## MATIOHAE EnTine iviless



When speed begins to sag, and running costs increase, it is a sure sign that an engine needs overhauling. You will be well advised to get this job done in time for your Summer holiday.

Probably all that is required is a new set of BRICO piston rings, or at the most new COVMO pistons or cylinder liners.

In either case the cost will not be very great and the result-increased livelinéss, "off the mark" acceleration, smooth and silent running, and marked economy in oil and petrol consumption.

Consult your Garage Engineer about a "BRICOVMO" overhoul.

## PRODUCTS will keep your engine fit

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The Best in the World
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The Morris Owner is published monthly. Editorial contributions and advertisement copy should be addressed to The Morris Owner,

Couley, Oxford.
Telephone: Oaford tion Telegrams: "Morpress," Tadex, Oxford. Teles: Oxford Telex 7194.
Advertisements of goods manufactured by concerns of good repute only are accepted for publication in The Morris Owner. Advertisers' statements or claims are not necessarily endorsed officially by Morris Motors Ltd.

## CONTENTS for JULY, 1939



## Editorial Opinions

## THE RIGHT-HAND RULE

FAVOURS THE RECKLESS DRIVER

WE note that there are advocates of the righthand rule, which is in force in some cities on the Continent. By this rule a driver gives way to traffic on a road of equal importance on the right. Contrary to opinion in some quarters, there has never been any attempt to make off-side rule applicable to side roads.

So far as this country is concerned, there is everything to be said against the right-hand rule. The greatest reason against it is that a driver can only give way to a vehicle that he can see.

If a man is approaching a crossing so fast that he is a long way down the turning when the driver who should give way arrives at the crossing, and the fast driver collides with the other car-which by that time would be about half-way over-he can still say that he had the right of way. In France there have been many cases lost for this reason.

If there is a brick building on the corner accompanied by narrow pavement it is manifestly impossible to see a car driven recklessly on the other road until you are level with the building, and to apply the brakes would entail pulling up dead in its path.
The only sane method of dealing with the crossing question is to mark every crossing plainly, laying

## Editorial Opinions-contd.

down which is the more important-the one which must be regarded as the major road and for which the driver entering or crossing it must slow or stop. In the absence of any other test, there is no reason why we should not use the route numbers, making the lowest route numbers the more important, unless circumstances justified the other road. We should then have "Slow" boards at every crossing, or if these are regarded as too expensive there is no reason why a white band or other system of marking could not be utilised.

The great thing which stands up beyond anything else in the accident question is the necessity of giving main road traffic precedence, and of bringing home to the driver instantly the knowledge that he is about to come into a main road.

Ninety per cent. of cross-road incidents are due to uncertainty as to who should give way. It seems almost incredible that with thirty years of motoring the authorities still allow this doubt to exist.

## THE RALLY

THANKS FOR COMING

WE should like to thank all our readers who entered an appearance at The Morris Owner Rally at Donington, which, as you will judge from the pictures published elsewhere, may be said in all modesty to have been a great success.

The weather was kind to us-brilliant sunshine with a pleasant cooling breeze-and we confidently believe that all who attended enjoyed themselves.

The success of an event of this nature ultimately depends upon the number of people who attend, and so it may be said that every visitor helped towards the success of the day.
We have already had a large number of assurances that those who came this year will come again next year-very gratifying to the hard-working committee, and three hundred helpers who enable a long programme, with anything up to three hundred entries in each event, to be accomplished in an all too short afternoon.
We hope you will make a note to reserve a day in June, which will be announced early next year, to come to the next Rally.

## IRREGULAR POLICE GOURT PROCEDURE

A CLEAN LICENCE MUST NOT INFLUENCE THE DECISION

AREADER writes to point out an irregularity in police court procedure. Our correspondent had been timed in what can only be regarded as an unfair police trap in Croydon, where the constables selected a car at random from a long line of traffic and timed it. Such a process ought, of course, to be illegal.

When the case came before the magistrates they obviously did not like the procedure. They were
clearly of the opinion that the process was uncertain. It was very difficult, almost a matter of impossibility, for the policeman who was timing to be sure that he had timed the right car.
But it is interesting to note what was the deciding factor when the case was terminated: the kindly chairman asked the defendant whether he had a clean licence. As it happens he had, and accordingly was given the benefit of the doubt-to use the Court's words.

As everybody should know, however, a clean licence should not affect the case one way or the other; either the defendant was guilty on the evidence before the Court or he wasn't. Whether or not his licence was clean should not affect the issue so far as the verdict was concerned-although it could modify a fine in the event of the case having been proved.

## SIGNPOST MILEAGES

## ARE IMPORTANT

THERE seems to be a tendency in a good many districts, when signposts are due for renewal to dispense with mileages in favour of road numbers.

Everybody will agree that the numbered road is a very fine institution, although everybody will just as readily agree that few people ever use it, but all of us at frequent intervals want to know the distance from one town to another.

In some instances road numbers have been dropped in order to make room for large letters on the board. Here again, while everybody would like to have signpost lettering as large as possible, road distances are even more important.

## THE NEW RECORD

$$
\text { OVER } 203 \text { M.P.H. WITH tIOO C.C. }
$$

HEARTIEST congratulations to Major A. T. G. Gardner for his fine performance at Dessau early in the month.
As told elsewhere in this issue, he succeeded in attaining a speed of 203.5 miles per hour from 1100 c.c., and a speed of 204.2 miles per hour when the cylinders had been bored out to increase the capacity another 6 c.c.

That a $12 \mathrm{~h} . \mathrm{p}$. car can attain these astounding speeds speaks volumes for the advance made during recent years, and reflects the utmost credit not only on Major Gardner, whose valuable experience and prowess at the wheel must take the greater portion. but also on Mr. Reid Railton, the designer, and the M.G. Car Company, whose doughty mechanics, all enthusiastic in the cause, made the record possible.
It is only a few years since the world gasped engine of Major Segrave's big Sunbeam, with an enginc 45,000 c.c., attained a speed of 203 miles per modest now we have the same performance fro
I Ioo c.c. car. This is progress indeed


A NORTH WALES BEAUTY SPOT.-A charming aspect of the River Llugwy below Miners' Bridge, near the Swallow Falls, Bettws-y-coed.

pound, some paraffin and, for safety's sake, a spare cylinder head gasket.

## The First Steps

It is necessary first to drain the water from the radiator and cylinder block by means of the drain taps provided at the base of the radiator and on the off-side of the cylinder block.
If you have introduced Bluecol or any other antifreezing compound during the Winter months do not forget to collect the contents of the cooling system as it runs out, or you will be put to unnecessary expense when the next cold spell arrives.

While the cooling system is draining you can profitably fill in the time by removing the bonnet by undoing the two countersunk fixing screws which attach the rear bonnet hinge lug to the scuttle; then, obtaining the assistance of a friend to remove the bonnet by sliding it rearwards until the front end of the hinge rod is clear of the socket on the radiator, lift the bonnet clear of the scuttle and the wings. Additional freedom of movement will be obtained if the radiator tie bars are removed. This is best achieved by disconnecting them from


The cylinder head, showing the sequence in which the holdingdown bolts are slackened and tightened.
their radiator brackets, slackening their attachment lock nuts at the scuttle end and removing the nuts from the screwed ends which project into the body above the parcel tray.

Releasing Auxiliary Connections
Remove the air cleaner and the air intake pipe. The flexible petrol pipe can then be disconnected from the union on the petrol pump delivery pipe

## Decarbonising and Valve Grinding the Series " $M$ " Ten-contd.

and the throttle and mixture controls released from the carburetter. This enables you to remove the carburetter by withdrawing the two attachment nuts fastening the flange to the inlet and exhaust manifold.
The inlet and exhaust manifold itself may now be removed after releasing the series of four nuts and yokes and the three exhaust flange nuts with spring washers.
The water outlet to the radiator should now be released by unscrewing the four set screws which fasten the water outlet flange to the cylinder head, and the oil feed pipe to the cylinder head should be released by disconnecting the banjo union bolt which forms its attachment. It
pressing tool is recommended, but if one of these is not available a suitable substitute may be made from a length of stout tubing slightly smaller in diameter than the valve spring cap and slotted at one end to give access to the cotters. A wood block roughly shaped to fit in the combustion chambers should be prepared for use with the tubular compressor on which to rest the valve heads while compressing the springs.

## Dismantling the Head

Remove the sparking plugs from the head and insert the wood plug into one of the combustion chambers. Apply a load on the spring cap with the spring compressor until the cotters are released. Remove the cotters and release the cap, which will now enable you to remove the cap completely, together with the valve springs and the special synthetic rubber oil seal ring at the base of the cotter groove in the valve stem, which should be carefully preserved.

This will enable you to withdraw the valves from their guides for examination, and it must be noted

Two studs are screwed into the cylinder block to act as a location for the gasket and head. (Right) Valve and seat faces are ground by using a fine or medium carborundum paste by means of a special suction grinder and light coil spring under the valve head.
is advisable to bend the pipe slightly so that it is clear of the head, to avoid subsequent damage when the head is being removed.
The near-side lower edge of the cylinder head forms the seating for the upper edge of the tappet coverplate on the side of the engine. It is therefore necessary to slacken off the tappet cover retaining screws before releasing the head.
Release the sparking plug leads from the plugs. Undo the two knurled nuts locating the valve cover and withdraw the cover from its retaining studs.

Tap back the lobes of the lock washers on the series of eight bolts which fasten the rocker-shaft brackets to the cylinder head. This will enable you to remove the rocker-shaft assembly complete, and withdraw the eight push-rods.

## Removing the Head

With the special box spanner supplied with the tool kit carefully release the ten bolts which attach the head to the cylinder block half a turn at a time in the sequence indicated in the accompanying illustration, until all are quite free. Finally remove the ten cylinder head bolts and remove the cylinder head, which is now completely free.

In order to remove the valves some form of spring compressing tool is necessary. The " C " type com-
that the valves are numbered on their heads in sequence to indicate their correct position in the head. No. I valve is at the forward end of the cylin-
 der head and the valves should always be replaced in this same order. The inlet valves are also slightly larger in diameter than the exhaust valves.

## Examining the Valves

When the valves are withdrawn from the head they and their seatings should be thoroughly examined for blemishes. If any of the valves show signs of pitting-that is to say, they show signs of dark spots or depressions on their seating surfaces-they should on no account be ground on to their seatings until their surface has been restored to its original smooth state by grinding on a special grinding fixture.

This is work which is beyond the scope and equipment of the average owner and should be entrusted to a competent dealer who has the necessary machine.

## Decarbonising and Valve Grinding the Series " $M$ " Ten-contd.

Similarly, if the valve seatings in the cylinder head show signs of pitting, the valves should not be ground in position until the seatings have been cleaned up with a special seating cutter, again a task for a competent repairer. Should you be the possessor of a suitable valve seat tool, remember that only the minimum amount of metal must be removed.

Before grinding-in the valves it is essential to remove all trace of carbon deposit from inside the combustion spaces and from the surface of the head exposed to the effects of combustion.

This is best accomplished by the use of a blunt instrument, such as an old screwdriver. Do not forget to clean out any carbon deposit which has formed in the plug holes.

Wipe the surfaces decarbonised with a rag damped in paraffin to remove all loose particles of carbon.

## Grinding-in the Valves

The valves are devoid of holes or slots whereby they may be rotated for valve grinding purposes and it is therefore necessary to employ the special suction type valve grinding tool mentioned on the first page of this article.

tool is then applied to the valve head and a reciprocating motion imparted to the valve so that the surface of the valve and the seating mate accurately over their whole surface. The process of grinding is accelerated by raising the valve from its seating every few reciprocations and returning it to its seating in a fresh position. This procedure also helps
to prevent the formation of grooves in the seating and is therefore of considerable benefit and importance. It must be remembered that the valve grinding operation does not produce a polished surface either on the valve or its seating and that the grinding operation must not be prolonged beyond that required to produce an even matt surface on both valve and seating, free from interruption or blemishes.

Throughout the grinding operation care should be taken to avoid the use of too much grinding compound, as this will only find its way on to unwanted parts of the head, from which it will have to be removed before reassembly. The valves should be washed thoroughly in paraffin and dried, whilst all trace of grinding paste should be wiped from the seatings in the head with a rag damped in paraffin. As a final precaution the head should be washed thoroughly in clean paraffin.


Reassembly is carried out by inserting each valve in turn into its correct port, resting its head on the wood block inserted into the combustion chamber, threading the synthetic rubber sealing ring in position at the bottom of the groove, placing the oil shroud, valve springs and valve spring cap in position, and compressing the springs with the special tool until the cotter groove is exposed. The cotters should then carefully be inserted in the valve stem groove and the pressure on the springs gradually released, making sure that the cotters are in proper engagement with the valve stem and spring cap.

When all valves have been replaced, the head is ready for reassembly when the engine has been decarbonised.

## Removing the Carbon from the Engine

First of all plug all the water passages and pushrod passages in the cylinder block with pieces of rag to restrain carbon particles from straying into the inside of the engine.
Turn the engine until two of the pistons are at the top of their travel and then plug the open ends of the two remaining cylinders with rag.

## Decarbonising and Valve Grinding the Series " $M$ " Ten-contd

Using a blunt screwdriver, carefully scrape away the carbon from the upper surface of the cylinder block exposed to the combustion chamber and from the centre of the piston crowns, but leaving a ring of carbon approximately $\frac{1}{4} \mathrm{in}$. wide all round the outside edge of the pistons.

Carefully wipe off all traces of loose carbon with a rag damped in paraffin, remove the rag plugs from the other cylinders and turn the engine until the remaining pistons are at the top of their stroke. Clean off the carbon from these two pistons and cylinders, and carefully clean up the top face of the cylinder block.

## Replacing the Cylinder Head

Before replacing the cylinder head carefully examine the old gasket and make sure that it is devoid of damage. If it is in any way defective it should be replaced by a new one. If the old gasket is in order it should be cleaned carefully and any carbon deposits removed.
If the old gasket is used again it may be advisable to coat it with a thin even film of gold size, or other sealing compound, but this is quite unnecessary with a new gasket, which should be assembled dry.
The gasket should now be placed on the top of the cylinder block and correctly located by inserting the two special 6 in . studs in the cylinder head bolt holes at opposite corners of the cylinder block. Note that the gasket is not symmetrical and has an opening at one end which must coincide with the water port of the rear end of the cylinder block.

When the gasket is properly located, the cylinder head may be lowered into position over the two guide studs and the cylinder head bolts screwed into position finger-tight, removing the guide studs, of course, in order to insert the last two.
The cylinder head bolts should now be tightened up a partial turn at a time in the rotation shown in the illustration on page 438 , remembering that it is essential that they should all take up the strain evenly to avoid excessive bending loads on the head.
When all the bolts have been screwed up quite tight the push-rods can be inserted in their respective tunnels, care being taken to see that their lower ends are in proper engagement with the tappets. To ensure this the cylinder block side plate should be removed. When all push-rods are properly located, the rocker-shaft assembly can be replaced and bolted down firmly.

## Setting the Valve Clearance

The process of decarbonising and valve grinding removes a certain amount of metal from the valve and the seating, which modifies the valve clearance, and in addition the gasket thickness may be modified.

It is, therefore, essential to reset the valve clearances after the head has been disturbed.

The camshaft design on the Morris engine is such that it is imperative that the valve clearance should be set with the tappet exactly at the back of the cam. This can be ensured by turning the engine so that the corresponding valve belonging to the other cylinder which travels in unison with the cylinder it is serving is in the fully open position.

To facilitate matters and avoid unnecessary turning of the engine we give a table of the correct sequence in which the valves should be adjusted.
Adjust No. I valve with No. 8 valve fully open.

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| " | $"$ | 7 | " | " | " | 2 | " | " | " |

Valve clearance adjustment is carried out by slackening the lock nut on the tappet rod end of the rocker, turning the slotted adjustment screw with a screwdriver until the correct clearance is indicated by inserting a feeler .or9 in. thick between the head of the valve stem and the rocker face, and then tightening up the lock nut while still holding the adjusting screw with the screwdriver.

After locking the adjustment it is advisable to again check the clearance to make sure that no movement has taken place.

## Reassembly of Engine

When the valve clearances are all correctly set, the tappet cover can be replaced and its attachment screws tightened up. Sparking plugs may now be replaced and high-tension leads connected up.

The oil lead to the cylinder head should also be connected up, remembering that a copper-asbestos washer should be placed on each side of the banjo.

The water outlet joint should now be remade and the exhaust manifold replaced, followed by the carburetter and its controls.

This will enable you to replace the cylinder head cover and start up the engine, which should be allowed to run for some fifteen minutes. Immediately the engine is switched off again remove the cylinder head cover and carefully go over the cylinder head bolts, giving them a final tightening up, after which the valve clearances should be reset, of course.

When this final tightening up and valve setting is completed you can replace the cylinder head cover together with the air cleaner and air intake pipe.

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## An interesting demonstration of its efficiency

IFIND that it is always interesting, before I take a car out for a road test, to spend a few minutes with a catalogue studying its specification. From the book of words one can generally get an idea of what the manufacturer had in mind when the car in question was designed-and the road test becomes the more interesting as one observes the success or otherwise with which this theoretical conception has been worked out in practice.

In the case of the Morris Twenty-five the catalogue provides quite a number of pointers. We see, first of all, that it is by far the biggest of Morris cars, having an engine capacity nearly twice as great as that of any other model. Its coachwork is of very comfortable, but not enormous, dimensions : therefore its power/weight ratio must be uncommonly good.

## Good Top-gear Performance

Then we note that the gearbox is a three-speed unit. Why is this? It is clearly not for reasons of economy, since other and cheaper Morris models are given four speeds. We can only conclude that the top-gear performance of the Twenty-five is

## - By THE EARL OF CARDIGAN

intended to be of so excellent a character that the other ratios will only rarely be called into play. In other words this is to be a top-gear car, in which the driver can sit back comfortably, put his foot down on the accelerator, and leave it to his big, smoothrunning engine to do the rest.

With all this in mind my road test of this Morris was of a special and severe type. I began by taking the car on to a level stretch of road and allowing it to "idle" along in top gear. With the throttle fully closed, a very low level of speed was soon reached --plainly well below the 5 or $6 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. of the average car.

## Smooth at 3 m.p.h.

Now when a car is made to run in top gear as slowly as this-let us say at 3 or $4 \mathrm{~m} . \mathrm{p} . \mathrm{h}$.-there is usually some "snatching" or other irregularity by way of protest. The Morris Twenty-five, on the other hand, gave a wonderful exhibition of smoothness. The engine appeared perfectly content to turn over indefinitely at this absurdly low rate of revolutions.

To verify the speed at which this slow-running

## The Biggest Morris-contd.

test took place, I actually opened the door and stepped out, walking alongside the car for some considerable distance and merely keeping one hand on the steering wheel. I can honestly state that I did not have to walk particularly fast. Had I stepped out at my best pace-probably $4 \mathrm{~m} . \mathrm{p} . \mathrm{h}$.I could have walked away and left the car behind!
Finally, I applied the most severe test of all: stepping back into the car I put my foot down firmly on the accelerator. Please note that I did not coax the engine to accelerate; I deliberately avoided using any skill or subtlety whatever.
The result was very remarkable, for the engine picked up rapidly, and without any trace of the knocking or pinking which one might have expected. It seemed to treat the task of accelerating from $3 \frac{1}{\frac{1}{3}} \mathrm{~m} . \mathrm{p} . \mathrm{h}$. as quite a simple, everyday affair!

Striking as this demonstration was, it must not be thought that it is only at ultra low speeds that this Morris excels. On the contrary, the engine -which, of course, is a six-cylinder overhead-valve unit-behaves excellently also when it is running fast. Acceleration is consistently good up to a maximum in excess of $70 \mathrm{~m} . \mathrm{p} . \mathrm{h}$., and anything round about $60 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. can be regarded as a comfortable cruising pace.

## Hill Climbing

Even in hilly districts it is a fact that the lower gears are very seldom required-so that, except on abnormal occasions, the three speeds do everything that can reasonably be asked of them. It is possible


The rear luggage compartment is easy of access and ample.
to exceed $50 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. in second gear, which, incidentally, has synchromesh engagement--and this ensures a really good response if ever a change down is required.
One point which I particularly like about the Twenty-five gearbox is that it does not locate "first" and "reverse" opposite to each other, as is the normal practice with other gearboxes. This means that one can never accidentally touch reverse
gear when making a change-up through the gate -an embarrassing error to which beginners are extremely prone, and which even old hands have been known to commit in a hasty moment!

When driving fast one is able to appreciate that this Morris holds the road really well. Large cars can always be driven harder than small ones without creating the sensation of excessively high speedbut in this case there is a very definite feeling of steadiness and controllability. The springing tends to be firm rather than soft, and even at speeds in excess of $70 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. there is no need for the driver to "hang on" to his wheel.

The steering must certainly be given some credit for this. It is definite in action, and centres itself well. There is no doubt, I think, that this castor effect, by which the front wheels centre themselves


A handsome facia board and roomy cockpit with comfortably grouped controls are noticeable features.
automatically after a corner has been taken, is liked and preferred by the great majority of motorists - even though a few cars continue to be built otherwise. A further good point-and a boon to longlegged drivers-is that the steering column of the Twenty-five is now adjustable for length, and can be instantly adapted to the position of the driving seat.

## Brakes and Jacks

The hydraulic brakes, in my opinion, are quite excellent-as such brakes almost invariably are. The beauty of hydraulic braking is that certain factors, such as the even application of power in all four brake-drums, progressive action in direct proportion to the amount of pedal pressure, etc., are inherent and may be expected as a matter of course. A jerky or uneven hydraulic brake would be something "agin' Nature." At any rate, in a fairly long experience of brakes good, bad and indifferent, I have yet to find a poor example of the hydraulic type.

Talking of hydraulics, it should not be forgotten that the Twenty-five Morris is fitted with built-in Jackall hydraulic jacks. Modern tyres are so good

## The Biggest Morris--contd.

that such jacks may not be required for very frequent use, but when they are wanted, the fortunate possessor of them will have good cause to be thankful. (I speak with feeling, for I once had to use an ordinary jack at 4 a.m., in several inches of snow, while wearing a tail coat and a white tie.)
The saloon coachwork of this model is, of course, extremely comfortable. It seats five large people with ease, and is more than ordinarily generous in the matter of head room. There is good luggage accommodation, also, and this is now-a valuable improvement-accessible from outside the car. If

I am to suggest a coachwork improvement I can only propose that an expert in aerodynamics stould examine the guttering which leads the rain off the roof. I suspect this of creating some little noise at the higher speeds.

Altogether, the man or woman who appreciates a big car will assuredly appreciate and like this Morris. As to its price, if I was writing for any journal other than The Morris Owner, I should expatiate upon the amazingly low figure- 6320 with sliding head-at which it is listed. Those who are familiar with Morris products, however, will perhaps take such exceptional value for money as a matter of course!

## WHY NOT A BULGING DOOR?

or what to do if the new car is too big for the garage by l. S. P.

THE tendency of the majority of car owners is to graduate from a small car to something larger as time goes on, a circumstance they did not prepare for in the choice of a garage. Then one has a problem akin to the proverbial insinuation of a quart into a pint pot.
Architects having a decided small-car complex so far as their work is concerned, few garages will allow much increase in car length and still permit the doors to shut.
The enforced use of a public garage while one's own is being rebuilt is costly, but nothing compared with the bill for alterations. Bricks and mortar seem of fabulous price--and "man's time" worth far more than anyone seems likely to earn in many instances.
The wooden shed type of garage can be extended fairly cheaply, but the more solid kind present difficulties. This is where the bulging door comes in. If the car is backed into the garage, the part which is too long will be fairly low-bumpers, etc., and possibly the radiator. It is an irritating fact that in most cases of this kind only a few extra inches are needed-seemingly very little in view of the alteration cost. If a carpenter is approached in an ingratiating manner the existing doors can be made to "bulge" at the lower halves. This enables the car to be shut up, even if no room is left for walking round it. This is some slight disadvantage, but far better a little inconvenience than a major alteration.
The bulge can be tapered off towards the hinges, depending on the width of the car. When finished, the exact position of the car, when properly placed, should be noted and a batten of wood nailed to the floor at the back so that the rear wheels just touch it. This makes it easy to park the car quickly as far in as possible without much trial and error.
No measurements are given, for these depend on the extension needed and the existing doors. Fifteen inches is about the maximum without making the
doors too clumsy. If more than this is required, one ought to think seriously of extending the whole structure.

Price ? Well, perhaps two pounds, more or less according to the special circumstances. What will the "authorities" say? Districts vary in this matter, but it's an unobtrusive little job in appearance, and it's no use looking for trouble !


## The Millionth Morris Car

庖匀 cAnd an interesting ceremony in celebration of its appearance


Viscount Nuffleld congratulating Mr．A．E．Keen， General Works Manager of Morris Motors Ltd．， as the millionth car comes off the line and （left）handing over the car to Guy＇s Hospital．

ON Monday，22nd May，the millionth Morris car left the assembly line at Cowley，in the form of a Morris Fourteen saloon．

At a celebration lunch held at Grosvenor House，there forgathered a large number of motor trade celeb－ rities and Press，together with members of the Morris organisation who in varying degress have helped tae company to produce and distribute this record number of cars．

Viscount Nuffield outlined the rapid progress of the Company，with many reminiscent details of his early years．

As is generally known，he went into business for himself at the early age of sixteen with a capital of $£ 4$ after a few months＇apprenticeship to a cycle manufacturer．After a successful career on the cycle track he graduated to motorcycles，and the Morris machines were among the most suc－
cessful of their day．
In 1910 he made preparations for building his first car，and after two years he evolved the successful Morris Oxford，and later the Morris Cowley which，in the immediate after－the－war years，virtually drove transatlantic competition off the roads．

From a production of a few cars a year，output bas gradually grown until nowadays 100,000 cars a twelve－ month has been reached．

Present at the lunch，among other Distributors who have handled Morris cars for many years，was Mr．Gordon Stewart，who，with only the blue prints of the first Morris Oxford before him，gave an order for no less than 400 cars；this at a time when cars were thought of in units．

He retained his faith in the car in the uncertain period immediately after the war，during which the Morris
factory had to be turned to war work， and among other services turned out 50,000 mine－sinkers for the North Sea minefields as a single order．

## Old Associates

Among the employees of the con－ cern present at the luncheon were seven men whose total service numbered 140 years．Their names are Messrs．A．E．Kcen，A．F．Organ， W．H．Anstey，B．W．Crease，J．A． Cooper，W．H．Thornton and B．W． Jewell．

Mr．A．E．Keen，who was apprenticed to Viscount Nuffield in his cycle manu－ facturing days，is now a Director of the Company，and General Works Manager． Mr．A．F．Organ＇s name will be known to a large number of our readers as General Sales Manager，while Mr ． W．H．Anstey is Transport Manager of the large fleet of service vehicles which serves the concern．

The original shops which served as the factory still stand behind Hurst＇s Grammar School，Cowley，where Mr． W．R．Morris（as he then was）began to build his Morris Oxford car for $£ 165$ ． They are now virtually lost in 120 acres of factory space which extends from Cowley into the countryside at the foot of the Berkshire hills．

The car was presented to Guy＇s Hospital，who are organising a com－ petition in connection with it．Tickets are obtainable for $1 s$ ．from Distribu－ tors and Dealers and，incidentally，a large number were sold at The Morris Owner Rally at Donington．

Motorist summoned at Highgate for passing red light：＂I always ex－ amine the lights carefully before going against them．＂


THERE is no sport or recreation to excel swimming and bathing. It gives health, enjoyment, invigoration. And in these days when modern pools are multiplying everywhere, with sparkling clear water, germ-proof and "fit to drink," it is a delight to be able to take a dip frequently.

Just as there are necessary rules of the road, so there is a proper behaviour for the bath. The enthusiast who bathes regularly at the same swimming place may learn what things to avoid and what to do in it by long experience and familiarity-but may be hopelessly gauche and ill at ease in a strange

SID G.HEDGE
stretch of water. Yet how much pleasure he misses through being restricted to his one pool!

The motorist is more fortunate. Miles mean little to the Morris owner. He can take his dip in one place one day, and another the next. He can sample all the pools within a wide radius, swimming indoors and outdoors, in water warm, cool, fresh, salt, filtered, "natural."

But these special privileges make it particularly necessary that he shall be very intimate with bathing etiquette, for only so will he be at once quite at home in every bathing place.

Good bathing pool behaviour is really like any other
sort of good manners-largely a matter of consideration for others, and common sense.
It hardly needs to be said at the outsét that you should not park your car right across the entrance to the bathing place-though I have known it done. Give some thought to the matter of "where?" if you chance to be visiting a place where no provision is made. It is better to enquire than to be fetched out of the water by a justly irate policeman because you are committing some quite unsuspected offence. The bath attendant will know all about such things, and you can have a word with him on arrival.
In open reaches of water where "casual bathing" is practised, undressing in your car may or may not be permitted. Again it is a matter of local law, and it is wiser to ask than err.
Regulations as to what constitutes correct bathing attire vary widely. Trunks for men, shorts and brassieres for girls may be quite de rigueur at one place, and absolutely taboo at the next. So, in going
to any unfamiliar pool, play for safety, and arrive equipped with a more normal swim-suit, having plenty of material up the front, and at least a little up the back. If you wear a rubber cap, too, preventing stray hairs or possible grease finding their way into the water, it marks you still more as a modern of taste and discretion. One day such cleanly caps will be compulsory in every filtered pool.

Cleanliness is an essential feature

## Thoughtfulness for

 others is largely the guiding principle

## Good Form at the Bathing Pool-contd.

Go straight to the dressing compartment, therefore, and having discarded your clothes visit the shower or ablution room, and make use of the toilet conveniences. Nose and mouth should be thoroughly cleansed before you are ready for your swim, and if possible the whole body should be washed with soap and water. At least wash the feet, if only under some tap. In the newest baths one cannot enter the pool without passing through showers and foot sluices.

So, scrupulously cleansed and appropriately attired, you reach the water-satisfyingly conscious that so far your behaviour has been admirably correct.
The next point where many go wrong, making themselves an annoyance to other bathers, is in entering the water-or rather in failing to enter it. It is so easy to get to the steps of the pool, and to stay there, hesitating to make the plunge, and oblivious of the fact that entry and exit are being blocked for other people. Incidentally, it is far better from every point of view to get into the water quickly, especially on a chilly day.

## An Important Matter

But that matter of blocking exits and entrances is really important; it has so many applications throughout your bathe. If you want to lounge or sun-bathe, don't do it on steps. Nor should you cluster with friends and hold conversation therethere are plenty of other places round the bath edge where no one will be inconvenienced. In the same way be careful not to obstruct divers. If you are swimming in the deep end, keep an eye on the diving stage, and avoid the middle of the bath where divers are entering. It may be kindly to wave a friendly signal to the person on the high board, to let him know you are aware of him and intend to keep clear. And as divers are in and out again quickly, eager for succeeding dives, it is particularly desirable that the steps of the deep end and the passage to the diving stage shall remain clear.

Does all this make it seem that the burden of good behaviour rests entirely on you? Am I making your
bathing to seem a burden ? I hope not. I am merely giving a sort of highway code for the swimming pool, and your own irreproachable manners will certainly, react favourably on other folk and tend to raise the general standard of behaviour.

Suppose you are on the diving stage yourself. There are points about that, too. Don't linger or cause obstruction for those waiting to follow you: there is nobody more irritating than the person who spends a minute bouncing on a springboard when a whole queue are anxious to take their turn behind him. Neither should you stand for a long time on any diving stage, poised as if about to enter, thereby keeping swimmers below in watchful suspense.

Look out for novices struggling their first few yards, and swimmers doing straight lengths. Give way to each, if you can. Never, of course, duck or push in nervous beginners.

## Inner Tubes

Many motorists take inflated inner tubes to their bathes, at least when they go in parties. This is an excellent idea. Such tubes serve for learning supports, for all sorts of floating and sculling games and contests, for restful drifting, and for emergency lifebelts. But it is as well to ask an attendant if it is permissible to take them into the water ; there are places where space is restricted and bathers are many, and unnecessary things in the water are not encouraged.
At last you have, we will imagine, reluctantly brought to an end a delightful bathe. You return to your dressing cubicle hoping to find it dry and clean from the last user. Particularly you want the seat and the wood grid on which you stand to be dry. Very well, see that you in your turn do not wet them. You will not sit or stand on the seat until you have dried, and you will run the towel over your feet before you step on the wood slats. Leave the place as you would wish to find it.

And when you do leave, having behaved with such kindly correctitude all through, may virtue add to the lovely glow that proper swimming gives, and may your car look resplendent and inviting as it greets you again.

## FROM GAPE TOWN TO NYASALAND IN A MORRIS " 25 "

BRITISH cars are rapidly winning a reputation for themselves as the ideal vehicles for work in the Colonies and Dominions.

At one time it was thought that the design of British cars was not suitable for the particularly bad road conditions existing in most parts of the Dominions and Colonies, but to-day, after the experts from the factories have carried out their surveys, cars which are now shipped abroad can be relied upon to give a performance second to none in reliability.

For example, Stewart and Ardern Ltd., the London Morris Distributors, recently received a letter from a motorist who earlier this year took a used Series II Morris Twenty-five
which he bought from them out to Nyasaland, shipping the car to Cape Town, and motoring from there to his destination.
"From Cape Town to Johannesburg," he writes, " the car was rather heavily laden, but we did the 820 miles comfortably in $3 \frac{1}{2}$ days. The road in parts was extremely bad (we went over a stretch of 175 miles of continuous corrugations), but anyhow, there were no mishaps."

The next part of the journey was I 400 miles between Johannesburg and Nyasaland, which was accomplished in $4 \frac{1}{2}$ days.

Describing this part of the journey, the owner states: " It rained hard most of the time, and the roads in
most places were but seas of mud. I had a mishap in Portugcese East Africa when trying to cross a river bed-the bridge had been washed away -wher we struck a large rock which carried away my off fore jack. This was the only bit of bad luck I had. The car travelled perfectly the whole way."

As a precaution the car was equipped with a large number of spare parts brought in case of accidents, but they arrived in Nyasaland with every package intact-not a single item had been called for.
Such achievements as this fully demonstrate the ability of British cars to withstand the most gruelling treatment.

## SEE THESE THINGS FOR YOURSELF



IN ACCORDANCE WITH AN OLD CUSTOMANCIENT EVEN IN 1598 (WHEN SPECIPL MENTION WAS MADE OF IT IN COUNTY RECQRDS) - THE HORNBLOWER SOUNDS FOUR MOURNFUL
NOTES EVERY NIGHT IN THE MARKET PLACE - PUNCTUALLY AT NINE ÓClock.-

BY THESE NOTES PEOPLE SET THEIR CLOCKS AND WATCHES. - THE CEREMONY COMMEMORATES THE PLAGING OF A GUARD OVER THE TOWN.

##  <br> TREES IN CHURCH!

 ULUREALIMD

## THE ER TOWER BUTTER!

ROUEN CATHEDRAL

- FRANCE -
-ROSS ON-WYE, HEREFORDSHIRE
NORTH SIDE-NEAR EAST WINDOW.
TWO ELM TREES-NOW DEAD-BLT EACH YERR
ACREEPER TWINES AROUND THE TRUMKS
APPARANEE OF TREES IN FULL LEAF.


ERECDED WITH MONEY PAID FOR THE PRIVILEGE TO EAT BUTTER
DURING THE. LENTENSEASON THE HANDSOME CENTRE SPIRE 15


ThE MRIDGE OF TREES!
UNIQUE \& ANCIENT BRIDGE THAT CROSSES THE RIVER AT COUNTY SLIGO, IRELAND

$$
\begin{aligned}
& \text { LARGE TREES } \\
& \text { GROWING ON IT ! }
\end{aligned}
$$ $\cdots$

## The Cbateau Country for the <br> Motorist


he chateau at Blois, with the Morris Ten in the foreground.

ALTHOUGH the Chateau Country is becoming increasingly popular with British motorists there are still a very large number of visitors to France who have never paid it any attention. About ninety per cent. of those who cross the Channel make at once for the Riviera, and nobody is going to say that their choice is not sound.

Everyone should, however, endeavour to pay a visit to this part of France, because no other part of Europe can offer so many attractions. It is favoured climatically (although when we were there in the Spring the weather was icily cold); it produces delicate wine; the French language is spoken at its best; it has its own cooking, which ranks among the finest in France; there is an abundance of good-class hotels, and by good-class I do not mean expensive-indeed, many of them are all the better for being the antithesis of the five-star, palace type of establishment which thrives on custom from American business men. Its university at Tours bestows upon the whole district a pleasant culture, and the Touranians are among the nicest people in France.

## Worth Repeating

In order that I shall not be accused of sailing under false colours, I ought to mention that I dealt with the Chateau Country three years ago, in the May issue of 1936 to be precise, but as the Chateau

Chenonceau is built across the Cher.
Country is one of those districts which will stand a second, a third and possibly a fourth visit, I am making no excuse for referring to the subject again, and, blending the experiences of two trips, I purpose telling what you can do, rather than boring you with details of my own itinerary.

## In the Loire Valley

The chateaux, generally speaking, are ranged along the banks of the Loire and are situated in impressive landscape settings, in architectural styles between the eleventh century and the early eighteenth. and range between ruins and occupied homes of titled families, for the French Government has not taxed the owners out of existence as our country has done in order to bolster up squandermaniac methods of administration. They have said in effect


Amboise looks down majestically on the town and the RiverLoire, and among otherinteresting features possesses the tomb of Leonardo da Vinci.

The pine-bordered road at Candes, on the road to Saumur.


The chateau of Cheverny is surrounded by beautiful gardens, and dates from 1634.

Crossing the Indre on the terry at Bac. Incidentally, the charge for two passengers and the car over a stretch of water almost as wide as the Thames at Gravesend was a modest is, $3 d$.

## The Chateau Country for the Motorist - contd.

to the owners, "Look here, if you like to let us put a turnstile at the gate and a man to collect three francs a time from all visitors on certain days of the week, we'll let you off most of the taxation. In return you must allow the tourist to come and gape round your home, but as we are going to appoint a guide you need not fear that they will take away slices of tapestry, or carve their initials on the piano. We'll see to that."

In practice the arrangement has worked admirably. Aristocratic families, hit by after-war conditions, have been glad of the remission of taxation, whereas prosperous business men who have purchased chateaux have gone to great expense to equip their ancient charges as they deserve, and have searched Europe for period pieces to furnish them.

Here is a list of the principal chateaux, which I would write down in their order of interest. This, however, it must be pointed out, is only my opinion.

## A List of Chateaux

At the top of the list I would put Amboise, partly for its delightful position overlooking the bridge across the Loire and the town of Amboise. Perhaps, too, my surprise at finding the tomb of Leonardo da Vinci had something to do with it. Although by no means complete, there is still a great deal of the old chateau standing, and it has witnessed some of the stormiest days of French history, including one when no less than 1200 members of the Huguenot party-which was almost as political as it was religious-were slaughtered. The guide is very careful to give you details of the whole business, pointing out just where the more notable members were suspended or decapitated to teach them a lesson.

Next I think should come Chenonceau, which straddles the River Cher, a tributary of the Loire. It was built about the year 1515 by one Thomas Bohier, who was something in the Treasury to Charles VIII, Louis XII and François I, and therefore obviously in a position to build a chateau if he wanted to. The guide will tell you quite a lot of history of the early owners, including one Diane la Toujours Belle, who in 1547 received it from Henry II, which was rather an achievement, having regard to the fact that the lady was some twenty years older than the king. Interesting pictures and relics are on view.

Loches dominates an attractive old town, and is remarkably well preserved. It was the
residence of the kings of France from the thirteenth century to the demise of Charles VI.
Langeais is particularly interesting for the reason that it belonged to a very rich man, one Siegfried, who died recently. He was a man of taste and discernment, who made the embellishment of his home his hobby. He has filled the rooms with carefully chosen period pieces, each in keeping with the rest of the furniture.
Azay-le-Rideau is a Renaissance building. It is, in some respects, a counterfeit chateau, because its, architect has made an attempt to follow the old style of round tower and battlements. Nevertheless, it is a magnificent building, surrounded by beautifully kept gardens. A spot for a pleasant afternoon, whether or not you are particularly interested in what did, or did not, happen to the kings of France.

Blois must, clearly, be included in our trip, for it is linked with much of English history. It was, for instance, in 1429 the headquarters of the late Miss d'Arc, known to all of us as Joan. The chateau dates from the thirteenth century, but has many later additions. It is famous for its spiral staircase, which allows people to ascend without coming into contact with anybody coming down, sometimes a desirable consideration in the period when it was built.
The town itself is pleasant, and abounds in the more English sort of café and tea-room, for those who must live under home conditions in somebody else's country.
I would next include Chinon, which, although only a ruin, is in some respects the better for it, from a historical point of view. There is sufficient of the fabric left to give you an idea of what it looked like in its heyday, and magnificent views across the Vienne. One can spend a pleasant hour browsing around old Chinon, the town at the foot of the chateau.


## The Chateau Country for the Motorist

- contd.

Valençay will appeal particularly to those who find interest in the chateaux because they are somebody's homes in the present day. I met some Americans who were positively "tickled to death" because they went into the dining room immediately after the family had left their lunch, and found the lunch crockery still upon the table. Valençay is picturesquely situated, surrounded by a moat and attractive gardens. In that it was not constructed until 1540 it has escaped the destructive influences of earlier buildings.

At one time the chateau belonged to Talleyrand, who was created Duc de Valençay by Louis XVIII, and it is still in the hands of his descendants.

Villandry I would put next on the list, not so much for the chateau (which, however, is quite interesting), but for its magnificent gardens. They represent the French idea of an English garden, and they do us, and themselves, great credit.

Chaumont stands on the site of a much older edifice, and the present building may, to all intents and purposes, be said to date from 1500 . It is in wonderful preservation, even having regard to its relative youth, and stands in the centre of delightful gardens. One should on no account miss the beautiful tapestries, while its pictures are very much out of the ordinary.

Well, there are ten of them for you; they ought to last you a week, if you are not to come away with a confused idea of what they represent, and want some time on your hands for other amusements.
For those stopping for a longer period, and those
who take their history very seriously and would like to see some more, I might mention Usse, Sully-sur-Loire, Chambord, and Luynes; last, but not least, the little chateau at Tours itself.' This edifice, while almost insignificant as a spectacle, has a very interesting assortment of lace, together with an intriguing fifteenth-century spimning wheel and loom, which is still in working order, and can, on special occasions, be made to produce a few yards of cloth.

If you want to take the subject more seriously, books written in English are obtainable in all the sizeable towns like Tours, Blois and Angers.

## Money is Cheap

As most of you will know, the exchange in France at the moment is very favourable to British purses. Good accommodation can be obtained for anything between eight and twelve shillings a day inclusive, and if you are one of those peculiar people who like to live in the big hotels, there are places in the district to satisfy your craving at about fifteen shillings.

I am quite prepared for chateau-country enthusiasts to write in and tell me that my list is all wrong, and that there are more interesting chateaux that I have not mentioned, so I want to make it perfectly clear that I am merely giving a list of what would interest the average person with a taste for the worth-while interests of life, and such history about him as a persevering schoolmaster could inculcate between games of noughts and crosses. And even if you wish to take the chateau country more seriously -to tackle it in one piece-they should serve as a useful and representative groundwork of the subject.


The relative positions of the more interesting chateaux.

## Tickets, Please

TICKETS for the competition organised by Guy's Hospital Appeals Committee in connection with the millionth Morris car can be obtained from all Morris Distributors and Dealers throughout the country.
The competition consists of placing in their correct order of importance fourteen given points of the car. The correct order of these points has been determined by a committee of wellknown motoring correspondents, and is deposited in a sealed envelope in the original dispatch box of the Founder of the Hospital.
The competition is open until 13th July.

## A Useful Cleaning Ball

HERE is a way to make an economical cleaning ball which is better than anything else for idding the hands of that dirt and stain which is often the result of tinkering about with a car. From an upholsterer secure a few pennyworth of horsehair. When pressed closely the mass need not be larger than a small orange. Collect the odd pieces of soap and press these into the mass, shaping it into a convenient form for using on the hands. Use the ball for washing and it will be found that the slight roughness of the horsehair, combined with the soap, will clear away stains in a manner that seems
almost miraculous. When most of the soap has come out of the hair, the ball can be made up again by the addition of fresh scraps, and this can be repeated any number of times.
S.L.B.

Woman motorist at Highgate police court:- "I am very sorry for this offence and plead not guilty."

Solicitor: "What gave you the impression that the police were enquiring about you?"
Witness: "One man chased me up the road in a car."

| The Morris Owner July, 1939 |
| :--- | :--- | :--- |



## IDLE THOUGHTS UPON MOTORING MATTERS OF THE MOMENT

## If Eight Elephants -

DRIVING back to Town from Maidenhead t'other evening I reached a cross-road, and pulled up just in time to avoid a huge lumbering shape which I diagnosed as an elephant, having seen one before.
Almost immediately there issued from the same side road another elephant and a second and a third, and finally, just as I was beginning to think that


I was doomed as a penance to see elephants in column of line for all eternity, the procession stopped, totalling in all eight elephants.
Each elephant was accompanied by a mahout or a marabout-I can never remember which is which -swinging a lamp, but, believe me, eight elephants crossing a main road can be a very real menace and demand a certain amount of patience as soon as you have got over the novelty of the passage of the first one.
The incident reminded me of a friend who had lived on and off in India for a number of years, and offered the information that the size of an elephant's foot bears a remarkably exact relation to the height of the animal.
It is a curious fact that the distance round one foot of an elephant is always half its height.
The food supply of the working Indian elephant is regulated according to the height of the animal. In the old days to find out how tall an elephant was the keeper would simply take the circumference of the foot at the base and double the figure. The result is surprisingly accurate and has rarely been known to vary more than a fraction of an inch.
Usually the slight difference makes the animal seem to be a trifle taller than it really is. Hardly
anyone would think that the height of an elephant was no more than double the circumference of its foot. As a matter of fact, if one could see the foot of an elephant alone it would appear to be much bigger than it does when overshadowed by the mountain of flesh which it supports.

## Jones's Corner

IT seems funny to think that there is a spot called Jones's Corner out in the middle of the ocean. There is such a place and it is known to every airman on the great American clippers which fly across the Pacific.
Who gave the name Jones's Corner no one seems to know, and perhaps the name was selected because it is so easy to remember. Anyhow, Jones's Corner is just a point in the sky above the Pacific Ocean.


It is a very important point, too, because it is the spot where the clippers change their course in flying between Hawaii and San Francisco.

Its exact location is latitude 35 north and longitude 145 west. If one could draw a straight line between Hawaii and San Francisco, and then go three hundred miles north of the half-way point on the line you would be at Jones's Corner. If you look at a globe of the world you will notice how the earth curves. By following the earth's curve the route across the ocean is shorter. Such a course is called the circle route.
The clippers save time and find more favourable winds by following this curved route. But somewhere on the way they must turn and fly down towards Hawaii or towards San Francisco. That's where Jones's Corner comes in, for the flyers turn when they reach that exact point.

## Musings Awheel-contd.

## Changing Down with Synchromesh

ALTHOUGH with the Morris synchromesh gearbox it is impossible to make a noisy change -up or down-between the gears provided with synchromesh mechanism (second and top in the current models), unless the driver fails to depress the clutch sufficiently and moves the gear lever with

unnecessary rapidity, here is a hint that may be adopted with advantage by those drivers who are in the habit of changing from top to second with the accelerator pedal released.
This latter plan is quite legitimate in that it does not prevent a silent change from being secured. But a weak point of it is that, when the accelerator is released prior to changing, the engine decelerates to idling speed; the result is that after the change has been made and when the clutch is re-engaged the car may be "pulled back," as it were, owing to the speed of the car being higher than the appropriate speed of the engine.
To avoid that pull-back there are two plans available. One is to depress the accelerator before the clutch is released after the change of gear has been made ; the other is to keep the accelerator depressed slightly during the whole of the process of changing into the lower gear-the change is made just as usual but the accelerator is held down a little way all the while.

The first plan is preferable in traffic and when the car is running slowly in top gear. But if the change down is being made to climb a hill, the second plan is better, because there is no period of waiting for the engine to accelerate after idling. Moreover, the second plan is worth cultivating because it' will give a quiet and quick change down from second to bottom gear on a steep hill ; the lack of synchromesh assistance will not be noticed, or not much if at all.

## Bogs

ACHARACTERISTIC feature of some parts of the country is the bog, a spongy tract of land, covered with peat.
A bog differs from marshy ground, such as is associated with rivers and streams, in that it is not necessarily at a low level. Some of the worst bogs of Dartmoor are near the tops of the hills a thousand or more feet above sea level. Bogs are always likely to arise where there is an impervious subsoil through which there is little or no drainage of water. As the plants which grow on the bog decompose there comes the formation of peat, which, with the passage of time, settles down into a dark brown mass. The peat is almost entirely formed by the sphagnum mosses
and other small plants of the boggy tracts. Plants that make a woody growth, such as the thicker stems of heather, bog myrtle and trees, decompose more slowly and before they decay they are brought under the preserving action of the peat. Thus it is quite a common thing to find tree trunks embedded in a bog, the wood being hard and black. In Ireland articles made of bog oak are common and some of this wood may be of a very great age.
The most extensive bog in the British Isles is the Bog of Allen. This lies east of the River Shannon in King's and Queen's Counties and Kildare, Ireland, comprising about 150,000 acres with strips of arable land in between. The Solway Moss, on the western border of England and Soctland, is almost seven miles in circumference, and Chatmoss in Lancashire is about ten square miles in extent. There are also large bogs in some parts of Scotland and the adjoining islands. Quite extensive bogs occur in the West of England and there are certain considerable patches in the New Forest.

Generally speaking, the surface of a bog will be almost level apart from the clumps of grasses and rushes, which are somewhat elevated and offer rather a firmer foothold. By the continual formation of peat the surface of a bog is gradually elevated; that of


Chatmoss, for instance, rises above the level of the surrounding country, having a gradual slope of thirty or forty feet from the centre to the solid land on all sides.
Because a bog is practically without drainage, excessive and continuous rains may cause it to burst. Then the bog pours a terrible deluge down the course of a stream, causing great devastation. This is not only due to the force of its torrent but to the enormous quantities of peat which it deposits on meadows and cultivated fields.

Some years ago a large bog of 200 acres burst at Rathmore, near Killarney ; several lives were lost and many miles of country laid waste.
The depth of a bog is sometimes more than forty feet and the spongy mass of which it is formed shakes on the leást pressure. Are bogs dangerous? you may ask. Yes, they are. They should always be treated with respect, as it is easy to get into great difficulty if you do not watch your step.
The foregoing reminds me that I have just read how a couple lost their car completely through driving along the sands too far below high-water mark. When the tide came up, the car sank so swiftly out of sight that they had barely time to save their loose belongings.
All of which suggests that there is everything to be said for leaving the bus on dry ground: but it must be $d r y$ ground.


FASTER STILL

ㅁ
Major A. T. G. Gardner's IIOO c.c. M.G. breaks its class record for the second time and takes that for the I 900 c.c. class as well.

1
timing apparatus permanently in position.

Major Gardner's feat has added further to the outstanding recordbreaking successes of the M.G. Car Company, for they were the first with a small car to exceed $100 \mathrm{~m} . \mathrm{p} . \mathrm{h}$., two miles a minute, i50 m.p.h., three

O$N$ the 3 rst May and the 2nd June, driving an M.G. car on the Reichsautobahn at Dessau, near Berlin, Major Gardner, who won the Segrave Trophy for 1938 for the most meritorious performance by a Britisher on land, sea or in the air, achieved another outstanding success for British motoring.

At 8 o'clock in the morning of the 3rst he did a warming-up run with the M.G. and then proceeded to break three International Class " $G$ " inoo c.c. records at $200 \mathrm{~m} . \mathrm{p} . \mathrm{h}$., and this amazing speed was achieved with an engine with an R.A.C. rating of only 12 h.p. The actual figures for the records were as follows:

I kilometre ... $203.5 \mathrm{~m} . \mathrm{p} . \mathrm{h}$.
$\begin{array}{lll}\text { I mile } & \ldots & 203.2 \mathrm{~m} . \mathrm{p} . \mathrm{h} .\end{array}$
$j$ kilometres ... $197.5 \mathrm{~m} . \mathrm{p} . \mathrm{h}$.
During the attempt the car was actually timed in one direction over the mile at 207.4 m.p.h.

## A Quick Rebore

Having achieved this success in the I Ioo c.c. class, Major Gardner's mechanics commenced to rebore the cylinder block to bring it over the I 100 c.c. capacity and into the International Class " F " for cars of between IIOO and $1500 \mathrm{c.c}$. The engine when dismantled was found to be in absolutely perfect condition and the alterations necessitated only the boring out and the fitting of new pistons. This in itself was an engineering achievement, since the engine was not even taken out of the chassis, and quite normal Aerolite self-compensating pistons were fitted. Furthermore, no running-in was done before making the second record attempt.

On Friday, 2nd June, Major Gardner again did a short warming-up run and made the record attempt at


The car at speed (top), and (beneath) with Mr. Cecil Kimber, Viscount Nuffleld, Major Gardner and Mr. Reid Railton.
$6.30 \mathrm{a} . \mathrm{m}$. , returning the following figures:

I kilometre $\quad \cdots \quad 204.2 \mathrm{~m} . \mathrm{p} . \mathrm{h}$.
I mile ... $\quad . . \quad 203.8 \mathrm{~m} . \mathrm{p} . \mathrm{h}$.
5 kilometres ... 200.6 m .p.h.
These and the 1100 c.c. records are subject to official confirmation by the A.I.A.C.R. The engine size for the ${ }^{1500}$ c.c. records was 1106 c.c.

This is the first time that a British car has taken records on the new German record stretch at Dessau, which is part of the German Reichsautobahn, 80 kilometres from Berlin in the Leipzig direction. It consists of 14 kilometres of the normal twin track road with the centre division taken away, thus giving an available width of 94 feet. The surface is almost perfect and all the electrical
miles a minute, and now the 200 mark has been passed; also, in spite of its relatively small engine size, the M.G. is unofficially the fastest car up to three litres.

The iloo c.c. records were previously held by Major Gardner, and in the 1500 c.c. class he had the distinction of beating what was considered to be a practically unbeatable record of $164 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. set up twelve years ago by the late Frank Lockhart with an American Miller at Muroc, U.S.A.

The M.G. Car Company has been responsible for the design and construction of the complete car with the exception of the body, which is to the design of R. A. Reid Railton, who has been responsible for most of the world's land speed record cars.


Write up your diary and claim your allozances. These notes tell you how. By JOHN LYMESTER

MOTORCARS are nearly always used by their owners both for pleasure and business purposes. It is therefore desirable that an accurate record of all expenses in connection with the running of the car be kept, not only for the information of the owner, but to enable him to recoup the outlay either from his business or his employer.

The importance of these records will become even more apparent, however, when a claim is made for the expenses in connection with income tax, and an accurate account will save considerable difficulties with the Inspector of Taxes.

Owners of businesses are entitled to charge all experises laid out wholly and exclusively for the purposes of the business against the profits, and employees likewise to charge travelling expenses incurred in the performance of the duties of the office, which are not repaid by the employer, or which exceed the allowance made, against the remuneration. Thus a director, traveller, or agent, who receives a fixed allowance can claim any excess of expenses incurred over such allowance as a deduction from his income, and the owner of a business, or a professional man, such as an author, doctor, dentist, or estate agent, can claim the whole of the car expenses incurred in connection with his business against his profits.

## Keep a Record

The owner of the car should keep a $\log$ of all his journeys and the expenses incurred in connection with the car, and this should be adequate to substantiate any claim made for the purposes of income tax. This $\log$ will be most easily kept by purchasing a cheap book and ruling it as below.

This should be written up daily, the book being kept in the car. In column (A) the date should be entered, and in column (B) brief details of the journey.

In columns (C) and (D) should be entered the total mileage covered by the car at the beginning and end of the journey. From these figures the miles taken on the journey can be calculated and entered in column ( E ) or ( F ), as to whether for business or pleasure. It is essential that the total miles the car is driven be accounted for, and consequently the figure in column (C) should always correspond with the last figure in column (D).

## Allowable Items

It should also be noted that the expense of travelling from home to the place of business is not an allowable charge against income. In columns (G) and (H) all expenses paid in connection with the car should be recorded. Again it should be noted that only car expenses should be entered, such as petrol, oil, garage, repairs, insurance and licence. Items such as hotel bills, meals, etc., should be recorded elsewhere.

The fiscal year runs from the 6th April in one year to the following $5^{\text {th }}$ April, and, consequently, at the end of this period the year's total mileage should be ascertained and the expenses. The total mileage should then be divided as between that performed for business and pleasure purposes. The ratio which the business mileage bears to the total mileage should be the proportion of the total expenses which should be claimed for the purpose of income tax. To this figure should be added the same proportion of any wear and tear or obsolescence, including the additional one-fifth wear and tear allowed. It must be noted that if wear and tear is not claimed the benefit of the allowance is lost, and that should there be a profit on sale, it is not assessable. Hire-purchase interest can also be charged.

Finally with adequate records any attempt to restrict the allowance should be resisted.

| Date | Journey | Total Mileage |  | Journey Mileage |  | Expenses Paid |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Start | End | Pleasure | Business | Nature | $\downarrow$ | s. | D. |
| (A) | (B) | (C) | (D) | (E) | (F) | (G) |  | (H) |  |



## Increased Ferry Services

MOTORISTS visiting the Continent with their cars and other intending cross-Channel passengers will be interested to know that the Southern Railway will this Summer augment the number of day sailings by the Dover-Dunkerque Ferry.

Until the 28 th of this month the following service will operate, ercept on Saturdays:-
Dover (ferry berth) dep. :
$9.30 \mathrm{a} . \mathrm{m} . \quad 6.30 \mathrm{p} . \mathrm{m} . \quad 12.35 \mathrm{a} . \mathrm{m}$.
Dunkerque (ferry berth) arr. :

$$
\mathrm{I} .30 \mathrm{p} . \mathrm{m} . \quad 10.30 \mathrm{p} . \mathrm{m} . \quad 4.30 \mathrm{a} . \mathrm{m} .
$$

Dunkerque (ferry berth) dep.

$$
11.30 \mathrm{a} . \mathrm{m} . \quad 4.0 \mathrm{p} . \mathrm{m} . \quad \text { 2. o a.m. }
$$ Dover (ferry berth) arr. :

$$
3.30 \text { p.m. S.o p.m. } \quad 6.15 \mathrm{a} . \mathrm{m} \text {. }
$$

On Saturdays, 8th July to 26th August inclusive, there will be two services each way instead of one, at the following times:-
Dover (ferry berth) dep.

$$
12.35 \mathrm{am} . \quad 12.30 \mathrm{p} . \mathrm{m} .
$$

Dunkerque (ferry berth) arr. :

$$
4.30 \mathrm{a} . \mathrm{m} . \quad 4.30 \mathrm{p} . \mathrm{m} .
$$

Dunkerque (ferry berth) dep.

$$
\text { 2. o a.m. } \quad 2.0 \text { p.m. }
$$

Dover (ferry berth) arr. :

$$
6.15 \mathrm{a} . \mathrm{m} . \quad 6.0 \mathrm{p} . \mathrm{m},
$$


"D'you know I'm a doctor going to a serious case?" "I'li say you are! It'll come on next Friday."

## LIGHTING-UP TIMES

 July 1st $\quad 7$ th 14 ith 2 2st 28 8th

## Record Caravan Rally

TNo HUNDRED AND ONE caravans attended the National Rally organised by the Caravan Club at Overstone Park, near Northampton, during the Whitsun week-end. This was twenty more than last year's record in spite of the competition of rallies organised this Whitsun by other clubs.

Almost every model of nearly every reputable make was represented, and this collection of vans, worth in all about $f 50,000$, showed the continuous progress taking place. For example, vacuum brakes are becoming noticeably more common since the Club introduced a braking competition last year. This year's competition showed that braking efficiencies of 50 and 60 per cent. (on the Tapley meter) are not -
uncommon, while with vacuum brakes up to 80 per cent. can be obtained.

## Furious Loitering

AFINE of 15 s . 6 d . was imposed at Middlewich Police Court on a man for "obstructing the highway by standing thereon.'
It was stated that the man after alighting from a bus attempted to cross the road in front of it and was knocked down by a caf.

## Morris Service Weeks

SERVICE weeks for the month of July, during which technical experts from the Factory at Cowley will be present to give free advice to Morris owners at Distributors' premises, have been arranged as under:
3rd-Wadham Bros., Southsea.
Graham \& Roberts Ltd., Carlisle. Turvey \& Co. Ltd., Sunderland. roth-John C. Beadle Ltd., Dartford.
H. J. Croft Ltd., Kendal.

Charles G. S. Buist Ltd,, New-castle-upon-Tyne.
17th-Dickinson \& Adams Ltd., Luton.
Brown \& Mallalieu, Blackpool.
Charles G. S. Buist Ltd., New-
castle-upon-Tyne.

## What's On During July

Sat. rst-Crystal Palace Cup Meeting, The Road Racing Club.
S.E. England Rally, Nomad Motorists' Club.
Hill Climb, Dover, Brighton and Hove M.C.
Donington Meeting, M.C.C
Sun. 2nd-Hill Climb, Maidstone and Mid-Kent M.C.
Speed Event, Southall, W. Middlesex A.M.C.C.

Sat. 8th-Leinster Trophy Race, Eire. Concours d'Elegance, Ramsgate. Donington Meeting, S.S. Car Club. Members' Day, Brooklands, J.C.C. Speed Event, Midland A.C.
Sun. 9th-Chilterns Rally, M.G. Car Club.
French Grand Prix, France.
Wetherby Speed Trials, Yorkshire S.C.C.

## Triumph for Morris Ten in Scottish Rally

MRS. ELSIE WISDOM, the wellknown racing motorist, and Mrs. Arline Needham, won the women's prize for closed cars of unlimited horse-power, with a Series " M" Morris Ten, in the Royal Scottish Automobile Club's Rally held during Whit week.

Here, There \& Everywhere-contd.
Thur. ${ }^{13}$ th to Sun. 16th-Alpine Thur. Frial, France. Sat. ${ }^{15}$ thire A.C.
shire A.C.
Driving Tests, M.G. (S.W. Centre). Driving Speed Trials, Vintage S.C.C. Leves Spedill Climb, Stelvio.
Sun. 16th-Hent and Hill Climb, Croydon, W.A.S.A.


A fine view of Crockham Hill, near Edenbridge, Kent. This delightful spot is becorning a favourite venue for South London motorists.
many cars three times as powerful.
This car is the identical Morris Ten which made the record run, for a car of this size, from Ankara, in Asiatic Turkey, to London, in August last year. The time occupied for the whole 2000 miles journey across some of the worst roads in Europe was under one week.

## Morris Motors Band

0N Sunday, 3oth July, the Morris Motors Band, under the leadership of its conductor, Mr. Sydney V. Wood, B.B.C.M., is to give two programmes of music at 3.0 p.m. and 7.30 p.m. at the Eastwood Annual Charity Carnival at Eastwood Hall Park, Eastwood, Notts.
The services of the band were obtained through the enterprise of Messrs. Neville \& Co., the Eastwood Morris Dealers.

By releasing a pigeon a bus conductor working at Grays lets his wife know the time he will be able to reach his home at Stephenson Avenue, Tilbury, after work.

A motorcycle recently burst into flames while travelling along Peckham Road, S.E. The fire was quickly quelled with ginger-beer and lemonade taken from a mineral water van.

Because he would not take his turn in a queue of seventy people waiting at a bus stop, a man was, at Tower Bridge Police Court, fined

Wed. 19th to Sat. 22nd-Welsh Rally, S. Wales A.C.
Sat. 22nd-Sports Car Race, Light C.C.

Backwell Hill Climb, Bristol M.C. and L.C.C.
Sand Races, Southport M.R.C.
Speed Event, Portsmouth, Veteran C.C.

Sun. 23rd-Surrey Rally, M.G. Car Club.
Sat. 29th-Speed Trials, Poole, W. Hants. and Dorset C.C.
Sun. 3oth-International Hill Climb, Prescot.

## The Ramsgate Concours

0N Saturday, the eighth of this month, Ramsgate will be holding its ninth annual Concours d'Elegance on the Royal Esplanade, on the West Cliff. This event, staged in conjunction with the resort's gala week, enjoys the blessing of The Society of Motor Manufacturers and Traders, and Capt. G. E. T. Eyston, the world's land speed record holder, will be there to present the prizes. There are no less than twenty-seven classes, entries for which can be accepted up to the third instant. Particulars may be had from the Hon. Secretary, Chamber of Commerce Offices, Harbour Parade, Ramsgate.


IN THE NEW FOREST.-A glimpse of a charming by-way bordered with tall

Mrs. Wisdom's win is all the more notable as her Morris Ten was the smallest car driven by a woman in the Rally, and had to compete against

Ios. with ros. costs. This was the first prosecution under the London Transport Board's by-law for the regulation of queues at bus stops.

# The Seventh "MORRIS OWNER" RALLY 

## at Donington Park, where enthusiastic crowds enjoyed good weather and entertainment

ADAY of brilliant sunshine was the reward of those who looked forward to participating in this year's Morris Owner Rally, held on Sunday, $4^{\text {th }}$ June, at Donington Park race track. It is some years since such completely favourable weather conditions have been experienced by the thousands who annually assemble at the largest one-make affair of its kind, and the day's enjoyment was materially enhanced in consequence.
The Concours d'Elegance, as usual, produced a number of well cared-for cars and, also in accordance with tradition, was enthusiastically supported.
In the neighbourhoed of two o'clock the cars were marshalled in their respective classes on the track by the pits and the business of judging was begun. As formerly, classes were provided for middle-aged and elderly cars, so that all comers could participate without fear or favour.

## Acknowledged with Thanks

Our thanks are due to all those good people of the trade and the Press who gave their Sunday and their services for the onerous duty of marshals and judges, as they are likewise to Capt. G. E. T. Eyston, the holder of the land speed record, who presented the prizes. Two names always stand out for signal service in the cause, those of Mr. F. J. Findon, of The Light Car, who once again kept the crowd informed of the progress of events at the microphone, and our well-known marshal-in-charge on the Gymkhana field, Mr. Dan Thomas, of the Midland Light Car Club.
The Gymkhana began at three o'clock with musical chairs-in which uere heats for both men and women (heats being the operative word)followed by obstacle and needle threading races, a reversing test on the race track, children's sports, and speed judging with sealed speedometers (also on the racing circuit). Thereafter came the prize distribution by Capt. Eyston, and, to round off the day's doings, a dance at 8.15 p.m. in the mansion.
In the course of the afternoon the usual "side-shows" were in full swing. There were the treasure hunt for coconuts containing prize vouchers, the "What is wrong with this car ?" mistake spotting competition for the


An animated scene in the musical chairs event.
lynx-eyed cognoscenti, and the very popular balloon race.

## The Longest Distance

The longest-distance car entrants assuredly had the surprise of their lives when a claimant turned up from Shanghai in the person of Mr. Gilbert H. Jolley in his 1935 Morris Ten.

Music was provided throughout the afternoon by Morris Motors Band, which comes annually by courtesy of Viscount Nuffield.

The results of the Concours and Gymkhana-with the exception of the balloon race and the "What is Wrong ?" features, which will be announced next month-are as follows:

PRIZEWINNERS IN CONCOURS

$$
\begin{aligned}
& \text { (Class No. 1) } \\
& \text { H. Rainh. } 28 \text {. }
\end{aligned}
$$

First: R. J. H. Ralph, 38 Glenhill Chase, Finchley, London, N .3 .
Second: J. Heaven, ${ }^{89}$ Westield Road, Edgbaston, Birmingham.
Third: R. D. Ison, 12 Grange Road, Hartshill,
Nuneaton.

## (Class No. 2

First: J. Wynn, 86 Market Street, Atherton, Manchester
Second: R. S. Cole, Coneygres, Quenington, Fairford, Glos.
Third: J. H. Turner, Ty-nant, Trent Terrace, Leek Road, Hanley, Stoke-on-Trent.
(Class No. 3)
First: B. Randle, 94 Gainsborough Road, Leicester.
Second: N. F. Hollands, 7I Pollard Street, Kettering, Northants.

## (Class No. 4)

First: A. H. Bradford, 46 Bulmer's Avenue, Hereford.
Second: H. Ayto, 28 Stroodley Terrace, Warley Road, Halifax.
Third: C. M. Myers, 70 Sparkerhoe Street, Leicester.
(Class No. 6)
First : W. H. Carpenter, 72 Devonshire Road, Smethwick, Staffs
Second: Norman E. Evans, Nordene, Alpine Road, Old Colwyn, N. Wales.
Third: R. Simms, 31 St. Johns Road, Langley, Birmingham.
(Class No. 7)
First: N. Blackett, Heathfield, Clift Avenue, Salford, 7 .
Second: ${ }^{\text {Sald }}$ W. ${ }^{7}$ R. Chambler, ior Rosemary Street, Mansfield, Notts.
(Class No. 8)
First : R. T. Atlers, ga Heath Street, Hampstead, N.W.3.
Second: : Sydney W. Hill, 26 Tolcarne Drive, Pinner, Middlesex
Third: F, L. Warren, 37 Spring View, Ramsbottom, Manchester.

## (Class No. 9)

First: H. C. Beasley, Thornfield Way, Hinckley, Leicester.
Second : W. Wright, 5 Beardall Strect. Mansfield, Notts.
Third : Norman Slater, 285 Chester Road, Macclesfield, Cheshire.
(Class No. 10)
First: A. Saxon, 41a Watnall Road, Hucknall, Notts.
Sccond: Albert R. Daniel, "Alwynn," 139 Dovehouse Lane, Solihull, Birminghant
Third : H. Hulse, 22 Wentworth Road, sou Yardley, Birmingham, 26 .

First: A. K. Corser, 22 Vibert Road, Birmingham, 26.
Second: F. A. Addison, Newlands, slockter Lane, York. Horle Roal. ird : C. K. Kranter, Rydal, Hosle Roan Hoylake, Wirral.
(Class No. 12)
First: L. J. Pollett, 16 Oakfield Aucret. Birstall, Leicester.
G. H . Ruston, 20 King sitrect Second: G. H. Ruston, 20 Ring Walke
Southport.
hird: P. P. Hoon, II
Pitts, Stoke-on-Trent.


SCENES AT THE MORRIS OWNER. RALLY ON 4 th $J U N E$

The Seventh "Morris Owner" Rally
-contd.
(Class No. 13)
First: E. Sherriff, 82 Rosebery Avenue, Manor Park, London, E.12.
Second: F. W. Walker, 121 Moorside Road, Flixton, Manchester.
Third: J. Munro, c/o Police Office, Dunkeld, Perthshire.
(Class No. 14)
First : 'T. W. Roberts, Tudor Cinema, Vaughan Street, Leicester.
Second: G. H. Spittlehouse, 66 Chatsworth Road, Chesterfield.
Third: Miss Amy F. Sandes, 5 Oakwell Drive, Ilkeston, Derbys.

OLDEST CAR TO ARRIVE
Miss A. F. Sandes, 5 Oakwell Drive, Ilkeston.
CAR FROM FARTHEST DISTANCE Gilbert H. Jolley, Shanghai.

LONGEST DISTANCE (INLAND) J. Munro, c/o Police Office, Dunkeld, Perthshire.

## GADGETS CLASS

First: A. H. Bradford, 46 Bulmer's Avenue, Hercford.
Second: R. J. H. Ralph, $3^{8}$ Glenhill Chase, Finchley, London, N. 3 .
Third : W. Wright, 5 Beardall Strect, Mansfield, Notts.

## GYMKHANA

Musical Chairs-Genttemen)
First: A. N. Soutar, Ridgeway, Weston Favell, Northampton.
Second: W. S. Griffiths, 92 Durham Road, Birmingham, 13.

Third: N. Murphin, 84 Edge Lane, Stretford, Manchester.
(Musical Chairs-Ladies)
First: Mrs. Bartlett, 340 Glossop Road, Sheffield.
Second: Miss B. Jennings, 30 Landgate Road, Handsworth, Birmingham.
Third A Miss B, Bunting, 14 Adlam Road, Liverpool, 10.
(Obstacle Race-First Heat)
First: ]. Blagg, Stanley Moor.
Second : W. Ricketts, Coventry.
Third: F. Penna, Great Crosby.
First (Obstacle Race-Second Heat)
First: A. N. Soutar, Northampton.
Second: E. Capron, Grimsby.
d. M. Rackham, 3 vincent Terrace outhampton.
(Needle Threading Race)
First: Miss Clarke, Birmingham.
Second : Miss Atkins, Potters Bar.
Third: Miss Staple, Southampton.
(Reversing Test)
Fist: B. Young, Southfield Road, Hinckley,
Second: J. E. Pattison, Jnr., 4 Rosslyn Avenue, Low Fell, Gateshead-on-Tyne.
Third: J. H. Turnock, Trent Terrace, Leek Road, Hanley, Stoke-on-Trent.
Fourth: G. F. Wilment, 51 Harvard Road, Isleworth.
Fifth: C. H. Middleton, 60 Woodgate, Sixth: T. J. Norton, Belton Lane, Grantham,
(Speed Judging Contest)
First: L. O. Baitlett, 340 Glossop Road,

Second: W. J. Roden, 25 Noel Road, Birming. ham, ${ }^{15}$. N . Dyer, z2 Gibson Road, Birstall, near Leicester.

## TREASURE HUNT

First : C. Summers, Hoveringham, Notts, Second: John Bament, 175 Abington Avenue, Northampton
Third: R. Grewcock, Holmeside, Shilton Road, Barwell, Leicester.

GHILDREN'S RACES
(Race No, 1
First : Peter Bellotti.
Second: George Fulwood. Third: Reg. Hutton.
(Race No. 2)
First : Lawrence Thompson. Second ; Roger Powell. Third: John Marshall.
(Race No. 3)
First : Derek Thompson. Second: Philip Roden. Third: Eric Swannack.
(Race No. 4)

First : Jean Pallett.
Second: Eileen Slimm.
Third: Betty Youngs.

## (Race No. 5)

First : Joan Revill
Second: Betty Southern.
Third: Hazel Messent.
(Race No. 6)
First : Dorothy Southern,
(Race No. 7)
First: Trevor Allen.
Second: Betty Middleton.
Third: Pat Symmons.

## A 60 M.P.H. CRASH TO ORDER-AN INTERESTING EXPERIMENT

MOTORISTS and pedestrians, who were passing the Morris Works at Cowley recently were horrified to see two cars dashing headlong at each other on a private road.

Realising that they could do nothing to avert the accident they watched spellbound as the two cars hurtled towards each other, and the inevitable head-on crash at a combined speed of $60 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. As the two cars met there was a terrific impact, and the sound of rending metal and torn wood. One car was flung yards out of its course, while the other, with a sickening lurch, turned over on its side.

It seemed that anyone in the cars must have certainly been seriously injured, but officials of the Company quietly assured the spectators, much to their relief, that the crash was an experiment specially staged, there being no passengers, as the cars were electrically controlled from a distance.

The two cars were a Series " M " Morris Ten of mono-construction design, i.e. chassis and body welded together, and a Series 11 Morris Ten of the more conventional type of bolted chassis and body.

Despite the fact that the Series II Morris Ten was $2 \frac{1}{2} \mathrm{cwt}$. heavier than the latest type, the Series "M" car, it suffered much greater damage and was the one which was overturned as a result of the impact. It also suffered much more extensive damage than the Series " M " model. Its entire frame was distorted, the front axle badly bent, and the damage

generally extended as far as the rear springs. The Series " M " Morris Ten, however, was only damaged in a small area round the front axle and bonnet side, which Morris engineers state can be quickly repaired by welding in the necessary new sections.

The older type car, however, will have to be entirely stripped and rebuilt.

The experiment confirms the opiniot of the Morris Company that this type of mono-construction results in a much stronger structure of greater rigidity and stability, and is a triumph for the adoption of this type of modern motorcar construction.

An interesting point of the experiment was that the Triplex glass fitted on both cars remained intact.



## THE LINK

By SHOWELL STYLES

LET me say at once that I do not drive a Morris car. In fact, I don't drive a car at all. My doctor has advised me to bicycle at the week-ends for my health, and when I go up to Town I travel by train.
As a rule nothing out of the ordinary happens on my train journeys. I am grateful for this, as it gives me opportunity for studying the latest nonographs on sphragistics, a subject upon which I may say I am something of an authority. Besides, my nerves are not what they might be. But I digress.
It so happened that my nephew, a young man to whom sphragistics mean less than nothing (though in many ways he is an admirable young fellow), had been staying with us for some days. 1 mention this fact in order to explain another circumstance. I had risen early to catch the early train to London, important reasons having arisen why I should at once consult Case No. 435 Y in the British Museum, and as I hurried through the front door I snatched up a motoring magazine belonging to my nephew in mistake for Schweinfleish's monograph on the Sphragistics of the Bong Dynasty. I am apt, so they tell me, to be a little forgetful in lesser matters, and I was twenty minutes early for the train.

## Sensation at the Station-

I noticed, as I paced up and down the platform, that the waiting passengers were staring at me in a rather marked manner. Their expressions were not visible to me, as 1 had forgotten to don my spectacles. But I told myself with a certain pride that the fame of Professor Mould, the foremost authority on sphragistics, must be spreading if his mere appearance occasioned such a stir.
Not until I had entered the train and it was in motion did I realise that I had failed to exchange my pyjama trousers for the customary day wear.
A little cogitation informed me that my season-ticket, card-case and all my money was in the pockets of my trousers at home. Further thought convinced me that the spectacle of a trofessor of sphragistics in his nether night-gear was scarcely conducive to dignity.
1 shot a hurried glance round the carriage. Its only other occupant whas a large man in a tweed overcoat, Who seemed to be eyeing me with train amusement. Fortunately the and 1 was one of the corridor species. my top-hat no time in gathering up and retiring the motoring magazine at the end to a small apartment temaine end of the coach, where I the train behind a locked door until During arrived at Victoria.
perused some period, I may add. I
magazine some pages of my nephew's
a number of found therein, amongst of articles and sketches


## Wherein is shown how like calls to like in unexpected situations

incomprehensible to a sphragistician, a certain amount of highly interesting letterpress. One article in particularbut I digress again.

At Victoria I released myself from my voluntary confinement and descended to the platform. Vulgar laughter greeted me, accompanied by scarcely-veiled sneers. Slanting my top-hat to a formidable angle and projecting my beard in an arrogant manner far removed from my usual dignified expression, I forged through the crowd to the ticket-collector and grasped him by the elbow.
Derisive yells and cat-calls sounded from the less self-controlled members of the crowd, and one mountebank began to sing:
"Diddle-diddle dumpling, my son John
Came to Town with his Py-jams on."
"I am Professor Mould!"' I shouted above the noise. "I have unfortunately failed to don the trousers containing -"'
"Tickets, please !" retorted the collector sharply. He was evidently new to the job.

## -and Trouble at the Terminus

" I have no ticket," I pointed out in a reasonable manner, " and therefore cannot give it to you, my good man."
"Then pye up, and look sharp!" he retorted, extending a grimy palm. Impatient shouts from the crowd applauded this suggestion. I took off my hat to them in a conciliatory manner and turned again to the ticket-collector.
" Unhappily," I began, " I have no money with me-"
"No money!" interrupted the official rudely. " 1 thought as much. Y " oughter know better, yer wicked old billy-goat! I seen your kind before, all beards an' cock-eyed clothes. One $o^{\prime}$ them blinkin' Soviets, that's what you are, goin' about in a state of 'arf-nakedness! Bill!" he shouted to a distant colleague. "Get a bobby!"

I protested as forcibly as I was able, but it was of no use. Things looked very black.

Then there came a stir in the crowd. It was the man who had been in the railway carriage, the large man in the tweed overcoat. He forced his way to us.
"It's all right, ticket-collector," he panted with a grin. "This gentleman's a friend of mine. I'll pay for bis ticket."
Before I had recovered from the effects of this miraculous intervention I found myself being hurried past the barrier and through to the front of the station. My new friend called a taxi and bundled me inside.
" Nearest Gent's Outfitters," he told the driver.

In five minutes I was clothed in a fairly respectable pair of nether garments.
" And you'd better allow me to lend you a couple of pounds,"' said my benefactor. " You'll need it for lunch and the return journey, I expect. Here's my card. Pay me back when you like. 1 must get along to the office."

## Explanation

" One moment, sir," I said. " I am at a loss to understand your extraordinary beneficence to an utter stranger. What link is there between us which causes you to become my guardian in the hour of need? Can it be that you are one of the chosen few who recognise me at sight as Professor Mould, the sphragistician ?"
" 'Fraid not, old man," returned the large man apologetically. "I don't even know what a sphrag-what-you-said is," He pointed to the motoring magazine which I still held in my hand. "That's the link, as you call it."
"This ?" I exclaimed, peering at it.
" Yes," he nodded. "I spotted it in the train. You see-I happen to be a Morris owner as well. So long !"

Some children in a school were being taught road "safety first" precautions. A visitor turned to one little girl aged five and asked: "What is red for?" "Stop" was the reply. "What is green for ?" "Go," replied the child. "What is amber for?" Without hesitation the child replied: "Let in your clutch."

Magistrate at Tottenham: "Your father should teach you not to hang on to lorries."
Boy Cyclist: "Why, it was from him that I got the idea!"

Clerk: " Have you anything you wish to say?"
Woman Defendant: "No. I have no evidence against me."

# FROM CRADLE 

MAJOR ALFRED THOMAS GOLDIE GARDNER, who won for M.G. the title of world's fastest light car when he reached a speed of over $186 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. in his super-streamlined Magnette last November, has probably had more narrow escapes from death than any other racing driver alive to-day. Yet at forty-nine his only disability is a slight limp, which some wit once attributed to his habit of dangling one foot in the grave.

AS a lad in short trousers he accidentally took a header into a large cistern, swallowed a quart or two and then was hauled back to terra firma by the seat of those trousers. Close shave No. I.

JUNE, r907, brought the realisation of an ambition cherished throughout his schooldays at Uppingham - young Gardner joined the Honourable Artillery Company, from which he transferred two years later to the Ceylon Mounted Rifles. After Ceylon came Burma, and severe attacks of malaria and enteric fever. And no sooner had he settled the score with those virulent "bugs" than war broke out, providing bigger game for Goldie to tackle.

OVER to France he went in January, 1915, and immediately his fine qualities as a soldier gained recognition ; a Captaincy for a start, then further promotion to the rank of Major before 1916 was out. Next we find him mentioned in dispatches by Sir John French for distinguished services at Loos, and afterwards awarded the Military Cross for his part in the Battle of the Somme.

REMINDERS of an ever-growing debt to Providence came one after another. Goldie's misadventures during two years' service in France included stopping a shell fragment, crashing in an aeroplane, being buried alive, gassed and holed by a bullet. The last of these contretemps put him out of the war we call Great, and from the end of 1917 to February, 1919, he remained in hospital.

AFTER peace broke out he served a couple of years with the Home Forces and was then invalided from the Army. One imagines him circumnavigating banana skins and the ladders of exterior decorators with some care during the period from I92I to 1926, for those years passed without a single near shave worthy of the name.
T HE instinct to live dangerously was still strong in him, however, and in 1926 Gardner had his first taste of motor racing, at the wheel of a Gordon England Austin Seven. His mounts have been many and varied-Austin, Rover, Salmson, Amil-car-but the marque that was to bring him the greatest fame is the one he now pilots exclusively, M.G.

## From Cradle to Cockpit-contd.

GOOD all-rounder that he is, Goldie has performed outstandingly on the road, the track and in hill-climbs, and to his wartime M.C. he later added two further "decorations," the Brooklands Gold Badge for lapping at over 120 m.p.h., and the Montlhéry Gold Button for turning the autodrome in excess of $200 \mathrm{k} . \mathrm{p} . \mathrm{h}$.

GOLDIE made Brooklands history by being the first man to top the century for an officiallytimed lap in a 750 c.c. car-M.G., of course. Then, despite the bashing he had received at the hands of Kaiser Wilhelm's lieges, his stamina was always remarkable, and the Double Twelve, Thousand Miles and Five Hundred Miles races were among his favourite " dices."

AN accident which-once again-came near to robbing the racing world of this stalwart soldier will be remembered by all who witnessed the Tourist Trophy Race of I932. A bigger car crowded him out on Horse Trough Corner, whereupon his car left the road and executed a triple somersault.

RESULT-game leg re-broken, neck vertebrae fractured (an injury which the doctors failed to notice for several years), both clavicles broken and considerable damage to the wrists. This particular pile-up was similar in its circumstances, but not in results, to one which had befallen him the previous year in the same race. The 1931 crash, although ugly enough in all conscience, didn't have serious consequences.

DOWN but not out, the Major had to give racing a miss for two years after his second Ards packet, then he returned to the fray in earnest. Since his come-back in 1934 he has put up some truly astonishing performances on M.G. Magnettes-1100 c.c. Brooklands lap record at $124.5 \mathrm{~m} . \mathrm{p} . \mathrm{h}$., British records for 50 kilometres and 50 miles, both at over I20 m.p.h., flying mile and kilometre records in 1937 at 148 -oddwith these and other achievements behind him; little wonder that Gardner succeeded last year in enlisting the official support of Lord Nuffield and the M.G. Company. But that is anticipating.

NEVER free from his hoodoo for long, Goldie once more came a frightful cropper in 1937 when his big blue Mercedes roadster turned turtle, pinning the driver beneath it and giving his old Wounds a new excuse to make nuisances of themselves.
A period of irksome inactivity followed, but no sooner was the patient out and about again than he had a fresh outlet for his boundless energy and enthusiasm the new super-streamlined car was gradually taking
EVEN the experts confessed themselves surprised, staggered might be a better word, when that
little
grey-green projectile screamed along the Frank-
furt-Darmstadt autobahn at a two-ways average of 186.567 m.p.h., approaching within a mere $6 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. of the double century on one of its runs. That was on 9th November, 1938, and recently this epochmaking speed burst had a fitting sequel when Gardner was presented with the Segrave Trophy in recognition of 1938's most outstanding feat on land, sea or water. And now, as recorded on another page, he has attained a speed of 203.5 m. p.h. on the Dessau autobahn, and, with the engine bored out to 1500 c.c., a speed of 204.5 m.p.h. He thus annexes the Flying Kilometre, the Flying Mile and the 5 Kilometres in the IIoo c.c. class, and the Mile, Kilometre and 5 Kilometres in the 1500 c.c. class-a magnificent performance.

RISKS are the breath of life to this tall, quietvoiced speedman, and so long as tuners like Robin Jackson can go on conjuring fresh prodigies of power from an engine which the Treasury would modestly rate at II h.p., Alfred Thomas Goldie Gardner will be the man to put those horses into a gallop. An amateur at racing and the record-breaking game, he pursues an ordinary humdrum business career in the motor trade at Croydon "between times," plays golf at week-ends and occasionally curses the game leg that has put an end to more vigorous activities on the tennis court and polo ground. Never mind, Goldie, it might have been something besides a leg!

## TREES AND LIGHTNING

COUNTRY people will often tell you that some kinds of trees are never struck by lightning. I have been told that it is quite safe to stand under a beech during a thunderstorm, as this tree never falls a victim to the lightning stroke. This idea regarding certain trees is very ancient indeed and probably originated in some religious belief of the sanctity of some plants. Thus the laurel was dedicated to Apollo and was held to be immune from any damage by the elements.

It is not correct, however, to say that some trees are never struck by lightning, although certain kinds are much less likely to suffer than others. A tree which seems to attract the lightning flash more often than any others is the white poplar. Next the most common victims are the oak and the elm, whilst much less frequently does the lightning strike the pine and the ash.
Trees which are only struck on very rare occasions are the beech, the birch and the maple.

These facts concerning the comparative immunity of some trees have been established after a great deal of observation in many parts of the country. Thus it has been noticed that, even if a nearby pine tree is much taller than an oak, it is the latter that usually attracts the lightning.

In the same way a large isolated beech will pass unscathed through the storm, meanwhile one of a row of much smaller elms will be wrecked. S.L.B.


The romance of an old stager at present enjoying honourable retirement

ALOT of people wonder why I keep the old 1926 bull-nose two-seater. It hasn't been out for five years, they say, and merely takes up valuable garage-space. These critics point out, furthermore, that it will be at least seven years before any of the children will be old enough to drive, so what do I think I'm playing at ? Starting a museum ?

Certain prominent residents have even been heard to suggest police intervention, hinting that investigation of the dickey-seat would bring to light the severed torso of some murdered insurance-salesman.
It is to rebut such scandalous rumours that I now propose to publish the true facts regarding old Beauty's past career. I shall then throw myself upon the mercy of my friends and fellow-citizens and ask them, as man to man, whether they would consign such a car to the scrap-heap.

## Her Acquisition

I had just come down from Oxford when I first saw Beauty. New and shining, she was delivered at the front door as a present from my father. I had planned to have a short holiday in Brittany before starting work, and Beauty fitted in with that holiday as pickled onions go with beer. I spent a fortnight running her in, and when we landed at St. Malo both she and I were ready for anything that might come along.
After breakfast I pushed off on the road to Dinan, where I aimed to have lunch and spend an hour or so looking at the old fortifications. Beauty was glad to get away from St. Malo's cobbles and flew like a bird along the rather poor road which follows the
course of the Rance. She ran without a murmur of discontent and we had covered twenty-five kilometres in as many minutes when we came to the scene of the dispute.

I turned a sharp corner and arrived slap into the middle of it. In fact, if Beauty's brakes hadn't been exceptionally good I should have knocked down some of the chief participants.

## The Stage is Set

A crowd of villagers surrounded a stationary car, all talking fifteen to the dozen and throwing their arms about in a most abandoned manner. In particular one blue-trousered worthy, who waved what looked like a broken dog-lead, seemed about to have an acute attack of apoplexy.
Sitting in the car-and this was where my heart bumped like a broken big-end-was the most delirious blonde my young eyes had ever seen. A large G.B. on the back of the car proclaimed her my compatriot and her air of bewilderment suggested that her French was insufficient for the situation.

In about two seconds I had offered my services as interpreter to both sides and was being told the facts of the case. The gentleman in blue trousers. it appeared, had been crossing the road with his dog, Alphonse, when the English girl's car, swerving to avoid a fowl, had flung him rudely to the ground. He was not hurt, but in the stress of the moment Alphonse's lead had snapped and Alphonse himself disappeared along the road to Dinan.
Alphonse, I gathered, was a hound of a speed Alphonse, I gathered, was a hound of a sp his
truly formidable, who had won many prizes for

## Beauty Stays On-contd.

master. And by now, nom d'un nom de dix mille cochons, he would be half-way to Bordeaux. Alphonse was worth, at a modest estimation, five thousand francs.
The girl, who introduced herself as Jane Beaumont, confirmed the first part of the story and admitted she had only a hundred francs or so in her purse. She was staying with her people in Dinard and was coming back from paying a visit to an old schoolfriend. Her eyes flickered a little as she said this, and my mind was made up.
" Come," I said to the multitude, " we will chase this Alphonse and see if he is as speedy as you say. Jump in, Miss Beaumont."
I sat her in the seat beside me while the bluepanted gentleman and three of his partisans clambered into the dickey. Amid cheers from the rest of the village we set off on the chase.

I had just reached 52 m.p.h., in spite of the heavy load, when a cry from Jane (as I propose to call her from now on) took my attention from the road. Following her finger I saw an enormous hound reclining in the right-hand ditch, part greyhound, part Alsatian, and wholly covered in mud.
After I had pressed hard on clutch and brake together, we slithered to a standstill not five yards from Alphonse, and Blue-pants was in the road before we quite stopped. Alphonse, however, stayed not to welcome his master ; he upped out of the ditch and sped down the straight like a record-breaker. Shouting to Blue-pants to climb in behind, I let in the clutch and followed.

## On with the Chase

Alphonse had a flying start, but I would have caught him within a kilometre if he hadn't turned off into a field when I was hard on his tail. Luckily there was a gate ten yards farther on and Jane jumped out to open it without awaiting my orders. The spirit of John Peel was upon us and we intended to see this thing through.
Beauty didn't do the cabbages much good, and I rather gathered they belonged to one of our friends in the dickey. We crossed the field in good time, however, with Alphonse only a lap ahead. I didn't know the open gate through which he escaped led into a ploughed field and I don't suppose it would have made any difference if I had. Beauty bumped and reared a bit and her speed fell to thirty. Even so we lost one of our complement before reaching the stream, and another deserted us in the middle.

There were two feet of water and a steepish bank the other side, so Alphonse, who crossed sedately by footbridge, must have had a good laugh before he started up the boulder-stewn hillside.

For the first time during my ownership I had to put Beauty into bottom gear, and I think the little car found the gorse-bushes particularly troublesome. I have to admit that, in spite of two minutes wasted while he sniffed at a rabbit-hole, Alphonse gained considerably.

It was a different matter when we reached the top and started down the other side. Perhaps I acted foolishly, but you must remember I was only twenty-three at the time and had the loveliest girl in the world laughing and shouting beside me. At all events I let Beauty take the bit between her teeth and, gentlemen, did she take it! She tore through gorse-bushes, negotiated great piles of rocks on two wheels and finally plunged through the far hedge at a good sixty-five.

## Twice Round the Duck-pond

At this juncture, as they say, I began to think things had gone far enough, especially as Alphonse was nowhere in sight. As we hurtled down a steep lane I put out the clutch and tried a little gentle braking. But before I could effect any appreciable reduction in speed we had scattered the denizens of a farmyard, made two desperate circuits of a duckpond and finally broken through into the main road.

Here I was able to stop, helped by a brick wall, and, after assuring myself that Jane was all right, got out to inspect the damage. Only Blue-pants was left in the dickey, a Blue-pants sadly shaken.
We helped him out and laid him on the ground. Almost immediately a huge, furry body shot through the air, and there was Alphonse licking his master's face and receiving his congratulations with evident pride. The three stragglers arrived shortly and it appeared we had arrived back at the village whence we had started.
Nothing now remained but for me to buy several bottles of wine in which we drank to the Entente Cordiale and the future successes of Alphonse. We all parted the best of friends and I drove Jane back to Dinard, promising to fetch her car in the afternoon.
Beauty, bless her, cared nothing for the bumps, scratches and bruises with which her peerless body was covered. She drove so well that we lost our way and took two hours to do fifteen miles.

And that, gentlemen, is why my wife and I retain the battered old bull-nose. What is your verdict ?

[^1][^2]them burn better in windy weather. Matches treated in this way do not absorb any moisture either from the air or from water. In fact the waterproofed matches have been immersed under water for hours and then they lighted just as easily as if they had not been soaked.
S.L.B.


The inertia test machine.


Fitting the metal ends on brake hoses.


Pressure-testing the master cyinder.

#  

## Describing a tour of inspection of where your Morris <br> By F. L. M. 

AFEW months ago Automotive Products Company Ltd. delivered their millionth set of British-made Lockheed hydraulic brakes.
This huge production has been accomplished in little over ten years, because the present giant factory for making Lockheed brakes in Leamington was not opened until 193I. Previously they had been made in quite small numbers in an earlier factory, and prior to that they had been imported from the United States, where they were originally invented by a Mr. Loughead. The spelling Lockheed was adopted because the American sponsors feared that Loughead might be awkward for people to pronounce.
Morris Motors were the first customers for Lockheed brakes entirely produced in England, and they are, of course, fitted to all models in the Morris range, also to all Wolseleys and M.G.s.

The factory is a most surprising place on the outskirts of Leamington, and many readers no doubt will have passed it on their way into the town from Banbury. It has a frontage of 700 ft . on the main road and covers some fourteen acres. It is growing all the time, and on the occasion of a recent visit the latest addition was a 600 -ton chimney, 135 ft . high, to carry the smoke away from the boiler which is to warm the shops and offices next Winter.

Borg and Beck clutches, Thompson tie-rods, aircraft components, oil filters, and marine and industrial hydraulic controls are made in shops adjacent to the main factory where the brakes are produced.

## Great Responsibility

The making of brakes is a worrying job because of their vital nature. The all-important thing is that they must not go wrong, and in consequence one finds almost as many people testing and inspecting as there are producing.

A tour of the Works can logically begin in the laboratory where all materials are analysed. Metals are tested for hardness and toughness, and rubber for its strength and durability.

There are rubber cup washers in the master cylinder and in the wheel cylinders, whilst the flexible hydraulic connections are also, of course, of rubber. All these rubber parts must be proof against the action of the Lockheed orange fluid, and they are all specially made for their respective duties.

The principal lesson learnt by the visitor to the made for their respective duties.
The principal lesson learnt by the visitor to the
laboratory is to avoid filling the container of his

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## THE MILLION

the Lockheed Works at Leamington brakes are made

## HARRIS



braking system with anything except the recommended orange fluid. When people do so and complain later to a garage that their brakes are defective, the laboratory at Leamington obtains a sample of the fluid which was in use.

One such sample, which appeared to be largely engine oil, showed under test in the laboratory that rubber parts soaked in it swelled to three times their normal size in six weeks!

Moving on from the laboratory to the research department, the visitor encounters a number of impressive machines which almost exactly reproduce the conditions under which car brakes have to work. Here they test complete assemblies for retarding power and wear.

## Pressure Tests

In other parts of the factory you see components undergoing pressure tests. When a man treads heavily on his brake pedal in an emergency he exercises a pressure of about 200 lb . This loads the hydraulic pipes and cylinders to the extent of about 800 lb . per sq. in., and all components in production are tested to at least double this pressure. The rubber hoses are all tested to withstand a pressure of 3000 lb . per sq. in. and some are subjected to 4000 lb . for twentyfour hours. Approximately one per cent. are given a destruction test, the usual bursting pressure being something over 7000 lb . per sq. in.
To make sure that the rubber hoses will not deteriorate on account of vibration, samples are taken and are flexed violently through ninety degrees in an electrically-driven machine for days on end. They must not expand at all or they would make the brake pedal feel spongy. So while they are under pressure their lineal and diametrical dimensions are very closely watched.
If a hose ever develops a defect (perhaps in a Crash) it must be replaced entirely, because the hollow bosses of the metal ends are shrunk over the rubber in a machine which exerts great pressure.
Leaving the inspection and testing departments of the Lockheed factory, one finds production going ahead all in one giant shop. The shoes are rolled to their curvature from T-section steel and all the holes for curvature from T-section steel and all the
by a lining rivets are drilled in one operation
a machine with sixteen chucks.
Toulded linings, which are delivered from their makers
shous whed to shape, are pressed very firmly to the
loes while the riveting machine is at work and are


A general view of the brake factory.


Soldering fluid tanks on master cylinders.


A multi-spindle machine drilling brake-shoes.

## Brakes by the Million-contd.

then ground true so that they will bear evenly on the drum. It impresses one as being a much sounder plan than the haphazard methods of a few years ago, and the advantage of getting replacement shoes when the linings are worn out is very evident.

Master cylinders for the larger cars are castings, but the Morris Eight model is made from steel tubing to which the fluid reservoir is soldered. Tremendous care is taken to prevent corrosion. At every stage of production iron and steel parts are continually
more than 5000 sets of brakes does not contain any parts which might be incorrectly assembled owing to a mistake being made by one of the 2560 people on the pay-roll.
The writer sought diligently in the Lockheed factory for any components which it might be wise for Morris owners to adjust or examine from time to time, but nowadays there are none. Your responsibility ends with ensuring that the correct orange fluid is maintained at the proper level in the reservoir. Owing to the almost perfect balance of pressure, the linings will not want renewing for about 50,000 miles. The only things which can bring their life to an earlier close are grossty excessive use of the brakes or the consistent overfilling of the back axle

with oil or the front hubs with grease, causing the linings to get saturated with lubricant.

So far as human ingenuity can devise, Lockheed brakes have no components which can go wrong. One leaves the factory full of contentment. As the writer's passenger remarked: "We're O.K. for stoppers."

## GARAVAN MOVEMENT FORMS UNITED FRONT

$\mathbb{N}^{1}$INE organisations interested in caravanning have taken part in the formation of a National Caravan Council. The aims of the Council are to further and protect the interests of the whole movement, from the manufacturer to the private user, to conduct enquiries and prepare expert reports on questions of interest to the movement, and generally to act as spokesman for the movement vis-à-vis Parliament, Government departments, local authorities, landowners, the Press and the public.

The constituent bedies who are represented on the Council are the

British Caravanners' Club, the Caravan Club of Gt. Britain and Ireland, the Caravan Distributors' \& Agents' Association, the Caravan Manufacturers' Association, the Trailer Caravan Club, The Caravan, the Camping Club of Gt. Britain and Ireland, the Central Committee on Camping Legislation, and the R.A.C. Other constituent bodies may be added in the near future.

Subjects to which the Council has first turned its attention include the use of caravans in war-time, relations between caravanners and local authorities, and the best lines of development of caravan sites.

Yellow Lights Not Essential A. S we know, since the first of January of this year all auto mobiles registered in France must be provided with yellow head lights. At the same time, foreign vised tors driving their own cars registered in their own country are not obligy to comply with this requirement. withmay use their white headlights out infringing the French laws.

Woman motorist at Tottenham Police Court: "It never crossed my Pohind that the policeman was going to mind that the policeman was offence, charge me with a traffic offence." thought he wanted some advs!

## YACHTING AND MOTOR-BOATING



SIMPLE COASTAL NAVIGATION

certainly. Distance on a chart is expressed in nautical miles, one minute of latitude equalling one mile, the scales of latitude being those shown at the sides of the chart. When measuring distances, that part of the scale opposite to the course being measured must always be used.

On every chart will be found one or more compass roses composed of two rings, the outer ring giving a true direction and the inner a magnetic reading. The beginner may, for the time being, ignore the true readings and concentrate on the magnetic direction, which corresponds to his magnetic compass.

Here a complication known as compass deviation enters, but fortunately can be very much reduced and in some few cases almost cured by the compass
(continued on page 485)

"Brian Boru," a 32-foot Brightlingsea smack, at Cannes. She is engined with a Morris "Navigator" unit and was on passage to the Seychelles when the photograph was taken.

# BIRTHPLACE OF AN EMPIRE-BUILDER 

> In a quiet Hertfordshire township, Rhodes of Africa, one of the greatest forces in the rise of the British Empire, had his origin

AS you approach Bishop's Stortford from London, you see on the right a group of stucco-fronted houses of early Victorian date. They are not picturesque but of typical suburban residential type. Yet one of them is of a very great interest, for here it was, on 5th July, 1853 , that Cecil John Rhodes was born, one of the several sons of the Rev.F. W. Rhodes, vicar of Stortford.
No sketch is needed here of a career whose record is writ in the politics of his time, and indelibly scored in the history of his country.

Like Moses, it was not given him actually to enter that Promised Land of Empire he had seen from afar, but when he died in 1902, the fruition of the idea was at least assured. He looked, like some prophet, upon South and Central Africa.

## Dream of an Imperialist

"Rhodesia" was on the map ; but he looked upon the map of Africa, and with a comprehensive span said: "English, all English, that's my dream!" And a pleasant dream too.

Thinking thus, it behoves us to honour this great Empire-builder in the bulk, even though we may criticise him in detail. And at last the importance of


Cecil Rhodes' birthplace at Bishop's Stortford.
his birthplace has been recognised locally. The house and two others adjoining have been purchased and the grounds belonging to them have been opened to the public as a memorial to this far-seeing expansionist. On 12th July of last year the opening ceremony was held.

## DO SWIFTS SLEEP ON THE WING ?

THAT remarkable bird, the swift, is the last of the Summer migrants to come and the first to go. Only from about the middle of May until the end of August can one see these members of the swallow tribe rushing backwards and forwards in the air at a considerable height above the earth.
The swift, which is of a dull sooty black colour, with a very faint suspicion of white under its throat, gets its name from its marvellous powers of flight. In proportion to the size of its body the wings are very long and shaped like scythes, and the whole design of the bird is suggestive of rapid flight.
The swift feeds (its diet is small flies) and drinks whilst on the wing, and it also collects its nesting material in the same way. The bird is hardly
ever seen on the ground, and, in those instances which the writer has come across, the swift then seems to find it difficult, and indeed almost impossible, to rise into the air. In fact, the swift on the ground is so helpless that it is easily capturcd, and the coming to earth of the bird is probably due to some accident. Neither does the swift settle on trees or roofs, and these birds never collect on telegraph wires just before migration as is the case with other members of the swallow tribe. About the only time when the swift is known to settle is at nesting time, when the bird makes use of holes in ruins and cliffs and positions under the slates or tiles of house roofs. An interesting question concerning this remarkable bird is:

Where does it go at night? There is an old country idea that swifts spend the hours of darkness at a great height above the earth, using as little effort as possible to keep themselves aloft. Whether something like this does happen it is extremely difficult to say.

On a Summer evening, as long as ever you can see, you will notice the swifts sweeping backwards and forwards across the sky. Those who are out and about with the coming of dawn can again notice the birds, often at such a height above the earth that they appear to be little more than rapidly moving specks. Generally speaking, the night haunts of most of our birds are well known, but no one has yet discovered where the swifts pass the hours of darkness.

## RUINED AND DESERTED CHURCHES

INTERESTING AND FORGOTTEN RELICS OF ONCE
PROSPEROUS PAROCHIAL LIFE

By CHARLES G. HARPER



IT is not generally realised that we have in this crowded country of ours not only many still lonely places, but also a great number of ancient parish churches completely ruined and deserted, and many others derelict, but not quite so far gone in neglect and decay.
The largest number of these is found in East Anglia, which is at this day a rather depopulated region. One reason for this is to be found in that mediæval pestilence, the "Black Death," which took off the majority of the population, and nowhere more severely than in East Anglia, which then was a region of exceptionally many and large churches. Norfolk and Suffolk were then the centre of numerous thriving textile industries and wealthy communities. We see there to-day vast churches, long more than half


The barn of Ruxley Farm, which was once Ruxley Church.
in ruins, and others entirely roofless as a result of that scourge, from which great tracts never wholly recovered.

North of Winchester, some three miles on the Stockbridge road, you come to Lainston Woods, through which there is a short cut to Sparsholt. In the woods is the ruined chapel of Lainston, which
was held in conjunction with the living of Sparsholt, whose vicar holds a service (chiefly for the benefit of the birds, we may say) once a year, legally to secure his stipend of $£ 60$ a year for the chapel. It is a charming scene-deeply embedded in the woods, and near the old mansion of Lainston. It is of romantic interest too, for here it was that Elizabeth Chudleigh was married to Captain Hervey of the Royal Navy, whom she met at Winchester races, and hastened off to get wedded here. At that time she was one of the Maids of Honour to the then Princess of Wales.

She kept her secret and her place as Maid of Honour at Court. Meanwhile Hervey succeeded in an unexpected way to the Earldom of Bristol (which has since, by the way, become a Marquisate). She repented of her marriage and went so far as to abstract the record of it from the register. She then became associated with Pierrepont, Duke of Kingston, and was sued in the Consistory Court on a charge of jactitation of marriage. The finding of the Court, which it was alleged was collusive, was that she was a spinster. Shortly after, she married the Duke of Kingston, who died in 1769 . This romantic and adventurous lady died in 1788.

## A Group of Three

There were once no fewer than three churches in one churchyard at Great Melton, near Wymondham, in Norfolk, but one of these disappeared very long ago ; the surviving two are those of Great and Little Melton. You will find Great Melton to be a place not in the least answerable to that description ; and as to Little Melton, you might seek it all day and then not find it. The ecclesiastical parishes were amalgamated by Act of Parliament in IyIo, when the church of All Saints was allowed to fall into ruin. That of St. Mary partly collapsed in 1883 , and subsequently the formerly abandoned church of All Saints was rebuilt.

## Ruined and Deserted Churches-contd.

There is a yet more remarkable instance, also in Norfolk, of three churches in one churchyard. This is found near Aylsham, where two of the three churches survive.

These are those of Whitwell and Reepham; the former church of Hackford was burned down so long ago as 1543. These three churches served the four parishes of Reepham, Whitwell, Hackford and Kerdiston, which last place would not seem to have had a church of its own. The illustration shows Reepham Church (on the right) and that of Whitwell, left. They are built end to end ; the east end of Whitwell Church forming the western wall of Reepham. It has been my curious experience-and, of course, that of others-to stand in the churchyard and to hear the clergymen of these two churches preaching their sermons at the same time. There remain just a few stones of the long-destroyed Hackford Church.

## The Silent Bell

Two miles south-east of Malmesbury is the parish of Bremilton, in a very lonely situation. There is no village and but two or three farms. The litile Early English church is no longer in use, and is ecclesiastically joined to the neighbouring parish of Foxley. The one bell long since was removed from the bell-cote, and stands on the floor. Chickens and ducks run about what once was the churchyard.

It is not often that an ancient church is wantonly destroyed, but such a fate befell that of South Wheatley, in Nottinghamshire, near Retford. The population of South Wheatley long ago dwindled away, and it was decided, some sixty years ago, that the church was therefore an encumbrance and too costly to maintain. The

day survey, as given by William the Conqueror to his half-brother Odo, Bishop of Bayeux. One Sir Richard de Rokesley owned it about 1310. The church was abandoned and desecrated in 1557 , with that of North Cray, when Cardinal Pole agreed to

## Who Knows?

But strange things happen in this age of revivals, and since even this neighbourhood is developing, it might well be that some day Ruxley Church will be restored. The like of it happened some twelve years ago, when Chingford old church, in Essex, which long had been a roofless ruin, thickly overgrown with ivy, was reconditioned.

One of the several reasons for the vanishing of villages is found in the changed economic conditions which throughout the centuries have overtaken these rural communities. So far back as the



IT would be interesting-but, I am afraid, depress-ing-to obtain the opinion of motorists in general as to the magistrates by whom, in the first instance, all prosecutions for alleged motoring offences are heard. It would not be a favourable opinion ; and to say that is to put the matter mildly !

It would seem that magistrates, as viewed by the motorists summoned to appear before them, are almost invariably old gentlemen whose intellectual powers have long since decayed. Their knowledge of the law is shaky, and their knowledge of modern motoring conditions well-nigh non-existent. Among adjectives commonly applied to them, we may note "fossilised" and "woollen-headed" as being among the more charitable examples.
Is this justified ? When one is personally acquainted with a body of magistrates and has a share in their work, it is difficult to believe so. Most magistrates, to be sure, are men of a certain age ; but how many young men can find time for public work of a deeply responsible nature for which there is no remuneration?

## Intelligence and Common Sense

As for intelligence, it is true that the average magistrate may not be an especially sharp, quickwitted person. It is seldom necessary that he should be so. His work on the bench demands chiefly that he should exercise plain common sense-and, when I think of my own colleagues, I cannot see in them any obvious lack of this essential quality.

As regards knowledge of motoring conditions, I believe that every single magistrate of my acquaintance owns a motorcar. The great majority-certainly three out of every four-are owner-drivers. They may not be motoring experts; but they do "know one end of a car from the other."

How then are we to account for the painfully low opinion which motorists in general have of
magistrates ? I believe that this arises from a number of simple misapprehensions.
For instance, motorists resent the fact that magistrates spend so much of their time in inflicting fines for minor offences. It is argued that the roads could be made much safer if less attention were paid to dirty number-plates, defective tail-lamps, etc., and if a more serious effort were made to discourage "cutting in" and other such forms of bad driving.

## The Police Provide

Personally, I agree; but please note that the magistrates are not consulted as to what cases they prefer to deal with. The police find the cases, presumably in accordance with instructions given by the Chief Constable of the area coucerned. They bring the cases into court-and it is only then that the magistrates have any part to play.

It may be claimed that magistrates, even at this stage, could do a great deal to direct the efforts of the police into more profitable channels. They could make a point of inflicting only trivial penalties for certain offences, and their chairman could, by means of a few pointed criticisms, indicate the Bench's disapproval of such minor charges being brought.
It is true that this could be done; but would it really be justifiable for magistrates to adopt this sort of rôle ? After all, it was Parliament which decided that number-plates must be kept clean and legible, and that it should be an offence to have them bent or dirty. Are magistrates to say "Pooh! Parliament may have decided this ; but it is obviously absurd and therefore we shall not enforce it"?
seems to me that this would be a very presumptuous line to take.

The average magistrate prefers to say-with a humility which surely is to his credit: "Parliament made this law, or at least approved it. The police have found several motorists openly ignoring it.

## We are not Really so Unreasonable-contd.

It all seems rather absurd and trivial ; but while this law exists, I must play my part in seeing that it is enforced." He may perhaps recall the day when he was first appointed, and when he took a solemn oath to act in just this way.
Magistrates, then, can surely plead " not guilty" to the charge of causing or encouraging what has been termed the "petty persecution" of motorists by the police. Let us turn now to another point. It is often claimed that magistrates do not use sensible discretion in grading the penalties which they inflict. They do not, it seems, show sufficient leniency to motorists who have merely committed some technical breach of the law, nor are they sufficiently stern with those whose law-breaking is tinged with wanton recklessness and stupidity.
There may be an element of truth in this-but remember that magistrates are only allowed to use their discretion within certain fixed limits. Let us take the case of a motorist who has driven at $35 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. through a so-called "built-up" area. The offence may have been committed on the outskirts of a town, with only a few scattered buildings in sight, and at a time of day when very few people can have been about. At first sight, it is an obvious case for leniency.

## Parliament's Decision

Unfortunately, Parliament has decided that, in every such case, there must be a fine and an endorsement of the offender's licence, unless the magistrates can find some special grounds for acting otherwise. All too often, when one looks for these special grounds, it becomes very difficult for the conscientious magistrate to find them.
It is generally not a first offence. The police can probably reveal that this same driver was, two years ago, fined $f_{\mathrm{I}}$ for a similar breach of the law. Last year, his "dossier" may go on to state, he was fined
$£^{2}$ and given an endorsement, again for exceeding the $30 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. limit.

What are the magistrates to do ? They may privately feel that this particular motorist has been unlucky, and they may appreciate that there is no suggestion that his $35 \mathrm{~m} . \mathrm{p} . \mathrm{h}$. was dangerous. The hard facts, none the less, stare them in the face. On what conscientious grounds can they avoid imposing a slightly larger fine and adding a further endorsement ?

This endorsement probably will rankle most ; but remember that Parliament did not say " the magistrates may endorse if it is a particularly bad case." What Parliament said was "the magistrates must endorse, unless they have a special reason for doing otherwise." In the case which I have quoted, that "must" is an injunction from which there is no escape.

## Too Severe

It may be said that the law is unreasonably severe in this: I myself think that it is. It may be said that the police should not bring cases where there is no suggestion of danger: that at least is arguable. To blame the magistrates, however, is manifestly unfair. They neither made this particular law, nor do they select the victims of it.

I must not labour this point; but I hope I have said enough to show that magistrates are not really such unreasonable people as certain motorists imagine them to be. They have a difficult and peculiarly thankless job to do-and I claim that they bring to it as much good sense as can be expected from any group of ordinary, untrained individuals. Perhaps, when they go into court to hear motoring cases, they would be justified in taking a leaf out of the book of the entertainer who was to give a performance in a Wild West mining town. They could paraphrase the notice which this man nailed up, so as to read "Don't shoot at the magistrates! They are doing their best."

## Why not come to Oxford for your Summer Outing?

THERE are few more enjoyable ways of spending a day's outing than to visit Oxford with its wealth of historical associations and architecturally, as well as culturally, famous buildings.
The pleasure of such a visit is with enhanced when it is coupled With a tour of the Morris Motors Ltd. factory at Cowley, the largest motorcar assembly plant in the British
Isles.
After being shown some of the outstandingly famous in the university coach to party is taken by motor into convenient, where it is divided which is allocate groups, to each of each stage in ated a guide who explains of a motorcar the process of assembly For motorcar.
factory they examp, in one section of the fingers of they can watch the skilful
stitching the real women employees
in another section they can see the meticulous care taken to ensure that the coachwork is perfectly cellulosed, while in a third division of the Works they are shown the gradual assembly of the chassis up to and including the moment when the body and chassis are "wedded" to form the complete car.

Later, the thoroughness of the final tests and inspection before the car is ready to leave the factory is demonstrated.

The whole factory is so planned that each part comes to hand by means of a complicated system of conveyors at exactly the moment it is required by the craftsman, and so perfect is the organisation that the factory is capable of a daily production of over 600 complete vehicles.
New machinery and equipment is constantly being added, so that it can justifiably be said that the
factory is one of the most up-to-date in the world, while many of the processes, such as the method of assembling the Series " M " Ten model, which is built on the monoconstruction principle, are unique.

Such a visit cannot fail to be educational and instructive, as in the space of a few hours all the latest and best in modern quantity production methods can be seen, while to round off the day it is possible to arrange for a trip on the Thames.

The prices of such a tour, including railway fares, meals, the tour of the Works and the river trip, are amazingly low, and should the secretaries of any clubs, Farmers' Union branches, Rotary Clubs or Chambers of Commerce or Trade be interested to hear further details, these will be supplied upon application to Messrs. Salter Bros., Travel Agents, of Folly Bridge, Oxford.

# TALKING SHOP ${ }_{\text {cointreron }}^{\text {hin }}$ 

## NOTES, NEWS AND NOTIONS FROM THE INDUSTRY

## Cleaning without Water

CCLEANING one's own car can, according to circumstances, be an enjoyable or an irksome task.
I do not propose to discuss the pros and cons of that statement except to say that any disadvantages involved in car cleaning are greatly minimised when one uses such an excellent polish as "Rayglo," a sample tin of which we submitted to test recently.

Marketed by G. T. Riches \& Co. Ltd., 19/2I Store Street, London, W.C., in $8 \mathrm{oz}$. ., $\frac{1}{2}$-gallon or 1-gallon tins, "Rayglo" Liquid Wax Polish is certainly one of the easiest coachwork shining compounds we have ever used.

I'should like to emphasise that it can be applied to moderately dusty cars without the use of water. I am not suggesting that you would use up a whole tin of "Rayglo" cleaning a muddy car any more than you would use any other waterless polish on a muddy vehicle, but for ordinary Summer use, when we are concerned with dust rather than mud, waterexcept a little sprinkle on the duster - can be regarded as unnecessary.

One of its pleasantest features is the ease with which it can be used, there being no necessity to rub hard either when applying the liquid wax or when polishing off, and it also appeared to be quite economical in use.

The 8 oz , tin retails at is. 9 d .

## Champion Plug Weeks

0
NCE again the Champion Sparking Plug people have embarked upon an intensive campaign to inculcate the necessity for replacing old and duty-worn plugs by new units. Their National Plug Week-from 19th to 26th May - has been extended, so I understand, to take place as a local event on various dates with dealers up and down the country, who will be exhibiting signs stating their preparedness to clean and test one's plugs free of charge.

## An Emergency Ambulance

IILLUSTRATE on this page a Morris Eight two-door saloon fitted with stretchers and carrying gear with a novel application. The apparatus is the invention of Mr. H. C. Lunt, of Oakdene, Pensby Road, Barnston,


A Morris Eight saloon equipped with ambulance stretchers: see paragraph on this page.

The paintwork of the car chosen for the trial could only be described as moderately good, but after the first application of the polish and the final rub it shone with a resplendence which two days' continuous rain failed to dim, and, what is more, left no ugly rainspots.
and possesses the merits of being instantly attachable to any private car without alteration or damage of any kind, and inexpensive. The cradle is designed to carry either one or two full-size regulation stretchers, and there is a canopy provided for protection against the weather. When
one patient only is carried it is possible for a nurse or other attendant to minister to the casualty through the sliding roof, which is in no way interfered with by the cradle fitting.

## "Kar-vel" Carpets

WITH its individual fibres permanently set in a rubber base, "Kar-vel" motor interior carpet must of necessity possess many obvious advantages. It must, I conceive, be definitely draught and fume proof, and I should think, also, that the matter of cleaning has been greatly simplified by this form of construction. "Kar-vel" is a speciality of J.R. Holbrook \& Son Ltd., of Grosvenor Road, Coventry, who will, I imagine, be glad to furnish full particulars to all interested enquirers.

## Price's Road Maps

IHEAR that Price's, the oil people, who some years ago brought out their "Quieter Motoring" maps, are now producing a "Quiet Way" motoring atlas. This is a happy idea


This is Desmo's rexinc-covered sun visor for Series "E" Morris Eights and Series "M," Tens. It measures 11 in . by $4 \frac{\mathrm{in}}{\mathrm{in}}$, and costs 5 s .
stressing only those routes about the country which avoid most of the bustle of present-day highways. The new atlas has a green leather-cloth cover and a celluloid filter window which cuts out the full detail of the maps, contains twelve maps of England, Wales and Scotland south of the Forth and Clyde, and costs five shillings.

Incidentally, by arrangement with The Morris Otener, Price's publish the special Morris Otener maps, which are still available. The address is Price's Lubricants Ltd., Battersea. London, S.W.II.

A campaign urging pedestrians to make hand traffic signals to motorists when crossing roads is to be started by Merton and Morden Safety Committee.

Guessing is the road user's most dangerous occupation. Pedestrians therefore should be sure that all is clear before stepping into the roadway.


## The Moon

Many of your Scots readers will no doubt be interested in Mileator's paragraph on Sun Haloes, in his Musings Awheel, last month.
The Scot has it, of the moon, that:-
" A near-awa' braugh is a far-awa' change, but
A far-awa' braugh is a near-awa' change.'
"Braugh," which I have tried to render phonetically, is a cloudy ring, or halo, and in the mouth of a Scot is a beautiful word; a Welshman can approximate it; an Englishman will murder it.

It translates roughly into: "When the ring round the moon fits closely, the weather will change in the near future; but when the ring is wide spaced from the moon there will be an immediate change in the weather."

It is twenty years since my doubting ears first heard thus expressed the moon's infallibility as a weather prophet, and not once have I known it to be false.

Cleeve Hill, near Cheltenham. "Cymru."

## Two-door Models Preferred

Up to the present I have been in the "eight horse-power saloon" class of motorists, and my present car is a Morris Eight purchased in 1935, which has given me every satisfaction, Apart from the economic advantages of cars of this type, the two-door models make a further appeal to me in that young children can be accommodated at the back with the assurance that they can come to no harm.
I am now considering a slightly larger car, and am impressed by the new Morris Ten. I am, however, concerned by the danger of the children opening the doors whilst the car is in motion, particularly as two of my friends have been very near to accidents in this way.
I appreciate, of course, that the doors may be locked or that slip bolts may be fitted. Neither of these methods is, however, foolproof (or rather "childproof"), and I dislike driving with locked doors, as in the case of accident it might be necessary for the doors to be opened quickly from the outside; the would be the back seat through the front doors would be more difficult than in the case of a two-door saloon. Removal of the inside handles renders it impracticable to lock the doors when parking.

I am sorry that Messrs. Morris Motors Ltd. do not market a two-door Ten, as I feel that position. parents of young children are in my havition. Meanwhile some of your readers may culty, and I methods of overcoming the diffiGreenock shall be very glad to hear of these. tcheenock, Scotland. $H$ H. S. Peake. [Children could easily be lifted over the front seats-ED.]

"You will have to walk to the village, Percy-Mary's using the car as a kitchen."

## Other Owners' Opinions-contd.

## Chinese Symbolism

I thought you would like to see these photographs showing some of the remarkable Chinese ivory carvings which form part of the famous Grice Collection recently presented to the Graves Art Gallery. Sheffield, where they are now displayed to public view. Rescued from China, where the war imperilled its safety, the collection is claimed to be the most extensive of its kind available to the public in any western country !

One photograph shows the Four Heavenly Kings-familiar symbols of the Buddhist faith. Between them, these gentry are supposed to guard the four points of the compass. So that travellers may be able to judge under whose guardianship they are on any particular journey, I will give details of their respective duties. From left to right, they are as follows: Mo-Li-Hung, who guards the south with an umbrella; Mo-Li-Chung, who guards the east with a magic sword; Mo-Li-Shon, who guards the north with the aid of a serpent; and Mo-Li-Hai, who guards the west with his four-stringed guitar.


The Four Kings of Heaven, and (right) Immortality and Peace: see Mr. G. B. Wood's letter.

Immortality is symbolised by the cranes, deer and pine trees in the other photograph, while a pair of phonix testify to the Chinese belief that this bird only appears in times of peace and prosperity. It is also considered to be one of the four supernatural creatures.

The entire collection has been housed in a specially prepared room, and as the subjects of the carvings range from goddesses, priests and a Chinese general, to opium pipes, richly decorated vases and cricket-cages (in China these creatures are kept as pets because of their merry chirrup), readers will rightly judge that the Grice Collection is well worth seeing.

Leeds.
G. B. Wood.

## 150,000 Miles

I Am wondering if you would be interested to know that I am scrapping a Morris Oxford saloon first licensed on 2nd September, 1925, at Southampton (OR8731).

I bought this car in 1926 after she had done 8000 miles, and although she cost me more than would buy a new car to-day, she has been excellent value, having done over 150,000 miles, frequently with heavy trailer loads. The
engine is still "ticking like a watch," and perfectly gas-tight, the original piston rings fitted in the factory never having been out of the cylinders.

I attribute this to excellent workmanship and materials on the part of the makers, and to careful-very carefulregulation of lubrication on my part-over, rather than under.

I have replaced this car with another Morris Oxford-of later date, of course.

Buckie, Banffshire.
W. Macdonald.

## On Rallies

In the May issue the Editor of The Morris Owner honoured me by printing my opinion of The Morris Owner Rally. In that article I stressed the fact that it enabled the ordinary owner, who could ill afford the expense of the bigger rallies, to sample some of the thrills of those functions.

In April, although I was not a competitor, I decided to go to Brighton to see the final stages of the R.A.C. Rally, and I formed one or two conclusions which, I think, will be of interest to all motorists in so far as rallies help the manufacturers to produce better vehicles.

An analysis of the results of the various classes at Brighton suggested very forcibly to me that there is something radically wrong in the manner in which the cars are classified. It seems that the private cars, such as The Morris Owner readers and other motorists

possess, are not given a fair chance in the eliminating tests, which are really suitable only for high performance sports models.
It appears that it would be a much better idea to group the cars in each class into two sections: sports cars and private cars; the definition of a sports car to be a model whose manufacturers claim a sports car performance, or some similarly definite distinction.

In the second place I heard many dissatisfied expressions of opinion as to the value of the road section of the Rally.

## Other Owners' Opinions-contd.

It is quite true that this year a difficult hill had to be eliminated owing to the bad weather conditions, but I certainly think that, en route, all cars should be asked to perform a certain number of eliminating tests. This would inevitably result in a number losing marks before the final control was reached, and thereby simplify the task of the organisers when arranging the final tests.

With the classes split into two sections, these final tests could be arranged so as to demonstrate the manœuvrability of each type to the best advantage without favouring the sports car in the matter of performance.


A well-kept veteran : Mr. W. W. Bishop's Cowley two-seater, about which he writes on this page.

November, 1936, and is really quite a marvel and a great credit to the makers.

It still does about twenty-six miles to the gallon of petrol, and about the same number of miles per hour on a run, and has never once let me down.

W. W. Bishop.

## A One-car Road

My photograph shows a Morris Eight on the road to Kedah Peak, in the Malay States. The track climbs 3800 feet in seven miles through virgin jungle, and at the top is a Government sanatorium.

The Government keeps one car to negotiate the steep and narrow climb, and the choice fell on a Morris. No other car is allowed as there is no room to pass. The notice says. "You are now 2200 feet above mean sea level." Malacca.
T.K.

## Keep Your Tanks Full

If all motor vehicle owners made a habit of keeping their petrol tanks full as opposed to the general practice of allowing them to become almost empty before refilling, I estimate that additional bulk storage to the extent of, maybe, $20,000,000$ gallons would be available.

This is by no means a negligible quantity in time of emergency-a quantity, moreover, not concentrated in large storage tanks subject to attack, but dispersed in small quantities throughout the country.

It is hardly necessary to add that, if this suggestion were adopted, no benefit would aćcrue to those interested in the production or distribution of motor spirit. London, E.C.4.

Alexander Duckham.

## He is Pleased with it

I think you may be interested in a few facts about a Morris Eight which I purchased in July, 1936. It has now done 26,500 miles and never been decarbonised. I have just done 1200 miles since last having the oil changed and putting in the first pint of oil.

In making these suggestions I do not wish in any way to disparage the R.A.C. organisation, as this has now been brought to an enviable pitch of perfection and, of course, no one doubts their bona fides when arranging eliminating tests. The fact remains, however, as I have said, that these events do definitely tend to favour the sports car as opposed to the car most used by the British public and, therefore, from the point of view of the average owner-driver the tests are useless.
Finally, I think there ought to be a more stringent scrutiny of winning cars. A certain amount of "hotting-up" which any private owner who cares to spend the money could obtain from his local agent should be permissible, and it is difficult to say where this is to stop. The only way of doing this which occurs to me is that at the conclusion of the trials, and before the announcement of the winners, the winning cars should be scrutinised very carefully by R.A.C. engineers, and any departure from normal specification should rule it out.
If only a few of these suggestions could be adopted I am sure that the R.A.C. Rally
would would become a much more popular event with motorist.
London, S.W.
G.B.A.

[^3]

This Morris Eight saloon has a road to itself: see the letter herewlth.

In addition to the above the engine is as silent to-day as a new one. The car does not get "fair weather" treatment, as I have a daily journey of twenty miles to and from work. The only money I have spent on repairs is for a reconditioned petrol pump. The performance of the car is as good as when it was brand new. I have always used No. I petrol and oil and never driven the car over forty-five miles per hour.
Wombourne,
F. C. A. Bennett.

Nr. Wolverhampton.



## Renewing a Starting Handle Doǵ

QI have recently been having difficulty in engaging the starting handle of my Morris Eight car, and upon investigation discover that the dog on the end of the crankshaft is badly worn.
As I should like to fit a replacement myself, would you be kind enough to let me know the size of box spanner to fit the nut behind the dog and the direction in which this is to be turned ?

AYou will find that a specially shortened $\frac{?}{8}$ in. box spanner will fit this dog, which can be removed without disturbing the radiator or fan. The dog should be turned in an anti-clockwise direction, looking from the front of the engine. The engine can be prevented from turning by engaging a gear and applying the hand brake.

## The "Major" Dynamo Withdrawal

QMy car is a 1932 model Major saloon and recently I have been having a little trouble with the dynamo. Your instruction book suggests lifting the springs and withdrawing the brushes, but, as you are aware, this is difficult in respect to the third brush, and I think the dynamo should be detached from the engine. Such, I anticipate, would entail removing the radiator and be fairly expensive, but do you think it is a job I could undertake myself ? I should be obliged for full details.

AWillingly we provide details of removing the dynamo, which, incidentally, does not entail detaching the radiator, although a special extractor tool is necessary to withdraw the sprocket from the dynamo shaft and at the same time hold it in position, otherwise the valve timing would be disturbed. In consequence the work is best entrusted to the local Morris Dealer, or, as you are in Birmingham, you could go direct to the Service Depot of Messrs. Joseph Lucas Ltd., Great Hampton Street.

## SHOCK ABSORBERS

ASES have come to the knowledge of our Service Department where uncomfortable springing-and in some cases actual breakages -have been traced to the use of unsuitable fluid in the shock absorbers. The character and viscosity of this fluid is critical, and in no case should anything but the makers' special fluid be used.

In any event, so that you will know what is entailed, the following is the modus operandi for removing the dynamo:-
First of all drain the water from the radiator and slacken the clips from the upper water pump connection to the cylinder block, sliding the hose on to the pump outict until
it is clear of the cylinder block pipe. Now slacken the clip attaching the lower water pump hose to the pump intake and release the hose from the pipe. Disconnect the oil gauge pipe from the cylinder block union and the support clip on the water jacket cover. Next remove the three water pump attachment nuts holding the pump to the dynamo and slide the water pump assembly rearwards until the flexible coupling is clear of the dynamo spindle; this will permit the water pump to be detached. Remove the coil unit after releasing the coil leads by unscrewing the retaining nuts and the supporting studs on the dynamo body. Detach the circular cover-plate from the forward face of the dynamo chain cover and the jointing washer which you will find underneath. Take out the split pin and nuts from the end of the dynamo shaft, using a short box spanner.
Turn the engine by the starting handle until the keyway comes to the top and the two tapped holes in the dynamo chain sprocket coincide with

"That's the bomb-proof shelter my husband built-I happened to back the car into it."


## When considering an Overhaul

Ask your Morris Dealer for details of the comprehensive Morris Scheme (introduced in 1926).

Replacement Power Units, comprising engine, clutch and gearbox, entirely rebuilt and guaranteed by Morris for six months, are available from stock from the Factory at short notice, or clients' own units can be completely rebuilt and returned.

## Some Typical Charges

Morris Eight ... ... ... ... | Engine only |  |
| :--- | :--- | :--- | :--- | :--- |
| 0 | 0 |

Morris Ten-Four (S.V. models) ... £l3 $5 \quad 0$ Carriage extra, and an extra charge is made if new block is required through damage due to accident, frost, etc.

Very favourable standard flat rate prices apply for every model.


MORRIS MOTORS LTD • COWLEY • OXFORD

## Information Bureaw-contd.

the slots provided in the chain cover. For this purpose the use of a small mirror (borrowed from a lady's handbag) is useful for observation purposes. Now comes the use of the dynamo extracting tool to which reference has been made, and without it we are afraid the job would be very complicated, entailing the detachment of the radiator and timing case, subsequent to which the engine would have to be retimed. In use the special tool is located over the dynamo drive sprockets and the two small bolts are screwed into the two tapped holes in the sprocket. As these bolts will pass through the two radial slots provided in the timing cover, the sprocket cannot fall.

The next operation is to remove the distributor cover and observe the position of the electrode on the distributor rotating arm. Then remove the three dynamo attachment bolts and screw in the centre bolt of the extractor so that it forces the dynamo rearwards after engagement with the chain sprocket. The dynamo is now released and can be placed on a bench.

The replacement of the dynamo is carried out in the reverse order, care being taken to see that the electrode on the distributor rotating arm is in the same position as before removal.

## Morris Service Weeks

QHaving heard from an owner of a new Morris car that there is a car inspection service, I should like to know if my car, a Series I Morris Eight, can be examined, even though it is over two years old and outside the guarantee period. Also kindly advise me whether the inspection is carried out locally, or must the car be returned to Oxford, and what is the fee chargeable?

AThe car inspection service to which you refer is known as the Morris Service Weeks Scheme. Service Weeks are held from time to time at the premises of Morris Distributors, when special technical representatives are in attendance to inspect owners' cars and furnish them with a detailed report on the condition. For this examination and written report no charge is made. Experts from the S.U. Carburetter Company Ltd., Joseph Lucas Ltd. (electrical equipment), and the Dunlop Rubber Company (tyres), also attend to give advice on the equipment supplied by their respective firms.

You will doubtless learn of the next Morris Service Week to be held in your locality through the medium of a Press announcement, although we recommend that you communicate with your nearest Morris Distributor, who will be pleased to advise you when the next Service Week takes place,
and with whom an appointment for inspection should be booked.

A list of Distributors where Morris Service Weeks will be held in the near future appears on page 460 .

This particular service is not available at the Works, although we are always pleased to give owners advice and assistance concerning repairs when they call. It must be borne in mind, however, that an appointment is advisable to avoid disappointment.

## A Reconditioning Query

Q
I was interested to read your answer to the question "When to Rebore," which appeared in the February issue of The Morris Owner.
1 Having decided that this work is indicated on my Morris Eight, I should like your advice concerning the introduction of :-

1. Special pistons and rings without a rebore.
2. A rebore with pistons.
3. The advisability of baving a reconditioned engine, and if possible an estimate of the cost likely to be involved.

A
Occasionally, if bores are not badly worn oval or tapered, a satisfactory repair so far as the prevention of oil consumption is concerned can be obtained by fitting special pistons and rings, but at their best these can only be looked upon as

In these circumstances, if you contemplate owning your car for some time, it would be definitely more economical for a factory reconditioned engine to be installed.

It is difficult to assess the charges that will be involved under these various schemes, but we should expect to have to meet a bill of between $f_{3}$ and $£ 4$ for the installation of a set of pistons and rings. A rebore usually works out at between $f 6$ and $\& 8$, but a general overhaul involving attention to bores, bearings, tappets, and clutch, could very well amount to between \&12 and $£ 14$. It should also be remembered that even after this work has been completed, it will not be a reconditioned engine as defined by the factory, these units having reground crankshafts, camshafts, etc., also few repairers can afford to guarantee their workmanship for six months.

At present Morris Motors Ltd. are prepared to exchange under their reconditioning scheme, and subject to the return of your unit in an undamaged condition, a Morris Eight engine less gearbox for $£ 11$, with gearbox $£ 15$. These units are in an "as new" condition, and covered by a guarantee for six months. In addition to these charges you will have to bear carriage from the Works, and labour covering the exchange of engine, which usually amounts to approximately $£^{2}$, making approximately a total bill in the case of an engine less gearbox of $\ell^{15}$.
 A NEW PASTIME,-The Kent Model Engineering Society starting a race for
model cars at their inaugural meeting at Sportsbank Hall, Catford. Some of the models are said to do nearly $50 \mathrm{~m} . \mathrm{p}, \mathrm{h}$,
a palliative, a lasting repair being only obtained from a rebore.

It is doubtful whether this attention alone will suffice on an old engine, as upon dismantling general wear will probably be found, and repairers would recommend attention to the bearings and perhaps the clutch.

- Decarbonising the Eight I Have recently become a
reader of your interesting
magazine, and as I am also the owner of a 1937 Morris Eight which I contemplate decarbonising, I should appreciate information from you to facilitate carrying out this work.


## Information Bureau-contd.

AIT is noted that you contemplate decarbonising the engine of your car in the near future, and consequently we propose to outline the correct procedure.
nut from the stud at the rear and removing the remaining two nuts and bolts.
5. Remove the four nuts locating the exhaust manifold to the cylinder block, preferably by means of a $\frac{1}{4} \mathrm{in}$. T-handled universal joint socket


ON THE SET.-Miss Valerle Hobson and Director David MacDonald at Denham studios with the Morris Twelve used in "This Man in Paris."

Actually, the following tools will be needed:-
Description. Part No. Price Postage
Cylinder head locating
tool
Valve grinding tool
Valve spring compressing
tool
They can be ordered through local Dealers or Distributors or alternatively direct from the Service Department, Morris Motors Ltd. If all three are ordered from Morris Motors Ltd., postage will be 7d. These tools cannot be lent for this work.

1. Before dismantling, drain water from radiator, then remove bonnet by detaching the radiator stay rods at the forward end, and pull the radiator forward to release the centre rod from its bearing.
2. Disconnect the flexible petrol pipe from the carburetter float-chamber and petrol pump and detach the connecting link between the throttle and accelerator lever at the accelerator lever end by unscrewing the ball joint nut.
3. Unhook the throttle spring from the connecting link, and detach the mixture control inner cable from the jet lever by partially slackening the nut.
4. Disconnect the exhaust pipe from the manifold by unscrewing the
wrench. This will enable the induction and exhaust manifold to be removed complete with the carburetter.
5. Disconnect the positive lead from the battery and, after disconnecting the cables from the ignition coil, remove coil.
6. Remove the dynamo by unscrewing the two bolts and nuts and set screw locating dynamo to bracket In addition, detach the horn from the cylinder head, when both horn and dynamo can be rested on the steering gearbox at off-side of engine.
7. Remove the high-tension leads from the sparking plugs, noting carefully from which plugs they are taken. To save confusion, the brass terminal on each cable can be marked with the number of the cylinder from which it is taken.
8. After noting the position of the distributor from the marking on the quadrant, remove by unscrewing the $\frac{3}{16} \mathrm{in}$. set screw holding quadrant to cylinder head.
ro. Disconnect and remove the rubber hose from the cylinder head and radiator.
II. Remove all nuts locating the cylinder head to the cylinder block, which will enable the cylinder head and dynamo bracket to be lifted clear of the engine. A $\frac{5}{16} \mathrm{in}$. T-handled
universal socket wrench is helpful to undo the cylinder head nuts at the rear.
9. Remove the cylinder head gasket and the tappet chamber cover and gasket.
10. Cover with a piece of clean rag the holes in the tappet chamber leading to the sump, and remove the valves by means of the spring compressor, Part No. 38378 , taking care not to lose any of the retaining split cotters.
11. It is not altogether necessary to remove the valve springs to grind-in the valves provided the tappet adjusting screws have been turned back before the valves are removed.
12. If the valves are to be ground in by hand, the grinding tool, Part No. 66893, is required.
13. After the carbon deposit has been removed and the valves ground in, the valves and cotters can be replaced by means of the spring compressor, Part No. $3^{8} 378$, and by the aid of a small mirror.
14. After the valves have been replaced and the tappets adjusted to the correct clearance, replace the cylinder head and gasket, using the cylinder head distributor shaft alignment gauge, Part No. $3^{8} 385$, to keep the distributor bearing hole in the cylinder head and block in line with each other, otherwise difficulty will be encountered in replacing the distributor drive shaft.
15. Reassembly of the remaining parts of the engine takes place in the reverse order to that of dismantling.


This sign indicates that it is no longer forbidden to overtake on this section of the Great North Road near Stamford. It is not concerned with the drink question.


[^0]:    A cyclist who was fined 5s. with 10s. 6d. costs at Croydon for furious riding enquired what the costs were for When told that they were for the street plan he replied: "Well, if I've got to pay for that, I'll have it." He got it.

[^1]:    Waterproof Matches
    $\left\{\begin{array}{l}N \text { case petrol "lighters" should fail } \\ \text { it is }\end{array}\right.$

    - it is petrol "lighters" should fail these matches with one in camp. But ${ }^{\text {Prove }}$ matches may get damp and treated. useless unless they are properly maked. Here is a very good way of matches waterproof.

[^2]:    Cut up a candle into chunks and then put the bits of wax into an old tin can. Stand the can in a bowl of scalding water and the wax soon melts. The heads of the matches, and a little way up the sticks, are then dipped in the liquid wax. When cool they can be scratched quite easily and, in fact, the coating of wax makes

[^3]:    ## A. Clean 13-year-old

    photograph possibly you would be interested in the enclosed
    This machine 1926 two-seater Morris Cowley (ON7514). very well indeed, having covered just on 6000 miles since

