recent experiences in a local police court? The summons informed me that I did "unlawfully by negligence and misbehaviour prevent, hinder and interrupt

The Policeman's the free passage of other vehicles, The fact is that at 6 p.m. on the day Version. of the offence I was travelling up a hill which leads on to a main road in our city, in first gear, before turning to my right and continuing my journey, Knowing that sometimes there is a policeman on point duty at this spot, I looked around for one, but, on seeing none. I noticed the road was clear but for a stationary tramear which had not been "rung off" by the conductor. I therefore proceeded at about 5 m.p.h. and turned to my right. Just as I was changing up to second I noticed a constable standing within two feet of the car. I glanced at him, but did not

The next thing I heard was that I had been reported, and then game the summons. At the police court the constable biddly stated that I was driving "a large high-powered touring car with powerful headlights on." This vehicle is nothing more or less than a 10.5 h.p. 1922 2-scater Wolseley and the "powerful headlights" are the standard C.A.V.s. but they were not illuminated at the time in question, and, indeed, very rarely are in such a well-lighted highway.

Robert also said that traffic was travelling in both directions, and on being asked how I got through it, he politely informed me that at the speed I was going I would have "got through anything." Despite my questionings, etc., I was fined £1 and told to stand down. Yet an English court of justice is the fairest in the world (?). Wishing your of justice is the fairest in the world (?). Wishing you happer every success.

A. J. Sheffield.

Obliging P.C.s.

In comparing the exploits of P.C.s Charming I and II (referred to in recent issues of your journal) with those of their colleagues of 15 or 16 years ago, one finds that the

latter outshone the present-day officers in assisting perplexed motorists. To-day, motorists more or less regard Are they Fewer ? Robert as an uncertain quantity, and most of us can bring to mind incidents in which a constable has been a source of help and kindness and other times when he has been a decided nuisance. The police now regard

motoring in a critical light. However, in years gone by, P.C. Charming was to be met everywhere (although he knew little or nothing about car mechanism), and I remember a story of a man who returned to his town office in his car to attend to some private business in the quiet of the evening, leaving his car outside. His duties finished, he got his hat and coat, and, feeling a sharp walk home would do him good, he started off, his mind pre-occupied, and forgot all about his car standing in the street.

In the early hours of the morning he was aroused by the telephone bell, and, getting up, he was surprised to hear the police inspector state that one of his men had found the car outside his office; the inspector concluded by asking what he must do with it. Not wishing to return to town at that hour, the gentleman arranged with the inspector to put the car in the police station yard until later.

In the explanations that followed when the motorist called for his care the inspector.

for his car, the inspector told of the great and laborious struggle he and six of his men had had in pushing the car about a quarter of a mile to the station yard. The obliging but inexperienced ones never thought to release the hand-

Motoring Insurance Principles.

In the article on motor insurance published on January 21st a correspondent mentions a complaint that is often beard from those who have been unfortunate enough to suffer the "total loss" of their cars—

namely, that the amount paid by the A Reply to "A.H.S." insurance company is below that which they expected and below the value of

the car as stated in the policy. It is a fact that a great number of persons insuring do not trouble to read their policies, but it must be admitted, on the other hand, that

the wording of the clause dealing with this portion of the risk is often somewhat deceptive.

Whilst we cannot reasonably expect a new car for the old, in the event of the latter having been damaged beyond repair, it is worthy of note that some companies undertake to pay an agreed amount in the event of total loss during the currency of their policy. On renewal a further amount is fixed to apply during such renewal period, and if the reduction in value is appreciable the renewal premium is also

The exact drop in premium can be ascertained from the premium chart contained in the current prospectus of the company. Reference to a chart of this type will show premiums fluctuate more with the horse-power of the

ear than with its value.

The writer of the letter referred to asks what justification The writer of the letter referred to asks what justineation can be found in grading the premiums very largely on the R.A.C. rating of a car and whether we are safer when driving cars made on mass-production principles, as, for these, lower premiums are asked.

Leaving out the question of third-party risks, which must, of course, depend more on the skill of the driver than on the horse-nower and value of a car, it is evident that the

the horse-power and value of a car, it is evident that the insurer's liability under the "damage" section of the policy varies considerably according to the car insured. For example, the reinstatement of a damaged chassis of a car worth 2,000 guineas is a far more expensive business than in the case of a #200 car, put only because this life. in the case of a £200 car, not only because of the difference in value of the actual replacement parts, but because the fitting charges are higher. Again, where cars are made on mass-production principles, repairs also are often possible more or less on the same lines, and spares can be obtained at mass-production prices.

These facts explain very largely the reasons for the fluctuation of premiums according to R.A.C. rating and why concessions are granted to owners of mass-produced cars

Motor business is, speaking comparatively, but a young branch of the insurance world; even the oldest-established companies in this market have but recently completed statistics of claims and resultant costs over a sufficient number of years to form a reliable basis on which to revise their premiums if necessary. It is possible, therefore, that certain changes in policies and premiums may take place in the near future.

At present, if one desires to insure for third-party risks only, the premium often increases with the horse-power of the car, which does not appear altogether fair and just: possibly some alteration may be made in the rates for this I am told also that experience has shown that the driver of the large luxury car is less expensive in proportion than the owner of the lighter vehicle. This will probably mean increased premiums in the latter case and may even counterbalance the reduced premiums made possible by mass-production methods.

As some persons are no doubt aware a cumulative homes has already been adopted by two or three companies. This idea should certainly be worth while, as an incentive to more careful driving. It is to be hoped that it will be more widely adopted.

The question of insurance is of importance to every car owner, and it is therefore advisable that the policy-holder should know more than a "general outline" of the protection tion granted to him. This knowledge can be obtained only by reading the document carefully. If, then, the assured is dissatisfied with the cover granted he at least has the opportunity of the cover granted at least has the opportunity of the cover granted he at least he cover granted he at least has the opportunity of the cover granted he at least he cover granted he cover granted he tunity of obtaining more adequate protection elsewhere, which is better than a fulse sense of security gained by a very casual perusal of his policy.

The fact remains, however, that certain persons never read their policies, and it is usually these very people who are most discontented when disputes arise over their claims.

* * Questions of insurance are dealt with in this issue * under "Topics of the Day." An increase in premiums is unlikely .- ED

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

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

2-seater - £220 4-seater - £225 Coupé (detach-

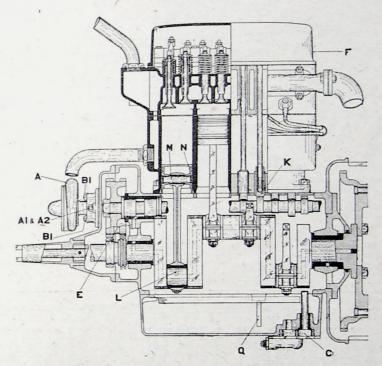
able head) - £235 Sports 2-seater £240 Semi-Sports 2 or 4-seater - £260

Coachbuilt Coupé - - £285

Saloon (Weymann) - £285 Saloon

(Coachbuilt) £295 NOTE.—All models have 4-wheel brakes, seating in real leather, automatic screen wiper and lavish equipment. Choice of body colour.

The 20 h.p. engine of "The Nippy Nine."



The object of these announcements is to make clear the remarkable combination of up-to-date features of design which make the 9/20 h.p. Rover car so marvellously efficient. Above is a sectionised view of the four-cylinder overhead-valve engine (60 mm. bore, 95 mm. stroke, 1,074 c.c.). At A is seen the pump which circulates the cooling water

(costlier to make, but more efficient than thermo-syphon). At C is the pressure oil pump, which forces oil through the hollow crankshaft to the inside of the big-end and main bearings and to the overhead-valve gear. Here alone are two features which give "The Nippy Nine" much of its tireless stamina and power—20 h.p. for £9 tax. (To be continued.)



Have you seen the "Book of the Rover Nine"? We are holding a copy against your request—write now for it. The Rover Company, Ltd., 61, New Bond St., W.1, and Coventry.

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CURRENT PRICES. 4-cyl., Type 40, Touring Model, Chassis only.

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10/20 H.P.

SPORTS 2-scater .. £165 Skiff £175 Two-Seater & Dickey £199 Four-Seater ... SPORTS 3-Seater ... £199 £215 COUPE £225 GRAND PRIX £265 SAN SEBASTIAN . £315 " Supercharger Model (110 m.p.h.) £410

HIGHEST PRICE FOR YOUR USED CAR IN PART EXCHANGE. 1927 San Sebastian model complete with wings. screen, hood, etc., mileage 250, cost £380.

1926 in splendid condition, painted red with black wings.

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1925 de Luxe model 2-seater and dickey, £75 dition throughout.

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1924 Sports 2-seater. £65 several other extras, in excellent condition.

1924 de Luxe 2-seater £65 licensed, in splendid condition.

1924 3-seater, English £55 condition.

1923 de Luxe 2-scater £50 and dickey in good £50

Part Exchanges and Deferred Terms

EY & CO., LTD., 31 BROOK ST., Bond St., W.1 **GORDON WA**

OUR READERS' OPINIONS (contd.).

Mud on Wings

Is it not time that some method of preventing the outside of the rear wings of a light car from being smothered in mud was introduced? After a run on a muddy road

it is almost impossible for the passengers Soiling Passen- in the rear seats of my own light car gers' Clothes. to descend from the car without getting

which has been thrown on to the outside of the front half of the rear wings. Most light cars with balloon tyres seem to suffer from the same lack of protection. Maybe a reader can suggest a remedy.

W.E.P.

Man-handling Cars in Garages

I see in last week's issue of your journal mention is made of the harsh treatment cars receive when being moved about in public garages. It really is time that the subject should be aired. To spend only a few minutes

in a public garage is sufficient to demon-strate the want of respect for other to Blame. people's property that is common in all

Although a great deal of blame for the way cars are pushed and pulled about rests on the garage hands I contend that designers and builders of cars are chiefly to blame. A car and its body are designed to be propelled by the engine only. There is not a car on the market, to my knowledge, where any provision is made to man-handle it without pushing and pulling by means of mudguards, lamps, door catches and such light fittings,

I am sure a lot of good could be done to improve these conditions if you air the subject fully. Perhaps it will encourage car builders to give a little attention to the matter and some of your many readers to put forward some practical suggestions. The provision of heavy and very securely attached handles or gripping fittings is not a simple matter; their shape and where to fit them requires a lot of consideration.

I have given a lot of thought to the subject myself for my own car, but have not found a simple solution of the problem. Experience has resulted in my always leaving my car out in the open when away from home rather allow it to be man-handled in a garage.



Motorist (after continual trouble): "Will you help me

Farmer: "But you ain't going to push it right to the garidge in the big town, mister, are ye?"
Motorist: "No, but you can give me a hand to get it to the edge of that cliff!"

An Ideal Light Car?—the Care of Batteries.

A Suggested Specification.

In the course of the correspondence which has been going on in your columns recently on the subject of whether three speeds are better than four, one correspondent expressed the

opinion that the ideal car would have only one gear. In discussing the question with some of my friends recently Practical Features. "What specification would comply with the ideal for a

light car?

This question resulted in a very interesting argument. We agreed to confine ourselves to features which are quite practicable and not to indulge in flights of fancy which our grandehildren may, perhaps, see put into execution, but which are impossible at the present time. In other words, it was our object to draw up the specification of the car which we should like to own if we could afford to have a light car specially built. After a very long discussion we agreed on the following points:-

Engine: four-cylinder, 1.496 c.c., detachable cylinder barrels and detachable head, side valves, three-bearing crankshaft, forced lubrication, dual ignition, cooling by thermosiphon circulation aided by belt-driven fan (helt-driven so that fan could be put out of action easily in winter).

Transmission: right-hand controlled four-speed gearbox of the constant-mesh type and having helical cut teeth; single dry-plate clutch in unit with engine and gearbox; enclosed propeller shaft and final drive by underslung worm to fully floating rear axle.

Suspension : rear, cantilever ; front, semi-elliptic ; mediumpressure tyres.

Brakes: Brakes: internal-expanding on all four wheels, operated by pedal: hand lever operating separate shoes in the rear wheel drums.

Conchwork, etc.: according to taste and purpose for which required: following points essential: driver's door, inde-pendently adjustable seats, aluminium body panels, cellulose finish, side screens or windows of an easily operated wind-up

There were many other minor points mentioned, but the above were the main features; it would, I think, he very interesting to your readers and of great value to manufacturers if other owners gave their views.

H. N. HOLLOWAY.

The Effect of Overcharging on-

In a recent paragraph on battery life, "Focus" mentions several abuses to which accumulators may be subjected, and among them is that of overcharging. I am open to correction, but I have, so far, never been able

to find any reason, chemical, physical, or electrical, why an accumulator should -Battery Life. be damaged by overcharging, nor have I ever found anyone who could tell me just how the damage (if any) is caused. The irreparable harm resulting from over-discharging, from allowing the battery to stand idle, and from overcharging in the sense of passing too heavy a current through the cells, is well known. Overcharging in the latter sense, however, is quite impossible with the

electrical equipment of a modern car. I have heard an accumulator likened to a dog; it must have regular exercise or it goes mangy. Thus, to keep an accumulator in good fettle it should be used; it must fre-quently be charged and discharged, and never allowed to stand idle for long periods, especially in an undercharged condition.

The only effect, so far as I am aware, which results from continuous overcharging is the decomposition of the water of the electrolyte, with the result that more frequent attention to "topping up" with distilled water is certain to be necessary.

A test for an overcharged battery other than that involving the use of a hydrometer is the application of a I frequently test my battery by applying the voltmeter. I frequently test my battery by applying the voltmeter leads to the plug sockets I have fitted for use with an inspection lamp. If the instrument records 2 volts per cell (i.e., 6 volts in all) it may be assumed that the battery is in a normal condition, being neither over nor undercharged. It may record as low as 1.8 volts per cell (say, 5½ volts for the battery), in which case a long constitution of the property with red displayers in a normalized visit. tinuous charge (with no discharge) is an immediate vital necessity for its well-being. I should not regard the battery as being in an overcharged condition until the record was 2.5 volts per cell (it may go to 2.6 volts per cell in some cases), or, say, 7½ volts for the battery. The test should be made when the engine is stopped. For those who have a 6-cell battery the danger limit will, of course, be 11 volts and the meter if the battery is overcharged will record 15 volts. n41



OUR READERS' OPINIONS (contd.).

A Cock and Bull Story.

My thanks to "Focus" for the "cock and bull" story; I am afraid it is one! Actually, the cock has always typified the boaster in fable, whilst the thick-headed bull is just such an audience as a "crower" would prefer. The French, I am told, say "cock and ass."

LIGHTLINE.

Lubricating Road Springs.

As a motor fitter and mechanic I agree with most of what "Marmaduke" says on lubricating road springs, but I do not agree with the idea, which he suggests, of placing small

Grease, Engine of the leaves. As one of the great arts oil and Graphite, of spring making is to get each leaf to

fit or bed as close as possible to its neighbour, placing small strips of leather at the ends of the leaves is obviously preventing the spring from functioning as it is intended to. I have had it on my repair card to take off gaiters and not to refit them-not once, but many a time, and I have seen quite good gaiters thrown away as serap.

In my opinion, the best way to lubricate road springs is as follows :- Jack up the chassis, to open the leaves of the springs a little, mix a quantity of gearbox grease, engine oil and a 2d, packet of Zebra blacklead to a very thick cream. and with a painter's old flat brush smear the grease well into the leaves. If this is done every six or eight months the owner will feel the benefit. PRACTICAL.

Headlights in Fog.

Your correspondent "A.H.R." is mixing up two problems, that of colour correction in the photographic rendering of coloured subjects and that of the disturbing effect produced

by a hazy atmosphere in taking photographs. The former problem has been Coloured Glasses, solved as he suggests, by the use of Panchromatic plates and suitable colour filters. The latter problem is somewhat more difficult, but

has been partially solved on somewhat similar lines by the use of Panchromatic plates and yellow or orange filters. is well known, an ordinary photographic plate is chiefly sensitive to ultra-violet and violet, and these rays are much more diffused by haze conditions than the rays of longer wavelength-yellow and red.

We have made some experiments, attempting to use our own colour filters, but they have not been successful, owing not only to the cost of the filters themselves, but to the fact that their construction makes them susceptible to deterioration by reason of the atmospheric conditions to which they are subjected in such use. The problem seems to us to be much more suited to the consideration of makers of coloured ILFORD, LTD.

Scientifically Coloured Fog Screens.

With reference to my letter published in your issue of January 21st, and your footnote, it is obvious I have not succeeded in making my suggestion intelligible. On the face of things, the problems confront-

Obtaining More ing the photographer and the fogbound priving Light. Independent would appear to have very much in common. The former has found that a filter which is simply orange or yellow in colour does not give the maximum benefit by a long way; the question of colour must be approached from an opticallyscientific standpoint. Certain carefully selected dyes have given a result very much superior to those obtained from ordinary yellow or orange stains in the case of the photographer; is it not reasonable to suppose that the same might

apply in the case of fog screens? I may, of course, be wrong in thinking that the problems are optically similar, if not identical; on the other hand, it seems possible that the scientifically selected dyes so use-

ful in one case may be useful in another.

To avoid misunderstanding, may I say that I am quite aware that orange caps are used by photographers, although not for the purpose in question? I have just satisfied myself by experiment with an enlarger fitted for electric light that the crappe cap out of the light passed the orange can cuts out quite 50 per cent, of the light passed by the optically efficient Aviol filter. If motorists driving through fog could obtain 50 per cent, more driving light without back-glare I think they would welcome the change.

A.II.R.

A Peugeot Club Proposed,

For some time I have been considering whether or not it For some time 1 have been considering whether of normalized would be possible to establish a Peugeot Seven club. If any of my fellow readers of your periodical think well of this project 1 shall be glad if they will communicate with me to this end.

F. E. WOOLHOUSE.

22, Latymer Road, Lower Edmonton, London, N.9.

The Most Accessible Light Cars.

Which is the most accessible and ensiest overhauled light car in production to-day? It would be interesting to have the views of owner-driver mechanics and those of garage proprietors who handle all makes of Ease of car without previous knowledge or ex-

Maintenance. perience. Some of the simplest opera-tions on light cars can be extra-ordinarily irritating owing to the inaccessibility of a nut or serew, and many of these annoying features are quite unnecessary,

CONDENSED CORRESPONDENCE.

Mr. G. Lester writes to point out that the system of issuing a guarantee with used cars was in operation so long ago as 1916; in that year he purchased a guaranteed secondliand car from The Light Car Co., of Euston Road, London.

Mr. L. Fontyn writes to express his appreciation of the practical assistance and advice which he has received from Wolseley Motors, Ltd., in connection with his 1922 Wolseley, and goes on to say that owners of these cars can rest assured that their interests are really being studied by the present management.

The Midsomer Norton Motor Co. is praised by Miss M. V. Gregory: she recently experienced magneto trouble some nine miles from Midsomer Norton and this concern towed her ear to their premises and fitted another magneto so that she could continue her journey the same night, the charge being very reasonable.

Suttles' garage and cafe, near Biggleswade, on the Great North Road, a photograph of which was reproduced in a recent issue of this journal, is the subject of a glowing letter of praise from Mr. G. Gunton. He recently called there for lunch and was very pleased with the food provided and the charges made, whilst the expediency with which a small adjustment was made to his car is also commended.

INFORMATION WANTED.

COVENTRY PREMIER.—An instruction book for the 1921 model is wanted.—N. Horton, 234. Holly Lane, Erdington, Dissipated Birmingham.

MORGAN GEARBON .- The experience of any reader who has fitted a Hambling three-speed gearbox to a Morgan would be appreciated.—J.D.R., Abbeyfeale Station, Ireland.

LAGONDA.—Any render who is willing to lend or sell an instruction book dealing with the 1919 11.8 h.p. model is asked to communicate with S. E. Brewer, 33, Tunley Road, Harlesden, London, N.W.10.

Morgan .- Any reader who is prepared to lend or sell an instruction book for the 1923 Grand Prix model, fitted with an 8 h.p. J.A.P. engine is asked to write to-J. Hipper, 6, Trellis Street, Malmesbury Road, Bow. E.

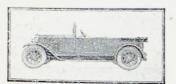
Singer.—Any reader who is willing to lend or sell an instruction book and spare parts list for the 1923 10 hr. model is asked to communicate with—A. W. Turn Tredegar, Frimley Green Road, Frimley Green, Surrey.

ROVER EIGHT AND BELSIZE-BRADSHAW .- The opportunity to borrow or purchase instruction books dealing with the 1922 or 1923 models of these cars would be appreciated.—S. Plant, 28, Keeling Street, Wolstanton, Stoke-on-Trent, N. Staffs.

F.W.B. FOR JOWETTS .- Owners of 1926 Jowetts who bave equipped their cars with the front-wheel brakes marketed by Hydraulic Cable Brakes, Ltd., are asked to give their experiences, with particular reference to efficiency and ease of fitting.—G. Ewins, 338, Boldmere Road, Erdington, Birmingham.

TO CORRESPONDENTS. -Please write clearly on one side of the paper only and leave a wide margin. It helps!

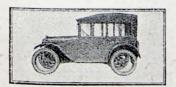
INSPECTINSPECTCOMPAREWHEN DECIDE Of HENLYS



Henlys have these wonderful 9 h.p. FIAT Models in stock.



This ALVIS SPORTS SALOON is the finest car of its type on the road.



For Best Deliveries of AUSTIN CARS-try Henlys.



The New SWIFT is a Car you must see-at Henlys.

T'S more satisfactory—safer—easier—and better in every way to choose your car at Henlys. With 200 cars of all the leading makes for inspection, you can make an accurate comparison—and a decision which will bring real and lasting satisfaction.

If you have a car to exchange, we will certainly give the very highest allowance for it and, incidentally, our deferred terms financed by ourselves are the finest yet introduced in this country. Then, after purchase, Henlys unique Service-Plan ensures for you true economy of upkeep. Re-

member, too, that we have an enormous selection of soiled and used cars from £50 upwards. Fullist will be sent you by return, and every car has our name behind it. Our reputation is your complete protection.

Why not call and judge for yourself. Even if you do not intend to buy at present, you are assured of courteous attention.

We are the London Specialists in the following makes:-

SWIFT WY FIAT AUSTIN V CITROEN LEA-FRANCIS

91, 155, 157, Gt. Portland St., W.1.





"Don't be afraid of Bond St."

You will be making a great mistake if you think that the most distinguished street in the West End is the wrong place to bring that old light car of yours.

At No. 150, New Bond Street you will find the best selection of the latest models and you will get the very best terms for a Part Exchange transaction.

Meanwhile, why not find out the Real Value of your present car? We will give you an approximate quotation by return of post. Write for our booklet.

Warwick Wright, Ottol.

(Mayfair 2904)

It Makes you Think!

Race after Race—Record after Record—Reliability Awards by the score—all fall to those who use Wakefield CASTROL.

It makes you think—for maximum efficiency and reliability are no less important in everyday motoring than in the competition field. And CASTROL from the Pump costs no more than many inferior oils—sometimes less.

No wonder that over 200 Leading Motor Manufacturers recommend—

WAKEFIELD

See the Wakefield Chart at any Garage—try the CASTROL grade recommended—and note the difference in the running of your engine!

C. C. WAKEFIELD & CO., LTD.

All British Firm.

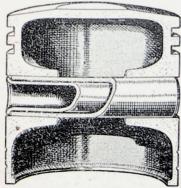
Wakefield House, Cheapside, London, E.C.2



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

Locating Gudgeon Fins.

In the majority of modern light carengines the hollow gudgeon pins float in the piston bosses and are prevented from scoring the cylinder walls by means of soft metal end pads. It happens sometimes, say, during the course of an overhaul, that these pads are lost or are found to be worn so that they are of no further use. If new pads cannot conveniently be obtained, a very satisfactory substitute can be made by passing a piece of copper tube through the bore of the pin and "belling" out each end, as shown in an accompanying sketch. The ends must be "riveted" so that the tube is held tightly in the pin.



A piece of copper tubing used as a substitute for lost or worn gudgeon pin retaining pads.

Automatic Lubrication.

Where screw-down greasers are placed in a horizontal position, automatic lubrication, which allows a limited amount of grease to be fed into the bearings under ideal conditions—i.e., when the car is actually moving—may be obtained by fitting each greaser cap with a band clip and bob-weight. Before starting the journey the cap is screwed in until the bob-weight is just past top dead centre, gravity, assisted by road shocks, causing it to drop to the bottom, screwing up the cup as it does so. Pairly large grease cups will, of course, increase the supply. The best actual weight of the bob must be found by experiment, but it should be enough to cause the cap to turn through half a revolution in about 20 miles' running.

A Morgan Tip.

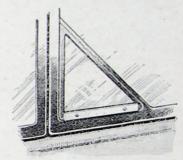
Morgan owners are sometimes inconvenienced by the starting-handle dog engagement pin working loose in its socket at the end of the countershaft and getting lost. This can be prevented by making a saw-cut (with a hack-saw) down the centre of the pin from its narrow end as far as the circumference of the shaft. A cold chisel may be used to open out the slit a little so that the pin cannot fall through the hole. Care should be taken to refit the pin with the saw-cut at right angles to the shaft, otherwise the starting-handle dogs will tend to close up the slit and the work will be undone.

Care of Brakes.

In spite of the great importance of having efficient brakes, it is surprising how little attention the average owner-driver gives to them apart from making adjustments. To keep the joints of the braking system in proper order, time and patience are required. Periodically the joints should be taken apart and washed in paraffin, and before reassembling the moving parts should be given a thin covering of grease. Care should also be taken to clean grease-gun nipples and oil ducts thoroughly. If the brakes are operated by wire cables it is more than ever desirable to make a frequent examination. Even a few frayed ends may be taken as a warning signal, and if the least sign of deterioration makes its appearance it is most unwise to postnone a renewal of the cable.

Removing Wet Tar.

Tar spots on bodywork can usually be removed when wet if treated with furniture cream into which a few drops of lemon-juice have been squeezed. The acid has the effect of dissolving the tar and the cream polishes up the resultant dull spot. There are, of course, tarremoving preparations on the market, but this resipe is useful in emergency.



An easy method of keeping down the signalling flap of a side curtain.

Preventing Draughts.

Signalling flaps often develop the irritating trait of refusing to close properly after the driver or passenger has withdrawn his hand from the aperture, with the result that an unpleasant draught finds its way into a car adjucent to the shoulders of the crew. To fit any form of spring is not advisable, because a glove may be caught up and impede the quick return of the hand to the controls. A slightly loss effective but, taking all things into consideration, a more satisfactory method is to load the lower edge of the flap with a small weight. This may take the form of a short strip of steel, a couple of holes being drilled through it so that it can be riveted or screwed in position. A coat of black enamel should be given to the weight before securing it in position.



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.

J.F.J. (New Cross).—It is possible to use bronze or copper for lining brakes, but we advise you to fit the asbestos fabric material which is standard on your Morgan.

J.L.N. (Kingston).—You should send the tyres in question to a reliable retreading concern for an opinion. It is difficult to give advice on this subject without first seeing the tyres, and, in any case, there is no hard and fast rule as to the fitness of a cover to undergo the process. H.F. (Rochdale).—Have you examined the magneto slip ring? Intermittent mistring which cannot be easily accounted for is often traceable to a fracture of this part, and if this is the case a new ring will be necessary.

H.H. (Newcastle).—An advertisement in our Miscellaneous Section might procure the spares you require. The makers ceased producing four years ago, but no doubt there are existing cars no longer in use from which the necessary parts could be obtained.

F.A.C. (New Cross).—It is usually quite an easy matter to lubricate the speedometer cable. Detach the whole length and withdraw the inner member from the outer. Apply light grease or vascline to the whole length of the cr.ble and replace it.



THE FLORIO CUP RACE.

L'Ouest-Relair, a popular French newspaper, states that the Florio Cup Race will not be held in Sicily this year, but at Saint-Brieuc, Brittany. The date is fixed for July 17th.

EALING AND D. M.C.C.

The annual dinner and dance of the Ealing and District Motor Cycling Club will be beld on Friday, February 18th, at Ealing Town Hall. The function will commence at 6.30 p.m. Tickets, 5s. double and 2s. single, may be obtained from Mr. J. H. Douglass, hon sceretary, 11, Lilac Gardens, Faling, W.5.

Secretary, 11, Lilac Gardens, Ealing, W.5.

J.C.C. YORKSHIRE CENTRE DINNER.

The annual dinner of the Yorkshire Centro of the J.C.C. was held last Friday evening at Powlony's Rooms, Bond Street, Leeds, one hundred members and friends attended, treluding Capt. Trubie Moore, the chairman of the Centre. The cups, spoons and other prizes won by the members during the past season were presented by the hon gen secretary of the J.C.C. Afterwards dancing continued until 2 a.m. cluded in the programme. The arrangements were made by the Centre hon, secretary, Mr. H. J. Smith, and were most ably carried out by Powlony's, Ltd.

A. C.U. NEWS.

The A. C.U has heaved the following open permits:—February 12th, Leede Motor Club, 8200 Reliability Trial; February 15th, Sutton Coldfield and North Birmingham Colmor Cup Trial; February 25th, South-Eastern Center Reliability Trial; March 19th, Fast, Midland Center Reliability Trial; Mr. A. V. Ebblewhite has been reappointed as an Ac.U. official timekeeper, grade A. Mesars. Acc. Ebblewhite and E. P. Willoughby have A. C.U. official measurers Application of affiliation from the following clubs with the composition of the following clubs with the foll

LONDON STRATFORD LONDON TRIAL

(Yorkshire Centre), and Caerphilly L.C. and M.C.C. (East South Wales Centre).

LONDON-STRATFORD-LONDON TRIAL.

Out of a total entry of 37, of which 12 were three-chiesers and light cars, 35 laced the starter at Sand light cars, 35 laced the starter and sour-wheelers showed up to consider able advantage over the sole molorcyclists. A very fine climb was made by A. T. Pryor fine climb was made by A. T. Starter (Morgan). Who was outstandingly last, and made it look very simple the Miss Roper loured up cashly of a little. Miss Roper loured up cashly of a little. Miss and made it look very simple the course then led to Waterworks, which, althout fluid and made it look very simple the course then led to Waterworks, which, althout fluid and made the look very simple the course of them led to Waterworks, which, althout fluid and made the look very simple the course of the made the keeping of a 20 mg sing a relieved by 30 miles of cross-county glong, which made the keeping of a 20 mg sing, which made the keeping of 14 gates rather amusium the opening of 15 mg and 15

Reports and Announcements of Sporting and Social Events:

NORTH-EAST LONDON M.C.C.

The club is holding its second annual dinner and awards distribution at the Comely Restaurant, Haymarket, on February 5rd, A horner extension until midnight has been granted, whilst dancing will continue till 2 a.m. Tickets and further particulars can be obtained from the hon, secretary, 65, Well Street, Hackney, E.S.

FORTHCOMING EVENTS.

January 28-29
Cardiff M.C. and C.C. Cardiff-Leicester-Cardiff 24-Hour Trial,
Combined M.C.s. Charity Dance at Alexandra Palace.

Woking and D. M.C. and C.C. Winter Trial. outhampton and D. M.C.C. and L.C.C. Annual Night Trial.

Oxford M.C. Annual General Meeting.

February 1.

J.C.C. Yorks Centre Annual General

February 3.

.E. London M.C.C. Annual Dinner and Prize Distribution.

February 6.

City of London M.C. Run to Tring. Wood Green and D. M.C. Social Run.

February 9.

Morgan M.C. Whist-drive and Dance at Ye Mecca Café, London

February 11.

Public School M.C. Annual Dinner and Dance. Oxford M.C. Annual Dinner and Dance.

February 12.

Leeds M.C., Ltd. ,£200 Trial.

February 16.

J.C.C. (South-Western Centre). Annual Dinner and Dance.

WOODFORD AND D. M.C.C.

WOODFORD AND D. M.C.C.

The annual dinner, distribution of awards and dance of the Woodford and District Motor Oyeling Club was held at the Method of the Club was held at the Method of the Club was held at the Method of Method o

R.A.C. PERMITS.

The R.A.C. has issued the following closed permits.—Pebruary 19th, Sutton Coldfield and North Birmingham A.C. Colmore Cup Trial; April 15th and 16th Scarborough and D. M.C. Reliability Trial.

P. M.C. Reliability Trial.

J.C.C. S.-W. CENTRE.

The annual dinner and dance of the J.C.C. ISouth-western Centrel is arranged for Februard will commence at 7.30 dancing will continue from 9 nm. is an extension of licence has been 3 fickets, which cost 10s. 6d. each, are obtainable from Mr. T. G. Hayter, Daion Bank Chambers, High Street, Southamoton.

WOOD GREEN AND D. M.C.

WOOD GREEN AND D. M.C.
Twenty-live members participated in the
Wood Green and District Motor Club's social
Fine to Reaching on January 16th. The sporting run to Modelin's Greve arranged for Januarry 30th has been postponed until February
Oth. A mystery run will take the place of
the morting run. On February 27th the club
is arranging a sweepstake trial, first, second
and third prizes consisting of motor accessorable the wine of which will be determined
by the number of competitors. The hon, secretry 1 M. C. E. Harling, Wood Green, N.22.

LEEDS £200 TRIAL.

LEEDS £200 TRIAL.

Considerable interests is being taken in the £200 One-day Redisability Trial, to start from Lords Town Hall on Saturday, February £2th, under the auspices of the Yorkshire Centre of the A.C. and the Leeds M.C. Lid The R.A.C. has is used the necessary permit, and hoth in the ear class and that for three wheelers good sport 13 expected over the 100-mile course.

The route less via Guisley, fikley, Kelghler

The route he vice (ulsely filter). Religher (ale, There with the vice (ulsely filter). Harden hand, Hollin Park and Haworth to Goure Inn, and from Sippery Ford to Lotherdale and Stiplon for lunch. The return will be made by way of Belden Bridge, Jimmies (Bide, Megunton, Blubberhouses to Pob Park, Fod. Medical and the foliation of the beautiful for the first stiplon for lunch and the first stiplon for the first stiplon for lunch and the first stiplon for the first stiplon for lunch and the first stiplon for the first stiplon for lunch first stiplon for the first stiplon

ULSTER AUTOMOBILE CLUB,

ULSTER AUTOMOBILE CLUB.

The annual meeting of the Ulster Automobile Club was held in Belfast on Thursday, January 20th, when the activities of the pasty of the

M.P.
During an interesting discussion the chairman said he understood that legislation was going to be introduced in the Ulster Pariament dealing with pedestrians. It might be laid down that local authorities would not to make regulations and provide special crossings for pedestrians, who would not be allowed to cross at any other point.

"Here she is, sir, yours for a song!"

"Thanks, but I've only pound notes on me and I don't want to break into one





The Winner
Royal Automobile Club

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

70 m.p.h. GUARANTEED

EVERY Lea-Francis 2 or 4-Seater BROOKLANDS Sports Model is guaranteed to give 70 m.p.h. Brooklands certificate will be supplied if desired. (B.R.C. charge extra.) These Models include:—

WONDERFUL BRAKES (Servo operated).

AMAZING ACCELERATION,
AMPLE SEATING ACCOMMODATION,
SPEED and SAFETY.

Full equipment including 2 spare wheels.

Demonstration runs and full particulars on request.

Brooklands Sports Model £425, other Sports Models from £325

LEA & FRANCIS LTD. and reduced, COVENTRY.
London Showrooms: 118, Gt. Portland St., W.1.

Quality Cars from £210

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

DEFERRED PAYMENTS AND EXCHANGES CAN BE ARRANGED

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- 1. For more than three years we have been selling used Cars with a written guarantee.
- 2. Over 2,000 of these Guaranteed Cars are now in the hands of satisfied clients.
- 3. We are pioneers in the sale of used Guaranteed Cars.
- 4. Our guarantee is in favour of the client in letter and spirit.
- 5. WE NEVER LET YOU DOWN.
- 6. Our used Guaranteed Cars are the best bargains obtainable.

100 GUARANTEED CARS

always in stock from £25 to £250 Complete List Free.

EASIEST EXCHANGE & DEFERRED TERMS ON ANY MAKE OF NEW OR USED CAR

YOU ARE SAFE

WHEN YOU DEAL WITH



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

'Phones . Museum 3081, 3143 and 0140.

AROUND THE TRADE.

Messys, Hooley's Garage, 14a, Upper College Street, Derby Road, Nottingham, the makers of the Hooley steering damper for Morgans, advise us that the price of these fittings is now 20s. each.

The Palmer Tyre, Ltd., 100-106, Cannon Street, E.C.4, have issued a new price list, which came into force on January 17th. The price of the 710 mm. by 90 mm. Flexicord (beaded edge) cover is now £2 15s.

Mr. E. H. Lupton, of Hutton Rudby, Yorks, has been appointed official representative for Romae Motor Accessories, Ltd., The Hyde, Edgware Road, London, N.W.9, in Northumberland, Cumberland, Durham and Westmorland.

Gutta Percha and Rubber (London), Ltd., 30-32, Bolsover Street, Great Portland Street, W.1, announce that the prices of Gutta Percha cord tyres have been subjected to big all-round reductions. Copies of the new (temporary) price leaflet may be obtained by readers upon application to the address given above.

The Newnham Motor Co., 237, 243 and 245, Hammer-smith Road, W.6, announce that they are now prepared to issue a written guarantee with their second-hand cars and that this has been approved by several of the principal manufacturers. The company has at present a stock of 130-150 used cars and the list covers practically all requirements.

An extremely useful and interesting booklet called "Aluminium Data" has been issued by the British Aluminium Co., Ltd., head office, Adelaide House, King William Street, E.C.4. It contains sectional drawings of some of the patterns of beading and so forth made by the company, and the weight in pounds per foot is given in each case. There are also very handy tables setting out the dimensions.

We have received a copy of "The Taylor Buyers' Guide," a useful little hooklet issued by H. Taylor and Co., Ltd., 49-53. Sussex Place, South Kensington, S.W.7. It contains a wealth of useful information, including price lists routes and distances, particulars of insurance policies. taxation and car licence duty tables, and the concern's terms of business and service. Interested renders can obtain copies upon application.

Following the closing down of the London depot of Lagonda, Ltd., Major W. H. Oates, O.B.E., who has been London manager of Lagonda, Ltd., for the past 17 years, is taking over the premises at 195, Hammersmith Road, W.6. from February 1st, as Lagonda agent and repair specialist. As he is retaining the majority of his old staff he will be in the position to offer the same service as was previously given at the Hammersmith depot. Major Oates has written occasional articles for The Light Car and Cyclecar and has achieved many outstanding successes in road and track events at the wheel of Lagonda light cars.

The Leverett Kearton Co., Ltd., 79-85, Davies Street. Oxford Street, London, W.1, have shown us one of the road maps which they are giving away with every K.L.G. sparking plug they sell. The maps are printed on very tough paper cloth, which should stand a considerable amount of rough usage, and fold up to a convenient size to carry in the pocket. On one side is a map of England and Wales drawn to a scale of approximately 12 miles to the inch; it is intended primarily for planning long journeys, and for this reason only the most important roads are shown. On the opposite side is a very good large-scale map of London and its suburbs, together with useful street guides for helping motorists to find their way through twelve of the principal cities of the country.

ALL MAKES IN STOCK FROM £25 TO £100.

- 1. To Buy a Good Used Car
- 2. To See 100 Small Cars
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EXCHANGE

We will quote you a definite allawance per return for your present machine which can act as deposit if desired. Balance over a period

WRITE for our Daily Lists and Terms, we won't worry you.

ARE

LIKE THIS

Every Car is sold on the understanding that if you are not satisfied for any mechanical reason, return the Car and your money will be credited on any other

PHONE to see if we have your favourite make in stock.

WRITE US FOR OUR TERMS OF ONE-TENTH DOWN. ------

£100 and 12 h.p. One Roof without being Worried to Buy.

Any Offered Elsewhere. A GUARANTEE

DELIVERY

and Collection anywhere in England, Scotland or Wales, £2-10-0 extra. You are safe in dealing with us through the Post. Your projection

and inspect our stock every day.

Benmotors 30-32, High St., Wandsworth, Phone Battersea 1509.
Next the New Town Hall. S.W.18. Telegrams—"Benmotas. Wands, London.

Next the New Town Hall. S.W.18. Wands, London.

THE WISE-MAN OF THE ROAD.

STOTT ANTIBOUNCE CLIPS THE

are absolutely efficient Shock Absorbers for any make of car, they fit on to the springs themselves and will effectively counteract all roll and sway due to potholes or cornering.

TO CLYNO OWNERS.

The following is an extract from a letter from a Clyno owner:—
"Since the Clips were fitted I must say that the difference is surprising. The car is altogether steadier and more comfortable, and I can only say to you what I say to various people I meet, i.e., 'The efficiency of such a simple fitment is an eye-opener.'

PRICE 11/6 per pair.

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

RICHARD BERRY & SON,
Department "A,"
MAFEKING ROAD, SMETHWICK.

Phone: Smethwick 631-2.

"Springs, Smethwick."

Comming and the second and the secon





You use it with water—therefore, IN ONE OPERATION you clean and burnish your car, at a cost of NEXT TO NOTHING (one pint makes 12 pints). You keep your car like new, preserving the critical lustre and beauty in very part of it, INSIDE AND OUT. prolonging the life of the finest author.

ONE TENTH THE COST

FLUID

surface.

ONE THIRD THE LABOUR

0

Huttonize

your car

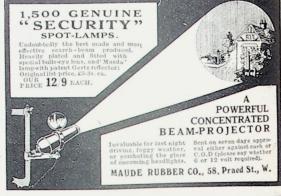
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A HUTTONIZED CAR WILL NOT RAINSPOT.

The greatest boon ever invented for the owner-driver, the motor garage and the home.

If your garage or dealer does not stock Huttomizing Fluid, send 3/6 for a pint cr 2/3 for half-pint, post paid, together with his name and address.

BRITISH COMMODITIES LTD. Huttonize New House - Hatton Garden, E.C.1 you'r Home A BRITISH INVENTION Phone: Holborn 5969. EXPORT ENQUIRIES INVITED. Factor, and dealers not yet stocking should send in an immediate enquiry. PRESERVES THE ORIGINAL LUSTRE AND BEAUTY OF ALL POLISHED SURFACES IF YOU VALUE YOUR CAR & YOUR HOME Start the Hutton Habit:









Don't risk it! That new car will feel before the Summer's Fit a here.



REGISTERED TRADE MARK

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BROOKS Quality - 18/-INDUSTRIA Quality 14/6

Laccording

J. B. BROOKS & CO., LTD., 73, Criterion Works, Birmingham



MORGAN OWNERS cure your STEERING WOBBLE

by fitting a HOOLEY STEERING DAMPER. Prov. Pat. 22592/26

Vide "The Light Car and Cyclecar."

"We tested one of these dampers on a staff Morgan and the added comfort it gives to the driver is surprising every suspicion of wheel wobble is completely damped out."

Price 20/-. Postage extra.

HOOLEYS' GARAGE, Derby Road, Nottingham.

ANEW HOOD FOR 9/6! Make yo

present hood last two or three times as long, look much smarter, and be absolutely waterproof by applying

ACCARA HOOD DRESSING

You simply paint it on, yet it penetrates the bood and becomes a part of the fabric. Your hood will remain soft becomes a part of the fabric. Your hood will remain soft and pliable under all conditions, and will not crack or stiffen. Supplied in three qualities, state which required. Mohair and Black Hoods—Jet Black. Canvas Hoods—Khaki Leather or Imitation Leather—Lustre Black.

CUARTTINS 9.6 for 4/5 Souter Care. PINT TINS 6/6 for 2/3 Souter Care.

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If complete satisfacti n is desired, take no other but "ACCARA."

The Finesse of Driving

The Ninth Edition of this invaluable manual is a complete guide to the niceties of safe and efficient driving, particularly useful to the beginner in motoring.

2/6

Of all principal Booksellers and Bookstalls or direct from the Publishers 2/9 post free.

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Take advantage of this opportunity and fit action wings made.

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ALSO ALL TYPES OF RADIATORS

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JANUAR

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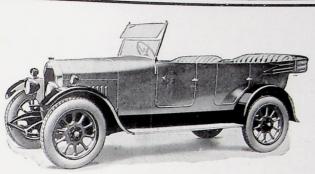
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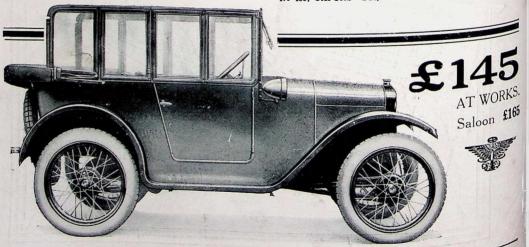
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