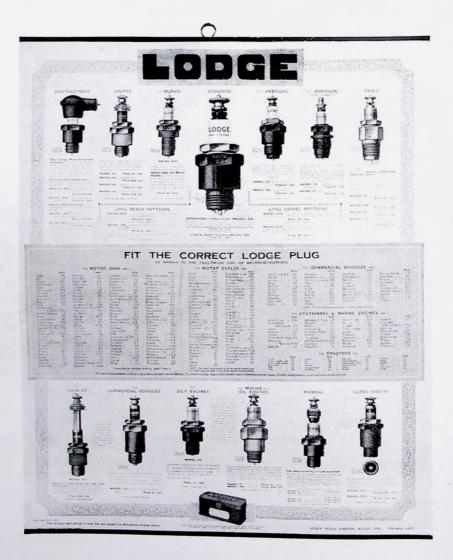


When buying plugs

consult the Lodge Plug Chart at your garage to see that you are served with the correct model for your engine.



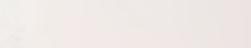
Any plugs which may be offered to you that are not listed on the Lodge Chart are most probably unsuitable for your engine or may be obsolete.

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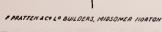
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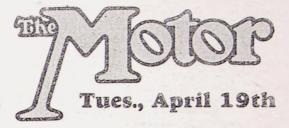
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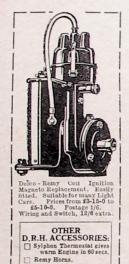
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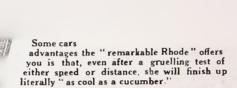
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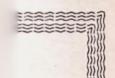
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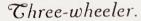
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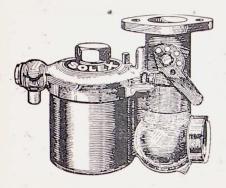
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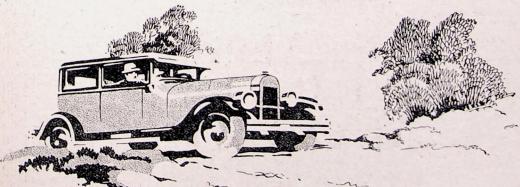


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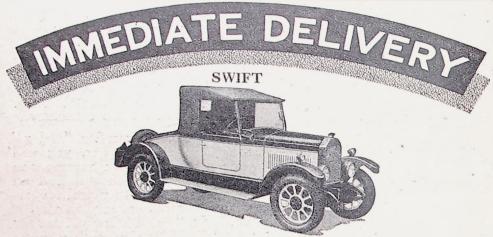
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OVER DALTON
BANK.

In the Huddersfield and District Motor Sports Club's freak bill-climb up Dalton Bank,
Dr. John S. Fulton in a Frazer-Nash was the only competitor to succeed in getting over the top of the hill.

NOTES, NEWS & GOSSID The WEEK

In Search of Solitude.

Who found it last week-end? We know one reader who did—along the mountain road leading from the top of Bwlch-y-Groes to Lake Vyrnwy, in Wales. The gradients are very severe, the surface appalling and there are sheer drops bordering the road.

Steam Light Cars?

We learn that a company is being formed to build a steam light cor. The design of the car is already well advanced and we look forward to further particulars with interest. As steam cars are not very familiar to the majority of our readers, we are publishing an article shortly which will explain their working and design.

This Week.

Our main feature in this issue is a comprehensive and fully illustrated report of the Land's End run. Every important point along the course was explored by members of The Light Car and Cyclecar staff, so that the account throughout is from the pens of eye-witnesses. The Brooklands Bank Holiday meeting and the Scarborough Two-day Trial are also described, whilst a technical article entitled "Extra-air Valves in Theory and Practice" will prove of great interest to all who study fuel economy.

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The London-Edinburgh.

The Motor Cycling Clubs next big run is from London to Edinburgh. It is held at Whitsuntide and is an ideal event for beginners at competition work owing to the comparatively easy nature of the course. This year's run, however, may be "stiffened up." We do not think, however, that there is any risk of Park Rash being included, rauch as the enthusiasts would like to see it on the route card!

Any Claimants?

'Who covered the largest mileage bebetween 6 a.m. on Good Friday and midnight last Monday? "Shacklepin" claims 1,016 miles, "Focus" 855 miles and two members of the staff over 750 miles. It would be interesting to hear from readers who can beat these figures.

Lessons of Segrave's Record.

In the opinion of Mr. C. P. Harding, research engineer of the General Motors Corporation, Major H. O. D. Segrave "moved too much iron"—meaning that his 1,000 h.p. car was too heavy, as it weighs about 4 tons. Mr. Harding added that if an American challenges Segrave's record he will do so in a light and narrow single-engined car.

Next Week.

A few weeks ago "Focus," in "Rich Mixture," mentioned that it would be very interesting to know something of the origin of screw-threads. Next week, therefore, we shall publish an article entitled "A History of Screw-threads," which will deal with the subject in an authoritative and instructive manner. "Supercharging or Gear Changing?" will be the title of an article in which the writer makes some interesting speculations regarding the future design of touring cars.

Spanish National Motor Congress.

According to Reuter, H.M. the King of Spain has signed a decree extending his patronage to the Congress.

Bargains.

Amongst the bargains offered in our advertisements of second-hand light cars for sale this week is a Singer Senior saloon which is the property of our contributor " Focus."

International Motor Contest.

The Dunlop Rubber Co., of Australasia, Ltd., is considering the organization of an international motorcar relay contest from Townsville, Queensland, to Perth, Western Australia, a distance of about 5,000 miles. It is proposed that three groups of ears, representing Great Britain, America and the Contiment, should take part.



The dotted line on this map of Australia shows the route of the proposed international motor contest.

Trial by Ordeal.

Easter saw the commencement of the "pleasure-motoring" season, and from season, and from now onwards until late into the com-ing autumn the roads will be thronged over the week-ends with pleasure-seeking motorists. Those who have not yet joined the happy band and are hesiloined the happy band and are hesitating as to the car which they will buy can gain a good iden of how the various makes behave by spending a Sunday afternoon on a busy main road, preferably where there is a steep hill presaged by a length of "straight." From such a point of vantage it is possible in a couple of hours to come to fairly accurate conclusions regarding fairly accurate conclusions regarding performances.

Amongst the Yorkshire Moors.

590

Yorkshire motorists flock to the moorland roads at holiday times. Pienies were popular over the week-end, whilst the Whitby-Scarborough road was explored by thousands of holiday-makers.

Touring the Heights of Hampstead.

Not every London light-ear owner ent away at Easter. On Sunday went away at Easter. On Sunday morning last Spaniard's Road, Hamp-stead, was thronged with small cars—many of which had clearly not traveled more than a mile or two that day.

"The Petrol Engine."

The new Temple Press manual, entitled "The Petrol Engine," should appeal to a large number of our readers. It deals with the power units of motorcycles, cars, motor boats, buses, trams and aeroplanes, and is written in such simple language that all readers of The Light Car and Cyclecar could understand every part of it. The price is 3s. 6d. from bookshops or 3s. 10d. post free from these offices.

Please be Tidy!

As a direct result of untidiness and carelessness on the part of pienic parties, many commons, woods and other pleasant spots are being placed "out of bounds." We appeal, therefore, to all motorists to leave no traces of where their "caravans have rested." when moving on after a picnic. Paper can be burned or buried and tins or bottles repacked in the car, to be disposed of afterwards in the domestic dust-

"Hints to Motorists."

We cull the following "hints" from the bright pages of The Quarterly Review, the house journal of the Licences and General Insurance Co.,

Don't buy a car unless you can alford the

Don't buy a car unless you can alford the norrance.

Don't insure your car unless you have one; it's wasteful.

The use of the expression "my bus" should be avoided; it doesn't sound quite so good as it is meant to.

Should you be unfortunate enough to meet with an accident, don't be shy about telling the insurance company; they are just longing to hear all about it.

Always look where you are going, for a car on the road is worth two in the dick.

A car, like a small boy, should be seen and not heard.

The carbon deposit in the cylinders may be removed every easily with the aid of three cold chisels, one 18-lb. hammer, three files, two spanners and a good flew of bad language.

Sans Noise, Sans Giants.

With quiet exhausts, no monster cars and few of the old heroes to worship, a one-time Brooklands habitue, who has just returned to England after two years overseas, told us at the track on Monday that motor racing has "gone to the dogs." Certainly it is rather less spectacular than of yore.

Lieut.-Col. Wilfrid Ashley, the Minister of Transport, who it is rumoured may be raised to the peerage.

Toiling, Rejoicing, Sorrowing. With tyres rubbing the mudguards and passengers all higgledy-piggledy inside, many a veteran car wheezed its weary way towards the scrap-heap last week-end. Gross overloading seems to

be on the increase. Who was the Hero?

A Humberette of 1913 vintage, with no bonnet or engine, was seen being towed, apparently from one repair shop to another, through the back streets of Selly Oak, Birmingham, last Monday. The owner sat proudly at the wheel "clucking" vigorously to an aged horse which provided the motive power.

A Warning Note.

It frequently happens that when one motorist is following another he notices something amiss with the car ahead. A door may be open, luggage may have fallen off, a wheel may be wobbling, or the rear light may have gone out. cumstances do not always permit of the leading car being overtaken, and the Safe Driving Committee of the R.A.C. suggests, therefore, that the driver of the following car should give three short blasts with his horn followed by a long one, to indicate to the leading driver that something is wrong and that it is advisable to stop.

The R.A.C. Stewards.

During the past four months the stewards of the R.A.C. have twice been called together to hear appeals by commetitors in connection with awards in reliability trials. In one case the appeal was dismissed, whilst in the other it was upheld. The stewards of the R.A.C. constitute the final court of appeal in all matters relating to the sporting side of automobilism, and the weight which attaches to their the weight which attaches to their decisions will readily be understood when it is said that the following were the stewards in attendance at the second of the two appeals referred to above:-Lord Cozens-Hardy, Lord Weir of Eastwood, the Hon. Sir Arthur Stanley. Brig.-Gen. Sir Capel Holden, the Rev. E. P. Greenhill and Mr. Percy Short.

PRACTICAL EXPERIENCE.

B10

After learning the theory of the business, members of the newly-formed motorcycle corps of the Bradford City police obtain practical experience in checking motorcar licences.

Where Every Prospect Pleases . . .

Is there a finer view in the country than that obtainable from the ascent hair-pin of Bluehills Mine? The spectators there last Saturday were loud in its praise.

Racing at Montlhery.

In the 1,100 c.e. Grand Prix held at Monthlery on April 17th, Duray (Amilcar) covered 156 miles at an average speed of 67 m.p.h. Second place was taken by Harincourt (Salmson), with Perrot (Salmson) third. There were 14 starters and 7 finished the course. On a demonstration run Divo, driving a Talbot, attained a speed of 145 m.p.h. He was not electrically timed, however.

Light Cars and Bandits.

After the Sevenoaks car bandits broke through the police cordon at High Street, Bromley, last week, a police motorcycle combination gave chase but was outpaced. The driver of a sports light car also joined in the chase and came within an ace of overtaking the bandits when held up by police. There was a hue and cry in a large area and many motorists were stopped. The Pol Hill Arms garage, which the bandits raided, is well known to light-car drivers on the Hastings road.



The conversion of the ancient cross at Crich, near Matlock, into a signpost is being severely criticised by local residents.

Overloading?

A representative of The Light Car and Cyclecar counted nine vehicles in trouble with tyres on a 10-mile stretch of the Bath Road on Good Friday.

Tourists and the Tyre Duty.

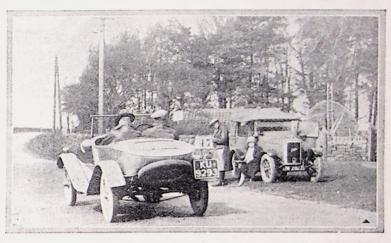
The Automobile Association draws attention to one effect of the newly imposed Customs duty on tyres, which is that motorists taking their cars abroad will be liable to pay duty on the tyres unless they can produce proof that they formed part of the equipment of the car when it left Britain. The A.A. is prepared to safeguard the position of tourists hy seeing that they obtain a certificate of temporary exportation declaring the make and size of all tyres on the vehicle at the time of departure.

Nothing Like Soap!

A member of the staff of Motor Cycling who carries a cake of household soap in his tool bag for stopping up petrol leaks twice found it useful during the holidays when assisting fellow-motorists in distress.

Road Improvements.

Concrete kerbs will be laid along the entire length of the new 30-ft.-wide road between Maidstone and Ashford, Kent. The total length of the road is approximately 12 miles and includes several hy-passes.



SCARBOROUGH TWO-DAY TRIAL.

Twenty-two cars started, and finished, in the Easter two-day trial organized by the Scarborough and District M.C. The photo shows H. C. Rolson (Rover Nine). A full report of the event appears on another page.

Caution in the New Forest.

At the request of the Verderers the R.A.C. appeals to all motorists to exercise the utmost care when driving in the New Forest so as to avoid injury to the ponies, which are such a feature of the district. As the forest is not enclosed by hedges or fences, the animals are free to roam unchecked, and frequently cross the highways in moving from one part of the forest to the other. It is therefore advisable to be on the qui vive at all times, and to travel only at a speed which will enable the car to be stopped quickly should any of these ponies appear suddenly on the road.

Changing Conditions.

At Wellingborough, Northants, police court recently two charges relating to Road Fund licences were dismissed by a motorist magistrate upon payment of costs. In both cases the defendants had used a motorear and a motorcycle respectively without displaying the Road Fund licence disc, although the money for the licences had been sent some days previously to the authorities. In the case of the car driver, a woman, the facts were known to the police, and she had been advised by the police superintendent not to use the car until the licence was in place.

MOTORING MATTERS IN PARLIAMENT.

WHEN Parliament reassembles after the Easter recess the attack upon the Budget in respect of the Road Fund will be renewed with intense vigour. It may be true, as Sir Robert Horne said, that the roads in Great Britain are better than those in other countries; it is undoubtedly true that the Chancellor of the Exchequer must find money to make up the big deficit in the year's revenue caused by industrial troubles; but that is not the point. The Road Fund surplus which Mr. Churchill has wholly appropriated was contributed by motorists for the maintenance and improvement of the roads, and for no other purpose. To apply the money otherwise, as the Government now proposes, is really to break faith with motorists.

Just before the Easter recess Mr. Idoyd George, who was the creator of the Road Fund, declared in the House of Commons that the Government had been designedly creating a surplus—by the simple expedient of not expending the money, as it ought to have been ex-

pended, on the roads—in order to seize it for general revenue purposes. Mr. Snowden called it sheer robbery. These may or may not be party debating points, but the fact remains that what the Chancellor of the Exchequer is doing is to impose by indirect means an additional tax upon motorists. The only defence Mr. Churchill vouchsafed for his action is, in effect, that he is hard up, that he must find money somewhere, and that motorists must accommodate

themselves to national necessities. As the Ministry of Transport is under "sentence of death" the Trensury has taken over the administration of the fund, which means that, in future, all the so-called surpluses will be utilized not for roads but for any other national purpose. A big fight may be expected on the committee stages of the Budget upon this matter, and members of all parties will certainly join in remonstrances upon the policy of the Government towards the Road Fund and those whose contributions have built it up.

CYCLECAR COMMENTS.

By Shacklepin.

INTERESTING HOME-BUILT CYCLE-CAR—A ONE-ARMED BUILDER-DRIVER—AMATEURS AND BODY-WORK—A USEFUL HINT.

THE photographs which form the heading to this page were sent to me by a render who is known to me but signs himself "Handicapped, but not Hindered." The cyclecar depicted is of the home-made type, and one of the most interesting features in connection with it is the fact that its builder has only one arm—hence his nom de plume—but he was assisted in the construction by a friend.

The chassis frame of the machine is that of an old Ford car, whilst the engine is a M.A.G. water-cooled twin of 1,100 c.c. capacity. Suspension is by quarter-elliptic springs front and rear, and the detachable wire wheels are shod with 28-in. by 3-in. highpressure tyres.

The body, wings, upholstery and hood are all home-made, the wings being of elm steamed to the required shape. The framework of the body is composed of 1½-in. squared timber covered with three-ply wood and sheathed in aluminium. A double dickey is provided and there is a locker of ample size behind the dickey seat.

Rack-and-pinion steering is used, and it is claimed to be finger light at all speeds and there is no suggestion of wheel wobble. In order to ensure comfortable riding the wheelbase was made fairly long—8 ft. 3 ins. to be exact—whilst the track is 3 ft. 8 ins.

The engine is set transversely in the frame and drives through a tubular shaft fitted at each end with fabric disc universal joints to a friction-type transmission which is carried on a sub-frame, anchored at the front by a spring-loaded ball joint to a cross-member of the main chassis frame. The friction disc arrangement is similar to that which was employed in the Unit cars, separation of the discs for gear

changing being carried by sliding the driving disc bodily away from the driven disc instead of swivelling the driven disc shaft asin early G.W.K. practice. Some trouble was experienced at

Some trouble was experienced at first owing to slipping, but this was a fault in the construction and easily rectified. I understand that the gear has now behaved in a perfectly satisfactorily manner for several thousand miles, during which distance trips to the north of Scotland have been undertaken with two passengers and luggage.

A speed of just over 40 m.p.h. can be attained, whilst petrol consumption works out at approximately 40 m.p.g. It is hoped, however, to improve upon these figures by certain adjustments which are now being carried out.

The controls of the cyclecar are of the orthodox type and the hand brake is placed just outside the body. The only variation from a perfectly standard control lay-out is an increased rake to the steering column so that the wheel is brought low enough to be held by the driver's legs whilst he changes gear. This arrangement is, of course, due to the fact that he has only one arm.

I was very interested to learn that the road experience of my correspondent dates back to 1886, in which year he learned to ride a bone-shaker fitted with wooden wheels having iron rims. The machine weighed over a hundredweight, and I am told that with a violent effort a speed of about six miles per hour could be attained for short periods.

Even after my correspondent lost his left arm in 1889, he continued his cycling career, going so far as to compete successfully in races and other club events. During the period he often met Mr. S. F. Edge, who was then one of the star performers on the cycle racing track.

This original-looking but practical cyclecar was built and is driven by a one-armed enthusiast.

His motoring experience began in 1922, when he bought a R.S.A. side-car combination, after which followed a period with Ford cars until 1924, when the vehicle which I have just described was placed on the stocks, to be completed two years later.

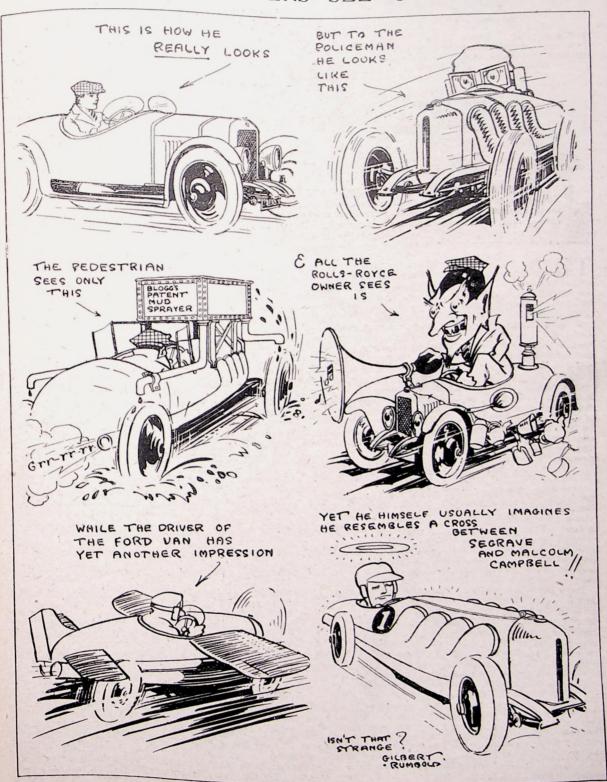
Many enthusiasts who set out to build their own cyclecars or to alter some existing type find that they are apt to meet their Waterloo when it comes to body building. It is quite easy to make up the framework, but fitting the panels is a rather different proposition, especially when it is necessary to curve them. Panel beating is an art which requires years of training, and even gentle curves in thin sheet metal should therefore not be attempted by amateurs.

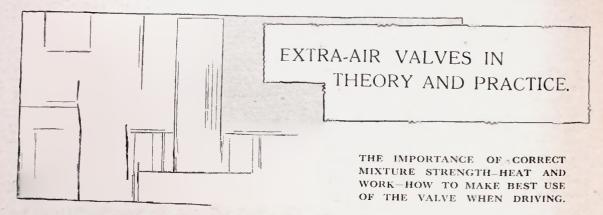
Quite a satisfactory result can be attained, however, by the use of very thin three-ply wood secured to the framework by small countersunk screws placed very close together. In this way the sheet of wood can be drawn down so that it will conform to the shape of the framework and the possibility of unsightly dents will be avoided.

In connection with bodywork, some of my readers may not be aware that a substance known as plastic wood can be obtained from most ironmongers. It is extremely useful for filling up screw-holes, dents and similar unsightly places, and it has the advantage that when set—it is applied rather in the same way as putty—it can be planed, chiselled and sand-papered exactly as ordinary wood, also it takes paint in the same way, having, apparently, a similar coefficient of absorption to that of wood, so that the resulting surface shows no sign of the holes.

It is, of course, advisable to use a good undercoating paint on the body before applying the colour coats. The undercoating must be rubbed down until it is perfectly smooth and, after the ordinary paint or enamel has been applied and is perfectly dry, a coat or two of varnish will ensure a brilliant finisit.

AS OTHERS SEE US.





Although modern carburetters may be relied upon to provide automatically a mixture which will ensure economical and efficient running, there are times when the fixed petrol-air ratio may be altered with advantage. This mixture control can be obtained by the use of an extra-air valve, which, in addition, forms a useful scavenging device, and which, when descending hills, enables the engine to be used as a brake.

HE advantages to be obtained by the use of an extra-air valve are set forth in detail in the advertisements of the makers of the various types. On the other hand, the carburetter makers are almost unanimous in condemning their use. When we find such divergent views held by responsible people we may be assured that there is a reason for it.

A little light was thrown upon the subject by an

article which appeared rather more than a year ago in a motoring journal. Two quotations will be sufficient to indicate the gist of the article:—

"It is unscientific to arrange for the carburetter alone to compensate for the very varied conditions of everyday running, particularly when it is insisted that the carburetter shall function with one control only."

"It is frequently contended that the time is not yet ripe for mixture-strength controls, and, bearing in mind the remarkable stupidity that nonmechanical individuals can sometimes evidence, it would seem that there is some reason for this contention.'

Hence we may take it that an extra-air inlet is very beneficial if used intelligently, but may be harmful in the hands of the ignorant.

How the Valves Work.

Although these devices vary slightly in detail, the general principle is the same in practically all cases. A fitting is placed between the flange of the carburetter and the entrance to the induction system, and it is, of course, important to make a good, air-tight joint. Through the side of the fitting is a passage, which normally is closed, but which may be opened to a greater or less extent by a Bowden-wire control or similar device operated by the driver.

The effect of opening the valve slightly will be to admit to the cylinders air which has not passed through the choke tube of the carburetter; hence the depression over the jet is reduced and the mixture, consequently, weakened, the amount of weakening depending upon

the extent to which the valve is opened.

It will be seen, therefore, that an extra air valve may be used as a mixture control. The carburetter should be set to give easy starting from cold and good running under the worst conditions. Extra air can then be given when conditions justify its use. It will be obvious that this arrangement not only affords driving comfort, but leads to economy in petrol con-

In the very early days of steam engines, when pumping water from the mines was the chief use to which B14

they were put, their efficiency was expressed by the number of foot-pounds of work done in raising water per bushel of coal burnt under the boiler. The modern equivalent is "thermal efficiency," which is the ratio of the work done by an engine to the calorific value of

the fuel burned, both being expressed in the same units.

It has been found that the maximum thermal efficiency of a petrol motor is given when the mixture has a particular strength. If a cubic foot of petrol-air mixture is burnt it produces a definite number of units of heat. Thus at the temperature and pressure of the air a mixture which contains petrol and oxygen in chemically correct proportions will give about 100 British thermal units of heat per cubic foot. Such a mixture would give excellent results if it were used to heat a furnace, but it would be too rich for an internalcombustion engine. Maximum thermal efficiency is obtained when the mixture strength lies between 20 and 40 British thermal units per cubic foot.

Efficiency and Flexibility.

To obtain maximum efficiency from a given engine it is not necessary only to supply it with a mixture of the required strength, but it must run under predetermined conditions of load and revolutions per minute. If any one of these conditions changes the thermal efficiency falls, but it is obvious that for any given load and r.p.m. there is a mixture strength which, while not giving the maximum thermal efficiency of which the engine is capable, will give the highest efficiency for that set of conditions.

If an engine is to run under a constant load and at uniform speed one should, of course, arrange the mixture strength to give the best thermal efficiency for that set of conditions and thus obtain maximum economy. It would be folly, however, to tune a carburetter in this way for a petrol motor in a car, for, while providing the most economical running for a given set of conditions, it would rob the engine of all pretence to flexibility. Thus we must sacrifice petrol to obtain n flexible engine, which is so necessary for comfortable driving.

It is now easy to see the use to which an extra-air inlet can be put. When an engine is running under relatively light load at high speed one may usefully weaken the mixture, yet if we had a carburetter set to give this weak mixture it would give very bad running at low speeds or heavy loads. Hence the carburetter can be set for the latter conditions and the extra-air inlet used to satisfy the former.

A little experience will enable any driver to operate the device to the best advantage. When the engine is

started the air inlet should be closed, and it is very necessary that it should be quite air-tight in this position, otherwise starting difficulties are inevitable. The valve should remain closed until the engine warms up; it may then be opened very slowly, but the extent of the opening will depend upon a host of circumstances; it will vary with the weather, with the direction of the wind, and, of course, with the speed and gradient. One soon learns by experience the best position for the control lover.

The writer has frequently obtained appreciable acceleration by keeping the throttle fixed and slightly opening the valve, a sure proof that the engine needed the extra air. In climbing it is advisable to make a practice of reducing the amount of opening as the revs. drop, but if a change down becomes necessary the valve should again be opened up, as the revs. will have increased, although the speed of the car may be less. Similarly, in negotiating traffic it is wise to close, or nearly close, the valve, because in such circumstances one wants maximum flexibility, not maximum efficiency.

Weak-mixture Risks.

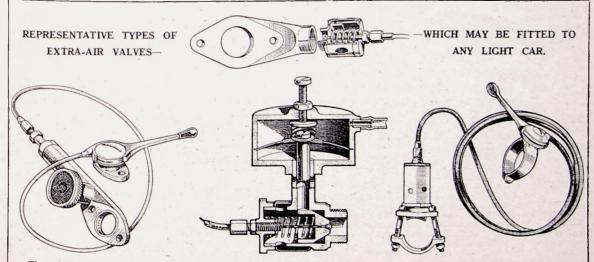
Let us now consider the evils which may result from the use of an extra-air valve. If too much air is given it produces the effect of a braking action. This is, of course, bad in itself, but its effect upon the engine is much worse. An unduly weak mixture—like an unduly induction stroke and to compress it on the next stroke. The braking action of this operation is remarkable, and somehow gives one a sense of security which a brake does not offer. By changing down to bottom gear and opening the valve it is possible to crawl down very steep hills with scarcely any use of the normal brakes.

In this connection there is one point which is of very material advantage. If one descends a hill with the throttle closed the suction of the engine is very strong, and, failing an air supply such as we are discussing, there is a marked tendency for oil to be sucked past the piston rings into the combustion chamber. This may foul the plugs, but, in any case, it will have to be burnt—or charred—after the hill is passed; thus carbon deposit will be formed. Apart, therefore, from the point of view of economy, an extra-air inlet makes for a clean engine.

Types of Valve.

Enough has been said in the foregoing remarks to indicate that, however accurately the carburetter may be set, an extra-air valve will prove very advantageous if used intelligently. The sketches reproduced below show some of the better-known air valves, and it will be obvious that they are very vasy to fit.

It is necessary in most cases, however, to substitute longer studs in the inlet-port flange to accommodate the extra thickness of the air-valve flange, but this job



The extra-air valves depicted above are arranged for use on the engine of any car. The Bowden flange-fitting type is shown at the top with the valve in section. (Below, left) is the Arc Atomizer, also arranged for flange fitting. A sectional view of the new Mosaire combined automatic and hand-operated valve is shown in the centre, whilst, on the right, is a Bowden type designed for clamping to an induction pipe.

rich one—burns relatively slowly; this has the effect of overheating the engine and, in extreme cases, of burning the exhaust valves. If, however, one has a temperature indicator on the radiator, overheating will soon be indicated, even if the braking action had pussed unobserved.

A mixture which is richer than necessary for the efficient working of the engine tends to deposit unburned carbon, which, with charred oil and road grit, produces the "coke" which forms in the combustion chamber. By keeping the mixture as lean as possible consistent with efficient running this evil is avoided to a large extent.

Even if none of the advantages mentioned above was available, the writer would still fit an extra-air valve to use as a brake on hills. By closing the throttle and opening the air inlet to its full extent the engine is made to draw in a full charge of pure air at each

is neither difficult nor expensive. The Bowden control lever should be fitted in a position where it is readily accessible from the driving seat in order that maximum use can be made of the valve.

The average price of an extra-air valve, complete with control, is about 30s., which is by no means excessive, but those owners who do not wish to incur this outlay can rig up a fairly satisfactory valve by means of a length of copper tubing and a tap. A hole is drilled and tapped in the induction pipe to take an ordinary union, from which the copper tubing is led to the facia board and secured to the tap, which, of course, when opened, will allow air to be drawn into the engine.

By using a two-way tap it is possible to couple up the pipe line to a vacuum-type windscreen wiper. The tubing from the engine to the tap should be at least ‡-in, bore,

BROOKLANDS BANK HOLIDAY MEETING.

LIGHT CARS IN ALL THE RACES, A LARGE CROWD AND FINE WEATHER MARK THE OPENING OF THE SEASON.

THE 1927 season of the B.A.R.C. opened most successfully at Brooklands on Easter Monday, when, in brilliant weather, a very large crowd gathered to watch the racing. An innovation which was welcomed by everybody and which cannot fail to prove expensely approach in the Gaussian that the states were the tremely popular in the future, was the

> maintained it for some time until chal-lenged by "J. Taylor," who, driving a 200-Mile Race Talbot, drew level with him. Whilst in this position they were both passed by E. L. Meeson (Vaux-hall), the order of finishing being Mee-son, "Taylor" and Newman, with a dis-

tance of about 200 yards between them. In the Brooklands Founders' Gold Cup race Goutte was again unlucky. When going well, a cloud of stones shot up from the wheels of a car ahead, hitting him in the face, cracking his goggles and making it necessary for him to retire. The race resulted in a win for Kaye Don, driving Mr. H. Wright's 4,890 c.c. Sunbeam, with Captain Campbell (2,262 c.c. Bugatti) second and C. Staniland (1,990 c.c. Bugatti) third. The winner's speed was about 105 m.p.h.

(Above) The start of the seventh race. The photo was taken from the roof of the new grandstand—an excellent vantage point. (Left) A bunch of light cars on the banking in the second race.

(Salmson) rapidly took the lead and

use of Amplion loud speakers dotted around the course through which announcements and running commentaries concerning the races were broadcast.

In all of the nine races were brondens.

In all of the nine races down in the programme cars in the "up to 1,500 c.c." category were competing. This, from a light car enthusiast's point of view, is distinctly encouraging, because at previous meetings of the kind, there usually have been several races in which a light have been several races in which no light cars figured.

In the first race there were six entries, In the first race there were six entries, but only three starters, and of these two were light cars. G. A. Wadham (1,496 c.c. Horstman) took the lend from G. Staniland (1,990 c.c. Bugatti) with Dr. J. D. Benjafield (1,087 c.c. Salmson) in the third place. Bad luck soon overtook Dr. Benjafield, however, as a connecting rod broke and knocked a hole through the side of the crankcase, thus effectively nutting him out of the thus effectively putting him out of the running. A hard-fought duel then resulted in a win for Staniland at a speed of about 82 m.p.h.

The next race produced a much larger The next race produced a much larger field, as eleven cars started, amongst them being two "dark horses"—these were both supercharged 1,495 c.c. E.H.P.'s, driven respectively by G. D. Olive and A. W. Hayes. They both started scratch and got away well, but were overhauled on the home banking by R. F. Oats, driving a 1,991 c.c. O.M., n.16. B16

who was followed closely by Vernon Balls (Amilear). This driver would almost certainly have retained second place to the finish, but on the last lap instead of turning into the finishing straight—the lightning finishing line was being used—he commenced another lap but discovering his mistella element. lap, but discovering his mistake almost immediately was able to brake hard and turn. This manœuvre, although skilfully carried out, lost him two places, so that he finished fourth, with Capt. Frazer-Nash second and C. W. Johnstone (Bugatti) third.
The French Salmson exponent, P.

Goutte, driving a single-senter super-charged 1,087 c.c. car, was scratch man in the third race, for which there were seven starters. Those who expected Goutte to continue his remarkable speed achievements of last season were disappointed, however, as the car did not appear to be going any too well and the race developed into a duel between two big Vanxhalls driven respectively by J. R. Cobb and E. L. Moeson. Cobb ultimately proved to be the winner with Moeson second, E. Poppe (2,426 c.c. Rover) third, and G. Newman (Salmara) fourth. son) fourth.

Mr. H. E. Totlow's supercharged 1,496 c.c. Lea-Francis, driven by R. M. V. Sutton, was a scratch car in the fourth race, and got away in a very convincing manner, but G. Newman

Re-handicapping.

Re-handicapping.

As a result of their times in previous races some of the cars entered for the sixth race were re-handicapped, and "J. Taylor" (Talbot) started owing three seconds, whilst G. A. Wadham (Horstman) had his haudicap reduced from 44 secs. to 35 secs. This car, however, did not get away very well from the starting line and Captain H. E. Hazlehurst (Salmson), whose handicap had been altered from 30 seconds to 52 seconds as he was driving a Grand Prix instead of a San Sebastian model, led from H. N. Thompson (1.372 c.c. H.N.T.), who was closely followed by Captain W. S. Garton in a two-cylinder 1,086 c.c. Frazer-Nash. Frazer-Nash.

Before the end of the race, however, Vernon Balls, driving a side-valve supercharged Amilcar with clouds of steam pouring from the radiator escape pipe. came rapidly into first place and crossed the line in the finishing straight a convincing distance ahead of Hazlehurst, whilst G. Newman (Salmson) beat

"Taylor" (Talbot) for third place by inches almost at the instant that they crossed the line.

Misfortune still pursued P. Goutte in the seventh race, when he was compelled to retire apparently from plug trouble, whilst H. W. Purdy (1,492 c.c. Bugatti) also retired. The race resulted in another win for Kaye Don, driving Mr. Huntley Wright's Sunbeam, with J. R. Cobb (Vauxhall) in second place and Jack Dunfee (8-cyl. Ballot) third. Goutte and Purdy were the only light

car starters in this race.
"J. Taylor's" Talbot was driven by J. Barclay in the eighth race, in which there were nine starters, the limit man being Captain H. E. Hazlehurst (Salmson), who had a start of one minute eight seconds. He made good use of his time allowance and maintained his lead for almost two laps, but Dunfee (Ballot) and Meeson (Vauxhall) were overhauling him rapidly. These two passed Hazlehurst in the final lap, the race going to Meeson, who won from Dunfee by about 30 yards, with Hazlehurst a good third. The winner's speed was 102.54 m.p.h.

Only five cars faced the starter in the ninth and final race of the meeting, in which Captain Campbell, driving a supercharged 2,262 c.c. Bugatti, started, owing six seconds. The race was notable as being probably the most exciting of the afternoon, especially as Goutte had got his Salmson into really fine fettle, and thus was a formidable opponent. The Halford Special, now the property of Mr. G. E. T. Eyston, proved rather disappointing, as severe misfiring prevented it from getting far. From the start it was obvious that Campbell and Kaye Don were formidable rivals, and a splendid duel resulted. Campbell passed Don, but was unable to get very far ahead, and soon after Goutte over-took Cobb, who was driving Mr. R. Ward's 10,087 c.c. Fiat. Upon ap-proaching the railway straight only a few feet separated Campbell and Kaye Don, but Campbell, by a supreme effort, got ahead to the extent of about 30 yards and thus finished with Goutte

third. Campbell's speed was just over 110 m.p.h.

Before the conclusion of the meeting. Col. Lloyd, the clerk of the course, broadcast a message in which he said that it was hoped to improve the service by the next B.A.R.C. meeting, which takes place on Whit-Monday; by then, additional loud speakers will have been fitted up so that everybody, no matter on what part of the course they take up their stand, will be kept fully informed regarding the progress of the races. It was hoped also that more intimate runing commentaries would be made on the lines, presumably, of those broadcast by the B.B.C. regarding football matches and so forth.

After the meeting the paddock was thrown open to the public so that they could view Captain Campbell's Campbell-Napier car in which he attacked the world's speed records at Pendine.

The car was in a special shed and 1s. admission was charged, the money going to the Parry Thomas Cot Memorial

SCARBOROUGH TWO-DAY TRIAL.

Cars Prove Superior to Motorcycles Over a Moderately Difficult Course, Which In-cluded Several Steep Hills.

THE chief motor event on the York-shire programme for Easter was a two-day reliability trial promoted by the Scarborough and District Motor Club. It is significant of the friendly spirit in which Scarborough regards her motoring visitors that both the corporation and the local tradesmen's society figured prominently in the list of prize donors.

There were 22 car entries for the trial, which began at Otley on Good Friday morning.

There were four women driving, these being Miss V. Worsley, Miss M. V. Milne, Miss L. M. Roper and Miss D.

An excellent course had been selected, and it was stated that while there were occasional stretches which would test both experienced drivers and novices in driving to schedule, yet the roads would be mainly secondary, with an absence of freak features.

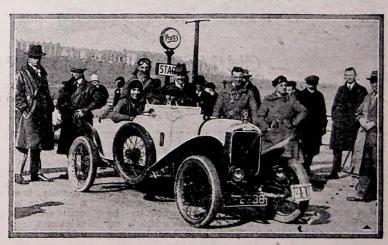
Sutton Bank.

From Otley the course led by way of Snowden Moor and across the Wash-burn Valley to Thirsk, where a lunch stop was made. The afternoon section included the ascent of Sutton Bank, where there was the usual crowd of spectators to enjoy any fun which might be provided. There were no failures, though Sutton Bank still remains a stiff proposition for light cars.

Despite the fact that the trial was

largely on main roads, there were several motorcycle competitors who dropped out on account of tyre and mechanical trouble, but all the 22 cars checked in at Scarborough that night in good time.

The trial was resumed on Saturday morning, and at the start one heard several competitors expressing their appreciation of the arrangements and general organization.



A SUCCESSFUL COMPETITOR.

There were four women competitors in the Scarborough Two-day trial and all gained first-class awards. The photograph shows Miss V. Worsley in her Salmson.

Saturday's course was again over good roads, and some of the finest scenery on the Whitby Moors was unfolded to the competitors.

Although the course was slightly more difficult than that of Good Friday, there was easy going to Sandsend, then a little north of Whitby came a stiff climb at Lythe Bank; but, although bottom gears were called for, there were no failures.

A by-road was then taken via Ugthorp and Egton Monument to the famous (or infamous) Limber Hill, low gears again infamous) Linner Hill, low gears again being required—but in this case for de-scent. The course then presented no great difficulty, fairly good roads being followed to Lealholm, Dale End and Castleton, then to Guisborough for the lunch stop.

In the afternoon a return was made over the same course, and this provided the titbit of the day at Limber Hill Only one car failed, however.

It was announced later at the finish that 47 competitors out of the 62 had finished within schedule time.

As previously stated, the failures were confined to motorcycle entries, wherein solo riders were the worst offenders.

Owing to the fact that in many cases competitors ran each other very closely for chief honours, secret checks played a large part in ascertaining the results, which are given below:—

RESULTS.

HESULTS.

G. F. Robertshaw (Sunbeam) and O. Langton (Anstin) gained premier awards.

The following gained first-closs awards:—Miss V. Worsley (Salmon), H. Cooper (Rhode), P. H. Mayne (Austin), F. Dastow (Austin), H. C. Robson (Rores), Miss M. V. Milne (Austin), Miss L. M. Roper (A.C.), T. Harwood (Riles), H. W. Setters (Essex), Miss D. Wilson (Morris-Opeley), C. Thackray (Rover) and S. Payne (Morris-Oxford), B17



A FRAGRANT AND CHARMING LINK WITH ANTIQUITY THAT IS PASSING FROM BRITAIN'S COUNTRYSIDE.

By A. Stanley Blicq, F.R.G.S.

NFLUENCED largely by the genius of the artist who created that delightful picturisation of the extraordinarily wide reputation for the medley of harmonious sound that emanates at eventide from the ivied towers of its widespread churches. It is a reputation which might well have been earned by the melodies of a thousand chimes that tinkle lightly on the air of Old Britain. They have been severely ignored and left in complete obscurity.

These chimes, heard from every far-flung corner of this ancient isle, embody a sympathetic lilt, a welcoming cadence and a joyous note of independence, whether they come softly to you from Worcester's cathedral over the waters of the Severn on a rose-hued evening; from the lofty spire at Ross, far down the wrinkled waters of the Wye; from the cathedral at Truro, encased by its looming mills, rolling tremulously away into those misty heights, or down the peaceful waters of the Eal

Justice has never been done to the melody of the chimes of Old Britain. Characteristic insular indifference, an utter lack of appreciation or imagination and a thoughtless disregard has caused a big diminution in the number of chimes that once were such a harmonious asset to various corners of the countryside. There was—and is—the financial aspect, too; but this is insignificant in relation to the charm that the bells inspire. That this link with antiquity should be on the wane is a theme for poignant regret.

Of course, the tolling of church bells in city, town and village is still with us on the Sabbath; but the purpose under survey conveys infinitely more than that. Were one-fiftieth of the more melodious church bells and chimes of this country brought into tuneful play for but fifteen or twenty minutes during spring and

summer, the charm of Britain's rural life would be presented with delightful simplicity and haunting charm to the visitor to our shores, to the native and to the tourist by car or on foot. It would take little ingenuity, finance or organization to raise Britain to a deserving leading place in the entire world for the rustic charm, sonorous delights and melodious harmony of chimes . . . it should be a characteristic once or twice weekly or even daily of every village in possession of such bells. For one brief quarter or half of an hour per day Britain could, and should, ring out a message of good-will from end to end of its varied shores.

If there is no possibility of an elaboration of what is obtaining to-day, there is a crumb of comfort in the ability to gather here and there across Britain an occasional crescendo of majestic melody ringing out from the scattered belfries. Among others the diligent should seek out the few which are enumerated, and there are many, many others. Some are rarely heard on any day but the Sabbath: but the charm and the possibilities are there.

Down in the valley or the Avon, senceth Warwick, when a west wind sweeps gustily up and across the warm lands, wait for the chimes of the Collegiate Church of St. Mary. They will come to you sometimes gently and faintly in the whimsicalities of the wind; sometimes between the gusts, with a deepthroated cadence of exquisite harmony, rising and falling, sweet and low . . . a medley of sound to linger in memory for all time.

in memory for all time.

When a great wind, whirting down from the mountains to the west, hammers and pummels at "Rest and be Thankful"; when the roar of this wind drowns every sound, takes the breath from your nostrils and bends great trees before it, follow the road down be-

yond the little church of Kilmorich, around Loch Fyne, until, after a wide sweep, the shelter of the loch head is reached, and there, across the stretch of water, Inveraray faintly looms. . . Softly stealing over the sea the light tinkle of church chimes will greet the ear. Over the whole loch-side and the town those bells dominate. They are wafted to the great pines inland, down upon the fishermen and their boats, across the waters to the gloomy heights. The setting is unique and the bells a happy and inspiring entertainment.

It is possible at Ludlow to sleep in a half-timbered hotel. A black-and-white relic of mediæval England, with floors aslant, quaint knockers on the doors and an aged cobbled yard without. From within the ear can be delighted by the harmony of some of the most tuneful chimes the world over. They, too, cling tenaciously to memory, with the same haunting fragrance.

There is a sequestered charm amid the sylvan beauties of Sherborne when the ten chimes from the abbey broadcast their measured appeal, and the air for just a brief while is a whirl of soothing melody, with "Great Tom," the largest bell rung in peal in England and a gift from Cardinal Wolsey, resounding his triumphant tenor note. There is just the same charm from the humble music that will creep out to you when you loiter on the centuries-old bridge at Brecon and catch the beckoning appeal from the Priory Church.

There is a beautiful peal of bells from Hexham Abbey and another delightful song of sunshine, hope and peace from the peal of ten bells from Ripon Cathedral, Again, at Winchester, where the great tenor bell weighs 32 cwt., the soothing charm of a peal of 12 bells rings out across the peaceful Hampshire countryside. Is it possible to visualize anything more characteristically English than this summer evening scene amid the green fields of Hampshire, when those ancient cathedral bells are rolling in soft eloquence right out and far across the somnolent countryside?

Here and there in the countryside historical memories are maintained by the ringing of the Curfew at eight every evening. It is sounded from Exeter Cathedral upon, one believes, "Great Peter," the second heaviest bell in England, whilst at Stratford, another corner reminiscent of Britain's old-world countryside, in the Guild chapel the Curfew is still rung during the winter months.

There is still another charming spot, Dunster, a delightful old-world village, over which the sweet chimes of the Priory Church caress the air every evening, and their tunes are changed each day of the week.

In even the most humble village church bell there is a charm. It has a kindly, motherly, welcoming sound. Does even the little church of Capel Curig, the humble "Chapel of St. Curig," peal forth its own solitary little chime, which can be heard even up to the looming heights of Snowdon, do so without finding a sympathetic ear?

It is a poignant misfortune that so little is made of the chimes of old Britain. They could be made a joyous asset to a countryside that reveals harmony and melody in every twist and turn of its beautiful countryside.

THE LAW AND WAYSIDE REPAIRS.

By a Barrister.

CONVICTION or order for costs was recently made against a motorist for allowing his engine to run while the car was stationary, and it should therefore be useful to motorists and motorcyclists to have the present law made clear to them once and for all.

Under Article 5 of the Motor Car (Use and Construction) Order of 1904.

Every motorear shall be so constructed as to enable the driver, when the motorear is stationary otherwise than through an enforced stoppage owing to necessities of traflic, to stop the action of the machinery attached to or forming part of the motorear so far as may be necessary for the prevention of noise. The driver shall on every such occasion make prompt and effective use of all such means as, in pursuance of this condition, are provided for the prevention of noise as above mentioned.

It was under this Article that the defendant in the case referred to was charged, and he raised the defence that he was carrying out adjustments to the engine. It is quite clear that, if he produced sufficient evidence to show that these adjustments were necessary, he was entitled to an acquittal, for the Article quoted continues:—

Provided that this regulation shall not apply so as to prevent the examination or working of the machincry uttached to or forming part of a motorcar where any such operation is rendered necessary by any failure or decomposed of the said machinery

or derangement of the said machinery.

The language of this proviso is clear and unambiguous, and the mere fact that it is possible for a motorist to drive away and do his repairs or adjustments elsewhere appears to afford no ground for a conviction if the operation is a necessary one. The word "necessary" presumably means reasonably necessary, and it is open to the Court to find as a fact that there was no need for the defendant to attend to his engine.



Noisy engines must be stopped when adjustments are being made.

If, however, the magistrates accept the evidence that there was a "derangement or failure" of the machinery it would be difficult for them to hold at the same time that it was unnecessary to put this state of affairs right, particularly if the defendant could show that to have driven the car further in its then condition would have increased the mechanical trouble.

The difficulty in such cases as these is the power of the justices to get round the law by finding the facts to suit the provisions of the Act or Order under which the charge is brought. On appeal to the High Court in such cases it is necessary for the appellant, in order to succeed, to show that there was no evidence to support the findings of fact made by the Court below, and this is seldom easy to do. It may well have been in the case referred to that the adjustments were, in fact, unnecessary, but one may be forgiven for imagining that in similar cases magistrates, who have as little knowledge of motoring as they have of law, might get the idea into their heads that residents in their vicinity are not to be disturbed by running engines, and that, if a car will go the driver ought always to take it into the country to adjust it.

LIGHT CAR

Why not "Free Wheels"?

HAS it ever occurred to you what a tremendous amount of petrol must be wasted due to the heavy suction on the pilot jet when a car is descending a hill or otherwise overrunning the engine with the throttle practically closed? All this wastage could be done away with if there were a free-wheel device of some kind between the back wheels and the gearbox. The experts say one would not be able to use the engine as a brake and that the wear and tear on the brake linings would be very much increased. I wonder whether this would really be the case.

After all, the Tilling-Stevens bus, which is a very fine vehicle indeed, has been in use for many years and one hears of no brake troubles, although the brakes act only on the rear wheels. I have driven one myself, and the fact that the engine did not act as a brake when overrunning was not at all troublesome after the first few miles, during which a queer feeling of gathering speed was noticed every time pressure on the accelerator was removed.

These remarks are prompted by an experimental car-with a free wheel at the forward end of the propeller shaft-which is being tried out by one of the big light-car manufacturers in the Midlands. It has been found already that a very big petrol saving is obtained and that the car is very nice to drive in traffic, particularly as, with one of the lower gears engaged, the passengers are not lurched forward in their seats when the engine is decelerated.

When Decelerating in Second.

DERSONALLY, I detest the grinding, rough deceleration of a car when an indirect gear is engaged, and usually thwart it by keeping my hand almost continually on the gear lever when in traffic and shifting to neutral or top when I have to slow down immediately after accelerating for a spell in first or second. Many drivers whom I know declutch instead, but I was brought up to light cars with very inferior clutch-withdrawal mechanisms, and I still hesitate to use the clutch more than is strictly necessary, although the last halfdozen cars which I have owned have had properly designed ball thrusts at the vital point, whilst the

leverage has been well worked out, so that paralysis of the left leg is not threatened after holding the pedal down for a minute or twe.

In my view, few parts of a car have been more improved of recent years than clutches and their withdrawal mechanism; the popularizing of the dry-plate clutch has gone far towards bringing about this desirable state of affairs, but the few examples of cone clutches which remain to-day are very difficult to criticise.

The Modern Supercharger.

RECENTLY drove a supercharged Lea-Francis sports model and was amazed at the big improvements in the design of supercharged engines which have been made during the past few months. When superchargers first began to appear two or three years ago they were suitable only for racing engines. One could get no reasonable tick over, a push start was essential, fuel consumption was terrific and many minor troubles were experienced. On the car I have just tried, however, the engine would start with one complete turn of the starting handle, it would tick over just as well as any other sports engine and consumption was at the rate of about 20 m.p.g.

So far as flexibility was concerned, I could find nothing about which to complain. On a top gear a trifle higher than 4 to 1 it was possible to get away from a standstill on a level road and to accelerate quite briskly, whilst in the ordinary course of events the gearbox needed using less than that of the average type of atmospheric induction sports model with a compression ratio of 6 to 1

or thereabouts.

Motorcycle Gearboxes.

TOTORCYCLISTS who have abandoned two MOTORCYCLISTS who have about poor im-wheels for four must gather a very poor impression of the skill of designers of car gearboxes. I rode a 1927 350 c.c. sports motorcycle of a popular make last week and the ease with which the gears could be changed was a positive revelation. When getting away in bottom gear, once a fair speed had been obtained, it was easy just to ease the clutch and snatch the gear lever into second with the throttle still half-way open, whilst a similar change could be made from second to top.

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There was absolutely no need for double declutching or pausing in neutral, whilst when changing down all one had to do was just to ease the clutch and shift the gear lever as snappily as possible into the lower notch. When I returned the machine to its owner after a 30-mile run I remarked on the delightfully simple gear changing, and he stared at me aghast. "Why," he said, "it's the very worst feature of the machine! The one I have just sold was ten times as easy to change!" Ye gods!

Running Expenses.

THE majority of new motorists take over their first car with the intention of keeping a detailed account of all their running expenses, tyre mileages and so forth.

This, of course, is very commendable, for there is no doubt that much can be learned from an examination from time to time of the figures so obtained.

It may be discovered, for example, that the petrol or oil bill has increased out of all proportion to the mileage covered. Discrepancies of this nature need to be accounted for, and the cause may often be traced to a minor fault which would otherwise remain undiscovered for a considerable time and thus cost the owner quite an appreciable sum. Apart from this aspect of the matter, running accounts make very interesting reading, and in the case of those who have to keep a close watch on expenditure show just how the money goes and thereby suggest possible economies.

This is all very well, but the trouble is that accounts of running expenses are seldom kept for more than three or four months. The owner may plan an attractive system, but sooner or later it fails, he gets in a muddle and in desperation decides to abandon the whole idea. I speak from experience.

Those who have been discouraged in this way, however, can take heart again—that is, if they are prepared to spend the sum of 1s. I have just received a copy of "The Motor Car Log Book," which has been compiled by Mr. L. A. H. Stovell, and is printed and published by Messrs. A. Chamberlain and Co., High Street, Exeter. Its straightforward layout is impressive, and it should certainly remove the principal objections to keeping running cost accounts.

Wasted Tread Rubber.

NE sometimes wonders whether our fine. smooth, tarred roads are as good for tyres as the macadamized surfaces of old. In France, where the bulk of the roads still have a loose, sandy surface, and where really hard roads are the exception rather than the rule, one notices many tyres worn evenly right down to the canvas, but I cannot remember having seen the canvas peeping through the tread of any tyre I have used during the past three years—the tyres having always burst or shown signs of an impending burst some time before the tread rubber has worn away.

As French tyres behave, in my experience, in much the same way when used on our English roads, the implication would certainly appear to be that to enjoy the full advantage of all the rubber on the tread you have to go to a country where the roads impose less strain on the carcase of a tyre and, presumably, more friction on the tread. Mileages of 10,000 to 12,000 are, however, by no means uncommon on French roads in spite of the gritty nature of the surface.

Second-hand Bargains.

VHILST looking through the advertisements of second-hand light cars for sale in last week's issue, I was struck by the very low prices which are being asked in spite of the fact that this is considered to be practically the best period of the year for selling second-hand cars. Even amongst dealers' advertisements there were what appeared to be splendid bargains, whilst private owners were offering up-to-date models of good makes at prices in many cases well under £100.



The villages of Scotland afford a pronounced contrast to those of the South. This is Killin village, in 'WAY UP Perthshire, on the left being the River Dochart. NORTH. B21

When one turns to the older makes, such as the G.N., it is amazing how low are the prices asked. There was one for £16 and many for £25 and thereabouts, Jowetts were offered from £55 upwards, whilst there were Salmsons under £50 and Standards at £85 and even less. Two 10-23 h.p. Talbots were on offer at under £100, and if they were in anything like good order must surely have been really first-rate bargains. The 10-23 h.p. Talbot was a model for which I always had a very great weakness.

Talbot Points.

PERHAPS my liking for it was chiefly due to the fact that whatever kind of petrol was used and whatever the ignition lever happened to be placed there was never a sign of knocking or pinking, whilst much the same applied to the engine of the Talbot Eight, which, I believe I am right in saying, was identical with the 10-23 h.p. unit, except that the latter was bored out a little more. Both models were particularly sweet running, most beautifully built and capable of an excellent performance on their gears. They were driven out

of production by their high prices, the public being unable to appreciate the solid worth which they embodied.

The anti-knocking capabilities of these engines were due, of course, to sheer design, the cylinder heads and ports being designed to give first the right degree of turbulence and an approximately ideal flame rate.

Two Diehards.

In the old days two things which we never omitted from our tool boxes before starting on a long run were a roll of insulation tape and a good supply of about 16-gauge copper wire. Today one seldom finds the need for effecting a jurying by the wayside, but I should still hesitate to go very far without these aids to achieving a satisfactory "botch."

Copper wire, incidentally, used to be very difficult to buy in small quantities, but now that there are so many wireless shops in the country it is easy to obtain any quantity from a 12-in, length to a supply sufficient to make an aerial and still have some change left out of a shilling.



AN UNUSUAL C. L. Clayton's Amilcar tackling Bluehills Mine in the Land's End trial. The artist has conveyed a fine impression of the difficulty of the notorious hair-pin bend.



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

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

NORTHERN OFFICES: MANCHESTER: 196, Deansgate. 'Phone: Central 2467.

A Free Over-run.

OUR contributor "Focus" touches upon a very interesting point in his notes this week when he refers to the inclusion of a freewheel device in the design of the transmission of a light car. Let us investigate the disadvantages inseparable from such a system. In the first place the engine could not be used as a brake; secondly, if the engine were momentarily stopped, the momentum of the car could not be used to restart it.

What other drawbacks are there? Admitting that there are none, does not it seem that the advantages accruing from the use of a transmission system giving a free over-run are well worth exploring, for brakes to-day are so good and so reliable that the need for using the available braking power of the engine no longer exists, whilst with an electric-starter switch always within reach of the driver, surely the ability to restart the engine "on the clutch" is a very small point to sacrifice. Both these drawbacks could, of course, be got over by designing the freewheel device so that it could be locked at the will of the driver.

The definite advantages of a freewheel device are apparent only to those who have tried one; reduced fuel bills, much sweeter running and materially decreased wear and tear of the engine and transmission inevitably result, whilst there are other points in favour of the scheme which engineers would not be slow to emphasize. The ideal arrangement, of course, would be for there to be no mechanical connection between the engine and the back wheels; if this is unattainable, is not an attempt to get part way to it worth consideration?

Public Enthusiasm for Competitions.

THE immense crowds which witnessed the performances of the cars and motorcycles on the hills in the London-Land's End trial showed in a very striking manner how keen the public is upon competitive events of this kind. It might be said that the crowds of spectators were there simply because the hills happened to be in popular holiday districts, where many folks would naturally forgather at Easter. But this does not necessarily account for their presence as, in the case of important motorcycle events, such as the Stock Machine trial and the International Six Days' trial, fairly large crowds gather on the more important hills, even on week-days.

Tight &r Cyclosur

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

NO CAR WITH AN ENGINE CAPACITY EXCEEDING 1.500 C.C. (1) LITRES) COMES WITHIN THE SCOPE OF THIS JOURNAL, THAT CAPACITY BEING GENERALLY RECOGNIZED AND ACCEPTED AS THE LIMIT FOR A LICHT CAR ENGINE.

Topics of the Day

Conducted by EDMUND DANGERFIELD.

TEMPLE PRESS LIMITED,
7-15. Rosebery Avenue,
London, E.C.I.
Inland Telegrams - "Pressimuz,
Holb, London."
Cables - "Pressimus, London."
Telephon - "Certenwell 6000
(7 Lines).

The public, therefore, is unquestionably interested in the performances of machines in competitions, and the word "machines" must include cars as well as motorcycles, for on Porlock. Beggars' Roost and Bluehills Mine last Saturday it was noticeable that very few of the spectators left their vantage points after all the motorcycles had passed and the cars began to arrive. In view of this and the admitted enthusiasm of the trade for competitive

events as exemplified by the number of letters from prominent trade personalities which we published in *The Light Car and Cyclecar* a few months ago, we sincerely hope that the Society of Motor Manufacturers and Traders will seriously consider the advisability of raising—or at least partially raising—its complete ban on events of this kind. There is much to learn from the way cars behave in the hands of amateurs, but their performances when driven by trade men is far more instructive.

Importance of Running Costs.

In these days when so many buyers of cars have very little technical knowledge and still less enthusiasm for things mechanical, there is naturally a tendency for the bulk of cars to be sold on what might be termed their "showroom performance." Prospective buyers examine the body details, the accessories and the general appearance of a car, but pay very little heed to the running costs. They certainly watch prices very closely and they are intent upon paying a small tax, but they fail to realize that the first cost of a car and the annual tax are of less account than the cost per mile.

In the case of an annual mileage of 10,000, the difference between an £8 and £12 tax in terms of cost per mile is less than .1 of a penny, but the difference between 25 m.p.g. of petrol at only 1s. 2d. per gallon and 40 m.p.g. is £8 15s., or more than .2d. per mile. Oil consumption to-day does not vary much in the case of cars with "touring" engines, but tyre mileages vary enormously. Some light cars, in fact, cost £10 more per annum for tyres than do others covering an identical mileage with a similar load. It is the dead weight which Those who buy cars purely for their superficial merits may find that 12 months' running costs may amount to £20 or £30 more than their neighbour's, although he uses his car just as much and carries an equal load.

INTERESTING LES

Folding Table.

A FOLDING table suitable for carrying in a car has just been added to the range of Brooks productions. The table surface is 20½ ins. square and it stands 24 ins. from the ground, whilst when folded it is only 1 in. thick. It is claimed to be strong but very light and folding is quite a simple operation. The manufacturers are J. B. Brooks and Co., Ltd., Criterion Works, Great Charles Street, Birmingham, and the price is 27s. 6d. One of these tables and two or more of the Brooks folding chairs, which sell for 7s. 6d. or 10s. 6d., with a folding back rest, should be ideal for picnies or camping.

Useful in the Garage.

A N accompanying illustration shows a quarter-pint conical-shaped oilean which is being marketed by Joseph Knye and Sons, Ltd., Lock Works, Leeds, at the price of 1s. 10d. This oilean was designed chiefly for textile mills, where it is used for spirits for removing grease spots from pieces of cloth, and should be very useful for similar purposes if kept handy in the private garage, for any grease which was accidentally



A Kaye oilcan which should be useful in the garage (see accompanying paragraph)

spilled on the clothes could be immediately removed. The can is constructed of polished brass and is corrugated to ensure strength, whilst the workmanship is, of course, up to the usual Kaye standard.

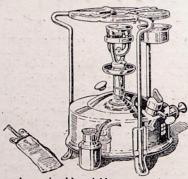
For Tracing Elusive Noises.

READERS who are mechanically inclined should investigate the claims of the Mitchell Nocfinder, which is an extremely useful instrument for locating clusive taps and so forth in an engine. It is manufactured by the London Motor Supplies Co., 1, London Road, Twickenham, Middlesex, and sells for 12s. 6d. carriage, paid. The Nocfinder consists of a sound box, which is not unlike the carpiece of an ordinary telephone in appearance, and a sounding rod. With the former pressed against the ear, the end of the rod may be applied to externed.

nal engine parts under examination, with the engine running, when the movement of internal parts can be clearly heard. It is claimed that every click made by the opening and closing of a valve is readily audible, and the sound of the tappet striking the valve stem can easily be distinguished.

A Handy Stove.

Picnic enthusiasts will be interested in the collapsable wickless stove which is shown in an accompanying illustration. It is being handled by Messrs. Marble Arch Motor Supplies, 153, Edgware Road, London, W.2; and



A serviceable wickless stove for picnics; it is supplied in a metal box (not shown).

sells for the modest figure of 9s. 11d., 9d. extra being charged for postage. It is supplied in a metal box with carrying handles; the box measures 8 ins. square by 5½ ins. high, a size which enables it to be readily carried in the car. The fuel capacity of the stove is a full pint, and, from the motorist's point of view, has the added attraction that it can be used equally well with either paraffin or petrol as fuel. We have inspected one of these stoves and it impresses us as being a very practical affair. The arms, which support the grid, the burner and so forth, are detachable for packing, and a priming can, in which methylated spirit for starting the flame can be carried, is supplied.

Neat Tool Boxes.

JOSEPH SANKEY AND SONS, LTD., Hadley Castle Works, Wellington, Shropshire, are now prepared to make special tool boxes for fitting between the front dumb irons where the layout of the front axle, springs, and so forth allows. These boxes are shaped to conform with the curve of the dumb irons and in a good many cases would actually improve the

appearance of a car, whilst the ease of access to the tools is obvious. Quick release bolts are provided for easy removal if the starting handle is required, whilst, when the box is locked, these bolts also secure it to the chassis, thus preventing the tools or the box from being stolen. Naturally special models have to be made to suit different makes of cars and the manufacturers must therefore examine customers' cars to take the necessary measurements. Incidentally, Joseph Sankey and Sons, Itd., are prepared to make these boxes for car makers who wish to fit them as standard, or to grant non-exclusive licences for their manufacture.



A tin of Wonder Mist car polish together with the sprayer for applying it.

An Excellent Car Polish.

A VERY efficient car polish, known as Wonder Mist, is being handled by the Ashton Engineering Co., Ltd., Floodgate Street, Birmingham. Eightounce cans are sold for 2s. 6d., larger quantities, of course, being available, whilst the sprayer with which the polish is applied is 3s. 6d. The preparation is a cleaner as well as a polish, and with muddy cars it is necessary only to spray the parts to be cleaned generously with Wonder Mist, allow time for it to soak in, and then wipe down with a soft damp cloth, afterwards finishing off with a soft dry duster. We are informed that it can be used on ordinary paint and varnish, cellulose finish, or Weymann conchwork, whilst it is equally effective on leather.

A Neat Fire Extinguisher.

THE Knock-out Fire Extinguishers, Ltd., 16 and 18, Bardwell Street, London, N.7, are producing a handy fire extinguisher, which sells for 28s. 6d. It is quite small in size, measuring only 11 ins. over all, whilst its weight complete is 3 lb., so that there should be no



The Baby Knock-out fire extinguisher which sells for 28s. 6d. including a carrying bracket.

difficulty in accommodating it in the average light car. A prominent feature of this extinguisher is that it is easy to ascertain the amount of liquid which it contains without waste. It is claimed that the fluid will not freeze and is a non-conductor of electricity. A bracket (shown in the illustration) is supplied, and the extinguisher itself is finished in nickel-plate. Refills can be obtained for 2s. 10d. each.

"any hill on top, with three passengers

The Car that makes molehills of mountains.

PRICES FROM

EVERY MODEL GUARANTEED 3 YEARS.

" Iesmond." Ardenlee Parade, Belfast.

Jan. 12th, 1927.

A-C car is made.

I am the owner of a 4-cyl. Royal Model A-C for the past three years, and I feel even prouder of it to-day than the first day I got delivery. I have done some 23,000 odd miles on some of the worst roads in Ireland.

Been decarbonised only once, and can take any hill on top with three passengers, which I think speaks volumes for the car. An A-C car will take you anywhere, and then you always have something to look at in appearance.

Yours truly, (Signed) D. McATAMNEY.

The above letter is eloquent testimony to the really serviceable quality of the A-C, its hill-climbing prowess, its attractive design, and the small demand it makes for mechanical attention. And remember, too, that the A-C costs less to run per mile than any other car of equal road-performance and carrying-capacity. Come to our Works at Thames Ditton and let us show you how the

> RELIABLE DEMONSTRATION CARS FOR SALE.

THAMES DITTON, SURREY, ENGLAND.

Full range of A-C Cars at A-C LONDON CONCESSIONAIRES, 55-56, PALL MALL, S.W.1 (Opposite Marlborough House.)

Dunlop Cord Tyres are best, and we fit them on all A-C Cars.





HE manufacturers of the Trojan

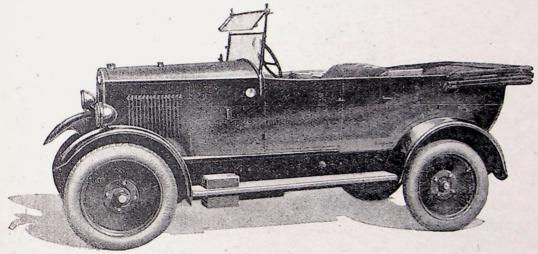
Cars and Vans have pleasure in announcing that on and after April 23rd, 1927, purchasers of new Trojan Vehicles in Great Britain and Ireland will receive a signed undertaking that, beyond the usual running costs for petrol, oil, tyres, their Maintenance Expenses shall be Nothing for the first 5,000 miles. This remarkable Guarantee is put forward with the sole object of proving the claims we have always widely advertised that the Trojan is the Simplest Car in the world and Costs the least to Maintain.

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Your car is on the Mobiloil Chart—follow the Mobiloil recommendation and be sure of correct lubrication.

Wherever you go you can buy the correct grade of Mobiloil for your car, antiern in quality the world over, and in convenient packages—sealed for your protection. If you prefer to buy Mobiloil 'loose' (i.e. from bulk) make sure that it is drawn from a container bearing the Mobiloil trade mark.

Mobiloil

Make the chart your guide

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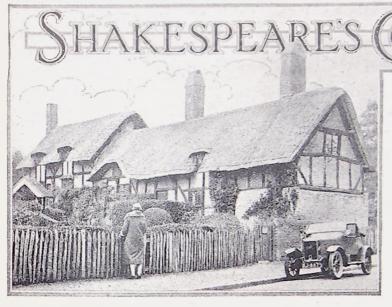
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If your car is not listed below you will find it in the Mobiloil Chart at your Garage. WARNING:

Don't ask for "A" or "BB"; always ask for Mobiloil "A" or Mobiloil "BB."

	1927 Engine		1926 Engine		1925 Engine	
NAME OF CAR	Summer	Winter	Summer	Winter	Summer	Winter
Alvis	BB BB A BB	A A A	BB BB A	A A A	BB BB A	A A A
Austin (12 h.p Austin (other) Bean Citroen, 7.5 h.p Citroen, 12/24 h.p	BB A A	AAA	BB A A	A Arc	A. A	A Arc
Clyno Crossley, "Six" and	BB BB	AAAA	BB BB	A	BB BB	A A
Crossley (other)	A BB	A	BB A BB A	AAAA	BB A BB A	A A A
Darracq (other) Hillman Hi mber, 8 and 9/20 h.p.	A	AAA	A	AAA	BB A BB	A
Humber (other) Jowett	A A BB	AAAA	A A BB A	AAAA	AAAA	AAAA
Lanchester Lancia (Lambda) Morris-Cowley Morris-Oxford Peugeot (Sl. Valve	AAAA	Arc A A	AAA	Arc A A	AAA	Are A A
Mdls. and 11 and 12 h.p.) Peugeot (other) Riley, 11 and 12 h.p.	A BB BB	Arc A A	A BB BB	Arc A A	A BB BB	Are A A
Rolls-Royce Rover, 8 h.p Rover (other) Singer	A A	AAA	BB A A	AAA	BB AA	A BB A A
Standard, 14 h.p Standard (other) Sunbeam, 4 and 6 cyl. Swift	AAA	AAA	BB A A	AAAA	BB	A A A
Talbot, 18/55 and 20/60 h.p. Talbot (other) — Trojan	A BB A	AAA	A 0.0	AAA	BB BB	A
Vauxhall, 14/40 h.p. Vauxhall, 23/60 and 25/70 h.p. Vauxhall (other)	A A BB	A	A A BB	A A A	A BB	A A
Wolseley	BB	A	BB	Λ	BC	A

Mobiloil Recommendations are endorsed by hundreds of Motor Manufacturers the world over.



Anne Hathaway's cottage at Shottery, one mile from Stratford-on-Avon.

SATURDAY next is the anniversary of the birth and death of England's greatest poet and dramatist, William Shakespeare, who was born on April 23rd, 1564, and died on the same day 52 years later.

Every year a large number of Shakespeare lovers make the pilgrimage to his birthplace in Stratford-on-Avon, and it seems likely that, falling as it does on a Saturday, the anniversary this year is likely to witness a record number of visitors.

Stratford-on-Ayou is a charming old country town, and has the added attraction that the surrounding country (often known as Shakespeare's Country) is typical of rural England at its best, and forms an ideal district for a short tour.

The centre of attraction in the town itself is, of course, the house in Henley Street where Shakespeare was born. Originally it was two houses; in one his father, John Shakespeare, lived, whilst adjoining was the wool shop in which his business was carried on. Later the wool shop was converted into an inn, whilst the birthplace became a butcher's shop; but in 1857-8 the building was restored and the original wool shop is now a Shakespeare museum, the birthplace being open to visitors.

The Grammar School where Shake-speare was educated stands in Chapel Street, but, unfortunately, New Place, the mansion in Church Street where Shakespeare lived after his retirement and where he died, was demolished about the middle of the 18th century, and a garden now occupies the original site of the building.

Just opposite is John Harvard's house, which is said to be the finest ancient domestic building in the town. John Harvard left part of his estate for founding Harvard University, Massachusetts.

Few visitors will miss Holy Trinity Church, where the great dramatist was buried. The church is picturesquely situated beside the River Avon, and Shakespeare's grave is in the chancel. Upon the stone appears the following verse which was placed there by the will of Shakespeare himself:—
"GOOD FREND FOR JESUS' SAKE FOR-

BEARE
TO DIGG THE DVST ENCLOSEED HEARE;

BLEST BE YE MAN YT SPARES THES STONES:

AND CVRST BE HE YT MOVES MY BONES."

In the beautiful village of Shottery, one mile from Stratford-on-Avon, stands Anno Hathaway's cottage, a picturesque, thatched, half-timbered farmhouse. Anne Hathaway was the eldest daughter of John Hathaway, and was nearly eight years older than Shake-

PLACES OF INTEREST WHICH SHOULD NOT BE MISSED BY READERS MAKING A WEEK-END VISIT TO THE DISTRICT.

speare at the time of their marriage, Shakespeare being only 181 years old.

The whole country round about Stratford-on-Avon teems with associations with the world-famous poet, but the district cannot be explored thoroughly during a week-end run.

Pleasant trips may, however, be made the "Eight Villages," which are satirically described in a rhyme which is said to have been composed by Shakespeare after an excursion with the Stratford good fellows and jolly drinkers to Bidford. Here they are supposed to have had a drinking bout with the Bidford sippers and got worsted. Their condition appears to have been such that on the way back they sank down by the roadside and slept under a tree for the night. The following morning some of them wished to go back and have another bout, but Shakespeare refused, saying that he had drunk with-"Piping Pebworth, Dancing Mareton,

"Piping Pebworth, Dancing Marston, Haunted Hillborough, Hungry Grafton

Dodging Exhall, Papis Wixford, Beggarly Broom and Drunken Bidford."

All the villages mentioned in this verse lie within a few miles of Strat-ford-on-Avon and are well worth exploring.



Harvard House, Stratford-on-Avon, is an object of great interest to Americans owing to its association with John Harvard, who founded the university bearing his name.

Amateur Drivers Make Light of the West-Country "Terrors." Only 24 Retirements out of 141 Small Car Competitors.

THE 15th of the Motor Cycling Club's series of London to Land's End Trials, and the first in which there were no trade car drivers, the big event which finished at Land's End last Saturday night proved to be an over-whelming success. The most difficult of the test hills—Beggars' Roost—was climbed with ease by more than two-thirds of the light cars, whilst the general standard of driving on the test hills was very good indeed. The weather throughout was perfect, a woncerful bright moonlit night being fol-lowed by a perfect spring day, with a bright sun shining from a blue, cloud-

Of the 118 light cars which started, 101 arrived safely on time at Land's End. The three-wheelers performed very creditably; there were 23 starters and 16 finishers.

At the start, which was from Slough. there were scenes of great enthusiasm, very large numbers of friends and rela-tives of the competitors having gone there to cheer them away. The last of the 348 motorcyclists was despatched by the starter shortly before midnight, when the first of the three-wheelers set forth on the 317-mile journey to "The End." The first of the four-wheelers was away eight minutes after midnight, whilst the last of the cars was not started until 2.40 a.m.

This year, apart from a few particularly red-hot enthusiasts in sports models, the competitors were very subdued and well-behaved; there was less ragging than usual, and the most austere clothing was adopted by the ma-jority—quite a change from the crimson tam-o'-shanters and kindred head-gear which has typified these events in the past.

Along the road to Maidenhead, Reading and Newbury it was noticeable, too, that driving methods this year were more steady than of yore, the bulk of the drivers preferring to jog along quietly rather than to proceed in a series of short speed bursts followed by a wayside rest in order not to get too

Even over that beautiful road which threads its way through Savernake Forest and down the steep pitch which leads into the fine historical old town of Marlborough, speeds for the most part were low. In Marlborough itself coffee

On Bluehills Mine. J. Wallace (A.B.C.) was one of the 129 out of 135 small car competitors who made a clean ascent.

was to be had, but there were more competitors who put theirs in thermos flasks for future use than took it then and then.

Leaving Marlborough, a turn was soon made for Devizes, whence Trowbridge and Shepton Mallet lay ahead. Here some little difficulty was experienced by many drivers in finding the proper route, but there were signposts in plenty, and Glastonbury was reached by the majority on time.

by the majority on time.

At Taunton, rather more than 20 miles farther on, breakfast was served at Deller's Café, after which the serious business of the trial began, for Porlock lay less than 30 miles ahead.

The hill did not prove so severe 3



test this year as in previous trials and comparatively few competitors experienced any serious difficulty. There were two reasons for this. In the first place the surface was in unusually good condition, with no troublesome ruls, whilst it was sufficiently damp to be firm but not too slippery, thus allowing an excellent grip for well-studded tyres.

The second reason was that the ascent was not timed this year, so that competitors could take things easy—most of them did, for really spectacular climbs were few and far between.

In consequence, the hill was robbed of a certain amount of interest from the point of view of spectators, a fact which was reflected in the size of the crowd on the first bend, which, although large, was not so great as last year. Incidentally, the spectators were kept in very good order by the police, and cases of competitors being partly obstructed by onlookers were very rare.

The weather was ideal-better even than that of the

last few Easter holidays — whilst the grateful warmth of the brilliant sun was tempered by a faint, refreshing breeze. As in last year's trial a restarting test was held just before the first bend, competitors being required to bring their cars to rest with the front wheels on a white line drawn across the road and at the word "go" to restart unsided and reach a second line ten yards distant in as many seconds, thereafter completing the climb non-stop.

The cyclecar class was composed entirely of Morgans and was headed by S. Hall, who made a faultless climb, as indeed did the majority of three-wheeler drivers. B. B. F. Russell was driving a smart coupé model which, finished in an attractive two-colour scheme of dark red and grey, excited a good deal of interest and favourable comment.

interest and favourable comment.
W. W. Mares, in an Aero model, was troubled with clutch slip, which prevented him from making an unaided

restart and he was pushed some way up the hill, when he eventually stopped with an overheated engine; on the filler cap being unserewed a quantity of boiling water and steam spurted up, some of it unfortunately reaching his hands and face, but without serious results. H. J. Vidler, in an Aero model, had his very promising climb spoilt by one of his front wheels coming off.

S. A. McCarthy made one of the best restarts of the Morgan drivers, whilst H. R. Taylor was also very good, but his machine had a bad double skid on the second bend.

The four-wheelers were led by D. M. Healey (Rover Nine), who made a good climb. All the Frazer-Nashes made

INCIDENTS ON THE-

Porlock Hill was in particularly good condition this year, and few competitors experienced any real trouble. (1) J. C. Anderson (10 h.p. Mathis saloon) taking the first bend comfortably. (2) J. B. Tointon (10.8 h.p. Riley) and R. B. Waters (10 h.p. Salmson) rounding the second corner together. Lyamouth Hill did not take a very large to!l of failures; and (3) K. H. Daniel (12 h.p. Alvis) made light of the hair-pin, his passenger sitting in the rear seat to assist wheel grip.

light of the hill, some of them showing a very creditable turn of speed; E. Hillary made a particularly good getaway and skidded the first bend, whilst Lord Waleran executed a fast skid on the second corner.

A thrill was provided by K. II. Daniel (12 h.p. Alvis). S. E. Mortyn's Bugatti, which appeared to be overgeared, had come to a stop in the centre of the road just above the first bend and was being assisted when Daniel was allowed to restart. Accelerating in an exceptional manner, his car came round the bend at speed and he did not see his danger until a collision seemed inevitable. A cool head and remarkable skill saved the situation, for, with a lightning double twist of the wheel, he slithered safely past.

With one or two exceptions the

with one or two exceptions the Austin Sevens, of which there were quite a number, behaved very well indeed, those driven by B. W. Harcourt, J. G. Orford and J. Richardson being, in our opinion, the best. The Lea-Francis drivers showed off the splendid acceleration of their cars to advantage, and L. T. E. Clark, who went through the trial with a full complement of pasengers in his four-seater model, was especially noteworths.

especially noteworthy in this respect.

H. J. Lovatt was driving a Jowett with a sports body and got away very well, whilst the other cars of this make were equally convincing. Among the B32

few competitors who went through the trial with three passengers was B. Monk, driving a Trojan saloon, which, although slow, gave the impression that it would have been equally comfortable ascending the side of a house! E. E. S. Montagu was at the wheel of one of the new Riley Nines, which made quite a creditable climb.

Besides those already mentioned, a few drivers took the hill fast, notable among them being C. Anthony (8 h.p. Sénéchal), G. H. Martineau (Salmson

G.P. Special) and the A.B.C. drivers. The ten-mile stretch of moorland between the top of Porlock and Lynmouth used to be somewhat trying to competitors three or four years ago, when the bad surface, combined with the twisty nature of the road, made time-keeping somewhat difficult, but a better surface and four-wheel brakes have now robbed it of its terrors, whist four-wheel brakes have also made it possible to descend Countisbury Hill a good deal faster than of old.



-WEST-COUNTRY HILLS.

(4) As usual, Beggars' Roost attracted a very large crowd of spectators, and towropes were in readiness for assisting unfortunate competitors. D. W. Geidt (11.9 h.p. Lea-Francis) is seen making a comfortable ascent. The hair-pin bend on Bluebills Mine is very tricky to those who are unfamiliar with the hill, and (5) G. H. S. Ellis (Austin) failed. (6) G. B. Wieland at the same spot; note the exceptional steering lock of his Newton Ceirano, which ascended with two passengers.

Lynmouth Hill, with its rather aweinspiring hair-pin, did not account for many failures and, although the surface was stony and a trifle damp, competitors were able to pick a fairly firm path by hugging the wall.

From the top of this hill it is only two miles to Beggars' Roost, which, in consequence, had to be climbed with engines which in most cases were already very bot

already very hot.

Beggars' Roost! How terrible it sounds to those who know the hill only

by repute, who have never seen it, but have only been told almost ghastly tules of the severity of its gradient and the surface. From Barbrook Mill the hill rears skywards, bears sharply to the right, stiffens up to the steepest part, with a gradient of 1 in 3, on a sharp "hump" on the right-hand side. Thousands of really enthusiastic spectators guthered on the hill.

Thousands of really enthusiastic spectators gathered on the hill even at seven o'clock to greet the motorcyclists, and by the time the cars arrived every available spot was populated, as it

were, with visitors. Some even sought vantage points in the branches of the

On the whole the cars performed well, about two-thirds of the total number of competitors in all car classes making good climbs, of which many were quite fast and well-judged. Some of the failures probably would have met with greater success had the spectators not crowded to the hump over which the drivers were forced to pilot their cars rather than steer into the crowds to the left where the greaters that steer had.

Loud shouts and excited cries heralded the approach of the first Morgan before it took the bend. It was R. A. Jacobs's Aero Morgan. He

cornered fast and well and altogether made a most impressive climb.

The greatest excitement followed a few minutes later, when A. C. Maskell (Aero Morgan-J.A.P.) literally streaked up, sliding on the loose surface on the corner. At that moment his steering column broke, perhaps due to the use of a special steering reduction gear. His machine charged the off-side bank, heeled over at an alarming angle and leapt across the road into the spectators. They scattered in all directions and unfortunately a small boy was injured. The front axle was considerably bent. Maskell told us that the speedometer was showing 42 m.p.h. just before the crash—a really splendid performance.

One generally expects of a Morgan a speedy and maybe spectacular climb, but only about five made ascents which could be described as fast. Taylor, of course, was one of these drivers, the others being Stokes, Thurlby and Russell in his coupé.

Steady and sure climbs were made by Hall, McCarthy, Holmes and Stephens, whilst Saunders just managed to get over the hump by dint of his passenger lying over the tail to help the rear wheel to grip. Five failed.

In the 1,500 c.c. class the Frazer-

In the 1,500 c.c. class the Frazer-Nashes were outstanding performers. Practically all (there were nine of them) made astonishingly fast climbs, B33 especially Lord Waleran, Cornish, Schwalm, Aldington, Jaques and Hillary.

The Alvises, Lea-Francis and Austins, too, were all notable performers. Concerning the first-men-

the hump steered straight into the crowd and went around it.

Other good performances were those made by the super-sports A.B.C.s, the 10.8 h.p. Newton-Ceiranos (both of which makes were fast), D. M. Healey

(Right) L. Martineau (Salmson) taking Bluehills Mine at speed, and (below) a remarkable photograph of E. N. G. Cooke (Morgan) overturning after crashing into the rocks on the same hill.

tioned, of eight in this class only one failed; the others, in most cases, appeared to find no difficulties whatever, and Daniel, Holcroft and Urquart-Dykes were particularly fast, but the car driven by Grimsdell boiled. A

saloon, too, was very good.

Only two Lea-Francis cars marred what would have been a splendid show. One, driven by E. T. Evans, arrived very near the hump in second gear, but the driver missed his change! The other, a four-seater with four up, approached the climb too slowly. Broom-

field, Chantrey and Walker were quite fast.

There were no fewer than 24 Austin Sevens, of which seven made clean climbs. Most of those that failed reached the hump, which was just too much for them. They were conspicuous for the unusually quiet manner in which they climbed. Milton, Eddy, Tomhason, Harcourt, Orford and Richardson made clean and well-judged climbs and, curious to relate, several drove standard chummy models, whereas many sports models failed.

The Trojans, including a saloon with four up, were extraordinarily sure. Slow and steady they pingged their way up; the hump, over which they drove cheerfully, having practically no effect upon them. The way in which the 7 b.p. Jowetts climbed also put to shame the poor shows of many larger cars, three of the four Jowetts running making perfectly clean climbs.

It is probable that R. Francy (11 h.p. Clyno) would have climbed successfully had he steered to the left of the hump. As it was, the spectators crowded to the hump over which he was forced and failed.

Of the ten Salmsons, G. H. Martineau (G.P. Special), Simon, Couradi and Berry made fast ascents; Moss-Blandell (9.5 h.p. model), an old hand, elimbed steadily, and on approaching B34

(9 h.p. Rover), who was slow but sure, and likewise J. C. Anderson (10 h.p. Mathis). G. F. Smith (10.8 h.p. Riley) steered cheerfully straight over the steepest part of the hump.

Amongst others who climbed successfully we noted E. S. Huchence (11.9 h.p. A.C.), C. Anthony (8.2 h.p. Sénéchal), and both Palladiums

The wait of half-an-hour which was allowed at the top of Beggars' Roost this year gave engines a chance to cool down and competitors an opportunity to discuss their joys and sorrows. Everyone who failed had some good reason to

Dust this year was even more troublesome than it has been in the past; but, even so, there were few competitors who did not enjoy the magnificent scenery and the interesting nature of the route. The narrow, steep streets of Launceston were thronged with people when the ears began to arrive there, and some difficulty was experienced in getting them safely parked, whilst the competitors had lunch in the Town Hall.

After the meal, for which only an hour was allowed, making a total time for meal stops for the run of only two hours, the way led over Bodmin Moor to Bodmin—the joint (with Truro county town of Cornwall. The road is bounded by immense stretches of open moorland, which were covered with a rich earpet of magnificent yellow gorse. In Bodmin itself all the local enthusiasts turned out to cheer the compettors on their way—and many of them needed cheering, for, with Bluchills Mine only a few miles ahead, most of the drivers were feeling far from confident.

The turn off the main road for Perranporth, near which the Mine is situated, was made some 15 miles along the Truro road from Bodmin. Here a foretaste was obtained of dense—almost impenetrable—clouds of dust, which made a purgatory of the last 40 miles of the

A very welcome tea halt was allowed at Perranporth, and afterwards the competitors set off to attack Bluehills Mine, with its tricky hair-pin bend. As usual, many men were caught by the left-hand corner on the descent, and those whose cars had not a good lock were forced to reverse on the bend—not an easy proceeding!

The official cars sailed round the hair-pin in excellent style between two solid banks of spectators. It is difficult to estimate the size of a crowd, but without any doubt this year's was a record one. There were four fields filled with the parked cars of spectators.

After the official cars came a long procession of motorcycles and sidecar outfits, and, as in previous years, it was left to the Morgans to cause the real thrills and excitement.

Very wisely the chief marshal on the hill decided to hold up proceedings until everyone had moved right away from the corner, as Morgans have a habit of

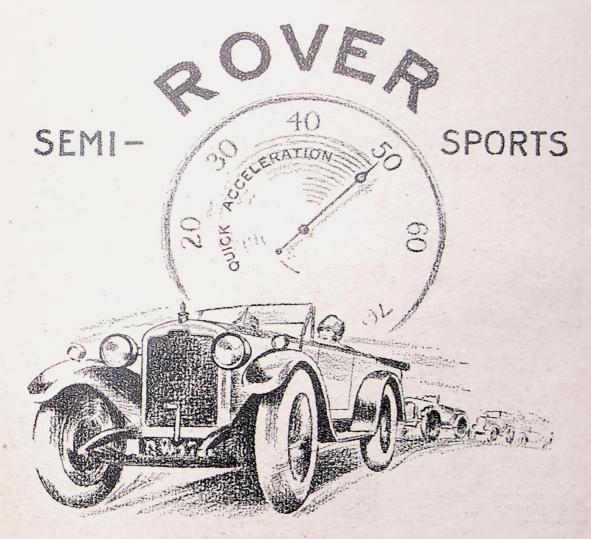
(Above) Competitors waiting in Lynmouth to ascend Lynmouth Hill and (right) S. J. Clutterbuck (Rover Nine) after rounding the hair-pin at the foot of the hill itself.

account for it, whilst those who had been successful were for the most part singularly modest.

The 30 minutes soon passed, and the delightful Devon lanes leading through Umberleigh Bridge, Torrington and Holsworthy to Launceston were joined.

throwing large stones from under their back wheels.

With the hair-pin clear, S. Hall, the first of the Morgan drivers, was given the signal to start from the little bridge at the foot of the hill and made a very neat and silent climb. J. S. Thurlby



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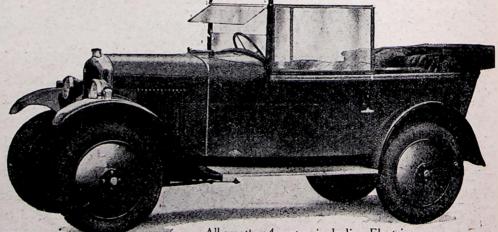
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READERS, NOTE.—It assists the small car movement and the advertiser, and ensures you prompt attention, to mention "The Light Gar and Cyclecar" in your enquiries.

was slightly faster, but R. A. Martin took the bend wide and suffered from wheel-spin.

E. N. G. Cooke took the bend too wide, hit the rock, bounced back and turned over. No damage was done to the machine, and so soon as the occupants' kit, tools, thermos flasks, and so forth had been bundled back a good restart was made.

B. R. F. Russell in a neat little coupe almost repeated this performance, but he merely stopped his engine. E. J. S. Stafford approached the corner at an extraordinary speed and gave up all hopes of getting safely round. He ran back and restarted, blowing his silencers off in the process.

An example of how to take a four-wheeler up was given by D. M. Healey (9 h.p. Rover), who lives at Perranporth and who led the ears.

Most of those to whom the hill was familiar made clean climbs; they knew that to cut the inside hump of 1 in 3 was asking for trouble, also that a not over-powerful engine or a high bottom ratio demanded the bend to be taken in one big skid, to the success of which the surface this year was quite conducive.

A very impressive show was put up by the Austin Sevens, and out of the 20-odd that tackled the hill only two-those driven by G. H. S. Ellis and W. Boulton—failed. All the others purred up in an effortless manner and gained many a cheer from the crowd.

The Trojans were slow, but very sure, and special praise is due to B. Monk

for his skilful handling of a saloon.

The climb was really easy for most of the cars, and success or failure rested almost entirely with the driver.

The three Newton-Ceirano drivers-C. M. Needham, R. M. Dixon and G. B. Wieland-all chose to keep as near to the inside as possible, but were, nevertheless, very good.

R. Francy (11 h.p. Clyno) came up the first slope in second genr, actually changing down on the steepest portion, but few others risked a changed down at the danger point. E. E. S. Montagu was at the wheel of one of the new Riley Nines and swung round without fuss or bother.

As was to be expected, the Frazer-Nashes were all very fast and spectacular. H. J. Aldington skidded and burst his off-side rear tyre, continuing to the end of the non-stop section on the rim. The Salmson entries were also fast, and perhaps the best climb of these was made by C. L. Simon.

The Jowetts were very convincing, but H. J. Lovatt had a rough passage through running over the loose boulders on the outside of the road.



C. R. Morrall (12 h.p. Alvis) waiting for the fall of the starter's flag to commence the ascent of Porlock Hill.



N. Miller (10.8 h.p. Riley Sports) cuts the hair-pin bend on Bluehills Mine close, but makes a successful ascent.

K. H. Dauiel (12 h.p. Alvis) endeavoured to take the corner wide, but not having sufficient lock hit the wall.

In all about 135 light cars and threewheelers tackled the hill, and of these only six failed, a testimony to the power of the modern small car.

The lanes which lead from the top of Bluehills Mine to Penzance would be very pleasant on a fine Sunday afternoon-if there were no other traffic and an average speed of about 12 m.p.h. were sufficient. Last Saturday, however, they were positively villainous. Numerous sharp corners abound; there are steep hills, both up and down, and the dust was very troublesome indeed. It was really difficult to average 20 m.p.h. along them, and it was with sighs of contentment that the competitors ran on to the hard, wide road leading into Penzance. Few knew what lay ahead of

The town itself was skirted, and at the far end a narrow, dusty hill climbed. after which even narrower, rougher and more dusty lanes than those previously traversed were joined; these were fol-lowed practically to Land's End. At Trevelloe, 4½ miles from Penzance, there was a secret check-one of a series of about five which were dotted along the road, the first having been at Hunger-They caught few delinquents, we should judge, for nearly everyone was on the qui vive for them.

Last week we gave a complete list of car and cyclecar entries, and with the exception of those whose names appear below all checked in at the finish. list of awards will be published in the near future.

NON-STARTERS

NON-STARTERS.

Jacobs, H. C. (1096 Morgan-Blackburne).
Harris, G. C. (1096 Morgan-J.A.P.).
Goodall, U. H. (1096 Morgan).
Stevens, H. S. (12 Ica-Francis).
Keep, N. M. H. (9 Riley).
Chessum, F. J. (11.9 Aivis).
Turner, W. H. (9.3 December).
Broomball, C. A. B. (9 Riley).
Watson, S. E. A. (11.9 Surrey).

NON-FINISHERS.

NON-FINISHERS.

353 Marshall, G. H. (1096 Morgan-Angani).

555 Vidler, M. J. (1096 Morgan Aero Blackburne).

357 Macaskie, D. 8. C. (976 Morgan-Angani).

357 Macaskie, D. 8. C. (976 Morgan-A.P.).

361 Johnson, T. E. A. (1096 Morgan).

364 Maskell, A. C. (996 Morgan).

367 Mares, W. W. (960 Aero-Morgan).

374 Wells, W. H. (1096 Morgan).

384 Gripper, A. G. (12 Alvis).

386 Hamilton, H. C. (8 Clement-Talbot).

396 Mortyn, S. E. (11.9 Bugatti).

418 Podonore, A. (11.9 Lea-Francis).

427 Ripley, H. J. O. (7 Austin).

435 Righey, H. J. O. (7 Austin).

436 Martin, B. (11.9 Co.M.).

437 Righell, R. (8.9 Swift).

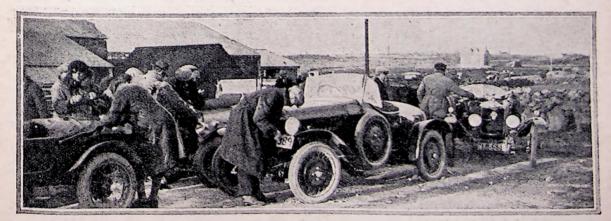
448 Figens, B. W. (11 Bugatti).

449 Date R. J. A. (8.8 Skilley).

449 Figens, B. W. (11 Bugatti).

450 Clark, L. T. E. (11.8 Lea-Francis).

451 McGowran, A. P. (7 Austin).



A busy scene outside the Land's End Hotel, where competitors are seen removing their numbers AT THE END. preparatory to the journey back, whilst others compare notes.



MORGAN WITH THREE-SPEED GEARBOX.

OUR IMPRESSIONS OF AN INGENIOUS CONVERSION.



SOME time ago we described a three-speed gearbox which has been designed and built for use on Morgans by Mr. F. H. Hambling, who was unable to

go allead with production immediately, although inquiries were numerous. He is now in a position, however, to build these boxes to order, and we recently tested one fitted to a Grand Prix Anzaniengined Morgan.

One of the chief points about the design is the fact that only one chain is used, and the sliding-dog mechanism is, therefore, not required. The box, which is a little larger than that of a full-sized motorcycle, is bolted to one of the transverse frame members on the near side of the rear wheel, and torque is taken by two large lugs in which the bolts are screwed. The standard countershaft has been replaced by a nickel-steel shaft running right through from the bevel box into the gearbox, the gear cluster being carried on a

spline. By this means alignment is made very easy. The sprocket is, of course, concentric with this shaft, and the selector mechanism is operated by the standard Morgan controls, the near-side end of the dog shift-rod

being connected to the selector rod—which is notched to secure correct engagement of the gearwheels—by a short coupling strip. A new "gate" is all that is

necessary when fitting the gearbox so far as the controls are con-

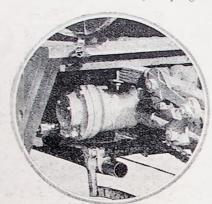
cerned.

We soon experienced the usefulness of the low gear of 15.2 to 1, for we were able to crawl along in traffic without the necessity for slipping the clutch, and the getaway from dead-slow was easy and smooth; a quick change up into second (7.66 to 1) gave excellent acceleration. Top gear is direct, so the usual Morgan ratio, in this case 4.4 to 1, is obtained. One of the points about the change-speed gear which impressed us most was the case with which it was possible to change from top to second and vice versa.

We tried the machine up Netherall Gardens, which turns abruptly off Finchley Road, London, where the gradient is about 1 in 74, and

were able to make two separate easy restarts.

The price, exclusive of fitting, is £12, and Mr.
Hamblieg's address is Cambridge Mews West, Cambridge Road, Kilburn, London, N.W.6.



The Hambling three-speed gearbox fitted to a standard Morgan.

ADDITIONS TO AN AUSTIN SEVEN.

RATHUSIASTIC Austin drivers may be able to gather some useful ideas from the additions and so forth made to his Austin Seven by Mr. A. D. Draper.

One of the most useful of his improvements is an extension to the gear lever. The standard knob was replaced by a wooden handle about six inches long and, as will be seen from the photograph, this greatly helps the driver.

(Below) A Protectomotor air filter on the intake and a Hemm's Booster muss on the induction and exhaust manifolds. (Right) The extended gear lever. Mr. Draper has found that a padded cushion, placed on the floor beneath his heels, effectively prevents

"that tired feeling." The fitting of two aluminium shields covering the gaps on each side of the engine between the crankcase and the side chassis members shows that the owner has an eye to neatness.

Among the proprietary accessories are a Protectomotor (air filter) on the intake, a Hemm's Booster must on the induction and exhaust manifolds, radiator shutters and an electric screen wher.

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We welcome letters for publication in these columns, but take no responsibility for the opinions expressed. No anonymous communications will be accepted, but writers may use a nom de plume. To ensure publication in the next issue letters should be addressed to the Editor, "The Light Car and Cyclecar," 7-13, Rosebery Avenue, London, E.C.1, and should reach us on Monday. We reserve the right to make any alterations or deletions which we deem necessary. Please write only on one side of the paper and leave a wide margin.

ENCLOSED CARS DANGEROUS? ARE

Confusing Reflections at Night-Flimsy Glass Windows.

New Light on the Subject.

The point raised last week by Mr. Humphrey Holt is one of very great importance. I bought my first saloon car about six weeks ago and have driven it a lot in Manchester after dark. During this time

chester after dark. During this time I have fitted a dead-black blind to the Why Not Sloping Panes? rear window and a drop window instead of a sliding pane on the off

side, so that with the front screen open I can drive after dark without looking through any glass at all, either in front or to either side. It may be due to some peculiarity of my eyes or possibly to nervousness, but before, with the windows shut and the screen closed, I felt-with all the

that I really did not have proper control of the car.

My previous car, an 11.4 h.p. Standard, had the front windscreen set at a slight angle, and with this there was no trouble from street lights or from lights of following cars when the hood was up. This suggests that if saloons could have their front screens and side windows all placed at a suitable angle to the vertical the difficulty and danger of driving after dark, when looking through glass, would be entirely overcome except in wet weather, when I, for one, believe that the only really safe plan is to open the front screen—or at least part of it. G. R. Daniels.

Confusing Reflections.

I am entirely in agreement with your correspondent, Mr.

I am entirely in agreement with your correspondent, Afr.

Humphrey Holt, who thinks that drivers should make it a

point not to look through glass when travelling in crowded

streets after dark. There is no doubt

whatever that one cannot see so well

Again!" through a windscreen as when one's

vision is absolutely unobstructed, a

fact which is borne out by the ease with which motor
cyclists with poor headlights can find their way after dark,

whilst drivers of cars with much more powerful lamps have

whilst drivers of cars with much more powerful lamps have

This, however, is not, in my opinion, the only point to be considered. I think that saloon cars are distinctly dangerous after dark on account of the confusing reflections which anpear both in the front screen and in the windows. Reflections of headlamps of following cars can, of course, be eliminated by fitting a blind to the rear window, but not so the other reflections.

Not having driven a saloon before, all this was very forcibly brought home to me when I drove an enclosed car belonging to a friend through London recently. On several occasions I applied my brakes sharply, thinking that a car

was approaching from one side, only to discover, a fraction of a second afterwards, that it was only a reflection. Towards the end of the run I went to the other extreme, and on two occasions nearly had a crash through thinking that the lights of another car were merely reflections. Fortunately I got home safely, but so far as I am concerned my decision with regard to driving enclosed cars at night is-never again! A. K. ROBERTS.

Windscreens and Visibility.

Whilst I feel sympathy for Mr. Humphrey Holt in his unfortunate accident, due to looking through the glass screen of his car, I do not admit that there is the slightest danger in the practice. I forget how many cars are in daily—and nightly—

Officialdom Fails, use throughout the world, but it is a very large number, and we can assume that most of them are provided with glass windscreens. The number of recorded accidents arising directly through drivers being unable to see properly when looking through drivers being unable to see properly when looking through the screens is absolutely negligible; in fact, I have never heard of a previous case.

My sight is none too good, but I shall continue to drive my Alvis sports saloon with the windscreen closed at night. even in rainy weather, and I do not expect to experience any trouble. I shall look forward, however, to the day when street lighting conforms to modern requirements.

GIG LAMPS.

The Glazing of Saloons.

Being recently "in the market" for a small enclosed car I have examined a considerable number of new and secondhand models, and have noticed that the plate-glass used for the windscreen and windows is

1-in. Glass . seldom nearly so stout as it might be. the Minimum. Some light cars have ordinary household window glass in the back light
and (fixed) quarter lights, and this, in my view, is extremely dangerous. It would break if even a very tiny stone were thrown up by the wheels of another car, whilst a bird flying out of a hedge or any other similar trivial cause might be sufficient to rob the occupants of the back seats of the sight of their eyes. I have run big closed cars for many years; if 4-in. plate-glass is—as it is—the minimum thickness for a big car, why should it not be so for a small one? Weight, of course, has to be considered, but it must not be saved at the price of safety.

614

OUR READERS' OPINIONS (contd.).

The Age Limit for Driving Licences.

"Just Sixteen" wants the age limit for a car licence reduced to 15. Whilst agreeing with him that if a girl or boy is fit to drive a motorcycle at the age of 15, they
(sic) are certainly capable of handling

a car, one need not be particularly ob-15 Years Too servant to realize that a girl or boy of Low!

15 is not fit to drive a motorcycle. Flappers of both sexes should be confined to the passenger seats—if for no other reason than because of the difficulty in securing legal redress for injuries or damage caused by a minor. But there are other reasons. Cecil W. Cooke.

Running to Schedule.

As one who has taken part in a great number of M.C.C. long-distance reliability trials, I should be interested to know why so many competitors rush from one "place named with a time on the route card" to the

next and wait there for several minutes Blind-and-Wait Tactics. to prevent getting ahead of schedule time, instead of pottering in a peaceful manner at approximately the necessary speed. Those who rush like lunatics from one "place" to another cause a great deal of annoyance to peace-loving competitors like myself and surely can gain little pleasure from it. Com-petitors are not the only sufferers, and, in my view, the club would be well advised to alter its regulations so that secret checks might be held anywhere and thus put an end to the "blind-and-wait" tactics of the youthful minority. OLD-TIMER.

The Road Fund Raid.

Is it not a very shameful thing that £12,000,000 a year should be taken from motorists and allocated to general revenue? As you point out, this means that we are all paying a luxury tax, pure and simple,

and whilst we do so other road users Crippling get off scot free. Is there any good

reason why cyclists should not pay a small tax, why the owners of horse-drawn vehicles should not contribute a little and why countless other members of the community who at present pay no special taxes should be subsidized by motorists?

We have in our motor industry one of the bright spots in the country's commerce; could anything be more foolish than to continue the harsh and unreasonable scale of taxation at present in force and thus sow seeds which can lead only to impoverishing users and thus crippling trade?

FRANCIS WARWICK.

Mushroom Lighting.

I must thank your correspondents for their kind interest in my "Mushrooms." Perhaps "A.K.C." and "Pedestrian" do not quite appreciate that the idea is primarily intended for new motoring country roads. The Prof. Low reflection from the ground is ample to

give illumination for passers-by, and, as Replies.

experiment will show, it is far better than the present system of patch lights, where one walks to a small illuminated area and holds the paper into the air in an endeavour to decipher the winner of "the 3.30."

Even if the lights are suspended at a great height, it will be found, more particularly on wet days, that at any speed when the vision is ahead the beams from the lights above strike unnecessarily into the eyes and waste their power in illuminating mist and fog, to our disadvantage. A. M. Low.

Back Draughts in Open Cars.

I was interested in the letter from Mr. H. Charles on the subject of back draughts in open cars and quite agree with

subject of back draughts in open cars and quite agree with him that the subject should be carefully studied by each manufacturer before he places a car

A Curious on the market. In this connection I may mention a curious phenomenon noticeable in my own car. When driving with the side curtains in position and screen closed. I am wornied with the most charging healt draught imaging I am worried with the most chronic back draught imaginable, but if I open the screen the back draught immediately disappears and I do not seem to be troubled with the wind blowing on my face; presumably, the shape of the bonnet and screen deflect it over my head. Probably on other cars this would not be the case, and I mention it only to emphasize the fact that individual experiments are necessary

with every car. As I have a very distinct preference for open models I certainly hope manufacturers will "get down to it" and OPEN AIR. climinate this bugbear.

Passing Led Horses-Injured Animals.

Studying the Safety of All.

Although a keen motorist myself I venture to suggest that the remarks which accompany the photograph on page 530 of your issue of April 8th, relating to the alleged dangerous

practice of leading horses on the off side of the road, are somewhat prejudiced. The practice is a general one in this Nervous and other countries for the following reasons :- (1) The average rider naturally controls his own horse with his left hand, leaving his usually stronger right hand and arm free for the more difficult task of controlling the led horse. (2) The led horse should, for obvious reasons, be on the inside.

In the case of a staid and steady carthorse it may not matter how the leading is done, but where a "fresh" or nervous horse is concerned, it is important to take all precautions for safety. KM165.

The Correct Practice.

I was extremely sorry to see your remarks in the April 8th issue of *The Light Car and Cyclecar* about "the dangerous practice in the country of riding and leading horses on the wrong side of the road." I am afraid

you will strengthen the uninformed Modern Difficulty. notion that to lead horses on the right of the road instead of the left is wrong, and that the practice will gradually be dropped.

I do not agree with you that it is dangerous; the dangerous practice is for a man, riding one horse and leading another, to have the loose horse uncontrolled between him-self and other traffic. I have ridden and driven for 40 years, and am sorry to notice that the old and correct practice is falling into desuctude. The only difficulty that I can see-it seldom cropped up 30 years ago-is to decide B42

who shall pull up when two vehicles meet on a portion of road where there is a led horse. It seems to me that the driver on the side of the road away from the horses should pull up. This would mean that the horses could continue their journey, there would be less delay for all concerned and there would be less likelihood of disturbing the horses. F. CHILTON. the horses.

Motorists and Animals.

From information which has reached this society it is evident that the number of thoughtless motorists is increas-The society has from time to time received serious complaints of animals being injured by

motorists and motorcyclists and then being left by the roadside to suffer. It is obviously the duty of a motorist An Appeal.

who has run down an animal to stop and obtain proper treatment for the animal he has injured. The name and address of the nearest R.S.P.C.A. inspector, whose services are free, can always be had from the police, or from any A.A. scout. If an animal is so severely injured that recovery is impossible, the inspector will destroy it humanely. It the animal is only slightly injured and a veterinary surgeon is summoned, this society—if called upon to do sowill pay for the foot of the second control pay for the first-aid expenses.

May I beg all But prevention is better than cure. May I beg an motorists to look well ahead for animals on the roads and to slow down if necessary when passing them. In the event of even the slightest accident the motorist should stop and see if he has done any harm. To do this may cause a little delay. Still, I would plead with motorists to make that slight sacrifice. After all, animals have an equal right with motorists to the use of our roads.

E. G. FARRIOLME (Captain).

Chief Secretary, R.S.P.C.A.

Chief Secretary, R.S.P.C.A.



A Passport to Fairyland

A Singer Car can be the key to untold enjoyment, the constant source of discovery of something new. Whatever the mood or fancy, the Singer will respond. Discover England afresh with a Singer, let her take you to pastures new, away from the madding crowd and the hurly-burly of everyday life. Somewhere there is a road to rolling slopes and the music of running water — to a sleepy old-world village full of charm — to the coast and the sea where you can take your fill of pure ozone. The Singer will take you safely and bring you back. There is a Singer Car waiting for you from £148 10 0



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Salmson Performances

10/20 SKIFF, 70 m.p.h.,

10/20 GRAND PRIX SPECIAL 85 m.p.h.,

£315

100 miles per hour average in the rain

Smashing victories were won at the reopening of the Montihery track on March 18th, when Salmsons were 1st, 2nd and 3rd in all three races.

16 other new models from £165 to £410 in stock, as well as some shopsoiled cars at reduced prices.

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Kingsbury House, King Street, St. James's Street, S.W.1.

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10 20 3-SEATER SPORTS 65 m.p.h.,

10/20 WEYMANN SALOON, 60 m.p.h.,

£275

Speak louder than words!

OUR READERS' OPINIONS (contd.).

Place the Engine at the Rear.

The paragraph by "Focus," in your last issue, dealing with ways of arranging the propeller shaft so that bodies

can be still lower, makes me wonder why curs of to-day
do not have the engine fitted at the
Lower Bodies rear. I know this subject has been
Possible brought up before, but nobody has as yet been able to satisfy me that there

is any real reason why the engine should not be so placed, and I can certainly see many advantages in this position, one of which is the low body position which it permits. Another point which has caused grave concern of late is the danger of exhaust fumes in enclosed cars, and by placing the engine at the rear this difficulty could obviously be overcome quite easily.

I do not propose to enumerate all the advantages I can see in having the engine at the back, because numerous correspondents in the past have pointed them out, but I correspondents in the past have pointed them out, but a should like to know the real reason why engines are invariably placed at the front. Is it merely that manufacturers, like a flock of sheep, follow one another?

E. H. Montague.

CONDENSED CORRESPONDENCE.

Mr. A. H. Pickett, 329, Halley Road, Manor Park, E.12. Mr. A. H. Pickett, 329, Halley Road, Manor Park, E.12, informs us that he has copies of every issue of The Light Car and Cyclecar from the first Show Number, 1924, and is willing to sell them to readers at 4d. each, post paid. The 1924 four-scater Rover Eight is recommended to

readers who are on the look-out for a low-priced second-hand light car by Mr. N. H. Ellis (York), who purchased one of these cars some time back and has obtained every satisfaction from it.

INFORMATION WANTED.

Singer.—The opportunity to buy or borrow an instruction book dealing with the 1924–10 h.p. model would be appreciated.—A. S. Bothwell, Northaw, Whetstone, N.20.

Humber.—Owners' experiences of the 9-20 h.p. model, together with hints regarding the upkeep and running of the car, would oblige.—F. Gibbons, 68, Normandy Avenue, Barnet, Herts.

Fiat.—Readers' experiences of the 9 h.p. model, with particular regard to reliability, speed, hill-climbing powers, acceleration and comfort, would be very much appreciated.— Gordon Grey, Heath House, Bromley, Kent.

CLUB ITEMS AND SPORTING EVENTS.

LONDON EAGLE M.C.

About 40 members and their friends took part in a run to Leith Hill on April 10th. An imprompth hill-climb was organized and received considerable support. A social and picnic run to Camberley Heath has been fixed for April 24th.

BRAMPTON AND D. M.C.

The annual general meeting was held recently, then the hon, ecretary's report stated that the membership showed a slight decline. The symkhana which had been held during the ecason had again proved a success and had enabled the club to hand over to the Cottage Haspital and the local Nursing Association sums of .25 each. The hon, treasurer, Mr. R. H. Hunter, stated that the expenditure amounted to £53 5s. 4d., leaving a balance in hand of £8 12s. 10d. With the view to furthering the welfare of the club and causing a greater interest to be taken in its nctivities, the meeting resolved that juniors under 21 years of ago should be admitted to membership on the payment of an annual subscription of 2s. 6d.

OXFORD M.C.

OXFORD M.C.

On April 10th, a social run in the form of a treasure hunt took place, and over 70 members and friends participated. The clues were in the form of a passenger's comments on a route to a secret destination. To those who were fortunate enough to arrive at the given place a second sheet of clues was issued and likewise a third, the final destination being a spot where the treasure was hidden. At one time over 40 people were searching for it, and eventually it was discovered by Mr. D. F. Welch. The party then proceeded to the Hotele Brimpton Grange, Tiddington, for tea. As similar event will be organized for May 22nd. The next social function will be held on May 1st, and will take the form of the usual early motning run and breakfast.

SYDENHAM AND D. M.C.

SYDENHAM AND D. M.C.

Fine weather and the prospects of an interesting run made the start, from Leaves Green, Kent, of the season's first touring trial organized by the Sydenham and District M.C. a lively and cheerful meeting of members and their friends. The first observed hill was Motts Hill, man Withyham, where an naceleration test and monstop section were included. J. W. Barber's Salmson and H. Jefterie's Frazer-Nash made spectacular climbs, but F. J. Sargert's made no was suffering from clutch-sip and slopned he get away unaided, and completed However, he get away unaided, and completed Downs, lunch, which was taken at Rottingdean, but this priced caused no "casualties." In the but this priced caused no "casualties." In the suffering special market from the restart line, literate her special second attempt, made a fast climb, and second attempt made a fast climb, on a second attempt made a fast climb, on a second attempt made a fast climb, and second strength of the suffering trouble, and made a clean but some list clutch climb. A run over the downs to shat elem Hencon computer were the downs to what elem Hencon computer were the downs to w

R.A.C. PERMITS.

The R.A.C. has recently issued the following permits:—Open: May 21st, Middleacx County A.C., Brooklands race meeting: Closed: May 7th, Southport M.C., race meeting; May 14th, Western Centre A.-C.U., reliability trial; Liverpool M.C., race meeting on Wallasey Sands; May 21st, Middleacx County A.C., Breeklands hill-climb; Cumberland County M.C.C., reliability trial.

FURTHCOMING EVENTS.

April 23,
Surbiton M.C. Brooklands Meeting,
Sutton Coldield and N. Birmingham
A.O. Trial,
April 24.

Targa Florio (Italy).
Southern Jowett L.C.C. Trial.
City of London M.A. Social Run to
Worthing.

Worthing.
Catford and D. M.O. Run to Penshurst,
Sydenham and D. M.O. Hill-climb.
Austin Seven C.O. Run to Warwick.
Leicester and D. M.C. Three-lap Trial.
Wood Green and D. M.C. Ladies' Run
to Virginia Water.
Leeds M.O. Run to Kirkham Abbey.
Morgan Club. Captain's Surprise Run.
N. Loudon M.O. Run to Ashridge Park.

April 30.

J.C.C. Spring Meeting.
Froth Blowers' Trial,
Second Wessex Centre League Trial.
Kent and Sussex L.O.O. Speed Trials
at Lewes.

SHEFFIELD M.C.

SHEFFIELD M.C.

The annual team trial was held on April 10th, but the weather conditions were very unfavourable, and on the high points of the new conditions are sufficiently as the series teams completed, and every driver completed the course. The winter social events had proved very successful, and to wind up the season a carnival dance has been arranged for Saturday, April 30th, and will be held at the Cutler's Hall, Sheffield. Club runs are held every weekend, and trials and grawthanas frequently figure on the programme. The honesecretary is Mr. J. Guest, 79, Clun Road, Sheffield.

ROYAL SCOTTISH AUTOMOBILE CLUB.

ROYAL SCOTTISH AUTOMOBILE CLUB.

The annual general meeting was held recently in the North British Station Hotol, Edinburgh, Col. Wingate Gray, the vice-chairman of the general committee, presiding. In submitting the annual renort and accounts he stated that the membership showed a steady increase and had reached, by January 31st, a total of 4.720. Referring to the proposal of the Chanceller of the Exchoquer in introducing the Budget, Col. Oray said that, while all motorists will unite in protesting against the further raid on the Road Fund, he did not anticipate that the progress of road-making or road improvement throughout the country.

WOKING AND D. M.C. AND C.C.

Twenty-eight entries were received for the touring trial to Brighton and back which was held on April 10th. Five timed checks were taken, and special souvenir club pennants as awards were rained by the Misses Broderick and Stort and Mesers. Chapman, Humphries, Seabrook, Broderick, Bradley and Osborne. The club's next event will be a sporting trial (restricted) and the date and details will be announced shortly.

THE MORGAN CLUB.

THE MORGAN CLUB.

The Morgan Club has arranged a number of pionic runs to be held during the week-ends from April 24th to November 12th. In addition to these there will be three more creats, particulars of which will be announced later. The meeting place for all the pionic runs is the Marble Arch, and the time of departure is fixed for 10.30 am. The hon. secretary, Mr. W. E. A. Norman, 422, Upper Richmond Road, S.W.15, points out that members friends, welcome at any social swent, and Morgan owners who are not members are recommended to get into touch with him.

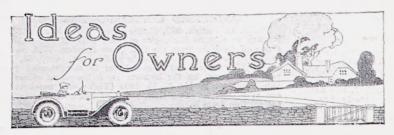
SURBITON M.C.

Out of the 50 entrants for the Surbiton Grand Cup trial held on April 9th, 47 etarted, and, taking into consideration the atroctons weather, the number of finishers was very satisfactory. The course was an exceptionally difficult one, and the heavy rainfall had turned ordinary roads into something worse than was intended for the colonial sections. These latter were in many cases almost, but not quite impassable. So exhausting was the morning circuit of 50 miles that an application was made to the atwards to abandon the afternoon circuit after the lunch stop. The stewards considered this application and decided to omit the second circuit. After the starting-from-cold test, the competitors dispersed to each dry clothing, and, presumably, hot baths. The course was well marked with red dye which, he apite of the rain, was quite clear, and very lew competitors had any difficulty in finding the route.

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

The Bristol M.C. And L.C.C.

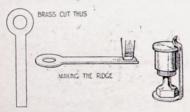
The previous mystery trial and epecial evening was considered such a success that the club decided to repeat the experiment on April 9th when a large and the clubs trials headquartered the Starker at the clubs trials headquartered. White Hart Hotel, Brislington, at 3 p.m. The drivers were informed that they had to preced to Blagdon Lake, under the Mendip Hills, where the first check was to be taken. On reaching this point they were directed to Sharterhouse, reached by a steep ascent of just over three miles, thereafter being sent to Banwell and from thence to Clevedon. The finish was at the club's country headquarters, the Royal Oak Hotel, Nailsea. Various average speeds were indicated between the different checks, and the trial was primarily a test of the entrants' knowledge of the local country and their ability to reach the point concerned by the shortest possible route. At the finish each competitor was asked to state what was, in his opinion, the total mileage and also to name certain places portraved in three or four photographs that were displayed. H. G. Biggz (7.5 h.p. Amilcar) was third, whilst P. G. Fry (Austin Soven) and H. Clegg (Austin Seven) were light car drivers who also finished. B45



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

A Gear-knob Substitute.

A reader ingeniously replaced a lost gear-lever knob with a John Bull motor-cycle-type rubber knob cover, filled with stiff putty. The end of the lever was pushed well into the putty, which was given pleuty of time to harden. The price of the whole replacement was practically negligible and the result was a control more comfortable to handle than the standard fitting.



The illustration shows three stages in the making of a simple greasecup securing clip.

Making Small Springs.

Small helical springs are always useful for a variety of purposes and are easily made from nothing more elaborate than a length of steel wire, a vice and a bolt of suitable size. The bolt head should be gripped in the vice and the wire wound tightly round the grooves of the thread. Piano wire is the best for the purpose as it does not require tempering. It should be remembered that a bolt of slightly smaller diameter than that required for the spring should be used, as the wire will have a tendency to expand outwards when removed from the bolt.

Securing Grease Cups.

A useful way of securing loose grease cups is by means of a clip made from 1.32-in, or even ½-in, sheet brass, which should be cut to the shape shown in the accompanying illustration and a ridge should be stamped at the narrow end with a blunted cold chisel to engage with milling on the grease cap. The method of bending is made clear in the illustration, but the actual dimensions depend entirely upon the size of the greaser. If the milling is very fine it may be necessary to file a few nicks on the circumference of the cap in order to provide a better grip for the ridge on the clip.

A Singer Junior Hint.

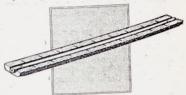
The leather cone clutches fitted to Singer Junior cars sometimes require dressing with Collan oil. To do this it is not necessary to go to the trouble of lifting the floorboards—one of which is screwed in position—and removing the aluminium cover over the clutch pit; instead, the oil can be introduced by means of a small squirt, the nozzle of which is passed through the hole in the rear engine bearer and through one of the holes in the flywheel.

Ey turning the engine slowly with the near side of the bonnet raised, it is easy to see when the holes come into line. It is advisable to prop out the clutch before squirting in the oil, which, if warmed, will flow more freely. The nozzle of the squirt should be directed vertically downwards, so that the oil will flow down and find its way between the coned faces.

The whole squirtful should not be applied at once; squirt in a little oil, then give the engine a quarter turn, this will spread the oil and bring another flywheel hole into line with the bearer arm hole. The next step is to start up the engine and, scated in the driving seat, operate the clutch several times to ensure that the oil finds its way over the whole surface of the leather. A very sweet-acting clutch will result from this treatment and no further attention should be necessary for some months.

Carrying Repair Patches.

In most repair kits a number of innertube patches are carried as a precaution against a series of punctures in one day. To prevent the patches becoming soiled or otherwise damaged through contact with articles loose in the toolbox, it is a good plan to carry them in a fold-over Treasury note case, obtainable for about Gd. This may be clipped or looped inside the lid of the toolbox, where it will take up little room and will be out of the way of the tools, ensuring that the patches are kept in good condition.



A useful petrol gauge of the dip-stick type made from a wooden rod and a length of glass tubing.

An Easily Made Petrol Gauge.

A simple petrol gauge can be made out of 12 ins. of \(\frac{1}{4}\)-in. glass tubing and a wooden rod or slab of the same length. A deep groove should be cut down the rod to take the glass, so that the latter is, to all intents and purposes, inside the circumference of the rod. to minimize the chances of the glass getting broken. The tube should be held in place by two pieces of wire passed through holes bored at each end of the rod and twisted tightly round both the glass and the rod. The end of the glass and the rod. wooden piece should be cut off to slant To calibrate the towards the tube. gauge empty the tank and refill a quart at a time. After each addition the level should be tested by holding the gauge in the tank and pressing the finger on the upper end of the tube to withdraw the petrol for the level to be marked.



Queries of general interest will be answered under this heading whenever possible, but a stamped addressed envelopc must be enclosed for reply by post. Telephonic inquiries cannot be answered.

E.G.A. (Eastbourne).—The chassis numbers of 11 h.p. Standards are stamped at the top of the steering columns.

E.R (West Hartlepool).—You can prevent the sliding windows of your saloon from tending to open by themselves by fitting to them small screwdown rubber-faced stops, which are specially made for the purpose. Almost any coachbuilder can supply these at about 9d. each, and they are easily fitted with the aid of a little Secotine or similar adhesive.

H.G.E. (Edinburgh).—The trouble you have experienced when trying to start your two-stroke engine when hot is probably due to too rich a mixture.

T.I.R. (Liverpool).—Provision is made in the Dewandre vacuum servo braking system for human effort to be used should the mechanism fail. When the Dewandre system is in operation the force exerted on the pedal is multiplied five times.

P.T.S.S. (London, W.11).—The "kicking" of the foot-brake of your Morgan is due to the up-and-down movement of the rear wheel pulling the connecting-rod between the brake and the pedal. It can be cured by fitting the compensating device employed on the later models. As you have not facilities for carrying out the conversion, we should advise you to entrust the work to one of the Morgan specialist concerns advertising in this journal.





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

SPEED WITH ABSOLUTE SAFETY

Two features have made Lea-Francis cars famous—their speed and braking. Experienced motorists know that a reserve of speed means safety, especially when combined with the highly efficient Lea-Francis four-wheel brakes which give absolute control of the car under all conditions.

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May we demonstrate to you? Write for an appointment to-day. Catalogues on request.



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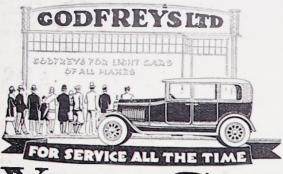
- 118, GREAT PORTLAND STREET, W 1 Telephone—MUSEUM 8720.

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B47



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AROUND THE TRADE.

The slogan for Sternol, "See How They Run," in the advertisement of Sterns, Ltd., which appeared on page 8 on April Sth. would surely take some beating.

We learn that a staff of works-trained Italian mechanics is retained at the service depot of Ansaldo Motors, Ltd., 12, Brewery Road, Caledonian Road, London, N.7.

What is claimed to be the first scientifically correct pneumatic tyre is the Miller. The tread is described as "geared to the road," and it is said to eliminate spotty, rapid and uneven tread wear.

Messrs. Tapley and Co., Totton, Southampton, have issued a second edition of their booklet, "Intelligent Motoring," which explains the applications of the Bapley gradient meter and performance meter.



Part of the new service station recently opened by Solex, Ltd. It is situated in Marylebone Road, London, and 40 cars can be dealt with at one time.

Reports reach us from the prominent dealers that the rush to get deliveries of new cars before Easter and to have used models taken in part exchange has caused an unusual glut of good cars in the second-hand market.

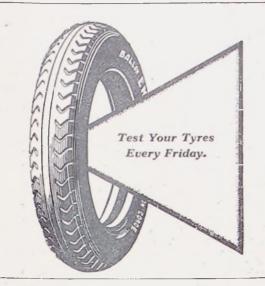
The Coventry Victor Motor Co., Ltd. (Coventry), have sent us an interesting little 12-page booklet dealing with Coventry Victor cyclecars. It adequately describes all models and gives a complete oiling chart and other important information. It should be useful both to owners and to the trade.

The enterprising concern of Messrs. Gillon Accessories, 149, Drury Lane, London, W.C.2, is now marketing a luggage grid for Austin Sevens suitable for 1926 and previous models. The price is 17s. Gd., and it is claimed that no drilling is necessary and that the grid can be fitted in less than two minutes.

At one time London's motor trade centred in Long Acre. To-day it has spread to Great Portland Street, Euston Road, Bond Street, Piccadilly, and even to exclusive Knightsbridge, whilst Pall Mall was invaded many years ago. In Paris, too, the most important and fashionable thoroughfares are popular for motor showrooms.

For smartening up a car, Dullite, a quick-drying paint manufactured by Messrs. Daniel Judson and Son, Mack's Road, Bermondsey, London, S.E., is an invaluable preparation. The dull black eggshell finish considerably improves the appearance of radiator or tyres. It is sold in half-pint, pint and quart tins, the price of a pint being 3s. 4d.

We note that in future the grades of Price's motor oils (including the Huile de Luxe range) will be known and graded under the name of Motorine. Also these oils will be marketed in round quart tins as well as gallon tins and drums. Huile de Luxe Heavy will be known as Motorine B de Luxe, while C will stand for medium and D for zero.



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	7 h.p., Chummy Model	0440
	7 h.p., Chummy Model	£98
,, 1924,	7 h.p., Chummy Model	£80
A-C, 1924, Royal	Model, 2-seater and dicke	y £110
	926, 7 hp, 2-seater Coupe	
	925, 7 h.p., 2-sea'er Coupe	
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	, 1926, 11'4 h.p., de Lux	
	1925, 11'4 h.p., "Piccadil	
,,	1925, 11'4 h.p., 4-seater	Case
"	1924, 11'4 h.p., All-weath	
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Revised prices of models fitted with Front Wheel Brakes: 9 20 H.P. 2 3-Seater with \$267 7s. Dickey Seat Seater \$267 7s. 10urer 9/20 H.P. 4-Seater £322 7s. Dunlop Tyres Standard. The front wheel brakes are of the internal enclosed type operated above the internal enclosed account of levers and cam's mechanism forms are bed The entire make bed a unit with the front axle. MODELS ARE AVAILABLE FOR IMMEDIATE DELIVERY. axie ped Ine entire meent a unit with the front axle.

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9/20 h.p. 4-Seater Tourer, with Front Wheel Brakes.

Pages from the Diary of an Austin Owner



Page Seven

Wonderful how many Austin Seven Saloons there are about. Noticed four only yesterday in less than thirty miles. Of course, the Tourer is ideal for me, with the long business trips I make. But it's Madeline's birthday next month, and the Saloon would be an absolute treasure to her for shopping and calling, and the links, etc. I can think of nothing that would please her better, nor of any car so simple and so safe. Yes, a call at the local Austin Agent's is clearly indicated.

Austin Seven

STANDARD TOURER, £145

Not the state of t

SALOON, £165

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