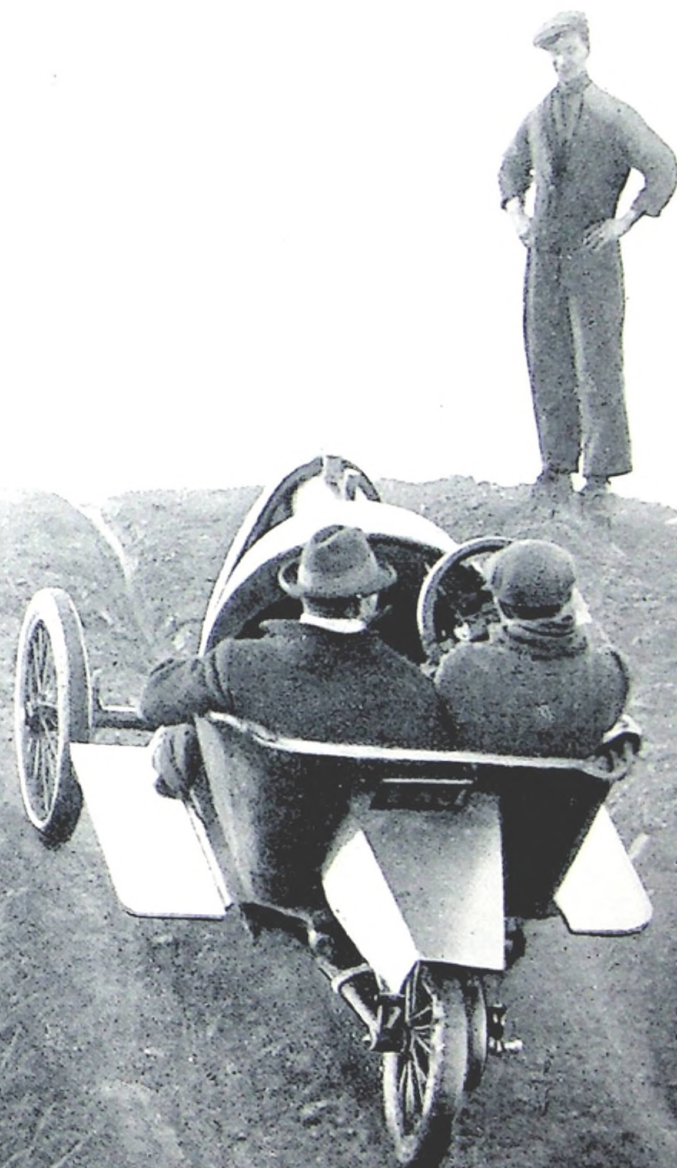


Light Car *and* Cyclocar

Founded 1912

The only Small Car Journal

VOLUME 10, NO. 11
April 2, 1921
Registered at the GPO
as a Newspaper



Up 1 in 1½ !

*THOUGHTS AND OPINIONS (contd.).**An Effective Road Clearer.*

Whilst driving on a narrow road a week or two ago I came upon a small boy driving a heavy cart, and, despite my continued hooting or buzzing on the electric horn, he took no notice and did not pull to one side. Not feeling in the mood for driving about a mile behind a walking horse, I let out the clutch, raced the engine vigorously—and with no small result, for the horse immediately bolted, leaving me a clear road.

I approached cautiously however, for the boy appeared to have considerable difficulty in bringing the horse to a standstill. On drawing near, we found him to be resting from the strain of conflict and searching his vocabulary for adjectives, of which we received the full benefit.

I find that this is the simplest and most effective way of attracting the attention of the driver of a vehicle when the proper means have failed, and I have even known it to be successful in the case of motor lorries.

As regards the dazzling effect of headlights, the obvious and most simple remedy is to switch them off on approaching another car.

I always flick mine on and off once or twice, and if the other car answers one knows he appreciates the courtesy and one feels well rewarded.

ARTHUR F. GOTCH.

Chesham House, Kettering.

For the Attention of Swift Owners.

Being the owner of a 7.9 h.p. Swift, I should be pleased to have the experience of other owners in reference to a point about which I have been somewhat puzzled, this being in regard to a noise emanating from the camshaft gear. This noise is set up when the engine is cranked, and synchronizes with the periods at which the valves commence to close.

Having satisfied myself that the trouble is not due to irregular wear of the contour of the cams, which would cause the tappets to jump, I have arrived at the opinion that it must be brought about by backlash between the teeth of the camshaft pinion and the teeth of the main shaft wheel, due to the force of the valve springs causing the camshaft pinion momentarily to overrun the teeth of the main shaft pinion.

There is no wear in either the camshaft or main shaft bearing, and the higher the engine speed the less the noise, but

it is particularly noticeable at low engine speeds, the engine in other respects being exceptionally quiet.

I am anxious to know if similar trouble has been experienced by other users of the Swift, and any information resulting from experience with this excellent little car I shall be pleased to impart to those interested.

Norton-in-the-Moors,
Stoke-on-Trent.

JNO. HOWARD.

Built in 1912.

I have been a motorist for 15 or 16 years and a cyclecar enthusiast from the early days. The accompanying photograph is of an 8 h.p. cyclecar built in 1912 by myself and a friend, who now runs a garage in the town. A photograph



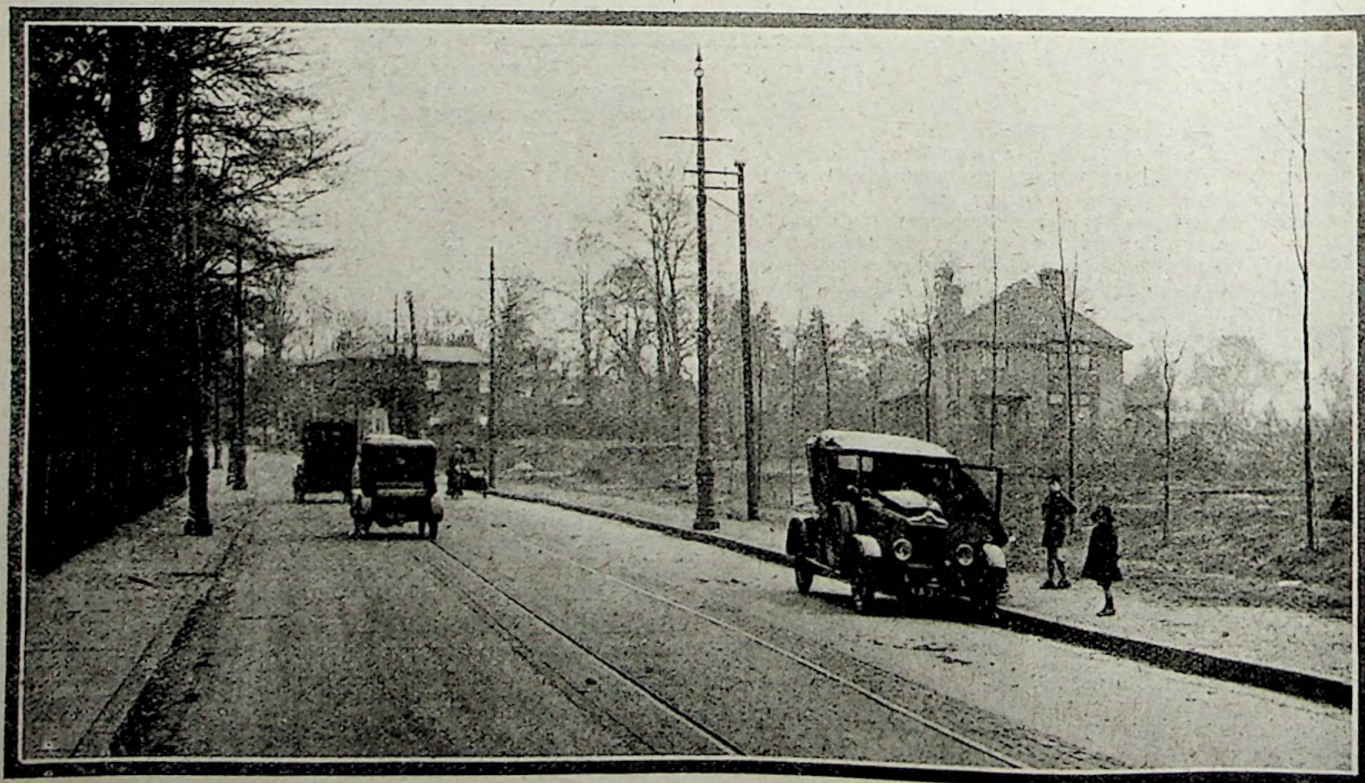
Mr. H. G. Thompson's 1912 cyclecar. This machine put in an appearance at the Richmond meet in 1913.

of it in its early state, taken at the Richmond Meet in 1913, appeared in *The Cyclecar* at that time. Unfortunately, it is at present laid up with a broken crankshaft.

My machine at present is a 1920 G.N., for which I have nothing but praise, and which has been a source of great interest wherever I have been. It was apparently the first to make an appearance in a great many places last year.

H. G. THOMPSON.

Croft Cottage, Shinccliffe, near Durham.



Are they widening Kingston Hill? From this photograph it would appear that such is the case. The house on the right has been recently erected for a well-known figure in the light-car world.

The Light Car & Cyclecar

LIGHTING-UP TIMES

for Saturday, April 2, 1921.

London ...	7.2	Edinburgh ...	7.21
Newcastle ...	7.12	Liverpool ...	7.17
Birmingham ...	7.10	Bristol ...	7.12
Dublin ...	8.0		

Lighting-up time in Ireland is one hour after sunset and in Scotland half-an-hour after sunset. Lighting-up time in England and Wales is half-an-hour after sunset.

Moon—New Moon on the 8th.

NOTES, NEWS AND GOSSIP FROM ALL QUARTERS.

Moderately fine weather and plenty of good sport.

Favourable conditions for a really enjoyable "motoring" Easter.

* * *

Everybody took advantage of them, and all the sporting events attracted hundreds of enthusiastic motorists.

* * *

Thanks to fine weather and plenty of pluck on the part of the competitors themselves, the severe conditions imposed by the M.C.C. in the London-Land's End Run were wonderfully well followed.

* * *

Incredible as it may seem, the majority of those who entered managed the 18 m.p.h. average up Porlock Hill, and sped on to Lynton well up to schedule time. The complete run was voted a great success by all concerned.

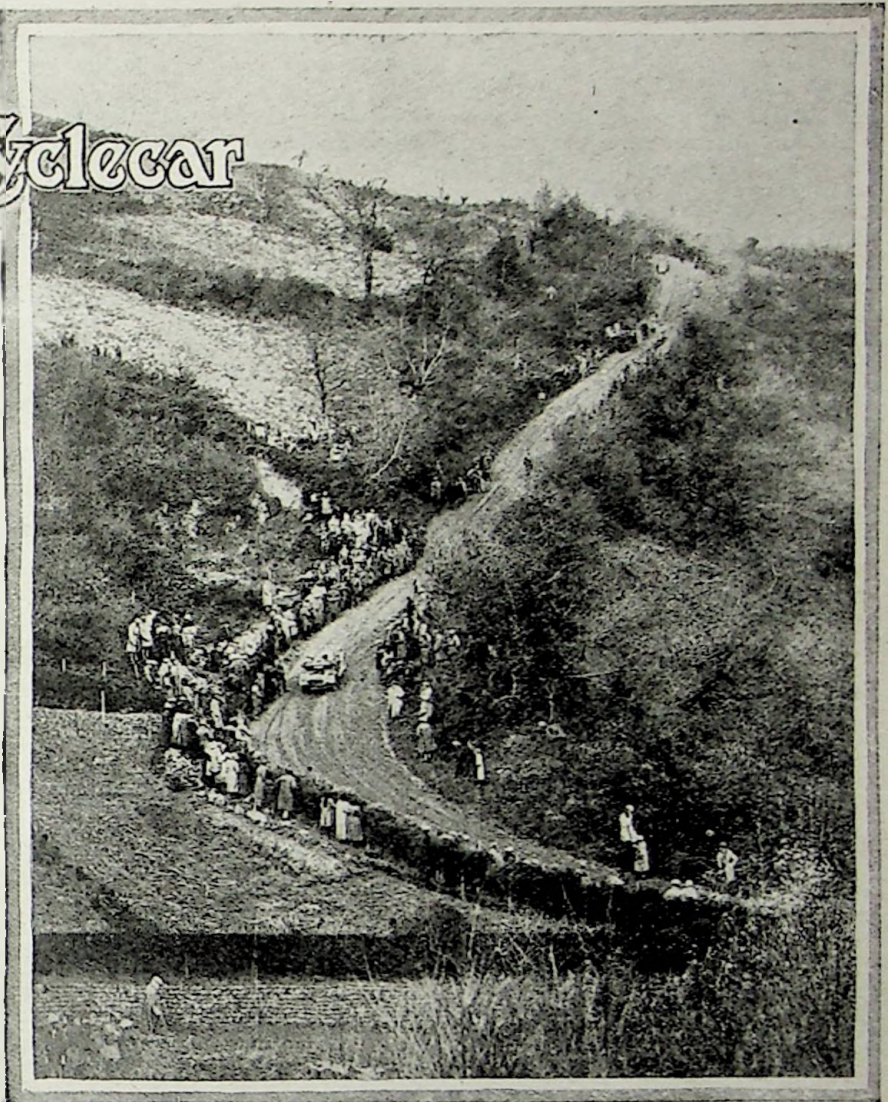
* * *

From all parts of the country reports reach us to the effect that, like the demure infant, where the roads are good, they are very, very good, but where they are bad they are—! Competitors in the London-Land's End could give valuable testimony on this point!

* * *

The police were extremely indignant with motorists who displayed the January-March quarter's licence on their cars after Thursday last, and in a number of cases the car owner was told that he would hear more about it. He may, but we do not think it will cost him anything, as, in innumerable instances, although application had been made in plenty of time, it was impossible to cope with the rush, and issue the necessary scrap of paper!

No. 435. Vol. XVII.



Porlock as it appeared last Saturday morning. Excellent as the picture is, it hardly conveys a correct idea of the severity of the gradient which has the reputation of being one of the steepest in England.

We hear that Sir Marcus Samuel, Bart., has resigned from the boards of all the oil companies with which he has been actively associated for a considerable period.

* * *

Ninety-one cars have been entered for the open hill-climb to be held at Kop Hill near Princess Risborough, by the Essex Motor Club to-morrow, Saturday. Of these entries 15 are cyclecars.

* * *

A record crowd of spectators and their cars attended the Easter Monday meeting at Brooklands. As anticipated, the meeting was interesting, and successful from every point of view. A full report appears elsewhere in this issue.

* * *

The extra hour of daylight comes into operation next Sunday, April 3rd, "a.m." Clocks should be put forward one hour on Saturday night. The lighting-up times given in the table on this page only apply to Saturday. For Sunday and onwards add one hour to the times given.

* * *

The gradients which can be surmounted by the modern light car or cyclecar prove beyond doubt that engines and transmissions have made remarkable strides in efficiency during the last few years. Our front cover picture shows a T.B. Tricar ascending the private test hill near the works at Bilston. The gradient of this diminutive "pimple" is 1 in 1½!

NOTES, NEWS AND GOSSIP (contd.).

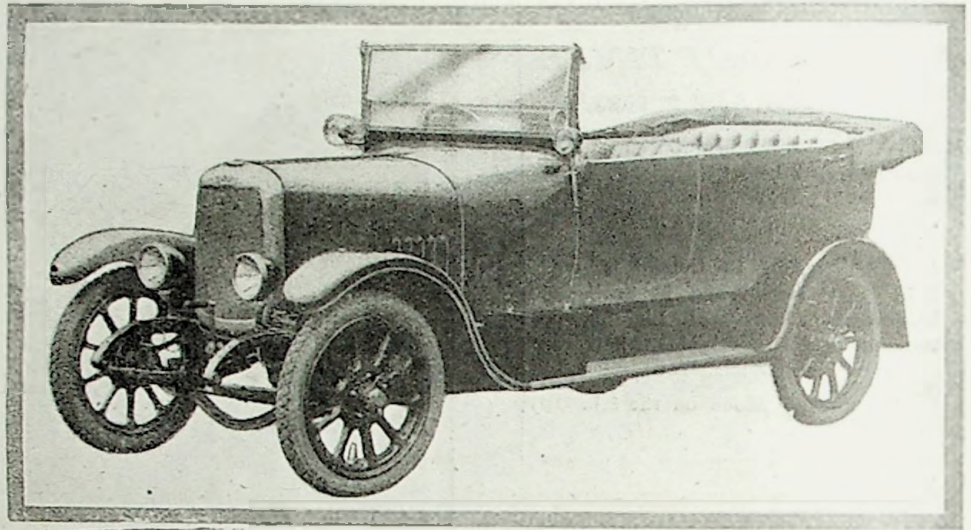
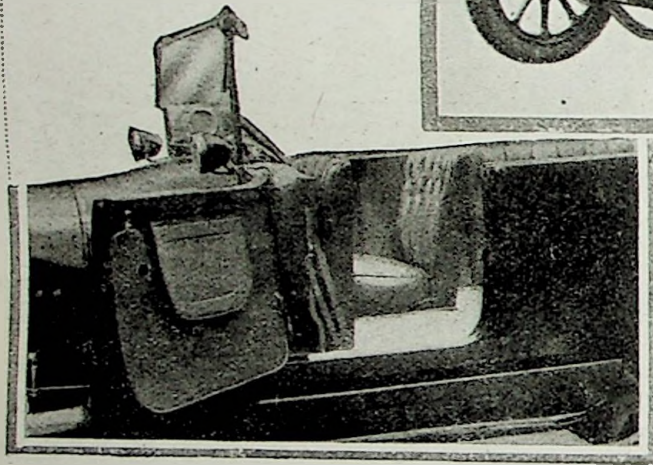
Hague Motor Show.

An exhibition of cars and accessories will be held in the buildings and grounds of The Hague Zoological Gardens, from April 5th to 12th.

New Address.

The secretary of the Junior Car Club, Mr. A. Percy Bradley, wishes to point out that all correspondence should be addressed to him at 37, Wallbrook, London, E.C. 4.

Two views of the new Alvis four-seater. It is complete with double windscreen, and is fitted with a wide door giving access to all seats.

**Joining Rovers.**

We hear that Mr. Alan Hill, who is well known in connection with the Motor Cycling Club, will shortly join the Rover Co. as travelling representative in the care and maintenance of the Rover "Eight."

Victory Cup Trial Results.

The following results in the recent Victory Cup Trial are announced. Gold medals: Messrs. H. F. S. Morgan (8 h.p. Morgan), J. Wainwright (10 h.p. T.B.), W. A. Ridley (10 h.p. New Hudson), A. G. Frazer Nash (10 h.p. G.N.). Silver medals: J. W. Meredith (10 h.p. T.B.), F. W. Benson (8 h.p. Morgan), W. A. Carr (8 h.p. Morgan), R. N. Hamilton (10 h.p. G.N.).

The Colmore Cup Trial.

The following results have been announced. Phosphor-bronze Team Prize—The Morgan team: Messrs. H. F. S. Morgan, W. A. Carr, and J. W. Shaw. Silver medals (full marks): H. F. S. Morgan (8 h.p. Morgan), W. A. Carr (8 h.p. Morgan), J. W. Shaw (Grand Prix Morgan), H. R. Godfrey (G.N.). Bronze medals: J. Wainwright (10 h.p. T.B.), W. A. Ridley (10 h.p. New Hudson). Special cyclecar prize: H. F. S. Morgan (Morgan).

A20

New 10-30 h.p. Four-seater Alvis.

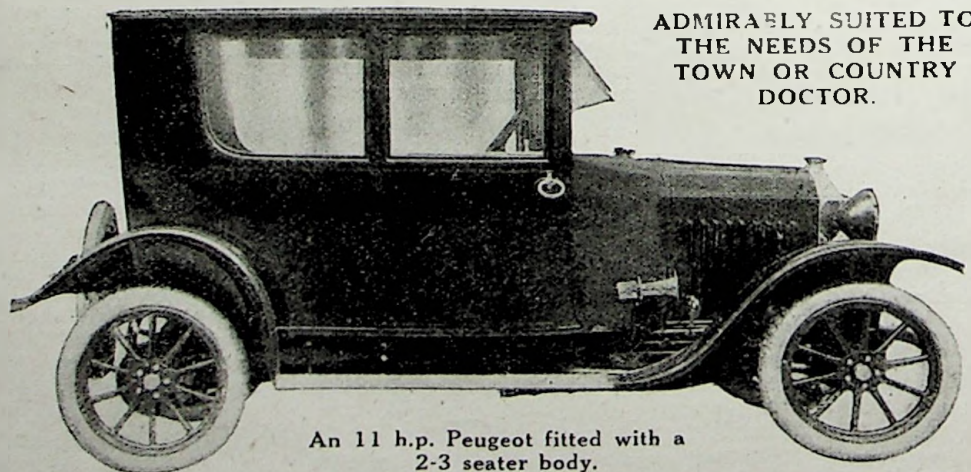
Following on the two-seater aeroplane-bodied Alvis light car, T. G. John, Ltd., Holyhead Road, Coventry, has now produced a four-seater which follows more ordinary practice, this type supplementing the two-seater and being mounted on the same chassis, though with slightly stronger springing. The roominess of the four-seater body is at once apparent, and owing to the long wheelbase of the car

there is plenty of leg room for all four occupants. The sides of the body are high and should provide ample protection from the wind. A black imitation leather hood, with draught-excluding attachment to the double windscreen, is fitted as standard. The driver's seat is adjustable, and access to the rear seats is provided by the patented tilting front passenger's seat. Both running boards and floor boards are covered with lino-rubber, and a carpet is fitted to the front and rear compartments. The standard colours are royal blue with black wings, or Alvis grey with black wings. A consumption of 32 miles to the gallon and a speed of 55 m.p.h. are claimed for this four-seater model, which is priced complete and ready for the road at £720.

The Hedge Peril.

It appears that the recent agitation against high hedges has had due effect, for we understand that the Ministry of Transport has appointed a Departmental Committee to deal with the matter. This

ADMIRABLY SUITED TO
THE NEEDS OF THE
TOWN OR COUNTRY
DOCTOR.



An 11 h.p. Peugeot fitted with a 2-3 seater body.

committee will shortly issue a report, which will recommend that additional powers shall be given to local authorities to deal with dangerous portions of their roads.

THE RICHMOND RALLY.

Over 1,000 Machines Put in an Appearance.

THE annual Richmond (Yorkshire) Meet was held as usual on Good Friday, over 1,000 motorcycles and cars being driven to the ancient town for the inter-club meet competition, which resulted in a win for the Scarborough club. At first it was announced that the Hull club had won, but it transpired later that several Hull clubs had been grouped together and counted as one. Light cars under 1,500 c.c. were eligible to take part in the meeting, a number of Morgans, G.N.s, and Calthorpes being noticed. Several cars with engines over 1,500 c.c. attended the rally, but had to be ruled out for the purpose of the count.

A member of the Junior Car Club drove his Morgan up from Fleet in Hampshire, being under the impression that Richmond (Surrey) was the venue. However, he made good by driving all night, and arrived safely at the other Richmond.

During the morning the North London Club stated their case to the Mayor and Meet officials, pointing out that not until it was too late for them to alter their arrangements did they realize that only Friday's mileage would count for the cup. As matters turned out, they were not placed, but were offered a consolation prize by the Mayor of Richmond. Light cars and cyclecars did not qualify for special awards.



The excellent performance of the small air-cooled cars was a feature of the London-Land's End Run. Above, Mr. E. A. Tamplin is seen making a clean and fast ascent of Porlock.

LIGHT CARS AT STAXTON HILL-CLIMB.

Wins for the Morgan and Deemster.

THE Scarborough and District M.C.'s annual hill-climb at Staxton took place as usual on Easter Monday. The cyclecar and light car classes concluded the event, which was splendidly supported by north-country motorists.

So huge was the crowd that the field which had been set aside for the storage of visitors' cars and motorcycles was soon well packed, whilst another field higher up the hill was also well filled.

The hill rises over 500 ft. in three-quarters of a mile, the steepest gradient being 1 in 5.

The times in the cyclecar and three-wheeler class were as follow:—F. W. James (Morgan), 1 min. 27½

secs.; R. E. Hutton (G.N. Legere), 1 min. 51½ secs.; A. B. Case (Morgan), 1 min. 51½ secs.; T. Moore (G.N. Legere), 1 min. 52 secs.; C. R. Waddington (G.P. Morgan), 1 min. 52½ secs.; C. H. Mason (Rover), 1 min. 57½ secs.; E. F. Warters (G.N.), 2 min. 13½ secs.; C. E. Richardson (Richardson), 2 mins. 16½ secs.; E. Richardson (Richardson), 2 mins. 18 secs.; E. Wilkinson (Morgan) stopped.

The class for light cars up to 1,500 c.c. resulted as follows:—W. H. J. Phillips (Deemster), 1 min. 40 secs.; N. H. Player (Calthorpe), 1 min. 49½ secs.; D. T. Walker (Hillman), 1 min. 52 secs.; C. W. Mosey (Calthorpe), 2 mins. 14½ secs.

The London-Edinburgh.

We understand from the trials hon. secretary who is organizing the London-Edinburgh run that competitors will not have to climb Buttertubs Pass at 20 m.p.h. The regulation dealing with this part of the course reads as follows:—"Gold medals will be awarded to competitors who are not more than 15 minutes early and not more than 10 minutes late at any point of the journey, and who complete the three-mile section from the foot of Buttertubs Pass to the top non-stop, and who otherwise comply with the rules and regulations."

Western Centre Two Days' Trial.

At the time of going to press the following small car entries have been received for the Auto-Cycle Union's Western Centre's Two-day Reliability Trial, to be held on April 8th and 9th. Messrs. D. G. Prentice (8 h.p. Morgan), H. F. S. Morgan (8 h.p. Morgan), W. A. Carr (8 h.p. Morgan), N. Hathaway (8 h.p. G.N.), N. C. Harbut (8 h.p. G.N.), A. W. Brittain (10 h.p. Calthorpe), A. G. Frazer Nash (10 h.p. G.N.), Rex Mundy (11 h.p. Deemster), A. W. Knight (10 h.p. Surrey), J. Rothwell (8 h.p. Le Zebre), C. A. Hardy-Mason (8 h.p. G.N.), and two 11 h.p. Hamptons.

THE PETROL CONSUMPTION TRIAL.

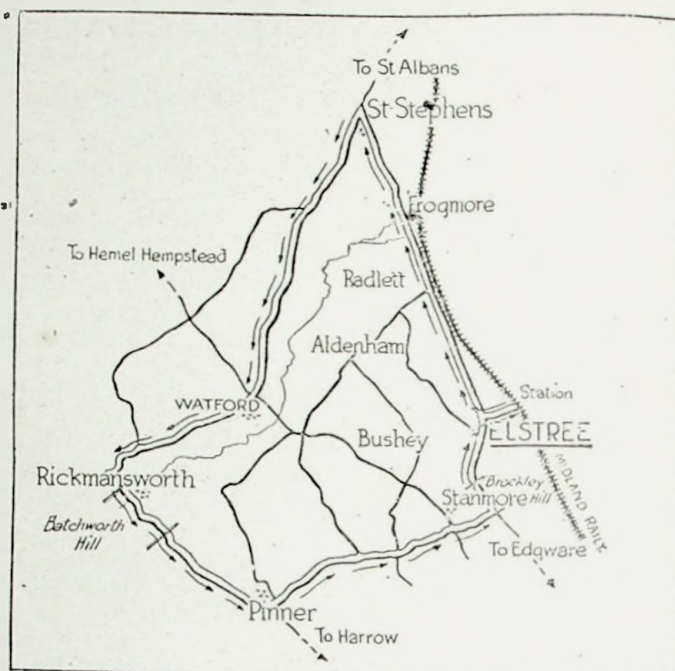
An Interesting Event which Takes Place To-morrow.

TO-MORROW, Saturday, the Junior Car Club will hold its annual Fuel Consumption Trial, the first competitor starting from Stanmore at 2 p.m. The course is approximately 28 miles in length, and will have to be covered in a certain specified minimum time. Competitors must arrive with their cars and observers not later than 1.30 p.m. at Stanmore Station yard, when the machines will be weighed with full running weight and full tanks. The Club gold medal will be awarded to that car which gives the highest figure for ton miles per gallon.

Each entrant is required to bring along a passenger who will act as an observer on another competitor's car.

Arrangements have been made for tea to be provided for members and their friends at the "Abercorn Arms," Stanmore Hill.

The accompanying map shows the route—essentially the same as last year—which will be followed.



THE LONDON-MANCHESTER STIFFENED UP!

Details of the J.C.C. Reliability Run on April 23rd.

THE "go-as-you-please" trial organized last year by the Junior Car Club from London to Manchester was an unqualified success—from the point of view of the man who aspired for a medal, but as the percentage of competitors who gained the premier award was exceedingly high, it was only to be expected that this year the Club would stiffen up the conditions and make the winning of a gold medal more difficult.

The preliminary details show that two fairly stiff hills will be included and that failure to make a clean non-stop ascent of either will entail loss of marks. Further conditions are that arrival at any of the secret controls more than 15 minutes early or late will entail loss of marks, whilst competitors who arrive at any of the open checks more than five minutes early or 15 minutes late will be similarly penalized.

The gaining of an award will depend upon the total marks obtained by the competitor. One hundred is the maximum; 91 must be obtained for a gold medal, 81 being necessary for a bronze. The following are the principal penalties. Secret check = loss of 5 marks. Open check = loss of 10 marks, and failure on observed hills = loss of 10 marks. Thus, whereas failure to comply with the conditions governing one secret check will not deprive the competitor of a gold medal, competitors must be to time at each open check and climb observed hills non-stop in order to gain the gold.

The start will be from the Old Salisbury Arms Hotel, Barnet, at 7.30 a.m., and the route will follow

very closely that taken last year, which led through Daventry, Derby, Bakewell, and Stockport to Manchester—roughly 206 miles. Lunch, however, will be taken at Loughborough instead of Daventry, 35 minutes being allowed, and a 30 minute stop will be permitted at Bakewell for tea. The observed hills will probably be between Bakewell and Manchester. It will be noticed that the forthcoming run will finish this year in Manchester itself, and not in Stockport, so that it will be slightly longer. The first car should arrive in Manchester approximately at 7 p.m.

A general stiffening up of the other conditions governing the run has been made. For instance, no adjustments will be permitted during the luncheon or tea stops other than filling up with petrol, oil and water, and a marshal will be on duty to enforce this rule. No competitor will be allowed to leave the controls before his scheduled time of departure, and a conviction by the police for exceeding the limit or for dangerous driving will render the competitor liable to disqualification.

The competition will be run under J.C.C. rules and the R.A.C. rules governing closed competitions. Entry forms, accompanied by a remittance of 30s., must be forwarded to the hon. secretary for the event, Mr. G. W. Pearson, 28, Denmark Street, Charing Cross Road, London, W.C. 2, not later than April 4th, and those wishing to join the Club in time for the event must send a form of application for membership without delay to Mr. A. Percy Bradley, 37, Walbrook, London, E.C. 4, the hon. secretary of the Club.

MODIFICATIONS TO THE L.M. LIGHT CAR.

WE are informed by the Little Midland Light Car Co. (1920), Ltd., Southgate Works, Preston, that by mutual agreement, J. White (Liverpool), Ltd., The Albany, Liverpool, have ceased to act as sole concessionaires for Little Midland light cars, and that in future the whole sales organization will be conducted from the works at Preston. Some modifications have been made to the standard L.M.

chassis, amongst which may be mentioned a lengthened body, which gives a further 3 ins. leg room, the placing of the pedals farther apart, greater clearance to the hand brake, and, in addition, a Bowden wire valve lifter. The instrument board is also now fitted on the dash. The price of the machine is now 250 guineas, having been reduced. The original figure was £285.

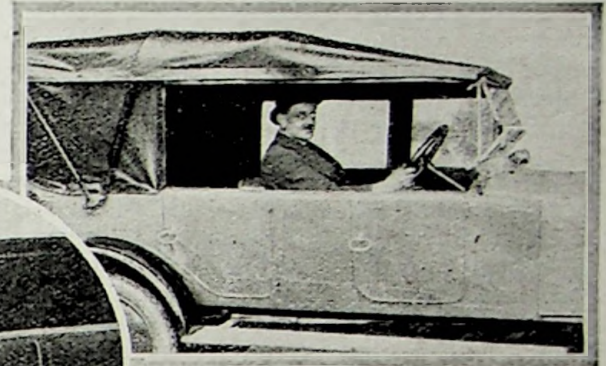
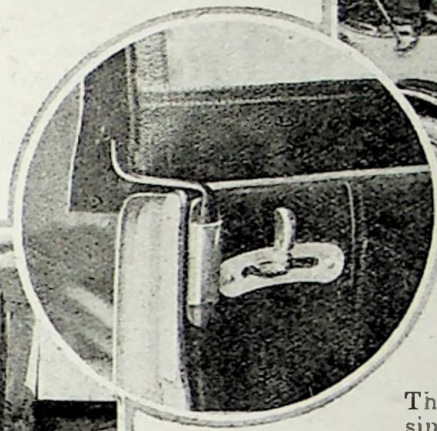
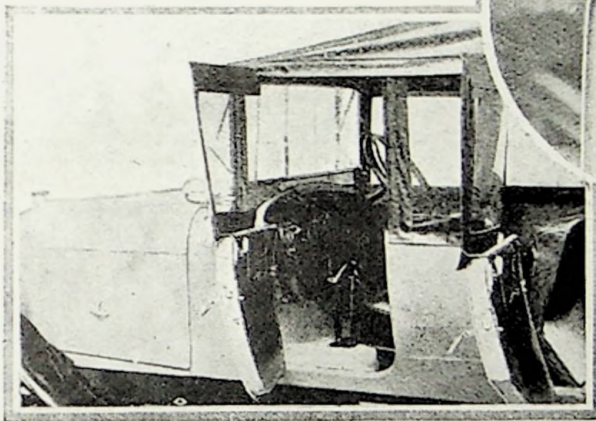
A RILEY ALL-SEASONS HOOD.

Converting the Open Touring Machine to an Enclosed Model,

ALL-WEATHER hoods are very popular at present, the latest concern to introduce a hood of this pattern being Riley (Coventry), Ltd. The all-seasons hood as the fitting is called, has been adopted as standard on the £650 modèle de luxe Riley, and it can be fitted to other Riley cars for quite a small sum, although the exact price has not yet been fixed.

The hood in the main follows standard practice

(Left) Both doors open showing how the side "curtains" open out with them. (Centre) The method of attaching the "curtains" to the door. The support can be instantly removed from its socket. (Right) The offside "curtains" removed showing the interior with hood drawn over.



doors, the celluloid bending to allow for this. The front side window is attached to the top of the windscreen and is supported in addition by a vertical metal strip, which fits into a socket in the door.

The other windows are supported in a similar manner by metal strips fitting into sockets in the doors. Filleted

joints are used all round, a point of importance being that there are no joints directly facing the direction of travel.

The front part of the roof of the hood fits snugly down on the top of the windscreen, which is divided into adjustable halves. It has been found on test that, provided the lower half is allowed to protrude outwards a short distance in advance of the upper half, there is absolutely no draught, it being possible to light a match in the angle formed by the two sloping glass panels. The side curtains, when not required, are rolled up and stored in a locker situated in the rear compartment, just in front of the passenger's feet. The hood is black, well finished, and strikes one as a useful type of all-weather covering.

with the exception that the back portion is continued round the sides for a short distance, the near-side extensions, when erected, clipping to the roof so as to form an absolutely draught-proof back. A diamond-shaped window is fitted to the back, which gives the car quite a distinctive appearance.

A NEW MODEL G.N.

The "Popular" at an Inclusive Price of £198 Ready for the Road.

THE sturdy qualities of the G.N. and the satisfaction which owners derive from this machine may be said to have their foundation in the 90 degrees twin engine and the simple method of transmission adopted.

Many owner-drivers, however, have not been able to afford the Touring or Légère models and in order to satisfy the demand which has been expressed for some time by public and agents alike, G.N., Ltd., East Hill, Wandsworth, London, S.W., have decided to produce a new model, to be known as the "Popular."

This will embody all the well-tried features of the more expensive G.N.s; in fact, we believe we are correct in saying that the chassis is precisely the same. Economy has been effected, however, in regard to the construction of the body and also the equipment provided, whereby a considerable saving in price is obtained, permitting this model to be sold at £198 complete and ready for the road.

A notable departure in the design is the elimina-

tion of the familiar V-shaped dummy radiator, which is regarded as characteristic of the G.N. cyclecar; but a type of dummy radiator has been substituted which, we presume, is somewhat cheaper to manufacture and does not in any way detract from the appearance of the machine.

It is noteworthy that the general lines of the G.N. have been preserved, apart from such modifications as radiator, fixed screen, and the absence of a spare wheel. Another essential difference, not so obvious, is that the wheels of the Popular model are not detachable, but here again the manufacturers are willing to meet the owner by fitting detachable wheels at an extra cost of £12. Spare wheel and tyre can be supplied for £6 10s. extra.

A really excellent hood is provided, and, from a weatherproof point of view this model has everything to commend it. Naturally, no speedometer is fitted, but the fact that oil side and tail lamps are included, together with tool-kit, number-plates, etc., permits the manufacturers justly to claim that this model is "ready for the road" at the price named.

Topics of the Day

The Commencement of a Record Year.

LAST week-end was certainly a real motoring holiday. We fully expected that the glorious weather that prevailed on Good Friday would make the roads teem with cars, and never had such streams of motors been seen before. A journey on a main thoroughfare was a slow affair, for one found oneself an unwilling unit in a long procession which, as regards pace, would have done credit to a well-organized funeral. It was impossible to pull out and pass, for the oncoming stream kept one continuously on the near side of the road. In spite of the change of weather on Saturday and Sunday, and again on Monday, the number of cars did not perceptibly lessen. One saw every type of motor vehicle, from the smallest scooter to the largest char-à-bancs, and if the motor trade requires any special impetus to set it going as it was a year ago, we feel certain that this last week-end will have this effect. In addition to the opening of the road season, Brooklands started off on Easter Monday. Here, again, a record crowd was in attendance and a real good day's sport was witnessed. If one may take the attendance at the track on this occasion as a criterion, racing is going to be very popular this year. There was certainly a long delay experienced in gaining admission to the track, but we understand that the authorities were taken completely unawares. Different arrangements will be made for the next meeting; another entrance will be provided, so that no wait on the roads outside should be experienced. In spite of the attractions of large horse-powered racing cars, tremendous interest was evinced in the smaller machines. Many new-comers made their debut to the public, and although some may not have come out high on the honours list on this occasion, it is almost certain that their drivers will not rest content with the speed obtained from their machines, so that at some future meetings we may see many of these new drivers challenging in no uncertain way the veterans of the track. The great Easter road event, the London-Land's End trial organized by the Motor Cycling Club, was run off without a hitch. Huge crowds gathered at vantage points along the road, and here, again, fine weather made everything smooth. Looking back on this holiday season, we may confidently say that the motoring public has wakened up from its sleep, and that the 1921 season which has just commenced will be a record one in every way.

The Return to Simplicity.

EVERY true enthusiast of the economical motoring movement will have noticed with satisfaction that several manufacturers have recently announced the introduction of a cheaper model of many of the well-known small cars. The reduction in price has been attained in practically every instance by the elimination of costly accessories, such as electrical starters, double panel windcreens, etc. Although everybody desires as much comfort as possible in motoring, the predominating features of the small car movement which *The Light Car and Cyclecar* has fostered from the beginning, should be economy. If, of course, comfort can be given at the same time, without any increase in the selling price of the machine, or without showing a rise in the running costs, there is no reason why it should be taboo, but up to the present these luxuries have added anything up to £100 to the first cost of the machine, and their additional weight, which has to be transported about with the car every mile it is run, must in the end increase by a considerable amount the annual running charges. The second important feature in the modern small vehicle should be what we will describe, for loss of a better word, as "nippiness." If a chassis is loaded up with heavy fittings, this quality suffers unless a larger-sized engine is installed, which, in its turn, means heavier consumption in tyres and petrol. We, therefore, welcome this tendency to return to the original conception of the simple type of motor vehicle, and, so far as it lies within our power, we shall do our best to encourage the future of the economical machine along these lines.

Light Car and Cyclecar

Conducted by EDMUND DANGERFIELD.

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ADVERTISEMENT COPY, Blocks, &c., should come to hand by Tuesday morning to ensure careful attention and allow time to submit proofs, except when an earlier time is specified.

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	6s. 0d.	

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The . . .

LIGHT CAR & CYCLECAR

was founded in 1912 to cater for the needs of users and potential purchasers of various new types of cyclecars and light cars, and it has consistently encouraged the development of this new motoring movement for more than eight years.

The journal is published every Friday, dated Saturday. There should be no difficulty in obtaining a copy at any bookstall or newsagent, as arrangements have been made to ensure a regular supply. Should any difficulty be experienced, we should be greatly obliged to receive the name and address of the reader's newsagent.

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THE LIGHT CAR AND CYCLECAR

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THE TRIUMPH OF THE SMALL CAR.

How Competitors Grappled with the Severe Conditions Imposed by the M.C.C. in the London-Land's End Run. High Speeds up Freak Hills Made Possible by Skill of Determined Competitors.

WHEN the regulations for this year's Motor Cycling Club's Land's End Run were first published they were subject to considerable criticism. It was considered almost impossible for light cars to average 18 m.p.h. up the three miles beginning at the foot of Porlock Hill; but as events turned out in the actual trial, which took place on Good Friday and Saturday last, many competitors, thanks to the efficiency of their machines and their own skill in driving, succeeded in putting up the necessary performance, which says much for the powers of the modern light car.

Thanks to the courtesy of the manufacturers we were able to follow the trial on a Légère model G.N., which behaved splendidly throughout the run and gave no trouble, with the exception of a small bolt which sheared through owing to the necessity for making speed over appalling road surfaces. Including the return journey to London we covered 777 miles in this speedy little car, and did not find it necessary even to remove the engine bonnet.

The start was at the Berkeley Arms Hotel, Cranford Bridge, Hounslow, and some 63 light cars and cyclecars faced the flag. For some obscure reason the M.C.C. Committee made the maximum engine size 12 h.p. by R.A.C. rating. Although this allowed four cars over 1,500 c.c. to compete, it prevented the Silver Hawks (which are now fitted with Sage engines—bore and stroke 72 mm. by 83 mm.) from competing, as the bore upon which the R.A.C. rating depends makes them more than 12 h.p.!

The Start.

Never has such a fine night been experienced for the opening section of the run. A clear and star-studded sky, with a brilliant moon that turned the darkness into daylight, there was only a chill nip in the air to cause any discomfort. The run westwards to Marlborough was devoid of incident, unless a particularly brilliant meteor, which rocketed across the sky, be mentioned. C. M. Harvey (Warren-Lambert) had trouble with his magdyno at Marlborough and retired in consequence. Thereafter patches of fog were encountered, which made keeping an average of 20 m.p.h. difficult. Competitors bunched and followed the tail light of the next ahead, while the damp atmosphere gave rise to gloomy forebodings as to the state of Porlock and Lynton Hills. Spirits fell still lower when, at Bridgwater (the breakfast stop) the roads were thick in mud and a depressing drizzle was falling.

The run on to Porlock in the very early morning was most noticeable for the sliminess of the roads, and many of the competitors stopped to fit Parsons chains before tackling the steep gradient.

Luckily the rain had ceased by the time the first competitor tackled the towering slopes. We had observed many of the sidecars climb the hill, and it was at once noticeable that the cyclecars put up a much better performance. Their drivers and passengers also had not such a miserable appearance. The Morgans climbed fast and well, as is their wont, and did not seem to get out of control as was the custom with the sidecars. The Coventry-Premier and the T.B., the other three-wheeled machines, were also steady and fast. Alan Hill's 8 h.p. Rover came up and round the bends with power in hand. S. C. H. Davis (A.B.C.) was not so fortunate, for his engine was obviously labouring, and at the top he stopped with his piston seized hard and fast in the cylinder—

a particularly bad piece of luck and in no way due, incidentally, to the fact that his engine was air-cooled. Vaughan Knight and Falahee, on similar machines, put up faultless performances.

The Tamplin climbed well and fast and with no sign of wheel-spin, and then the three Cardens followed each other up the hill. They put up an extraordinarily good show and must have deeply impressed the large number of spectators who were present. One certainly had to be assisted round the lower bend, but, considering the price of these machines, the way they sturdily propelled themselves up the steep gradient was most remarkable.

After them came the Rover team, just as steady and certain, and slightly faster, as befits a more expensive car. The beat from their engines was particularly healthy and there was no sign of wheel-spin.



W. V. Denison (Lagonda) takes the corner on Lynton rather too wide and cuts out

Other excellent climbs were made by the Riley and Lagonda cars. The palm for speed, so far as we could judge, should be divided between the 11.9 h.p. Aston-Martin, driven by Lionel Martin; G. C. Stead's A.-C., and A. W. Brittain's Calthorpe.

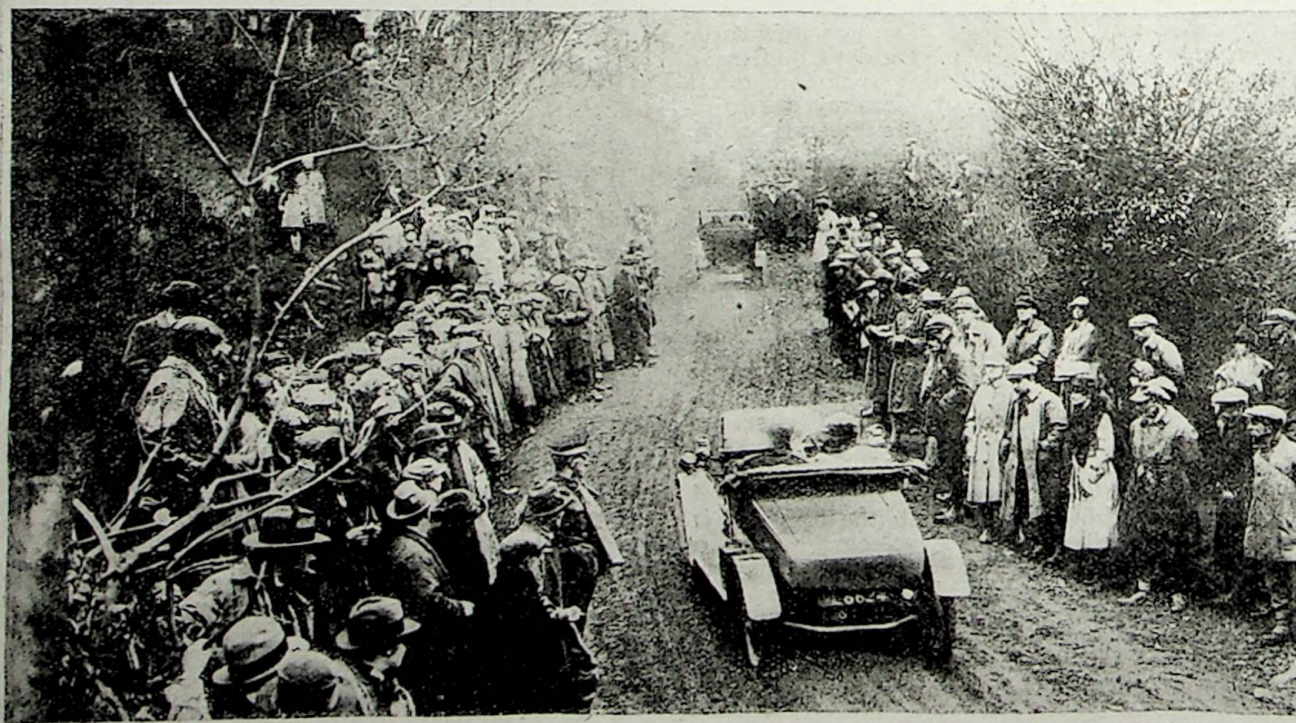
Trouble on Porlock.

The Hon. Victor Bruce, driving one of the new six-cylinder A.-C.s, was extraordinarily fast, doing over 20 m.p.h. on the steepest portion, but unfortunately he suffered trouble further up the hill. Brownsort, on another A.-C., was unlucky, for he seized his low gear pinion when going extraordinarily well. The G.W.K.s were steady, if not particularly fast, and Farrar-Hockley, on a Douglas, made a good sure climb. The Victor failed to reach the foot of the hill, and the Baughan retired after reaching the top.

The check at the summit of the hill took most competitors unawares, for, owing to wheel-slip, the speedometers registered more than the distance travelled, and as a result many were appreciably ahead of time. Thus the M.C.C. was vindicated, for the climb was not by any means impossible, although, had the weather been wet, the result might have been very different.

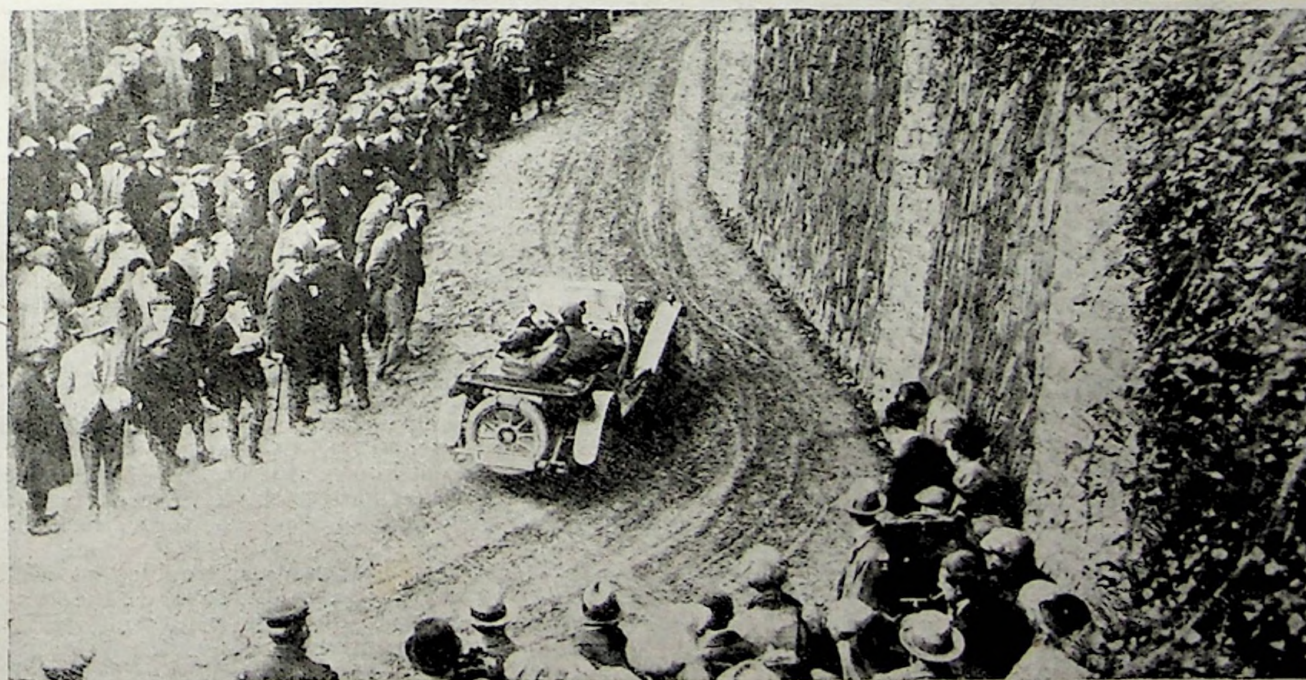
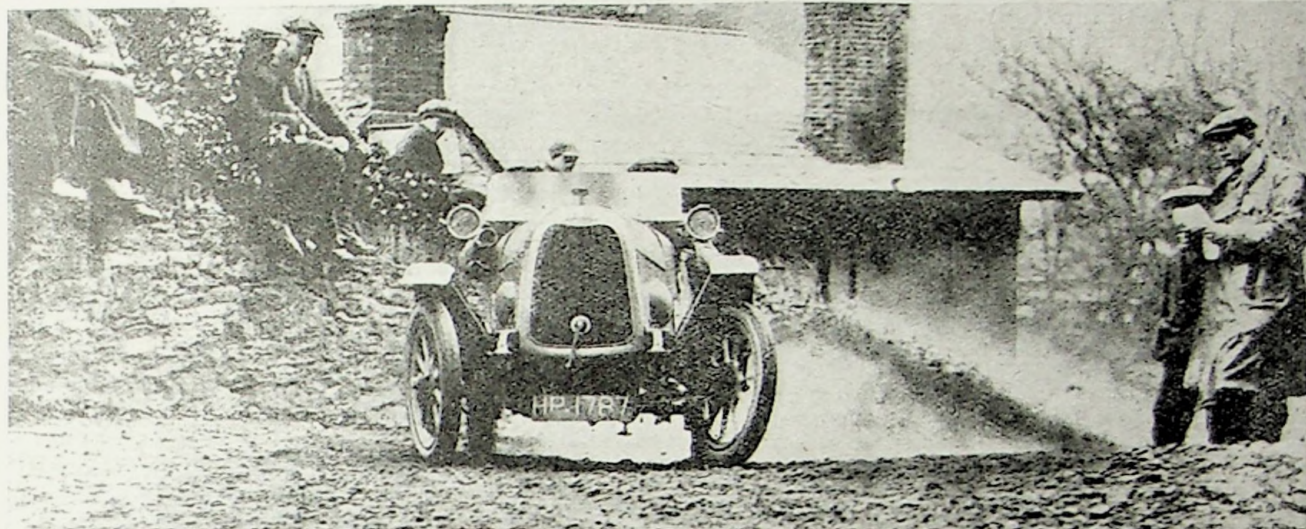
Drivers and passengers breathed more freely after the ascent of Porlock, but their troubles were by no means over. for the run from this point to Countisbury

ON PORLOCK—



There were some very fine ascents of the famous Porlock Hill in the London-Land's End run. (Top) F. S. Spcuse, (T.B. tricar) on the second bend. (Middle) A Carden requires slight assistance on the first bend, which has a gradient of 1 in 5. (Bottom) J. T. Wood (G.W.K.), makes a clean and fast ascent.

—AND LYNTON.



Lynton Hill worried the competitors more than Parlock, principally owing to the greasy surface. (Top) A. C. Hardy (Hotchkiss), takes the bend in style. (Centre) H. E. K. Sawtell (Morgan), approaches the corner at speed, assisted by his passenger. (Bottom) Lionel Martin (Aston-Martin), goes up like an express train!

TRIUMPH OF THE SMALL CAR (contd.).

was rendered extremely uncomfortable by the slippery and rutty nature of the road.

It had been feared that advantage would be taken of the long descent into Lynmouth by competitors who were behind time, but dangerous driving on this precipitous gradient was conspicuous by its absence, and all the cars were piloted with the greatest care from the top to the bottom. There were no casualties of any sort and, as a matter of fact, few of the competitors had any reason to come down at a dangerous speed, for practically all were well up to time at the foot of Lynton Hill.

Lynton Proves Formidable!

The turbulent waters of the diminutive river Lyn were no more turbulent than the feelings of the competitors at this point, however, for there was no time to stop and pluck up courage—in fact, it was necessary to speed straight through Lynmouth and make the ascent of Lynton Hill at once if the scheduled time at the summit of the climb was to be adhered to.

The slight shower of rain which had fallen in the early morning had rendered the surface of the hill extremely slippery, and by the time the last motor-cycle and sidecar had slithered up to the summit there was practically no hold for the wheels of cars fitted with differentials. This climb demonstrated in a very forcible manner the superiority of the differentialless back axle on small machines, for such cars as the Surrey, G.N., de Marçay, and Carden made absolutely certain ascents. Of the two hills, Porlock and Lynton, the latter undoubtedly was the severer, and



The Rovers made conspicuously good ascents up Porlock. The photograph shows one on the first bend.

we give the performances of each machine as a point of considerable interest.

The first up was A. E. Hartfall, on a Morgan, and his performance was fast and certain. Close behind him was F. S. Spouse (T.B. tricar), who made a slow and sure ascent. H. E. K. Sawtell (Morgan) and R. Croucher (Coventry-Premier) came up together, the former being sure and moderately fast, while the latter had ample power in hand and experienced no difficulty, despite the fact that he appeared to cut-out on the corner. They were closely followed by S. A. McCarthy (Morgan), who made a very good climb, and E. A. Tamplin (Tamplin), who went exceedingly well until he was approaching the quarry, when he had some difficulty owing to wheel slip.

H. H. Vaughan Knight (A.B.C.) made a spectacular ascent owing to the fact that he was baulked by a car just on the bend, and which he could not possibly see until he was right on it. He was then travelling fast, and to have locked over hard to the near side would have been inviting disaster. He chose the only alternative, and, jamming on his brakes, endeavoured to pull up; but his front off side wing struck the wall. In the twinkling of an eye the obstructing car had been pushed out of the way and Vaughan Knight made an easy restart, finishing the climb in an excellent manner. Thanks to his celerity, J. Falahee, also on an A.B.C., who was close behind, was not impeded in any way, and made a fast and certain ascent.

The first of the 8 h.p. Rovers, driven by Alan B. Hill, now made its appearance and toured up the difficult gradient without fuss and in excellent style, whilst close behind followed H. Gardner, on another Rover, whose performance was equally good. C. E. Bennett (Morgan) came to a stop on the first bend, owing to engine trouble, apparently, and it appeared to us, from unofficial timing, that he was late in Lynmouth.

The fleet of Cardens proved an eye-opener on Lynton, as they did on Porlock, and with the exception of the machine handled by E. E. Loyd, which experienced some trouble near the quarry, all made wonderful ascents.

The 8 h.p. Rovers performed exceedingly well in the main. W. Bennett's passenger alighted for some reason which was not at all obvious, as the car appeared to be going well and, so far as we could see, was not experiencing any difficulty. E. A. Sapey's Rover was going excellently, but on the worst portion of the hill wheel slip appeared to trouble the machine, which had to be hurriedly assisted so that it did not baulk other competitors.

G. C. Stead (A.C.) was very fast and certain, whilst his negotiation of the corner was conspicuous by good judgment. H. W. Holmes (Morgan) "pettered" out near the quarry, but after making an adjustment he got away—too late, we fear, to check in to time at the top of the hill.

Split Seconds and Quarters of an Inch!

K. A. MacDonald (G.N.) roared up the first part of the gradient at speed and was obliged to cut-out on the corner; but he quickly "revved" up his engine again and slipped away easily up the hill. Lionel Martin (Aston-Martin) looked happy and contented as he sped away towards the summit and waved gaily to friends whom he recognized amongst the crowd. He made one of the fastest climbs of the day, and the machine held on to the slimy surface in an astonishing manner.

C. Finch (G.N.) rounded the bend steadily and went up the hill at speed, but cries on all sides warned him that there was trouble ahead. This proved to be a car which had failed and upon which endeavours had been expended to get it out of the way in time. It was a question literally of split seconds and quarters of an inch, but Finch made for the narrow opening without hesitation, and with both off side wheels well up the grass bank he shot through as clean as the proverbial whistle. P. D. Walker, also on a G.N., more or less glued himself to the tail of Finch's car and followed his leader's example. He charged the bank and managed to squeeze through without accident.

G. W. Lucas (Riley) was not troubled at all by gradient or grease, and sailed towards the top in exemplary fashion. F. E. Salter (Unit) suffered from wheel slip near the quarry, and had to be assisted before he could get away. The Hotchkiss, handled by A. C. Hardy, caused some speculation, many of the onlookers thinking that it was a new type Bugatti! It made a fast and exceedingly good climb. S. H. Roe, on a pre-war A.C., made a plucky attempt, but he had to be assisted near the quarry.

'MIDST SNOW AND SUNSHINE.

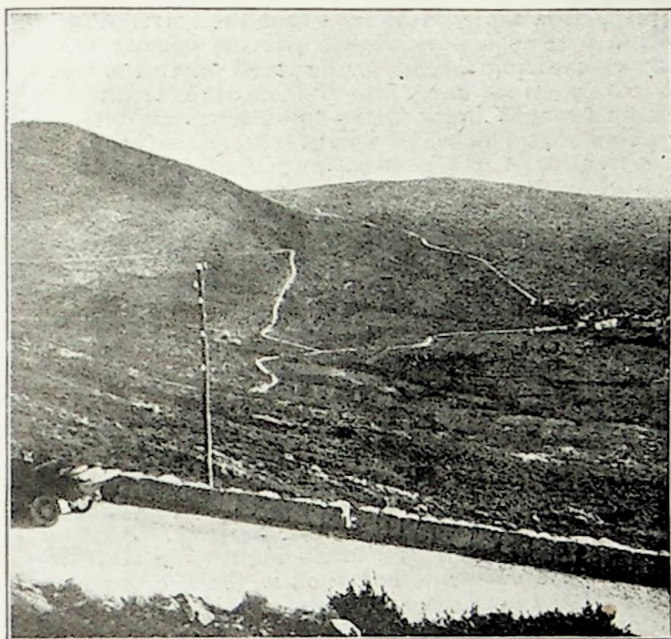


During the return journey from Nice to Boulogne the crew of two in the little four-seater light car gazed on scenery of surpassing wonder and beauty. (1) Skirting the lower Alps. (2) Not a cul-de-sac, but a wonderful view of rugged peaks through the narrow street of Sisteron. (3) Wild country for the light car. On the road to Castellane.

2,000 MILES IN TABLOID (contd.).

sixth went ahead and gave directions. They apparently all expected tipping, but were disappointed. The custom in France is to give 10 per cent. of the bill to the staff for services. I generally paid this to the manager or clerk with the bill, and found it much more convenient.

We reached Bourg after a bumpy journey, the last 40 miles being covered in the dark. The prettiest church in France is situated near Bourg, but again



Twisting and winding! The Pilon Pass, part of the road to St. Vallier.

time necessitated our pushing on. The Hôtel Terminus did us well at a reasonable price. We proceeded north and lunched at Chagny.

That night we slept at Auxerre. We arrived at 10 p.m., to find festivities in progress at our hotel in the shape of a concert and dance. As usual, we were too late for dinner, and fell back on œufs et jambon. By now we were rather tired of eggs and ham, having existed on them more or less daily for a fortnight.

By Night Through Devastation.

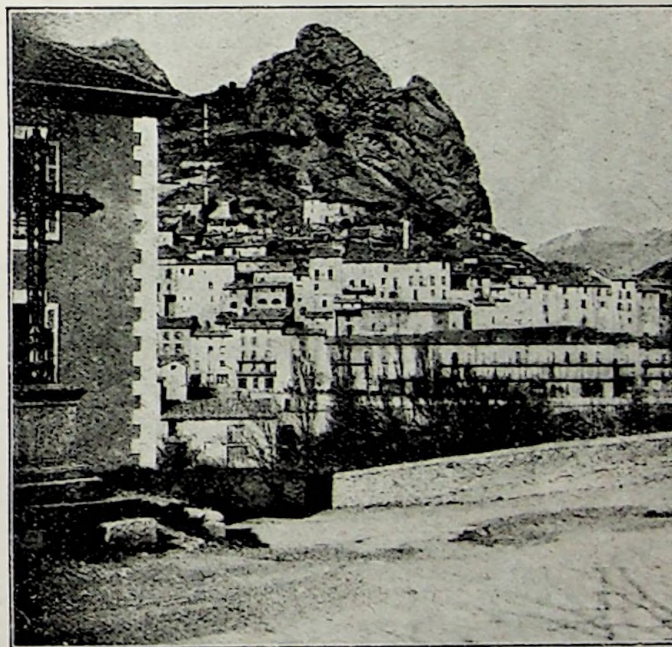
We were now getting on with the journey. On the Thursday we left Auxerre at 10 a.m., having breakfasted at 7.20, and spent the remaining time in attempting to repair a leaking tube. Lunch at Fontainebleau did not take long, and we were soon on a road skirting Paris, which eventually led us to Senlis, where we dined. Senlis is within 30 miles of the devastated area: the hotel looked prosperous, and although we were the only visitors the dining-room was fully equipped for at least 50 guests. The night run through part of the devastated area to Montdidier, Montreuil and Boves, a hamlet on the outskirts of Amiens, was most impressive. The roads are not very bad, but the desolation is appalling. One can see where the French contractors are getting busy amidst the piles of stones, by the new red brick faces they are fitting between the walls that still remain standing. Our headlamps only revealed a fraction of the desolation all around us.

Those who saw the 1913 Grand Prix at Amiens will remember Boves, where one of the Guinnesses, on a Sunbeam, fell into the river. Montreuil, a few miles away, is a mass of ruins, but Boves has escaped the Boche, save for a few stray shells. To our amazement, M. le Clerc, Madame and Marie

Therese were in residence at the same Old Café de Commerce, where we stayed in 1913. Although it was midnight when we arrived, we were made welcome, and the family, who had been forced to entertain the Huns in 1914 and to evacuate their home in 1918, to return later to find it devoid of all furniture save a picture of the crashed Sunbeam in the river and a shell through the roof, made merry discussing old times. To Monsieur and Madame Morgan and to M. Thomas they sent their remembrances. Any Englishman who happens to be touring the battlefields may be sure of a kind and comfortable welcome at this place. There was a gentle rain as we departed at 7 a.m. next morning, and Marie Therese, now a buxom wench of 21, and having learnt to speak a little English, naively said as I was going: "It is damp. Why do you not put up the tent?" (meaning the hood). I thought that this remark was quite charming. In future I shall always talk of the "tent." It is so much more picturesque.

The Last Lap!

Over the last lap—to Amiens-Abbeville and then on by some second-class roads through Etaples to Boulogne—we sped, calculating to arrive at one o'clock at Boulogne so as to catch the two o'clock boat. Somehow, owing to a sign, we missed the main road by which we came down, and in running out of petrol within five miles of Boulogne suffered a series of air locks in the tank, which the disconnecting of the petrol pipe and much blowing with the pump

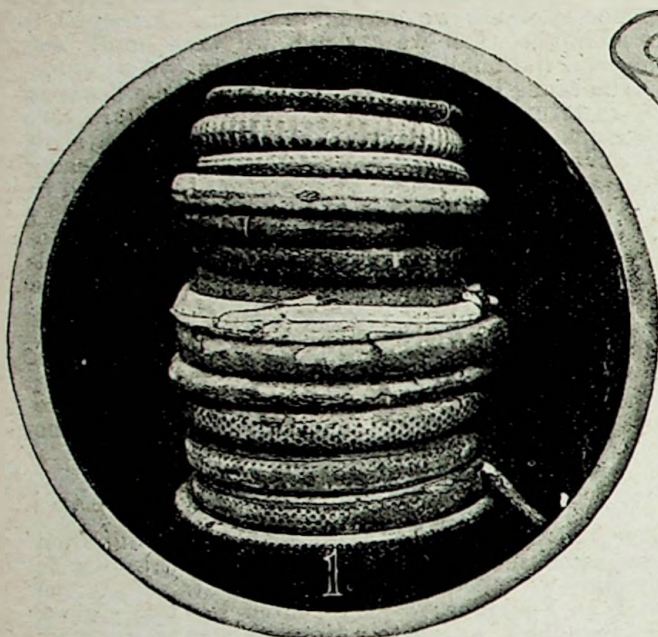


A view of Serres with its imposing background.

failed to cure. Three times in 300 yards we stopped, and only at the fourth attempt did we manage to get going again. Then we were held up at two level-crossings. This meant more delay, with the result that we arrived at the boat ten minutes before it was due to sail. Again the officials said "Too late." "Thirty francs if you get me on board," quoth I. Willing hands pushed the car on to the platform, slung it up, and it was on board in next to no time.

Tea at Folkestone, dinner in London, and a 90 odd miles' run home to the Midlands concluded the tour, the total for the last day being 258 miles. The Folkestone road looked so clean and fresh after the roads in France. Our hamlets seemed so neat and well-kept after the deserted, want-a-spring-clean look of the villages on the other side, and all said and done we were glad to be home again. We have had enough motoring for some time to come! McM.

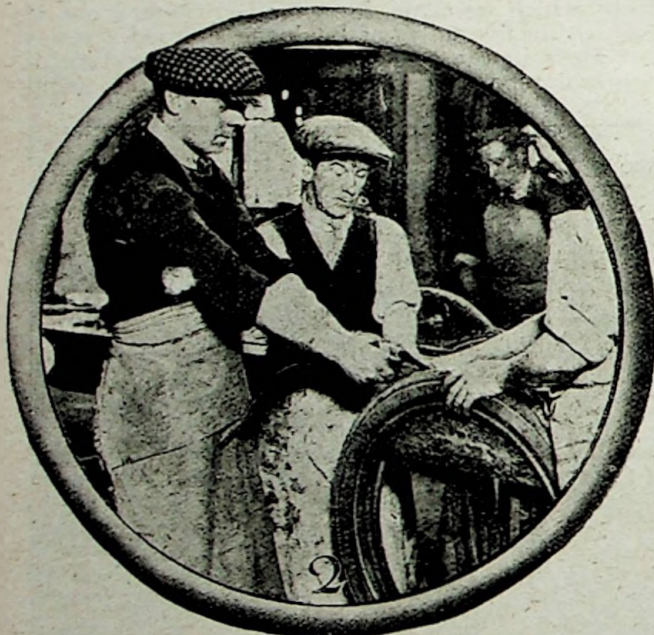
An Up-to-Date



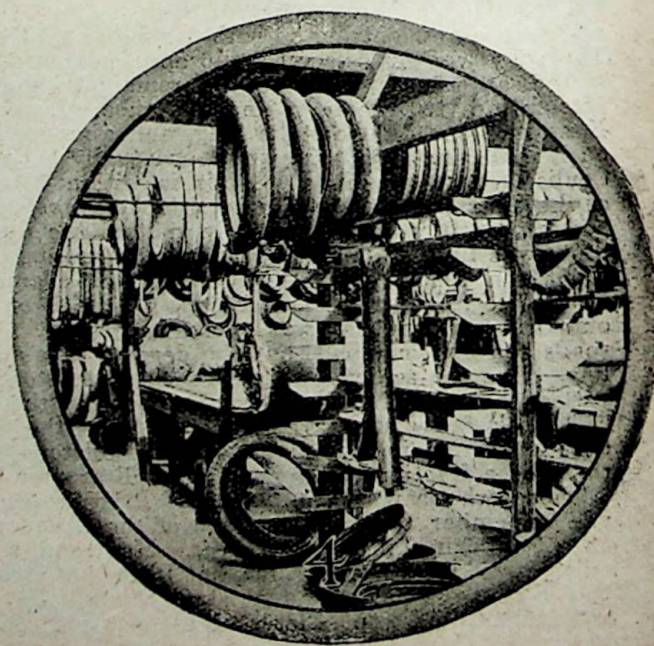
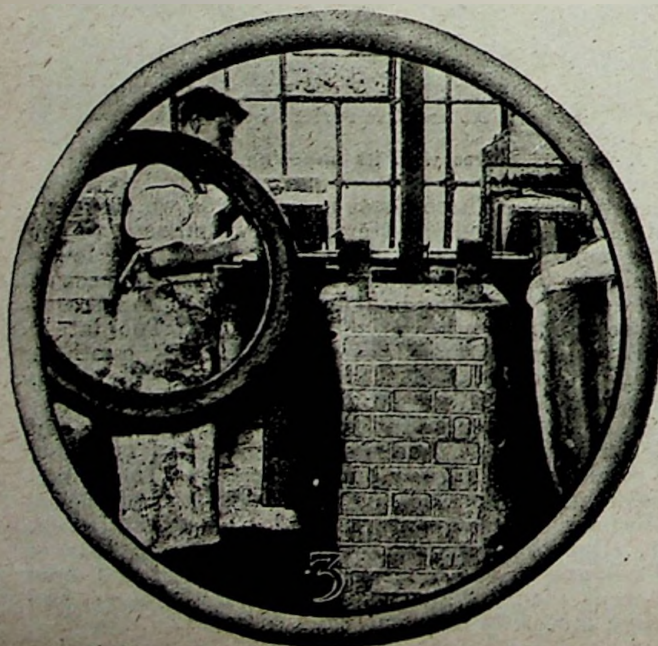
THERE is a prevalent idea that the retreading of a tyre is a very simple process consisting in vulcanizing a ready-made tread on to the worn out cover. How far this is from the truth was forcibly brought home to us upon a recent visit to the Almagam Works. These works are situated on the outskirts of Harpenden, and it comes as somewhat of a surprise to find a large manufacturing works in the centre of such delightful country. But the advantages of having a works so placed are reflected in the healthy appearance of every operative in the works, for seldom have we noticed such living illustrations of health and contentedness as in the employees of the Associated Rubber Manufacturers Co. at Harpenden.

Upon arrival at the works, there was noticed a large heap of tyres of every conceivable size, type, and make awaiting treatment. These tyres were being taken into the stores for inspection, and after inspection each tyre was given a number and its history from that time onwards recorded in a large book specially set aside for the purpose. Some of the tyres appeared to be in an impossible state for satisfactory treatment, but such is the thoroughness of the Almagam process that even tyres with large cuts and bursts may be made into a very satisfactory repair. At the same time, it is understood that if the best results are to be obtained the cover should be sent for retread at a reasonably early stage of decay.

After leaving the stores the tyres are sent into the stripping shop, where all the old rubber is completely stripped off. The tyre is then buffed on both sides, relined with canvas, and taken away to be painted with a special rubber solution. When it is nearly dry, one layer of what is known as incorporated high quality rubber is fixed to the tyre, and on top of this a layer of special canvas, which is impregnated with rubber.



(1) A group of "patients." (2) Stripping off the old rubber. (3) painting shop. (5) The drying stores. (6) Building up the new tread



Tyre Hospital

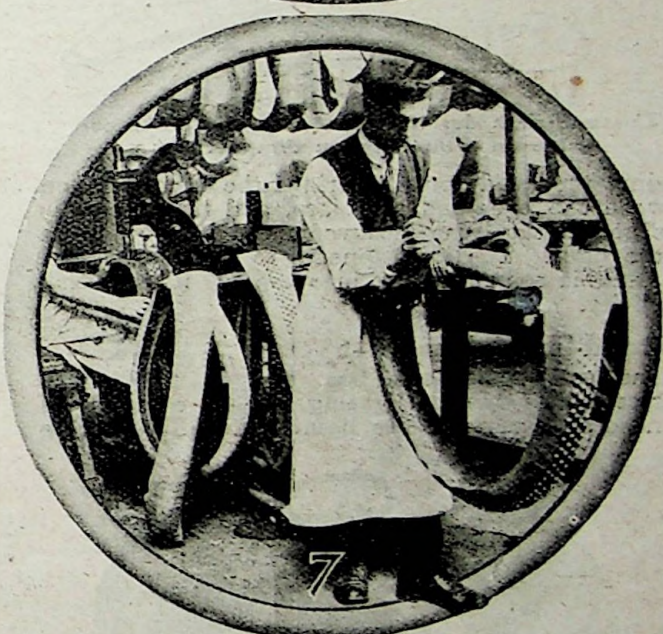
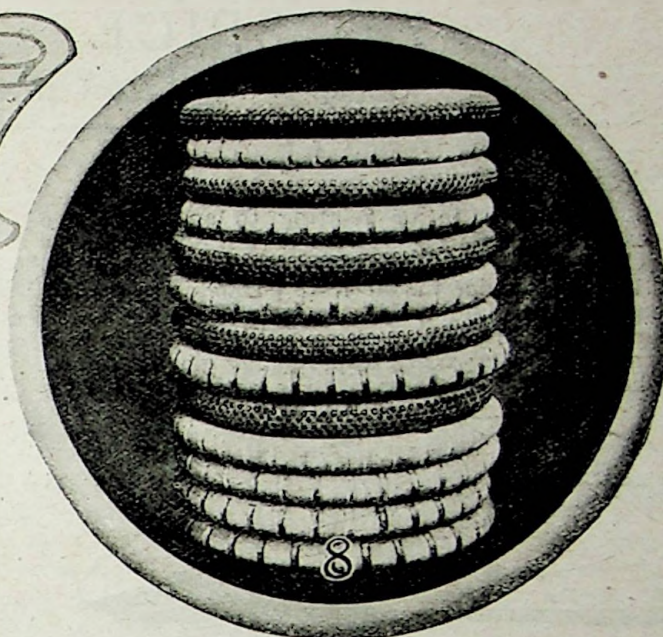
Over this canvas are built several layers of rubber, each about $\frac{1}{8}$ in. thick. The numbers of layers may vary from 6 to 12, according to the size of the tyre. When the tyre has been built up to this stage the grooves are cut in the tread, the tyre mounted on a mandrel and a template placed in each groove. The cover is then bound up and put into the vulcanizer, and it is worthy of note that the process of vulcanization only lasts for about an hour, this being due to the fact that quickly-vulcanizing rubber is used in order to avoid damage to the old tyre casing by being subjected to prolonged heat. This completes the process of retreading, the tyre being ready for despatch to the customer as soon as it has come out of the vulcanizer.

The average length of time between despatch and receipt of a cover sent by a customer to the company for retreading is about ten days, and in every case a quotation is sent to the customer before the work is proceeded with.

They make every variety of hose and the A.R.M. tyre and tube as well as retreading covers, and on our visit we found considerable extensions to the works in progress ready for the coming season's pressure of work. It was interesting to hear that these extensions were being built by the firm's own men, as they find it considerably cheaper to run a building department of their own than to have extensions made from time to time by outside contractors.

In a factory situated in such a pleasant and healthy spot, where the workers are operating under very congenial conditions, the general effect must be undoubtedly reflected in the workmanship and quality of the goods turned out, and this, added to the many years of experience the Company have had of this class of work, undoubtedly contributes largely to the very excellent reputation the firm have attained for the workmanship in their retreads.

ing up the inside and outside of the canvas. (4) The solution
7) Inserting non-skid studs. (8) A group of "complete cures."

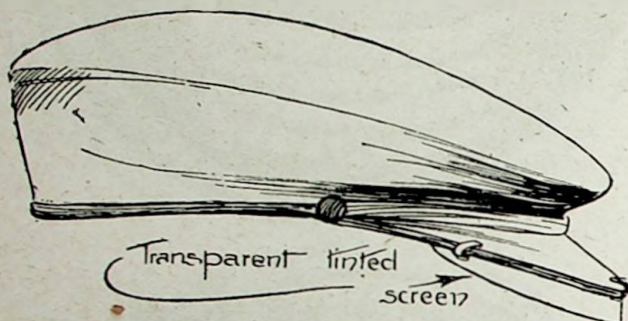


The SPICE of NOVELTY.

Some of the Latest Inventions and Accessories.

An Anti-glare Device.

"Improvements in or relating to anti-glare eye shades" is the subject of an invention introduced by Mr. C. F. Lane, 11, Compton Road, Wimbledon, S.W.19. The device in one form consists of a transparent slip of celluloid, mica, or other suitably tinted material, held in position on or adjacent to the peak of one's headgear. When approaching glaring lights, or when otherwise necessary, the action of slightly

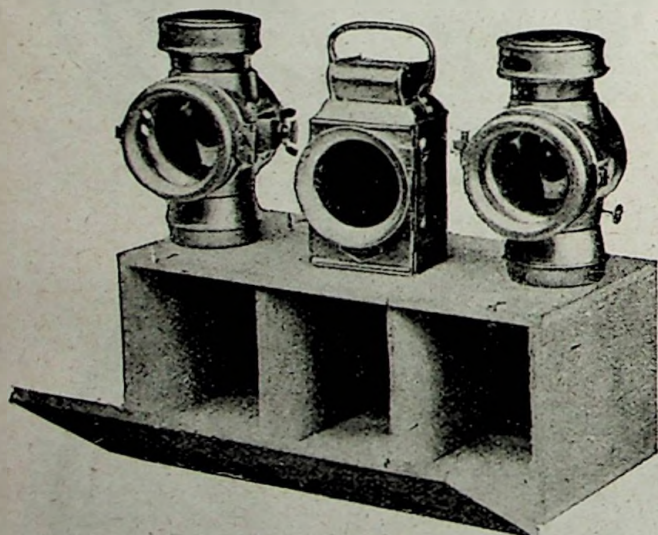


This anti-glare device is neat and can be fitted by the aid of three clips in a few seconds.

bending the head forward brings the tinted screen between the eyes and the glare, and the wearer is thus not in the least inconvenienced by the effects of the light. The idea appears to be an excellent one, and is commendable in view of its extreme simplicity.

A Stand-by Lighting Set.

Considering what one has to pay to become possessed of a dynamo lighting set, there should be no need to carry a spare lighting installation. Be



The Dunhill emergency oil lighting set. The lamps are strong and of good quality.

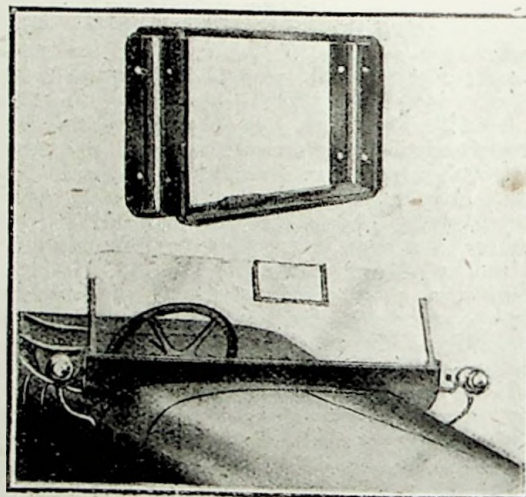
that as it may, the considerate motorist leaves nothing to chance, and as likely as not he will carry a set of oil lamps in the locker. Dunhills, Ltd., of Euston Road, N.W.1, have just introduced a very useful "how to get home" outfit, consisting of two oil side lamps and an oil tail lamp. The lamps are of good quality, of neat design, and well finished. A box in which to carry the lamps is included in the outfit, its overall size being approximately 17 ins. long by

B34

7 ins. wide and 9½ ins. deep. The price of the set with brass lamps and a plain wood box is £4 7s. 6d. Black and brass or nickel-plated lamps cost another 5s. per set, whilst a box of mahogany can be supplied, if preferred, at a slight extra charge.

Keeping the Screen Clear.

Windscreens are a boon in fine weather, but during a rain storm they make driving almost a danger unless measures are taken to keep the screen clear. In this direction special preparations may be applied to the glass or a wiper may be employed. That known as the Duplex Screen Wiper, manufactured by the Coventry Manufacturing Co., Ltd., Empire Works, Clarendon Street, Coventry, represents an easily fitted and efficient appliance. As will be gathered from the illustration, it slips over the top of the screen, and, by using one hand only, it can be moved from right to left or left to right as desired. The action of sliding the wiper along the screen serves



In position, the Duplex screen wiper is unobtrusive. The driver can clean the screen without inconvenience.

to remove the moisture thereon, and so provides a perfectly clear glass. It should be noted that both sides of the screen are cleaned in the one movement. In brass, the Duplex sells for 21s., or, plated finish, 25s. When not required, the wiper may be removed instantly, so that it can be carried in the locker if necessary and placed in position when a rain storm threatens. In any case, if it is always kept in position on the screen, it does not by any means look obtrusive or ugly.

Assisting Vaporization.

Car Repairs, Ltd., of 63, Portobello Road, Bayswater, W., have placed a neat and compact form of electric vaporizer on the market. A carbon sleeve specially prepared and well insulated is fitted round the jet in the carburettor. Current from the lighting and starting battery serves to heat up the carbon, and thus vaporization is materially assisted. Irrespective of the grade of the fuel used, it is claimed that vapour is generated within from 10 to 15 secs. The device is perfectly safe in use, and prospective users of the fitting need not have any fears as to a conflagration being caused, as the carbon at no time becomes incandescent.

The Light Car and Cyclecar

Conducted by EDMUND DANGERFIELD.

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The . . .

LIGHT CAR & CYCLECAR

was founded in 1912 to cater for the needs of users and potential purchasers of various new types of cyclecars and light cars, and it has consistently encouraged the development of this new motoring movement for more than eight years.

The journal is published every Friday, dated Saturday. There should be no difficulty in obtaining a copy at any bookstall or newsagent, as arrangements have been made to ensure a regular supply. Should any difficulty be experienced, we should be greatly obliged to receive the name and address of the reader's newsagent.

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Topics of the Day

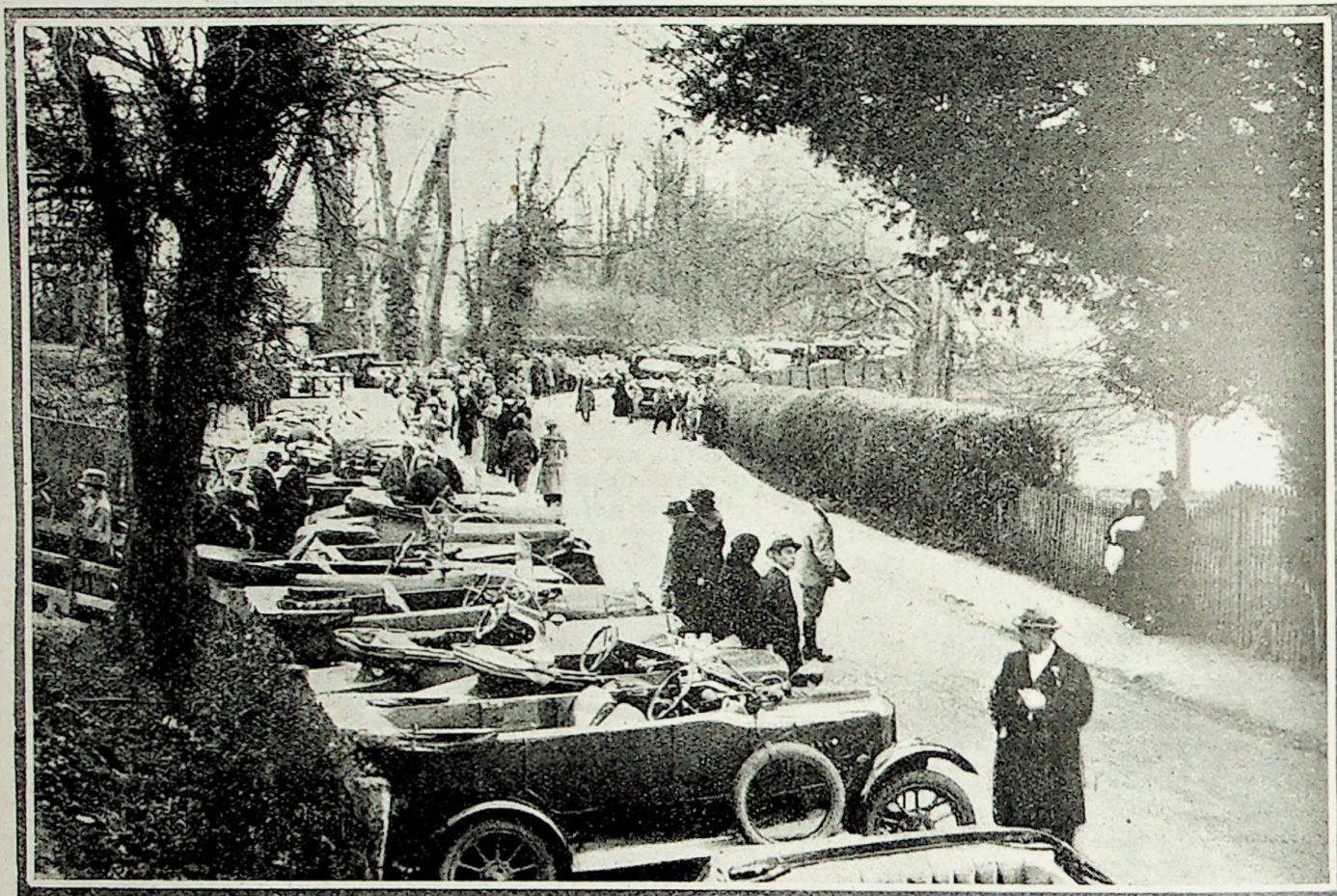
Appearance Counts.

THE design of the light car chassis improves year by year, but it is not so certain whether the lines of the complete 1921 machine are more graceful or more pleasing than those of a few years back. The mechanically-minded person will probably repudiate the suggestion that appearance counts in any way in the popularity of a particular car. In his eyes the things of beauty lie under the body and bonnet. He is perfectly correct, for it is indeed unwise to choose one's machine just because it looks graceful and neat. A really high-class chassis, on which is mounted a cheap and ugly-looking body, will give infinitely better service to its owner than a chassis of inferior design fitted with coachwork having the most graceful lines imaginable. In spite of this, we would say that fully 80 per cent. of cars bought, sell on account of their appearance. We do not wish to infer that some of the most popular makes of to-day have coachwork of pleasing appearance and inferior chassis, for the majority of small cars are not only pleasant to look upon, but also are built on a sound and satisfactory foundation, in the shape of a well-designed and well-constructed chassis. What we do wish to impress manufacturers with is that the mechanical design of a car may approach perfection, but if an ugly body is provided, the sales of the machine will suffer considerably. Year by year modifications in coachwork, as in chassis design, are made, but in one or two instances we would say that the general lines of the body have not been improved by these modifications; in fact, there are one or two 1914 models that are much more graceful than their 1921 counterparts. Many really excellent machines are spoilt by the hideous lines of their coachwork. We would advise manufacturers whose Sales Departments are not working overtime to make certain that this very important point is not the cause of the lack of orders. No matter how mechanically minded the prospective owner of a car may be, it is fairly safe to say that before a purchase is made some of his relations belonging to the fair sex will be consulted; and it is for this reason special attention should be paid to appearance.

Where Do We Stand?

DURING the last twelve months, restrictions, and rumours of restrictions, constantly have beset the motorist, so that from day to day he not only found it difficult to follow the trend of events, but he could be pardoned for wondering where it would all end! The activities of the Ministry of Transport gave him furiously to think, and he dreaded what would be the outcome of their deliberations. One thing was certain, however, that a new system of taxation would be devised; and in due course the nature of this taxation was made public. It would seem, however, that this was the first and last great effort of the Ministry, for beyond much talk about road improvement, examination for driving licences, the revision of the speed limit question, anti-dazzle lighting, etc., the Ministry has performed nothing useful, and now we learn that its demise will probably take place at the end of August. There is to be no legislation during the present session for the revision and amendment of the Acts relating to the use and construction of mechanically-propelled vehicles. This disposes of the Road Traffic Bill for the present, and it is even conceivable that this Bill may be dropped altogether. The report of the Lights on Vehicles Committee is now complete, but there is such an atmosphere of uncertainty surrounding its findings, that it is questionable whether they will ever be published for the benefit of the public. Mr. Arthur Neal stated in the House recently that the Ministry doubted the wisdom of pursuing the suggestion of examinations for driving licences, and the question naturally arises now, where do we stand and where shall we stand in the future? The welfare of the motorist has been studied very closely by the present Ministry, and the abolition of this department may not augur so well as, in sanguine moments, we may imagine. It may be a question of "out of the frying pan into the fire," and, as a body, motorists will be eager to learn what is likely to take place in regard to their interests in the future.

A RECORD MEET—



The machines lined up extended well up the road in the London direction—

—The Rally.—

THE Junior Car Club have held many rallies at Burford Bridge Hotel and elsewhere, but the one that took place last Saturday was not only the largest, but the most interesting from many points of view, that has been organized. The spring-like afternoon, with its continuous sunshine, was greatly appreciated, especially as the weather had not been in a propitious mood for this annual event on the last two occasions.

Long before the appointed hour of 3 p.m., cyclecars and light cars were arriving and being parked neatly at the edge of the road, and also in front of the hotel, and as time went on the long line became extended well over the bridge on the southern side of the hotel and far up the hill in the London direction. Not only was the event remarkable for the number of machines present—approximately 120—but many of the cars would have done credit to Olympia as regards their coachwork and general appearance. In this connection, we must mention two very handsome coupés, built on A.C. chassis—one painted a very delicate yellow tint, and the other a standard blue. They were most favourably commented upon by all present, as was the all-aluminium A.C. sporting model, which shone like a gem in the sunshine.

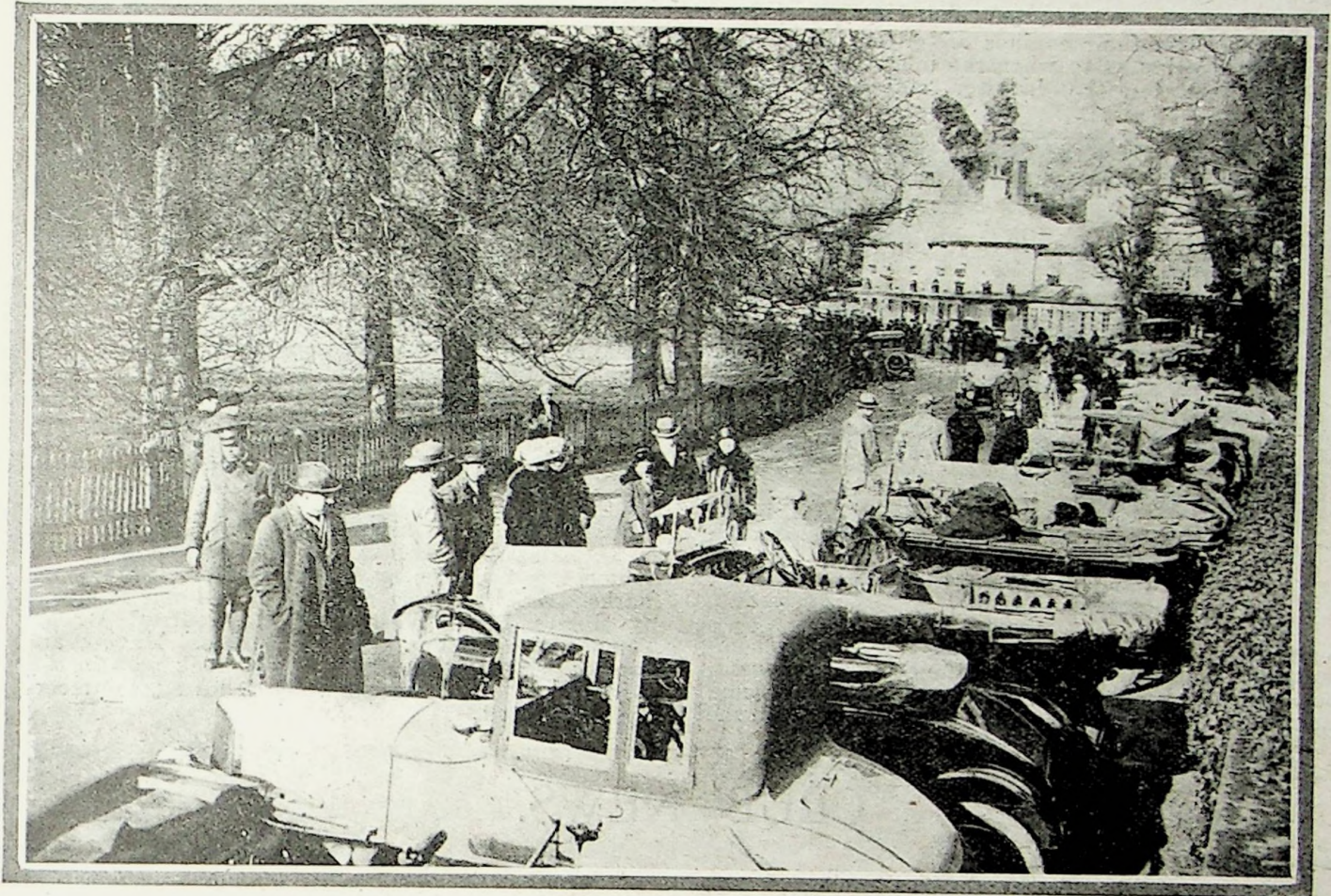
Another very fine example of the coachbuilders' art was seen on a 10-15 h.p. Fiat, owned by Mr. H. P. McConnell, one of the members of the Committee of the J.C.C. This machine is a four-seated interior-drive saloon with a V-fronted scuttle and screen. The colour scheme was carried out in black and white and the many extra fittings, several of them of an ingenious character, attracted much attention.

B36

A very fine fleet of sporting A.B.C.s was lined up opposite the hotel, and many other makes of cars were seen in large numbers, as the following figures show:— 12 A.C.s, 10 G.N.s, 6 Morgans, 3 Silver Hawks, 4 Calthorpes, 4 Horstmanns, 5 Warren-Lamberts, 3 Singers, 4 G.W.K.s, and 3 A.V.s. In addition the following cars were represented:— Carden, Standard, Humberette, Riley, Marlborough, Meteorite, Alvis, Bugatti, McKenzie, Peugeot Quadrilette, Tamplin, Alldays, Eric-Campbell, Lagonda, Kevah, Temperino, Hillman, Wolseley 10, Bifort, Ashton, Citroen, Douglas, Richardson and Rover.

Mr. Hunt, the well-known manager of the hotel, provided an excellent tea for the visitors, although owing to the crowd there was a certain amount of difficulty in obtaining room. The scene outside the hotel was one of extraordinary animation, and we have seldom seen the vicinity so crowded. The officials, ably aided by the representatives of the R.A.C. and A.A., succeeded in parking the machines quickly and without much fuss, so that through traffic was not impeded in any serious way. We noticed that the passengers on the buses en route to Dorking craned their necks over the sides in order to see what was taking place; in fact, some were so interested in the array of small cars that they made a hurried descent from the bus top so that they could examine the machines at close quarters. Judging by the cars present, it would appear that the sporting model is this type were present, and naturally they were critically examined in every detail.

AT BURFORD BRIDGE.



— and the cars were just as numerous on the southern or bridge end.

—The Lecture.—

From 2 o'clock onwards Professor A. M. Low was busy in the concert room arranging the apparatus for his "lecturette." It was naturally a difficult task to transport and fix up again in a temporary manner highly intricate and technical instruments, no proper facilities being available. Nothing, however, seemed to upset the lecturer in his preparations, and if a fuse did go, he doggedly replaced it himself and started afresh.

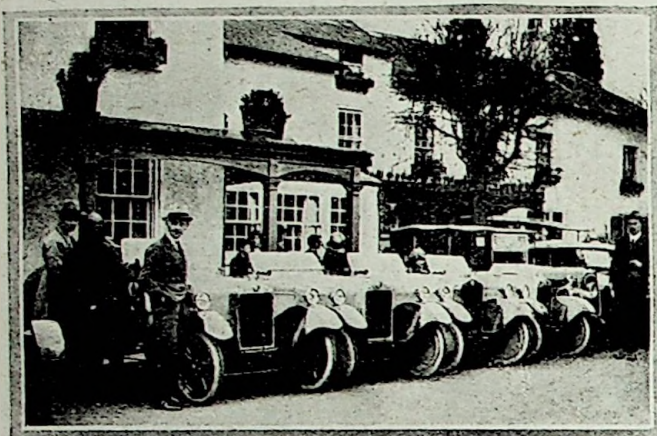
Towards 6 o'clock, the time arranged for the impromptu lecture, rain began to descend. This had the effect of driving many people homewards, with the result that when Professor Low started his lecture the room was not overcrowded. However, towards the end, the numbers present greatly increased, and in popular parlance there was "standing room only." The "lecturette" had been announced in the Press previously under different titles, but after listening to the learned Professor's remarks, we gathered that his chief aim was to put in a strong plea for the scientific testing of cars on the road. Professor Low drew attention to the fact that as car testing is carried out at present the results depend entirely on the individual. To show the absurdity of relying on such an uncertain method, the lecturer made his audience laugh heartily, by asking them whether they had noticed that having partaken of a really good dinner their sense of hearing had become more or less numbed, the explanation being that the membrane in the human ear is at a different tension under certain conditions. He touched upon the question of the rigidity of frames, suspension, overlap on cams and transmission losses.

Having concluded his remarks, he gave some very clear and exceedingly interesting demonstrations. By means of suitable mirrors and an arc lamp he was able to reproduce on a screen the effect of blowing a Klaxon into an audiometer. When all was quiet, a clear, well defined streak of light could be seen on the sheet, but the moment the Klaxon was sounded this straight line became immediately distorted and animated. Much amusement was caused during this experiment by all the lights suddenly going out, but the genial Professor knew by his experience during the afternoon that the cause was no more serious than that of a melted fuse. Whilst this was being replaced someone wiled away the time by performing on the piano.

Having rectified the electrical fault, the next experiment was shown. The principal instrument in the demonstration was Professor Low's vibrometer, which is sometimes known amongst his friends as the "bumpometer." It will be remembered that this instrument was used to measure the efficiency of suspension of the various cars competing in the General Efficiency Trial last year. In the ordinary way a pencil is used to mark a revolving sheet of paper, but in order to give a graphic demonstration, a mirror was fixed in its place, so that a beam of light could be thrown on the screen. As it was impossible to mount the instrument on a car in motion over a road, and at the same time show the results to the audience a "pocket track," consisting of a circular wooden drum with various projections on its periphery, was used to give the necessary shocks to the instrument.

A RECORD RALLY (contd.).

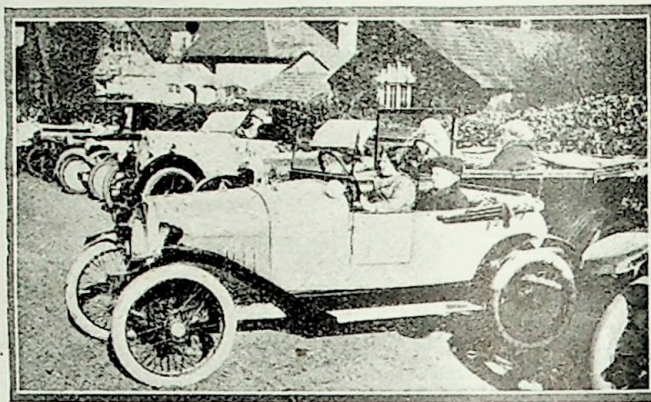
The last demonstration was one to show that it was possible to detect the slightest leak in a cylinder. As the Professor pointed out, many people worry themselves when their engines are fitted with cans having an overlap as to when the inlet opens or the exhaust shuts, but the lecturer stated that the



A fleet of resplendent A.B.C.s that attracted much attention.

main thing was to discover when gas actually commenced to come in or go out of the combustion chamber, which did not necessarily mean it was the same moment as the valve opened. By means of the

instrument with which he conducted this concluding experiment, it was possible, he said, to detect the exact instant the combustion chamber ceased to be airtight, or, in other words, the moment when a leak past the valve commenced.



Its first public appearance—the Kevah light car at Burford Bridge.

Having concluded his remarks, the chairman, Mr. A. C. Armstrong, called upon the members of the audience to criticise, or add to, Professor Low's remarks. Mr. Parnacott responded, and was followed by Messrs. S. C. Westall, H. R. Godfrey, W. M. Thomas, G. W. Pearson, and others. Having answered the questions of those who took part in the very interesting discussion which followed, the meeting terminated.

CLUB NEWS.

Easter Tour.

To-morrow (Friday) the North-West London M.C.C. will meet at 9.30 a.m. at Marble Arch for their Easter tour. Members who find this place inconvenient can join the club en route for Eastbourne, where accommodation has been arranged at the Claremont Hotel, opposite the Pier. Full particulars may be obtained from the secretary, 23, Clifton Avenue, Finchley, N. 3.

Third Sutton Bank Hill-climb.

The York and District Motor Club are holding their third open hill-climb at Sutton Bank, near Thirsk, at 12 noon on April 16th. There are various classes for cyclecars and light cars, air or water cooled and with three or four wheels, up to 12 h.p. Full particulars may be obtained from Mr. E. Wasling, Blake Street, York.

Bradford Trial for Novices.

One of the most powerful clubs in Yorkshire is the Bradford Motor Cycle and Light Car Club, which is holding its opening competition in the form of a Novices Trial on April 3rd, over a course of about 120 miles, to Richmond and back. Owners of light cars up to 15 h.p. who have never won an award are eligible for entry, and it should be noted that passengers also must be novices.

Bradford M.C. and L.C.C.

At the annual general meeting of the Bradford Motor Cycle and Light Car Club the secretary stated that the club had a nominal membership of 336. The statement of accounts from March 1st, 1919, to February 28th, 1921, showed a total surplus of assets over liabilities of £284 15s. 6d. The proposal to increase the membership fee to 10s. was defeated, but after some discussion it was decided to increase the present fee of 5s. to 7s. 6d. for the ensuing year.

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The Staxton Hill-climb.

A record cyclecar entry has already been received for the Staxton Hill-climb organized by the Scarborough and District Motor Cycle Club, which takes place on Easter Monday.

Gloucester Opening Run.

An invitation to all light car owners is issued by the Gloucester M.C. and Light Car Club to take part in their opening run on Good Friday. Members are leaving the Albion Hotel, Gloucester, at 10.30 a.m. Those intending to take part in the run are requested to notify the captain, Mr. Owen Blackwell, 146, Bristol Road, Gloucester.

Midland Light Car Club Fixtures.

The Midland Light Car Club is holding a rally of light cars at the "Swan's Nest," Stratford-on-Avon, on Saturday afternoon, April 9th, when prizes for the best turned-out cars of various makes will be awarded. All light car owners are invited to attend. On the following Saturday, April 16th, the Club is organizing a reliability trial, which will possess a number of novel features, some of which are specially designed to appeal to the private owner.

Results of Dorking Hill-climb.

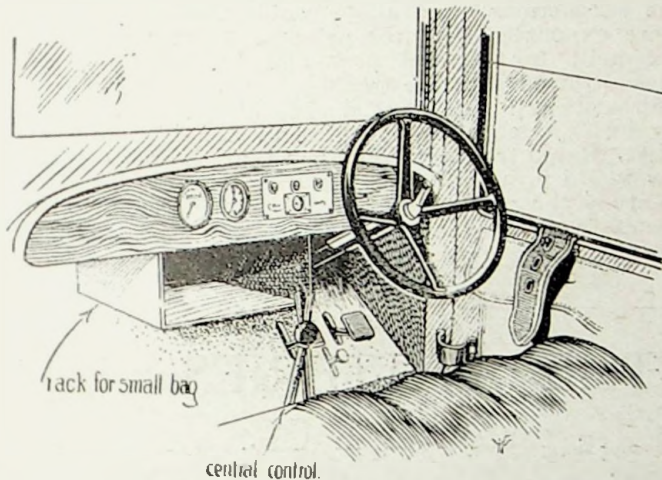
The results of the speed hill-climb organized by the Wallington M.C. and L.C.C. at Bore Hill, Dorking, are as follow: Class VII (private members): 1st, K. Hyatt, 8 h.p. G.N. cyclecar; 2nd, R. M. Bowen, 9.7 h.p. Hillman; 3rd, A. A. Allan, 11 h.p. Hillman. Class VIII (trade members): 1st, L. A. Cushman, 11 h.p. Bugatti; 2nd, Capt. A. W. Brittain, 10.5 h.p. Calthorpe. The cyclecar class had to be abandoned on account of the lack of entries, and the cyclecars were placed in the car classes. The club is holding a second speed hill-climb on August 13th and a freak hill-climb on October 15th.

CATERING FOR THE MEDICAL MAN.

Essential Features for the Doctor's Ideal Car.

IT is with hesitation that these notes are headed the "doctor's ideal car," for the ideal is very easy to describe, but hard to achieve, although certain features seldom found en bloc on any chassis would appear indispensable to meet the exacting demands of the general practitioner.

Let us first consider the conditions under which the car is required to run, particularly in any of our large towns or cities. For practically every day in the year the car must be on the road, whatever the



The "cockpit" of the medical man's car, showing position of the bag rack.

weather conditions, and often a great deal of work has to be carried out at night. There is little choice of roads, few of which are good, many indifferent, and some "unadopted." The continual turning of corners, the slowing down and accelerating for traffic, the stopping and restarting, sometimes a dozen times in a few hundred yards, mean a very heavy duty on steering gear, engine, brakes, and starter.

Engine Requirements.

Easy starting and rapid acceleration are essential, and to promote the former, particularly on cold nights, or when time is pressing, compression taps should be fitted; for most doctors are familiar with the effects of a few drops of ether in a cold engine. Heating of the induction pipe by means of a hot-water jacket, or exhaust gases, or the warming of the air before entry to the carburetter is necessary to obtain reasonable fuel consumption and good acceleration. If a fan is employed to assist cooling, it should be fitted with a clutch, so that it can be quickly put out of action at will, as, on account of continuous stopping, the engine is seldom sufficiently warm to give the best results.

Belt drives for the fan, dynamo, or speedometer are entirely out of the question, particularly for the dynamo drive, for reasons which will be discussed later.

An easily accessible drain cock should be fitted to the base of the radiator. An air-cooled engine

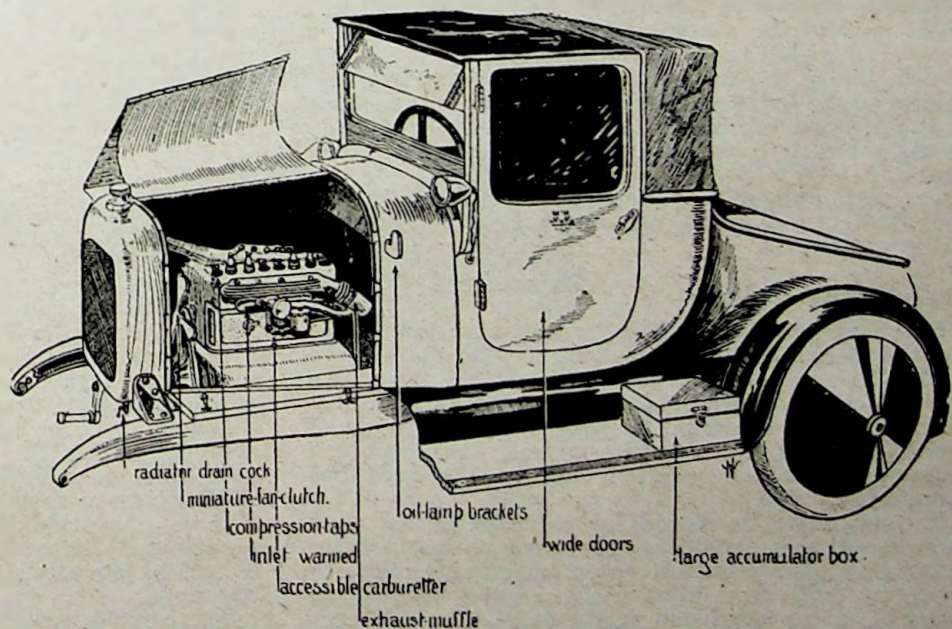
presents a desirable feature, inasmuch as there is no water to be drained off in frosty weather, but the disadvantages of having a practically cold engine to start after each call prohibits air-cooling.

The carburetter and magneto must be accessible, as, even with the "ideal" car, jets will continue to choke, and magnetos need occasional inspection.

Starting and Lighting Sets.

It is perhaps in connection with starting and lighting sets that the doctor experiences most trouble, due to the fact that constant starting and very little continuous running mean a heavy demand on the batteries. An automatic cut-in and cut-out should be standardized and arranged to cut-in at much lower engine speeds than is usual on standard cars, as there is often little opportunity of travelling above 15 m.p.h., which, on top gear, does not admit of high engine speeds; consequently belt drive to the dynamo must be avoided, as a slipping belt makes matters worse. The batteries should have a higher capacity than is usually provided, as the car is often required to burn a light at night for considerable periods without the engine running. As a safety device, provision might be made for oil side lamps, the headlamps being provided with a dimmer in a similar way to that standardized on several American cars.

Very little need be said concerning gearbox design beyond the fact that four speeds are most desirable, owing to their use for traffic driving. A clutch stop should be fitted to promote silent changes, and quickly to stop the layshaft spinning, before engaging the gears, when the car is stationary. The central gear lever has much to recommend it on account of



The effort required to start up must be reduced to a minimum, and attention should be paid to this feature. The fan, it will be noted, is intended to have a miniature clutch.

it lending itself to ease of entrance and exit to the driver's seat, especially in a coupé model.

General Chassis Requirements.

The minimum of attention by way of lubrication is essential, as the busy general practitioner has little

CATERING FOR THE MEDICAL MAN (contd.).

time or inclination to be continuously screwing down lubricators. The steering gear and brakes should be automatically lubricated with oil, as it is not at all uncommon to find these units seized fast. The steering must be very light so as to avoid fatigue, much lighter, in fact, than is usually experienced on the majority of light cars.

Brakes should be easily adjusted, particularly the foot brake, and they should be placed in an accessible position. A very desirable feature would be a means of holding the car stationary additional to the usual hand brake. A car left on a steep hill unattended, held only by the hand brake is a constant worry, as the brake might easily be released by mischievous children. Even if the car is left in gear, the engine compression is not always sufficient to prevent the car moving. It is advisable to have gaiters fitted to the springs, as the continued exposure to wet and mud plays havoc with the spring leaves.

Body Design.

The type of body to be standardized is a difficult question, as much depends on individual taste, but it should be such as to provide thorough protection

in bad weather, and be warm and comfortable. A two-seater is all that is usually required, the doors and seats should be such as to provide easy entrance and exit; in this connection the door should open exposing practically half the width of the cushion.

The body should be painted a dark colour, so as to be serviceable in bad weather, and a minimum of bright fittings employed, which require frequent cleaning. A rack on which to place a small bag without interfering with the leg room available is perhaps the only item required which might be termed a luxury.

In view of the large number of medical practitioners in this country, one would imagine that the market is sufficiently large to justify some manufacturer making a special effort to meet their demands. None of the suggestions cited above would render a chassis more expensive than the price of an ordinary light car built for general use, and the necessity for specialization is unquestionable.

Practically every medical practitioner in the country owns a motor vehicle, for to him it is a great asset. Rapid transport is most essential, and the light car would prove ideal if only some effort were made to study the peculiar needs of the profession. They are quite reasonable in every way, and do not temper towards a luxurious taste.

H.G.

TAKING CARE OF THE BATTERIES.

Nursing the Accumulators when These are Not in Use.

DURING the winter months, many thousands of private car owners put their cars away until the Spring. The wheels will be jacked up off the ground and the vital parts greased; but probably not one in twenty give a moment's thought to the lighting set—the battery in particular.

This is usually left severely alone until the car is required, when it is found that most of the acid has dried up and the surface of the accumulator plates is covered with a hard, white scale. The scale, which is principally sulphate of lead, is exceedingly detrimental to the battery, as in removing it a fair amount of the active material on the plates is brought away at the same time, with a consequent loss of ampere-hour capacity.

The terminals, also, unless well vaselined, will corrode badly and break off unless care is taken in unscrewing them.

Storing the Cells.

If the car is standing idle for not more than three months, it will be quite sufficient to give the battery a good charge, taking particular care that the plates are well covered with acid and the terminals greased with vaseline. It should be kept in a cool, dry, and preferably dark place until required and examined occasionally to see whether any of the acid has evaporated.

If required to be stored for a longer period than three months, it should be freshened up by an occasional slow charge until it gases, care being taken to wipe any froth from the outside of the battery, as this will set up corrosion of the terminals in a very short time. This freshening charge should be given to the battery about every six to eight weeks, and an extra long charge when the battery is again required for use.

Acid should only be added to the electrolyte when the accumulator has been accidentally upset, or the solution spilt from the cells when going over a bad road. Whilst on the subject of acid spilling, do not forget to apply ammonia at once to any clothing on which acid has been dropped. Within 12 hours sulphuric acid will burn a hole in ordinary cloth, whilst

it will produce a red stain on blue serge, which will ultimately wear to a hole unless the place is treated with ammonia.

The acid used for keeping the level of the solution constant should be mixed with distilled water in the proportion of one part acid to four parts water. It is most important to remember that in mixing the electrolyte the acid must always be poured on to the water, never the water on the acid. The reason for this is that were the water poured on the acid in a thin stream, the large bulk of acid acting on the comparatively small amount of water would cause a violent eruption, neither pleasant nor desirable.

Testing the Battery.

The solution should be allowed to cool before being used. With regard to testing the condition of the battery by means of a hydrometer, this will be found to be the only sure or safe method and far more reliable than a voltmeter.

The hydrometer in its most useful form consists of a glass body, similar in shape to a fountain-pen filler, only larger, and containing a small float on which is marked the scale.

When charging up the battery from an outside source, such as the house-lighting mains, particular care must be taken to connect up the terminals of the battery to their respective mains.

If the polarity of the mains is not known, it can be ascertained by means of pole-finding paper, which should be slightly moistened and laid on a piece of dry wood.

The current is then switched on and the ends of the cable placed in contact with the paper, about $\frac{3}{4}$ in. apart. The positive cable will produce a bright red spot on the paper, and should be connected to the positive pole of the battery.

When charged, the acid will assume a milky appearance, and on hydrometer test should give a reading of 1.225.

Another indication of the battery being fully charged is the colour of the plates, the positive plates being a very dark brown and the negative plate a light grey.

A.W.H.

THE PROMISE OF SPRING!

And How it Was Fulfilled on the Glorious Open Road.

"SPRING is coming," I cried light-heartedly. "Spring—" The eloquent gesture which accompanied the outpourings of my joyous soul swept a brass candlestick off the mantelpiece. Angela restored it to its original position with composure.

"You were saying?" she queried.

"I was saying—oh, *jam!* There's McPherson's account for overhauling the car. I'd forgotten it. It's a sure sign of spring—"

"Or spring cleaning!" Angela smiled. "That's the receipt," she said. "I settled up with him last week—as a birthday present."

Sensible girl, Angela!

"Let us hie us out on to the highway (no, I shan't knock it off again, Angela), and taste the joys of the coming spring."

"Let's," said Angela, and we did.

Glistening brasswork, the soft glow of unscratched varnish, and a general appearance of well-being.

"McPherson's an artist!" I exclaimed.

"So is Carruthers—in his way," replied Angela. Then: "Hadn't you better blow up that front tyre?"

I gave one hurried glance. The off side front cover was flat. Angela handed me the pump.

"It may only be the valve," she said briskly. It was.

Three smart jerks at the starting handle, and the melodious purr of the engine filled the little garage. Angela took her seat, and I packed her in with a couple of rugs; then I climbed nimbly over the off side of the body—and the engine stopped.

"Another sign of spring," murmured Angela.

"Or of a choked jet," I reiterated.

Humming blithely, I took out the pilot and the main, cleaned them thoroughly, reassembled them, and grasped the starting handle; but the engine would not respond to the call of spring.

Angela took off her glove and tapped the petrol tank under the dash with her knuckles.

"Empty!" she remarked sententiously. It was.

I put in four gallons of the best, and, at last, we were out on the open road.

* * *

"Simply huge!" sighed Angela, and I agreed. The hedges slipped past, the sun shone, the birds sang, and the engine pulled like the ten good horses with which it was credited. Then we spied a string of cars in the distance, and I slowed down.

"What's wrong?" I exclaimed irritably.

"Looks like a hold-up," said Angela—and it was.

We crept up bit by bit to the two zealous guardians of the law, and at last our turn came. The policeman with the notebook appeared puzzled. He was examining my licence in its neat brass holder. He

referred to a little printed book in his hand—then he referred to his subordinate. I nudged Angela. "Be pleasant," I whispered hurriedly. Angela can do, and has done, a lot that way. She cast two large, innocent blue eyes on P.C. "X."

"Can we help you?" she inquired timidly. The constable met her gaze sternly, then he softened; finally he smiled and scratched the side of his head.

"Well, ma'am," he volunteered, "your licence is on the car and it's in the right place, but it's upside down. A licence that is upside down ain't readable: if it ain't readable it's illegible, and," spreading out his hands apologetically, "there we are!"

"It depends which way you look at it," I ventured. Then I saw I had made a faux pas, because I really did not mean what he thought I did. I didn't suppose for a moment that any policeman had received instructions to stand on his head to read licences if necessary. Angela leaped into the breach.

"It was all right when we started, inspector"—

(inspector, what a brain wave!)—"and I think we could turn it round easily so that it was legible." This remark was accompanied by a dazzling smile. The constable tried. Both glass and licence card turned easily.

"Wants packing up a bit tighter," he said "Oright." He waved us on. Another conquest for Angela!—or was 't the promise of spring?

* * *

"Where shall we lunch?" I asked.

"Here," said Angela decisively. I looked round. Nothing but trees, hedges, green fields.

"I am not a horse," I said severely, "and I cannot feed upon grass."

"Exactly," replied Angela, unruffled. "You are merely a donkey. The luncheon basket is in the locker at the back." Needless to say, it was.

We drew up by the side of the road.

"The promise of—good things," I said as I surveyed the basket.

"The cork's come out of the thermos!" replied Angela in dismay.

"And it's simply soaked the sandwiches!" I groaned. Then I thought of the spring, and my despondency vanished.

"I don't mind if you don't," I hazarded.

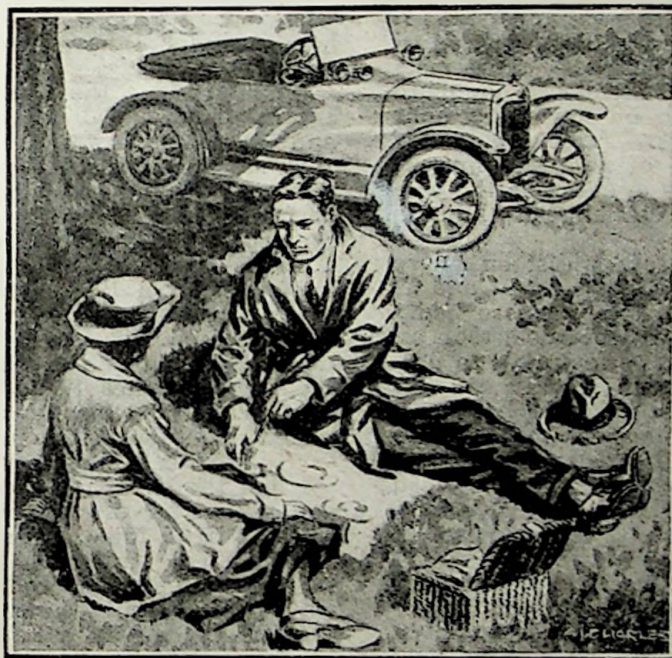
We quite enjoyed our lunch.

* * *

"Haven't you a spare valve?" asked Angela anxiously, when, for the third time, I alighted to blow up the front off side tyre.

"No; and I ought to have changed the wheel in the first place," I answered gloomily. Angela clapped her hands.

"Use the valve instead," she suggested. "It will be quicker than changing the wheel." (What a brain-wave!) It took me two minutes and a half to effect



The promise of good things is fulfilled—with qualifications!

THE PROMISE OF SPRING (contd.)

the change and another four minutes to blow up the tyre.

We spent the rest of the afternoon "rambling" wherever fancy dictated, and found that we were many miles from home eventually.

"What does it matter?" I cried as we turned into the main road again. "We must use the whip and urge our horses forward."

* * *

"Steady, old boy!" said Angela. "It's a ten-mile limit!"

I "tut-tutted" audibly. "This," I said, "is a unique example of the crass stupidity of those who are responsible for such restrictions. A perfectly clear road through a 'deserted village,' which would have caused Shakespeare—"Milton," corrected Angela—"a mere slip—Milton for forsake the loveliest village of the plain and turn his thoughts to something more modern and worthy of attention."

Ten miles an hour! Yet this quaint old highway is quiet and deserted—not a soul in sight—

"Except—" Angela had no time to finish the sentence, and it was quite unnecessary. Like a jack-out-of-the-box, the constable barred further progress.

"I hope the licence is the right way up," breathed Angela. "In any case, we've been going too fast." We had. The constable told us so, and intimated that I should be the recipient of an official invitation to attend at a local function which would take place in the near future.

* * *

After dinner we drew up our chairs to the fire.

"Tuppence," I offered after a long silence.

"I was thinking," said Angela slowly, "that when all is said and done, troubles on the road are 'worth it.' Few people understand the promise of spring as we do. By 'us,' I mean all those who can get out and see the beginning of the transformation worked by Nature. . . . It's—it's simply huge!" she added solemnly.

I handed her two bright new pennies. F.J.F.

THE MAIMED BUT EXPERT DRIVER.

An Indisputable Argument Against the Desirability of a General Driving Test.

LATELY there have been many letters written to the Press urging the necessity of having tests before issuing driving licences, in order to eliminate the people who are alleged to be physically unfit to have charge of motorcars. This would hit hundreds, probably thousands, of men like myself, compelled to use a light car or cyclecar as the sole means of moving around, on account of injuries received in the war.

Having lost one leg and one eye whilst on active service in Italy with the Royal Flying Corps and at the same time also injuring my other leg so badly that it is less useful and more cumbersome than an artificial leg, I naturally turned to motoring to provide myself with necessary recreation and fresh air. Not being wealthy, I could not afford a light car, so I bought a high-class combination, the absolute "model de luxe" of its type. However, despite the comfort of the sidecar, the discomfort I experienced on the driver's saddle soon convinced me that motorcycles were no longer for me, whilst the unavoidable exposure made my leg ache badly.

I found it very fatiguing to use the kick-starter with my wooden leg, which I was forced to do. Accordingly, I sold my combination and bought a G.N. cyclecar. Since then I have been wondering why people waste money on sidecars, or any other car up to £500. It is cosy, clean, and warm, easy to start, reliable, and extremely cheap. Reliability is a most important factor with me, for I must not risk having a breakdown miles away from the nearest garage. I am averaging 57 m.p.g. with two up and 1,000 m.p.g. of oil.

In order to control the car easily with my disabled legs, I had the foot brake coupled to the clutch. This I operate perfectly with my artificial left leg (amputated just below the knee), and pride myself that if my touch is not quite like a feather falling, neither is it like the smash of a steam hammer. Honestly, I am surprised at the delicate touch I am capable of commanding, but, of course, a stump is susceptible to very slight gradations of pressure. I can put my full weight on the foot brake, and stop the G.N. as quickly as any normal person. My right leg is quite stiff, and is supported by steel splints to the hip. It has lost 4 ins. in length, and so happens to be just right to reach the accelerator without bending. Although the knee is rigid, the ankle is not, and so I can work the pedal. My single eye is perfect, and I can see as well as I could when flying in the R.A.F. I maintain that having one good eye is no

handicap, for I have flown with men having only one eye.

I can manage the cyclecar as well as anybody. I have ridden and driven horses, cycles, motorcycles, and cars since I was a boy, and, of course, flying gave me the experience and judgment which stands me in good stead now. Should the proposed driving licence examination ever materialize, I am sure I could pass easily any test they could give me. Disabled as I am, I have driven over 7,000 miles, including a run from Portsmouth to Inverness, and have never had an accident or anything approaching one. Should any person feel inclined to say "he ought not to be allowed to drive," well, what else am I to do? With my crutches I can only walk a few hundred yards, and if confined to a house, a free being accustomed to outdoor sports, the question naturally arises—"Is life worth living?"

I find the G.N. a top-gear car. It runs smoothly and takes everything in its stride on top gear, barring the freak hills I have been searching out lately. Kirkfieldbank Hill and Lanark it ascended easily at 20-25 m.p.h. in second gear, accelerating all the way after the first awkward turn past the bridge over the Clyde. Largs Hill also presented no difficulties, just a quiet, steady climb in second. In fact, I have been looking for a hill to really extend the car. There is a little road with a loose, shingly surface running over the hills towards Johnstone. The local doctor (who is in a position to know) describes it as the "worst hill for many miles around," admits he has frequently hesitated to put his more powerful car at it when paying duty calls on wild nights, and that she always boils badly going up. I put the G.N. at it after a few days of heavy rain. She raced up with two aboard in second gear, dropped into first at one of the awkward bends, picked up into second again, and roared up to the top.

I have hesitated to put her at "Rest and be Thankful" in Argyllshire, not because I am afraid, but, knowing the road intimately, I realize that the atrocious surface there would do more damage to my tyres than I am willing to risk in order to satisfy my curiosity.

Should this article come to the notice of any of those people who are agitating for driving tests, I would ask them to remember the disabled men. If any of them doubt my ability, I should be pleased to give them a run through the busiest traffic districts in London or Glasgow just to prove the command I have over the car. R.B.

THOUGHTS and OPINIONS

Preference is given to letters which are to appear above the writer's name and address, but initials or a nom de plume will be substituted if requested. In view of the peculiarly wide publicity afforded to letters on light car and cyclecar subjects

The suggestions
of To day
may be
the realities
of To morrow

appearing in these columns, readers are asked to make their letters as brief as possible, so that a greater number may be published. Letters received up to Monday morning first post usually appear in the following Friday's issue.

CAN THE MODERN SMALL CAR DO IT?

Mr. Morgan Appeals to the Competitors to Take Up a Sportsmanlike Attitude.

I write before the event; it is easy to be wise after it. If an award in the London-Land's End is to be a distinction it cannot be given to everyone. It would become a farce—"Where everyone is somebody, and no one's anybody."

The Motor Cycling Club is not asking an impossibility. It is quite certain that a number of gold medals will be won, the only question is: Will cyclecars be able to win them? I have no doubt whatever myself that they can. It must be borne in mind that the M.C.C. is not arranging a competition for cyclecars only. Cyclecars are admitted in order that they may be tried against any other machines—especially sidecar machines. The club has no ulterior and sinister design of showing up the inferiority of the cyclecar. The cyclecarist would be the last to admit his inferiority, as the number of entries proves.

As regards the Porlock test, no one can say that speed on hills is unimportant, and that a speed test is unfair. If this were so, it would be time to cancel all hill-climbs. Is the speed required excessive? Certainly not, for a number of machines will accomplish it. It is unfair to say that the winners in that trial will be those who drive in the most dangerous manner. The dangerous people will be those who cannot drive at 18 m.p.h. up Porlock and who may attempt to make up time by scorching down Countisbury; but the gold medal is not for them. One thing I sincerely hope, and that is, that those who fail will not excuse their failure by whining about the impossible or the absurd. Having entered, they must abide by the result. To do otherwise is unsportsmanlike and is certain to bring discredit.

Stoke Lacy.

H. GEORGE MORGAN.

Meets for Certain Makes of Machines.

With reference to the letter from Mr. Emtage concerning G.N. cars and their drivers, and his wish for views from other drivers, I should like to say, since driving a "barrow," my experience has been the reverse of Mr. Emtage's.

With the exception of a very nice motorist driving a three-seater whom I met at the "Hut" a few Sundays ago, I have not had the opportunity of speaking to anyone. However, I think there is a lot in what Mr. Emtage says, and now there are two of us who think alike, perhaps, with the

assistance of *The Light Car and Cyclecar*, we might get together and form a merry crowd. To start with, will Capt. Nash pass the word to his testers on the road to join in? Perhaps the Gipsy Club would also give us a welcome, and thus solve the competition portion? (The Gipsy Club are A.I., and this from experience.) Personally, I will carry on, on the lines Mr. Emtage suggests pending the views of other drivers of the G.N. Perhaps Capt. Nash will oblige by stating his views on this subject.

AE6402.

Looking Back.

I read *The Light Car and Cyclecar* with pleasure and, I hope, instruction, and am watching with keen interest the growing number of illustrations amongst your advertisements of light cars which offer more than two seats. The prices of the cars and the meagre seating accommodation of most of them force me every day to think of the manner in which manufacturers neglect the largest of all publics, namely, that of the middle-aged, middle-class family man in this and in other countries. The evolution of the small car has been totally away from the needs of such men. Speed and elegance have been secured, but durability and seating accommodation have been sacrificed!

Can you or one of your readers oblige me with the dimensions of some of the early low-powered motorcars: De Dions, Wolseleys, Rovers, and M.M.C.? If cars were made of their dimensions, that is, short, sturdy, durable, roomy vehicles, with low engine power and upkeep, the aforesaid middle-aged, middle-class family men would buy them. The farmers also want a vehicle, not so long or speedy as a Ford, which will do the same duty so far as carrying passengers and other overloads is concerned. This work is now being performed by mere ponies in taking their masters to market, etc.

May I explain further for the benefit of the younger men? One of the first cars I rode in was an 8 h.p. (I think) M.M.C., which carried five persons; another was an 8-11 h.p. three-cylinder (Cottrean, from Dijon); another was an 8-11 h.p. three-cylinder (a Panhard), which carried five; another was an early De Dion, which carried four, and a really fine 8 h.p. Rover, with a special four-seater body, easily did 30 miles an hour in Kent. All were family cars.

It is most annoying nowadays to find that all sorts of progress has been made with engines, ignition, carburation, wheels, etc., but there has been no progress in providing

seating capacity. One obstacle is the silly rake of the steering column. Give me the old De Dion "moulin à café" steering if, by accepting that, I can have extra seats.

Chancery Lane, Loudon, W.C. 2.

GLEN STEEL.

A Windscreen Protector.

I noticed in the issue of *The Light Car and Cyclecar* dated March 12th that "Au Courant" is complaining that he has up to now found no method of keeping the windscreen clear when driving in the rain, and I think the following arrangement might be of interest to him and others.

The arrangement is briefly as follows:—A curved piece of aluminium with two side pieces is fixed to the windscreen in the most convenient position for the driver, and is held on by stout rubber suckers. It is impossible to pull this protector off without inserting a knife under the suckers.

I do not know the manufacturers of this protector, which is called the Club, but it is sold by Messrs. Muskett Bros., of Peterborough, at a price of £2 2s. I might add that I have no connection with the concern.

MOTORIST.

Air-cooling in the Tropics.

I should be grateful if any of your readers who may happen to have had experience of air-cooled-engined cyclecars (such as the G.N.) in the tropics would very kindly inform me if they can be relied upon to give satisfactory service under such conditions.

Is there any pronounced liability to overheat in a hot-weather shade temperature approaching 120 degrees Fahrenheit?

J. A. PAGE.

Archæological Survey of India, Northern Circle,
Agra, India.

*THOUGHTS AND OPINIONS (contd.).**An Effective Road Clearer.*

Whilst driving on a narrow road a week or two ago I came upon a small boy driving a heavy cart, and, despite my continued hooting or buzzing on the electric horn, he took no notice and did not pull to one side. Not feeling in the mood for driving about a mile behind a walking horse, I let out the clutch, raced the engine vigorously—and with no small result, for the horse immediately bolted, leaving me a clear road.

I approached cautiously however, for the boy appeared to have considerable difficulty in bringing the horse to a standstill. On drawing near, we found him to be resting from the strain of conflict and searching his vocabulary for adjectives, of which we received the full benefit.

I find that this is the simplest and most effective way of attracting the attention of the driver of a vehicle when the proper means have failed, and I have even known it to be successful in the case of motor lorries.

As regards the dazzling effect of headlights, the obvious and most simple remedy is to switch them off on approaching another car.

I always flick mine on and off once or twice, and if the other car answers one knows he appreciates the courtesy and one feels well rewarded.

ARTHUR F. GOTCH.

Chesham House, Kettering.

For the Attention of Swift Owners.

Being the owner of a 7.9 h.p. Swift, I should be pleased to have the experience of other owners in reference to a point about which I have been somewhat puzzled, this being in regard to a noise emanating from the camshaft gear. This noise is set up when the engine is cranked, and synchronizes with the periods at which the valves commence to close.

Having satisfied myself that the trouble is not due to regular wear of the contour of the cams, which would cause the tappets to jump, I have arrived at the opinion that it must be brought about by backlash between the teeth of the camshaft pinion and the teeth of the main shaft wheel, due to the force of the valve springs causing the camshaft pinion momentarily to overrun the teeth of the main shaft pinion.

There is no wear in either the camshaft or main shaft bearing, and the higher the engine speed the less the noise, but

it is particularly noticeable at low engine speeds, the engine in other respects being exceptionally quiet.

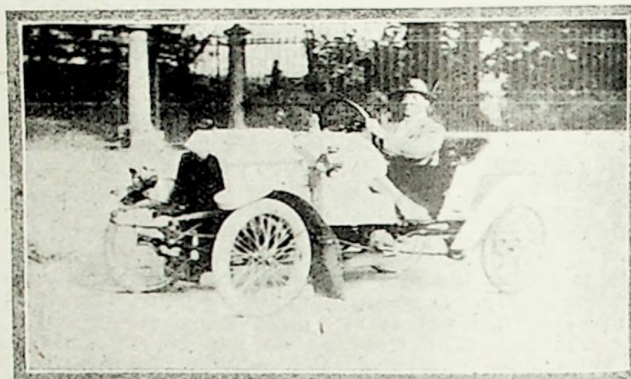
I am anxious to know if similar trouble has been experienced by other users of the Swift, and any information resulting from experience with this excellent little car I shall be pleased to impart to those interested.

Norton-in-the-Moors,
Stoke-on-Trent.

JNO. HOWARD.

Built in 1912.

I have been a motorist for 15 or 16 years and a cyclecar enthusiast from the early days. The accompanying photograph is of an 8 h.p. cyclecar built in 1912 by myself and a friend, who now runs a garage in the town. A photograph



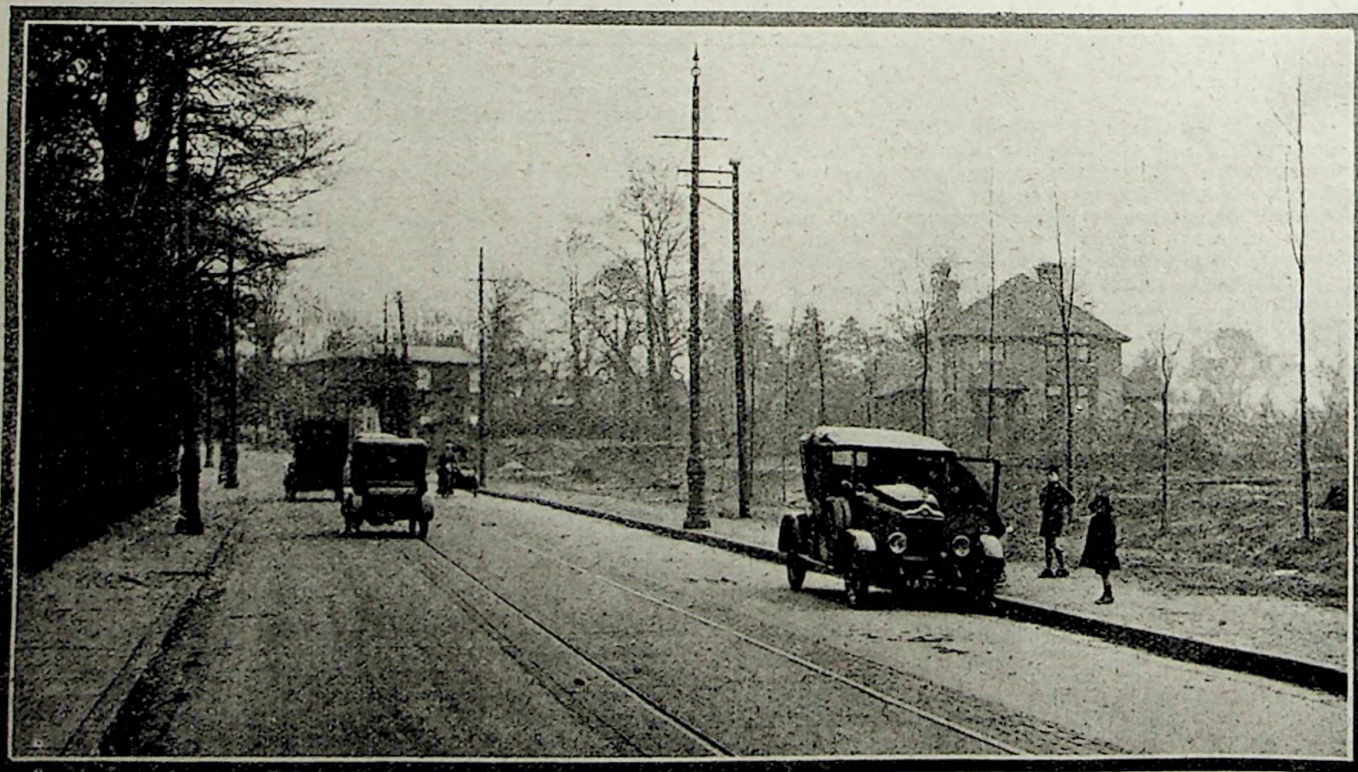
Mr. H. G. Thompson's 1912 cyclecar. This machine put in an appearance at the Richmond meet in 1913.

of it in its early state, taken at the Richmond Meet in 1913, appeared in *The Cyclecar* at that time. Unfortunately, it is at present laid up with a broken crankshaft.

My machine at present is a 1920 G.N., for which I have nothing but praise, and which has been a source of great interest wherever I have been. It was apparently the first to make an appearance in a great many places last year.

H. G. THOMPSON.

Croft Cottage, Shincliffe, near Durham.



Are they widening Kingston Hill? From this photograph it would appear that such is the case. The house on the right has been recently erected for a well-known figure in the light-car world.