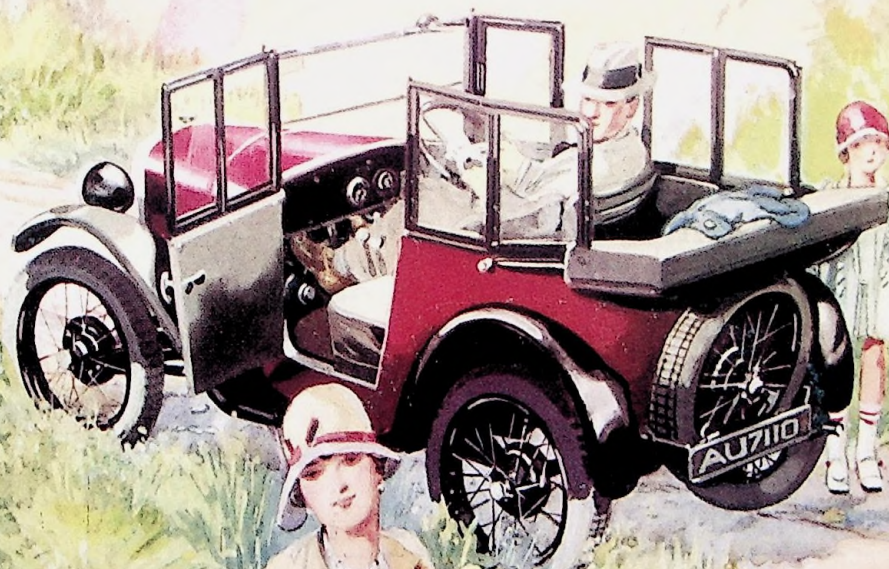


EASTER HOLIDAY NUMBER

"THE LIGHT CAR AND CYCLECAR," March

The **Light Car** *and* **Cyclecar**

3^D



Explore the lonely peace of quiet lanes
resting to bloom—a veritable heaven
for those who would escape the vulgar blare
of main roads—in a little Austin Seven

THE AUSTIN MOTOR CO., LTD.,
OXFORD STREET, W.1

London Showrooms:
479-483, OXFORD STREET, W.1
(Near Marble Arch).

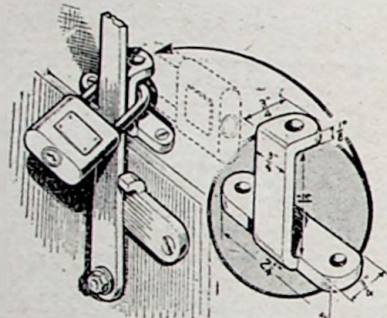
*The Austin
Seven*

IDEAS for OWNERS

An Electrical Wiring Hint.

In the standard wiring of most cars there are junction points at the back of the fascia board, on the engine side of the dashboard, and so on. The junction points consist usually of short insulated strips carrying bolts to which the wiring leads are clamped, and there is often no indication as to which parts of the equipment they connect, or as to their polarity. Any fault in the wiring is thus difficult to trace, and it is better if the plain bolts are replaced by lettered terminals.

Indicating terminals as used in wireless sets are suitable, and they can be obtained with insulated heads bearing



Details of the Morgan gear lever lock and the method of using it (see text).

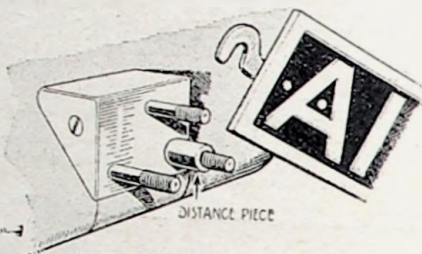
"+" "—" the figures "1," "2," and similar markings. Alternatively, the whole of the wiring may be traced out and red thread tied round the extremities of all positive wires.

Morgan Gear Lock.

The gear lever of a Morgan can easily be locked in neutral by means of the simple fitting illustrated on this page. The bracket is cut from a piece of $\frac{1}{4}$ -in. or 3-32-in. sheet steel bent and drilled as shown; it is secured to the wooden body runner beside the lever, so that the padlock embraces the two. When

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 undertake to return contributions not used.

not in use the lock is carried in the bracket in the position indicated in the sketch by the dotted lines; it is thus handy when wanted and unlikely to be mislaid.



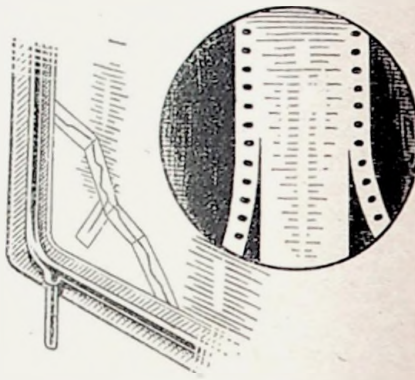
When the spare wheel is not carried a distance piece should be used against which to clamp the Fiat number plate.

Fiat Rear Number Plate.

On certain models of the 9 h.p. Fiat the rear number plate is attached at one end to one of the three bolts on which the spare wheel is supported at the back of the car. No provision is made for securing the plate when there is no wheel in position—as may easily happen if the spare is left for tyre attention at a garage—and a short length of tube must be used as a spacing washer. This should be about 2 ins. in length, and of the correct internal diameter to slip over one of the wheel-fixing bolts. It can be carried in the door pocket when not in use and slipped on to the fixing bolt when the spare wheel is removed.

Incidentally, the number plate is hinged at the other end, and the elec-

trical contact for the rear light has to be made through the hinge. It is a good plan to take a flexible lead direct from the lamp to a fixed point on the chassis frame, because lamp flicker may be caused by intermittent contact at the hinge.



Zigzag cracks in celluloid side screens can be neatly repaired by patching with old cinematograph film.

Repairing Cracked Celluloid.

Old cinematograph film will be found very useful for patching celluloid side screens or hood windows. The film is easily obtainable and, usually, 100 ft. costs only 6d. or so. Before it can be used for patching the emulsion must be removed by soaking in fairly warm water and then "scrubbing" with a stiff brush.

The perforations are cut from the sides of the film and the resulting clear strip can then be cemented to the side screen by the use of acetone. In the case of a zigzag crack several pieces of film with their ends suitably bevelled can be used, as shown in an accompanying illustration. A good tip when sticking the film is to press it on with an ordinary household iron made just moderately warm; if it is too hot it will shrivel the film.

IN ANSWER TO YOUR QUERY

H.E. (Shepherd's Bush).—A duplex roller chain is used for driving the overhead camshaft of the Singer Junior; it is self-tensioning.

N.P. (Bude).—A very satisfactory lubricant for use in your worm-driven rear axle would be Duckham's D.B.S. oil. Waste engine oil should never be used in a rear axle or a gearbox.

W.H.B. (Conway).—There is no risk of Bowden wire fraying when it is cut if, first of all, the strands are well soldered together for half an inch or so on each side of the point where it is desired to make the cut. Use a good pair of cutting pliers or a sharp cold chisel on a block of metal to sever the wire.

B44

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.

V.S.F. (Redcar).—The basic principle of a coil and a magneto is the same; each is a transformer in which the low-tension current flowing through the primary windings is stepped up to a very high pressure—several thousands of volts—in the secondary windings. A contact breaker is an essential in each case; its purpose is to interrupt the primary current flow.

D.M.P. (Inverness).—The connecting rods of your Standard engine are made of duralumin, which is an exceedingly light but very strong metal. We certainly do not advise you to drill them.

B.J. (Cardiff).—The brake squeak of which you complain may be due to the rivet heads making contact with the drums. You should examine each shoe and punch down any rivet which is "proud."

A.L.E. (Cheltenham).—You cannot satisfactorily repair the broken lug of your battery with solder. Lead is welded, as a rule, by the use of a hydrogen blowpipe or by an electric process. Yes, lead-burning is the correct term.

Landmark in Danger.

The famous windmill at Woodhouse Eaves, a notable landmark of the Charnwood Forest, near Loughborough, is badly in need of repair. It has been offered to the parish council on condition that it is kept in good order, but



The old windmill at Woodhouse Eaves, near Loughborough.

so far as our information goes the council has not yet given any decision in the matter. The sails are gradually disintegrating, and if they are not "doctored" soon they will have to be removed as they are becoming a danger to the public.

The Boat Race.

The Brentford and Chiswick Urban District Council are again making arrangements to admit the public to Duke's Meadows to view the boat race on Saturday, March 23rd. An excellent view can be obtained from the newly constructed terraced promenade, from which also a view of the finish is possible. The prices of admission are: adults 2s., children 1s.



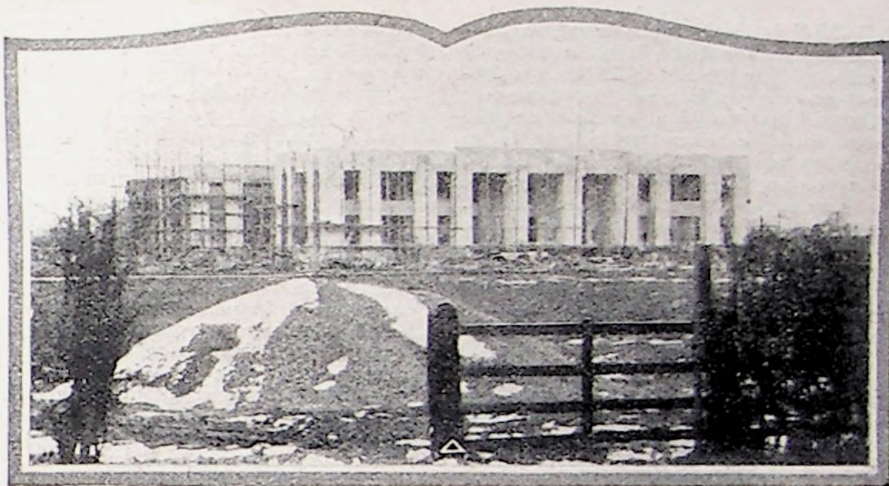
MOTORISTS AS FIRE-FIGHTERS. — A silhouette showing one of the many heath fires of last week-end being subdued.

Brighton Motor Rally.

The R.A.C. has issued a permit to the Brighton and Hove Motor Club for a motor rally to be held on Thursday, July 4th, and a Concours d'Elegance on Friday, July 5th. Special arrangements will be made by the Brighton authorities and by the club itself for parking the large number of cars which, it is anticipated, will visit Brighton.

The Tunis-Tripoli

On Thursday next, March 21st, the Tunis-Tripoli—one of the most important Italian road races—will take place. It is an open event for sports cars classified up to 1,100 c.c., 1,500 c.c. and unlimited. The distance of the route is 500 miles, and it has to be



NEW B.B.C. — Now nearing completion and as seen from the Great STATION. — North Road, about two miles north of Potters Bar.

R.A.C. Direction Indicator Demonstration.

OWING largely to the lack of uniformity of the signals given by many of the direction indicators in use on cars, the R.A.C., at the request of the Ministry of Transport, organized a demonstration in Richmond Park on March 7th.

Primarily, the object of the demonstration was to enable data to be collected in order to assist the Ministry in deciding whether or not, from the point of view of public safety, the indicators should be required to give signals complying with certain specific requirements. An opportunity was taken at the same time to demonstrate anti-dazzle devices.

Upwards of 150 inventions were on view fitted to cars, the majority, by a small margin, taking the form of direction indicators, well-tried designs—the products of old-established accessory manufacturing concerns—being ranged cheek by jowl with devices of weird and, in some cases, rather amusing appearance. Their ventors, however, were full of enthusiasm.

Ghostly celluloid hands moved in an uncanny manner in the darkness, red and green lights winked and flickered, illuminated arrows shot hither and thither, whilst headlamp beams, some dim, some bright, lit up the general scene.

A great amount of ingenuity obviously had been expended in designing many of the indicators, but their weird nature or the complication of their control mechanism seemed likely, in our opinion, to prevent their general adoption. Similarly, many of the anti-dazzle devices, although apparently fulfilling their object, were of so ugly or cumbersome a nature that one can scarcely imagine private motorists deciding to fit them.

Furthermore, when it is remembered that renowned concerns, such as Lucas, Barker, Bowden, Bosch and Zeiss, to name only five, market most efficient anti-dazzle devices of attractive appearance—even if the mechanism can be detected at all—the potential market for anything which does not approach their æsthetic and mechanical perfection is indeed remote.

Rosengart Successes.

Under its French name—Rosengart—the Austin Seven is achieving remarkable successes in competitive events. These include a new record in the 750 c.c. class for the Michelet hill-climb at Marseilles.

C. M. Harvey Ill.

We regret to have to announce that C. M. Harvey, the well-known Alvis driver, is seriously ill with pneumonia. We know that all our readers, amongst whom he numbers hundreds of friends, will wish him a speedy recovery.

Cost of Road Upkeep.

Speaking at the Livery Dinner of the Worshipful Company of Coachmakers, Mr. S. S. Guy, Vice-President of the S.M.M. and T., said that the average annual charge for road making and maintenance for a 30-ft. road was some £930 per mile. Dealing with the problem of the tramways, he said that doubtless the tramway authorities were exploring the possibility of developing flexible tramlines—in which case, he suggested, their friends connected with the rubber industry might be able to help!

Strong Alfa-Romeo Team.

We learn on good authority that an official team of Alfa-Romeos led by Ramponi and including Ivanowsky, Marinoni and Count G. Lurani as a spare driver will take part not only in the British Double Twelve-Hour Race, but the Brooklands Six-hour Race and the International Grand Prix races. They will also probably appear in the T.T., the names of Dr. Benjafield and Mr. G. E. T. Eyston having been quoted as two likely drivers. The official team for the "Double Twelve" will be 1,500 c.c. supercharged models.

MORE TO BE HEARD ABOUT PETROL PRICES.

MORE is likely to be heard in Parliament about the increase of petrol prices. The Prime Minister's statement on the subject last week merely clarified the position so far as the Government is concerned; that is to say, they are under obligations not to interfere in the ordinary commercial management of the Anglo-Persian Oil Co., although they are represented on the board by directors. But associated groups of undertakings, he pointed out, have a duty to supply on reasonable terms, and the public have a right to be satisfied that the terms are reasonable.

It was the intention of the Government to invite the oil companies concerned to submit a statement explaining the reasons for the recent increase. He made it clear that the Government, in taking this action, were not prejudging the question of whether the increase was or was not justified.

After this statement had been made

members of the House of Commons showed that they intend to follow up the subject later. Sir N. Grattan-Doyle asked whether the presence of two Government representatives on the board of the Anglo-Persian Oil Co. was likely to be of any service. The Prime Minister replied that the arrangement had been made subject to views which had been held by every successive Government since it was introduced.

The Prime Minister was pressed by Mr. Thurtle to say whether, if the explanation of increased price given by the oil companies proved to be unsatisfactory, certain action would be taken against them; but to this he merely answered that such a question was purely hypothetical. Other members pressed for further information. Was it not the case, Col. Howard-Bury asked, that there is great over-production of oil in the United States to-day, and that there was no reason whatever for the increase in price? No answer was

given to this and to other questions.

Mr. Day followed up the subject by asking the Home Secretary whether the increase in petrol prices would have as a consequence the raising of taxicab fares in the Metropolitan Police district. The answer was that fares would not be raised, as the addition to the cost of petrol would be infinitesimal in comparison with the rate per mile.

Members of the House have cross-examined the Minister of Transport on the question of dispensing with lights in parking places, and they have been informed that chief officers of police can decide (under the Lighting of Vehicles Act) that lights are not required on cars subject to the following conditions:—(1) That the parking place must not be on a part of the highway which is ordinarily used for the passing and repassing of vehicles; and (2) that the parking place must be adequately lit. Sir Frank Meyer contended that the words "the passing and repassing of vehicles" made the Lighting of Vehicles Act nugatory, as it really prevented the police from allowing unlighted vehicles at any parking place.

The Minister replied that he is anxious that the provisions of the Act shall be carried out in their entirety, and he undertook to confer with the Home Secretary on the matter which had been raised.



THE CHANCELLOR OF
THE EXCHEQUER
SMILES INDULGENTLY
ON THE DEPUTATION
REPRESENTING
MOTORING INTERESTS.



(Above) A recent photograph of Mr. Winston Churchill. (Right) Members of the deputation which met with such a frigid reception last week. In the foreground, Sir George Beharrell and Sir Arthur Stanley, between whom is seen Sir Alfred Mays-Smith. On the extreme right is Commander Armstrong of the R.A.C.

THE LURE OF THE CONTINENT.



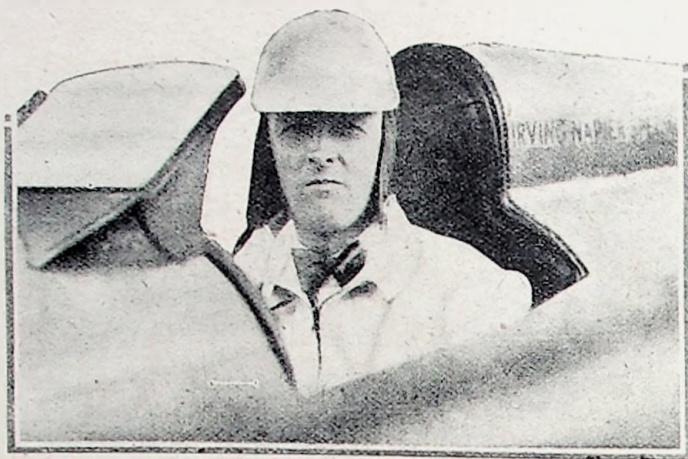
A timely reminder—to those who intend to go abroad for Easter—of old and, perhaps, familiar scenes.

WELL DONE, SEGRAVE!

Amazing
Performance
by
"The Golden
Arrow"
on the Sands
at Daytona.

Mean Speed,
231.36 m.p.h.

A British
Achievement.



Immense
Crowd
Watches
Record Run
Made Under
Difficult
Conditions.

A Technical
Description
of
the Car.

Major Segrave photographed in the cockpit just before a test run.

IN thousands of homes on Monday evening last wireless sets were tuned in for the nine o'clock news bulletin from London, for it was known that Major H. O. D. Segrave was to make an attempt on the land speed record in his master machine, the Irving-Napier Special, at about 8.45 p.m. (British time), and it was hoped that some announcement might be made before the station closed down for the night.

Actually, the attempt was made earlier than had been anticipated, and the bare but essential details were given out immediately following the bulletin concerning the King—an acknowledgment of the suppressed but feverish anticipation with which the whole country was looking forward to the result of this magnificent British effort.

The actual average mean speed was 231.362 m.p.h., and, owing to the fact that the breeze was blowing broadside, as it were, off the sea, the speeds of the northward and southward runs varied only by decimal places.

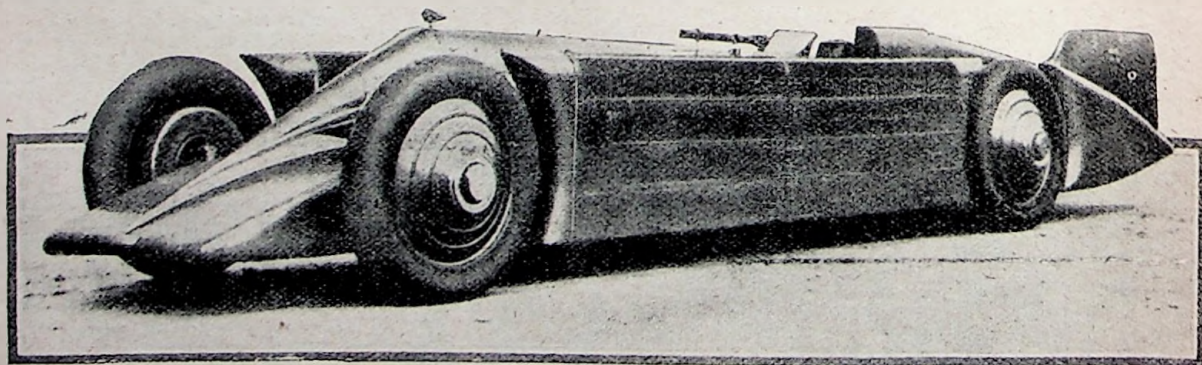
Within a very short time of the conclusion of the run Major Segrave was telling his story by transatlantic telephone to listeners in this country, and the admiration which motoring enthusiasts felt for this intrepid driver when they heard the bare announcement overnight was quickened when they read the stirring accounts in the morning papers.

Segrave had been waiting patiently for a fortnight for favourable conditions of sand and weather. He had been asked to make his attempt first, and as time was getting short and the long period of waiting becoming trying, he decided, in his own words, "to take the plunge."

Visibility along the wonderful stretch of Daytona Beach was bad, so bad that it was decided to erect two large arc lamps—one at the beginning of the measured mile and the other at the end. The much-discussed telescopic sights of the car were scrapped, ordinary rifle sights being attached to the bonnet of the Irving-Napier Special.

Segrave aimed his sights on the arc lamps, and in the presence of a hushed and expectant crowd estimated at 100,000 people, he unleashed "The Golden Arrow," and, with foot hard down, steeled himself for one of the most nerve-racking feats that it has ever been the lot of a sportsman to face; yet, with characteristic nonchalance, he says that it was all over so quickly that he had barely time to think!

To view this almost superhuman effort in proper perspective, it must be remembered that the tide was running in fast and that the course was partly obscured by patches of mist over 100 yards in length. Had it not been for the powerful arc lights it would have been impossible for him to keep his direction.



"THE GOLDEN ARROW"
COMPLETE.

A photograph of the Irving-Napier Special in its completed form. Note the radiator; there is a similar block on the other side, and neither were fitted before the car left England. The driving seat is 12 ins. from the ground, the overall height of the car being 3 ft. 9 ins., and the overall length nearly 30 ft.

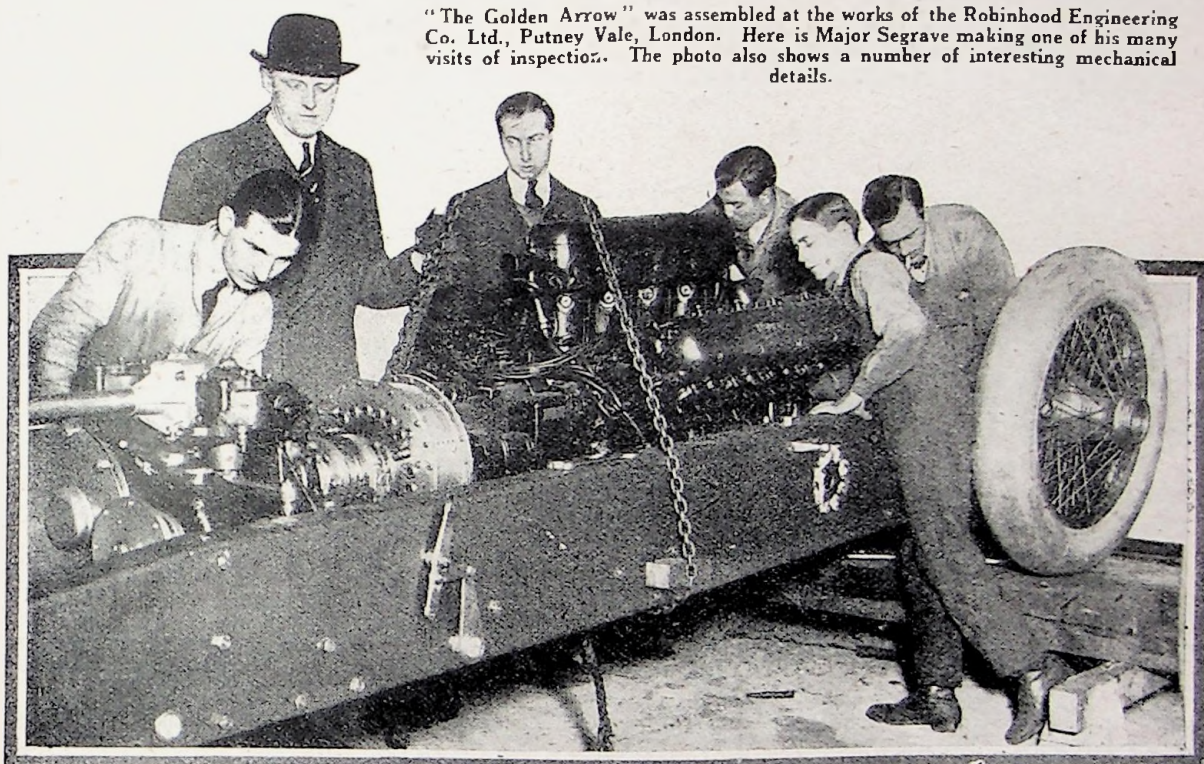
The first run accomplished, "The Golden Arrow" was swung round, and, without unnecessary delay, the return journey—more hazardous than that which had preceded it—was begun. Just at the moment when the arc lamp at the end of the measured mile was rushing towards him, as it were, the off-side radiator burst, and a great cloud of steam and water shot out from the casing and was blown back in a horizontal line. Some of the water swept across the cockpit, temporarily misting the goggles of the driver and obscuring his sight. It meant hanging on only for a fraction of a second, and, with grim determination, Segrave kept his foot down, crossing the finishing line at undiminished speed.

He had another bad moment when the car struck

"In the most literal sense the car was designed for the driver. He was accordingly placed in a dummy seat of the smallest possible dimensions and a silhouette taken of his cross-sectional area. Around this 'figure target' was built a rough, wooden 'mock-up' of that section of the car. In it were placed models of, on the right, the brake lever and on the left the gear lever at exactly the most convenient positions for his hands, with dummy brake and clutch pedals at the right distance for his feet, and a steering wheel of the smallest possible diameter—15 ins.—in front of the seat. Around this dummy cockpit as the nucleus the car was built up."

Naturally, the remainder of the machine was built to special design; that is to say, there was no question

"The Golden Arrow" was assembled at the works of the Robinhood Engineering Co. Ltd., Putney Vale, London. Here is Major Segrave making one of his many visits of inspection. The photo also shows a number of interesting mechanical details.



a pool of water caused by the rising tide. For the briefest fraction of a second it seemed as though the car would get out of control, and Segrave had to exert all his strength to hold it on to its course. The bursting of the radiator Segrave attributes not to any fault of design or manufacture, but to the shock caused by the car hitting a small gully.

The enthusiasm of the tremendous crowd knew no bounds when it became known that "The Golden Arrow" had achieved such a wonderful performance; conscious of the honour they wished to do him, but knowing what was in store for him Segrave soon gave them the slip, so that he could tell his own story to the great British public which was eagerly looking forward for full details of his superlative achievement.

The following accessories were used on "The Golden Arrow":—Moseley cushions, Castrol oil, B.T.H. magneto, K.L.G. plugs, Ferodo brake linings, Acetex safety glass. The engine was equipped exclusively with Hoffman ball and roller bearings and the fuel was prepared by B.P.

And now a word as to "The Golden Arrow" itself. The man responsible for the conception and execution of the design is Capt. J. S. Irving, but due tribute must be paid to the draughtsman, Mr. Snell. The romance surrounding Major Segrave's projected attempts both on land and water prompted the production of a book called "Progress," from which we quote the following:

of attempting to include in its make-up large slices of any other car. The Napier Lion engine is installed in a more or less orthodox manner at the front of the car. It develops about 900 h.p. and the transmission is so geared that, with the engine running at 3,400 r.p.m., the speeds are theoretically:—First gear, 81 m.p.h.; second gear, 166 m.p.h.; top, 246 m.p.h.

It is interesting to observe that the corresponding speed with an average light car on top gear at the number of engine revolutions given would be somewhere about 60 m.p.h.

The transmission is very interesting, first of all because the clutch is withdrawn by Dewandre vacuum servo mechanism and, secondly, because its power is transmitted to two propeller shafts, between which the driver sits, the shafts themselves running one on each side, just beneath his elbows. This arrangement, of course, necessitates separate final drives in the back axle; moreover, these final-drive units are independent. The bodywork represents a fine example of expert panel beating, and due credit must be given to the constructors, Messrs. Thrupp and Maberly.

The man who has made this wonderful attempt possible is Mr. O. J. S. Piper, although, naturally, the name of Sir Charles Cheers Wakefield will always be associated with the effort to secure the honour for Great Britain of supremacy in speed both on land and on water.

TOURING, CAMPING



On the Coast of Cornwall

AN AUTHORITATIVE AND INTERESTING GUIDE TO MOTOR HOLIDAY MAKING IN SEVERAL OF ITS MOST DELIGHTFUL FORMS.

EASTER is, admittedly, one of the best holidays of the year. For one thing, it represents a vacation of four clear days, and for another it usually marks the advent of the first spell of really spring-like weather. Only too often the holiday period is followed by a cold snap, which gradually merges, as it were, into a typical English summer; but, as we have already emphasized, Easter is usually an oasis in a perfect desert of indifferent weather. Wise motorists who know what to expect from past experience make their plans accordingly.

Folk who have made up their minds to have some kind of car holiday are frequently at a loss to know how to proceed. Now is the time to consider a motor-holiday in all its aspects and to discuss the programme.

A car holiday may take one of several forms—all fairly intimately bound up with that totally inadequate term "touring." Many motorists are under the mistaken impression that touring simply means "blinding" from one hotel to another with the idea of covering a great deal of ground and being able to tell one's friends when one returns of the various places that were visited.

What most people object to is not so much the programme as the cost of it; they visualize a four-day

holiday costing about £10 per head. This is one way of touring; but, obviously, it does not commend itself to people of moderate means. If a fairly long circular tour is contemplated, with economy as the watchword, an endeavour should be made to fix up private apartments for each night. This, of course, means running to schedule and does not allow for an unexpected breakdown; but in these days light cars are dependable and arrangements can be made without taking into consideration such unlikely contingencies.

It is a mistake to endeavour to cover too much ground in one day. Calculate each day's mileage on a running time of seven hours at about 20 m.p.h. This will enable the travellers to set out at 11 a.m., having seen the main features of the town or city in which the night has been spent, and will enable luncheon and tea to be taken in comfort, their destination for the night being reached in ample time for the party to settle down in the apartments chosen, wash and dine. If, of course, the idea is to reach some fairly far-distant point, the timetable must be arranged accordingly, but about 12 hours' running should be the maximum, and if this is based on a 20 m.p.h. average it will enable a large slice of country to be covered each day.

Alternatively, there is the out-and-home type of tour, which has the advantage that hotel bills and so on are cut out, the home being used as headquarters. The

CAMPING & CARAVANNING

four days of the vacation give one an opportunity of striking north, east, south and west on each day respectively—if one lives well inland—and the arrangement will ensure that at least one day is spent by the sea. The various routes should be worked out carefully with the aid of a fairly large-scale map, and, of course, the return route should be different to that chosen for the outward journey.

Touring under the conditions previously outlined necessitates only the simplest preparations; that is to say, each passenger need have only a suit-case if an away-from-home tour is contemplated, whilst for an out-and-home tour, obviously, the only essential is a good picnic basket.

We may now turn to the attractions which camping offers and which, given fine weather, are an inducement which no experienced camper can easily resist. The standard joke of the flooded tent will always be with us, but experienced campers know that they have to take the good with the bad which, translated in camping terms, means the fine weather with the foul. Provided sufficient care is taken in choosing a site, even the weather need not damp one's enthusiasm. For the benefit of readers who have never yet had the temerity to set off to an unknown destination, complete with camping kit, the following hints gained from actual experience should prove helpful.

The kind of tent chosen will depend on the size and hardiness of the party. We cannot do better than



recommend intending campers to make a personal visit to some large stores where camping equipment is sold and to examine for themselves the various articles offered. It is suggested, however, that a tent with a double top be chosen. This type is waterproof even in the worst weather. With only a single layer of canvas between the occupants of the tent and the elements one need do no more in wet weather than touch the canvas on the inside with the finger to cause a leak.

A serviceable tent, with ample accommodation for two, can be purchased quite cheaply, or, of course, it can be hired at reasonable terms. It is a mistake, when making out a list of kit, to include anything that *might* be useful. Such a list should include only things that are absolutely essential. Under the latter heading, of course, come bedding, a Primus stove, cooking utensils, tin mugs and plates, knives and forks, and so on. If the path of least resistance be followed, the party will load themselves up with tinned foods, but cooking is half the fun of camping, and there is no reason why at least one hot meal a day should not be prepared.

Camping Sites.

Unless one is intimately acquainted with the country which it is proposed to visit it will be difficult, if not impossible, to fix up a definite site beforehand, although in this connection the assistance of the Camping Club of Great Britain and Ireland, 2, Greville Street, London, E.C.1, may well be sought. Farmers, however, are not at all unkindly disposed towards campers, and it is generally possible first to find a suitable farm and then to approach the farmer for permission to use his ground for the night.

The site should be selected with care; a close-clipped grassy field with a slight slope, bounded on its higher edge by a thick hedge or a rustic wall, is ideal. Terms vary, and it is as well to settle the actual figure before pitching one's tent rather than to have any argument on the following morning.

The tent should be pitched so that the flap faces down wind, the tent itself being about six or ten feet away from the wall or hedge—unless the prevailing wind is from that direction. In any case an endeavour should be made to keep the longitudinal axis of the tent up and down the hill. If the field offers no protection, pitch the tent with the flap away from the direction of the prevailing wind, taking into consideration, of course, the slope of the field. Do not be influenced when choosing a position for the tent by the wonderful view and do not give way to the temptation to erect it under trees because the position looks sheltered. Actually, the ground beneath trees is usually damper than in the open.

Cooking Problems.

If the weather is fine, cooking within the tent will be a stuffy business, and it is a good plan, therefore, to make a kind of shelter outside for the Primus stove by surrounding it with stones or bricks, thus preventing it from being accidentally knocked over and also guarding in large measure against draughts. It should be superfluous to ask campers not to leave litter. By doing so they may spoil the same site for others, and in any case may anger their temporary landlord, who may decide to exclude camping parties. The litter can quite easily be collected and deposited in the refuse bin attached to the farmhouse.

Camping on a farm has one big advantage, for as a rule the farmer will be only too pleased to sell produce like butter, milk and eggs, which are, after all, essentials on an expedition of this kind.

The economy of a camping holiday need hardly be stressed. Most farmers are satisfied with half-a-crown "rent" for one night, whilst some refuse to take payment at all—provided that the visitors behave them-

selves and buy some of the farm produce. Actually, then, one can tour with a tent almost as cheaply as one can live at home.

For comfort-loving tourists a caravan has undeniable advantages. It may limit the range of travel—compared with camping by tent—but the luxury it gives compared with a tent is a great point in its favour. It is not so cheap, of course, but the novelty of it is far greater and it effectually disposes of hotel bills.

Those to whom the idea appeals should get into touch with a firm of caravan makers or hirers, such as the Holiday Caravan Co., Ltd., Bainton Road, Oxford. This concern publishes a complete guide called "Caravanning," now in its third edition, in which full



details of every possible phase of caravanning are given. Meantime, a brief résumé may whet the appetites of our readers.

There are various sizes of caravan, including a new ultra-lightweight 6-ft. Eccles, specially designed for trailing behind cars such as the Austin Seven and the Morris Minor. These are furnished with two settees, each 6 ft. long, which can quite easily be converted into sleeping bunks. Below the bunks are lockers for storing the bed linen, whilst there is a useful little table which folds up when not required. The caravan has two windows, one, which opens, being at the front, the other forming the upper half of the door. The interior is panelled to a height of 3 ft. and finished in pleasing style, whilst the exterior is covered with fabric.

The equipment includes the latest type tow pole and

automatic brakes and, complete with wire wheels, Dunlop tyres, and so on, the price is £65. This is, of course, the smallest of the Eccles range; for those with larger and more powerful cars there is the 9-ft. 6-in. model, which has comfortable accommodation for four people. A car with a minimum horse-power of 11.9 is advised for use with this caravan.

The equipment varies, naturally, according to the model, but in all cases there is a sufficient supply of crockery, cooking utensils and cutlery for the number of people for which the caravan has beds. With the 8-ft. caravan, for example—a useful intermediate size—there are plates, dishes, cups, saucers, jugs, cruet, saucepan, steamer, kettle, frying pan, teapot, egg cups,

client may hire a caravan for a short period such as that just mentioned, paying for the fortnight's hire when he takes delivery of the caravan and having the right to complete his fortnight at some future date, say Whitsuntide, or at any time during the summer.

The charge made for 14 days' hire naturally varies with the particular model chosen and the time of the year. Round about Easter the fee for a small 8-ft. caravan would be £5 10s. for a fortnight. The more expensive de luxe caravans cost as much as £14 10s. for the two weeks. No charge is made by the concern mentioned for making and fitting a towing bracket to the hirer's car; in fact, there are no extras to pay except insurance.

Automatic Braking.

Towing brackets for all the more popular makes of light car are kept in stock and can be fitted in a surprisingly short space of time. Incidentally, they incorporate mechanism for operating the brakes of the caravan, which comes into operation immediately the caravan tends to overrun the car. Within the tow-bar are two helical springs; the front one, acting as a damper, takes the pull exerted between the car and the trailer, and also helps to keep the brakes in the "on" position when car and trailer are at rest. The rear spring tends to draw car and caravan together, thus making the braking action more certain, especially when the vehicles have stopped. A special block inserted between the end of the sliding shaft and the wall of the caravan enables the last-named to be manoeuvred by hand when detached from the car.

The control of a car coupled to a caravan is very little affected, but care must, of course, be taken to keep well to one's own side of the road, to avoid excessive speed and to be doubly careful when reversing. It should be possible to average 20 m.p.h. over give-and-take roads—which may sound rather surprising in view of the fact that this figure has been named as one suitable for touring with a car alone. Experienced motorists, however, know only too well that where a speed of 25 m.p.h. may be difficult, 20 m.p.h. may be equally easy. For safety's sake, however, it might be as well to fix the average at about 18 m.p.h.

We may now turn to other phases of holiday-making by car. Motor boating is becoming an increasingly popular pastime nowadays, and motorists who are looking for a novel way of spending the Easter vacation are reminded that boating centres are within easy reach by car and that outboard motorcraft can be hired in most places. Enthusiasts might even think it worth their while to purchase their own outboard motor and have the joy of tinkering with it and tuning it in preparation for the coming holiday. Bought second-hand, an outboard motor need cost no more than a few pounds; it can be carried as a rule on the running board of the car.

Other Easter Attractions.

Those who wish neither to tour nor to camp over Easter, and who are threatened with finding themselves "at a loose end," should keep a watchful eye on the papers as Easter approaches, for, as a rule, there are various kinds of "side-shows" within easy car distance which are well worth visiting and which will provide a thoroughly good day's entertainment. They will not, of course, overlook the Bank Holiday meeting at Brooklands or, if they live "up North," the various sporting fixtures which are the inevitable accompaniment of Easter.

There are other aspects of the case upon which one might dwell—the outlook of the angler, for instance; but an angler needs no advice! Whilst others may be deciding what they will do when Thursday morning dawns, he will be already well on his way to some quiet and perhaps far-distant water, eagerly anticipating four full days' sport.



pic dishes, stewing pan, milk can, wash-basin, table-spoons, dessert-spoons, teaspoons, knives, forks and a carving knife—a list which should please even the most discerning housewife. Incidentally, the general equipment includes a wheel block, canvas bucket and a two-gallon water can. No bed linen is supplied because it has been found that most people prefer to use their own blankets, sheets and so on.

The question of cost is, of course, all-important. The Holiday Caravan Co., Ltd., state that they do not hire out caravans for so short a period as, say, the Thursday afternoon before Easter to the following Tuesday morning, unless, of course, a minimum hire period price is paid: this period is 14 days.

There is, however, a reasonable alternative, for a

MY IDEAL MENU. — By GOURMET.

Tomato Soup

Cold Chicken and Ham
Salad
Rolls and Butter

Fruit Tart

Cheese and Biscuits

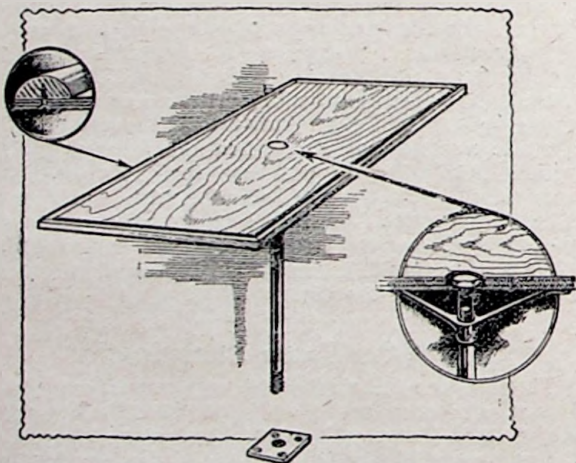
Coffee

HERE is an old tag which runs, "Some are born great, some are made great, others have greatness thrust upon them"; in much the same way some are born picnickers, others have picnicking thrust upon them; in the latter case seldom more than once if temperamentally they are not suited to this kind of recreation!

To stuff a paper bag containing half a dozen sandwiches into the pocket of each member of a motoring party is not the ideal way of converting them to picnicking, whilst if the arrangements are carried to the opposite extreme by endeavouring to serve a kind of table d'hôte luncheon on the grass the results may be equally dismal.

Mention of the word "grass" calls to mind one of the exaggerated pleasures of an alfresco meal. When we were very young a "tea fight" in some beautiful meadow, with the prospect of games to follow, was appetising, both literally and metaphorically, but as we grew older it lost much of its charm, and many grown-ups who still stage this kind of feast do so, as a rule, to please the youngsters.

The fact is that picnicking with the grass as one's table is an overrated pastime. It has only one recommendation—namely, that of novelty—and even this tends to wear off when the drink which one is about



A home-made table with a central support consisting of an old steering column and wheel suitably altered.

to raise to thirsty lips gets knocked over and insects settle on a tasty morsel into which a determined fork is being dug.

Picnicking *per se*, however, has undeniable advantages when on tour or when out merely for a day's enjoyment. For one thing, it cuts out the cost of expensive meals taken at hotels, and for another the time invariably wasted over such meals; but there is an increasing tendency to picnic within the car itself, a development for which many folk are grateful.

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PICNIC IN SALOON



Picnicking in saloon comfort is undoubtedly the final word, and a well-managed function of this kind is not only enjoyable by way of being a novelty, but enables the company to partake of a decent meal under decent conditions, no matter what the weather. Even in the case of an all-enclosed car, however, the job needs tackling scientifically.

It is not very amusing, for example, to have to balance one's plate on one's knees, or to place a cup of hot coffee at one's feet where it may easily be knocked over. For a comparatively small cost these discomforts can be entirely avoided, assuming that the front seats of the car can be reversed. If the seats are of the adjustable type they are nearly always reversible, whilst the ease with which a Leveroll sliding seat can be run off its guiding rails and turned round should recommend it to the attention of motorists apart from its other advantages.

How to Make a Suitable Table.

The next requirement is some form of table—the exact form will depend largely on the internal construction of the car. In most cases, however, it should be possible to make, say, out of three-ply wood a narrow table stretching right across the inside of the body and fitted with suitable felt-lined hooks to enable it to be suspended from the window openings.

This is the easiest way of supplying a table, but has the disadvantage that the doors cannot be opened. A slightly more elaborate form of table should have stout legs, which can be detached when the table is not in use. Yet a third type might be fitted with a single central support—an old steering column and wheel, with the rim of the latter removed, serves excellently—screwing into a special metal boss let into the floorboard, whilst a fourth might be hinged on a nickel-plated bar and end fittings, as shown in one of the sketches.

The question of finding a suitable place to carry the table of the detachable type must not be overlooked. A simple method is to convert it, when it is not in use, into

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The Light Car and Cyclecar

Conducted by
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FOUNDED IN 1912 TO CATER FOR THE
NEEDS OF USERS AND POTENTIAL
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ENTLY ENCOURAGED THE
DEVELOPMENT OF THE ECONOMICAL
MOTORING MOVEMENT FOR
OVER SIXTEEN YEARS.

NO CAR WITH AN ENGINE CAPACITY
EXCEEDING 1,500 C.C. (1 1/2 LITRES) COMES
WITHIN THE SCOPE OF THIS JOURNAL,
THAT CAPACITY BEING GENERALLY
RECOGNIZED AND ACCEPTED AS THE
LIMIT FOR A LIGHT CAR ENGINE.

The Holiday.

THIS Easter Holiday Number makes its appearance at a very opportune time. At last the clerk of the weather has relented and given us a taste of spring, the finest motoring holiday of the year is only a fortnight hence, the second quarter of the year starts next Monday week, and the motoring season—if such a term is permissible to-day—has definitely begun. It is likely to be a very eventful season. Already we have had two very important developments in the sudden, unexpected and apparently unjustified increase in the price of petrol and in the summary treatment handed out to the representatives of our associations by Mr. Winston Churchill. There is no doubt that before the 1929 season closes many other events of equal consequence will have transpired. It is not inconceivable that even the Road Traffic Bill may have passed into law.

This is not a time of year, however, when politics should be allowed to obtrude upon our enjoyment of what freedom of the open road remains. It is the time to make plans for the holiday, and we have spared no pains to help our readers as much as possible in this issue towards making the very best of it. For many years past the weather has been singularly kind throughout the Easter holiday, and perhaps it is not too much to hope that after the hard winter which we have left behind similar joys await us a fortnight hence.

Motoring Police.

THE Chief of the Bucks Constabulary recently set an excellent example to his colleagues by arranging for young policemen to undergo a course of training in the construction and driving of motor-cars. With equal interest the public will hear that fifteen Berlin judges and barristers are learning to drive so as to equip themselves in a suitable manner for their duties in the special courts dealing with motoring law. Does this development mark the beginning of a rapprochement between motorists and the law which will ultimately lead to a far better understanding than exists at present? "Giant oaks from little acorns grow": it is regrettable that no one in authority thought of sowing this particular acorn long before now, but we have to be thankful that initiative has at last been shown. Very nothing but good could come from a

Topics of the Day

widespread development of this kind? The police would view everything which directly connects them with motoring in a different and more reasonable light, whilst judges and magistrates bursting already with knowledge of motoring law would appreciate the justice of repeated pleas that it should be administered in a far more human manner. Some justification for this view is provided by the fact that where a magistrate is known also to be a motorist,

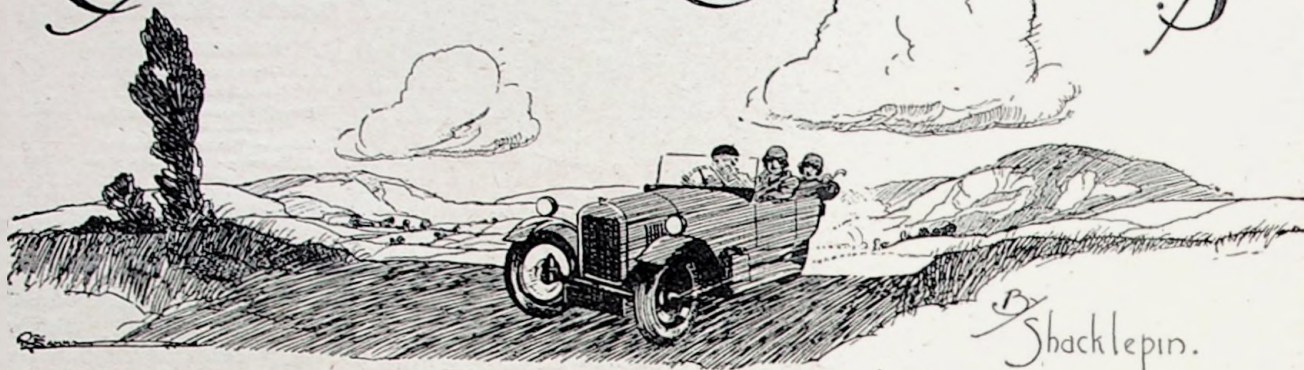
his administration of motoring law is usually beyond criticism. We sincerely hope that the good work started by the Superintendent of the Bucks Police will be carried on by other superintendents up and down the country, and that it is not too much to hope that the example set by German judges and barristers will give those who administer and are concerned with the law in this country furiously to think.

Trouble Brewing.

THE storm which was raised last week on account of the sudden and seemingly unjustifiable increase in the cost of petrol and on account of Mr. Churchill's summary treatment of the deputation which he received, has already fizzled out so far as the newspapers are concerned, but the oil combine on the one hand and the Government on the other will not be allowed to fall into the belief that motor users have forgiven and forgotten. The impositions of the past few years rankle in our minds every time our tanks need filling, and they are brought home to us with particular force when quarter day comes.

This must be regarded as a bad omen for those who are profiting by our discomfiture. It will produce exceedingly awkward and annoying questions at the hundreds of political meetings which will shortly be held, as candidates will find to their cost. They will discover, if they have not done so already, that these questions will be very difficult to answer. It will not be easy to explain away in simple language the Government's apparent conniving at petrol price increases, nor will it be easy to give the reason why the present Government, with Mr. Churchill as its spokesman, has declared that the raising of a loan to improve our roads and reduce unemployment would not be a sound plan.

Cyclecar Comments



THREE-WHEELER HARDINESS AND ECONOMY—DRIVING TACTICS ON CROWDED ROADS—
GARAGE CHARGES—WHY NOT MORE AIR-COOLED ENGINES?

ALTHOUGH cyclecar enthusiasts are, in general, all-the-year-round motorists, I am sure that most of them look forward to Easter, and the first long tour of the year, with real pleasure.

I have often, in these columns, laid special stress upon the handiness and economy of a three-wheeler. Now, with the recent increase of 2½d. per gallon in the price of petrol, the economy factor is still more in evidence. Even when in poor tune, the engine of an average three-wheeler will use no more than a gallon of petrol to propel the machine 40 miles, whilst consumption figures of 50 m.p.g. and 60 m.p.g. are by no means uncommon.

Many drivers, anxious, presumably, to be on the safe side, give their engines more oil than they need, and thus increase the running costs. As I mentioned last week, a sports-type o.h.v. J.A.P. engine requires only 15 drops of oil per minute for normal running, and this rate of flow will give a consumption of about 1,500 m.p.g. We all know that oil is cheaper than bearings or pistons, but, even so, there is no need to waste it.

I quite realize the risk I run in advocating a minimum oil supply, because not all drivers are "en rapport" with their engines. Thus the fact that the oil supply was insufficient might remain unnoticed until too late. The most unsympathetic driver, however, can safely avoid running with a constantly smoking exhaust.

Contrary to what most people, inexperienced with the type, believe, the rear tyre of a three-wheeler has a long life, provided, of course, that it is kept properly inflated. The front tyres, also, last quite as long as those on a four-wheeler; furthermore, when a complete new set becomes necessary, the three-wheeler owner has only three to buy instead of four. Finally, the tax on a

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three-wheeler is only £4 per annum and garage charges are very low. The foregoing remarks supply ample proof, I think, of the economy of a three-wheeler; let us now look into the question of handiness, especially from a touring point of view.

In the first place, the simplicity of the machine cuts down very greatly the amount of time which need be spent in preparing it for a lengthy tour. Even if it is decided to decarbonize the engine, the job can be done, single-handed, in two or three hours, including grinding-in the valves.

Admittedly, certain types of three-wheeler sports body do not provide much accommodation for luggage, but, after all, one does not need to carry many changes of raiment when on a two or three-day tour. With a touring or family-type body, however, as much luggage can be loaded on as would be possible with any small four-wheeler.

Given a fine Easter, the main roads will be crowded with traffic and many drivers will be at the wheel almost for the first time. It is inevitable, therefore, that the going will be slow in places. Nearly always, however, there are chances to get ahead of a slow-moving procession, but if they are to be taken in anything other than the true road-hog manner of blinding straight ahead, one's car must have really good acceleration, powerful brakes and a steering gear which is rapid in action.

The driver of a three-wheeler which has these attributes—and what modern model has not?—can, so soon as an opportunity presents itself, leave his place in the queue and overtake two or three cars before tucking into a space which might be too small for a four-wheeler.

Set down in black and white, tactics of this kind savour distinctly of the most objectionable and dangerous practice of cutting-in. If

taken to the limit, this, undoubtedly, would be the case, but a considerate driver will not go to the limit.

It must be remembered, furthermore, that we are dealing with three-wheelers, which, at the rear, are less than half the width of a four-wheeled car and thus do not require so much tail room. Driven with proper discretion, therefore, a three-wheeler will be found of great advantage in congested quarters.

When away from home, garage accommodation is sometimes rather difficult to find, unless one is prepared to pay an exorbitant price. This, at least, appears to be the experience of many light car owners, especially in popular seaside towns. Because a three-wheeler takes up very little room, however, a corner can nearly always be found for it, even in the most crowded garage.

When the bill is presented the owner will find, as a rule, that his machine has been classed as a side-car combination and that the garaging charge, in consequence, is reasonable.

On the score of handiness we must not overlook the claims of the air-cooled engine. Owners of machines fitted with this type of power unit certainly had the laugh of their brethren with water-cooled engines during the recent very cold weather.

Surely the lessons learned in that period will not be forgotten? I, for one, shall expect to see a very great increase in the popularity of air-cooled engines in the future; in fact, so far as twin-cylinder units are concerned, there seems to be no good reason why they should not be practically universal.

A water-cooled engine may be rather more silent, mechanically, but, beyond this, does it possess any really outstanding advantages over the air-cooled type for every-day and all-the-year-round use?

EACH TO HIS OWN TASTE

Here are Some Appropriate Ideas for Easter—
Ideas Which Should Help You to Map Out
a Motoring Holiday Entirely to Your Taste.

For the Golfer

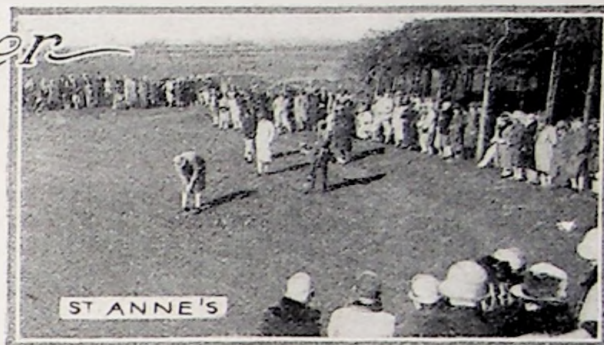
GOLF and motoring are wonderful fellows in double harness. One of the charms of the royal and ancient game is the fact that its devotee can enjoy his round "far from the madding crowd," and the rather inaccessible position of some courses make them popular because all are within easy reach by car. That is why a very large proportion of golfers are also motorists.

There is this, too: the golfer who travels by train has to study the collective convenience of the community as interpreted by the railway authorities, whereas the motoring golfer can start when he likes and, within bounds, travel as fast as he likes.

All the big cities in Great Britain have a "retinue" of first-class golf courses attached to them. Take London, for example. Within an hour's run there are at least a dozen first-class courses. On the Surrey side there is Walton Heath, a superb inland course which, 23 miles from town, is a comfortable hour's ride. In the same area is the R.A.C. course at Epsom; Croydon, 12 miles out, is fringed by a chain of courses which include Croyham Hirst, Addington, Shirley Park, Coulsdon Court and Purley Downs. More westerly are Bursill (18 miles), St. George's Hill (19 miles and opposite the Brooklands track), Sunningdale (23 miles), Wentworth (21 miles) and the more distant but well worth visiting Camberley Heath (35 miles). Sandwich is not too far off for a golfing holiday.

Birmingham is not so wealthy, but there are some fine courses close at hand, notably Little Aston (nine miles), Castle Bromwich (five miles) and Hollinwell, one of the best Midlands courses, which is worth the 30 miles' journey on the Nottingham road.

Liverpool is served by the Wirral Peninsula and the glorious courses near Southport. Of the former, Hoylake, which is a championship links, is the best, but the



nearer courses—at Leasowe and Wallasey—are very good. Formby, St. Anne's and Blundellsands are all famous golf links and all within easy distance of Liverpool.

In the golden west, where the touring motorist who is exploring the Devon moors may want an occasional round, there are Westward Ho (three miles from Bideford) and Saunton four miles from Barnstaple). These are the two best courses in Devon. East Anglia's courses are flat, but they are, nevertheless, good. Hunstanton has an excellent course running along its shore; so have Skegness and Sheringham. Six miles from Hunstanton is the magnificent Brancaster course, with some of the best holes in the country.

All the Yorkshire towns are well "linked." Leeds is the best off with Moortown, on which the Ryder Cup match will be played, Headingley, Alwoodly and other fine courses which are all within the precincts of the town. Actually, motorists cannot travel anywhere without being within easy distance of a golf course. Therefore, those of you who play golf, dump your clubs in the car—why don't manufacturers produce a golf "shoe" for carrying the bag?—and make a golfing Easter of it!



For the Angler

where fishing usually starts in March will have the strongest claims.

Some of these waters are rather inaccessible, but for those fortunate enough to possess a trusty light car distance has little meaning, and we can be over the hills and far away with the least possible delay and inconvenience.

A very early start is of no advantage at this time of year, for the trout will be found to rise most freely from about 11 a.m. to 3 p.m.—unless the weather is exceptionally warm, when the best fishing hours may be somewhat extended.

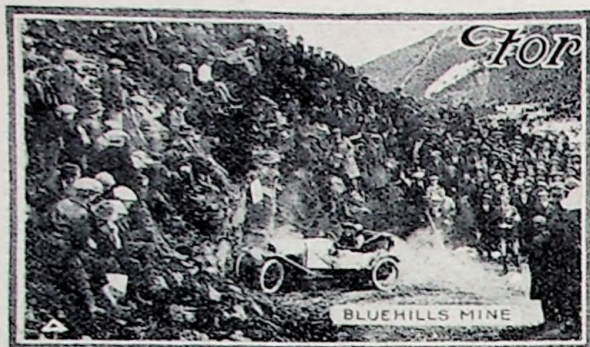
Anglers this Easter will have to be more than usually discriminating in the selection of which trout to keep after they have been caught. The exceptionally cold weather experienced all over the country in the New Year will have had the effect of retarding the recovery of the fish after spawning, for they feed but little when the temperature of the water is low, and many will still be in poor fettle at Easter. This, of course, does not apply to salmon which come straight from the rich fare in the sea, and are in the very prime condition.

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THERE is only one possible sort of ideal Easter holiday for the enthusiastic salmon and trout angler: he must afishing go! It is the first opportunity to wet a line in the new season, and however strong may be the claims of mother and family to choose the summer holiday venue, father must have his say now.

This year Easter falls rather inconveniently early, for many trout streams—especially those within fairly easy reach of London—are not available until April 1st. This year, therefore, the mountain and moorland waters

Each to His Own Taste.



For the Mountaineer

THERE is always a big thrill to be gained from scaling one of the well-known test hills, and those who are going to practically any of the well-known touring centres at Easter will be almost certain to pass within ten or twenty miles of a hill of world-wide repute amongst motorists.

On the south coast there are Peak and Sidmouth hills, which lie between Exeter and Lyme Regis. Both are well known and provide an excellent test of a well-laden car. Two hours' run to the north are Porlock and Beggars' Roost hills, which are probably the two best-known test hills in the country, whilst near Perranporth in Cornwall is Bluehills Mine, another justly renowned acclivity.

Those who are not going so far afield will find plenty of good hills in the Bath, Hereford and Gloucester district, the most famous being the Nailsworth Ladder, which is within a few minutes' run of Stroud. For a short distance the gradient is 1 in 24. Wales abounds in excellent test hills, the most famous being Bwlch-y-Groes, which is on the road from Dinas Mawddwy to Bala, about 12 miles east of Dolgelly.

Further north, opportunities for freak hill-climbing will be found to be very numerous in the Lake District. A stiff ascent, but a hill which none need fear to-day, is Kirkstone Pass. This long, grinding pull takes one from Ambleside to Patterdale, and was in great favour as a test hill until four or five years ago. The most difficult of all the Lakeland test hills are Wrynose and Hardknott, which have a common summit and which lie between Little Langdale, about four miles west of Ambleside, and Boot. Near at hand is Blea Tarn, a very famous hill.

Further north, Scotland's best-known test hill is Amulree. The hill lies off the Crieff to Aberfeldy road and is about 15 miles to the north-west of Perth. Further north still in the north-western Highlands are Applecross and Tornapress, with a common summit. Access to them is gained via Jeantown, which can be reached from the north via Achnasheen or from the south by Strone Ferry. Other famous Scottish hills include the Devil's Elbow, on the Perth to Braemar road; Mam Ratachan, on the Glenshiel to Gleneig road; and Cairn o' Mount between Edzell and Banchory.

Yorkshire is perhaps the most noted of all the counties of England for its test hills, the most famous of which, perhaps, is Park Rash, 1½ miles to the north-east of Kettlewell and about 15 miles north of Skipton. This is often described as being one of the most difficult climbs in Great Britain. Sutton Bank, on the Thirsk to Helmsley road, was a favourite test hill of pre-war days, whilst freak hills galore are to be found in the district around Whitby and in Wharfedale.

South of the Humber, eastern England boasts few really worth-while hills, the most notable, in fact, being Alms Hill, near Henley-on-Thames.

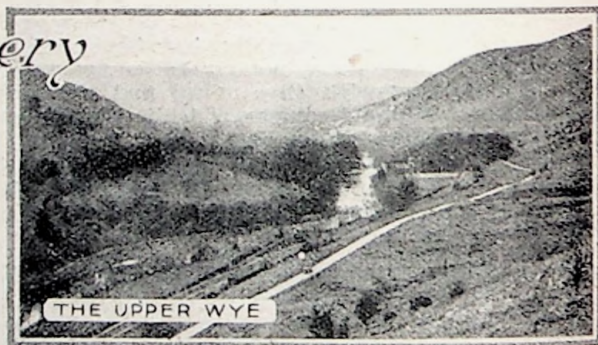
For the Lover of Scenery

OUR country possesses scenery of nearly every type, and, while almost all our roads lead through an ever-changing wealth of quiet and pleasing landscape, there are localities, unique in their way, where nature concentrates her artistry to produce a masterpiece.

In the lovely valley, where the River Wye wanders from Plinlimmon to the sea, there is a choice viewpoint at Symond's Yat, six miles south from Ross and five miles north from Monmouth, where the Wye, between steep tree-clad banks, turns upon its course until its waters almost meet. From each side of the river, but specially from the river itself, one has an arresting view of this beautiful waterway. The verdant country lies all along the course of the river southward 10 miles to Tintern Abbey, and one-and-a-half miles nearer Chepstow it is worth while leaving the car to climb to the top of the Windcliff for the sake of the view, which is one of the grandest in England, extending over nine counties.

It would be difficult to discover a more beautiful region of rugged mountain and tree-embowered waterway than that about Bettws-y-Coed, in North Wales; and, on the descent from the Llangollen road, the Vale of the Lledr opens up to the left as a vista of amazing delight, especially if the sun be falling to the far mountain peaks. This valley of the Lledr holds a high place among the beautiful valleys of Wales, and is not so well known as the less glorious and more desolate valleys of Ogwen and Gwryd. Those with an artistic eye will find their way again and again to the banks of the Lledr, and always with the reward of a worth-while prospect.

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The visitor to Scarborough, on the far north-eastern coast, should not miss the charming scenery of the Forge Valley, a few miles inland from the town, where the sylvan beauty of this secluded vale is a striking contrast with the wild moorlands which form its setting. These great Yorkshire moors have a charm of their own and, on a clear, sunny day, there is not a more exhilarating ride than that from Pickering, 17 miles from Scarborough, across the windswept moors to Whitby, with its old-world fisheries and historic abbey, and back once again over the moorland coast road to Scarborough.

English village scenery is famous the world over and, in these days of ruthless modernism, there is an inspiration in drifting back down the centuries into the ways and atmosphere of the past; and there are gems of such village scenery along the southern lanes of Suffolk.

To elect as supreme one spot above all others in the mountainous confusion of the Lake District would be a difficult task; those who visit this incomparable region should make Keswick their centre.

Each to His Own Taste.

For Peace & Quietness

"WHERE can we go for peace and quietness?" sighs the harassed business man—unless he belongs to that fortunate band of strivers who have already made it their business to find delectable spots where business cares can be thrown off and an escape made from the unceasing din and turmoil of city life.

Sometimes spots like these are chanced upon during an idle ramble, and these are probably treasured the most, for in their unexpectedness lies a great part of their charm. To endeavour to pick out such spots by casting one's eye over a brightly coloured map is next to impossible, and if all else fails one must tackle one's friends in the hope that the eagerly sought gem of a village or hamlet will be discovered.

Diogenes proved that peace and quietness could be found in a tub—a statement of fact which should, however, be accepted as a warning by those anxious for isolation. A quiet and peaceful holiday represents the desire to be more or less alone so as to commune with Nature—but Nature must do her share.

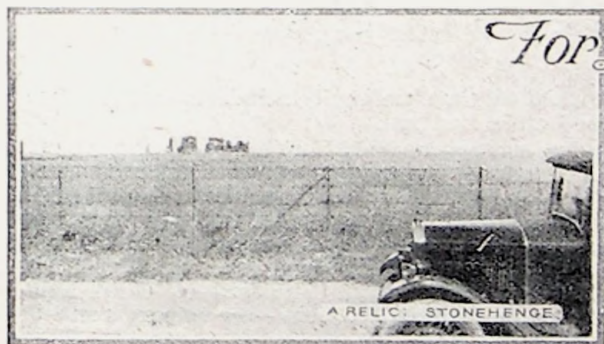
She must provide mountains, lakes, rivers and so on, whichever appeal the most. To gaze with shaded eyes across the English Channel from Fowey, in Cornwall; to sink breathless on some welcome mound, having scaled the heights of the Malvern Hills, the fair countryside spread out like a map at one's feet; to watch the shimmering reflections in the slightly ruffled waters of Lake Windermere, or to stand on the Lincolnshire Wolds and let one's eyes wander



across the flat panorama of land until it meets the distant sand-hills and the sea—these are interpretations of peace and quietness of the kind that we have in mind and which may act as a spur to the imagination of those who long for solitude during the coming holiday.

Naturally, camping and caravanning will make a very great appeal to the man in search of peace and quietness. With his house on wheels or safely strapped to the running board in the shape of a tent he can turn the bonnet of the car in almost any direction and find an ideal spot long before night-fall. His car can then be the true legacy of the hermit, for he is bound by none of the inexorable laws of house-dwellers and can make his camp wherever fancy dictates.

True he is subject to the law of the farmer, the landowner, or the local authority, but their mandates are easily obeyed; for the would-be recluse they have a kindly if sometimes puzzled, sympathy.



For Lovers of Architecture

IT is significant that in these islands, at any rate, architectural gems of bygone ages have best been preserved in ecclesiastical buildings. Prompted by high ideals, the builders of old put their best brains, workmanship and materials into edifices designed for the worship of God. It is not surprising, therefore, that the mystery of Stonehenge never ceases to grip the imagination and that this ancient relic continues to defeat the ravages of time.

Bridging a very big gulf, we come to Saxon architecture, but only those structures which superseded the early mud and wattle buildings still remain. Excellent examples are to be found at St. Michael's, Oxford, St. Benet's, Cambridge, and in the churches at Worth, Sussex, and Greenstead, Essex, to mention only a few.

There followed the Norman period, with its strong and solidly constructed buildings notable for their immensely sturdy towers. Examples of this type of architecture can be seen in Tewkesbury Abbey, Gloucestershire, Illey Church, Oxford, the nave of Gloucester Cathedral, St. John's, Tower of London and the round churches of St. Sepulchre, Cambridge, and St. Sepulchre, Northampton.

The Early English period dates from 1189 to 1272. It marked the introduction of what is known as the Gothic style, noteworthy examples being Westminster Abbey, Salisbury Cathedral and Leighton Buzzard Church. Coventry also boasts of a fine specimen of Early English architecture in St. Michael's Church, with its beautiful spire, a distinction which, of course, it shares with Salisbury Cathedral, which has the highest spire in England. The desire to include more decorative work obsessed architects in the latter part of the 12th century and was interpreted by delicate window tracery, beautiful carvings and more ornamental buttresses and so on. Witness the nave and transepts of Lichfield Cathedral, Trinity Church, Ely, Luton Church and Peterborough Cathedral.

The next phase in the development of architecture was known as the Perpendicular period (1377-1485). This trend is clearly to be seen in many ecclesiastical buildings up and down the country, notably Boston Church Tower and Henry VII's Chapel at Westminster.

King's College Chapel, Cambridge, an outcome of the Perpendicular period, indicates the next development, whilst the Stuarts saw the introduction of the Renaissance or Classic Revival of architecture associated so closely with Inigo Jones and Christopher Wren. St. Paul's Cathedral, Ludgate, London, will stand for generations, as it has already stood, a monument to the great architect. Other examples of the Renaissance style are to be found in parts of Hampton Court Palace, Kensington Palace and Greenwich Hospital.

From all of which it will be seen that for lovers of architecture this fair land holds innumerable gems, any one of which is worthy of a special and protracted visit.

Each to His Own Taste.

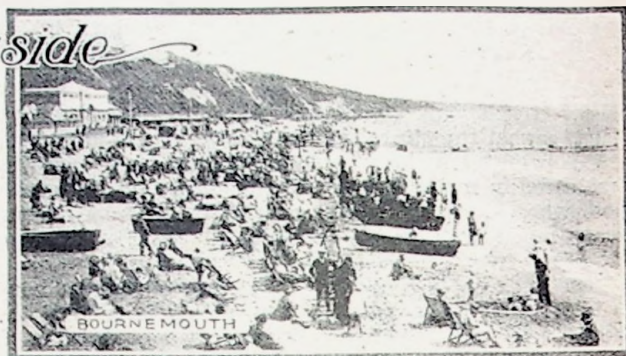
For the Rollicking Seaside

TO children a car nowadays is usually only a means to an end. Promise them a picnic and they will be aglow with excitement, not so much at the prospect of a trip in the car as the fun that will follow; promise them a visit to the sea—and what better time for having one's first springtime peep of the ocean than at Easter?—and they will be ready to tumble into the rear seats the instant they hear the word "Go."

Nowadays many indulgent parents are giving way more and more to the whims of the kiddies because half the trouble involved, namely, that of a long and generally tedious railway journey, is automatically cut out. They should remember, however, that the car is a magic carpet which will take them where they will, and that children do not love the seaside because of the crowded sands, the counter attractions such as pierrots and so on, but because of the sea itself.

Unfold your map, therefore, take a pair of compasses and strike an arc with a radial length to scale which represents the greatest distance you are prepared to go. If you live within fairly easy distance of the coast the arc should embrace many seaside resorts both large and small—and you can take your choice.

If it is intended to spend the whole holiday by the sea, it is a good plan to obtain accommodation well away from the crowd, preferably at some quiet



hamlet on the coastline where the children will have the sands more or less to themselves. The car will make pierrots and similar diversions easily accessible and will provide an outlet for the ennui which sometimes assails the town dweller who suddenly finds himself faced with unexpected solitude.

Another excellent idea, and one which is being acted upon each year by increasing numbers of motorists, is to pitch a tent or caravan at some suitable point on the coast such as that we have just described, and to put in four whole days practically on the edge of the ocean. The car can, of course, be detached and used for excursions to the nearest large town or for visiting interesting places inland, and even if the "kids" are not a deciding factor—well, there is nothing like a rollicking seaside holiday for grown-ups!



For Lovers of Sport

THE keen follower of motor sport is not so fortunate as he used to be before trade drivers were debarred from taking part in a large number of events and before public roads were banned by the R.A.C. for the purpose of holding speed trials, hill-climbs and so on.

Easter in those days was the opening of the season and in all parts of the country there were motoring events of greater and lesser magnitude. Amateur sportsmen, however, are still carrying on, and no matter in what locality one lives there is almost sure to be a local club which intends to stage some kind of competition for Easter. The list of such clubs is far too long to give here, but if the reader is sufficiently interested he will probably be able to obtain all the information he wants from his local garage.

Of the larger and more important fixtures, the "London-Land's End" and the Brooklands Bank Holiday meeting are pre-eminent. Why not make one or the other the *raison d'être* for a tour? The major interest of the Land's End run lies in the West Country, beginning, of course, with the restarting test on Porlock Hill. Then follow the ascent of Lynmouth, Beggars' Roost and—last but by no means least—Bluehills Mine, any of which are well worth a visit in order to see how the competitors fare. In

a fortnight's time we shall include a complete guide to the Land's End run.

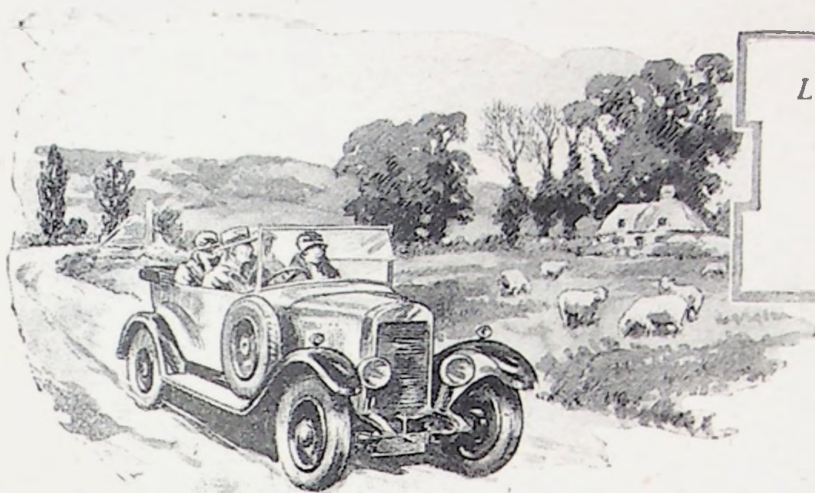
It does not appear as if Yorkshire will offer so many sporting attractions to light car owners as is usually the case at Easter. It had been hoped that Post Hill (Leeds) would be reopened in time for the Easter holiday, but it has been found impossible to make the opening date earlier than April 7th. Some good sport is, however, promised at Bradford on Good Friday afternoon, when Hepolite Scar—the famous test hill—will be reopened.

The Bradford M.C. and L.C.C. are co-operating with the Bradford Special Constabulary on this occasion, and it may be confidently expected that the joint efforts of these two bodies will result in a good programme. There will be special light car classes, and although the event will be held under restricted permits it is certain that many well-known competition riders will be present.

The Cinque Ports Flying Club is organizing an international flying meeting at Lympne aerodrome on Good Friday and Easter Saturday. The meeting will be thoroughly representative of civil aviation and will include entries from all over Great Britain and from Europe.

On Good Friday there will be a rally similar to the Monte Carlo rally, finishing at Lympne at 12.30 p.m. This will be followed by various gymkhana events and exhibitions of stunt flying.

On Saturday there will be two big races—one for private owners flying their own machines and one for standard light aeroplanes entered by the manufacturers, having engines of limited capacity. The aerodrome is situated quite close to the main London-Folkestone road, nine miles south-east of Ashford, Kent, about 65 miles from London. The price of admission to the public enclosure is 1s.



Legal Aspects.

AVOIDING TROUBLE ON HOLIDAY.

By a Barrister-at-Law.

POLICE POWERS ON THE
ROAD—BLAME FOR AN AC-
CIDENT—THE INSURANCE
POLICY—"TRESPASSERS
WILL BE PROSECUTED."

MISUNDERSTANDINGS with the police, accidents and rousing the ire of a landowner by picnicking on his property are all occurrences which may cause a motoring holiday to end in legal proceedings, and a general knowledge of their rights and liabilities in connection therewith may assist motorists either in avoiding such proceedings or, at any rate, in bringing them to a satisfactory termination.

A driver is bound to stop at the request of a police constable in uniform for as long as may be reasonably necessary and must obey the policeman's directions as to which way to proceed and the like. In view of the recent discussions regarding plain-clothes policemen stopping cars, it may be as well for motorists to know that it is no offence to refuse to stop at the request of a policeman unless he is in uniform. Apparently, however, any policeman, whether uniformed or not, can demand the production of a driver's licence, and it is an offence if the holder cannot produce it on the spot. Actually, however, the police are often content, and do not summon a motorist, if he produces it at the police station within 24 hours.

It is a good defence to a charge of not stopping at the request of a policeman or not obeying his directions in some other respect if the defendant can show that he did not wilfully disregard the signal and was unaware of it.

A policeman, whether in uniform or not, may arrest anyone for interfering with him in the execution of his duty or if his conduct is causing or is likely to cause a breach of the peace. Any driver apparently guilty of manslaughter, of causing bodily harm by furious driving, or of being drunk in charge of a vehicle may also be arrested without warrant.

A Bounden Duty.

After an accident a driver is bound to stop if it was in any way due to the presence of his car on the road, and occurred to any person, vehicle or horse. It is, however, an offence only if the omission to stop is wilful. In addition to stopping, the driver must give his name and address, the name and address of the owner of the car he is driving and its registration mark or number to anyone who asks for it. For his own benefit he should himself obtain similar particulars from everyone else involved in the accident and also the names and addresses of any witnesses.

If he is feeling at all confused he should be extremely careful as to what he says to anyone immediately after the occurrence and particularly to any policeman who may come on the scene. If he is not to blame he should make this point clear, but, beyond this, he should say as little as possible, unless he is in a position to give a clear and careful account of how the accident happened. A statement of this kind, made at the time, may be valuable, as will an admission of responsibility by any other party to the acci-

dent. Some insurance policies contain a clause forbidding the insured to mention, after an accident, that he is insured, and most policies contain a clause which makes giving notice of the accident within so many hours or days a condition precedent to the liability of the insurer.

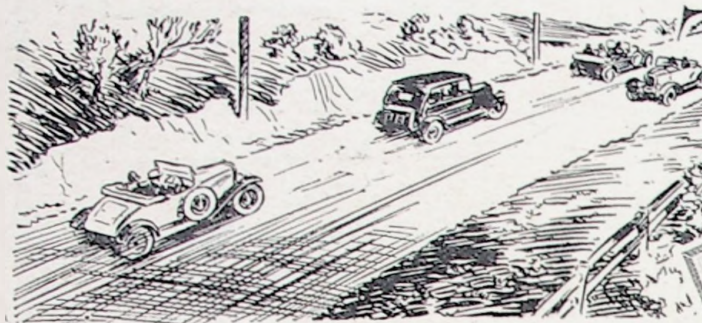
Although many good companies will not take advantage of non-compliance with this condition, many bad companies will be only too quick to repudiate a claim on such a ground. The first thing the wise motorist, who reads this article, will do will be to examine his policy carefully and make a note of the formalities with which compliance is required after an accident, and, if he is unlucky enough to have one, he will pay particular attention to complying with these formalities in detail or getting someone to do so on his behalf. Finally, it may be borne in mind that no motorist is liable for an accident to any person, animal or thing unless he has been guilty of negligence causing the accident.

The Law of Trespass.

Even those who not only drive carefully but manage to avoid the effects of other drivers' carelessness, may find themselves in awkward positions. For instance, while it is perfectly true that the familiar notice "trespassers will be prosecuted" is an idle threat, except in the case of a railway company or some other statutory company, "trespassers will be turned off" is by no means an idle threat. An owner of land is entitled to use as much (but no more) force than is necessary to eject trespassers. He must first request them to go, but, if they refuse, he may resort to the minimum amount of violence needed to assist their departure.

Motorists who indulge in picnics on other people's property must therefore be prepared with conciliatory speeches rather than arguments. The landowner may charge what price he likes for allowing cars to be parked on his property, for, although, in default of agreement, only a reasonable charge can be made, the landowner can eject the car owner unless he agrees to the amount suggested.

The new lighting regulations which make two front lamps obligatory must also be observed, and it must be remembered that these lamps must be left on when a car is parked unless the Chief Officer of Police in the area where the park is situated has given his consent to the use of the park by cars without lights being kept on. The Chief Officer of Police, however, has no power to give such consent where the park is on a part of the highway which is ordinarily used for the passing and repassing of vehicles unless he is satisfied that it is adequately lighted and unless it is a place specially set aside for the parking of vehicles.



THE CARS



CAN YOU NAME THEM?

A Good Knowledge of Detail Determines
a Car when the Radiator Cannot



THE ability to name, at a glance, any make of car they see on the road is something of which many people are proud. It would not be fair, perhaps, to say that the majority wait until they can see the radiator head on, but, certainly, it is the general distinctive shape of the front part of the car which aids them in distinguishing one make from another.

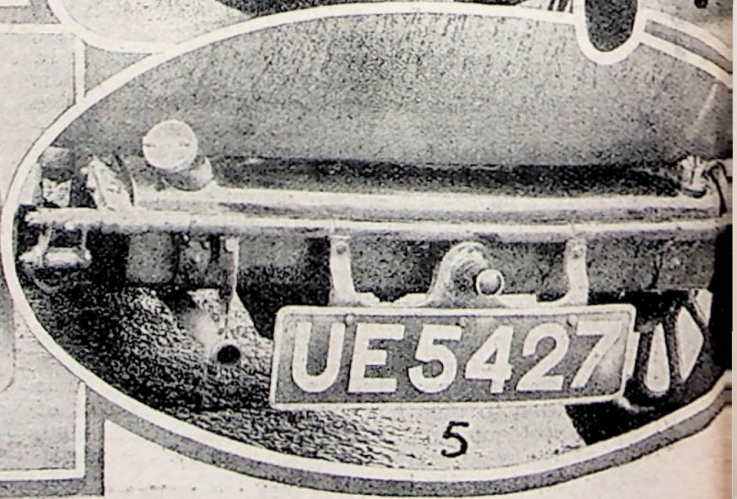
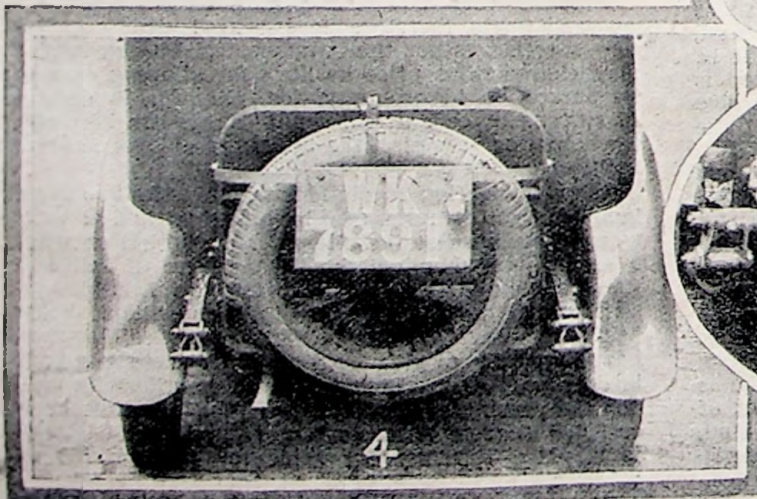
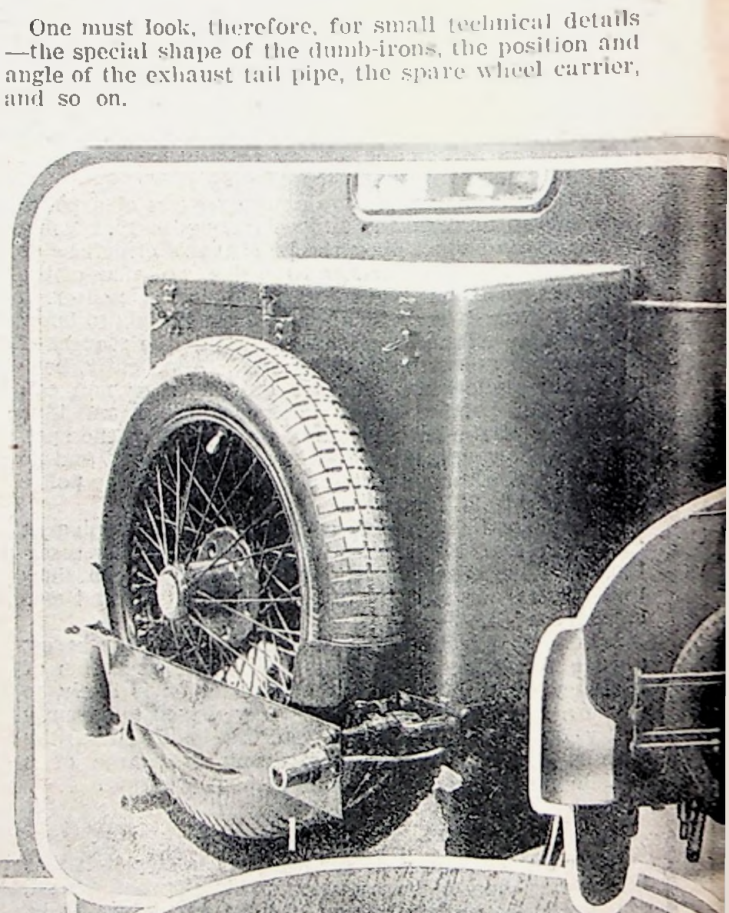
Often theedium of a long run through uninteresting country can be relieved if the occupants of a car organize a little competition amongst themselves. A game of "spotting the makes" might not appeal very much to old hands, but those new to motoring will find it interesting and instructive.

On a straight road distance will reduce the size of a car until it appears no bigger than any of the eight depicted in the heading photographs on this page. They are all well-known makes, but can you name them at a glance? If not, turn to "Around the Trade," where the names are given. Taking the size of the photographs as a rough guide, a guessing competition could easily be arranged; whoever names the car first as it approaches being the winner.

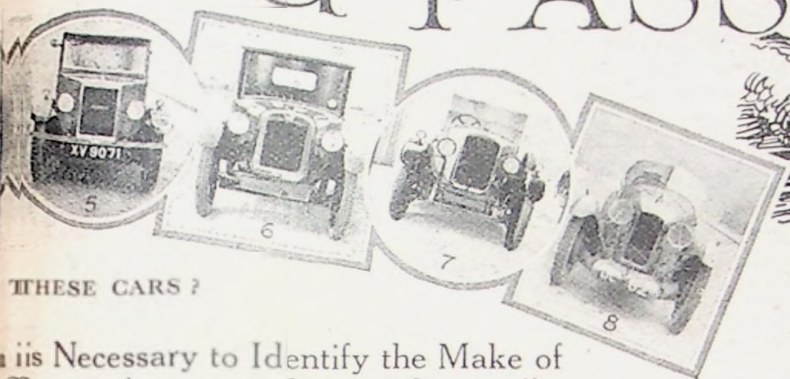
If there is any disagreement, the point can be settled almost at once, because the car will soon pass, and, unless it be a quite unknown make, at least one of the competitors is sure to be able to give it a name after a close-up view.

The foregoing, as we have suggested, is hardly a game for blasé old hands; they will be more interested in something harder; let them, therefore, try recognizing cars from the rear view. This is by no means easy in many cases, because the general appearance of the rear views of modern saloon bodies is not always distinctive.

A glance at these photographs will show that it is not always easy to identify the make of a car from a rear view. Each has its distinctive features, however, as explained in the text. The makes depicted are—



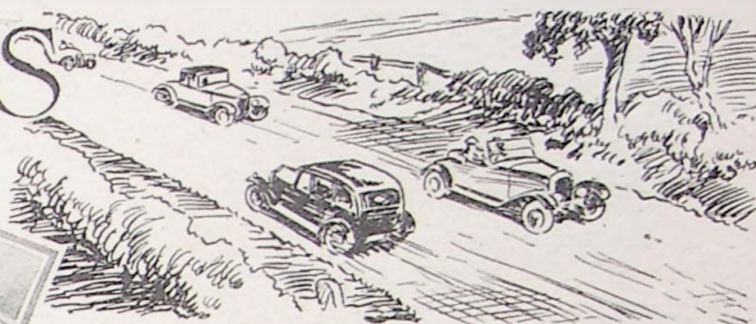
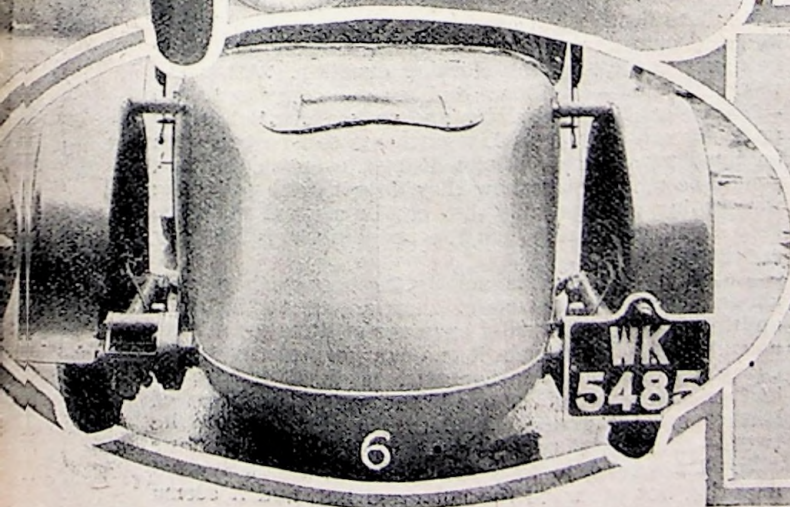
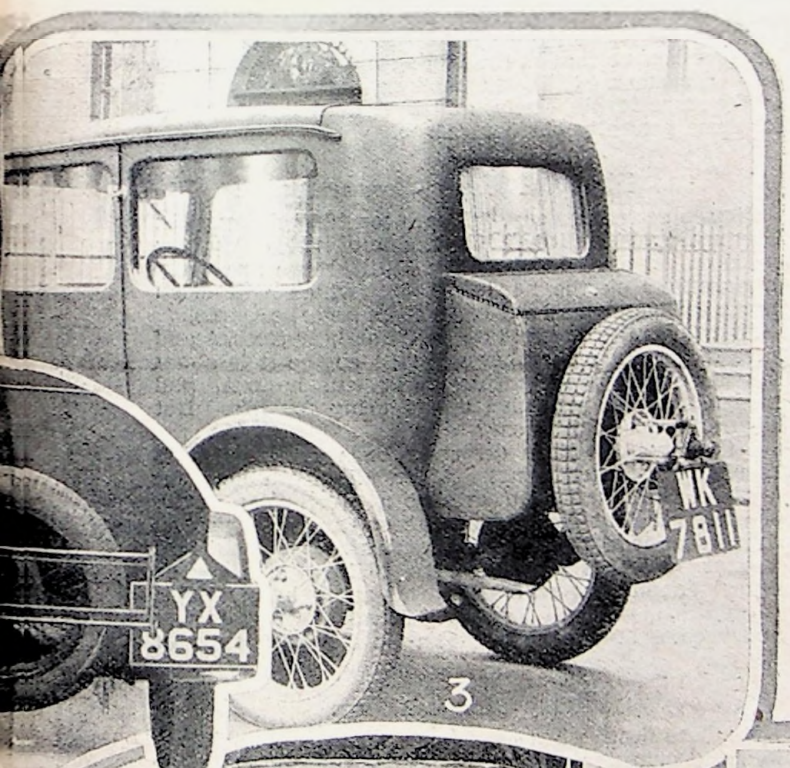
You Pass



THESE CARS?

It is Necessary to Identify the Make of
Seen. Are you a Quick "Spotter"?

As a rule, the appearance of the rear axle casing is a very helpful guide, unless it be a proprietary unit fitted to a number of different makes. Examples of individual design, however, are to be found in the



worm-drive axles fitted to Rovers, Standards and Triumphs, whilst who could mistake the huge, tapering sleeves forming part of the A.B.C. rear axle?

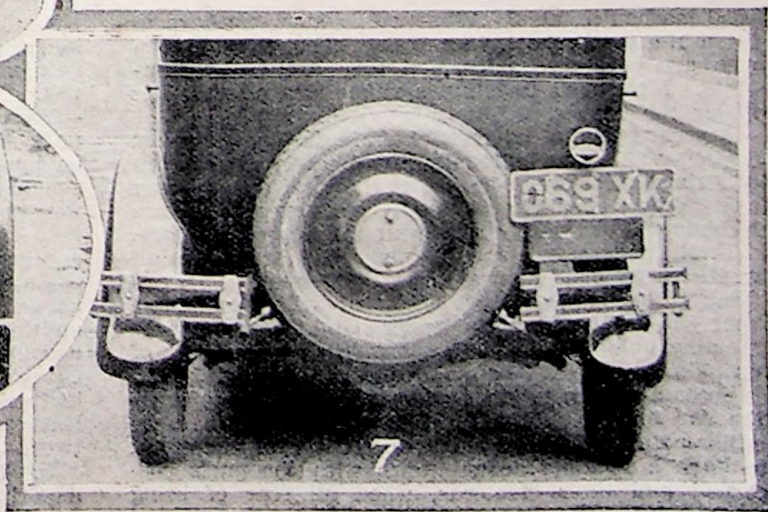
With low-built bodies and running-boards, however, a glimpse of the chassis components of a modern car can seldom be obtained, so that we must consider more obvious features. In the accompanying group of rear-view and partial rear-view photographs of modern light cars at least one distinctive point can be seen.

The Humber is one of the few light cars having a fuel tank at the rear and an additional clue is provided by the two-way tap control mounted on the off side of the tank. The luggage trunks and spare wheel fittings will assist in recognizing the Triumph saloon and the Rover sportsman's coupé, whilst in the view shown of the last-named car the underslung worm-drive rear axle can just be seen.

Probably the most distinctive feature of the rear view of the Standard Teignmouth saloon is the long, downward sweep of the mudguards, the ends coming nearer to the ground than those on any other light car. Mudguards, again, together with the luggage grid and the triangular rear lamp aid in identifying the Swift, whilst the transverse rear spring of the Renault and spare disc wheel shod with a large-section tyre form clues which should be obvious to anybody.

Those who are anxious to build up a reputation as "car spotters" must cultivate the observational powers of a Sherlock Holmes, and they will find it very helpful to visit car parks occasionally. Examined at leisure when it is stationary, any make of car will yield clues which will enable the "spotter" at an opportune moment to surprise his friends. A word of warning, however: Do not make the examination too lengthy or the suspicions of the park attendant may be aroused—it is *his* job to "spot" doubtful characters.

—(1) Rover, (2) Swift, (3) Triumph, (4) Standard, (5) Humber, (6) F.-w.-d. Alvis, (7) Renault Nine. A good example of detail difference is to be seen in the shape of the spring shackles on the Standard and the Humber.



For Women Who Drive.



Sue Carol, the Fox film star, believes that white leather coats with special wind collars are to be "the last word" this season.

FORTY years ago the girl of the day might perhaps have ventured to London on a visit carefully escorted on the train by an aunt and possibly a maid as well. To-day she says "Good-bye" to her father on the Yorkshire Wolds, drives herself cheerfully the 200-odd miles to town and thinks nothing of dancing all night afterwards.

Even eight or nine years ago driving 200 miles in a day was considered rather an adventure for a woman to undertake by herself. One was not absolutely sure of getting to one's destination within a day or two of schedule time. Punctures and various odd little things used to occur. But nowadays one can safely say, "I shall leave home at nine, I shall lunch at Stamford and I shall be in town by teatime."

So much for the reliability of the modern light car.

Safety-pin Repairs.

Friends often say to me, "I should not care to drive such long distances alone. I do not understand anything about the engine." Very few women are born good mechanics, alas! What we do know we have to learn in a hard school. I know only about three women who are born mechanics, and they are really first-class. Most of us have but a vague idea of what lies under the bonnet.

A great friend of mine still has the feeling that most engine troubles can be repaired by a safety pin or a bit of string! However, she knows the vital things every owner-driver should know, and if you know these things I think you can safely take your car anywhere alone.

First, understand how to start the engine in all weathers, by hand as well as by the starter. I always think if one cannot start one's car with the handle that the car has got the upper hand. Do not leave starting up to a man each morning; get the hang of cranking yourself.

Secondly, learn to know what is most likely to cause the car to stop. Roughly, this is almost sure to be either petrol trouble or magneto. It is wise, therefore, to have a nodding acquaintance with the parts concerned and their etceteras, when all fear of being

Expert Hints— By Victoria Worsley.

stranded can be allowed to vanish—that is, unless you are an absolute "rabbit" in such matters.

Self-confidence is what women drivers lack most in mechanical matters. Very often they can diagnose trouble correctly, but have not the confidence to try to put it right, or perhaps are not quite sure how to set about it. I know, when my car stops suddenly, my heart stands still and I think "Heavens, I'm done!" I rather believe that is the feeling most of us have on these occasions. Still, the modern engine very, very rarely stops involuntarily, and if it does it is usually for some perfectly obvious reason.

Plenty of Hand Cleaners.

Women sometimes say, "I hate touching the engine; I get my hands so filthy." That is quite true, of course; one does get one's hands filthy. Still, there are many preparations on the market to-day which will clean hands completely and not leave them any the worse.

Naturally, if you are wearing your best clothes and have to get out and tinker with the engine it is about the most exasperating thing that can happen, and enough to make you give up motoring for life. But how often does this occur?

I think most women drivers take a great pride in keeping their cars smart. After all, there is great personal satisfaction in owning a nice, clean, well-polished car that does not squeak or rattle. If you oil and grease it to the makers' instructions you will find it pays and that you will come to love your car as a real friend that will bring you many happy days. In addition, you will lose your dread of dirty fingers and become amazingly proficient in the geography of the car.

Flimsy Things Taboo.

In these days, when everybody wears sports clothes intended more for use than for show, there is little one need say concerning the clothing question. After all, most of us now—even if we do not run a coupé or saloon—have a hood, side curtains and so forth, which allow perfectly ordinary everyday garments to be worn even on the longest runs. Flimsy things, even so, I think should be taboo. Somehow they do not seem to belong to motoring, and certainly they can be a great nuisance in a small car which has the usual array of spikey excrescences.

Motoring, however, is not at its best with a roof above and a vast expanse of glass ahead, to the right and to the left. The really open car still makes a huge appeal, and I find that in it one can keep plenty warm enough in normal weather with a good windproof leather coat or a rubber one if the weight and cost of leather are too great. Underneath there should be tweed—thick, good tweed—and a soft jumper, wool or silk. Hats used to be a big problem, but universal motoring has produced the universal hat, and it seems

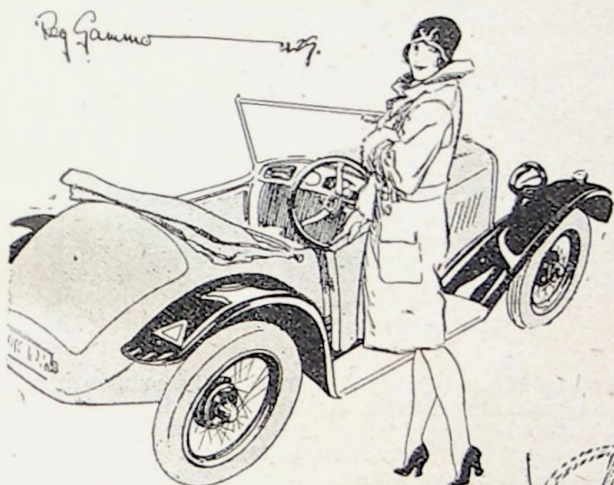
to serve for every kind of car. In a sports car, however, a leather helmet is always well worth having—if only in a door pocket for occasional use.

You can always do with a rug. Wrap it well round before you sit down so that the ends do not get near the gear and brake levers. Avoid letting it come below the ankles, or it may get in the way of the pedals. For long-distance runs I consider it quite unnecessarily spartan to forgo a rug in an open car—or a closed one, for that matter—simply because it is popularly supposed to be—shall we say?—self-indulgent.

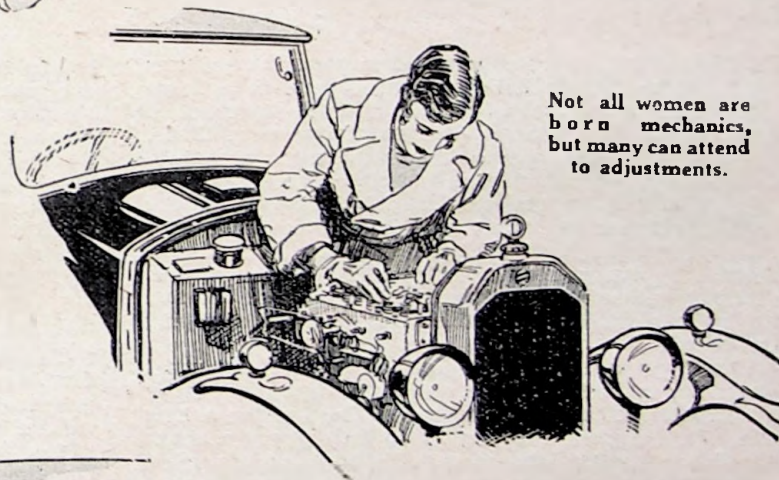
A Lecture.

I come now to the part of this article which appeals to me most. The time has come to lecture!

For the past 12 months or so some of the motor papers—and other papers as well—have been full of very bitter and unpleasant letters and comment about women drivers. It is no good writing indignant letters in reply. The best way is simply to prove that it is all untrue by being specially considerate and chivalrous



There is nothing like a good leather coat for keeping one warm in an open car.



Not all women are born mechanics, but many can attend to adjustments.



Most of us take a pride in keeping our cars smart.



Do not scorn to use a rug.

in future. Then we can hope these letters will stop.

Perhaps the golden rules are to pay attention every single second you are at the wheel, and to think all the time of other road users. Do not be impatient with the man who drives his sheep or his frisky cattle along the road, blocking it and probably forcing you to stop. He has to get his sheep to market and it is poor fun for him with so many motorcars about. Do not be too exasperated by ducks and hens. Ducks are charming birds, and hens, even if they are fools, cost money, as you would know if you had ever kept any. And children—you simply cannot be too careful of them. They will do anything unexpected—push each other in front of the car, dart out of side streets and even chase their tops under your wheels. Cyclists? Well, just ride a bicycle yourself along one of our highways and you will soon get to know their point of view, and how much consideration they deserve and should be given.

The Perfect Motorist.

I sometimes think the perfect motorist should be one who has graduated from the ranks: one who has, on a big main road, ridden a cycle and a motorcycle, driven a lorry, driven a farm cart—how much can you hear when the old cart rattles along?—led a restive horse on tarmac, driven pigs along and taken children for a walk. Those who have practised these trying arts before becoming motorists can get more amusement and incident out of a long run than out of many novels, movies or plays.

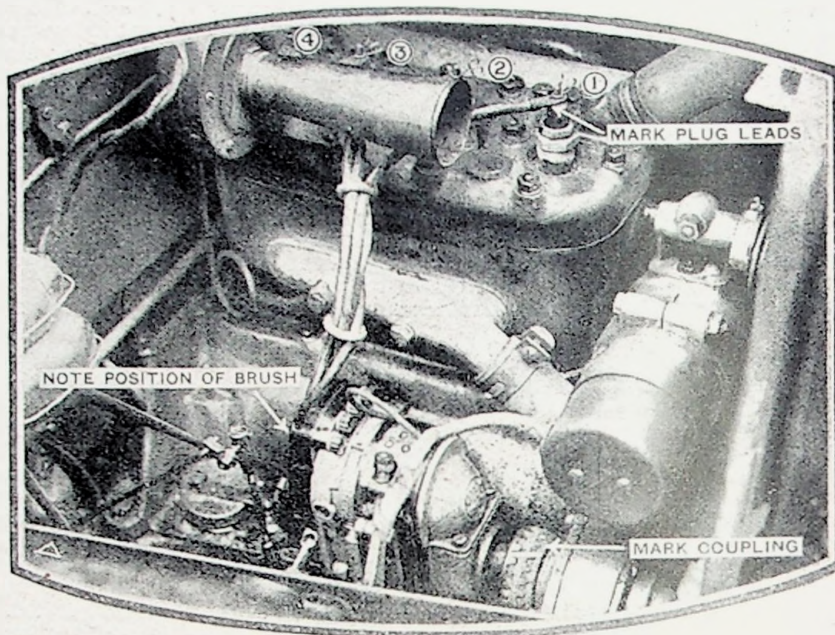
Remember always that a little extra consideration will not bring down your average speed very much, whilst it will help a great deal to win women more popularity as drivers to-day.

The Spring Overhaul.

MAGNETO MAINTENANCE

An efficient magneto makes all the difference to the performance of an engine and, as this article shows, it is not difficult to clean or adjust. The complete process is described.

Before removing the magneto from the engine care must be taken to adopt the precautions indicated in this photograph, otherwise it will be necessary to re-time the ignition.



THE amount of attention paid to a car in readiness for the Easter holidays will depend to a large extent upon the individual and his mechanical ability. If the car is comparatively new, little, perhaps, need be done to make it ready for a 500-mile journey, but, even so, a complete greasing of the chassis should be undertaken, whilst naturally the engine, gearbox and rear axle should be filled with oil to the proper levels. If the tyres are in good condition they may require only minor attention, but certainly all embedded flints should be probed out and the holes which they leave filled in with a good stopping compound.

These preparations are of a perfectly normal character and of the type almost always undertaken by a conscientious owner before setting out for a long run. If, however, the tour is to be enjoyed without the driver having always at the back of his mind some little worry in connection with the running of the car, every small job for which time permits should be done beforehand.

Detailed Attention.

Where older cars are concerned, more extensive preparations may be necessary; it is in fact a very good plan completely to dismantle the magneto and carburetter for thorough cleaning and adjustment. In addition, unless the job has been done comparatively recently, the engine should be decarbonized, the valves ground in, and the tappets adjusted.

The last-named jobs are those which the majority of owner drivers can readily undertake for themselves in these days of detachable cylinder heads, but many amateur mechanics fight shy of dismantling a carburetter, whilst when it comes to a magneto they are apt to view the instrument almost in a horrified manner and to recoil at the thought of doing anything more than removing the contact-breaker cover to look at the points.

Whilst it is by no means suggested that the man who has only recently taken delivery of his first car should straightaway dismantle the magneto, there are

at the same time many owners fully competent to do the work provided that they know how. We shall, therefore, in imagination, dismantle the magneto almost completely just to see how it is done. The instrument which forms the subject of the accompanying photographs is a B.T.H. removed from an Austin Seven. The great majority of modern magnetos, however, are constructed in a very similar manner; therefore, the instructions which apply to one will, in a large measure, apply also to the others.

The Preliminaries.

The first job is, of course, to remove the magneto from the engine, but before this is done the timing position must be marked so that the magneto can be refitted without the need for actual retiming from the piston position or the crank angle. If a Vernier coupling is fitted a line scribed or filed across it so that both flanges are clearly marked will be sufficient. It is not essential that the mark should be on the rubber centre piece, because when the other two marks are exactly opposite each other the rubber will fit only in one position.

It is necessary, however, to remove the distributor cover and note carefully the position of the brush, or the jump spark arm, as the case may be. The reason for this is that the brush rotates at half the armature speed; therefore, although the marked coupling may be reassembled correctly, it may happen that the brush will be 180 degrees out, that is, exactly opposite its proper position.

The magneto may be held on the engine by studs screwed in its base, or by a metal strap; in either case the job of uncoupling will present no difficulty, but it will be necessary at the same time to disconnect the contact-breaker control and to remove the high-tension leads from the plugs. Here, again, careful marking will be necessary so that the leads are not mixed up when they are refitted. A simple and perfectly efficient plan is to file notches on the brass terminal tabs, or even in the rubber insulation.

Starting with the front plug, a single notch is filed

in the terminal, the second lead from the front will have two notches filed in it, and so on to the fourth, although actually if the first three are marked there is no real need to do the fourth, as obviously it can go back only on one plug. Although the leads are then marked consecutively one to four, the marks will not, of course, indicate the firing order of the engine. This will be obvious if the leads are traced to the distributor end, when it will be found that they come in an order which is generally 1, 3, 4, 2. This, however, will not make the slightest difference so far as the present job is concerned.

The only remaining operation before the magneto is ready to be lifted from the engine is to disconnect the switch wire leading to the contact-breaker cover, unless the earthing brush within it can be examined and cleaned without disconnecting. The wire may be secured by a terminal or by a locking screw; in any case the method of its disconnection will be obvious at a glance, and the magneto can then be carried to the bench.

The first job will be to clean the outside of the instrument thoroughly, so that all oil and dirt is removed. This is essential if the risk of dirt getting inside the armature tunnel is to be avoided. The cam ring can then be removed by pulling it straight off. If it tends to jam it must be prised gently with a screwdriver blade, but on no account must force be used, otherwise the ring may be distorted. When it is clear the contact breaker will be accessibly exposed for attention, and it should be taken off by removal of the central binding screw.

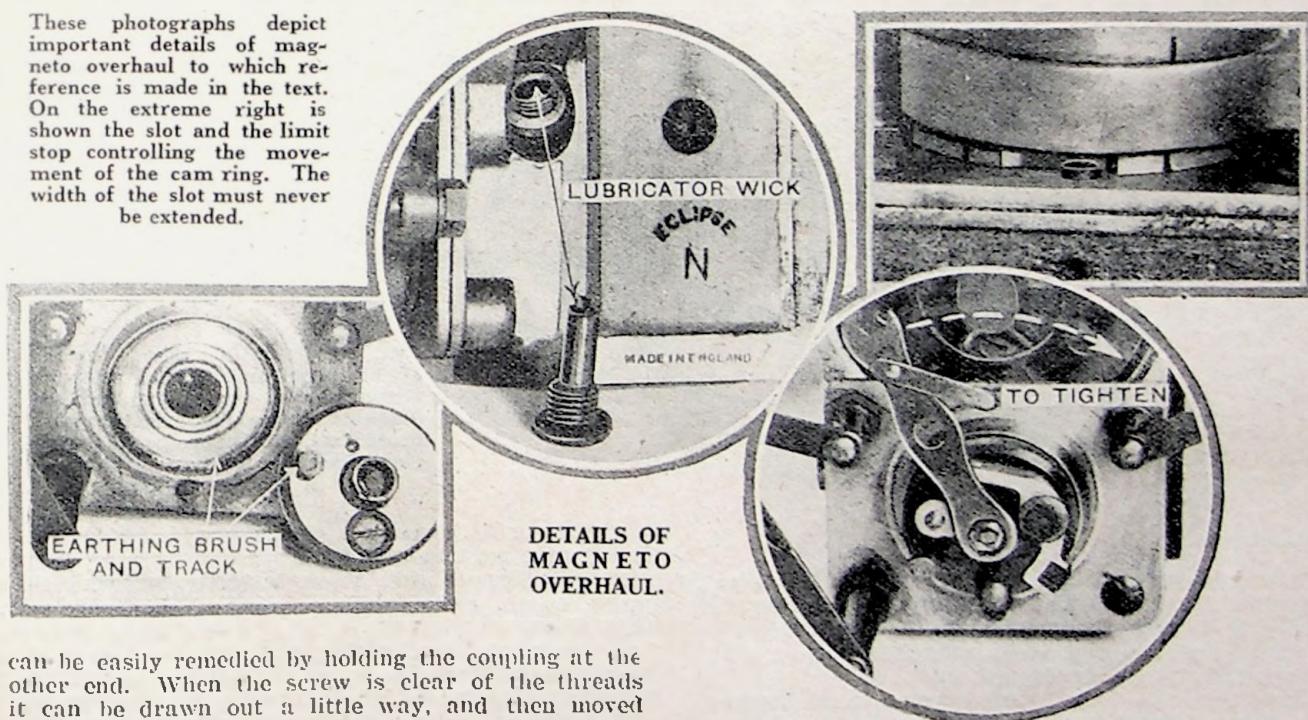
This invariably has a right-hand thread, but no other instrument than the special magneto spanner should be used to unscrew it. The tendency for the armature to turn whilst the screw is being undone

found to be projecting partly from the back of the contact breaker, but held more or less in position by means of a light spring. It can be pulled out as much as is necessary to clean it, but unless the face is badly pitted there should be no need to trim it up with a file; all that is necessary is to see that it is working freely and that there is no oil present.

If the points of the contact breaker are in good condition, there will be no reason for removing them, but if they show signs of pitting they should be taken out for closer examination. To do this the short length of clock spring on the bell-crank rocker arm must be undone, but great care is necessary in this operation because the small screw which holds it is almost certain to be very tight. Furthermore, it is rather short and, when once loosened, it is apt to come clear of the threads in the bell crank unexpectedly, with the result that the clock spring straightens out suddenly and shoots the screw across the garage, where it will be almost impossible to find it. On the majority of magnetos a short stiffening spring is fitted behind the main bell-crank spring. This also will be lost if the main spring is allowed to fly.

A pivoted spring-steel arm is used, as a rule, to locate the bell crank on its pivot pin: the arm can be pushed to one side and the bell crank eased off the pin. Quite possibly it will be a little tight, in which case, after its removal, the brownish deposit on the pin can be cleaned off with dead-smooth emery cloth, and the pivot hole in the bell crank also cleaned out by wrapping a piece of the emery cloth round a match stick and, as it were, filing out the hole. If the magneto is of an early type, having a small-diameter pin with a red fibre bush in the bell crank, great care must be taken to keep oil away from both the pin and the bush, as the effect of oil is to swell the fibre

These photographs depict important details of magneto overhaul to which reference is made in the text. On the extreme right is shown the slot and the limit stop controlling the movement of the cam ring. The width of the slot must never be extended.



can be easily remedied by holding the coupling at the other end. When the screw is clear of the threads it can be drawn out a little way, and then moved gently side to side so as to free the contact breaker from its seating in the end of the armature, but if this method does not prove effective, two screwdrivers inserted behind it on opposite sides will have the effect of bringing it clear.

Behind it will be seen a flat surface—probably besprinkled with carbon dust worn off the earthing brush which is let into the back of the contact breaker. The circular track of the brush and the surrounding area must be cleaned carefully, and ordinary brass polish will be found very suitable for the job. The brush itself should next be examined; it will be

and thus cause it to bind; the pivot is intended to run dry.

If the contact points are made of platinum and are badly pitted so that their surface is distinctly irregular, the backs of the screws should be supported on a metal block whilst the surface of the platinum is hammered gently to bring it flat, the final exact flattening and smoothing out of the pits being done by means of a special contact-breaker file which can be bought at any accessory shop.

The safest way to true the points, however, is to

wait until the contact breaker has been reassembled and then to separate the points by pressure on the heel piece of the bell crank. The blade of the file is then inserted between the points and the pressure on the heel piece removed. The spring then tends to bring the points together so that they press upon the file blade, which can be worked gently backwards and forwards until a true surface is obtained. The exact adjustment of the points to the correct gap cannot be made until the cam ring is refitted, but this job should be deferred until the rest of the magneto has been cleaned.

At the driving end of the magneto will be found an aluminium or, in some cases, a Bakelite cover above the armature, held in place as a rule by two screws. These can be undone and the cover removed, and it will be found that underneath it is the collector brush which conveys the current from the slip ring to the distributor. The brush holder is of right-angle formation, and held in place by screws. On some magnetos a thin piece of brass having a saw-edged lug on one side is clamped between the brush holder and the armature tunnel casing. This piece of metal forms part of the safety spark gap, and care must be taken to put it back in exactly the position which it occupied before removal.

The Slip Ring.

Withdrawal of the brush holder will show that in the lower end of it is a spring-loaded carbon brush which bears on the slip ring. Quite possibly the insulation adjacent to the brush will be covered with carbon dust. This should be wiped off and a rag, moistened with petrol, passed down the hole normally occupied by the brush holder. The rag can be pushed down

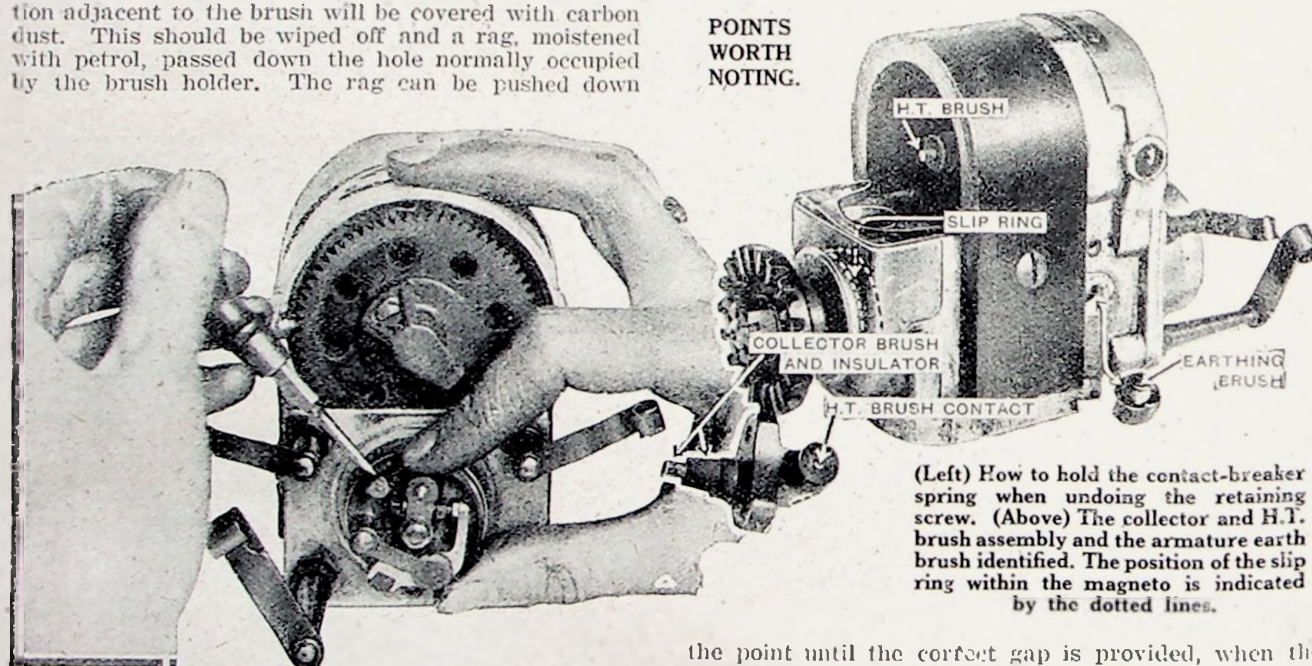
the magneto spanner is used to tighten up the binding screw. Incidentally, when the tapered boss of the contact breaker is inserted into the hole in the end of the armature, it is necessary to make sure that the small projecting key fits into the keyway. On some magnetos an earthing brush, bearing on the armature, is screwed into the body of the instrument; it should be removed and cleaned in petrol.

If the distributor is of the jump-spark type the only attention necessary will be to wipe the interior with a duster, but if the poles of the four segments show signs of pitting there is no harm in scraping them gently with a knife. Possibly, however, the distributor will be of the normal wipe type, in which case the brush must be examined to see that it is free in its holder and that its surface is clean and of a contour which conforms with the bore of the distributor. The four inserted brass segments in all probability will be dirty. They can be cleaned effectively with brass polish, and the cover will then be ready for replacement.

Final Adjustments.

The only job left to be done now before the instrument is refitted to the engine is the checking of the gap of the contact breaker, the armature being turned until first one cam and then the other separates the points. In each position the gap should be checked by means of the gauge on the plug spanner. If the gap is incorrect it must be made right by undoing the locking nut on the adjustable contact point, and turning

POINTS WORTH NOTING.



(Left) How to hold the contact-breaker spring when undoing the retaining screw. (Above) The collector and H.T. brush assembly and the armature earth brush identified. The position of the slip ring within the magneto is indicated by the dotted lines.

with a screwdriver blade until it comes into contact with the slip ring. The armature should then be rotated by turning the coupling so that the whole circumference of the ring is brought into contact with the rag and thoroughly cleaned.

The other end of the brush housing, when in position, bears against another small carbon brush projecting from the end of the distributor spindle, a small disc of brass being used to make the contact. The brass and the brush must be cleaned and the surrounding surfaces freed from carbon dust. There should be no need to draw out the armature from the tunnel, and in fact it is not advisable for an amateur with no previous experience of magneto work to undertake the job. Assembly can, therefore, be commenced, the collector brush with spark gap lug being first screwed into position and the cover plate replaced.

The contact breaker can then be refitted, care being taken that no greater leverage than that allowed by

the point until the correct gap is provided, when the locking nut must be tightened.

It may happen that when correctly adjusted the points do not come together truly, so that only one edge of each, as it were, touch. In that case the contact file must be reinserted, and moved gently backwards and forwards a few times to correct the irregularity, after which it may be necessary to readjust the gap. By arranging the plug leads so that the terminals are within a quarter of an inch or so of some part of the magneto and jerking round the armature fairly rapidly by hand, a spark should jump from each terminal in turn; this will indicate that the magneto is in working order. The instrument can quite safely be held by hand whilst this test is being carried out.

Refitting the magneto to the engine is simply a reversal of the method of removal already described.

The foregoing has dealt in a thorough manner with the overhaul of a normal magneto; next week we shall describe a carburetter in a similar manner.

TESTING WAR DEPARTMENT JOWETTS

How a Batch of Special Vans and
Tourers was Given a "Rough Usage"
Test from which the Vehicles Emerged
with Flying Colours.



PROVING THEIR METTLE.

The "big pull" of the Jowett engine and the general sturdiness of the whole car being proved beyond doubt in the recent works trials, which were far stiffer than any of those organized by motor clubs. During the test, slopes of 45 degrees were climbed with ease.

THE makers of Jowett cars have long claimed that their product is powered by an engine "with a big pull"; this claim has been substantiated by actual experience in the hands of private owners, whether they come under the category of novices or seasoned motorists. Until recently, however, one big factor of the general make-up of the Jowett has passed without special notice—the little cars are capable of withstanding a terrific amount of "knocking about" without protest.

On March 6th six Jowett vans and five touring cars were put through their paces by the works staff, prior to being handed over to the British Army authorities, a representative of *The Light Car and Cyclecar* being a privileged witness of the proceedings. To say that we were astonished at the capacity of the vehicles successfully to withstand rough treatment is really an inadequate statement, for virgin country—which seemed to be almost artificially severe—was traversed by the eleven vehicles in a most convincing manner. Hills with particularly severe gradients and atrocious surfaces were tackled nonchalantly by the drivers, while at the close of the proceedings one car was rushed up a bank with a gradient in the neighbourhood of 1 in 1 and, although only 4 ft. to 5 ft. high, would prove an almost insurmountable obstacle to the ordinary car.

Apart from a few minor alterations to suit special service requirements,

both the tourers and the vans were exact reproductions of the ordinary standard long-wheelbase Jowett models. The two-cylinder horizontally opposed water-cooled engine of 907 c.c. being used, together with the standard type of clutch and gearbox. Even the top-gear ratio was the same as the standard product, but the second and first speed ratios were lowered slightly in order to facilitate the negotiation of rough ground. Thus, the ordinary road performance of these cars would be in almost every way equivalent to the standard product.

It must be borne in mind that the vehicles were new, consequently the power units were not properly run-in, so that good though the performance throughout the tests proved to be, it should be even better after the cars have run a thousand miles or so.

From the Jowett works at Idle, near Bradford, a short road run led to a particularly severe hill which, although not very long, was extremely steep, the surface being very rough indeed. With the driver only aboard each of the Jowetts could plough its way up the hill with comparative ease. This particular hill was so rutted that one would have thought to look at the surface that climbing it would be quite impossible, at any rate for a light car. The ground clearance, however, on the Jowetts seemed to be ample and, although the ruts were in places 9 ins. deep, no "bumping" was detected.

The next item on the programme was certainly the most impressive test of all, and probably the most severe. A

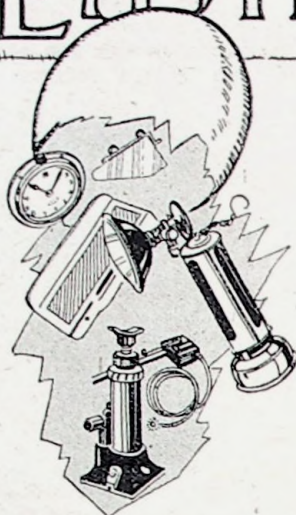
"rodeo" would be an apt name for it, for the cars were taken to a specially prepared course at the back of the Jowett works and sent off round a track one after the other until all the eleven cars were going at once. It is almost impossible adequately to describe the "course." Suffice it to say that there were no fewer than four banks, each approximately 5 ft. high and having a gradient in the neighbourhood of 1 in 2½. The cars rushed round at speeds which certainly looked too fast for the chassis to come through undamaged, but nothing untoward happened, and careful investigation afterwards failed to bring to light any fault whatever. To prove there was "no deception," the cars were then sent round the course in the opposite direction. Again everything went swimmingly, but, as might be expected, one or two vehicles occasionally suffered from wheelspin, as by this time the "course" was getting somewhat cut up.

The grand finale came when one of the Army vehicles was rushed up a bank sloped at approximately 45 degrees. At first the task was believed by all and sundry to be utterly impossible of attainment, but with a capable driver at the wheel the car accomplished its buck-jumping feat faultlessly.

Altogether a most impressive demonstration and one which should go far to show that the modern British light car is capable of tackling Colonial conditions successfully and with economy, for, as everyone knows, the running costs of a Jowett are as small as its potentiality is great.

IDEAL EASTER EGGS

Why Not Give Your Car an Easter Egg in the Form of Some Accessory Which Will Make It Better Fitted for Summer Touring?



Helpful Advice on Making a Wise Selection of Gadgets for a Tour, Together with an Indication of Current Prices, are Given in this Article.



NOWADAYS touring is a very easy business. The elaborate plans and preparations once considered necessary belong to the past and many folk start off for quite a lengthy tour without doing anything more troublesome than greasing and filling up with petrol and oil. Provided the car has been well looked after, this is quite satisfactory, but, all the same, it pays even in these days of trouble-free motoring to give a little attention to the vehicle and its equipment before setting off. The mechanical aspect of the question is dealt with in another article in this issue; here we are concerned with the matter of equipment.

Although a car may boast of all the accessories that its owner requires in the course of his normal runs, there may be certain additional items of equipment which will prove almost worth their weight in gold on a tour.

Take the question of luggage, for instance. A man who runs a four-seater and seldom takes more than two passengers would have little use for a luggage grid in the ordinary course of events, but were he to undertake a tour with a full complement of passengers he would find his pleasure completely marred in the absence of some provision for carrying luggage outside the actual body.

The luggage problem—the term is justified because the whole question of carrying luggage when on tour often does present a very definite problem—is not so serious as it was in the past, as the majority of 1929 cars are equipped with either a luggage grid or trunk at the rear, and this, of course, greatly simplifies, even if it does not actually solve, the difficulty.

How to Carry Luggage.

Those, however, who own cars which have no definite place for luggage should certainly consider the question seriously unless they will be travelling with one or two empty seats in the car. Taking things all round, a rear luggage grid of the collapsable type is best. Fitting does not as a rule present any difficulty, models being obtainable to clamp on to the chassis of existing cars without the need for drilling, whilst prices are quite reasonable, varying from about £1 to £2 10s. Moreover, a collapsable grid is quite out of the way and unobtrusive when folded.

It has been said that fitting is easy, but it may be pointed out that the position of the number-plate and tail lamp may have to be altered. Even this, however, should present no real difficulties, as suitable brackets are always supplied with the grid and the alteration

is merely a matter of bolting the number plate and lamp in the new position and lengthening the wiring as necessary.

For those who are prepared to spend a little more money, a chested trunk is an extremely good investment. Trunks of this type consist of an outer case, which can be attached permanently to the grid, either two or three normal suitcases fitting snugly inside. Their great advantages are, first of all, that the contents of the cases are doubly protected from both wet and dust and are thus absolutely secure against damage. Convenience is the second strong point in their favour: on reaching an hotel, for instance, the owner has only to undo the catches of the outer case when the inner cases, free from dust and travel stains, can be withdrawn.

Prices vary considerably, for it is possible to get types differing widely both in the quality of the material and the elaboration of the fittings. The cheaper types cost round about £6, whilst for the large, luxurious models fitted with three or more inner cases £20 or so can be paid.

Handy for Emergencies.

For folk who normally have practically no use for a luggage grid or who are so burdened with luggage that a rear grid would not accommodate it all, there is much to be said for a running-board rack. Most types are collapsable and can be folded up to occupy quite a small space at one end of the running-board, or can be removed entirely in a few minutes when not required.

This method of carrying luggage is not, as a rule, to be preferred to a grid, for if a car is fitted with off-side doors it precludes their use, but for people who very seldom require a luggage grid except when touring or who wish for accommodation in addition to that provided by a rear grid, it is ideal; moreover, prices are quite moderate, ranging from 15s. to 25s.

To drivers who are touring with a four-seater and only one passenger the question of luggage is a simple one, as an almost unlimited quantity can, of course, be stowed away in the rear seats. Baggage carried in this way will, however, get very dusty in an open car unless protected in some way, for fine dust has a habit of finding its way inside bags and suitcases in a surprising manner. It is a good plan, therefore, to fit a waterproof tonneau cover, which, by completely enclosing the rear seats, will protect luggage from the effects of weather and, incidentally, make it far safer if the car is left unattended for any length of time.

So much for luggage. The next point which concerns the driver is providing for the comfort of his

passengers, and this should be regarded as a most important matter. A passenger who is uncomfortable obviously cannot gain full enjoyment from the run.

If the car is an open one the best investment that can be made in this connection is the purchase of a good rear screen. Many owners of four-seaters may be tempted to disregard this advice, thinking that a rear screen represents an unnecessary expenditure. They adopt this attitude because, always driving themselves, they do not appreciate the effects of prolonged exposure to wind which those who occupy the rear seats have to endure, this being especially so if the weather happens to turn cold, as it sometimes does at Easter-time.

Glass or Celluloid.

There is a wide choice available to the purchaser of a rear screen, from the comparatively inexpensive celluloid type selling from about £3 10s. to the more elaborate models fitted with plain or safety glass, which cost anything from £6 upwards. Celluloid screens are quite satisfactory and, of course, safer than ordinary glass, but the buyer must face the fact that after, say, two seasons' use the celluloid is almost sure to become discoloured and in need of replacement. Ordinary glass, on the other hand, does not suffer from this fault, but presents a certain amount of danger in the event of a crash. The best type of all is a screen fitted with one of the excellent varieties of safety glass now on the market.

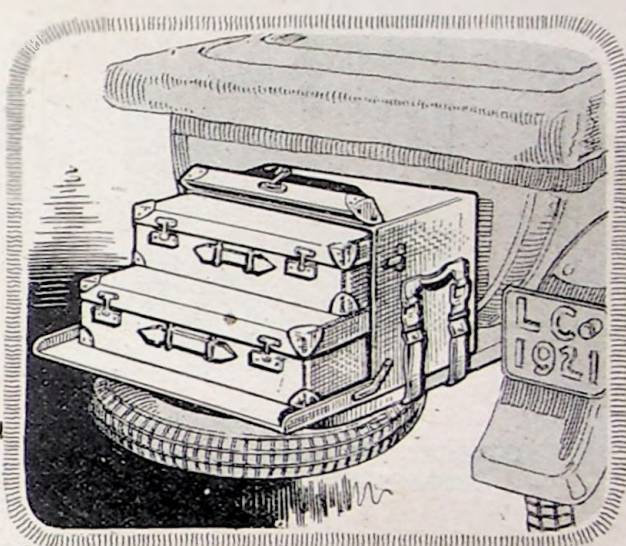
Apart from its actual value in shielding the passengers' faces from the wind, a rear screen adds much to their warmth and comfort generally, as an apron is always provided and this largely serves the purpose of a rug, forming considerable protection from cold. Yet a further advantage is that it is often possible to drive through a short shower without going to the trouble of raising the hood, for so long as the car is

in motion all the passengers will be kept reasonably dry, owing to the rain being deflected over their heads.

Most of these remarks apply also to a dickey-seat screen, if it is proposed to tour with more than two passengers in a two-seater. Dickey-seat screens cost between £3 and £4, and are usually arranged so that they can be moved to such a position that they will protect the passengers in the event of rain.

In connection with providing comfort for the passengers, there is one point that is sometimes overlooked by an owner who always drives himself, and this is that the effects of the car pitching on bumpy roads are felt far more in the rear seats than in the front. If a car is addicted to pitching, therefore, it is a good plan to fit shock absorbers. The leading makes are so well known that the pros and cons of various types need not be considered in detail here.

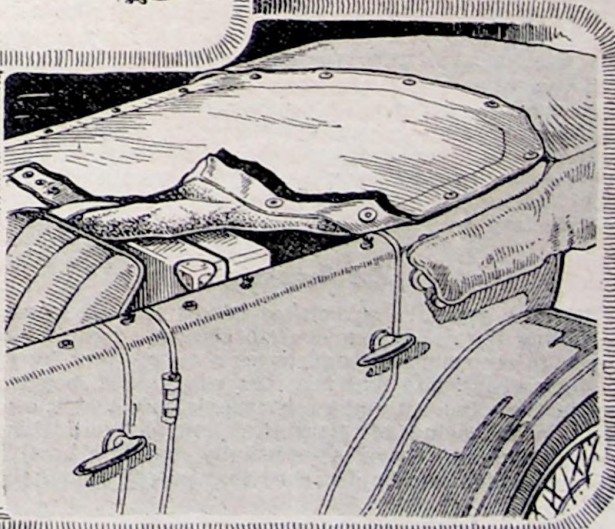
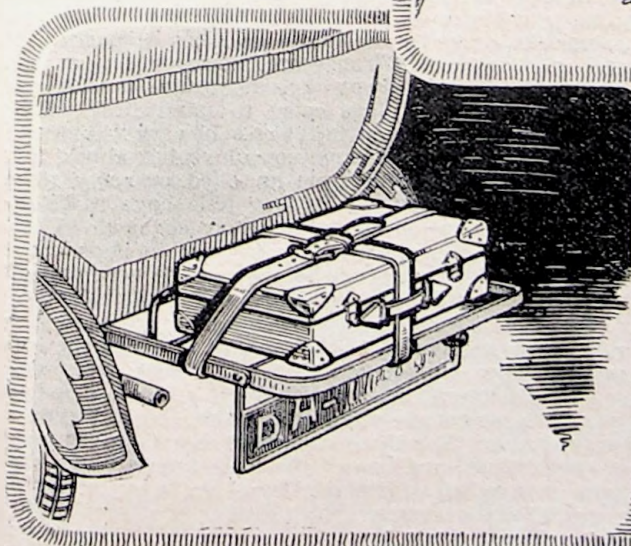
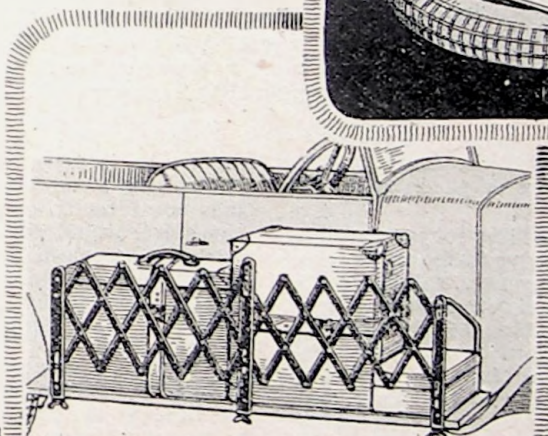
In connection with springing, incidentally, owners of cars not fitted with spring gaiters would do well to equip their cars with these accessories, as dusty roads

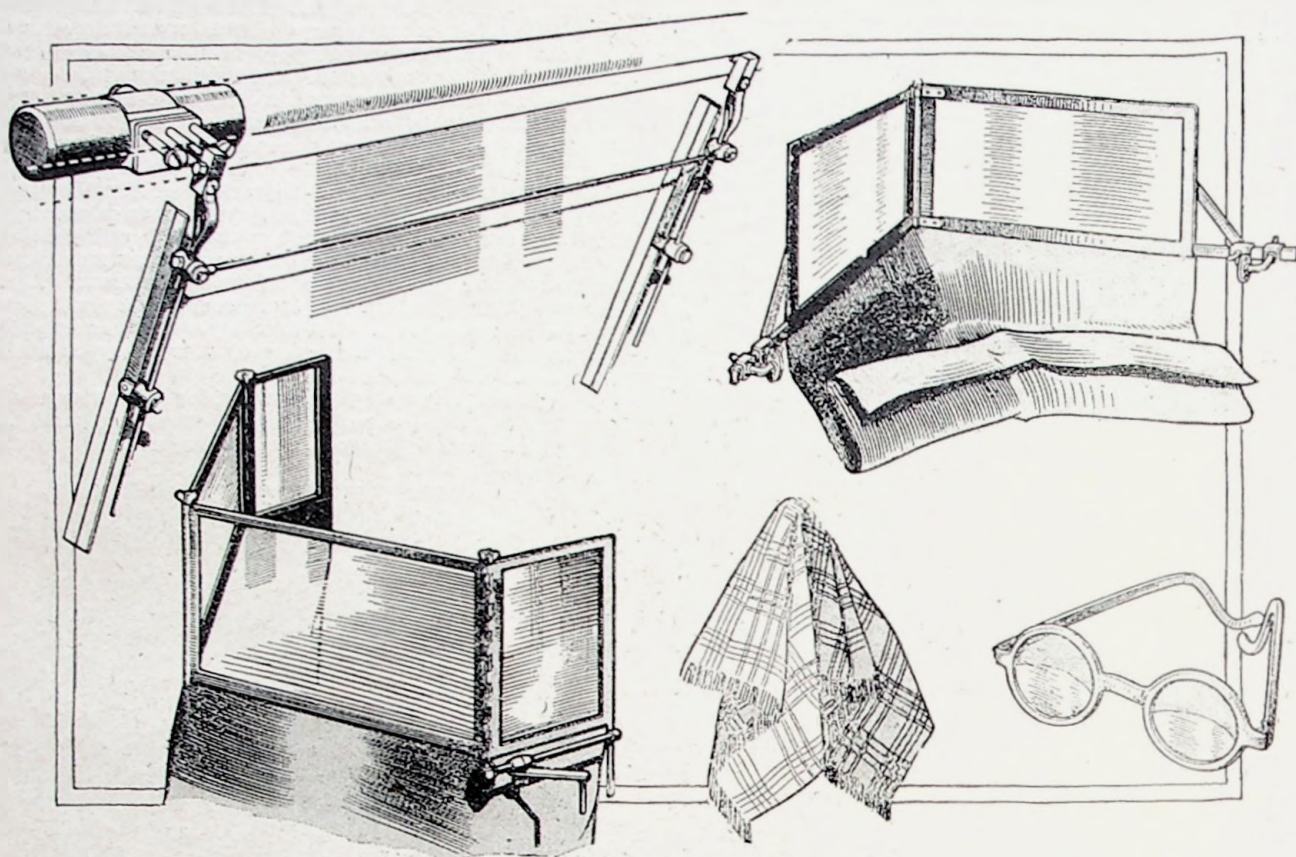


(Above) A chested trunk is very convenient and quite proof against rain and dust. (Below) If luggage is carried in the rear seats a tonneau cover is an advantage.

TACKLING THE LUGGAGE PROBLEM.

(Right) A running-board rack is extremely handy for occasional use and can easily be removed when not required. (Below) For average needs a rear grid is hard to beat.





COMFORT FOR THE PASSENGERS.

The considerate driver studies the comfort of his passengers. The items shown here are a great aid in this connection. They are: An extra blade for the screen wiper, a dicky-seat and rear-seat screen, a rug and a pair of tinted spectacles for sun glare.

are very likely to be encountered if the car is taken "off the map" and nothing is more detrimental to the action of springs than road grit.

To return to the question of providing for passengers' comfort, there is one quite inexpensive fitting which can make a world of difference, at any rate, to the front-seat passenger. This is a second windscreen wiper blade and coupling bar for attaching to the existing wiper so that a section of the screen on the near side is also cleaned. An extra blade working in tandem will not appreciably affect the functioning of the wiper, and besides saving the front passenger from that boring condition of being able to see nothing, it will also help the driver a good deal when taking left-hand bends. An attachment of this type can be obtained for 5s.

There remains yet one more item which the driver who has the comfort of his passengers at heart must certainly provide—a good, large rug or, better still, a pair of rugs. The weather has a nasty habit of turning very cold so soon as the sun goes down at Easter-time, and to end a run chilled and stiff is a very unsatisfactory way of finishing up a pleasant day.

For Smokers.

For the general convenience of all the occupants, including the driver, an electric cigarette lighter has much to recommend it and saves a tremendous lot of fiddling about with matches that will persist in going out in the wind. A lighter is in existence which contains a magazine of cigarettes and delivers them already lighted. Other types usually contain a heating element which can be detached and passed round the car.

One does not like to worry about time when on holiday, but all the same an eye must be kept on the clock

unless one is prepared to risk considerable inconvenience owing to misjudging the hour. Those whose cars are not already equipped with a fascia-board clock, therefore, would do well to fit one, especially as very moderately priced models—one very reliable example is available at 15s.—are now obtainable.

What of Spares?

Turning to mechanical aspects of the subject, one immediately comes to the question of spares. Except in the case of fairly old cars or cars which have some weak part known to be liable to give trouble, there is no need to carry the elaborate selection of parts that was once desirable. There are, however, one or two items which should always accompany the tourist, and of these sparking plugs come to mind first. Plug trouble, except, perhaps, in the case of very "hotstuff" engines, is not very common nowadays, but almost any car is liable to suffer from an oiled or sooty plug, especially in country where long hills have to be descended with bottom or second gear engaged. When this trouble occurs it is much simpler to change the plug for a clean one than to waste time scraping off the offending oil or carbon from the faulty plug.

The fact has also to be considered that there is a very large number indeed of makes and models, and small garages cannot be expected to stock every one, so that the tourist may find himself in need of a new plug at some remote village where the correct type is unobtainable. For these reasons it pays to carry a set of spare plugs, and one of the most handy and satisfactory ways of accommodating them is by means of a special holder screwed or bolted to the front of the dash. These keep the plugs clean and safe from damage and are to be had for holding either two or

four plugs. The price is usually round about 5s.

The difficulty of not being able to obtain a correct replacement in out-of-the-way places also occurs in connection with lamp bulbs, for here, again, there is quite a large number of makes and types. The tourist who intends to undertake any night work, therefore, should certainly carry one spare head and two spare side-lamp bulbs. The fragile nature of these articles makes it essential that they should be properly packed, and the best plan is to purchase a special holder for them. Practically every accessory dealer stocks several types, models suitable for carrying three bulbs usually costing about 2s., whilst larger holders for six bulbs retail for 7s. or so.

Two-way petrol taps have largely done away with the risk of being stranded without petrol miles away from a garage and have also done away with the need for carrying a spare tin, but owners of cars without a tap of this type should certainly either fit one or take a spare can with them, especially if they propose to venture into sparsely populated areas.

Spare Fuel and Oil.

An alternative to carrying an ordinary two-gallon can, which, after all, is rather an unsightly object, is to purchase one of the neat cabinets which can be obtained for fitting on the running-board. These usually consist of a well-finished outer metal case containing a one-gallon tin for petrol and a half-gallon tin for oil, and are to be obtained for about 25s.

To return to the question of the fuel supply, it is worth pointing out that a motorist will find a petrol gauge which is visible from the driving seat well worth its cost when touring. The most inexpensive form of gauge takes the form of a vertical glass tube fitted to the facia-board and connected to the tank by copper tubing. Petrol from the tank flows into the glass tube

and thus the actual level is readily visible. This class of instrument, of course, is suitable only for cars which have the petrol tank situated in the scuttle.

There are also the more elaborate gauges employing a dial, and these, naturally, are more expensive, costing from £1 upwards, as opposed to the 7s. 6d. for the glass-tube variety.

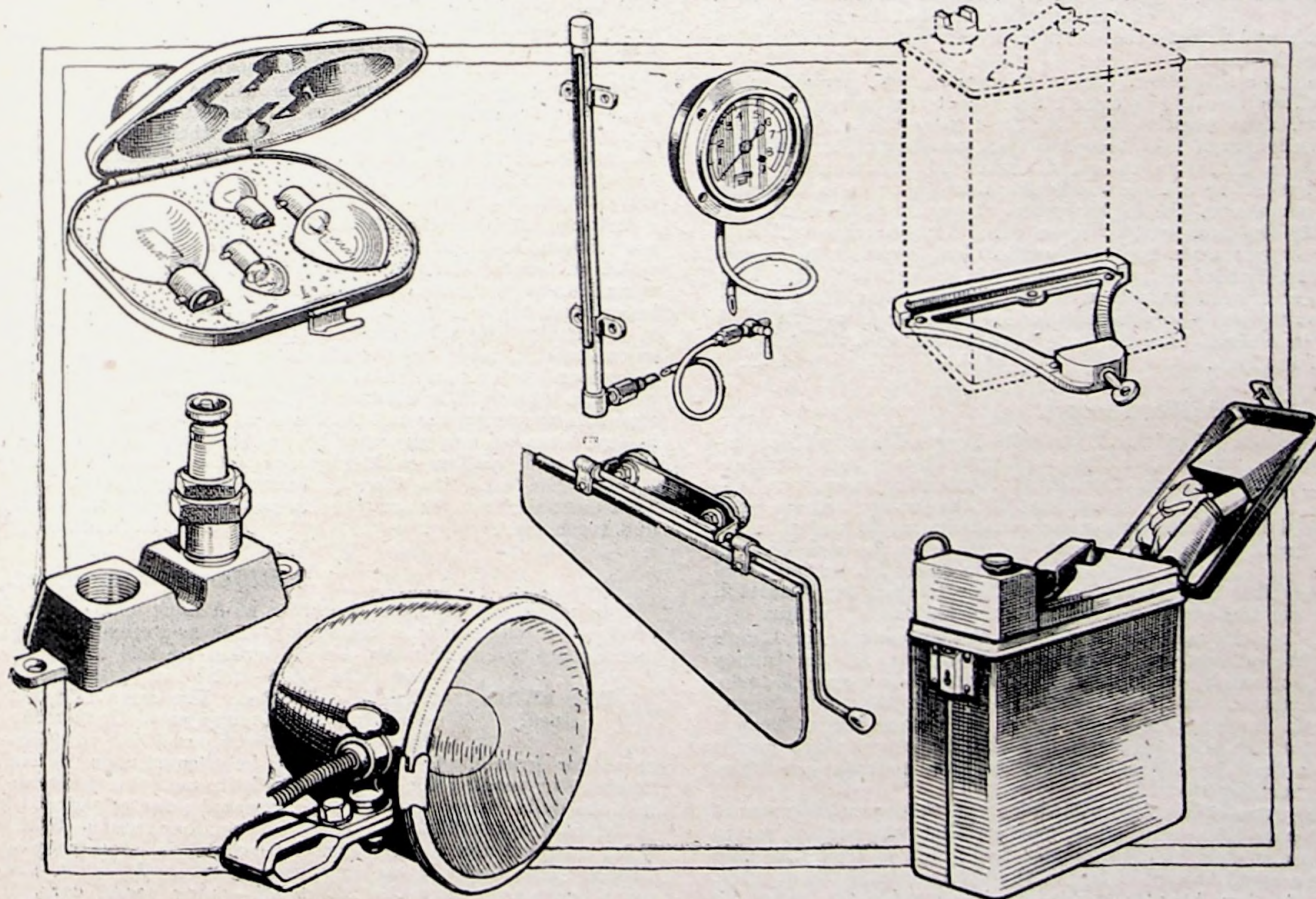
Other Useful Items.

Amongst other accessories which may be mentioned in connection with touring are a spotlight and an anti-glare shield; the former is invaluable to the tourist who proposes to cover any appreciable mileage after dark, as finding the way over strange roads at night usually means frequent examination of signposts, and unless a spotlight is fitted much time is apt to be wasted.

Anti-glare shields scarcely need any introduction, as there has been somewhat of a boom in them of late. It should be pointed out, however, that besides being valuable in cutting out glare from approaching head-lamps they are equally useful when driving towards the west in the evening, when the setting sun can be extremely troublesome.

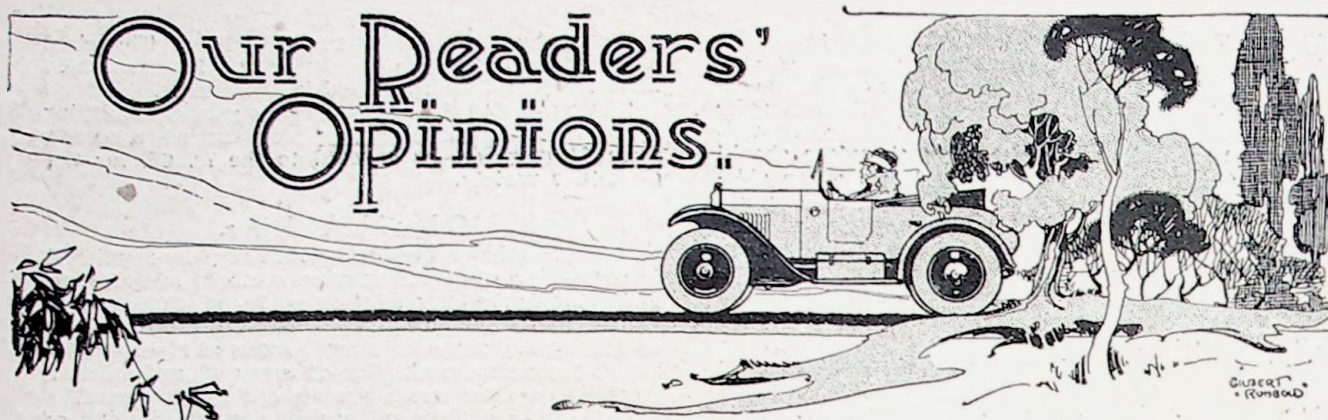
In this article we have not mentioned each and every accessory that might conceivably prove of service during a tour, but we have indicated the main items which are likely to prove useful. Some of the fittings mentioned will, of course, already be in place on many readers' cars, but these folk, if they have a pound or two available, will do well to study their cars, with a view to finding in what respects the equipment is lacking and to purchase the necessary gadgets.

No mention has been made of proprietary accessories, but in practically every case an indication of prices has been given, and in the actual choice of any particular item readers would do well to study the advertisements appearing in this issue.



ALL USEFUL FOR
THE TOURIST.

The accessories shown here are all of more than ordinary use during a tour. They are a spare bulb carrier, alternative types of petrol gauge, petrol can holder, spare plug carrier, spot light, anti-glare screen and combined spare petrol and oil cabinet.



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.

PETROL PRICES AND POLITICS.

The Government Policy Condemned—Business and Pleasure Aspects.

The Business Man's Burden.

As the proprietor of a small business in connection with which I run a 7 h.p. car, may I add my voice to the protests against the Government's policy with regard to motor taxation and petrol prices? The purchase

Typical Case of Hardship. of this car has proved a considerable drain on my finances—I am still paying instalments for it—but I was prepared

for this and thought the sacrifices worth while in the interests of my business.

I did not, however, reckon on a tax of 4d. per gallon on petrol, neither did I expect the recent increase of 2d. per gallon. My position now is this; petrol costs 6d. more per gallon than I estimated when I bought the car and this makes a difference to me of about £1 per month. The car has resulted in a steady but slow increase in business, but, thanks to the higher price of petrol, it does not yet justify the money it costs to run. Doubtless it will in a year or two when my business has had a chance to expand further, but what am I to do in the meantime? If I keep the car I shall have to make greater sacrifices than I care to contemplate—my resources are already low—but if I sell it, I shall lose the best possible aid to building up a good business.

H.P.

Mr. Churchill's Lesson.

It is not often that I trouble busy editors with correspondence, but I have just read with dismay and astonishment Mr. Winston Churchill's astounding reply to the

deputation of the motor trades and motor organizations which waited upon him with reference to the revision and relief of taxation on motorcars, etc., and

I think it is time something was done to show Mr. Churchill that his ideas with regard to motorists are all wrong.

He has the audacity to say that the motorist is the King's luckiest subject, on the strength I suppose of the fallacy that because a person owns a motorcar he is very well-to-do, and runs his car for pleasure only. Mr. Churchill forgets that in hundreds of cases a man or woman has to keep a car for business purposes, and that in cases where people use a light car for pleasure they have to make sacrifices in other directions.

The facts that petrol was cheap and that manufacturers of light cars had produced a machine that was economical in the use of fuel and practically fool-proof, enabled the man with a small income to enjoy the open air and the country. And, further, he was enabled to live outside the congested area of the city in which he worked, going to and from his job in his car, thus effecting a saving on rail fares, and getting a cheaper house, and giving his family a better chance from a health point of view.

B56

But now, with the rise in the price of petrol and the Government tax on his pleasure, whereby vast and already well-paying businesses are to reap a further harvest, the margin on his income which enabled him to do these things is insufficient, and he is faced with the fact that at the end of 1929 he will have to give up his hobby and return to the conditions which existed prior to his owning a car. To do this will cause him more pain than he will care to show. He loves his car and he loves the countryside—pleasures which, thanks to Mr. Churchill and his Government's class legislation, will be now beyond his means.

The effect upon the motor trades will be widespread. A large number of second-hand cars will come upon the market, less petrol and accessories will be used, there will be even greater congestion on the tubes and other means of conveyance, and finally the Government will find that they have slaughtered their goose.

Taking into consideration the above facts, what are motorists to do? There is one thing and one thing only which will show Mr. Churchill that they are not to be bled white, or to be driven from their legitimate pleasures by being taxed beyond any other class of the community, and that is to put him where he can do no harm—outside the Government, and if needs be the Government that supports his unjust and iniquitous taxes must go, too.

If Mr. Churchill is allowed to have his way and he continues to tax motorists and the motor industry as he is doing to-day, then we can say good-bye to the prosperity of this industry and good-bye to the pleasure of the average light car owner. Evidently Mr. Churchill must be taught his lesson. Will motorists have the courage to put every prejudice aside and teach him?

W. J. D. TUCKER.

A Different Viewpoint.

I have always regarded motoring as a most exhilarating pastime—a long run on a bright day, such as we experienced last Saturday and Sunday, always makes me feel that it is good to be alive—but I am beginning to think I am wrong. The main effect it seems to have on many people is to make them very depressed and in an ideal mood for grumbling. That is the only conclusion I can reach after reading the protests (in both motoring journals and the daily Press) against the increased price of petrol.

After all, what difference does 2d. per gallon make? 5,000 miles is about the distance usually covered in a year by a motorist who uses his car for pleasure only. Allowing the petrol consumption to be 30 m.p.g.—many small cars, I believe, can better this figure—the increased cost in the course of a year is about 30s. Why all the fuss? The sum at stake can easily be spent in one evening, when one's wife to the theatre.

N.P.H.

OUR READERS' OPINIONS (contd.).

Starting a Trojan.

I note one of your correspondents says he has some trouble in starting a Trojan. As I have possessed two of these cars, and have been, therefore, able to compare one against the other, my experiences may be of interest.

Avoid Over-priming. When I have come up against a difficulty in starting (other than through over-priming the engine) I have

always found that the cause may be attributed either to a fault in the sparking plugs or to blocked gauzes in the transfer ports. The latter should be changed if found to be clogged. My own method of starting is to pull the starting lever three times—instead of once—after each use of the primer, and the ease with which the car starts is very satisfactory.

For real care-free touring, as opposed to chasing one town after another, with one's eyes shut for everything but the road ahead, the Trojan cannot be beaten.

W. B. HUNTLEY.

Car that Climbed a Ladder.

The paragraph in your issue of February 22nd entitled "The Silent Salesman," recalls to my mind a little incident apropos this subject which befell me some short time ago on my way over from Australia to this country.

To Try the Pyramids Next! During the war I served with the Australian Air Force and was quartered for a time at the aerodrome near Nailsworth, which is close to the Hampton works. On my return to Australia after the war I read, with a certain amount of incredulity, in a copy of *The Light Car and Cyclecar* sent me by a friend, of the amazing performance of a Hampton car in climbing the famous Nailsworth Ladder. Being in the motor trade myself and knowing intimately this particular Cotswold hill, I can only say that the feat intrigued me very considerably.

Last year various business matters necessitated my visiting this country, and my trip entailed a call at Cairo, the pleasure of which was enhanced by the fact that one of my

fellow-passengers happened to have been a brother officer during the war. The day after our arrival in Cairo my friend received a visit from a well-known resident whose acquaintance he had made during his service in Egypt, and after an exchange of greetings an invitation was extended to both of us to go for a motor trip. This invitation held for me a very pleasant surprise, for the petrol chariot in which we were to enjoy the sights and wonders of the city by the Nile was no other than a Hampton.

Our host evidently observed that I showed unusual interest in his car, for he forthwith started, with typical Egyptian fervour, to extol its many virtues, concluding with the somewhat startling assertion "and this Hampton car is the only English car that has ever climbed a ladder." He then jokingly said that one day he hoped to put its hill-climbing powers to a further test on one of the pyramids, for he argued that if the car could climb a ladder, a pyramid should have no terrors for it!

EDWARD B. BROOMHALL.

"Barbarous, Revolting and Degrading."

I cannot refrain from expressing my regret that you did not see fit to apply your blue pencil rather rigorously to the article "With an Austin Seven in France and Spain" and delete the very offensive (to all humane

A Reader's Complaint.

minds) description of the bull-fight. It is particularly painful to read your contributor's summing up of his experience of this most barbarous, revolting and degrading "entertainment" in the following terms:—"The whole entertainment provided an extraordinary spectacle and a most exciting one, and I admired intensely the consummate skill displayed by everyone in the ring while they were undergoing such tremendous risks."

How an Englishman can find anything to admire in a display of skill devoted to such a cruel and bloodthirsty end passes all comprehension. The description, too, is absolutely unrelieved by even one word of pity for the harried and tortured bull which is the victim of this brutal sport.

What interest can one take in reading an otherwise interesting account of a Continental tour, and the performance of a popular car, when it is tainted by the portion which forms the subject of my letter?

A. C. HARVEY.

Deadening Mechanical Noise—An Important Problem.

Fabric Bodies a Help, But—

The great increase in the popularity of saloons has made the question of mechanical noise a very important one, and I quite agree with "Focus" that it is time the matter

—Much Remains to be Done. was given more attention in technical circles. Fabric bodies have gone a long way towards the solution of the noise question, but much remains to be done,

and I sincerely trust that "Focus's" timely remarks will be acted upon. Owners of small saloons suffer most, on account, I presume, of the confined space inside the body boxing-in the noise, as it were. With my own car, which is a saloon of well-known make, I always find that the continual noise of the engine and transmission makes me glad of a stop and a rest after about 100 miles' continuous running, although I might mention that my car is only a year old and is of a make usually considered to be above the average from the point of view of quietness and sweet running.

H. R. HAMPTON.

The Health Aspect.

As a new reader of *The Light Car and Cyclecar* I was rather surprised to see the paragraph by your contributor "Focus," stating that he had called attention a few months ago to the possibilities of deadening

Noise Bad for the Nerves. mechanical noise by lagging such components as the gearbox with sound insulating material, and that very little

interest had been aroused by his remarks. It seems to me that manufacturers who are alive to the needs of the public ought to be concentrating on this matter at the present time, as there is no question that the pleasures of motoring are being marred to a considerable extent by noises which could be cured quite readily after a little experimenting.

The question of health is linked up with this problem, for I am sure that it is a bad thing for the nerves for a person to be subjected to a continual din. My own experience may

be of interest. I often have occasion to drive two cars of identical make and model, with the exception that one has a saloon body, whilst the other is an open tourer. On the latter I always feel fresh at the end of the longest run, provided that I have not had occasion to erect the hood, but with the saloon anything over 150 miles in the course of an afternoon leaves me feeling distinctly tired and a trifle irritable. I can put this down only to the extra noise that I have to put up with in the closed model, as I always drive with one or more of the windows open, so that it is not a matter of ventilation.

I certainly think your contributor's suggestion that the simplest way to overcome the fault by means of lagging, is a sound one. A simple example of the efficiency of lagging is provided by the difference which the use of thick floor mats makes to the mechanical sounds heard by the occupants of the car. Yet another example is the difference between an air-cooled and a water-cooled engine, the comparative quietness of the latter being almost entirely due to the sound-deadening effects of the water jackets.

H.A.P.

Drumming Caused by Wind.

It is the aim of the careful designer in every branch of engineering to produce quiet machinery, and I am sure car manufacturers are no unlike the rest, but shutting off

Difficult to Cure.

gearbox noises is a very difficult problem, especially in cases where the gearbox actually protrudes through the floorboards. Experiments, however, might yield some useful results. A point that "Focus" seems to omit is that a very large percentage of the noise in many saloons is caused by wind drumming on the outside of the body. This is quite a serious matter, but one which would appear to be even more difficult to cure than mechanical noise. I am personally of the opinion that it is very tiring to drive a saloon car which is subjected to these drumming effects.

L.C.McN.

OUR READERS' OPINIONS (contd.).

Deafness and Driving Safety.

I see that a controversy regarding deaf drivers is running in your journal (your issues of November 30th and December 7th have just arrived here). I have been very deaf for years, and have driven since 1907, in the course of which time I have owned some ten cars, and I can say that I have never had an accident due to my deafness. Incidentally, I have travelled extensively in America and Canada, and have had to make all arrangements with a pencil and writing-pad—which shows how deaf I am.

A Further Experience.

C. B. SOUTHERDEN.
Brisbane, Australia.

Increase in Cost of Driving Licence—

I would like to draw your attention to a letter which appeared in a prominent daily paper recently. In this letter it was suggested that the cost of motor driving licences should be doubled and the excess proceeds given to hospitals. The writer, in conclusion, says:—"Surely this is very reasonable?" With all due respect, however, I contend that the proposal is very unreasonable.

Such an increase is not necessary. To suit Mr. Churchill's purposes the Government has "diverted" many millions of pounds from the Road Fund. Well, then, let it now, to meet a very laudable object, "divert" a percentage of the yearly income derived from motor taxation to the creation of a fund for the hospitals.

Another point is that past administration of the Road Fund has shown us that we shall have no guarantee that, if the cost of driving licences were increased, the additional money so provided will be devoted to the purpose for which it will, ostensibly, be intended.

I believe motor taxation is estimated to bring in to the Road Fund something like £25,000,000 per annum. Five per cent. of this would represent £1,250,000, which, invested to bring in a regular five per-cent. income, would provide £62,500 for the first year, £125,000 for the second year,

and so on. I think there are very few of the motoring public who would refuse to have their money employed to such an end, and our hospitals would be relieved of the indignity of continually begging from the public for funds.

Whatever my fellow motorists may think of the foregoing remarks, I suggest that it is high time we gave the Government clearly to understand that its present policy of screwing more and more money out of our pockets has got to cease.

FREDERIC K. MAY.

"I Can Drive a Car."

I have a rather interesting case of auto-suggestion to put on record. Before the summer of last year I had never driven a car in my life, although I was anxious to do so. I knew the controls and could drive theoretically, but I had never actually controlled a moving car. One evening a friend took me out in a two-seater

Alvis and let me drive. I took the car about four miles, but as (a) I met only one car the whole way, (b) did not turn a corner and (c) did not change gear once, it could not be described as "driving," so much as "taking the wheel."

A little later I purchased a driving licence and began to persuade myself that I could drive well and told others so. Until two months ago, however, I had no means of proving my assertion, but by that time I had repeated the fact that I could drive so many times that I actually had convinced myself!

One day two months ago a friend came round with a Morris and we went out for a drive. After a time I remarked casually, "Shall I drive for a while?"—I had already told him that I could—and we changed places. I engaged bottom gear, let in the clutch and we slid smoothly forward. I changed noiselessly into second and equally silently into top gear. I will not bore you with a detailed account of the run. Suffice it to say that, although I encountered a lot of stiff traffic and several villages I sustained my part perfectly and when we slid silently up to our house and came to a stop my friend remarked, "Where did you learn to drive as well as that?" I refrained from telling him that I had never even changed gear before. He is a sceptic; I should not have been believed.

DONALD GORDON.



BASKING IN MARCH
SUNSHINE.

A gay scene at Newlands Corner last week-end, when the midsummer-like weather brought out thousands of cars which had been lying idle during the previous weeks of Arctic conditions.

OUR READERS' OPINIONS (contd.).

A Bouquet for "Shacklepin."

The recent series of hints on Morgan maintenance in "Cyclecar Comments" are most interesting and instructive, and I feel sure that all Morgan owners who undertake their own repairs will greatly appreciate the good work "Shacklepin" is doing for their benefit. I hope before the series is concluded that he will tell us how to dismantle the bevel box, as I propose to carry out this job before long. As a reader of *The Light Car and Cyclecar*, I must tell you that every Friday is the day of the week.

A. R. MANNING.

INFORMATION WANTED.

BLERIOT WHIPPET.—A handbook or general hints on maintenance and the address of any dealer from whom spare parts can be obtained would be appreciated.—J.G.S., Ashfield, St. Anne's Road, Headington, Oxford.

CLUPET PISTON RINGS.—Readers who have fitted these piston rings are requested to give experiences of their working.—W. M. Bramley, Heathcote, 73, Randolph Street, Bramley, Leeds.

LOST.—On or near the Great West Road on Sunday, March 3rd, a waterproof ground sheet with collar to form a cape. The finder is requested to get in touch with E. A. Levett, Bunsyde, Coolhurst Road, Crouch End, London, N.S.

CLUB ITEMS AND SPORTING EVENTS.

LONDON EAGLE M.C.

As is the usual practice preceding Bank Holiday, the London Eagle M.C. is holding a two-day run commencing at midnight on Saturday, March 30th, from the Great West Road. The venue will be Porlock, where members will meet at the Ship Inn, at 12 noon, on Sunday, March 31st.

Members are reminded that subscriptions, which are now due, should be forwarded to the hon. secretary, Mr. N. P. Thorpe, 23, College Crescent, London, N.W.3.

J.C.C. NIGHT TRIAL RESULTS.

The provisional results of the recent J.C.C. Night Trial published in this journal last week have now been officially confirmed, with the exception of the fact that the following competitors are awarded bronze medals in place of receiving no award:—P. H. Clark (Austin), H. Gibson (Austin), J. F. De Latre (Austin), H. P. Ashell (Amilcar), H. E. Baum (Renault), J. Lawson (Austin), H. G. Marriott (Morris), J. R. Jeffries (Hupmobile), E. McNamara (Standard).

DISABLED DRIVERS' M.C.

The council of the Disabled Drivers' Motor Club, the main object of which is to watch over and further the interests of the disabled driver, anticipates that this year is going to be a very important one in view of the probability of various measures affecting disabled drivers being submitted to the House of Commons. The result, the council feels, may be an attempt to deprive disabled motorists of their driving licences. The council wishes to point out to any disabled drivers who are not members of the club that by joining they will hear first-hand exactly the objects of the club and what steps it is taking to further their interests.

The club holds socials, rallies and so forth, and the subscription is not large. Details may be obtained from the hon. secretary, Mr. P. Brough, Bradenburst, Hale Lane, Mill Hill, London, N.W.7.

SURBITON M.C.

On Saturday, April 6th, the Surbiton Motor Club is holding its Grand Cup Trial, the start being from the Talbot Hotel, Ripley, at 10.30 a.m. The route will be roughly 100 miles, the onus of finding the course resting with the competitor. The trial, which will be run at a scheduled speed of 20 m.p.h., includes non-stop sections and five checks. A special feature is introduced in the form of an engine-starting test from cold which will be held after the lunch stop. There will be many awards, including the Sopwith Challenge Cup for the best car performance and the Ballards Challenge Cup for the best performance made by a three-wheeler or a sidecar. There are also special awards for members of the Surbiton M.C. Details of the trial and entry forms may be had from the hon. organizer, Mr. C. S. Burney, Brooklands School of Flying, Ltd., Duffield, Surrey. Members are reminded that entries close on March 30th.

N.C.C. AT ASTON CLINTON.

The New Cyclecar Club was favoured with perfect weather for its opening run of the season on Sunday last, March 10th, and a fully representative number of members turned out. After lunch at the King's Head, Ivinghoe, there was a short run to Aston Clinton hill, where an impromptu slow climb, acceleration and braking test was held, an average figure of merit being taken to decide the winner. The bad surface of the hill, deeply rutted, wet and with snow still melting on it, did not appreciably affect the competitors whose performances, on the whole, were good. No driver stalled his engine in the slow section, whilst the acceleration times and braking distances were quite good. After tea at the Bell Hotel, Aston Clinton, the results were announced, E. A. Clarke (12 h.p. Fiat) being placed first, Miss R. Shead (Austin Seven) second and J. F. De Latre (Sports Austin) third.

J.C.C. HALF-DAY TRIAL.

An entry of over 50 has been received for the Junior Car Club's second half-day trial, which takes place to-morrow (Saturday), starting from Putney Vale, London, S.W., at 2 p.m.

FORTHCOMING EVENTS.

March 16.

J.C.C. Half-day Trial and Spring Rally, Liverpool and N. Wales Centre J.C.C. Competition and Social Evening, Birmingham M.C.C. Victory Trial, N. London M.C. Social Run, Austin Seven C.C. Meeting at Hampton Court.

March 17.

Brighton and Hove M.C. Trial, Wood Green and District M.C. Novices' Trial, London M.C. Raffle in Hertfordshire, Newbury and District M.C. Reliability Trial, London Eagle M.C. Run to Waterworks Hill.

March 23.

D.M.C.R.C. Opening Meeting, Brooklands, Leeds M.C. £200 Trial, North-west London M.C. Dance.

March 24.

Wood Green and D. M.C. Social Run to Burnham Beeches, Leicester and D. M.C. Opening Run, London Eagle M.C. Run to Amersham.

March 29-30.

M.C.C. London-Land's End Reliability Trial.

March 30.

Southport M.C. Southport Speed Trials, Leicester M.C. and L.C.C. Two-days' Trial, London Eagle M.C. Run to Devon.

March 30-31.

Wood Green and D. M.C. Holiday Run to Lowestoft.

April 1.

B.A.R.C. Brooklands Easter Bank-Holiday Meeting.

AUSTIN SEVEN CLUB.

Members of the Austin Seven Car Club will meet at the Greyhound Hotel, Hampton Court, to-morrow (March 16th), at 4.30 p.m. for tea at 5 p.m. Full particulars of the club can be obtained from the hon. secretary, Mr. R. H. MacLachlan, Mount Stuart, Whyteleafe Road, Caterham, Surrey.

COVENTRY TRIANGLE M.C.

The Coventry Triangle Motor Club is holding runs on every Saturday and Sunday throughout the season. The destinations for these runs during the remaining part of this month have not so far been fixed, but from April 6th onwards details have been settled and may be found in the membership card issued by the club. Further particulars can be obtained from the hon. general secretary, Mr. E. W. Machin, Villa Maria, 67, Lime Tree Avenue, Tile Hill Lane, Coventry.

SUNBEAM M.C.C.

The following are the car awards in connection with the Sunbeam M.C.C.'s fourth annual Bognor Trial which was held on Sunday, March 3rd:—

First-class Awards.—G. E. Swift (Morgan), T. E. A. Johnson (Morgan), A. D. Taylor (Austin), V. H. Tison (Fiat), C. C. Simmonds (Ceirano), F. Pike (Austin), A. L. Baker (Salmon), J. P. Ripper (Austin), F. C. Cox (Wolseley).

Second-class Awards.—C. H. G. Hart (Morgan), H. A. Sharp (Austin), C. D. Allen (Riley), G. H. Robins (Trojan), J. T. Dickinson (A.C.), Miss J. Dickens (Austin), E. W. H. Ellis (Austin), G. H. Bull (Singer), S. Chandler (Austin), R. G. Chadwick (Swift), A. A. Mann (Austin).

Third-class Award.—V. L. Brooks (Frazier-Nash).

LIVERPOOL MOTOR CLUB.

A challenge bowl, to be competed for annually by teams representing the motor clubs of Liverpool and district in a Merseyside motor club's inter-team trial, has been presented to the Liverpool Motor Club by one of its vice-presidents the Right Hon. Sir Leslie Scott, K.C., M.P. The first trial for the bowl will be held on May 12th, and six local clubs have already signified their willingness to take part. Secretaries of other local clubs are requested to communicate with the secretary of the Liverpool Motor Club, Mr. C. H. Durringer, Room 15, 48, Castle Street, Liverpool.

Teams may consist of any combination of vehicles (cars, solo motorcycles and combinations), and a club may nominate any number of teams. The winning club will hold the bowl for a year, and will promote the next trial. Members of the winning team will receive replicas, whilst there will be awards for members of the second and third teams. It is proposed that the course shall be approximately 40 miles in length, being mainly over secondary roads in the neighbourhood of Liverpool. It will be covered twice non-stop, a lunch stop being arranged between the two circuits.

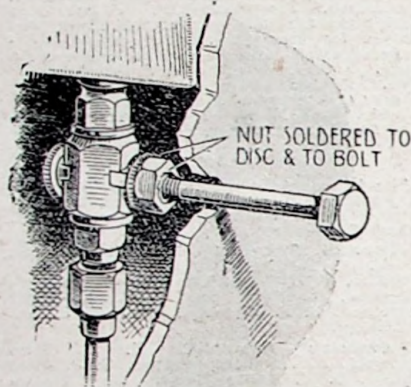


Miss R. Shead (Austin) receiving the "stop" signal in the "HALT!" — New Cyclecar Club's test on Aston Clinton hill, last Sunday. Slow-climbing and acceleration tests were also held.

IDEAS for OWNERS

Morgan Petrol Tap.

The petrol tap on some types of Morgan three-wheeler cannot be operated from the driving seat. It is a simple matter, however, to arrange for a control of this kind to be fitted. The existing petrol tap, if it be of the tapered-plug variety, must be discarded and replaced by one of the "push-pull" taps manufactured by Best and Lloyd, Ltd., and Rotherhams, Ltd. Before being screwed into the tank, however, a $\frac{1}{2}$ -in. nut should be soldered



How a "push-pull" tap can be arranged for control from the driving seat of a Morgan.

to the "push-on" end of the tap. The tap can then be screwed into the tank, the washer being of a thickness which will allow the operating portion of the tap to lie exactly in a fore-and-aft direction with the soldered nut facing rearwards.

It is then necessary to mark off very carefully in the dashboard the position for a $\frac{1}{2}$ -in. hole which will line up

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 undertake to return contributions not used.

exactly with the centre of the nut. Through the hole is passed a $\frac{1}{2}$ -in. bolt $\frac{1}{4}$ ins. long, the threaded end being screwed into the soldered nut. It will be found then that the head of the bolt which forms the operating portion of the tap is in a quite convenient position, and pushing it forward will open the tap, whilst pulling it back will close it. The general arrangement is made quite clear in an accompanying sketch.

Swift Gear Change.

Difficulty in moving the gear lever of the four-speed Swift across the gate first thing in the morning may be due not so much to the oil in the gearbox itself as to the slightly gummed-up condition of the extension-shaft bearings between the gearbox and the gate. The lever will move far more easily if that part of the shaft which can be seen within the gate when the lever is slid to the extreme right is painted with cycle oil, the lever then being slid from side to side so that the lubricant works its way along. Use an ordinary paint brush of the cheapest variety—one can be bought for a few pence.

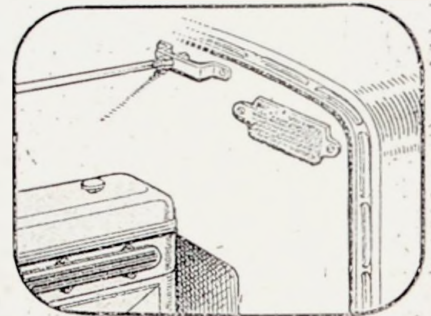
Sliding Window Fittings.

The finger grips fitted to the sliding windows of many cars consist of small metal clips which fit tightly on to the glass owing to the spring of the metal and are additionally secured by a special cement. Should a grip of this type once become insecure, it will be

wrenched off every time the window is opened hurriedly, and the owner of the car will probably find himself at a loss to know how to refix it firmly. A good tip is to stick a length of insulation tape on to the glass and then to force the grip over it. As a rule, this will have the desired effect, but should the grip still remain insecure a little Seccotine may be used in addition.

For Cleaning Plug Points.

A very effective method of cleaning the points of a sparking plug is to rub them briskly with a file card or a wire brush. On a car which is liable to



Sparking plug points can easily be cleaned on a file card screwed to the dashboard (see text).

soot up its plugs fairly rapidly it is worth while securing a piece of file card to the engine side of the dashboard so that the plugs as they are removed can have their points drawn across the face of the card or jabbed into the wire bristles. Securing a file card in the manner suggested has the advantage also of making it less likely that the fingers will come into contact with the bristles—a rather painful experience.

IN ANSWER TO YOUR QUERY

A.N. (West Ham).—If you intend touring abroad you should certainly join either the R.A.C. or the A.A., as the advice and assistance given by these organizations is invaluable.

G.K. (Belper).—The o.h.v. Blackburne engine, type K.M.C., fitted in your 1927 Aero Morgan has a bore and stroke of 85 mm. and 96.8 mm. respectively. The standard compression ratio of these engines is $5\frac{1}{2}$ to 1.

J.S. (Hersham).—A very suitable dead-black heat-resisting paint for exhaust pipes and manifolds can be made up by stirring lamp black into petrol and adding just enough gold size to make the mixture slightly tacky.

R.S.G. (Southampton).—The explosions in the silencer of your car when the throttle is closed to slow down are due, probably, to an over-rich slow-running mixture, although an unduly weak mixture can have the same effect.

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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.

M.C. (Palmer's Green).—Solex carburettors have only two jets, the main and the slow-running. Mixture control is obtained automatically by the special design of the main jet and its housing.

K.A. (Wickford).—You can tell the difference between iron and steel by dropping a spot of nitric acid on the emery-papered surface of the article in question. If the metal is steel a black spot will appear, and the darker the spot the harder is the steel. Iron, however, remains bright if touched with the acid.

M.A. (Canterbury).—The filler cap on your Standard Nine rear axle is sealed at the works to indicate that it has been filled with oil. You will be quite in order to break the seal when draining and refilling the axle.

C.C. (Malta).—When you arrive in England you will have no difficulty in obtaining a light car for use during your leave. Many dealers now undertake to buy back the car at the end of a stated period for an agreed sum; this should suit your purpose.

L.S. (Birmingham).—Unless the existing valve springs on your engine show distinct signs of being weak or otherwise defective there will be no point in replacing any of them by the two new springs which you have. As a rule, it is the exhaust-valve springs which require replacing first, because the heat tends to draw their temper and thus to make them weak.