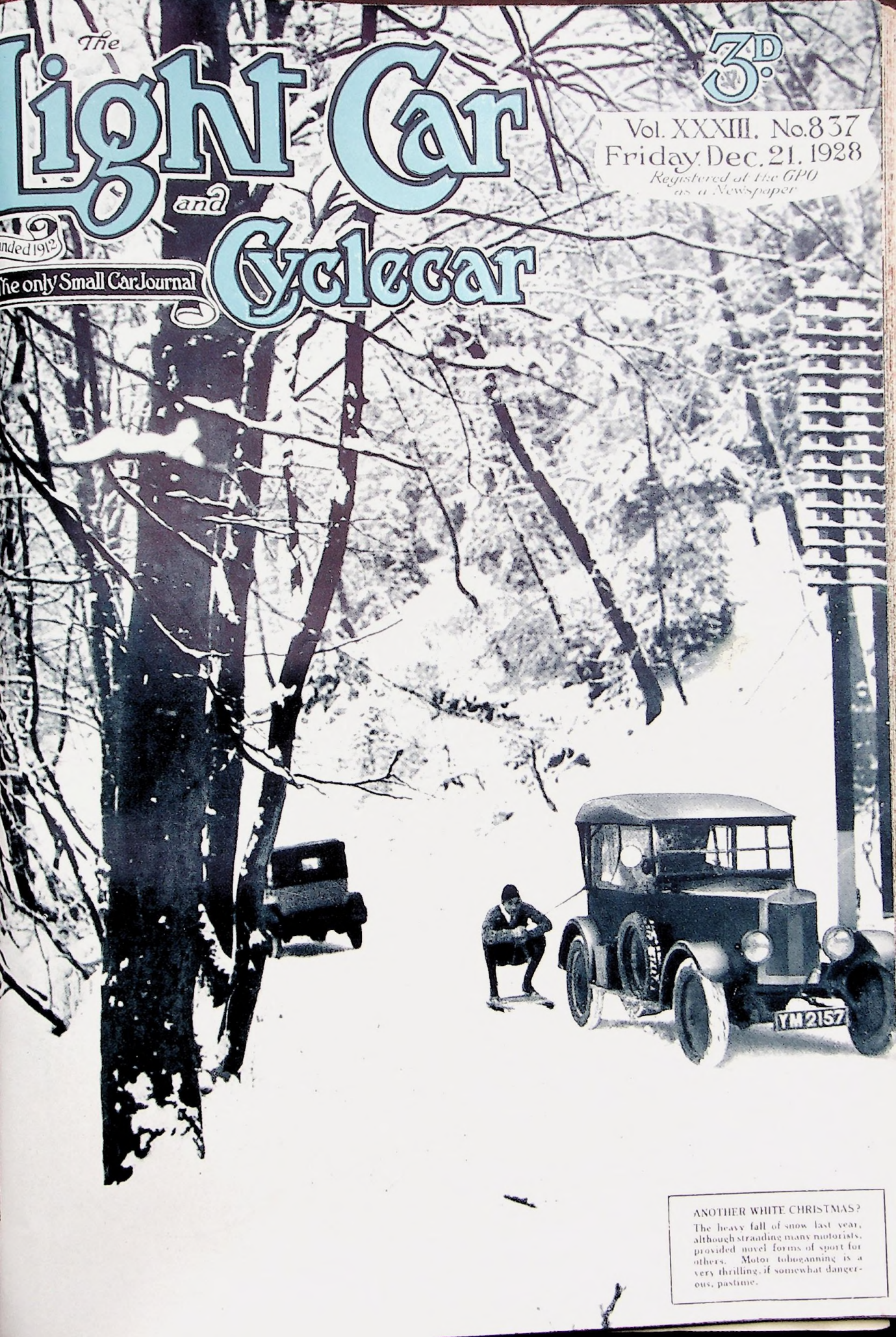
The
Light Car and Cyclecar

3D.

Vol. XXXIII. No. 837
Friday, Dec. 21, 1928
Registered at the GPO as a Newspaper

Founded 1912
The only Small Car Journal



ANOTHER WHITE CHRISTMAS?

The heavy fall of snow last year, although stranding many motorists, provided novel forms of sport for others. Motor tobogganing is a very thrilling, if somewhat dangerous, pastime.


The
Light Car
and
Cyclecar
FROM stage coach lumb'ring on its way
To "steamer," thence to petrol, and to-day
To perfect cars, all types and sizes ranged
Upon the King's highway—yes, times have changed;
Yet still the same old greeting year by year
We offer to our friend, the reader, here—
A Merry Christmas.
GILBERT RUMBOLD

NOTES AND GOSSIP OF THE NEWS WEEK

ON OTHER PAGES

LIGHTING-UP TIMES.

Saturday, December 22, 1928.

London ..	4.21	Edinburgh ..	4.6
Newcastle ..	4.6	Liverpool ..	4.22
Birmingham.	4.22	Bristol ..	4.31

Moon: Full, 26th.

This Week.

Apart from features which are of a topical nature at this festive season of the year, we include two main items of more than usual interest. The first is the second article of the series "Light Cars of 1929 Reviewed in Detail"—the car being the ever-popular Austin Seven—and the second a detailed programme of the classic "London-Exeter," together with a full list of car entries. The event—which, we should emphasize, is *not* a race—starts from Slough on Thursday evening, the first man being due to leave just after 8 p.m.

When Shopping.

Motorists are warned not to leave parcels in open cars whilst shopping for Christmas, as the "light-fingered gentry" are particularly active during the days preceding the festive season. Provincial folk who motor up to town for shopping purposes are reminded that the maximum period of time that a car may be left in a public parking place is two hours.

Great North Road Improvements.

Begun in March, 1925, the Great North Road from Blair Athol to Inverness has now been completed, the approximate cost having been £630,000. The road is roughly 78 miles in length, and at its narrowest point is 18 ft. wide. There are about 40 miles of entirely new road construction; no fewer than 38 new bridges have been built and 22 others widened or improved.

For night signalling: an illuminated glove invented by a Danish policeman.

On Land and Water.

Major H. O. D. Segrave, who, as already announced, is going to America to make an attempt on the world's land speed record, also intends to take with him a motor boat which is expected to be the fastest single-screw boat in the world. The engine is a 900 h.p. 12-cylinder Napier aircraft, similar to that used by Lieut. Webster when he won the Schneider Cup.

A Remarkable Car.

Said to be the most remarkable car in the whole world, the new straight-eight Duesenberg, which made its first

FOR THE CONVENIENCE AND COMFORT OF "ROBERT."

White coats for the London police. A man "on point" at Chelsea Bridge.

appearance at the Annual Automobile Exhibition in New York, is of 265 h.p. and has a speed range on top gear of 2 m.p.h. to 116 m.p.h. In second gear it will attain 89 m.p.h.

Training Motor Engineers.

A very excellent training in motor engineering is given by the Automobile Engineering Training College, Sydney Street, King's Road, Chelsea, London, S.W.3, and parents anxious to find a continuation college of this kind for their sons are invited to get into touch with the address given.

Next Week.

When an experienced motorist grumbles about the car of his choice merely because this or that is not *just* as he wanted it, and when his "want" appears to be absolutely desirable, he seldom stops to consider the case, but condemns the factory lock, stock, and barrel. There is another side to the case, however, and this we shall present in a convincing and informative manner next week in an article entitled "Factors That Influence Design." That issue, by the way, will be published, as usual, on Friday.

"Scouts" on Holiday.

There will be neither A.A. Patrols nor R.A.C. Guides on duty on Christmas Day. Motorists should, therefore, exercise particular caution at cross-roads and other danger points. The men will be back at work on Boxing Day.

New police telephone at Southend. It incorporates a fire alarm.

More French Motorists.

Figures just published go to show that during the past few years there has been an extraordinary increase in the number of cars registered in France. Cyclecars, however, show a slight decline: even then, the figure was, roughly, 27,000 for 1927.

Racing Prospects.

The British Racing Drivers' Club, as already announced, hopes to stage a 500-mile race at Brooklands for racing cars. The date fixed for this event is October 12th, 1929, and entries will be confined to cars with a minimum lap speed of 80 m.p.h. It is anticipated that the winning car will average about 115 m.p.h. and that lap speeds of 130 m.p.h. will be recorded. The Junior Car Club has been very busy revising the regulations prepared by a small sub-committee in respect of the British Double Twelve-hour Race. The whole idea is that cars destined to take part either in the Le Mans Twenty-four-hour event or the Ulster T.T. shall also be suitable for the "Double Twelve."

The Petrol Agreement.

THE agreement arrived at between the combine petrol companies and a few of the independent distributors—to which we referred last week—seems to partake of the nature only of a trading arrangement. On the side of the independents the contracting parties are the following:—United Oil Importers Co., Ltd. (handling Albion, U.C., Standard, Numa, and M.P.), Scaland Petroleum Co., Ltd. (handling Acme and Dominion), Cities Service Oil Co., Ltd. (handling Citex, Pyramid, and Ellisons), Sinclair-Union Petroleum Co., Ltd. (handling Sinclair and Sinco).

There are at least nine other non-combine suppliers who are not parties to the agreement, amongst them being the Power Petroleum Co., Ltd., R.O.P., Blue Bird, Silver, and others.

The combine concerns agree, as from January 16th next, not to withhold the exclusive rebate of 1d. per gallon from any dealer handling the product of the agreeing companies, provided the spirit is sold under a branded name, and that the pumps used for these brands for retail sales shall be on premises coming within the category of "legitimate petrol retailers."

On their side the four independent companies agree to market their brands on such definite conditions of sale that they are re-sold to the public at the same margin of profit to the dealers as that applying to the products of the combine companies. They further undertake to issue supplies only to legitimate dealers as defined by the combine concerns acting in unison with the Motor Agents' Association.

So far, says *The Motor*, there is no question as to any agreement in respect of price changes, but something may transpire in respect to this later. As we have pointed out, there are still powerful non-combine concerns outside the agreement, but it may be expected that if the combines and their new allies decide on an increase prices of the outstanding brands would go up but would be kept at a figure below that fixed by the combine. At the moment it is considered unlikely that there will be any increase within the immediate future.

UNRECORDED HISTORICAL INCIDENTS.

Caesar enjoys a splendid afternoon's "Dracing" in the Coliseum.

"Automatic" Gear Change.

An ingenious indicator marketed by the Cowey Engineering Co., Ltd., and known as the Cowey gear-change indicator, enables dead quiet gear changing either up or down to be made, the driver being guided by discs which clearly show the precise moment when the wheels should be moved into mesh.

British Cars in France.

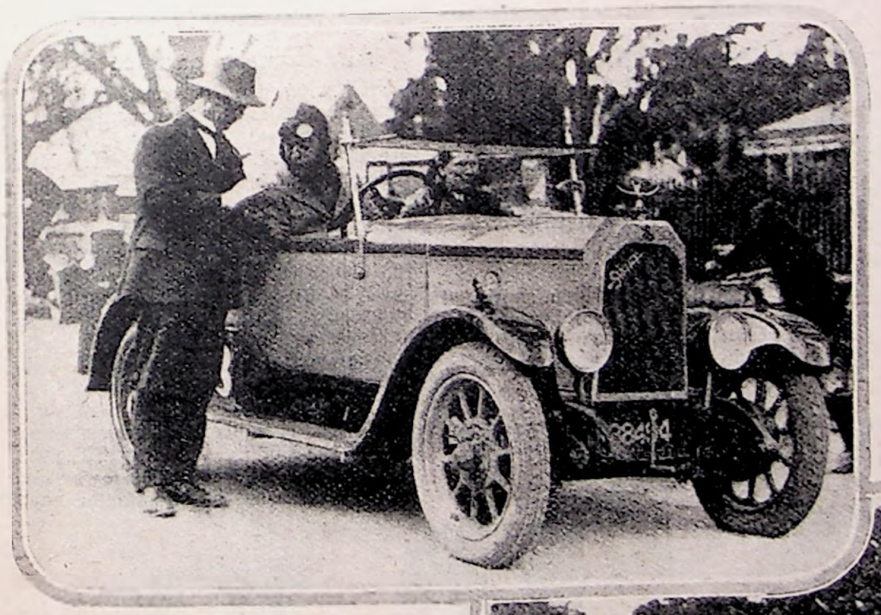
THE R.A.C. recently protested to the Paris Chamber of Commerce against the present methods of taxation of British cars temporarily in use in France. It is necessary to obtain a pass from the Customs authorities, which costs 10 francs a day and is available for two months; after that time the revenue authorities issue a pass, the cost of which works out at 80 centimes (about 1½d.) per day per h.p.

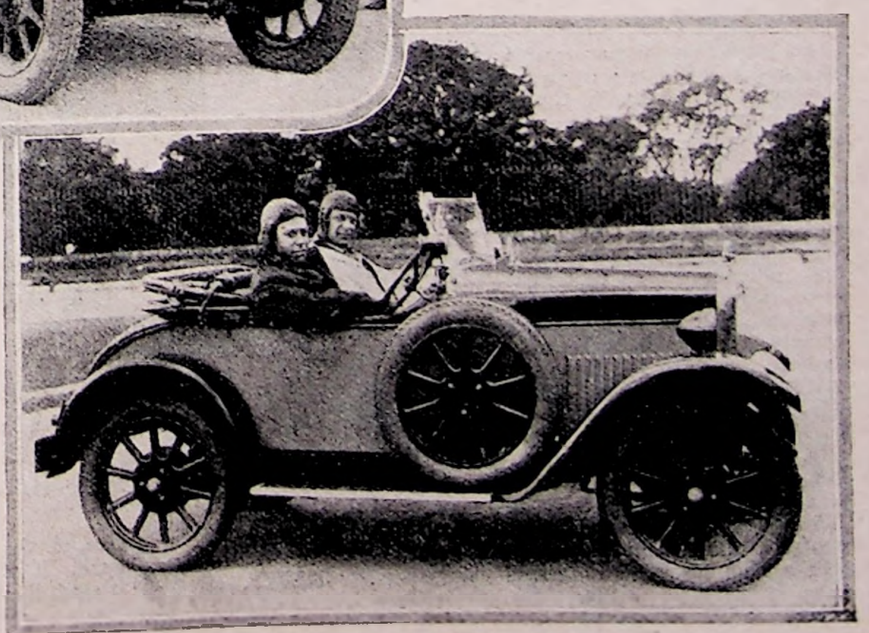
In a report on the matter made to the Chamber of Commerce, says Reuter, it is pointed out that it is desirable to avoid the necessity of determining in advance the length of a projected stay in France, and that consequently taxation based on the power of the car would be preferable—or, if the visitor so desired, taxation under the same conditions as those which rule in France, payable in advance every three months. It is further considered that foreigners coming frequently and regularly to France on business ought to benefit by a special régime on condition that reciprocity be granted.

Following on the reading of this report, the Paris Chamber of Commerce passed a resolution to the effect that foreign motorists visiting France should pay their taxes only on their return, the tax to be based on the h.p. and the duration of the stay, and approximating as nearly as possible to the scale of the tax paid every three months by the French, and that half rates should be granted to inhabitants of neighbouring countries coming to France at frequent intervals in connection with their business, on condition that reciprocity be granted by those countries.

BRITISH CARS SUCCESSFUL IN AUSTRALIAN TRIALS.

(Left) R. Graham Tucker in the Swift in which he gained full points, first prize for petrol consumption and first prize for speed in the Victorian L.C.C. trial, and (below) A. Buckle (Triumph) who completed the Sealed Bonnet trial without losing a single point.





THE PATH OF PROGRESS —And some old cottages which are having to give way to it at Larkfield, where a widening scheme is in progress.

A Sensible Plan.

For relieving street congestion in busy areas the Weymouth Corporation has prepared a schedule of streets for different classes of traffic, some being reserved for light traffic and others for heavy solid-tyred vehicles.

Echo From the Holy Land.

Whilst we in this country are still debating the advisability of banning the Klaxon, Jerusalem has jumped into the breach. A by-law has just been passed decreeing that the use of all electric horns and Klaxons on mechanically driven vehicles is forbidden within the municipal area.

Bus v. Tram.

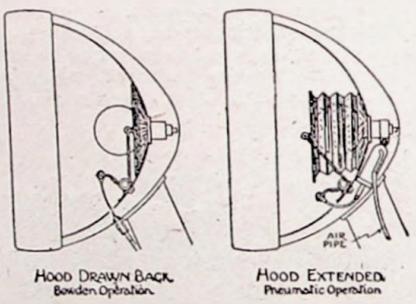
The tramways committee of the Manchester Corporation has obtained a sanction for the loan of £30,000 for the purchase of 18 motorbuses, whilst a similar sanction has been obtained by the York Corporation, who propose to purchase two motorbuses. Manchester has for many years past boasted of one of the finest tramway systems in the world, and the significance of the new move will not be overlooked.

Promising Anti-dazzle Device.

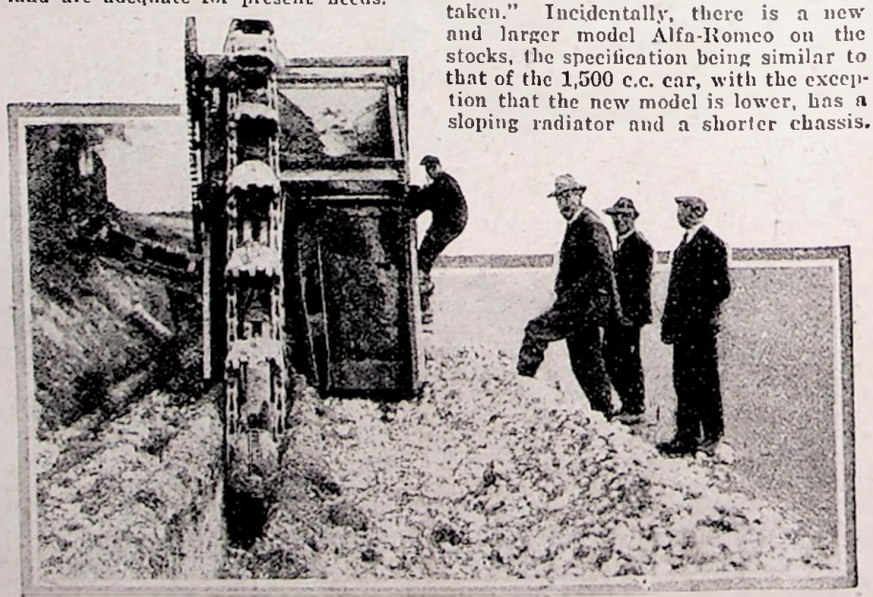
An interesting demonstration of the Shad-a-lite anti-dazzle device was given last week at the Kit-Cat Club, London. The patents of the device—which is of a very simple character—are controlled by Anti-Glare, Ltd., Teddington. It will be seen from the illustration that a hooding principle is employed, a specially woven fireproofed fabric being drawn bellows-fashion between the bulb and the reflector, so that light—which is as near dead white as possible—is produced. Dazzle is eliminated, but an effective driving light remains. It is claimed that in a fog there is no backward glare from the diffused light. The hood can be easily controlled, either by the Bowden principle or pneumatically. The device can be fitted to any lamp without structural alteration, and is entirely contained inside the lamp. A complete set for two lamps, with all controls, takes about an hour to fit, and will sell at 30s., plus an added charge in most cases for fitting.

No Solent Tunnel.

The suggestion for the construction of a tunnel under the Solent has been turned down by the Minister of Transport, who is of the opinion that the existing facilities for vehicular traffic between the Isle of Wight and the mainland are adequate for present needs.



Two sketches of an anti-dazzle device described in an accompanying paragraph.



THE MECHANICAL NAVVY. — One of the newest-type mechanical excavators at work. It is "digging" a pipe trench and so fast does it work that the pipe layers have a difficult task in keeping up with it.

Boulogne Meeting Abandoned.

According to a French newspaper the abandonment of the famous annual motor races at Boulogne-sur-Mer has been practically decided upon. The reasons for such a decision are many. Besides the frequency of accidents the expenses incurred in organizing such a meeting increase every year, while receipts tend to decrease. The rally at Le Touquet and the competition for the most elegant cars will, however, be continued.

A Fine Engineering Feat.

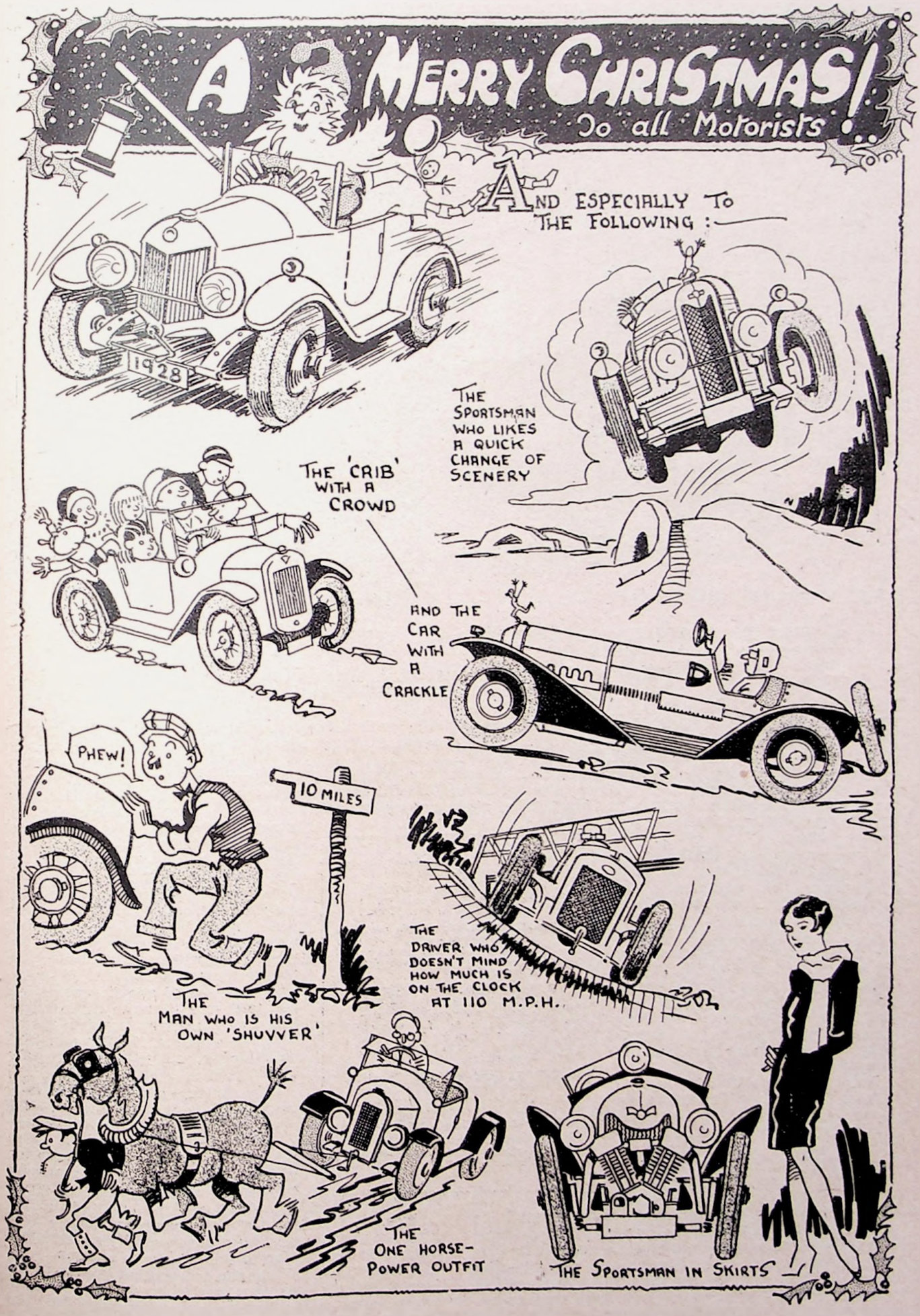
Very interesting facts concerning the new Newcastle-on-Tyne to Gateshead road bridge are given in the current issue of "Good Roads." The actual height of the roadway above high-water level is 93 ft. The carriageway is 38 ft. wide and the footways on each side are 9 ft. wide. The arch, which is the largest in the country, is of mild steel, has a span of 531 ft. and a rise of 170 ft.

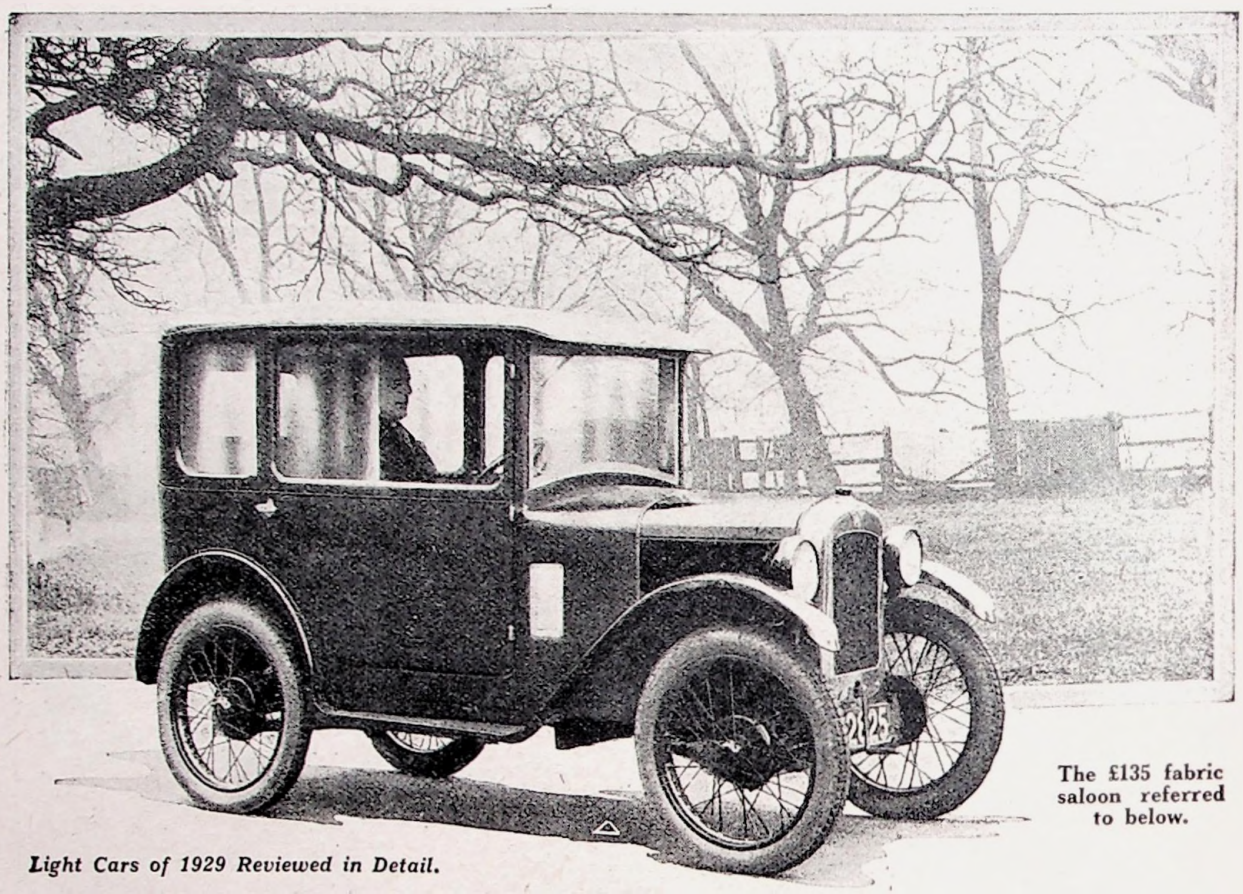
Germany's Motor Taxes.

According to information received from Cologne, the revenue in Germany from taxes collected on motor vehicles during the financial year 1927-8 amounted to £7,810,000. It is anticipated that this sum will be exceeded for the current financial year which ends on March 31st next, as up to the end of October motor taxes had already yielded nearly £6,000,000.

Alfa-Romeos and Le Mans.

Following a paragraph in a recent issue that Alfa-Romeos would not race at Le Mans, we now learn that Mr. F. W. Stiles, of Alfa-Romeo British Sales, Ltd., 1, Baker Street, London, W.1, is using his influence to persuade Signor Jano to modify the chassis so that it will be possible for Alfa-Romeos to take part in the race. "It is too early to say yet whether or not this will be possible," said Mr. Stiles, "but I am anxious to see Alfa-Romeos in this classic event: hence the action I have taken." Incidentally, there is a new and larger model Alfa-Romeo on the stocks, the specification being similar to that of the 1,500 c.c. car, with the exception that the new model is lower, has a sloping radiator and a shorter chassis.


A MERRY CHRISTMAS!
To all Motorists
1928
AND ESPECIALLY TO THE FOLLOWING :—
THE SPORTSMAN WHO LIKES A QUICK CHANGE OF SCENERY
THE 'CRIB' WITH A CROWD
AND THE CAR WITH A CRACKLE
PHEW!
10 MILES
THE MAN WHO IS HIS OWN 'SHUVVER'
THE DRIVER WHO DOESN'T MIND HOW MUCH IS ON THE CLOCK AT 110 M.P.H.
THE ONE HORSE-POWER OUTFIT
THE SPORTSMAN IN SKIRTS



The £135 fabric saloon referred to below.

Light Cars of 1929 Reviewed in Detail.

THE EVER-POPULAR AUSTIN SEVEN.

WHYS AND WHEREFORES OF A WONDERFUL LITTLE CAR—ITS BEHAVIOUR ON THE ROAD.

EARLY in the life of Sir Herbert Austin's masterpiece—as the Austin Seven has often been designated—we described it in *The Light Car and Cyclecar* as "Size One in Motorcars." That it still remains. It is the smallest really practicable car in the world, but in spite of that, or perhaps because of it, the Austin Seven is one of the most popular.

It was introduced in the first place to supply the family man who ran a sidecar machine with added comfort, safety and convenience at only very slightly increased cost, and it has succeeded not only in that original intention, but in penetrating the markets of the world. Up to date no fewer than 80,000 Austin Sevens have been built, and it is almost impossible to name a country where they are not being successfully operated by enthusiastic owners.

An outstanding feature in the history of the car has been that since it was introduced in 1922 only very small alterations have been made to the specification. The temptation to lengthen the wheelbase, to widen the track, to increase the size of the engine and generally to enter the vicious circle which has ensnared so many small car manufacturers has been steadily resisted by the Austin Motor Co., Ltd., Longbridge, Birmingham, who are its manufacturers, and, in consequence, the current series of cars almost exactly resemble their distinguished ancestors. The changes that have been made relate to comparatively unimportant matters, and have been introduced rather to comply with contemporary automobile fashions than to increase the efficiency of the vehicle.

An instance of this is provided by the fact that for 1929 the radiator has been made slightly taller with a view to giving the fashionable waistline. Other changes which have been made from time to time include the use of gearbox drive for the speedometer, the fitting of wheels of a different type to take wellbase balloon tyres, the adoption of shock absorbers and the use of larger brake drums and a different type of pressing for the wheel hubs, which gives a neater appearance and simplifies cleaning. For the sake of added convenience and to ensure that the car shall be thoroughly satisfactory for use in very hot climates, the fan mounting and driving pulleys have recently been modified.

Other changes which have been made of late include the addition of a short extension to the chassis in order to afford support for lightweight fabric bodies, the extension of the steering column to remove the need for having a dished steering wheel and the adoption of coil ignition. The last-named, of course, tends towards lowering production costs, whilst simplifying maintenance work and adding to the ease of starting.

It should be noted that the coil-ignition system which is provided operates at a very low voltage, so that in the event of the battery charge running low the owner has plenty of warning and so need never be

AT A GLANCE.

ENGINE: Side-valve, 56 mm. by 76 mm. (747.5 c.c.); R.A.C. rating 7.8 h.p. Tax £8.

TRANSMISSION: Single plate clutch, three-speed unit gearbox, central control, spiral bevel axle with full differential.

DIMENSIONS: Wheelbase 6 ft. 3 ins., track 3 ft. 4 ins., ground clearance 8¾ ins., turning circle 33 ft. Overall length (chassis) 9 ft. 2 ins., overall width (chassis) 3 ft. 10 ins.

MODELS and PRICES: Chassis, £92. Tourer, £125; Saloon (fabric or metal-panelled) standard, £135; de luxe, £146; Coupe same as Saloon.

MAKERS: The Austin Motor Company Ltd., Longbridge, Birmingham.

stranded. There is enough current in the battery for ignition purposes when the lamps have sunk to a dull glow and the horn has ceased to work.

An important innovation in connection with the electrical equipment is the adoption for 1929 of large lamps, each containing two bulbs. Thus current consumption is economized, whilst bulbs of conventional pattern can be used and very much more effective illumination is available than in the past. The lamps, of course, are mounted in such a manner that they comply with the regulations.

Further changes in the engine design which have been made since it was first introduced include the provision of a more convenient type of oil filler and the redesigning of the fan mounting which is now an integral part of the timing case.

The engine dimensions remain the same as they have always been, the bore being 56 mm. and the stroke 76 mm., giving a total capacity of 747.5 c.c.

The R.A.C. rating is 7.8 h.p., so that the tax in Great Britain is £8. At 2,400 r.p.m. (which is equivalent to 37 m.p.h. in top gear and 29 m.p.h. in second) the engine delivers 10.5 b.h.p.

Large Car Practice.

Apart from the fact that the crankshaft is carried in two bearings—perfectly permissible practice in view of its very short length—the engine follows large car practice in almost every respect; in many ways, in fact, it is an improvement upon the average large car unit in that it is much easier to keep in first-class condition.

The provision of a readily detachable cylinder head, which allows the engine to be decarbonized with a minimum of disturbance of other components, provides a case in point, whilst another, and one of even greater importance, is that the pistons are made accessible by lifting the cylinder-barrel block from the crankcase instead of having to be withdrawn through the base.

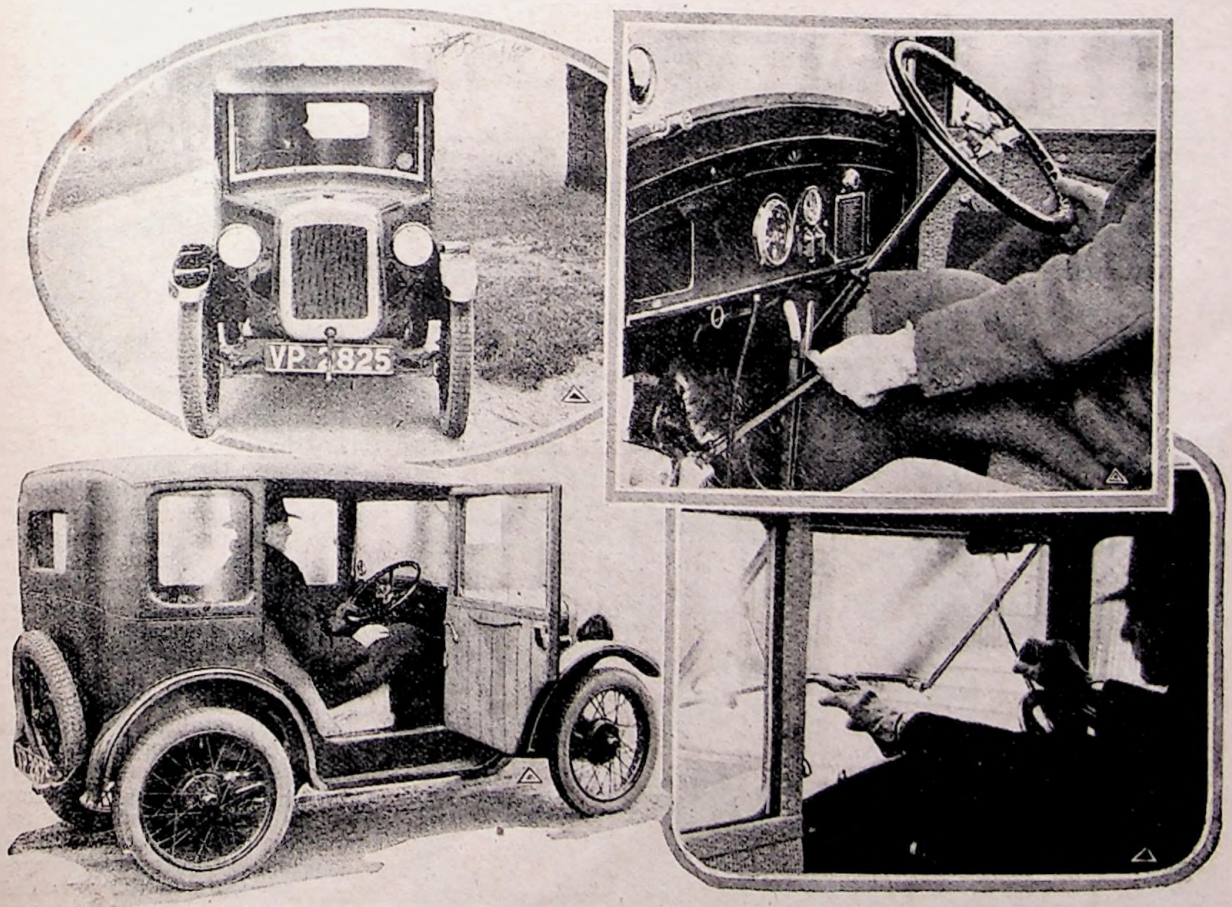
There is no good reason why anyone who has been accustomed to looking after even the simplest type of motorcycle should find any difficulty in keeping an Austin Seven in tip-top condition for at least 15,000 miles without ever having the need for visiting a repair shop.

Robust Transmission.

The Austin clutch and gearbox are built up as a unit with the engine, and are so robust that mechanical troubles in connection with them are practically unheard of. The same applies to the final drive, which starts with a large fabric universal joint behind the gearbox and continues via a further universal joint to the back axle, which is driven by spiral bevels. The axle ratio is 4.9 to 1 (top gear), the second-gear ratio being 9 to 1 and bottom 16 to 1. The reverse-gear ratio is 21 to 1.

Apart from the two-stage drive from the gearbox to the back axle, the propelling mechanism of the Austin Seven follows accepted principles and makes no noticeable breakaway from convention. When attention is turned to the axles, suspension and braking, however, numbers of unusual points are noted.

The most obvious break-away from present-day practice is the use of a transverse half-elliptic spring in front and two quarter-elliptics at the rear. The Austin Seven is the only car in the world which employs this combination, although at one time it figured in the specification of quite a number of different makes of car. In its favour there is the fact that it works supremely well with the bare minimum of attention, whilst it must also be borne in mind that it is light, cheap and, for this particular job, quite as efficient as any other design.



THE LATEST FABRIC SALOON. — With the new tall radiator, wide door and numerous features conducive to the driver's comfort, this Austin model is a marked advance on its forerunners.

Austin Seven braking arrangements are also unique amongst four-wheelers; the footbrake acts on the rear wheels and the handbrake on the front. In practice it is found that this arrangement in the case of the Austin Seven works exceedingly well, whilst it has the merit of eliminating complication and of making both sets of brakes very easy to adjust.

The controls and steering gear of the Austin Seven follow normal practice in every respect, the steering being of the worm and wheel type, and the pedals and levers being arranged in substantially the same manner as they are in the case of all other cars.

Coachwork Details.

The range of bodywork available for Austin Sevens is very extensive indeed, because, apart from the tourer, fabric saloon, all-metal saloon, and coupé supplied by the Austin Motor Co., Ltd., there are many coachbuilders who specialize in distinctive styles of bodywork for this chassis.

These include coupés, saloons, and two-seaters, many of which are very attractive indeed in appearance, whilst Gordon England, Ltd., the pioneers of special bodywork for Austin Seven chassis, attain not only this desirable characteristic, but also, by special methods of construction, keep the weight of their bodies exceedingly low.

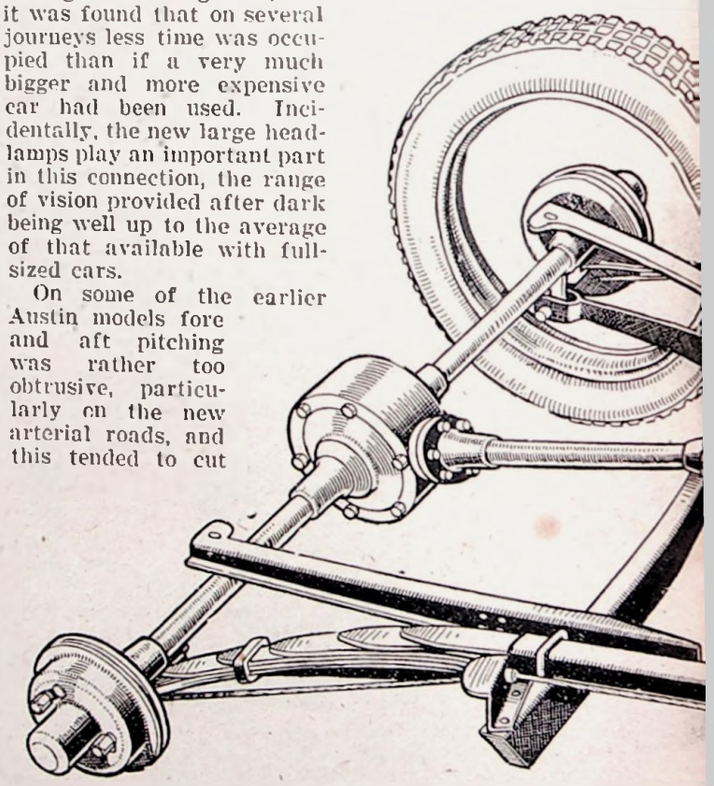
For 1929 important innovations have been made in the design of the saloon models manufactured at the Austin works, and, as it seems probable that these will be the best sellers in the home market, the limited space available for describing the behaviour of the 1929 model may well relate to them. It should be pointed out that the difference between the fabric and the metal-panelled saloon is substantial. The fabric saloon has not a panelled body covered with leather cloth, but follows the true principles of this type of body. A very robust wood framework has the fabric stretched over it, and thus the weight is kept low and drumming is eliminated. The metal-panelled saloon obtains most of its strength from the fact that the panels are strong pressings—very little framework is required. By the scientific elimination of framework it has been found possible to make the weight of this model practically identical with that of the fabric saloon. The metal panelled body is obtainable with a wide range of attractive cellulose two-colour schemes. The standard upholstery is in cloth, but the fabric saloon is available with leather cloth upholstery as an alternative.

On the Road.

When making the acquaintance recently of a fabric saloon with a view to running it for 10 days for business trips, town work, and a week-end in the country, it was felt that with honesty one could say, "Pleased to meet you." The car is particularly smart in appearance both inside and out; it is very light, roomy and comfortable. Very great pains have been taken in providing for the driver's convenience and for making the car exceedingly easy to enter or leave. Ventilation, too, has been very well thought out, whilst many "convenience features," such as two cubby holes in the facia-board and side windows which are in two halves—the front half dropping and the back sliding—are noticeable. Nothing is lacking except an interior light, the need for which was often felt, and the fitting of which doubtless will be carried out by most purchasers.

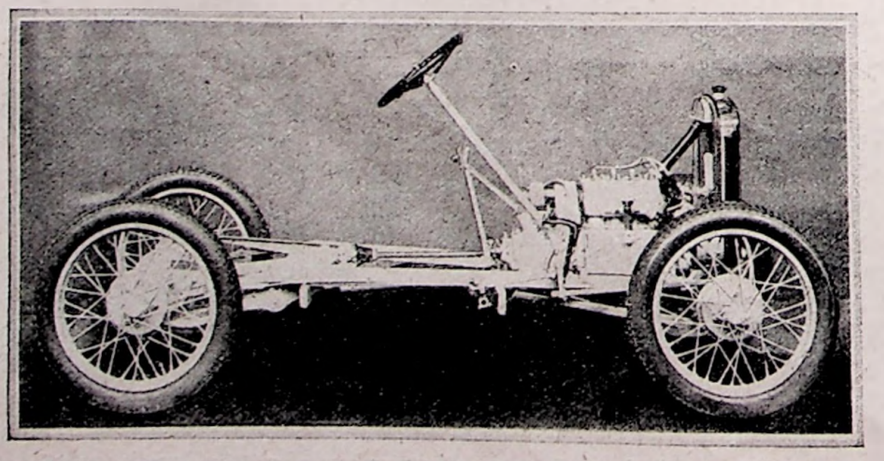
On the road the car handled very nicely indeed. It was capable of 38 m.p.h. on second gear and 52 m.p.h. on top gear, in each case with two occupants. These speeds were the absolute maximum. In practice, it was found that on good arterial roads about 45 m.p.h. is the highest comfortable speed in top gear, whilst something between that and 40 m.p.h. is the speed which one naturally maintains.

The general nippiness of the car and its good top gear performance allowed quite high speeds to be averaged over long runs, and it was found that on several journeys less time was occupied than if a very much bigger and more expensive car had been used. Incidentally, the new large headlamps play an important part in this connection, the range of vision provided after dark being well up to the average of that available with full-sized cars.



On some of the earlier Austin models fore and aft pitching was rather too obtrusive, particularly on the new arterial roads, and this tended to cut down average speeds to a quite appreciable extent. On the model we tried this objection has been entirely overcome, the shock absorbers and springs doing their duty in a very satisfactory manner. Side roll, too, was practically non-existent, it being possible to negotiate quite abrupt turns at considerable speed without any feelings of discomfort. It was clear that the natural difficulties inherent in making a very small car provide the same feeling of stability which one has in a larger model have been successfully overcome.

The width of the body is adequate for two bulky persons wearing heavy overcoats to ride comfortably in front, whilst the arrangements in the rear compartment now provide ample legroom for one adult of normal stature or two lusty youngsters.



The off-side of the diminutive chassis in its 1929 form.

With three adults aboard there was not the least sign of the car being over-loaded and all were comfortable.

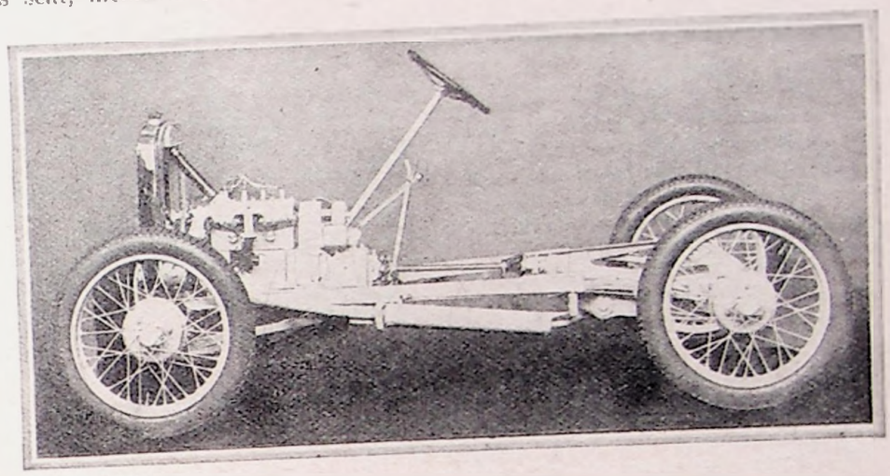
The very wide doors which are fitted to this model make it very easy for passengers to enter or leave the rear seat—quite as easy, in fact, as in the case of many full-sized cars with four-door bodies. When the door is opened and the near-side front seat tilted forwards one can step directly from the kerb into the back compartment with quite exceptional ease, whilst even when both front seats are occupied children can enter or leave their seats. The driver's seat, incidentally, is adjustable.

We found that the arrangements provided for signalling and ventilation were of an exceptionally high order. As previously mentioned, the windows in both doors can be opened, the front sections being lowered by a small crank handle and the rear sections being arranged to slide. By this means it is always easy to keep the car airy yet free from unpleasant draughts, whilst signalling and reversing are made extremely easy. The front screen is hinged along its top edge and is provided with an arrangement which allows it to be opened to any required degree. The window at the back is very large and well placed, but could do with a blind to prevent the lights of following cars being reflected into the driver's eyes from the windscreen.

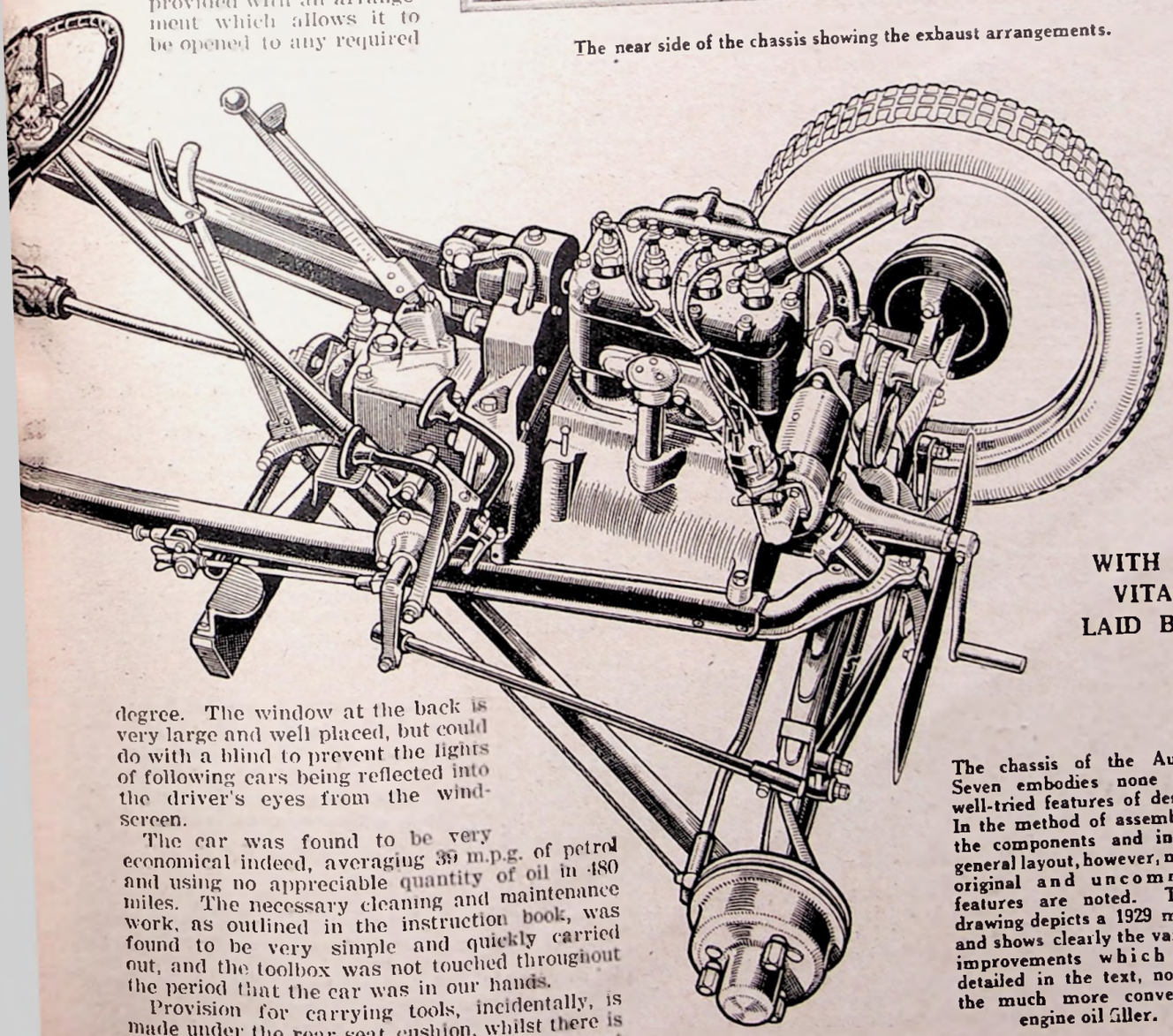
The car was found to be very economical indeed, averaging 39 m.p.g. of petrol and using no appreciable quantity of oil in 480 miles. The necessary cleaning and maintenance work, as outlined in the instruction book, was found to be very simple and quickly carried out, and the toolbox was not touched throughout the period that the car was in our hands.

Provision for carrying tools, incidentally, is made under the rear seat cushion, whilst there is also a convenient space under the driver's seat where small articles are secure from pilfering fingers. The space under the front passenger's seat is occupied by the battery, where it is particularly convenient for any attention it may require.

It is impossible to avoid the impression that, from the point of view of the man who buys a car as a vehicle of transport for two and not to impress his neighbours with its size and magnificence, anything larger than an Austin Seven might be described as an extravagance not only in first cost, but in the cost of upkeep.



The near side of the chassis showing the exhaust arrangements.



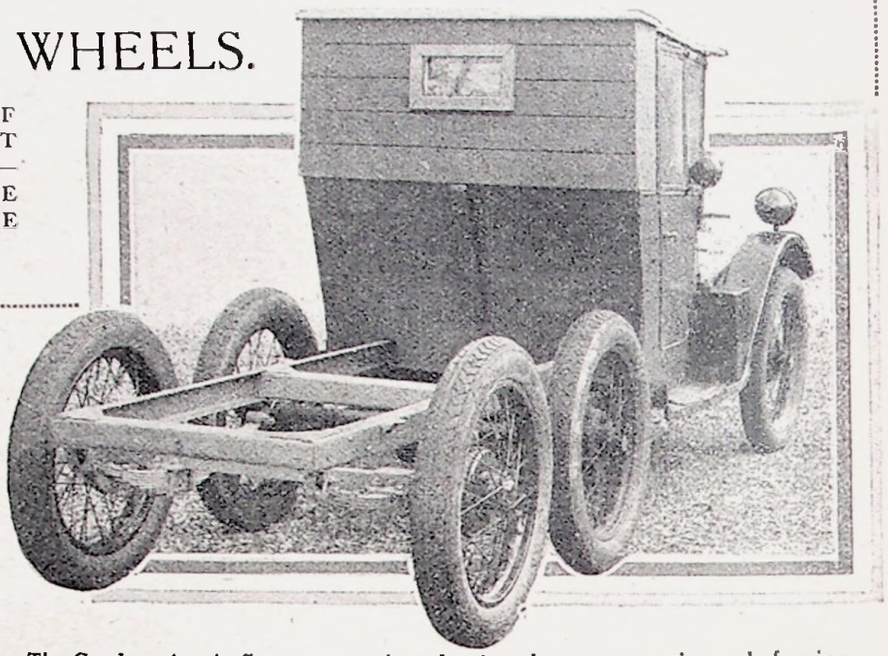
WITH ITS VITALS LAID BARE.

The chassis of the Austin Seven embodies none save well-tried features of design. In the method of assembling the components and in the general layout, however, many original and uncommon features are noted. This drawing depicts a 1929 model and shows clearly the various improvements which are detailed in the text, notably the much more convenient engine oil filler.

ADDING EXTRA WHEELS.

THE MECHANICAL ASPECT OF CONVERTING A NORMAL LIGHT CAR INTO A SIX-WHEELER—HOW THE JOB COULD BE DONE IN A SIMPLE MANNER—MORE ELABORATE SCHEMES.

The advent of the Gardner six-wheeler conversion for Austin Sevens has aroused a large amount of interest. This article, therefore, will prove helpful to those who wish to add an extra pair of wheels to their own cars. Given a fairly straightforward chassis layout the alteration need be neither difficult nor expensive to carry out; in fact it is well within the scope of many amateur mechanics.



The Gardner Austin Seven conversion, showing the square-section axle forging.

IN last week's issue of this journal the possibilities and advantages of "rigid" six-wheeled light cars for certain purposes were very thoroughly considered, and we now propose to examine the manner in which a conversion of this kind could be carried out.

As to whether or not the addition of an extra pair of rear wheels would prove difficult depends to a very large extent upon the layout of the existing chassis. Taking a simple case as an example, however, it will be interesting to outline a design which should prove practicable.

If the chassis side-members are of the usual channel section and quite straight each member can be lengthened easily by squaring off the ends and butting against them channels of similar section, which could be held in place by riveted flitch plates or, preferably, of course, by welding. Instead of a flat flitch plate across the web of the channel, a much stronger job would result if a channel-section piece of a size which would just fit in the main frame channel were used and riveted not only through the web but also through the top and bottom flanges.

Spring Location.

The additional lengths of side-member would, of course, carry the springs of the extra pair of wheels, each spring being located at its forward end by means of a pin passing through a bracket on the frame and through the eye-bolt of the spring, whilst at the rear end each spring would be fitted with a shackle.

As the trailing axle would not be used for driving, it could be either an H-section forging with the ends arranged to take ball races or a tubular axle could be used having the spring pads and ends brazed into position and carrying the standard stub axles of the make of car concerned. In any case, however, as the wheels would be used for braking the axles would have to be strong enough to resist torque reaction.

For the sake of simplicity, and in order to keep down the cost, it would be advisable to use the same type of wheels and brakes as those normally fitted to the four-wheeled vehicle; the brakes on the trailing wheels would, however, be connected with those of the intermediate wheels so that the brakes on all six wheels were applied by the pedal. To ensure even braking action it would be necessary to couple up the trailing pair through compensating mechanism of the whiffle-tree type.

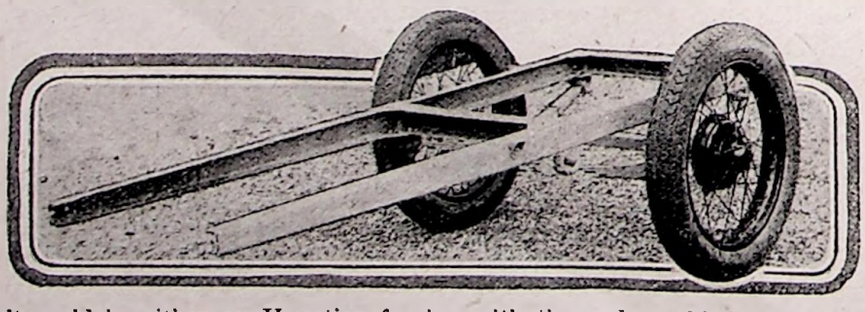
Coupling the Brakes.

One end of the link would be coupled by means of a pivot pin to the cam-spindle lever of the brake on the intermediate wheel on each side, whilst the other end would connect through a rod to the cam-spindle lever of the brake on the trailing wheel. A further rod from the main brake cross-shaft would be fulcrumed to the centre of the whiffle-tree, or, alternatively, it could be coupled out of centre if a difference in the braking efforts of the two sets of brakes were required; probably, however, it would be best if the power of the two sets were equal.

Reverting for a moment to considerations of suspension, it has been assumed that half-elliptic springs are used, but there is no reason why quarter-elliptics should not be substituted, although it might be necessary in this case to provide radius rods to take the brake reaction.

To turn now to a consideration of the conversion of a rather more complicated type of chassis frame, it will be interesting to see what can be done with that kind which curves over at the rear and is of tapered channel section terminating in an eye for the shackle connection.

In this case the addition of an extra length of side-member would mean the provision of a special forging curved to the radius of the main side-member and riveted to it back to back, as it were; that is, whereas

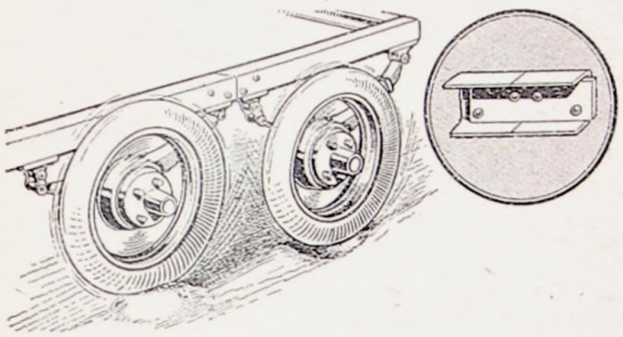


This is all that is required for a conversion to six wheels. The side-members, if butted as suggested in the text, would be shorter than those illustrated here, but strong cross bracing is advisable.

the flanges of the main member would face inwards, those of the addition would face outwards. Any unsightliness which this arrangement might cause could be camouflaged by means of a light sheet-metal covering. The remainder of the construction, however, would be similar to that already described.

For general purposes it should not be considered necessary for the rear pair of wheels to drive, especially as, if they are to do so, considerable mechanical complication arises. It will, however, be interesting to examine methods by which this can be done.

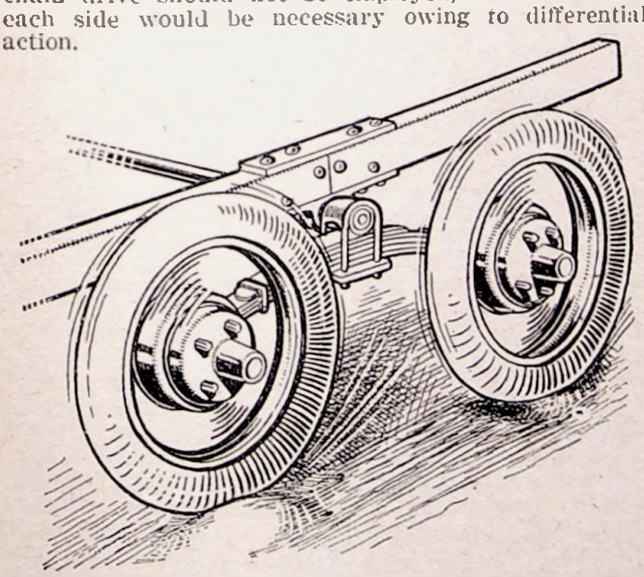
In commercial-vehicle practice it is usual to arrange the leading axle to be of the worm-drive type, and to



The action of the rear wheels on a bad road when half-elliptic springs are used. This layout is both simple and satisfactory. (Inset) The frame-member joint.

continue the worm shaft rearwards so as to couple up with the worm contained in the trailing axle. This provides a very efficient form of drive and ensures, furthermore, that wheelspin is eliminated.

Some designers, however, prefer to introduce a third differential connected between the main pair. This is an advantage in several respects, but it has the disadvantage that it allows wheelspin to occur exactly as with an ordinary single axle. In any case, designs of this kind would hardly be applicable to light car work. There seems to be no reason, however, why chain drive should not be employed, but a chain on each side would be necessary owing to differential action.



With a single inverted half-elliptic spring trunnioned at its centre there is less actual spring flexion than with separate suspension for each wheel, but there is equal smoothness on bad roads.

In the case of a simple layout it might be possible to mount chain sprockets on the brake drums and to connect them with comparatively light chains. Those used for driving three-wheelers would probably be of ample strength for the purpose; the gear ratio, of course, between the driving and driven sprockets would be 1 to 1. Some method of enclosing the chains would be desirable, but not strictly essential.

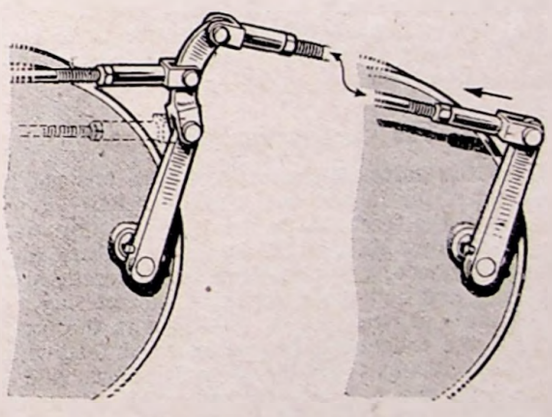
The exact location of the axles relative to each other, and the movement of the springs, would have to be studied fairly carefully in order to ensure that the chain tension remained reasonably constant on bumpy roads, but a drive of this kind would obviate the theoretical objection raised against independently sprung axles—namely, that where only one pair of wheels drives, the adhesion is reduced by 50 per cent.

How a curved side member can be lengthened. The joint could be hidden by a sheet-metal cover.

by reason of the fact that they are carrying only half the weight that they would were only a single rear axle used.

In six-wheeled commercial vehicles it is usual to arrange the two rear axles so that they share a common suspension system, this, as a rule, taking the form of a pair of inverted superimposed half-elliptic springs on each side, coupled to the axles at their ends and trunnioned about their connected centres to special frame cross-members. A modified arrangement of this kind could no doubt be made to prove very satisfactory on the type of light car which we are discussing, but as the load carried would be very considerably less than that on a commercial vehicle, it is probable that only one spring each side would be necessary.

The ability of the twin axles to rock about a fixed point on the frame ensures even road adhesion and gives rise to less excessive spring flexion than that which must take place when each wheel is suspended



The brakes on the trailing wheels could be coupled up to the existing f.w.b. controls by means of whiffle-tree compensating gear.

by means of independent springs. This point is made clear in one of the accompanying sketches, which shows each type of axle assembly traversing a bumpy road.

In the foregoing we do not claim to have touched more than lightly upon the subject of six-wheeler conversion systems, but we think it will be obvious that an alteration of this kind would be neither difficult nor expensive to carry out, and, in fact, given a comparatively straightforward chassis layout as a basis, the work would be within the capacity of many amateur mechanics.

It must be understood that such a conversion would be permanent; that is, even by substituting bolts and nuts for the rivets securing the frame joints, the extra wheel assembly could not be fitted and removed like a trailer. The reason for this, apart from mechanical considerations, is that, to take advantage of the extra wheels, a special body—of the caravan type, for example—would, presumably, be fitted.

YORKSHIRE BOASTS OF MANY PLACES ASSOCIATED WITH EERIE LEGENDS. WHY NOT EXPLORE SOME OF THEM THIS CHRISTMAS?

CHRISTMAS is the time for ghosts, and if an excuse is wanted for a run on Christmas Eve some thrills might be experienced in attempting to track down the ghosts that walk at Christmas-tide. A sympathetic companion, something warm for the inner man and a car that does not fail when the starter button is pressed are required. The latter is important, as it might be awkward if the engine refused to function when one particularly wanted to get away from a spot that proved too eerie!

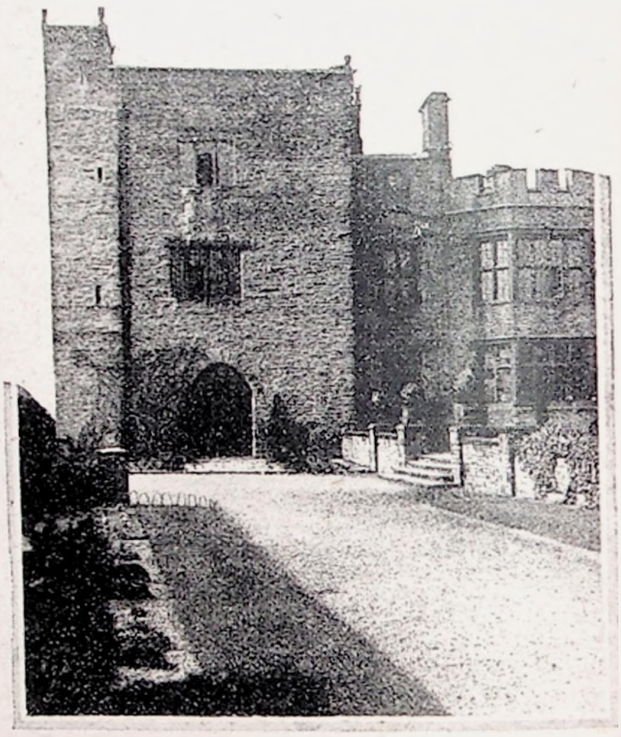
From the Tower of London to Land's End, and up to the Border there are reputed ghostly habitations by the score. One imagines that they are too practically minded in Scotland to trouble about such immaterial and unnatural happenings, but Yorkshire folk—who are supposed to be closely related to the Scots, in so far as hard-headedness goes—all seem to believe in ghosts. Many fully authenticated instances of their appearance—one cannot say existence—could be given from the broad-acred shire. So, if any would-be explorer lives in a benighted district without a ghost, let him come to Yorkshire to spend his Christmas. Some of the hotels in Harrogate or Ilkley will doubtless be pleased to entertain him—at his own expense, of course!

The Corporation "Spooks."

Even the industrialism of Yorkshire has not killed the ghosts, for do not two literally belong—if ghosts pass with the freehold—to the Bradford Corporation? At the Bolling Hall, so the story goes, there walks a filmy lady who, when the Earl of Newcastle slept at the Hall and had the intention of slaughtering all the inhabitants of Bradford, interceded with the Earl and caused the order to be countermanded forthwith. A blood-red footmark on the floor is shown, and here, it is said, the lady of the house fell when thrown from the balcony by her husband, when in a rage at losing money at the gaming table.

Still another ghost is associated with the hall, this time a miserly Derbyshire man who kept his treasure at the head of the bed. He was murdered, and the crops and the cattle never prospered thereafter until his ghost told somebody that if his skull was put on the window ledge all would be well. Enter the room alone on a moonlight night and the skull can be seen in the treasure cupboard, declares the curator. Perhaps he will allow you to try the experiment.

There is one ghost of particular interest to roadfarers, for it is supposed to act as guide in times of fog. Were that there were more of them, say some! A girl of Sheriff Hutton, near York, was courting a mail-coach driver, but a young swashbuckler from town stepped in and Nance's affections were stolen. Away she went with the dashing young man, leaving the coach driver to mourn his loss. Half-conscious one night, Nance, disillusioned by her swell lover, was found on the roadside by the stage-coach driver. She told him her tale, but died in his arms; the story continues that, to make amends, her spirit watched



A corner of Bolling Hall, which is the property of the Bradford Corporation and is supposed to be the haunt of two entirely independent ghosts!

over the stage coaches in times of danger and difficulty and guided them safely on their way on many a foggy night.

Cut Throat Hill, near Wetherby, sounds gruesome. It is a well-known gradient, and here a pedlar was missed one night and his ghost was said to have walked the road until the skeleton of a man was unearthed, buried head downwards.

Headless Horses!

Travelling north from Leeds, we pass through Calverley, and in the woods of this neighbourhood have been seen—so the locals say—strange, ghostly visitants in the shape of riders of headless horses. Perchance we may see them again this Christmas-tide! A brutal murder, of which there are evidences in the Calverley parish church registers, occurred in the sixteenth century at Calverley Old Hall, and Walter Calverley, the Lord of the Manor, was indicted for the crime, but refused to plead either guilty or not guilty. An old Act of Parliament imposing a terrible penalty for such a state of affairs was found, and Calverley was condemned to be crushed until he pleaded. Still refusing to plead, Calverley died, crying for "A pound more weight" to hasten his end, and it is this mournful cry that the rider at the head of the host repeats as he rides through Calverley Woods.

Motorists have a particular interest in Dob Park Castle, near the water-splash known to so many competition riders. The ruins on the hill are associated with the story of hidden treasure, but do not expect a local man to accompany you here at night. Most

likely he will refuse. From a doorway leading to the vaults strange noises are said to issue, and legend has it that once an unfortunate local fellow was eager to go down to search for the treasure. His lamp went out, and in his wanderings he came to a lofty chamber, lit by a great fire, in which he saw a strongly bound chest.

Attempting to open it, he was faced by a great dog, the Dob Park Devil Hound, and was ordered to drink from a glass or draw his sword. Terrified, the man took the glass, but the liquid seared his lips and, in his agony, he threw the contents in the face of the hound, which rent the air with its horrible shrieks. After long hours of wandering in the subterranean passages, the man at length regained his friends who were waiting for him outside. No one dared venture into the passages again, and the door has been buried under an accumulation of debris.

Well Catered For!

Near the road between Appletreewick and Pateley Bridge, well known to trials organizers, there are the scenes of three ghost stories at least. Trollers Ghyll, a narrow cut through the limestone hillside, which is the haunt of wild life of all sorts, is the spot where the great Barguest, or ghost hound, known in literature of old throughout the whole of Northern Europe, was last reported to have been seen.

Across the valley from the road looking down into Trollers Ghyll is a substantial farmhouse known as Percival Hall, with an outlook across the beautiful Wharfe Valley towards Barden Tower, at which Nevison, the highwayman, hid when closely pressed by the sheriff's officers. Does his ghost still ride the hills, followed by those hated men of the law? Over the hillside the rapid thud, thud of horses' hoofs is supposed to have been heard many times, followed by a more exciting chase than was ever enacted for the films. Towards Percival Hall ride the horsemen, but between them is Trollers Ghyll. The fugitive rider clears the narrow cut, but the pursuers vanish into thin air.

Perhaps the closest association with a Christmas ghost is the story associated with Wycollar Hall, near Colne, the pretty little hamlet on a road that leads nowhere but into a deep cleft into the hills. The ruined hall is open to the sky, but the great open fireplace in which 18 persons can sit on the stone seat round the fire is still in good preservation.

Old-time Huntsmen Reappear.

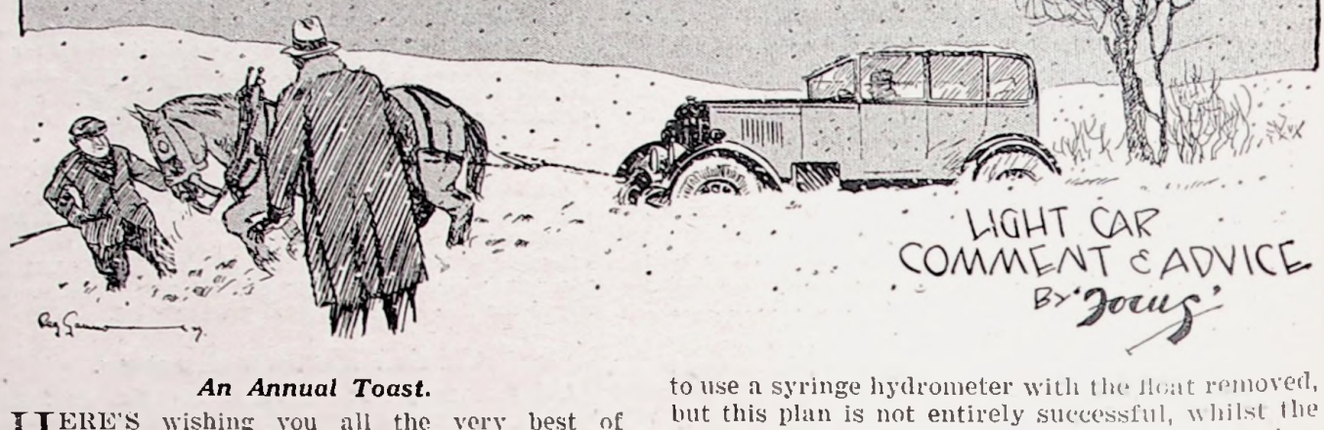
Old manuscripts tell us that the Cunliffe family "usually kept open house for twelve days round Christmas-time, commencing from Old Christmas Day to New Christmas Day. Their entertaining was in a large hall of curious ashlar work, with a long table, plenty of frumety, like new milk, made of husked wheat in the morning; roast beef, a fat goose, pudding and plenty of good beer for dinner. Round the fireplace were stone benches where the young folk sat and cracked nuts and diverted themselves." At this hall one old sportsman, while actually on his deathbed, staged a cockfight in his bedroom. Another once rode upstairs on horse-back, and the hoof mark is still to be seen.

Little wonder then that some of these sport-loving gentry are reported to come back and hunt the old pastures in the moonlight, and it is at Wycollar Hall, just over the water-splash near the double-arched pack-horse bridge, that the ghostly huntsmen are said to foregather. And what more appropriate time than Christmas-tide is there for such a jolly meet?

Truly, Yorkshire and Lancashire are the counties for the Christmas ghost hunter to scour the countryside. To do so on horse-back might be dangerous, but a motorcar never shies in disconcerting moments! Furthermore, a companion in the driving seat might be able to bring corroborative evidence. G.C.

A HAUNT OF GHOSTLY HUNTSMEN. — **The fine old fireplace at Wycollar Hall, near Colne, once the scene of Christmas revelry and now the reputed haunt of the ghosts of the one-time merrymakers.**

Rich Mixture



An Annual Toast.

HERE'S wishing you all the very best of Christmases. I like every year to take this opportunity of thanking you all for your forbearance in connection with views which I express and which you do not always share, and I like, above all, to remind you that on the stroke of 8 p.m. on Christmas Day I have a toast which I propose and to which my family enthusiastically drinks. The toast is "The Readers of 'Rich Mixture.'" So if you feel your ears blushing at that time of day it will not be indigestion, but a slight attack of telepathy.

A White Christmas?

LAST year's white Christmas will send many of my readers away on their holiday runs armed with non-skid chains and a ripe experience of how to handle their cars in the event of a fall of snow. There are, however, plenty who will read this note and who have never handled a car on snow-bound roads. Let me take this opportunity of advising them not to grudge time spent in getting non-skid chains to fit properly, and, above all, not to attempt speeds of more than 10 m.p.h. or so without them.

The golden rules on very slippery roads are to keep the speed very low indeed, to descend hills with the utmost caution, and certainly at not more than 7 m.p.h. or 8 m.p.h., and to control the car in such a manner that sudden braking or a violent swerve will not become necessary. A driver's best friend when snow is falling may well be a shovel, so do not omit to have one aboard the car if the clerk of the weather keeps up Yuletide traditions and a run of any length has to be attempted.

For Easier Battery Maintenance.

WHILST topping up my battery last Sunday morning with the aid of a small milk jug, which properly belonged to the best tea-service, I wondered why it was that nobody seems to be actively marketing an accessory especially designed for this purpose. I have heard that there is one in existence, but so far I have not seen one in any accessory showroom. What we need is some means to transfer distilled water from a bottle to the cells without wetting the tops of them and without the risk of overfilling.

Batteries are seldom particularly accessible, and a device for topping them up which was cheap and effective would be certain, in my opinion, to be a big seller. My usual plan until recently has been to use a syringe hydrometer with the float removed, but this plan is not entirely successful, whilst the glass portion of the syringe is very easily broken and none too cheap or easy to replace. I must have broken half a dozen or more during the past few years.

The Sport.

READERS who are asking in the Correspondence Columns for more reports of competitions in the pages of *The Light Car and Cyclecar*, and who seem to ascribe some definite motive for

A "real old-fashioned" countryside

their absence, have failed to appreciate, in my opinion, that the sporting side of motoring has now waned to such an extent that, apart from the London-Gloucester and the London-Exeter Reliability Trials, it is practically stagnant from September until Easter. Very few events, indeed, are held for which cars are eligible, whilst even such one-time notable trials as the Colmore Cup and the Victory Cup attract practically no entries.

All of us would like to see the sport on a much healthier footing—incidentally, does not the demise of the Essex Motor Club show the way that things are going?—but nothing useful can be achieved by *The Light Car and Cyclecar* boosting up trials which attract 100 motorcyclists for every half-dozen car drivers. It seems that nowadays the type of man who used to be prepared to smash his car round 200 miles of mud and boulder-strewn lanes every week-end simply does not exist.

Doors That Rattle.

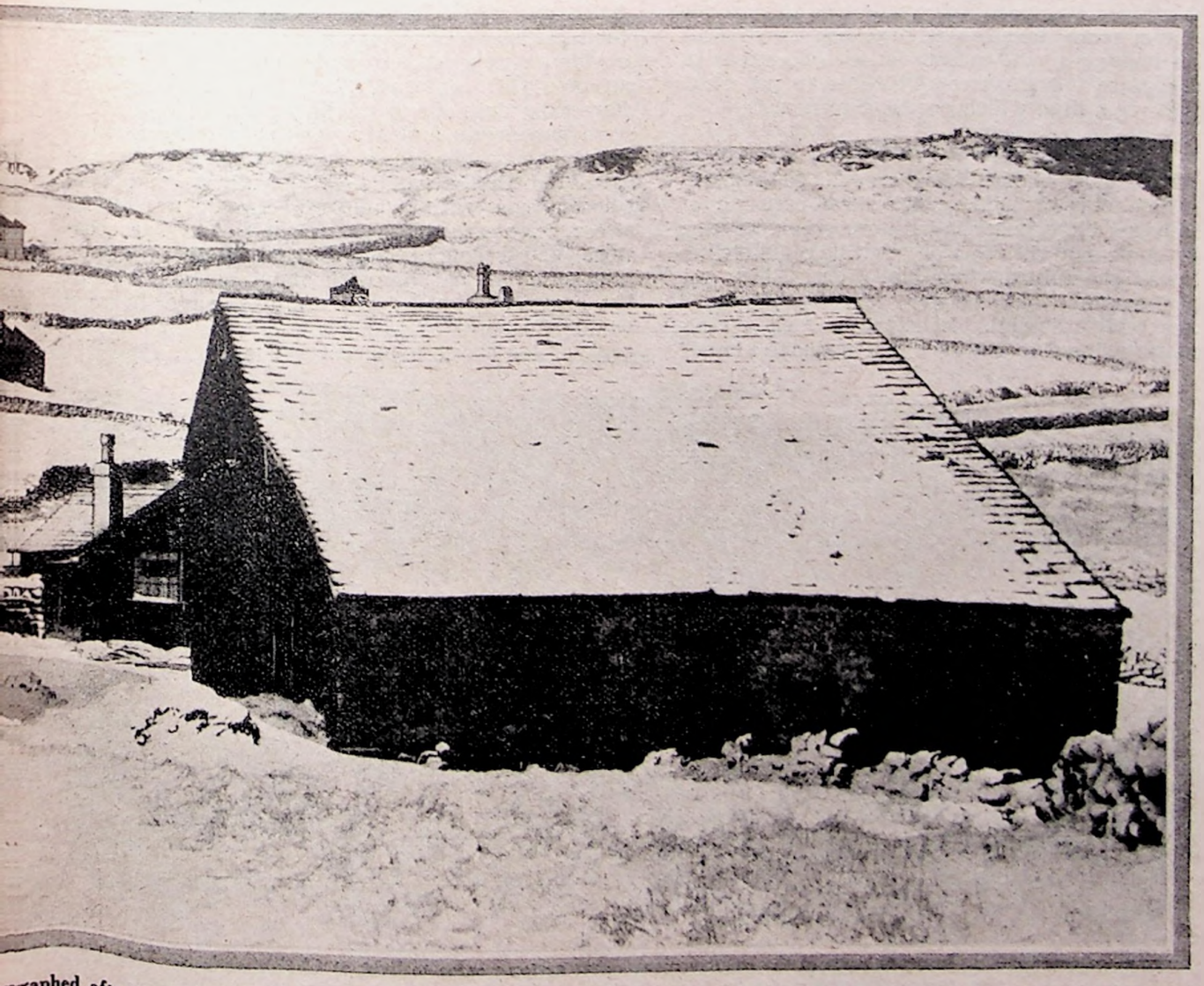
IT is all very well for a contributor to tell us how to stop the rattle made by doors, but why on earth should they rattle, especially on comparatively new cars? There seem to be some very effective rattle-preventers on the market, but surely it should be the duty of the manufacturer of the car, and not the buyer, to fit them?

I speak feelingly because I have recently come across several people who own new saloons with this annoying trait. The doors are fitted with anti-rattle devices of a sort, but a single glance is enough to show that their lasting effectiveness is a very doubtful factor. Here is an opportunity for inventors to think out something that will permanently prevent door rattle—a device which, when the door is closed, will hold it like a vice. Up to the present I have come across nothing which closely approaches this ideal "gadget."

Wireless Fans in the Garage.

FROM time to time I have commented upon the effect that the wireless boom has had in making so many people less afraid of mechanical contrivances and more willing to use their fingers and their intelligence. A good example of the changes which wireless has wrought was provided a few nights ago when I called upon a friend of mine and found him soldering a nipple on to the end of an oil-pressure gauge pipe—and an excellent job he was making of it. This man a couple or three years ago would have gone to a garage to have a plug terminal tightened.

Soldering, incidentally, is an art which everyone can acquire with advantage. It calls for no special skill, and quite a little practice allows one to do



graphed after a heavy fall of snow on the Lancashire and Yorkshire borders a fortnight ago.

certainly a sound job, and probably one which has a quite professional appearance.

I saw a radiator the other day which had had a new bottom tank made and fitted to it by a man who handled his first soldering iron only 18 months ago, and the job was perfectly sound and looked quite as well as if the owner had spent a couple of pounds at a repair shop instead of a shilling or two at a sheet-metal merchant's.

Result of Anti-horn Campaign.

ONE effect which has been apparent of the threat of legislation forbidding the use of a horn in city streets has been to deter a great many drivers from sounding a warning signal when passing a stationary tramcar or bus. The only result of this can be to cause a heavy toll of accidents, because people will suddenly dart out from behind these big vehicles, and a driver who is travelling at more than walking pace almost invariably finds it impossible to avoid knocking them down.

Whether the law intervenes or otherwise I shall continue to make an invariable practice of sounding a horn, which I am certain everyone concerned can hear whenever there is a stationary vehicle or other obstruction to one's vision from behind which it is possible for a pedestrian suddenly to leap into one's line of travel. I once knocked down with a projecting hood iron a man who stepped out behind a tram, and the feelings one experiences when making a wild swerve on such occasions in a desperate but unsuccessful effort to get clear are not of a kind which one likes to repeat.

Transparent Saloons.

A MAN with whom I was discussing the remarkable developments which have occurred of recent years in connection with everything relating to celluloid said the other day that he could picture a car of the future which had a closed body the upper works of which were made wholly of a transparent material. In support of his contentions he pointed to the fact that we have already witnessed the introduction of non-inflammable celluloid, of a material which has been described as flexible glass, of transparent waterproof dopes and of many other similar inventions.

The idea of a car with transparent coachwork above the shoulder-line is certainly somewhat visionary, but it would bring the closed car a very big stage nearer to perfection.

Open Cars are Faster.

NOT the least objection to the modern type of saloon body in the estimation of many people is that in traffic the driver never feels at ease owing to the blind spots caused by the pillars and by the popular "blind" quarters. The effect which these blind spots have on one's driving is immediately appreciated if the driving seat of a saloon is left for that of a tourer with the hood lowered.

Between two points ten miles apart in London most drivers, I imagine, would find that in the open car they put up an average speed better by at least 3 miles per hour. One seems always to feel less hemmed in when driving an open car, whilst the ability to glance over one's shoulder and see in a flash whether there is anyone coming up behind saves no end of time in traffic.

Those Wide Doors.

ARE the very wide doors which figure on many ultra-modern cars justified? They certainly provide an easy path to and from the rear seats, but does this compensate one for the fact that they swing right across the pavement when putting down passengers and are positively dangerous to open on the traffic side? In my view the game is hardly worth the candle. After all, most people who buy cars with two-door bodies do not intend to carry rear-seat passengers except on rare occasions, and I cannot believe that it is always a proposition to put up with the inconvenience of big, heavy, awkward doors simply to save the very slight effort needed to tip a front seat when the back of the car is being entered or left.

OLD CUSTOMS DIE HARD; — In many parts of the country many queer customs come to light at Christmastime. This party of mummers is to be found going round the villages between Pickering and Helmsley, Yorks, almost every Boxing Day.

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TEMPLE PRESS LIMITED,
5-15, Rosebery Avenue,
London, E.C.1.
Inland Telegrams - "Pressimus, Holb, London."
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"THE LIGHT CAR AND CYCLECAR" WAS FOUNDED IN 1912 TO CATER FOR THE NEEDS OF USERS AND POTENTIAL PURCHASERS OF LIGHT CARS AND CYCLECARS, AND IT HAS CONSISTENTLY ENCOURAGED THE DEVELOPMENT OF THE ECONOMICAL MOTORING MOVEMENT FOR OVER SIXTEEN YEARS.

NO CAR WITH AN ENGINE CAPACITY EXCEEDING 1,500 C.C. (1½ LITRES) COMES WITHIN THE SCOPE OF THIS JOURNAL, THAT CAPACITY BEING GENERALLY RECOGNIZED AND ACCEPTED AS THE LIMIT FOR A LIGHT CAR ENGINE.

Topics of the Day

Greetings.

THE very best of Christmas wishes to all our readers. Let us hope that the holiday this year will not be curtailed by the beneficent efforts of the Clerk of the Weather, who supplied us with such seasonable but unpleasant conditions last year. Christmas Day, falling on a Tuesday, will allow the bulk of our readers to enjoy quite a long holiday this year, most of them, no doubt, being free from business cares from to-night until next Thursday morning. There is time for most motorists to visit relations in remote parts of the country, whilst for those who have not sampled the joys and adventures of winter touring the opportunity is extended to spend five full days on the road.

Away from the cities motoring at Christmastide is quite different from any other time during the year as, being essentially a fireside holiday, the roads are never more deserted. In the cities, however, particularly on Christmas Day, the curtailment of public services brings on to the streets very large numbers of private cars, in the case of some of which the man at the wheel may be imbued more with the Christmas spirit than with discretion. It behoves us all, therefore, to exercise every possible caution and to follow meticulously the well-known "safety first" doctrines. It is impossible to exercise too much care at cross-roads and danger points when the holiday spirit is abroad.

Motorists and Third-party Claims.

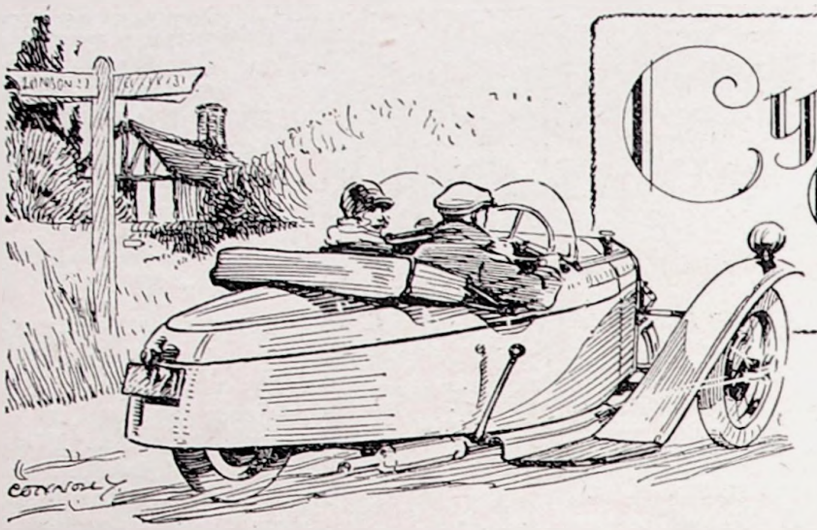
WE fully endorse a warning recently issued by the R.A.C. which refers to drivers of cars who, through no fault of their own, may be involved in accidents resulting in slight injury to some third party and who are tempted to show their sympathy by making payment either at the time of the accident or at some later date. It should be emphasized that such a payment may be construed as an admission of liability on the part of the driver and that it gives his insurance company an opportunity to repudiate liability should a third-party claim subsequently arise.

There is another aspect of the case to which we drew the attention of our readers some time ago, but which may well briefly be referred to again. Certain touts who haunt the entrances to the casualty wards of our large hospitals approach injured parties and offer to fight their case for them on the understanding that if successful the proceeds are shared. The usual modus operandi is for the tout to send a threatening letter to a driver, who may have been concerned quite innocently in the accident, in the hope that he will pay up so as to save further bother. Threatening letters of this kind bear the unmistakable stamp of blackmail and should either be ignored or placed in the hands of a solicitor. A case of this kind came to our notice recently; the threatening letter sent by the tout was promptly answered by a curt but very firm note from the recipient and no more was heard of the matter.

Renewal Time.

ON Monday week, December 31st, only ten days hence, all our car licences expire, and the consequence will be that the offices of the issuing authorities will be very congested. Wise men, therefore, will apply early and save themselves the worry and annoyance of being without a licence when the period of grace expires. This period of grace, it should be noted, is 14 days and no longer, although there have been cases of motorists being prosecuted for using out-of-date licences and their cases have been dismissed if they have been able to prove that a proper application complete with a cheque or money order for the right amount was despatched prior to the expiry date or the end of the period of grace.

It is necessary for us to direct the attention of our readers to the fact that if they do not intend to renew their licences for the coming quarter they are not at liberty to use their cars after December 31st. Last year many motorists, believing the 14 days' grace applied to them, although they did not propose to renew their 1927 licences before March, 1928, ran their cars on the roads during the first fortnight in January and were subsequently fined for doing so. Several cases of rather hard luck came under notice in this connection when those who were fined had acted in good faith but in ignorance of the law. They had applied for shorter term licences than the minimum at this time of the year, namely, one quarter, and delay due to congestion at the licensing office resulted in their not discovering their mistake until a summons had been served upon them.



Cyclecar Comments

BY SHACKLEPIN

A BLOW TO FRENCH CYCLECAR RACING—ITS EFFECT IN THIS COUNTRY—WINTER MOTORING WITH A THREE-WHEELER.

ACCORDING to the Paris correspondent of *The Light Car and Cyclecar* a deathblow has been struck at cyclecar racing in France by a recent decision of the U.M.F. The position is set out clearly in the following extract from our correspondent's letter.—

An important decision has been taken by the sporting committee of the U.M.F. with regard to cyclecar racing next season. The decision is to uphold, for France, the resolution passed at the last F.I.C.M. Congress, as the result of which a weight limit of 350 kilos. was reintroduced for cyclecars. For the past two seasons cyclecars in France have been confined to three-wheelers, all four-wheeled machines, whatever their size, weight or engine capacity, being classed as "petites voitures"; that is to say, they have had to run in the car classes in sporting events. The effect of the new decision will be simply to kill cyclecar racing in France entirely. French three-wheelers are confined to the Sandford, Morgan, D'Yrsan, Villard and two or three amateur-built machines. Sandford and D'Yrsan three-wheelers are automatically eliminated from racing by the new rule, whilst the supercharged Morgans may or may not be just within the limit. The remaining machines are not fast enough for serious racing. To say that the decision is an unfortunate one is putting it mildly, for the Sandford, Morgan, D'Yrsan battles have lent interest to many an otherwise dull race meeting in the past.

It will be a very great pity if this decision is allowed to stand, because many of us have been hoping to see French three-wheelers at the New Cyclecar Club's Brooklands meeting next year. If, however, the manufacturers are debarred from racing in their own country it is unlikely that they will keep machines available for speed events over here. We must look forward, therefore, to hearing that the new French ruling has been modified in some way.

* * *

In a recent issue of this journal there appeared an article which dealt with the question of winter motoring, and it was proved that there was practically nothing to be gained by laying up a car for the first quarter of the new year. The article referred to light cars, and showed that so far as actual financial saving was concerned the owner of a car taxed at £10 per annum would save only £2 2s. 6d. by foregoing three months' motoring. This saving, of course, would be offset by the fact that he probably would have to spend more money on fares in public conveyances than for the petrol necessary to cover a similar distance in his car, and on amusements such as theatres which, had the car been in commission, he might not have visited.

So far as three-wheelers are concerned, there is even less excuse for laying up the machine during part of the year, if only because the full year's tax is only £4. Comparing this with the £8 payable on a small car, we find that on a weekly basis the taxes work out respectively at 1s. 6d. per week and 3s. per week—and this difference represents the cost of a gallon of petrol.

* * *

Those who believe in four-wheeled vehicles will argue from this that one has only to cut down one's weekly mileage by 40 to be able to afford the difference in tax between a three-wheeler and a small horse-power car. This is all very well, but it is not only a question of tax difference; there is insurance to be considered, besides various other financial aspects. The insurance premium on a three-wheeler, in most cases, is less than that on even the lowest-powered four-wheeler, and one does not save money on insurance by laying up the vehicle.

With regard to the reduction of mileage, I would point out that 40 miles per week is equal to about 2,080 miles a year, which is rather a lot for an enthusiast to forego. A three-wheeler owner, however, with only his £4 tax to pay, can have his machine available throughout the 52 weeks, and then if occasionally the weather is so very bad that he does not feel inclined to be on the road he has the satisfaction of knowing that, whilst the machine is in the garage, it is not eating off its head to anything like the same extent as a four-wheeler.

To be perfectly fair to both sides I am prepared to admit that a three-wheeler uses about as much oil and petrol as a four-wheeler of similar horse-power; or, rather, I should say that it uses slightly less fuel but rather more oil. The ultimate accounts, however, would about balance.

* * *

In spite of the belief of many people to the contrary, the rear tyre of a three-wheeler has a very long life; in fact, quite often it lasts as long as either of the two rear tyres of a four-wheeler. As a rule, it is of about the same size, but when renewals become necessary there is only one tyre to buy instead of two.

Taken all round, therefore, it will be seen that a three-wheeler can be run throughout the year at a comparatively small cost, and as there is now a type for everyone it surely is not unreasonable to expect that before long many more three-wheelers will be seen on the roads than at present.

I have endeavoured at various times to make it quite clear that there is no need to buy a sports model three-wheeler in which one feels compelled always to travel fast, because touring and family models, designed primarily for normal comfortable travelling will give all the speed that an ordinary man requires. Furthermore, having a very high power-weight ratio their performance on hills is really remarkable.

Another argument in favour of three-wheelers, irrespective of type, is that they are really easy to handle. Having only two speeds—controlled by dog clutches—there is never any gear-changing difficulty; that is, no finesse is needed in changing gear either up or down, and, except in traffic, top-gear driving is nearly always the order of the day.

A WILD JOURNEY ACROSS AUSTRALIA.

GRIPPING STORY OF AN ADVENTUROUS TRIP BY A PIONEER MOTORIST FROM PERTH TO SYDNEY IN A TRIUMPH SUPER SEVEN.

PRIOR to the publication of an official record of the trip, only the most meagre details of the journey across Australia from Perth to Sydney, made by a pioneer motorist—Mr. P. W. Armstrong—in a Triumph Super-Seven were available.

It is an interesting story and well worth recounting in the actual words of the record which the Triumph Motor Co., Ltd., has prepared.

Torrid heat, blistering sand storms, innumerable punctures, obliterated tracks, torrential rains, floods, mud, cold and 80-m.p.h. cyclones—all these the Triumph had to fight against. In all Mr. Armstrong's wide experience—he is 65 and has crossed Australia four times—he had never encountered such a run of bad luck. Yet against it all his Triumph battled through to brilliant success.

The party left Perth at 2 a.m. on Sunday, September 30th. The first 24 hours took them 589 miles to Balladonia. There they had to take on board enough petrol to last them the 579 miles to Fowler's Bay. It was during this critical stage that they lost their way through sand storms erasing the track. An aborigine was approached to guide them, but as they would not take his "lubra" he refused on the score that someone would run off with her during his absence!

Then punctures harassed them, one after another. During one day they mended no fewer than 17. All this ate up their time, which meant extra speed to keep near their schedule.

Between Fowler's Bay and Penong, the Port Lincoln railhead, they got lost so often that 22 hours were wasted. In one place they held council to decide on the track. On they went, and five hours later found themselves at the exact spot on which they had previously been debating.

Adelaide, 1,748 miles, was reached at 10 p.m. on Thursday, October 4th. After a four-hour rest, they proceeded. Just prior to entering the famous Coorong desert a cloud-burst flooded the country, making the going so boggy as to be almost impossible. Only the veteran driver's grit and the power and endurance of the Triumph won them through. Mount Gambier saw them still battling against driving torrents. So much rain fell that the roads were not discernible, and to escape a sudden plunge into some hidden river they 'phoned to Casterton for a guide.

The guide arrived, but although he knew the country like a book, he, too, went astray. Experienced men of the district said it was impossible to get through, but Armstrong had other ideas. He knew his Triumph and he had confidence in himself. After a terrific struggle they reached Casterton.

The run to Melbourne, although not by any means pleasant, was uneventful. They arrived at 4.35 p.m. on Saturday, October 6th. A hot bath, a good meal and four hours' rest put the pair in sound heart, and the drive to Sydney was continued. It was their misfortune then to strike the cyclone which swept Victoria over the week-end. Into the teeth of the 80-m.p.h. hurricane they charged. For 12 hours they fought it and won through to Albury. During this run they had to make detours on occasion, to get around trees uprooted by the storm and flung across the road.

At 8.30 a.m. on Monday, October 8th, the great test ended. Sydney was reached after 196½ hours of the most appalling conditions. Over the whole distance the Triumph averaged 40 m.p.g. of spirit. Much of the route was low-gear flogging, yet their only mechanical trouble was a broken fan belt.

LORD CECIL'S BILL "TORN TO SHREDS AND TATTERS."

ONE of the most interesting debates of the present session took place in the House of Lords on the Bill which was introduced by Lord Cecil of Chelwood for the purpose of effecting various changes in the law with reference to motors and motoring. Its main provisions are that drivers' licences should not be issued unless the local authority are satisfied, by examination and test, of the applicants' fitness, skill, and knowledge of the ordinary rules of the road; that motor-cars should be provided with mechanical appliances for checking their speed; that local authorities should have power to alter the level of the roads at dangerous parts so that motorists could not drive over them at excessive speed without "inconvenience" to themselves; that there should be compulsory third-party insurance, and that the licences of drivers convicted of driving at excessive speed should be suspended for three months.

While everybody appreciated the purpose which Lord Cecil had in view, there was general agreement that the methods by which he desired to enforce it were open to very grave objection, and criticism came from many members of the House, including the spokesman of the Government.

Lord Denman, who moved the rejection of the Bill, pointed out that it was opposed by the national motoring organizations and viewed with disfavour by the motoring public. He agreed that the penalties for dangerous driving should be increased, and that some check ought to be put upon the issuing of licences to people suffering from physical disabilities; but medical examination would involve considerable expense, and the independent committees which had inquired into the proposal for driving tests had reported against such a system. It was not so much the beginner who caused accidents as the skilful driver who relied upon his skill to get him out of tight places and sometimes failed. The proposal to have a mechanical check upon motor vehicles was one of the worst provisions of the Bill. It would be impracticable to fit such a device, and, in any event, it could easily be tampered with. The statement that speed was the cause of accidents was a fallacy: traffic congestion was a more prolific cause. As to compulsory third-party insurance, it was open to serious objections (as already stated by the representative of the Ministry of Transport who gave evidence recently before the Royal Commission on Transport). There was no means of compelling the insurance companies to accept the risk, and, if they were to do so, they would be in a position to exact high premium charges on a monopoly scale. The breaking-up of the roads would make them impassable for horse-drawn traffic.

Support of the Bill in some of its parts came from Lord Buckmaster, who called for heavier penalties on the reckless motorist and demanded that the rights of pedestrians to the use of the public highways should be safeguarded against the monopoly which motorists had established. One abuse which he insisted should be dealt with was that of failure to dim headlights.

Speaking for the Government, Lord Londonderry, First Commissioner of Works, said the Bill had been torn to shreds and tatters by the criticism to which it had been subjected. Regulation of motor traffic, he proceeded, was absolutely necessary; but it must be sympathetic rather than oppressive, and it must not hamper a rising and flourishing industry.

Eventually the House agreed, on the suggestion of the Marquis of Salisbury, to give the Bill a second reading, on the understanding that it would be referred to the Royal Commission with a view to an early report upon it, or to a Select Committee. In either event, the Bill will make no further progress this session.

FULL PROGRAMME OF The M.C.C.'s Great Win

Lining up for the start—a scene typical of every "London-Exeter."

"TRIALS FEVER" EXPLAINED—SMALL ARMY OF MOTORISTS TO LEAVE SLOUGH EN ROUTE FOR E PERMITTING!—NEW AND FORMIDABLE HILLS—THE TEST ON "WHITE SHEET"—RUN TO FINISH AT THE EVENT.

VIEWED in the abstract and without ever having had anything to do with a long-distance trial, an event like the winter club run of the M.C.C. from London to Exeter and back, taking in rough going, difficult hills, restarting tests and so on, appears to be about the maddest thing that one could possibly think of as a means of whiling away the time during Christmas week; but once a man has taken part in an "Exeter," a "Land's End," or any other of the M.C.C.'s classic trials he thinks differently.

He realizes that the experience is like nothing he has ever come across before, and from the moment he mixes with the motley crowd at the start the world is well lost, the season—even if it be Christmas—has no significance, and the trial is all that matters. In other words, anyone who comes into contact with any part of the organization of the "Exeter" gets a bad attack of trials fever.

The Scene at Slough.

On Thursday next the Slough Trading Estate will be invaded by a busy army of competitors, their passengers, timekeepers and other officials. This invasion will begin fairly early in the afternoon, but it will not swell to formidable proportions until about 6.30 p.m., when the early starters in the motorcycle section begin to drift in.

At 8 p.m. prompt the curtain will be rung up and the official cars will be given a hearty send-off—that is, if all falls out according to plan, for last year Jack Frost played a hand in the game, making roads impassable in many places, with the result that the trial had to be postponed.

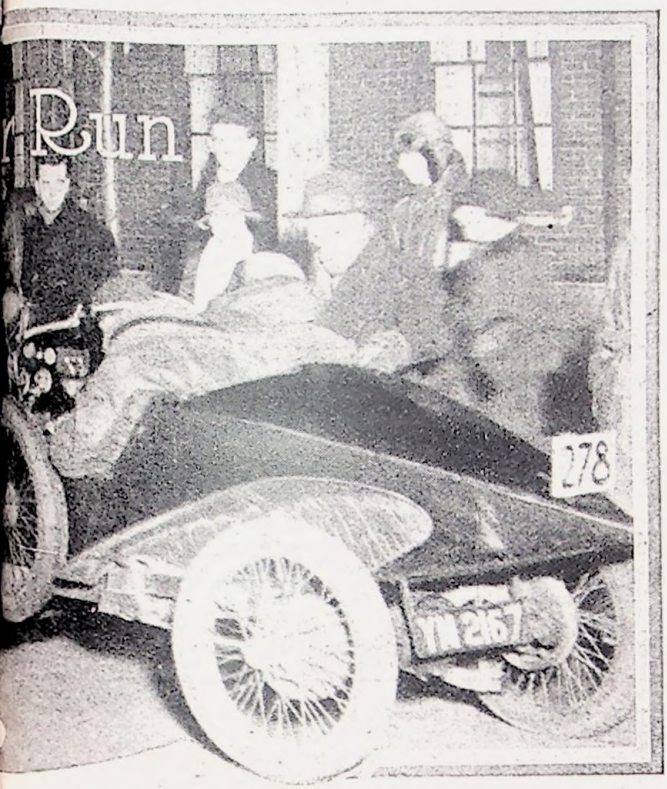
The official cars will be followed by the first motorcycle competitors and, in due course, the three-wheeled cyclecars, all of which, as usual, are Morgans. The four-wheelers—which are divided into classes for 850 c.c., 1,100 c.c., 1,500 c.c. and unlimited entries—will follow. It will be close on midnight before the tail of the procession gets well on the move and goes bowling down the road via Reading, Newbury, Andover and Salisbury en route to the first test hill, namely, Middledown.

The First "New" Hill.

This lies off the main Exeter road, about 15 miles beyond Salisbury. By daylight it can clearly be seen from the main road like a streak of white cut in the side of the downs. It is approached by a fairly narrow lane terminating in a sharp S-bend, half way round which the gradient commences to stiffen. Then follows the straight section to which we have just alluded, the gradient of which varies from 1 in 5 to 1 in 6; the hill proper terminates in a genuine left-hand hairpin bend.

The main Shaftesbury road is then rejoined after the steep descent at Alvediston, and the competitors carry on along the old route through Shaftesbury, Yeovil and Crewkerne to Chard—hill of blessed memories, once observed officially, but now "observed" only sufficiently to call for a change into second gear with most light cars.

Incidentally, however, Chard is still a little bit



ON THURSDAY NEXT AT 8 P.M.—JACK FROST TESBURY THIS YEAR—A COMPLETE GUIDE TO

of a terror, for only a few years ago a by-pass, cutting out the worst section, was constructed, and many private cars make use of the loop.

Carrying on, the competitors cross the main Exeter road, making for Sidmouth and Peak Hill. Of Peak we need say little, except that it is an old favourite which seldom catches experienced men napping, but often laughs at novices, who attempt to change from bottom to second far too soon, and when the hill has, apparently, been conquered.

Thence to Exeter and a welcome respite which will give these hardy winter adventurers time fully to discuss the "terrors" of the new hills on the return journey. The first of these is Westgate Hill, quite close to Exeter and to Gittisham Hill, which was used in last year's trial. The new hill is approached via a long, narrow lane, the gradient of which gradually stiffens. On the hill itself the gradient is about 1 in 5½ and there are two acute bends, one to the left and the other to the right. The surface is not good, being slimy and calculated to cause wheel-spin. Incidentally, this hill provides an ideal vantage point, as the banks form natural grandstands.

Next comes Harcombe Hill, which may be said to be a kind of blood relation to Salcombe. The approach is long, narrow, steep and slippery, and there will be some exciting work should a competitor fail. Higher up the gradient stiffens to 1 in 4½ and is approached by two sharp right-hand bends, whilst, to finish up, there is a sharp left-hand bend.

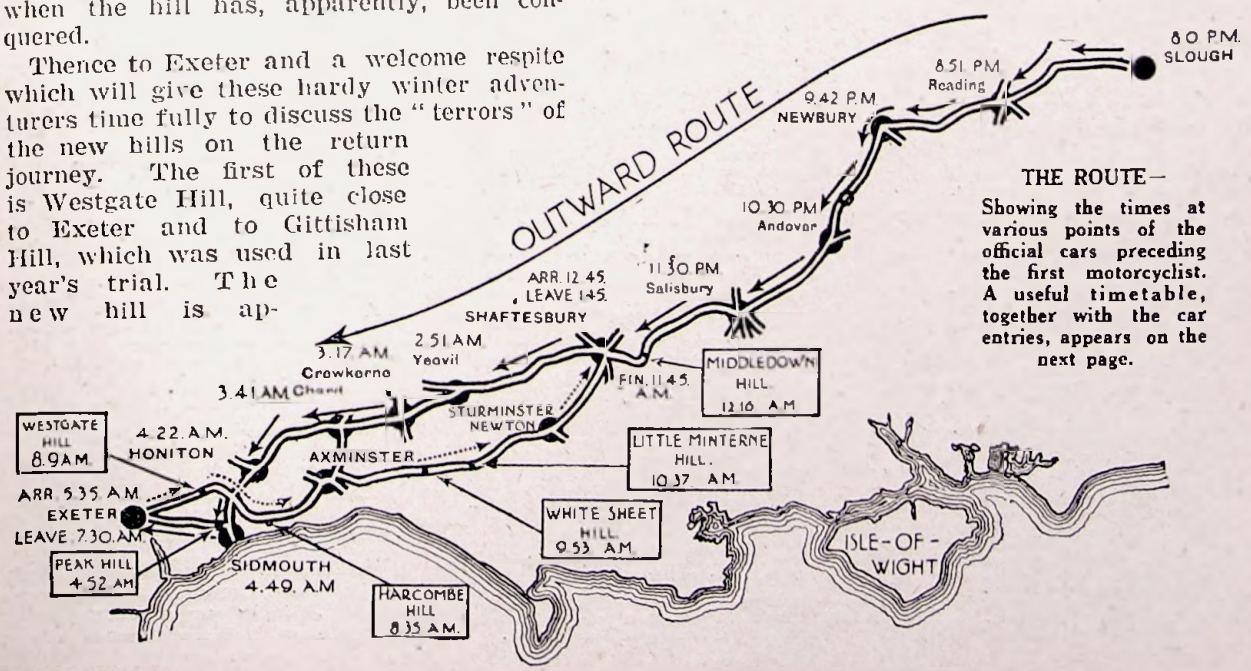
Daylight Once More.

As the first of the three-wheelers approaches Harcombe the sky should show traces of the dawn, and those who have not fallen by the way will probably heave a sigh of relief, for hill-climbing in daylight is child's play compared with stunts of this kind which have to be performed in the dark. So it will be a far more cheerful procession that wends its way via Axminster to White Sheet Hill.

Here the organizers will stage a special test just to show competitors that what the M.C.C. can do by darkness is nothing to what it has up its sleeve by daylight!

There are four requirements: First, a brief preliminary non-stop run from a standing start on the lower part of the hill (A) to a stopping place (S) about half-way up the acclivity; secondly, an immediate restart from S, for which seven seconds are allowed; thirdly, a brief concluding non-stop run from the restarting point (S) to a finishing point (Z) at the top of the hill; fourthly, the completion of the test from start to finish (A to Z) within a standard time for each class.

The authors of this Christmas road festival will bring it to a playful conclusion so far as stunt gradients are concerned by introducing competitors to Little Minterne Hill, which is about mid-way between Dorchester and Sherborne.



THE ROUTE—

Showing the times at various points of the official cars preceding the first motorcyclist. A useful timetable, together with the car entries, appears on the next page.

Full Guide to the "Exeter" (contd.).

Turning sharp right off the main road, drivers will gather their strength as they descend a slight declivity, cool their engines—and, possibly, their magnetos—by passing through a fairly deep water-splash and then, if the "crossing" has been a good one, begin to climb a gradient which does not become steep until narrow muddy grass-grown lanes have been followed by a considerable distance. Then follows the worst section, which has a gradient of about 1 in 6 or 7 and degenerates into a track with steeply sloping grass banks on each side and an easy right-hand curve at the top just before the last of several gates has been passed through.

This sounds like the very thing with which to wind up the "Exeter," for the run to Shaftesbury—the finishing point—will come as a kind of anti-climax. The first man is due to arrive at Shaftesbury at 11.45 on Friday morning. After that he will be at liberty to hand over his car to his passenger whilst he settles down to a well-earned nap. We can only hope than his dreams will be pleasant ones and that the thought of a "silver" or a "bronze" will not disturb his slumbers. This, of course, is the first time the run has ended at Shaftesbury. In former years competitors have checked off at Staines; but Shaftesbury completes the strenuous section of the run, and doubtless it is felt that it is unnecessary to carry on to the old venue.

Just one word more—for the benefit of lay scribes who frequently seize on the "London-Exeter" as an item of news at an otherwise dull period—the event is *not* a race!

COMPLETE LIST OF CAR ENTRIES.

WHERE TO SEE THE COMPETITORS EN ROUTE TO AND FROM EXETER.

CLASS III.

Three-wheeled Cyclecars (14).

181 *A. B. Sparks (Morgan).
182 J. S. Thurlby (Morgan).
183 G. H. Marshall (Family Morgan-J.A.P.).
184 C. J. Turner (Morgan-Blackburne).
185 D. S. C. Macaskie (Morgan-J.A.P.).
186 G. E. Swift (Morgan-J.A.P.).
187 T. E. A. Johnson (Morgan).
188 A. C. Maskell (Morgan).
189 A. W. Couchman (Morgan).
190 T. B. Raban (Morgan).
191 H. C. Harris (Morgan).
192 L. H. Creed (Morgan-Blackburne).
193 H. J. Vidler (Morgan-Blackburne).
194 R. D. Smith (Morgan Special).

CLASS IV.

IV (a). (Not exceeding 850 c.c. capacity.) (29.)

195 *H. W. Ellis (Austin).
196 L. H. Ellis (Triumph).
197 George H. Strong (Austin).
198 E. D. W. Verner (Austin).
199 F. H. Williams (Trinmph).
200 M. E. H. Gibson (Austin).
201 J. A. Pocock (Austin).
202 E. V. Frye (Austin Cup Model).
203 T. J. Medlen (Singer Junior Sports).
204 S. G. Hall (Singer Junior).
205 J. C. Thorowgood (T.S. Austin).
206 W. C. H. Pitts (Austin Cup Model).
207 K. G. Marsh (Austin).
208 H. S. Linfield (Taylor-Austin).
209 G. H. R. Chaplin (Austin).
210 H. J. C. Ripley (Austin).
211 M. J. Creswell (Austin Cup Model).
212 H. Widengren (K.C.-Austin).
213 H. W. Wells (Triumph).
214 H. A. Sharp (Austin).
215 A. Gordon-Smith (Austin Cup Model).
216 J. Richardson (Austin).
217 T. L. Carrington (Austin).
218 R. A. Hannam (Austin Cup Model).
219 P. G. Fry (Austin).
220 W. J. Milton (Austin).
221 E. Martin (Austin).
222 W. L. Watson (Austin).
223 A. P. McGowran (Austin).

IV (b). (Not exceeding 1,100 c.c. capacity.) (27.)

224 *B. L. Macassey (Riley).
225 L. F. West (Riley).
226 N. H. Keep (Riley).
227 E. H. Buckingham (Senechal).
228 Percy P. Heber (Riley).
229 M. H. Fortlage (Salmson).
230 C. B. E. Morgan (Rover Sports).
231 G. F. M. Wright (Frazer-Nash-J.A.P.).
232 R. Franey (Riley).
233 P. J. Urlwin-Smith (Amilcar).
234 M. J. E. Morgan (Amilcar).
236 C. H. Lawford (Fiat).
236 G. E. Vaughan (Salmson).
237 *A. C. Scarff (Riley).
238 L. J. Higgs (Salmson).
239 J. W. Barber (Salmson).
240 E. P. Huxham (Salmson).
241 R. Reffell (Riley).
242 B. S. Barton (Riley).
243 J. H. Robertson (Gwynne).
244 J. F. Cooknell (Jowett).
245 H. J. Lovatt, Junr. (Jowett).
246 H. J. Lovatt (Jowett).
247 W. Simpson (Riley).
248 A. E. Haskins (Frazer-Nash).
249 N. W. Rae (Salmson).
250 C. L. Bowes (Riley).

IV (c). (Not exceeding 1,500 c.c. capacity.) (49.)

251 *D. Duncan Smith (Frazer-Nash).
252 H. J. Aldington (Frazer-Nash).
253 C. L. Clayton (Alfa-Romeo).
254 G. J. N. Tait (Alvis).
255 J. N. Goodwyn (Swift).
256 S. H. H. Cundey (Frazer-Nash).
257 R. S. Latham-Hoote (Alvis).
258 W. J. Haward (Bayliss-Thomas).
259 G. L. Jackson (Lea-Francis).
260 A. G. Gripper (Alvis).
261 L. Maxwell (Lea-Francis).
262 N. Miller (Riley).
263 *C. B. Moss-Blundell (Alvis).
264 M. W. B. May (Cetrane).

TIME-TABLE OF THE RUN.

The official cars leave the Slough Trading Estate at 8 p.m. on Thursday next, December 27th. The first motorcyclist follows 30 secs. afterwards. The same interval separates both car and motorcycle competitors.

	First Motorcycle (No. 1) Fri.	First Cyclecar (No. 181) Sat.	Last Car (No 352) Sat.
Salisbury ..	11.30½ p.m. Sat.	1.0½ a.m	2.26 a.m.
Middledown	12.10½ a.m.	1.40½	3.6
Shaftesbury (arr.) ..	12.45½	2.15½	3.41
Chard ..	3.41½	5.11½	6.37
Honiton ..	4.22½	5.52½	7.18
Sidmouth ..	4.49½	6.19½	7.45
Exeter (arr.)	5.35½	7.5½	8.31
Westgate Hill	5.9½	9.39½	11.5
Harcombe Hill	8.37½	10.7½	11.33
Axminster ..	9.14½	10.44½	12.10 p.m.
White Sheet Hill ..	9.53½	11.23½	12.49
Up Cerne ..	10.35½	12.5½ p.m.	1.31
Little Minterne Hill.. ..	10.37½	12.7½	1.33
Shaftesbury (arr.) ..	11.45½	1.15½	2.41

265 A. J. Mollart (A.C.).
266 E. A. Marks (Rover).
267 G. W. Olive (Standard).
268 B. Roberts (Schneider).
269 F. Broomfield (Lea-Francis).
270 A. Podmore (Lea-Francis).
271 R. H. Penny (Alvis).
272 L. E. Fillmore (Rover).
273 W. A. Ponting (Bugatti).
274 R. H. Ferguson (Clyno).
275 *S. C. H. Davis (Alvis).
276 John Templeman (Standard Sports).
277 J. Torromé (Standard).
278 N. B. G. Jupp (Swift).
279 F. T. Williams (Alvis).
280 K. W. Bear (Newton-Ceirano).
281 R. Lester-Williams (Alvis).
282 G. P. E. Howard (Singer).
283 H. R. S. Keogh (Riley).
284 J. W. Richards (Frazer-Nash).
285 W. d'A. Tremlett (Lea-Francis).
286 H. L. W. Dry (Hampton).
287 *W. H. Julian (Standard Sports).
288 G. O. T. Gamble (Lea-Francis).
289 H. J. Bacon (Alvis).
290 C. A. Paul (Windsor).
291 Frank A. Landucci (A.C.).
292 E. Hillary (Standard).
293 D. W. Geidt (Lea-Francis).
294 E. H. Grimsdell (Alvis).
295 E. H. M. Grimsdell (Alvis).
296 A. T. Clark (A.T.C. Special).
297 A. N. Spottiswoode (Bugatti).
298 D. West (Westley Special).
299 R. L. Bowes (Frazer-Nash).

IV (d). (Over 1,500 c.c. capacity.) (53.)

300 *W. M. Couper (Lagonda).
301 C. R. B. Chiesman (M.G. Sporting Six).
302 W. E. Kendrick (M.G. Sports).
303 C. F. Dobson (M.G. Sporting Six).
304 A. A. Attwood (Moratt).
305 R. J. Munday (Vauxhall).
306 J. H. Simmons (Chrysler).
307 G. Higginbottom (M.G. Sports).
308 H. G. Reigate (Invicta).
309 J. H. Abern (Invicta).
310 Chas. I. Robinson (Bean).
311 J. R. Jeffress (Hupmobile).
312 A. C. E. Benson (Lagonda).
313 *J. V. Hay (Morris-Cowley).
314 R. J. Barker (Buick).
315 H. J. Stroud (Wolseley).
316 J. S. Steele (Delage).
317 P. D. Walker (O.M.).
318 C. M. Walker (B.S.A.).
319 G. E. Templer (Talbot).
320 R. H. W. Mander (Talbot).
321 J. O'Donnell (Morris-Cowley).
322 J. A. C. Patterson (Delage).
323 A. Sharman (Graham-Paige).
324 A. E. Lockie (Rover).
325 W. C. Gardiner (Bugatti).
326 *P. W. White (Lagonda).
327 R. C. Rowland (Austro-Daimler).
328 J. E. Williams (Hillman).
329 R. G. Percival (Metallurgique).
330 G. K. Collier (Morris-Cowley).
331 A. F. Scroggs (Trojan).
332 T. M. Robinson (Ford).
333 A. G. Shepherd (Morris-Oxford).
334 J. A. Daniell (Austin).
335 C. L. Sprosen (Erskine).
336 C. G. Fitt (Bentley).
337 R. F. Galbraith (Austin).
338 P. L. Farquharson (Essex).
339 *B. A. Hill (Standard).
340 M. Durand (Bentley).
341 A. E. P. Bridge (Sunbeam).
342 K. E. Gormly (Talbot).
343 H. J. R. Broadbent (Vauxhall).
344 J. S. Bass (Alvis).
345 P. L. Bass (Bentley).
346 L. C. Becker (Buick).
347 D. E. M. Douglas-Morris (Buick).
348 A. P. Warren (Morris-Cowley).
349 L. T. E. Clark (Morris-Cowley).
350 C. E. Wood (Wolseley).
351 H. D. Parker (M.G. Sports).
352 H. G. Martin (Star).

* Denotes travelling marshal.

Last year the "London-Exeter" had to be postponed as the route was impassable owing to snow. If similar road conditions prevail this year, the same decision will have to be taken.

We welcome letters for publication in these columns but take no responsibility for the opinions expressed. No anonymous communications will be accepted, but writers may use a nom de plume. To ensure publication in the next issue letters should be addressed to the Editor, "The Light Car and Cyclecar," 5-15, Rosebery Avenue, London, E.C.1, and should reach us on Monday. We reserve the right to make any alterations or deletions which we deem necessary. Please write only on one side of the paper and leave a wide margin.

"THE POWER OF THE MICROPHONE."

Wireless, the Cinema and "Safety First."

Safety-first Propaganda.

Your suggestion in "Topics of the Day" last week that safety-first suggestions should be broadcast regularly by the B.B.C. must have the hearty support of every motorist.

A Splendid Idea.

In my opinion, it would be a good plan if, instead of setting aside a definite time in the programme for the announcement, it were made quite unexpectedly between the normal items. During the course of an average evening's broadcast there are plenty of intervals long enough for the announcer to make a few remarks upon "safety first." If this plan were adopted there would be much less chance of the "won't-be-tolds" switching off their sets than if they knew the exact time of the announcement. There would be no necessity to engage special folk with high-sounding names or titles to make the announcements; the regular B.B.C. announcers are the right men for a job of this kind. They have the exact tone of voice and mode of expression most likely to carry conviction.

It cannot be denied that constant repetition of slogans appertaining to safety-first measures would eventually have the necessary effect upon the minds of all listeners. It would be a wonderful form of Coueism. Ex-oscillator.

What of the Cinema?

As a wireless listener I can heartily endorse the sentiment contained in your editorial, "The Power of the Microphone." Wireless listeners were first of all puzzled by the frequent repetition of the

Another Powerful Medium.

announcement concerning oscillation, then they became almost wrathful, but I wonder how many of them realized that the B.B.C. was "getting at them" by a psychological process, the value and efficacy of which there was no denying? I think your idea is a good one, but any announcement concerning driving should have the authority of the Ministry of Transport. In addition, I would like to suggest that the same policy be adopted all over the country in cinemas and theatres.

Could not the Ministry of Transport prepare a series of "potted" films, each one to last about two minutes, showing some aspect of dangerous driving or dangerous walking which needs emphasizing again and again? One or other of the series could be thrown on the screen of every cinema and theatre in the country during a suitable interval in the normal performance. B.B.-Cinema.

An Early Wireless Appeal.

Those of us whose first experience of wireless dates from Capt. Eckersley's Tuesday evening concerts from Writtle can very fully appreciate the value of his efforts to suppress the oscillation fiend. If, therefore, as

"Don't Do It!"

you suggest, similar use could be made of the microphone to educate the jay walker and the road-hog, the B.B.C. would earn the heartfelt thanks of everyone, whether they be motorists or pedestrians.

Perhaps Capt. Eckersley himself could be persuaded to take on this good work. His excellent microphone voice and his forceful mode of expression must be remembered clearly by all of us who, with clear consciences or otherwise, listened to his "*Don't do it!*"

Those very words could well be used again at the conclusion of a few snappy remarks upon overtaking on the near side or walking backwards in the middle of the road.

M. J. Bennard.

Broadcast Appeals.

I think it would certainly prove an inestimable boon to everyone if the B.B.C. were to broadcast "safety-first" propaganda, as you suggest. No doubt the R.A.C. and the A.A. would be prepared to draw

Impressing the Listener.

up suitable appeals which, I agree, should be quite short, but none the less forceful. In order to impress the matter upon the minds of listeners, however, it seems to me that the Ministry of Transport or Scotland Yard should be identified with the scheme. Then, in making the appeal, the announcer would preface his remarks with:—"We are asked by the Minister of Transport (or by the Commissioner of Police) to make the following announcement: Safety first. . . . ."

It is my experience, as a regular listener, that one automatically pricks up one's ears when an announcement of that kind is made, and one remembers it afterwards. A simpler talk, without the preface, could well be made during the children's hour, and I am sure that the "aunts" and "uncles" could make it sufficiently interesting to capture the imagination of any child, and thus to ensure that it is memorized.

I believe that "safety first" is taught in schools, but, so far as my observations on the road are concerned, this teaching does not, as yet, appear to have had much effect.

Allen Burt.

A35

OUR READERS' OPINIONS (contd.).

Why Does the Roof Light?

The questions put by "Tuff-tuff" in a recent issue are extremely amusing, but as they are for the most part rather difficult, if not impossible, to answer, I will not strain my grey matter by attempting the task, but will content myself with putting a few more quaint queries relating to motors and motoring. Perhaps some clever lad will be able to find fitting answers. Anyway, here are my questions:—

Some Quaint Queries.

(1) Can a ball race running costs?
(2) What made the rear window blind?
(3) Does a Singer need a torque tube?
(4) Who did the A.B.C. on the Rhode?
(5) Can the exhaust stroke a sliding dog?
(6) What did the torque tube say to the live axle about the dead battery?
(7) Does a wheel wear a tyre (attire)?
(8) Can a Horstman be referred to as "she"?
(9) Should a Hardy joint tyre?
(10) Why does the roof light?

ALL TORQUE.

Compasses and Cars.

Yes, "L.F.J.," there certainly are some snags in your idea of steering a compass course in a car. I admit to knowing nothing of the compass in question; it may be neat but, fitted in the gear-lever knob, it certainly will not be reliable. In fact if one searched hard one could hardly find a more unsuitable place in which to mount a compass. There may be some comfort in the knowledge, however, that, so far as a car is concerned, there is nowhere that a compass can be fitted to work in a reliable manner.

Correction Difficulties.

On board ship, or in aircraft, the greatest possible precautions have to be taken to prevent magnetic disturbance of the compass card by adjacent metallic bodies and by electric forces. Similar precautions could hardly be taken on a car, and yet the disturbing forces are very great. The steel and ironwork of the car would have a bad enough influence, but what of the magneto, starter and dynamo?

It is, of course, possible to correct a compass by inserting small bar magnets in a special housing beneath the card. This is always done, in fact, not only when a new compass is fitted to a ship but sometimes after a voyage or when structural alterations have been made to the ship. The small magnets exert a counter force to that which disturbs the card, thus the equilibrium is restored. The deviation of the compass is checked against a standard instrument and the necessary corrections inscribed on a chart to which the ship's navigator can refer when plotting his course. In no case, however, will the compass show the true North.

There are other important points in connection with the use of compasses, but probably I have said enough to indicate that one cannot buy a cheap compass and, without more ado, navigate a car by it. QUARTERMASTER.

Cross-roads Safety.

In your issue of December 7th "Focus" has a paragraph entitled "Where the Road Forks," in which some doubt exists as to which car should take precedence. I have just returned from a six months' stay in Canada and the United States, and there the problem is solved by the erection of an easily-read notice board at the side of the road, which says: "Main Thoroughfare. Stop." If, therefore, an accident occurs the onus is clearly defined. I saw the method working satisfactorily and without friction. Also in most of the towns—where, however, most of the streets cross at right angles—the traffic is controlled by red and green lights, worked from one controlling station and operating day and night. These lights simultaneously stop all traffic going, say, east and west, and release that going north and south, and vice versa, at intervals of about two to three minutes.

Canada and U.S.A.

This appears to work very smoothly and satisfactorily and with the minimum of inconvenience to traffic and the maximum of safety to all, because pedestrians have to obey the lights as well as vehicles. SAFETY FIRST.

Practical Experience for Police.

Would it not be possible to incorporate in a constable's training a period of driving about the country in "civvies" in a car, preferably, I think, a light two-seater model? A course would necessarily be planned through some of the busiest traffic centres and where roads are dangerously designed. I think many motorists will agree with me that such a scheme would give a constable a clearer insight of motoring from the motorists' point of view, and of the braking and acceleration powers of the average car.

A Traffic Insight.

Of course, the critical will say that joy-riding for the police is an unnecessary expenditure of State money. It may be, but it would necessarily be confined to the traffic control section, and we should not have a constable suddenly holding up traffic coming down a hill to allow a *slow*-moving horse and cart to pass on a level cross-road, and the similar holding up of traffic coming up a hill.

Other situations too numerous to mention here would be better controlled by a man who has had practical experience of the possibilities and impossibilities of car control. A SUFFERER.

Austin Seven Running Costs.

One often reads of owners who have been able to run their cars on about one penny per mile or some such fallacious figure and, in fact, I remember reading an article somewhere some months ago intended to appeal to prospective car owners in which some such claim was put forward. When figures have been quoted I find invariably some important item has been omitted or an entirely inadequate amount allowed for repairs and replacements. My actual figures for the year ending November 30th, 1928, for an Austin Seven Gordon England saloon, on a mileage of 10,000, are as follow:—

An Owner's Figures.

	£ s. d.	£ s. d.
Capital outlay	172 5 8	
Accessories purchased subsequently	3 11 11	
Insurance and tax		16 19 6
Oil and petrol (the latter at 40 m.p.g.—1s. 6d. per gallon)		26 16 6
Repairs and replacements ...		19 15 10
Sundries, including decarbonizing, greasing, etc.		8 4 0
Total ...	£175 17 7	£71 15 10

This will be found to bring the net running cost to (approximately) 1¼d. per mile, to which has to be added depreciation, say, £55, making another 1½d., or a total of 3d. Then add interest on capital to taste! The repairs include the cost of fitting a new crankshaft (£2 12s. 6d.), supplied free by the manufacturers. The "sundries" item is one which many owners avoid by doing these jobs themselves, but anyway it is not a big matter for a whole year (£8 4s.) and would not affect the result to any appreciable extent.

Logically one should allow for "wear and tear," but I have included only actual expenditure. The original tyres are still good for thousands of miles, so no allowance is made in the above figures for new tyres.

Of course, the cost per mile would be considerably higher to anyone with a lower mileage than 10,000, which is considerably above the average, as I use the car nearly every day to and from London, accounting for about 5,000 miles per annum, so that very few could reckon upon getting through with it for as low as 3d. per mile, as the biggest item, depreciation, would be the same in any case, also tax and insurance.

I have a garage, so there is nothing to include on this score, but to many it would mean an additional £20 per annum or ½d. a mile. CECIL W. COOKE.

OUR READERS' OPINIONS (contd.).

Safe Night Driving.

Headlamp Warning.

As an afflicted motorist I have naturally been interested in the correspondence appearing in your excellent journal regarding deaf drivers. I quite agree with "Bristol" that the danger is with road-hogs, negligent or drunken drivers, who, as he points out, would easily pass the suggested test for driving. I cannot, however, agree with "Bristol" in his suggestion that driving at night is inadvisable. Personally I feel very much more confident in the dark, as I know when nearing corners or cross-roads that if any other cars are near their lights will show up clearly and thus act as an excellent warning. For that reason I think night-driving for deaf people is quite safe, and I have had a clean licence for eight years.

I make my eyes act for my ears, with "Safety First" in mind the whole time when dangerous crossings and so forth are encountered.

DEVONIAN.

Praise for Morgans—

—and a Grouse.

It will be obvious from the following that I have been a Morgan owner and am still an enthusiast. Even in these days, when the needs of sporting drivers are so keenly studied, I do not know where £150 will buy such performance, acceleration, solidity and lasting worth. At the same time, there are many of us who, after some particularly bitter experience with "easily removed wheels" or pushing round in traffic, with a seated passenger, have defaulted from our allegiance. In mentioning the following points, I am aware I am omitting the myriad good ones, which all true "Morganites" know by heart, and to which the sales will testify.

Such minor improvements as more supple front springing, the provision of a jack in the kit, better upholstery, and a starter that will start an o.h.v. engine from freezing cold will, probably—like geared steering—come along in the normal train of events, so we can leave these. The two things we need are:—

A reverse.

A spare wheel or rim.

We do *not* want a three-wheeled luxury car or finicky fittings that will detract from what our champion "Shacklepin" calls, and rightly, that "easily maintained simplicity," but we do want these two bare necessities, which will transform one of the most thrilling little buses now on the market into a really feasible proposition. We know there are difficulties, but they are surmountable, and—anyhow, please, Mr. Morgan, make us hold our breath for 1929.

C. W. SMITH.

Club Trials' Popularity.

A Reason Wanted!

Can any of your readers give me a good reason for indulging in hill-climbs, trials, freak or otherwise, long-distance midnight or "community" runs? If the purpose be for testing the car then why not leave it to the professional engineers, who, presumably, know much more about what they are doing. Motor club activities can surely be extended in other directions than these.

I have never entered a car for any events of the kind mentioned, because I regard it purely as a waste of time and energy; furthermore, I have more respect for my car! A distorted sense of having done something of which to be proud; in fact, an over-share of personal vanity may account for the business as a whole.

Perhaps someone can enlighten me?

ANTI-TRIAL.

CONDENSED CORRESPONDENCE.

A reader writes to thank us for inserting under "Information Wanted" his request for an instruction book dealing with his make of car. He received five books, free of charge, and a number of helpful letters.

In reply to the question raised by "OT5564." Mr. G. H. R. Chaplin writes to say that the gear ratios of the Cup model Austin he mentioned are standard.

Mr. C. Thompson wishes to bring to the notice of Belsize-Bradshaw owners in the north country that a full stock of spare parts is carried by Mr. G. W. McKnight, 49, Deansgate, Manchester. He concludes by saying that he has found Mr. McKnight to be very obliging and helpful.

INFORMATION WANTED.

FIAT.—Owners' experiences with the 9 h.p. 1926 and 1927 models regarding petrol consumption, speed and general performance are requested.—C. H. Lea, Church Cottage, Ribbesford, Bewdley, Worcester.

G.N.—The opportunity to loan or buy an instruction book dealing with the 1923 8.7 h.p. shaft-driven model will be welcomed.—A. G. Eames, 30, Cecil Road, Wimbledon, London, S.W.19.

RENAULT SALOON.—Experiences regarding mechanical accessibility of 1928 or 1929 9-15 h.p. model would be welcomed.—A. G. Anderson, 5, Kelling Gardens, Bensham Lane, West Croydon, Surrey.

GWYNNE EIGHT.—Experiences and hints on the running of a four-seater 1926 model are required.—C. Bishop, "Oakview," Chapmanslade, Westbury, Wilts.

CLUB ITEMS AND SPORTING EVENTS.

SUNBEAM M.C.C.

The fifth annual dinner of the Sunbeam M.C.C. will be held at Les Gobelin's Restaurant, Hedden Street, Regent Street, London, W., at 7 p.m. for 7.30 p.m., on Friday, January 11th. The president, Mr. H. W. Mathers, will be in the chair. Tickets are priced at 7s. 6d. each, and can be obtained from the hon. secretary, Mr. F. W. Pinkard, 3, Wavertree Road, London, S.W.2.

NEW CYCLECAR CLUB.

The next event of the New Cyclecar Club will be a dinner at "Ye Olde Cheshire Cheese," Fleet Street, followed by a visit to the offices of *The Daily Chronicle* as the paper goes to press. Actually, this event is being duplicated, as it were, because it is not possible to arrange for parties of more than 25, and the dates fixed are January 2nd and 3rd.

The dinner is fixed for 8.30 p.m. each evening, and the cost will be 5s. each, whilst the party will be at *The Daily Chronicle* offices at 10.30 p.m. The visit itself will last about two hours. In view of the fact that this fixture is likely to prove very popular, early application for tickets is desirable.

Another event which should be popular is the club's party at the Cromwell Arms Hotel, Stevenage, on Saturday, January 26th. The programme is tea followed by games, a Christmas dinner and dancing until midnight.

Amongst the main events for next year are the Spring Trial on March 17th, the Touring Trial on June 1st and 2nd, the Brooklands meeting on August 31st, the Championship Trial on September 28th, and the annual dinner and dance at the Rembrandt Hotel, South Kensington, on November 22nd.

Intending members of the club who wish for full particulars of its activities should write to the acting hon. secretary, Mr. John Yule, Kirkney, High Road, Whetstone, London, N.20.

FORTHCOMING EVENTS.

December 22.
Midland Jowett C.C. Carnival Dance.

December 23.
Wood Green and District M.C. Run to Bedford.

December 23-26.
Civil Service M.A. Christmas Holiday at Milford-on-Sea.

December 27.
London M.C. Run to View Start of London-Exeter Trial.

December 27-28.
Motor Cycling Club. London-Exeter Winter Run.

December 30.
Wood Green and District M.C. Run to Ashridge Park.
London M.C. Run to Knebworth.

January 2.
Cranford and District M.C. and L.C.C. Social Evening

January 2-3.
New Cyclecar Club. Visits to *The Daily Chronicle* Offices.

January 4.
Combined Motor Clubs' Fourth Annual Charity Fancy Dress Ball.

January 5.
Kent and Sussex L.C.C. Annual General Meeting.

KENT AND SUSSEX L.C.C.

Members of the Kent and Sussex Light Car Club should note that the annual general meeting takes place at the White Hart Hotel, Lewes, at 3 p.m., on Saturday, January 5th. The main business of the meeting is to elect new officers for the ensuing year and to draw up the fixture list.

CARSHALTON M.C.C.

Members of the Carshalton M.C.C. are reminded that the annual dinner and dance takes place on Thursday, January 10th, and that applications for tickets, which should be made as soon as possible to facilitate the arrangements, should be sent to the hon. secretary, Mr. G. M. Cooke, Wisley Cottage, The Bridleway, Wallington.

LONDON MOTOR CLUB.

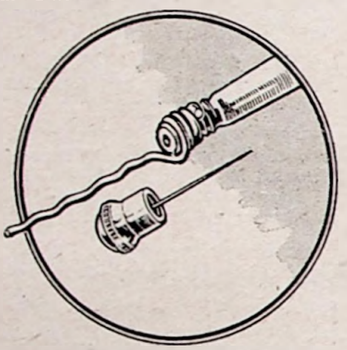
The London Motor Club is supporting to its fullest extent the Combined Motor Clubs' Fourth Annual Charity Fancy Dress Ball, which will take place at the Olympia Dance Hall, Kensington, London, W., on Friday, January 4th, 1929, from 8 p.m. to 2 a.m. Members of this club who wish to obtain tickets, which are priced at 3s. 6d. each, should apply to Mr. J. Baldwin, 79, Elmbank Gardens, Barnes, London, S.W.13. It is worthy of note that there is unlimited free parking space.

The ball is being held in aid of St. Mary's Hospital, Paddington, and the Royal School for the Blind, Leatherhead. Amongst the special features of the programme are a "Grand All Dancing Cabaret," presented by Byron Davies, whilst Debroy Somers and his band and Gwen Rogers with her Romany players will supply the musical part of the programme. Attractive prizes are being presented for the most humorous, original and handsome fancy-dress costumes.

IDEAS for OWNERS

Clamping Small Pipes.

When clamping soft round material such as thin copper piping in a vice it must be protected in some way so that it is not distorted by the jaws. A good plan, if wooden clamps are not available, is to place the piping in the round part of the nose of a pair of pliers. The nose of the pliers can then be inserted in the vice, and if the jaws are not screwed up too tightly the pliers will prevent the pipe from being flattened. Rag may be used if it is desired to protect the surface of the pipe from scratches.



A scheme for enabling out-of-the-way points to be lubricated (see below).

Lubricating Awkward Points.

A few weeks ago a hint appeared on this page suggesting the use of a thin stick dipped in oil for lubricating control joints and so on which could not be reached by the spout of an ordinary oilcan. A further idea has now come to hand which is an improvement on the first scheme. The idea is to twist a length of copper wire round the spout of the can, arranging it to project as shown in an accompanying sketch. When the end of the wire is placed in contact with the point to be lubricated and the can squeezed, oil will trickle down the wire to the desired spot.

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

When Decarbonizing.

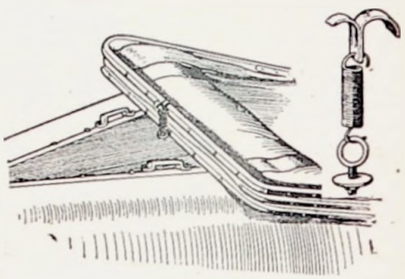
The usual way of preventing particles of carbon or dirt from entering the water passage of a cylinder block when the head has been removed for decarbonizing is to plug the holes with rag. This system, whilst excellent in many ways, has the disadvantage that the rag has to be torn up into a number of pieces and this, of course, takes a certain amount of time. A quicker and equally efficient system is to use smooth brown paper, which can very easily be torn up into squares of a suitable size, the sections being rolled upon the slant, as it were, so as to form taper plugs. These can be inserted, the protruding portions being pushed over to cover the holes.

Suction-operated Screen Wipers.

The periodical need for renewing the rubber tubing connecting a suction-type screen wiper with the induction manifold has led quite a number of motorists to use copper tubing in its place. As, however, rubber is usually retained for making the connections at each end matters are not very much improved, because the heat at the engine end is sufficient to cause the tube at this point to perish fairly quickly. The best system is to obtain a small double-ended union, sweating one end on to the copper tubing and the other to the small adapter which is driven into the induction pipe; the adapter will, of course, have to be removed to do this job. The result is a connection which is not in the least likely to give trouble, but which allows the tube to be detached readily when necessary.

Position of Horn Switch.

Greater comfort and command can be obtained if a horn switch fitted on one of the spokes of the steering wheel, but close to the rim, is shifted towards the boss of the wheel until there is room for the fingers to close round the spoke. The switch can then be depressed with the thumb, full command of the wheel being kept with the same hand.



A neat way of preventing the hood of an Aero Morgan from rattling.

Securing Morgan Hoods.

Owners of Aero Morgans may find that the hood, when folded, causes an annoying rattle, as there is normally no means of strapping it down. In addition to the noise set up, this movement also tends to chafe the hood fabric. An ingenious scheme for eliminating both these troubles is shown in the accompanying illustration. It consists of a spring clip which can easily be made up by an amateur, and which is fitted in a central position on the top of the tail. When fitting the eye-bolt to the panelling, washers of adequate size should be used to prevent the possibility of it pulling out. Another point which is worth bearing in mind, is that it is best for the spring merely to be hooked over the eye-bolt and not secured permanently to it; this permits the spring attachment to be removed when the hood is in use.

IN ANSWER TO YOUR QUERY

M.T. (Great Malvern).—The car which you mention is certainly inclined to "pink," but a noticeable improvement in running results from the use of a mixture containing benzole.

D.McG. (Barnsley).—Brake drums touching the back plates may be the cause of the scraping noise which you hear when rounding a bend, the trouble being due to slight end play of the shafts in the semi-floating rear axle of your car.

B.M. (West Bromwich).—As your carburetter has commenced to flood only recently, the cause is possibly a punctured float. Other likely causes are a loose jet or an obstruction which is preventing the float chamber needle from seating properly.

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 enquiries cannot be answered.

J.B.J. (Bath).—The correct type of Lodge plug for your Jowett is C.3.

A.R. (Greenwich).—Although the two-stroke engine of the Trojan has four cylinders, they work in pairs, and the engine is thus virtually a two-cylinder job. The arrangement, however, is capable of giving considerable advantages over a normal two-cylinder engine.

A.L. (Barnet).—Except in the case of pre-1921 cars, you can usually tell where a car was first registered by the index letters of its registration mark. The letters XH refer to London.

H.D. (Croydon).—The car which you mention has not been manufactured for several years, and spares are difficult to obtain. You would do better, therefore, to buy another make, even if you have to pay a few pounds more.

M.T. (Southport).—As you are sure that the alignment is correct and that the springs have not set and altered the castor action of the steering, we should advise you to fit a steering damper to cure the wheel wobble of your car. Dampers for light cars can be obtained at prices ranging from 27s. 6d. upwards.