

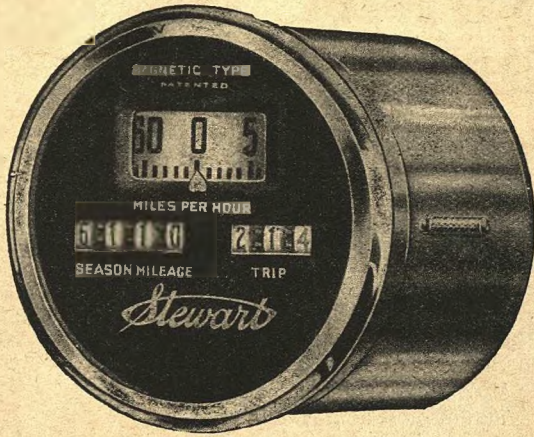
The Light Car and Cyclocar

1^p

Vol. VIII, No. 186
12th June 1916
*Registered at the G.P.O.
as a Newspaper.*



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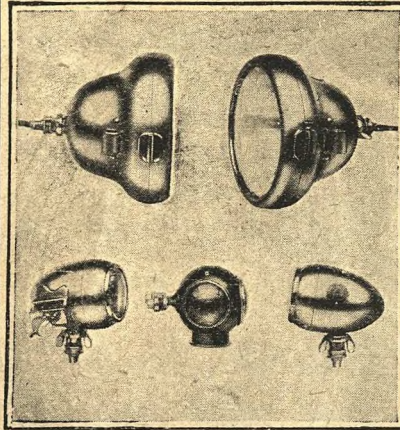
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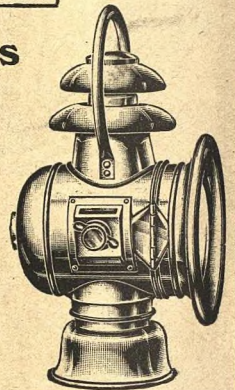
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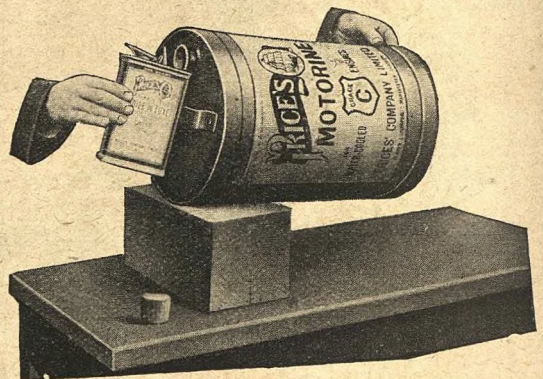
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7.9 h.p., 2 cyl. **SWIFT** cyclecar, 1913 model, 3 speeds and reverse, staggered seats, luggage box at rear, Stewart speedometer, horn, acetylene sidelamps with generator, large ditto headlamps with generator, clock, repainted Nor. £95
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1915, 10 h.p. **CALTHORPE**, Grand Duke Michael model, 12-volt dynamo lighting set, splendid condition throughout. £200

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1916, 10 h.p. **CALTHORPE** MINOR, 4-seater, dynamo lighting set, run only 800 miles, nominally second-hand £235

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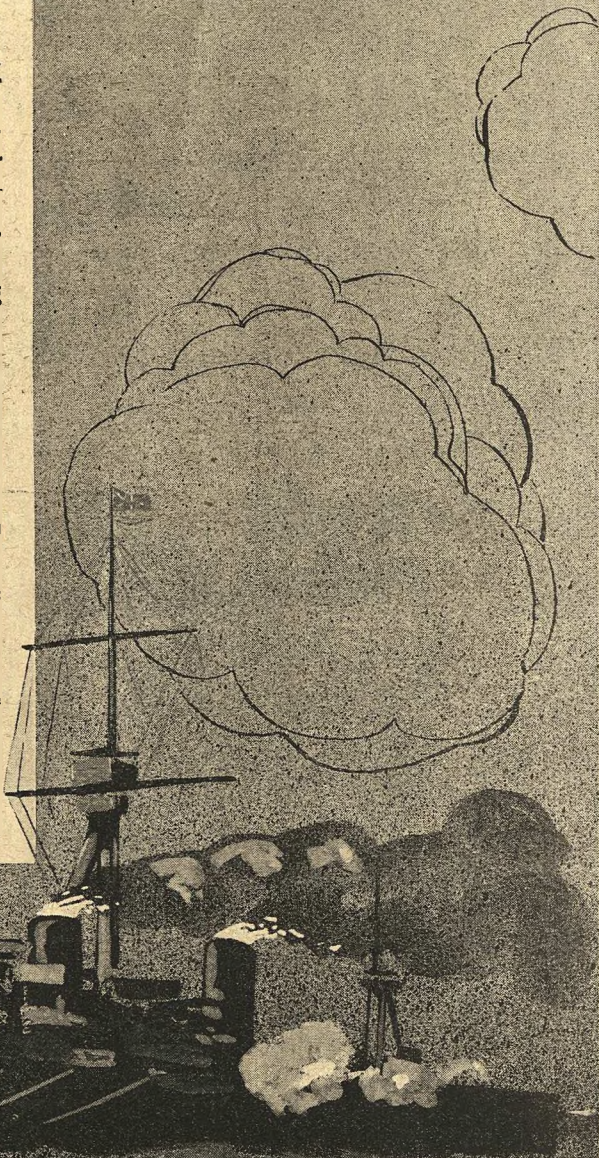
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MOTOR POLICIES

- At Lloyd's.

HELP THE MOVEMENT by letting advertisers know that their advertisements in "The Light Car and Cyclecar" interest you.

PETROL SUPPLIES—THE TRUTH AT LAST. (SEE PAGE 66.)



The latest craze
Note the name on the door panel.

A lady has her pet name painted on the door of her Singer.

NOTES, NEWS AND GOSSIP OF THE NEW MOTORING.

Less petrol for *pleasure*.

Which means really a serious check to *business* motoring.

That is all that can happen when the Petrol Control Committee's scheme gets working.

But the ray of light is the knowledge that larger supplies may be available shortly.

Meanwhile we must use paraffin, petrol substitutes and the like, and develop the steam car.

It is to be left to the nice discrimination of one's local garage how much petrol is available.

The interesting point will be to see if "kissing will go by favour." If so, another and more "drastic" scheme is in hand.

Now that one cannot motor for pleasure, which should be obvious to even the Economy Committee, will there be a fresh outcrop of posters? We shouldn't wonder.

What a howl will go up from the daily Press if they see motoring continuing, simply because what appears to be pleasure motoring is really for most part under another category.

"London Opinion" strikes a true note in a caricature of one of the Committee's posters, which reads:

Extravagance in paper for hoardings is not only
UNPATRIOTIC,
but slightly humorous.

What a week!

The naval battle, the Nation's great loss in the death of Lord Kitchener,

And the Petrol Supply Committee's belated decision, now announced.

The end of the war was prophesied for 17th June. That day is close by, but we should think the rumour was greatly exaggerated.

Our own forecast for the end of the war, made at the very beginning, was that it would come in September, 1917—another 15 months. Another popular forecast is peace by 4th July, which is unlikely.

Belgians, Danes and even "niggers" are fairly frequently observed in motor repair shops now. Most of these works are engaged partly on munition work, by the way.

Mrs. Guy Watkins, photographed above, has her pet name, "Dorothy," painted on the door panel. It will be a bold man who has "Percy" or "Archibald" painted on *his* car.

Fewer joy-rides for wounded soldiers. Anticipating this form of protest from motorists, the anti-motoring Press has latterly expressed the view that motoring for wounded soldiers is very injurious.

We have abolished one movable feast and done away with Whitsun Bank Holiday. Will the next proposal be to do away with Sundays? Then at last the papers could state with truth, "No Sunday motoring."

PETROL SUPPLIES FOR PRIVATE USE.

Classified First-claim Users—Official.

PRIVATE MOTORING NOT STOPPED. DIFFICULTY IN OBTAINING ROADSIDE SUPPLIES.

LAST Wednesday one of the newspapers conducting an anti-motoring campaign stated no more than the truth in referring to the perplexity of the private owner in the multitude of numerous anticipations and pronouncements that have been made about petrol and private motoring. The cause, however, is the infinite variety of the intelligent anticipations of the daily Press with regard to what the Petrol Control Committee proposes to do.

The real facts about the petrol shortage are now available, and the measures that the committee is taking have been communicated to us. There is a shortage, produced by the great increase in the use of commercial motor vehicles, war requirements, etc. At the same time the situation is not so bad as it has been painted, and provided that the sub-committee's scheme proves effective, the "ticket" system, with its many pitfalls, is not likely to be introduced.

Last week the Editor of "The Motor," which has taken the most prominent lead in defending motorists from the unfair attacks that have been levelled against them, had an interview with Mr. Philip C. Tennant, the chairman of the latest sub-committee appointed to regulate supplies, and the decision in the matter is given below. Mr. Tennant stated that the Government requirements fluctuate immensely, and, consequently, a definite statement as to whether or not there is a real shortage in motor spirit cannot be given. It is hoped to meet the recurring temporary shortage by withholding supplies from private motorists when necessary, and accordingly the following instructions have been sent to proprietors or garages:—

The Official Instructions.

TO GARAGES AND DEALERS IN MOTOR SPIRIT.
ORDER OF PRIORITY FOR DISTRIBUTION OF MOTOR SPIRIT.

Dear Sir(s),

Acting on instructions received from the Petrol Control Committee, we beg to inform you that the following list of customers whom you may be in the habit of supplying, are entitled to and must receive preference in supply:—

CLASS A.—Includes requirements for or by:—

Lords-Lieutenant, High Sheriffs, and any services certified by a Government Department to be essential.

The carriage of munitions of war or materials for munitions of war.

Medical practitioners.

Fire Brigades and Ambulances.

Motorcars used by or under the authority of the Red Cross Society or the St. John Ambulance Association, or any other society approved by the Admiralty or Army Council for the conveyance of wounded or sick members of any of His Majesty's Forces.

Police and Local Government Authorities.

Veterinary Surgeons.

CLASS B.—Includes requirements for or by:—

Agricultural machinery,

Motorcabs plying for hire.

Motorcars used by commercial travellers for business purposes.

Stationary engines (including lighting sets).

Motor fishing, cargo, and passenger boats other than boats running pleasure services.

We have, therefore, to request you to carry out the Committee's instructions, which are essential in the general interests of the country, and your failure to assist in this matter can only result in other steps being taken which may greatly interfere with the welfare of the trade generally.

It will be observed that doctors and veterinary surgeons have a prior claim, which thus settles all doubts in that direction. Commercial travellers, who are most dependent upon casual supplies, only come into the second category. Vehicles for the conveyance of goods are excluded.

Farmers are not provided for. Surveyors and other council officials are. No mention is made of clergymen, many of whom use their cars for parish work and when serving two churches, as many are doing in war time to relieve the peace-time parishes of chaplains in the services. Other hardships will probably be pointed out by readers.

The chairman of the sub-committee pointed out that it will be necessary for dealers to ascertain the requirements of their regular customers who are classified and retain sufficient stock to satisfy their demands. It will help if preferential buyers will give detailed information of their regular requirements to their dealers at once.

Now, what will happen in the case of the roadside garage, the bulk of whose supplies is distributed to casual customers?

The Position of Officers.

Another question that will be asked will be: Are military and naval officers, and drivers of motorvans, placed on the same footing as private users? We understand that they are. The officer can get his supplies when on duty from the Government store. When not on duty, but on pleasure bent, he most certainly should not have preference.

Whether motoring will continue as before depends upon how the supplies vary. Those who want to use their cars must first make sure of their supplies, and carry sufficient for each journey, in case of being unable to obtain any on the road. An inquiry at their regular garage will indicate whether there is likely to be any difficulty. Those who use their cars for station work and for business purposes will also have to make what arrangements they can.

We believe that the scheme will cut down private motoring to some extent, but whether it will relieve the shortage or not is another matter. It seems strange to us that with 400,000 gallons of petrol wasted on competitive motorbus routes (with the electric tram power running idle), a much simpler method has not been found to effect a really substantial saving.

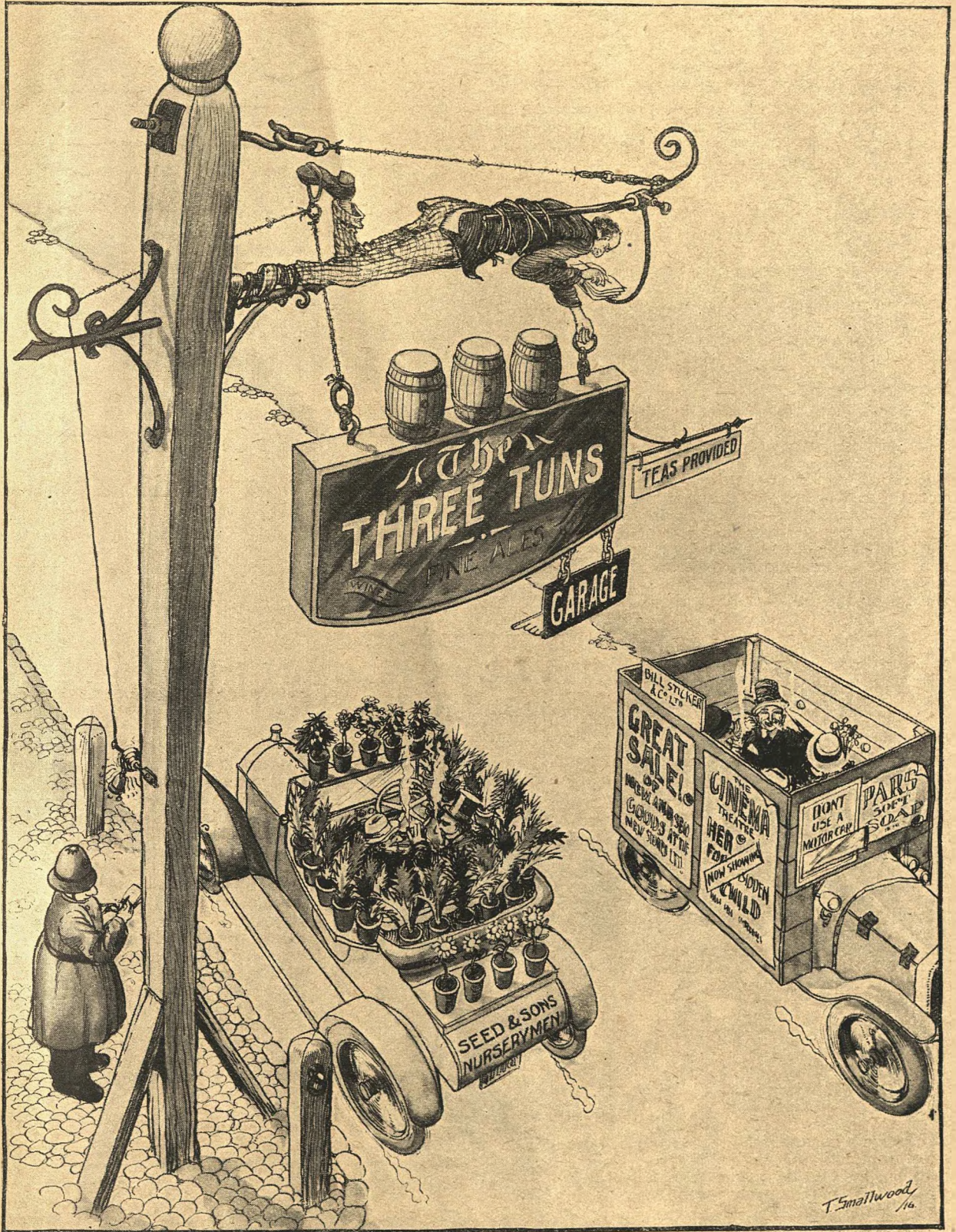
The position must be watched closely. We ask readers to advise us at once of any difficulties, shortage of supplies, cases of unfair treatment, the use of motor chars-a-bancs on pleasure trips, and the waste of petrol on country motorbus routes on Sundays. What we fear is that the user who is most generous in tips, or is favoured for a special reason by his local garage, will cause the scheme to break down.

Guesswork.

What the daily Press has said about what the Petrol Control Committee is going to do:—

- (1) Stop all motoring on Sunday.
- (2) Adopt a petrol ticket system.
- (3) A proportionate supply according to each individual user's requirements, to find out which a census was to be taken.
- (4) A census of motoring on Sundays to be taken, and decision based on result.

THE WORLD'S WORKERS IN WAR TIME.—II.



THE SECRET INQUIRY PURSUES MORE DRASTIC METHODS.

NOTES, NEWS AND GOSSIP (contd.).

Cyclecar Race in Spain.

For the race from Barcelona to Madrid and back, which took place last week, there were entered 22 cyclecars representing five different makes, all constructed in Barcelona.

Our Busy Navy.

We are frequently receiving inquiries from officers of the Fleet in respect of light cars and cyclecars. Since the great naval battle several have written to us to let us know they are very much alive and to say what a time they have had.

An Attractive Baby Peugeot.

The other day in the West End of London we saw a Baby Peugeot with a most attractive sporting body, painted a light green-grey, and with a bulbous tail. We shall be glad if the owner, if he sees this, would send us a photograph of the car, or bring it round to our offices in Rosebery Avenue, as we consider this to be the most attractive body yet fitted to this popular little car.

Another Bogey.

The calling-up of chauffeurs employed by distinguished members of the medical and surgical profession is causing great concern, as it is stated that if a surgeon drives himself he will probably be incapacitated for a delicate operation. This is probably true in the case of a man who does not know how to drive; but we can recall several surgeons who drive their own light cars and who never suffer from tremors of the hand as a result. In fact, there is no reason whatever why a hand on the steering wheel should be shaken any more than if the doctor rested his arm on the side of the car when being driven.



The celebrated "Peeping Tom" Inn at Coventry, recalling Lady Godiva's famous ride through the town. The car is a 10 h.p. Swift.

£20 a Week for Munition Workers.

It is said that American munition workers are drawing as much as 100 to 110 dollars weekly: 100 dollars equals £20 16s. 8d., and it is not surprising to hear that many of them are buying motorcars. It was recently mentioned in court that British munition workers sometimes earn £500 a year.

THE REVIVAL OF CYCLING

And a New Series of an Old Journal.

TH**ERE** is a great revival in cycling. It is not wholly because the high cost of petrol and shortage of supplies has caused many a motorist to take to cycling again. Nor is it largely because the absence of motor vehicles gives cyclists the roads to themselves, although this has been a great incentive to old-timers to take up the pastime once more. The recent "old-timers" meeting on the Ripley Road, organized by "Cycling," has had an encouraging effect upon the pastime. Then there are munition workers, and those who have in a small way prospered as a result of the war, who have been ready buyers of bicycles, and second-hand machines have advanced rapidly in price. Many causes have therefore contributed to a great revival in cycling. Whatever the causes may be, it is obvious that we are going to see the roads crowded with cyclists once more.

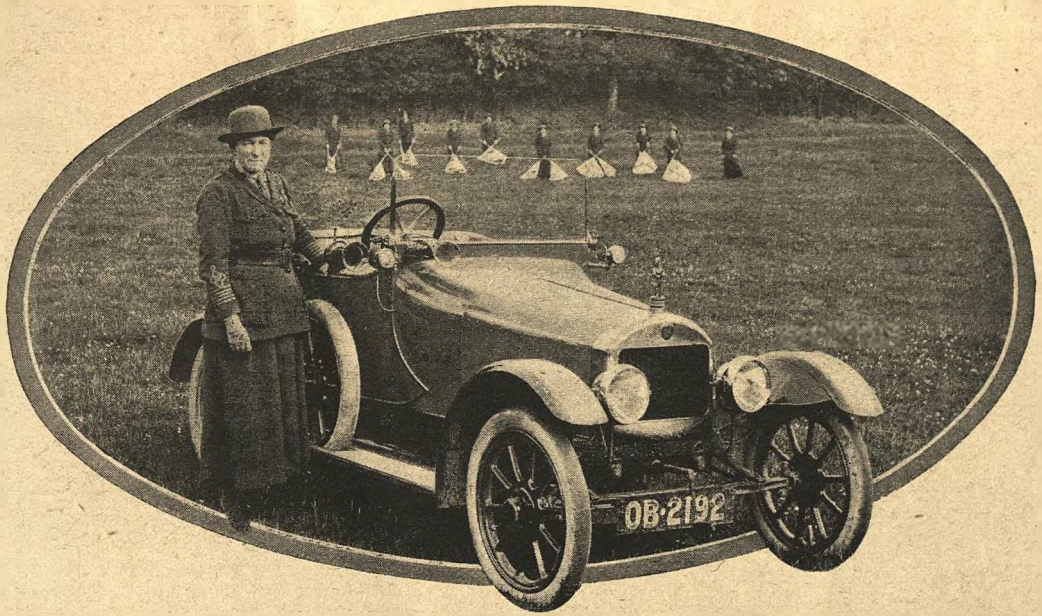
Not only is there a revival in the pastime, but in its organ "Cycling," the only purely cycling paper in the world. Next Thursday "Cycling" appears in a pictorial cover, printed in red and black on white paper; an enlarged

journal with new features, and it will continue to be published in this improved form. The cover pictures (there are two, back and front) will be changed weekly. The facsimile of the first of the new series is illustrated. Those who are interested in the pastime should certainly make a point of ordering now a copy to be reserved for them next Thursday. The demand for "Cycling" of late has been very considerable, and in its new guise it is expected to be quickly sold out, although the printing order, we understand, has been augmented. The first number of the new series contains 24 pages. The special features include photographic studies to settle that vexed question of "What is the Prettiest Village?" Another interesting article is a cycling tour, suggesting a summer holiday, illustrated by Frank Patterson, "Awheel in the Black Mountains."

"Cycling" was founded in 1891. At one time there were no fewer than 13 different cycling papers. The last paper to drop out was "The Cyclist," with an announcement to the effect that the pastime was practically dead, but after that came a big boom.



Next Thursday's "Cycling" in its new cover, printed in red and black on white paper.



Col. Hopkins, of the Women's Volunteer Reserve, who has just been supplied with a new Enfield light car. This is the latest model, having an engine the dimensions of which are 61 mm. bore and 100 mm. stroke (1168 c.c.).

Our Front Cover.

A 1916 Singer light car figures on our front cover picture this week. It will probably be recognized immediately, for the graceful rounded radiator merging into the bonnet and scuttle dash makes the Singer one of the most distinctive and handsomest of the light cars. These front cover pictures help to maintain world-wide interest in the leading productions of the industry, against the inevitable return of peace conditions.

Increased Fuel Supplies—Soon, Perhaps.

According to one of the petrol companies whose distribution in this country has been on a rather smaller scale than the big oil groups, there will be an abundance of cheap petrol after the war, owing to the development of higher productive cracking processes. A large number of tank steamers are being built in the States, and some in this country, each capable of conveying 20,000 tons of fuel. As soon as they are in service, they will greatly increase the available supplies of petrol in this country. Further supplies would be obtainable in a few weeks if the Admiralty could release various tank steamers which are understood to be in use for storage purposes.

A Loss to the M.C.C.

By the loss of the "Defence" the Motor Cycling Club loses a good friend in Admiral Sir R. K. Arbuthnot, Bart., who was a very popular member and competitor in several of the club's hill-climbs and trials, usually on a Triumph motorcycle. At Easter time, 1914, the Motor Cycling Club had a tour to Weymouth, where Arbuthnot's fleet was stationed, and during the holiday the members of the party were invited on his flagship, then the "Orion," and conducted all over it, as well as a torpedo boat, the "Goldfinch," and entertained to tea. Arbuthnot always kept his Triumph motorcycle and usually one or two other machines as well in his state-room. He was a great Devonshire hunting man as well as a keen motorcyclist. At an A.-C.U. dinner some years ago he warned the country to prepare against Germany, and this speech, which later events have shown to be only too well justified, led to him losing promotion.

New Petrol Regulations.

Storing petrol above the maximum quantity allowed without a licence (60 gallons and the car tank full) is now a serious offence.

The Government have taken powers to make a census of users of petrol, and the quantities and purposes thereof.

A Pressure Feed Compromise.

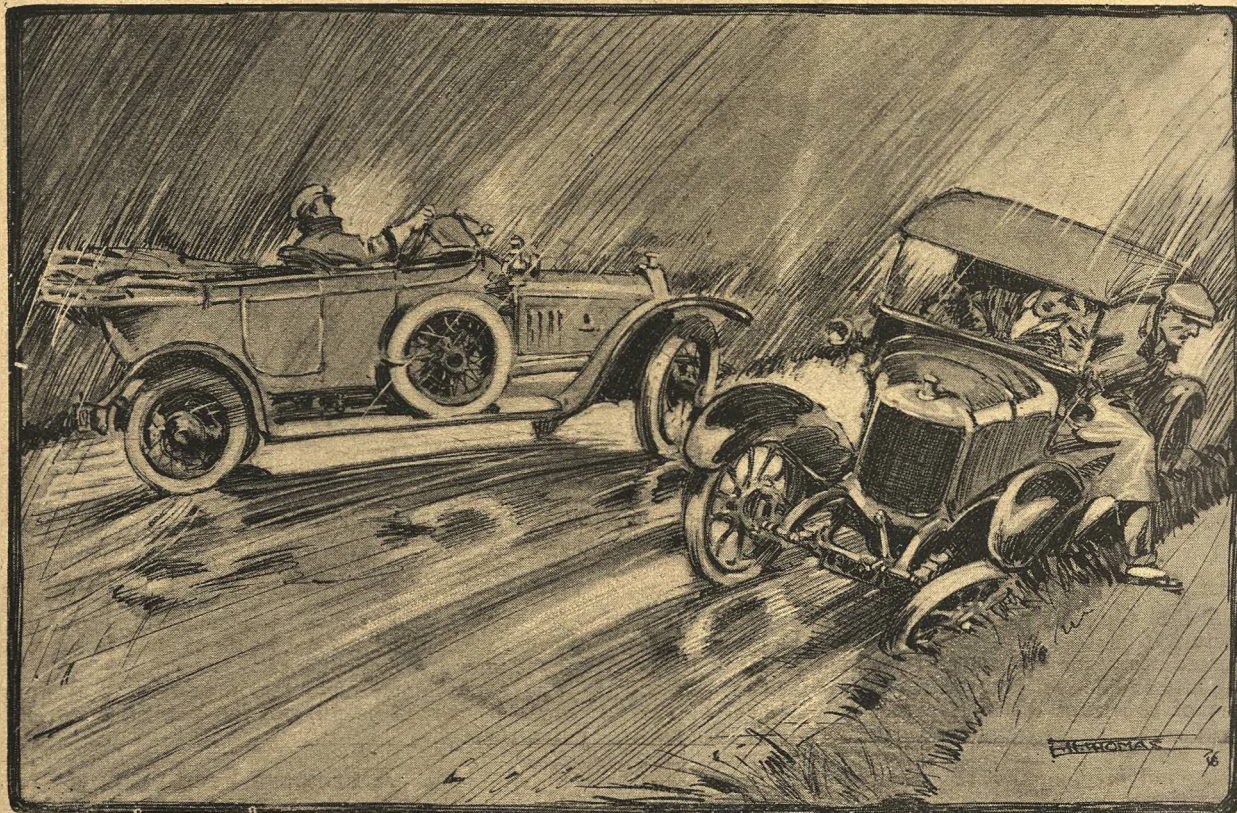
During the recent hill-climbing expedition—"mountaineering" would perhaps be more correct—Mr. Noble had trouble with the petrol not reaching the carburettor on gradients of 1 in 4. He overcame this difficulty by fitting a bicycle type of tyre valve in the filler cap, and by the aid of a cycle pump produced a pressure-fed petrol supply system.

Birthday Honours.

In the Birthday Honours list appears the name of Mr. Arthur Du Cros, M.P., who receives a baronetcy. Mr. Arthur Du Cros is the third son of Mr. Harvey Du Cros, to whose enterprise was due the popularity of the pneumatic tyre of to-day. The pneumatic tyre was invented by Mr. J. B. Dunlop, a veterinary surgeon, of Belfast, who produced a canvas and rubber air bag, which was solutioned on to the rim (thus, unknowingly, reinventing Thompson's pneumatic tyre of 1846, which had been forgotten), for the benefit of his little son, who was a cyclist, and who found the rough paving of Belfast streets a great disadvantage. Mr. Harvey Du Cros saw the possibilities of this invention, and formed a little company in Dublin with a capital of £25,000, of which only £15,010 was subscribed, to develop the pneumatic tyre. It was received with great hostility, but the sweeping victories in track racing that Mr. Arthur Du Cros achieved speedily convinced the trade and the public that the pneumatic tyre was the most striking improvement in the bicycle that had yet been produced. It is now estimated that the trade of the world in pneumatic tyres amounts to £130,000,000 per annum. The Hon. Arthur Stanley, M.P., chairman of the R.A.C., also receives the honour of Companion of the Bath. Admiral Sir R. K. Arbuthnot, who went down in the "Defence," also received this posthumous honour.

A DANGEROUS STRETCH OF ROAD.

Some Exciting Skidding Experiences.



"I shouted to my friend to jump, and as we did so the Straker-Squire missed us by a foot."

MOTORISTS travelling between Chelmsford and Romford should beware of a stretch of road which has been treated with some experimental surface material, left with an exaggerated camber, with the result that, when slightly wet, the most unexpected skids take place. On this stretch recently I had one of the most exciting double skids that I have ever experienced, and not only was the car considerably damaged, but two others, at almost precisely the same moment, met their Waterloo from the same cause. The stretch of road will be found coming from Chelmsford just outside Hare Hill Camp, which is just before one comes to Romford.

I was coming back from Chelmsford in a car driven by a well-known member of the trade, who has gained a certain amount of reputation at Brooklands. Coming out of Chelmsford, the rain began to fall slightly. We put the hood up and lit our pipes. The car was going at a very decent speed when we encountered this stretch of experimental surface, which starts off where there is just a suspicion of a bend in the road. Previously we had overtaken a Straker-Squire. The first intimation that we had struck this natural skating rink was an uncanny feeling which one gets when experiencing a front wheel skid. I planted my feet firmly on the footboards and got as far away from the driver as possible, but by the time I had appreciated what was likely to happen we had mounted the grassy edge of the path on the left and were making straight for a telegraph post. The driver, appreciating the danger we were in, gave the steering wheel a good twist to the right, and we

missed the post by inches, gained the road again, and sailed gaily along for about 50 yards broadside on. I glanced at the off-side kerb and observed a nice wet deep ditch waiting to receive us. Then the back of the car came round until we faced the other way. Finally, we hit the kerb with such force as to burst a back tyre, while the front axle bent so that a wheel lay under the car. The Sankey wheel was undamaged.

We were just congratulating ourselves on a lucky escape when we spotted the Straker-Squire proceeding merrily in our direction, its front wheels locked over and the body doing a gentle sway from one side to the other. I could see that on the next sway to the off side it would just catch us. I shouted to my friend to jump, and as we did so the Straker-Squire missed us by a foot, only to fetch up by the kerb behind our derelict car with a force that bent a stub axle, leaving the Rudge-Whitworth wheel intact, and bursting front and back off-side tyres.

After a car from London had brought out some men and materials to put our axle straight, we went further down the road and found yet a third car in exactly the same plight, with both front wheels doubled under it and the tyres burst. We then made inquiries and found that this part of the road has been recently treated with some experimental tar surface and that cars are frequently skidding after a slight fall of rain. It is a matter that the Road Improvement Association would do well to inquire into and see if, by covering the surface with sand, this risk could not be obviated.

G.D.

IS THE STEAM LIGHT CAR POSSIBLE?

An Article by an Expert on Steam Car Engineering which will be of Interest in View of the Discussion that has Arisen in Our Correspondence Columns.

ALTHOUGH the steam car is now an unfamiliar sight on the road, there are still many steam enthusiasts even among owners of petrol cars. When one finds so many adherents, it appears strange that the number of steam cars in use at the present time is so small. The reason most often given is popular prejudice or change of fashion. It is certainly not lack of reliability or lack of power. Power is the chief point in favour of steam, and incidentally the reason why steam cars are barred in hill-climbing competitions. Now that the price of petrol is getting prohibitive, there is a decided inclination to again consider the steam car using paraffin as a fuel. It must first be considered by the manufacturer, before seriously undertaking to place a steam car on the market, if, when the price of petrol again returns to its original level, popular opinion will, too, again favour the petrol car. There is also the prospect of paraffin becoming as difficult to obtain as petrol, in view of the normal supply being no more than sufficient for ordinary use, the greater part of which, of course, is for burning in domestic lamps.

How the Steam is Generated.

In a steam car paraffin is consumed in a furnace in much the same manner as gas. It is contained in a tank of a size similar to that carried on the average petrol car. The construction is somewhat stouter to withstand a pressure of 50 lb. to 60 lb. At this pressure the paraffin is fed through a heated vaporizer, which transforms it into a gas. The gas is then supplied to a large burner similar in form to that used on a gas stove, but fed under pressure. The boiler or generator in which the steam is formed is immediately above the burner. It is usually constructed of coils of steel tubing. The water passes through the tubes, and as but a small quantity is heated at a time, steam is quickly generated. The capacity of the generator is usually not more than 1½ to 2 gallons of water. The danger of a burst steam generator is a fallacy. Nothing more happens than a "fizz" similar to a nail-hole puncture and a small cloud of steam. The danger can be compared with an ordinary back-fire in a petrol engine.

The smell of the paraffin is much exaggerated, so far as the occupants of the car are concerned. It is only disagreeable to the occupants of other vehicles driving immediately behind the steam car, and then only under certain conditions. With an efficient burner that completely consumes the paraffin vapour the smell would be as little noticeable as the exhaust of a petrol engine with a properly-adjusted carburetter.

Much depends on the disposition of the steam generator. Most makes had the generator under the bonnet, which was certainly a great drawback, as it allowed the fumes and heat to affect unpleasantly the occupants of the front seats. The best position was that adopted in the case of the White steamer, viz., under the front seats. A long, properly-constructed flue prevented the fumes rising, and carried them to the back of the car. Objection was raised on account of the heat, but the critics were again wide of the mark. Providing the asbestos packing was in good condition, the heat was not appreciable. The generator could be removed from underneath the car without disturbing the body.

The chief objection to the steam car is the time taken in raising steam. It is necessary first to heat

the vaporizer by means of an auxiliary burner or pilot light. This must necessarily be supplied with petrol, which is, as a rule, carried in a separate tank of small dimensions, also under pressure. The time taken in getting steam, after a little experience, is from 8 to 10 minutes. It is also necessary to pump water into the generator up to a certain pressure to raise steam quickly. When once the steam is raised there is no need to go through the operation again until the car is finished with for the day, providing the pilot light is not turned out, although it takes some minutes to get away if the car has been standing for any length of time and the generator allowed to cool.

Another great objection is the necessity of carrying a tank of water and refilling it every 50 to 100 miles, according to whether it has an open exhaust or a condensing engine. The latter is most efficient, but it does not, as is imagined by many, do away with refilling periodically. There is always a certain amount of loss with the best condensing plants, but garages can supply water as well as paraffin.

The weight of the tank of water is often criticised, but critics must be careful on this point. The steam engine has no water jackets and needs no radiator. The tank of water is about equivalent to the quantity carried by the average petrol car of the same horse-power for cooling purposes.

Important Disadvantages.

Another disadvantage of the steam generator is the necessity for providing a force pump for feeding water against the head of steam. An air pump must also be provided to feed the fuel under pressure. The proportion of fuel consumed must be kept constant with the amount of steam used under all conditions. This makes it desirable to provide automatic devices for fuel feed and water regulation, unless it is done by hand control, which cannot be satisfactory except under the control of an expert steam engineer. All these devices, together with various gauges and valves, need frequent attention, and become an irksome business, except to an enthusiast with plenty of spare time. The most tiresome job is cleaning the vaporizer, which gets "carboned" up after a short time. The generator will soon cause trouble if "hard" water is used or oil allowed to get into the tank. The latter is difficult to obviate in condensing plants. Cleaning a foul generator is a big undertaking, especially the coil type, which is quite beyond a steam novice.

The advantage which appeals to most car owners when considering steam is the economy of using paraffin instead of petrol. A 15 h.p. steam car in first-class condition would do about 16 to 18 miles per gallon on paraffin. That is very much to the advantage of steam when compared with a petrol car of similar horse-power consuming petrol. With an improved type of burner and vaporizer than previously used, no doubt even better results are possible. If the steam car had the same chance as the petrol car, and had as much time and money been expended in experimenting and improving the details, it would have more than held its own.

Another decided advantage is economy on tyres. It is impossible to get away with a rush, which means slipping of the wheels and damage to the tyre treads. The steam car glides away, its power coming gradually. The engine being always directly coupled with

THE STEAM LIGHT CAR (contd.).

the rear axle, there is no sudden jar in the transference of the power to the road wheels.

Weight for weight the steam car has the balance in its favour. The engine has not more than two cylinders, high and low pressure. It has no water jacket, and needs no steam jacket. The steam engine is about one-third the weight of a petrol engine of similar horse-power. The steam boiler or generator does not much, if at all, exceed the weight of the average gearbox; other chassis parts are about equal, except that the frame can be made somewhat lighter in the case of the steam car.

The flexibility of the steam engine is beyond question. It depends on steam pressure, which can be increased immediately at will and maintained under all conditions. A steam engine has two power strokes every revolution, and does not depend on engine speed. The power of the petrol engine depends entirely on the revolutions. For hilly country the advantage of the steam engine is obvious.

There is little doubt that as a light touring car the "steamer" has a bright future, if only the time and attention is given to improving the details of former cars. A 6 h.p. to 10 h.p. car could do anything possible in regard to hill-climbing that the most powerful petrol car is capable of doing. J.T.C.

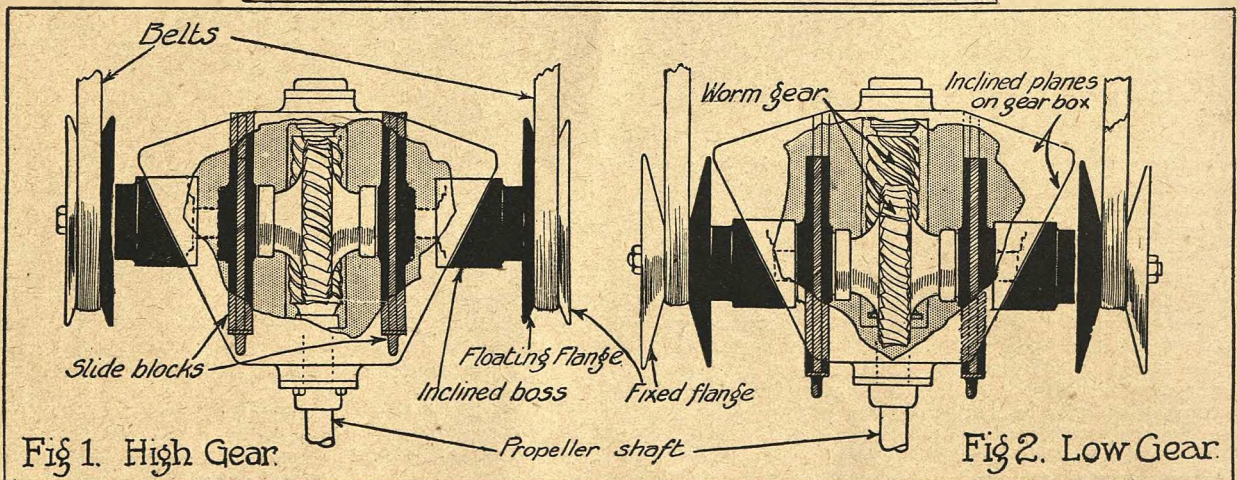
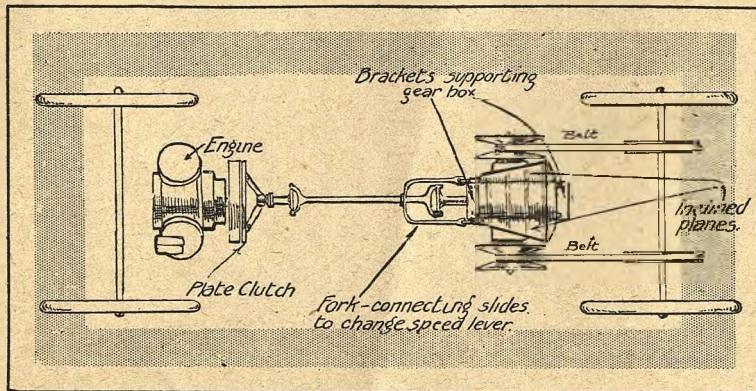
A NEW WORM-DRIVEN VARIABLE PULLEY GEAR.

AN ingenious method of providing a variable pulley gear for a belt-driven machine and automatically taking up the slack of the belts on the lowest ratio has been designed by Mr. H. Noel Wilson, No. 2 Coy., I.C.O.T.C., Berkhamsted. The countershaft carrying the belt pulleys is mounted in a case, the side members of which are inclined planes, bearing against wedged blocks on the floating flanges of the pulleys. As the shaft is drawn forward in its case the slack of the belts is taken up at the same time as the pulleys, owing to release of the wedging action, are opened, thus providing the lower gear. When the carrier is pushed back, the floating flanges of the pulleys close up, and the belts mount towards the peripheries of the pulleys, giving the higher gear. The countershaft is worm-driven, and the worm on the propeller shaft is of more than usual length, which enables the worm wheel to be moved backwards and forwards over it. A glance at the accompanying illustrations will make the action clear. The design has

the advantage of placing the belts centrally in the chassis, where they can be better protected from mud and dust than when they are placed on the extreme edges. An infinitely variable gear is, of course, provided. This design necessitates a separate clutch, which has an advantage in that the belt pulleys are not used as a clutch. The design is distinctly ingenious, and if a sufficient reduction of countershaft speed in relation to the engine speed is obtained by means of the worm wheel, it should be possible to fit very large front pulleys, which would give this type of belt drive a better chance than in the systems that have been tried previously. At the same time the different types of varying pulley gears, even when the belts are not made to serve the purpose of a clutch, have their limitations, owing to the difficulty of obtaining a grip in the lower gears, especially when the pulleys are slightly worn, as the effective diameter of a pulley cannot be reduced below 7 ins. or 8 ins. without belt slip, even on dry roads

The upper sketch shows a plan view of the Noel Wilson variable pulley gear system, and the lower illustrates the action of the enclosed planes, which close up the

pulleys when the countershaft is pushed back and open the floating flanges when the shaft is drawn forward, this also taking up the slack of the belts.



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Topics of the Day

PETROL SUPPLIES.—THE TRUTH AT LAST.

WHILE some sections of the Press have shown an insatiable desire to suppress all forms of motoring, and have been busy the last month or so with imaginary penalties that were about to be inflicted on motorists, the real facts, which have now been given us, prove that the critics have been very wide of the mark. There is no intentional desire to stop private motoring, Sunday motoring, or so-called pleasure motoring, and the Committee hope that increased supplies of petrol will be available soon. At the present moment, however, there is a somewhat serious shortage, and the Committee have, therefore, taken steps, which they hope will be successful, in insuring that those classes of users whose supplies must be guaranteed shall not be inconvenienced. A circular letter is being sent to garage proprietors and retailers instructing them as to the order of priority with which motor spirit is to be distributed. The object is to avoid any cause for complaint on the part of first-claim users that they are unable to obtain sufficient supplies. There have not been many complaints in big distributing centres, but in outlying districts, and in the north of England the position for some time past has been serious. A veiled threat is conveyed in the circular, which states that the failure of garage proprietors to assist in this matter can only result in other steps being taken that may greatly interfere with the welfare of the trade generally.

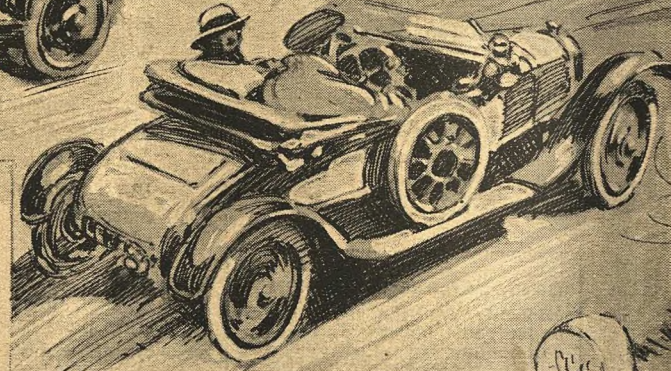
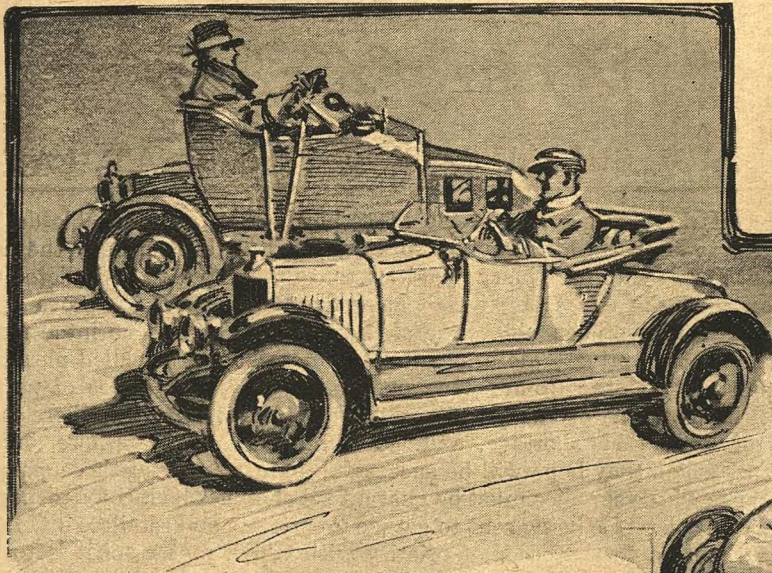
Various users who are to be supplied with petrol are divided into Classes A and B, a full and accurate list of which appears on page 66. It will be noticed that the list omits certain purposes for which petrol is used, such as the conveyance of goods (the classification as given in the "Daily Mail" and other papers is inaccurate), and we take it that this is done with an object. The petrol supplies to concerns using motorvans do not come from the garages, but are contracted for with the wholesale distributors. It will also be noticed that there is no mention of naval and military services in the classification, and this omission also, we think, is made intentionally. The classification means, in short, that the military and naval officer, drivers of motorvans, and private users are all on the same plane, and that is, they may have petrol if there is any to spare when the garage has reserved for its regular customers in Classes A and B such supplies as are required. If the military or naval man was in a position to demand petrol, as might be the case if he were included in the classification, it would make it possible for officers to commandeer supplies when not actually on Government business. It is to be presumed that when cars are being used by the military or naval authorities on Government work they will obtain supplies from the official depot. When they are being used purely for pleasure work a uniform will not give them preference over other private users.

The present shortage can be, and is likely to be, overcome. It has been produced largely by the greatly extended use of commercial motor vehicles, which have more than outbalanced the decline in private consumption, the ever-increasing use by the naval and military authorities, and the lack of sufficient tank steamers. It is understood, however, that new tank steamers are being built, while there is some possibility that the Admiralty will release those that are being used at present for storage purposes. We believe, however, that the shortage could be overcome in a very simple manner by eliminating the unnecessary competition between the trams and the buses, which results in a great deal of electric power running to waste and the unnecessary use of something like 100,000 gallons of petrol per week. A further saving could be effected unquestionably by the naval and military authorities. For ourselves, we must develop the use of petrol substitutes.

ART and TH

Form and Symmetry

Why Certain C



1913 to 1916

ART is divided into two: the fine arts and the lesser or mechanical arts. Painting, sculpture, architecture, music and poetry come under the first heading; the arts of the smith, the carpenter, the potter, the weaver, the printer, etc., under the second. The one contributes to the needs of the mind, the other to those of the body, but both are a necessity to the complete well-being of man, and both are the better able to perform their respective functions by being "beautiful" works of art.

With fine art, as such, the car has no concern. Suitability, or the fitness of things, governs our outlook on life, whether in the abstract or the objective. We do not want Botticelli Madonnas on our door panels any more than Grindling Gibbons carving on a plough-share. Fine art is best appreciated in times of ease and recreation, and is far removed from the bustle and grime of the active world.

The Coachbuilder's Art.

Coachbuilding has become in modern days a very important mechanical art, and the designer a highly-skilled artist. The principle which governs this type of art is that of utility. The characteristic merit, therefore, of a house, a chair, a dish or motorcar is to fulfil the purpose for which it is created, and beauty of form in them is nothing else than the instant revelation of this capacity. All decoration that does not contribute to this revelation, being meaningless, detracts rather than enhances the beauty of the objects which it is intended to adorn. A car is designed primarily for "use," so that all decoration, as such, is strictly debarred.

However, so complex is man and the workings of his mind that such a theory cannot be applied in its strictest sense with success. A soapbox on wheels is probably just as "useful" as a Rolls-Royce, but it does not satisfy the cravings of the average human being in the same way. Colour, the lustre of polished metal, good workmanship, and choiceness of material, being elements of beauty themselves, count just as much in practice as utility does in theory. It is for this reason that the cheap American car finds no admirers, even if it has thousands of enthusiastic "users." Each of these deplors the lack of beauty even while he excuses it, and the majority would be found willing to exchange their cars for one of slightly more attractive design.

Let us now see what constitutes beauty as applied to the car. First of all we must bear in mind that in

every art there are certain fundamental laws which must be obeyed. In painting a picture the artist has to represent solid objects and real colours by artificial lines and colours on a flat surface through the application of the rules of perspective and relative tone values. In building a house the architect has to overcome the natural stubbornness of stone, wood, brick and metal, as well as conform to the principles that have through the ages determined the final shape of a dwelling. A car designer in the same way has to contend with the stereotyped box on four wheels, engine in front, gears on the right-hand side, etc., which custom has standardized as the most suitable form for a car to take. The reward of the venture-some is well illustrated by the average Englishman's attitude towards Futurism or the cult of the Simple Life! It is almost as difficult to persuade people to use a new hygienic toothbrush as to make them see the advantages of central gear levers.

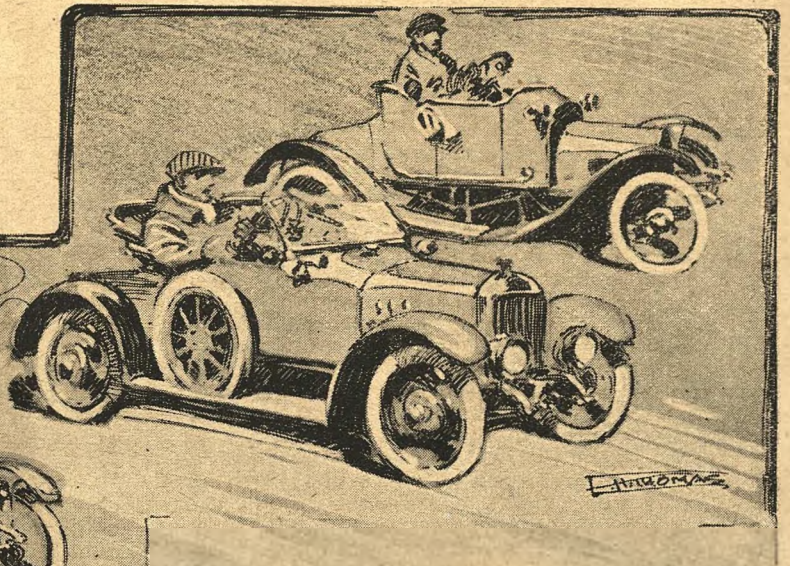
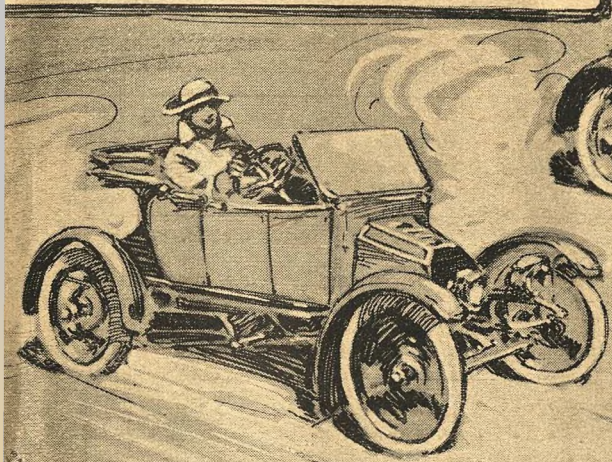
Body Designing—Fundamental Laws.

On the other hand, universal practice or popular prejudice serves a good purpose by preventing us running after every new soap bubble, and provides the artist with a safe rule to work upon. An artist is a man who can make the best use of the materials at his disposal within the limitations of his art, and on the whole, therefore, we must be content to leave things where we find them, where custom has determined is their place, knowing that we are working on proved, sound principles which will of themselves fall into disuse so soon as ever their term of service is completed and something better is ready to supersede them. We must, without attempting to alter the existing fundamental laws of car design, endeavour to work within its present limitations to the best of our ability. And in car designing, the artist will find plenty of scope for the exercise of his talent.

LIGHT CAR.

Relation to Construction.

Fail. By Viola Meeking.



How we have Progressed

Granted that we want to produce a beautiful car, we are next confronted with the perplexing question of "What is beauty, and of what does it consist?" Probably there have been more heads broken on this question than on any other. Ideals of beauty have varied throughout the ages. The Ancient Greeks admired most perfection of form in repose, the Romans evidence of muscular ability, the Africans of the dark Continent dusky skins, large teeth and a smile that reaches from ear to ear, the Chinese long nails and small feet, and so on down to the present time.

Reduced to a minimum of words, beauty becomes that upon which the eye rests with pleasure. The eye rests with pleasure upon what the mind has been educated to regard as perfection. We have been taught to look at form, symmetry and construction in judging a work of art, and we will now take them in sequence as applied to the car.

Beauty of Natural—Streamline—Form.

(1) Form is the appearance or shape of anything. The most beautiful form is admitted to be the simplest that answers the purpose, and it is for this reason as well as the natural laws relating to friction and wind pressure, etc., that all abrupt angles and niches are discouraged on an object that is designed for fast progress through the air—a shell or an aeroplane. Ruskin held a theory that the most beautiful art designs are those which most closely remind the beholder of natural forms; a fluted Greek column being regarded as a beautiful specimen of Art because it resembles the tall, straight trunk of a mighty tree. The natural form which is most suited to a car is that of a bird or a fish, and is the line of least resistance, known as "streamline." But this theory must not be advanced too far—it is only an example to bear in mind. It is not sufficient to make a car look like a fish simply because a fish has the most

perfect streamline form. A car is not built to perform the functions of a fish.

(2) Symmetry is the harmonious fitting of all parts with due regard to size and form. By the application of this principle the whole is made to look as if carved out of one piece of material, an impression which it is the chief aim of the artist to create. Each detail should be in proportion to the others, and nothing that is not a necessity should be allowed to spoil the graceful lines of the completed work. Grace has been called the elimination of all detail that delays the action of the whole or that attracts the eye away from the main point at issue.

The Governing Principle—Construction.

(3) Construction is the third principle of beauty of form and symmetry. It is the manner of executing the artist's design. No matter how beautiful the original plan may have been if the execution is bad. Only by the use of the best materials—not necessarily the most expensive—and of the highest class of workmanship will sound construction be attained and a car converted into a true work of art. Certain well-known cars, averaging a thousand pounds apiece, are usually quoted as the most perfect specimens of the coachbuilder's art. It is not such as these that the light car designers should copy. Cost price is an important question, and we do not want rosewood and mahogany dashboards or silver-plated fittings or silk cushions. What we do want are well-built bodies, comfortable, ample springs, doors that shut properly, hoods that close completely, and lamps that can be trusted to keep alight. It ought to be as cheap to produce an artistic, suitable mudguard as an ugly one, and even if the extra handwork costs a little more, light car manufacturers will find that people will be ready to pay 25 per cent. or so more if the completed article is a true work of art, i.e., something that is a veritable pleasure to "behold" as well as to "use."

There are a great many little cars which are perfect examples of form, symmetry and construction, but there are many more which fail on one or other of these points. We notice far too many that do not fulfil these requirements. Some are top-heavy, some have too small wheels, some have inartistic lamps. The car we all most admire is the one which shows clean, simple lines, evincing speed and wind-cutting propensities, inviting seats, shining varnish, an alluring colour scheme, and unity of the whole.

THE USE AND ABUSE OF THE LATHE.

New Explanatory Series of the Greatest Assistance to the Amateur Mechanic.

II.—TOOLS AND THEIR CUTTING ANGLES.

EVERYONE who uses a lathe will preach the virtue of having tools of the proper shapes and ground at the proper angles; few but professionals practice this virtue. As a matter of fact, angles may be varied within fairly wide limits, and until these are exceeded the average man grubs along fairly well. It sometimes happens he oversteps the bounds without being aware of it, by grinding the tools wrongly, and the angles get so greatly altered that the tools are useless. Then he grumbles, and may not put the blame on the right person.

These angles and their names are illustrated in the accompanying diagrammatic side view of the cutting edge of a lathe tool (Fig. 1). The clearance angle may vary from 3 degrees to 15 degrees, and is often called "front rake." The cutting angle varies for different metals. For brass, tools are flat-topped, for cast-iron the cutting angle is from 60 degrees to 65 degrees, for mild steel 40 degrees to 50 degrees. This sloping upward of the top of the tool towards the edge is known as "top rake," and frequently one side of the edges is higher than the other, and this rake is termed "side rake." The tool is then meant to cut on the higher side. There is no need for any great accuracy in the angles, and tools are usually ground by eye; and to assist the beginner in this the next sketch (Fig. 2)

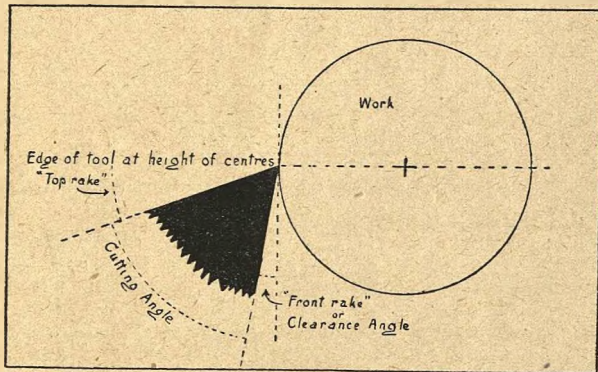


Fig. 1.—The cutting edge of a lathe tool.

shows three tools in silhouette; the first is a brass tool, the second one for cast-iron, and the third for mild steel. The angles are medium ones.

Tools for removing rapidly a bulk of metal are called "roughing down" tools. They are round-nosed, and their angles conform to the above general rules. They take a deep cut with a slow feed. A roughing-down tool for mild steel, if put on brass, pulls itself in with a fierce dig and breaks its point or stops the lathe. The brass tool on steel merely scrapes. Roughing tools are ground on the top and round the front rake—taking care to keep the angles right. A frequent fault of the beginner is grinding back the edge just where it is worn by cutting, on the front. The next sketches (Fig. 3) illustrate this. At A is the tool as bought; B shows the front ground back, lessening the front rake; at C the front rake has disappeared altogether, and the tool rubs instead of cutting, and its cutting properties will not be restored until the front rake is restored by grinding the whole front of the tool back.

The round-nosed roughing tool enables one to turn down any length of a rod, but the finish of the turned part is rounded like the nose of the tool, as A (Fig. 4).

If a right-angled shoulder is required, as is often the case, after the straight part has been turned, a knife or side tool—whose name explains its use—is employed. This tool is made left-hand and right-hand, and is shown in position at B. It may be set in the



Fig. 2.—Three tools for different metals.

tool-post with its point pointing inwards towards the shoulder a little—a practical tip many users of lathes do not know. The cutting angles of knife tools are the same as those for roughing. They should be kept

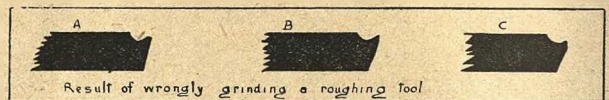


Fig. 3.—(A) Tool as bought and (B, C) as improperly ground

sharp and used gently, because from their shape they cannot be made so robust as the roughing-down tools.

At C is the beginner's bugbear, the parting tool. Its use is for cutting off work in the lathe and for grooving. It has no top rake, being like a brass tool, and its edge is square with the shank. It has, of course, a clearance angle at the front, and must have clearance at the sides as well, so they shall not rub in the sides of the groove made by the front of the tool. At the slightest excuse it digs into the work, and chatters. All that can be done is to keep it very sharp and trust in Providence. In most metals it must be given a decided cut: the chattering is often due to too light a feed. Too heavy a feed snaps it off instantly. It should overhang as little as possible from the tool-post, consistent with the depth of groove it has to make. In very light, fine work on brass it is sometimes a help to press steadily on it with the finger, to dull the tendency to chatter.

Like the other tools, it must be mounted at the height of the lathe centres. In brass work it may be mounted a shade above, and in that case must have a

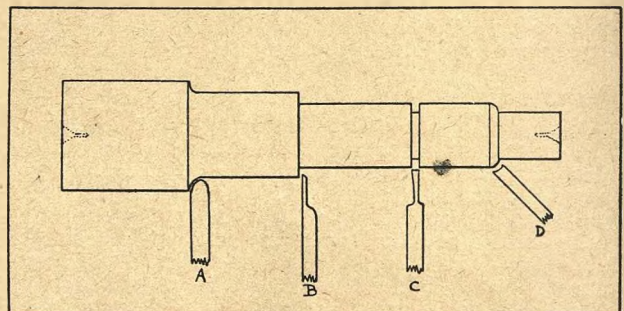


Fig. 4.—Different tools for different jobs.

big clearance angle, say of 20 degrees. It is essential that it be sharp, and the extreme corners of the edge may be slightly rounded. A fine carborundum stone will be found very useful for putting a good edge on parting tools, knife tools, and thread tools—any, in fact, where a particularly clean cut is wanted.

USE AND ABUSE OF THE LATHE (contd.).

D shows a radius tool. These are made to the radius required, and are flat-topped, acting rather as scrapers than cutting tools on steel. An amateur hardly needs to buy these; it is very simple to make them as they are wanted. The same remark applies to filleting tools, for producing a hollow curve on the work.

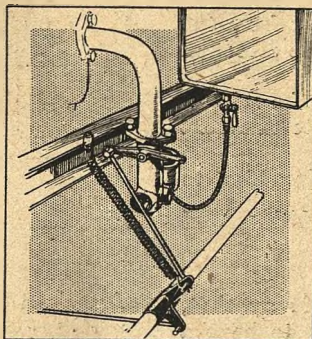
Boring tools and boring bars are very nearly legion. The amateur will not want more than three or four at first. They follow the same rules as to angles as all the other tools, but the clearance angles have to be greater, because the work comes towards the tool below the cutting edge instead of away from it, as in outside turning. The shanks are made as stout as can be conveniently managed, and the cutting edge is a sort of projecting lip on the side of the tool. For roughing they are made round-nosed, and a finishing tool has a straight edge, and is flat-topped, whether for brass or steel. Great care must be taken to set its edge parallel with the centres, and the corners of the

edge may be slightly rounded, as with the parting tool. For turning the bottom of a hole square, it is necessary to have a boring tool with a square edge on the end of it, and it requires some care in setting and using it, especially when, as it often happens, it is impossible to see it at work. One has to work then by the feel of the handles that operate the slides of the slide rest, and go very carefully. Indeed, in all lathe work "more haste less speed" is an excellent motto for everyone but the expert. The expert is a law unto himself, but always seems to work slowly, and with deliberation. The present writer has had the good fortune to see several at close quarters, and each one seemed more gentle than the last in his methods. The expert has a soft and cat-like way of manipulating his slide-rest handles that is very interesting to watch, and strongly reminiscent of the delicacy of touch of the fine driver with his gear lever and wheel controls. Did anyone ever see an expert driver advance his spark in jerks?

(To be continued.)

SOME INTERESTING

A G.W.K. supplied last week to Capt. Douglas, who has recently returned from the Front wounded and unable to drive his bigger car, has several interesting features. The car is finished in battleship grey, the lamps and accessories being painted to match, with the exception of the rims of the headlamps, which are left in polished brass by way of a contrast. The upholstery is in green, and buttoned along the outside edge of the door in continuation with the top edge of the seats. A special toolbox under the seat and a shelf for maps and gloves are fitted, but the most notable deviation from standard is a Zenith carburetter and its control. The



The Zenith carburetter and control levers as fitted to a special G.W.K.

FEATURES ON A G.W.K.

pull of the accelerator pedal falls upon a lever, instead of practically direct upon the throttle barrel, thus reducing the wear on this part and providing a more delicate control than is usually possible. The carburetter provides very slow running, with rapid acceleration. Except for these few details, the car was a standard model. It is interesting to note that the purchaser selected a G.W.K. because of its ease of control, as since being wounded he has not the strength to handle a more powerful big car. For instance, gear changing on the G.W.K. does not entail any effort on the part of the driver, and the steering is light.

THE FALLACY OF LARGE BATTERIES.

WHEN electric lighting first began to be used for motorcars, the ignition type of battery was, in many cases, the only type known to motorists. As a consequence, this battery was pressed into service for which it was not fitted. When electric starters were first used some fairly reliable lighting batteries were available, but, like the ignition battery, the lighting battery has been dragged out of its sphere to provide some very unpleasant surprises, almost equal to those sprung on us by the type that provided us with variable sparks.

We are told there is a mean in all things, but some people know only two points in the swing of the pendulum, the extremes, and, from the small and light batteries, they have plumped for the largest they can get. I saw the other day the specification attached to an order for a battery, two or three of which would have provided power to propel the car a considerable distance. The weight and size had apparently been forgotten; a battery of well over 1 cwt., however well and compactly designed, requires a considerable amount of room, more than most cars can provide.

There are undoubtedly some advantages in the very large battery, but we ought to count the cost in other ways than price only. The reasoning of the owner who installs a big battery because his engine is a bad starter, and may require more power to start it, is pretty sound, but it would probably pay to have the engine tuned to start easier even if it means less miles per gallon. If the current is taken out it has to be replaced, and it is not unknown for the engine to be

kept running to charge the batteries whilst the car is stationary.

Three stone does not allow for a very large battery, but if it is placed on the footboard it makes all the difference to the springing, especially if it be on the driver's side, which is often the case, but by no means always. When the offside footboard happens to be taken up by the spare wheel, etc., it is quite usual to turn to the other side. What an expanse, and ready to receive anything! Never was space more deceiving. Design your battery first, and you will see that expanse dwindle into the most meagre proportions: the length is diminished by those beautiful curves of your pet wings, there is insufficient room between the base of the front wing and the door, you decide to sacrifice half the step and find the battery box too deep for the door to pass over it. You lessen the length by making two rows of cells instead of one, only to find you have an overhang of a few inches. One should not be tempted to accept that arrangement. A footboard often marks the extreme width of the car, and if its edge is unbroken and continuous it may save the vehicle from serious damage in an accident. I saw a magnificent car meet with an accident in Regent Street. The blow was taken by the nearside footboard, which crumpled, but it had saved its cost many times over. Had the edge of the footboard been overhung by boxes or brackets or the board divided, the projections or interstices would have given the offending article something to "bite" into.

It is unwise to put a "passenger" in the tool-box or on the footboard.

W.F.A.

B15

A GOOD many otherwise sane and ordinary people appear to be born under a planetary configuration which decrees that they shall one day reach the summit of their ambitions by designing a motorcar. The cyclecar has given not a few that opportunity, and, alas! has been responsible for much perverted ingenuity, for, dealing in materials of small intrinsic value, and relying upon a transmission capable of ameliorating shortcomings in other directions, much may be done in departure from conventional lines. When it comes to designing a light car, by all the standards of which the power from the engine must be re-directed at an inflexible right angle upon an equally rigid back axle, the designer's inquiry into deviations from the straight and narrow path of engineering is rudely curbed by invincible laws, with a result that is usually very ordinary.

Often I am taken to view the achievement of one who has had the misfortune to be born at the moment that the stars foretold a fresh crop of designing geniuses, only to find:—

(1) That the radiator departs sufficiently from the humdrum to promise welcome variety in the direction of the back axle.

(2) That, like the highly-coloured cover of a railway time-table, the promise of interesting entertainment beyond is not justified.

(3) And that there is positively nothing else to justify adding one more to the ever-growing (and equally diminishing) list of car names.

WHY THEY COMMIT THE OFFENCE.

It does not seem to strike the designer of a car that, before he commits the offence, he ought to have a very good reason for doing so. Sometimes he has, or his friends think so, which amounts to the same thing, the flight of genius revolving round some such epoch-making anachronism as a radiator meant to copy the prow of a battle-cruiser, leading at once to the name of the car as the "Indomitable." Even this excuse is missing by the time the finished product waits the approval of a singularly cold world, when the rest of the car, having followed more or less closely an accepted standard, is not to be united with anything so original as a radiator of eccentric angularity without a sad hiatus that condemns it as a whole. Sometimes, the birth of the idea, as with the cyclecar, is a new method of adding to the frictional losses between the engine and the road wheels in order to avoid doing something relatively unimportant. In the vast majority of cases, however, the transcendent being who produces a new car does so because he feels that he has it in his bones to do so, and is determined to reach the pinnacle of fame by being recognized by his friends as the author of the X.Y.Z. two-seater (titles by initials having a singular fascination for this type of originator). Like the proud father, in his first few months of parental hallucinations, he is convinced:—

(1) That the car he has produced is a vast improvement on anything like it ever offered to the public (which in all probability his never will be).

(2) That everything, from the filler cap to the last rivets on the rear mudguards, bears the stamp of his own ingenuity (which if it were true would alone foredoom it to failure).

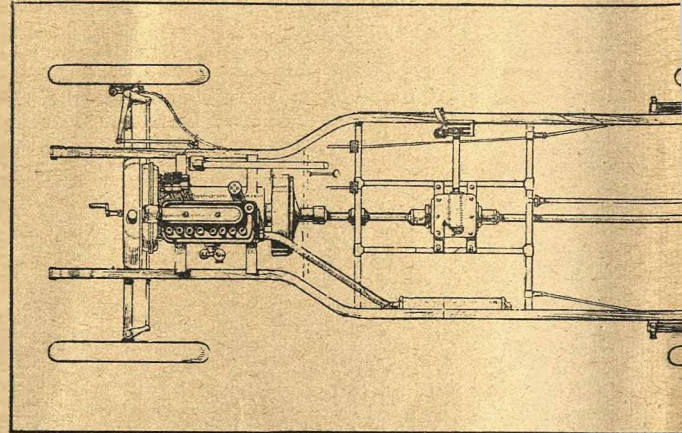
(3) That it is capable of 60 miles an hour and 50 miles to the gallon (the figures being arrived at by in-

THAT VERY O The Sad Fate of M

By

controvertible calculations at the time the problem of inswept, upswept, or straight-line frame members had been solved).

(4) And that the public, despite its purblind prejudice, fostered by a dishonest Press, in favour of



A conventional chassis, following big car practice.

American cars, is bound to realize that at last the perfect car has arrived (an illusion which it will receive with undisguised doubt).

I knew a designer once whose special reason for producing a car was the discovery that the chain was the least profligate transmitter of power known to engineering. (He did not really discover this; he read it). Further, all you had to do was to put a sprocket on the engine shaft and another on the back axle, and if the need arose for varying the gear add a few more chains. Having produced this wonderful invention he would hold forth at great length on the never-before-realized advantages of chain drive, whenever one of an inquiring turn of mind presented the opportunity, and, having extolled its virtues, he would consider in what way he could back them up, reappearing later with a few more festoons of Hans Renold added to his singular vehicle.

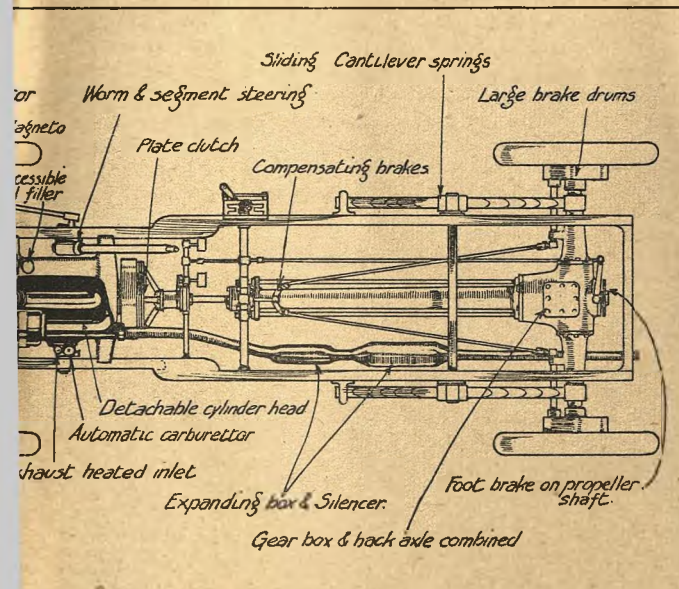
This was perhaps carrying originality too far, but I would much rather come across something on these lines than the hackneyed, inadequate, standardized type of light car that is so often presented to a gaping world as equal to anything produced by an industry that may be said to be a specialized one (thus much have we progressed). Even comparatively large concerns, when they first resolve to be in the fashion and produce a light car (at an extravagant price) rarely strike an original idea, preferring to put forward in their first and still-born model a Daimlerized version of a "car in miniature" (which the modern light car most essentially never was), merely reducing weights and dimensions and hoping for the best. Subsequent alterations produce improvements, but rarely approach the ideal, and thus it is we have so few light cars (compared with the number that have come and, mostly, gone) in which the special problems of light-

INARY DESIGN! Heaven-born Designer.

, Jr.

ness allied with reliability, and economy combined with comfort, have been studied from the beginning.

The other day I was asked to give the present address of the makers of upwards of 100 small cars, the names of which someone had mistakenly collected and could not find referred to in current literature. Some were cyclecars, the designers of which had sought to ally some such unworkable combination as the virtues of friction and belt drive as the method of eliminating the vices of the gearbox. The majority were light cars that had flashed upon the horizon, regarding which one general description would have fitted the lot. Thus we could have said that the frame was of channel steel (thanks to the enterprise of concerns able to produce such frames at a phenomenally low price). The engine was a thermo-syphoned cooled four-cylinder monobloc (as supplied by half-a-dozen makers and of not outstanding merit). The gearbox, of the sliding pinion type, was placed centrally (because it is much easier to do this than to design it incorporated with the power unit or the back axle). The back axle was bevel driven (and probably howled from the day it was born). The suspension was on



ristles with interesting features. This is not put forward as an design, but indicates a few deviations from standard.

short semi-elliptic springs back and front (modelled on the lines familiar to our grandfathers' spring "buggies"). The brakes are internal expanding (sometimes compensated and sometimes not). Etc.

Now, by way of contrast, take the specialized light car that has not been produced.

(1) Because the designer is a heaven-born genius, and has that goal in view all his life;

(2) Nor because he has thought of a special variation in the body, or has a pet theory with regard to the shape of the radiator;

(3) Nor because sets of fittings and ready-to-wear engines can be purchased from specializing manufacturers;

(4) But because the producers have studied the whole question of a light and economical vehicle that follows no hard-and-fast lines applicable to larger cars, for which the conditions are entirely different.

The radiator may be orthodox and scarcely ornate, and the bodywork not above criticism (art in light car design comes later); but the chassis is a joy. A glance at the engine, externally, may reveal an ingenious interlocking of carburettor, throttle, inlet and exhaust pipes, providing a readily-warmed mixture, with free ingress and egress and no awkward corners for absorbing power. A simple form of camshaft and magneto drive, and that rare virtue, an accessible contact breaker. Enclosed and lubricated yet get-at-able valves. A well-thought-out cooling system, so often a neglected feature for the type of engine that most demands attention in this respect. And a lubricating system that is self-indicating, accessible for replenishment, and which has a consumption of not less than 1000 miles to the gallon, only possible or improved upon when much thought has been bestowed upon the design.

If the gearbox is not combined with the engine unit or the back axle there is some good reason for placing it midway. The gear ratios, it will be found, have been well chosen and the relation of the pinions and the design of the teeth thought out to render gear changing simple (for the average buyer is not an expert) or the difficulties of changing overcome by constant mesh pinions and dog clutches.

STRIKING OUT ON NEW LINES.

The clutch is not the conventional and much-abused leather-cone type, and probably strikes out on new lines, in which the minimum of attention (as with a Ferodo-lined plate or cone) is necessary.

The back axle may be worm or bevel driven, or even a spiral bevel type; if the first mentioned, an under-head worm is provided; and the arrangement of torque rods, tie rods, or what not is not left to chance.

The brakes show appreciation for the special problem of a light car, where we have no great weight to keep the wheels turning when they are hastily retarded, and one brake at least is not necessarily acting direct on the back wheels.

But it is usually in the springing that the ingenuity of the designer comes uppermost, for here we have the greatest problem of all. It is no use adopting a system that gives satisfaction on a heavier car. We have the speed but not the weight to allow for. In fact, we have a little, short wheelbased, high-speed vehicle that may carry two or three, or be used by only one person, with an inclination to proceed along the highway in a series of bounds, with occasional playful leaps to this side or that. And it is only on very few light cars to-day that the springing problem has been solved.

The war has stopped many enterprises. Perhaps the check to the number of ill-designed light cars—really they are not designed at all—is just as well, for we have the comforting knowledge that even in these strenuous times the improvement of existing vehicles has been studied at more leisure, and with a sounder knowledge of the requirements. One day, the perfect light car will arrive. Who knows?

SIGNPOSTS, ANCIENT AND MODERN.

What was the Origin of the Finger Post ?

By Our Touring Editor.

Some types of "signposts."—Left, shows a sensible type on the Great North Road; centre, an old idea of combined town name and direction sign which deserves to be more generally used; and, right, a signpost near Missenden giving warning of a steep hill.

IF a collection could be made of every description of signpost still extant along the roads of these islands the result would be an amazing assortment of exhibits, for no country in the world could rival this one in the immense variety of way-indicating expedients. I say expedients, rather than devices, for the British never seem to have taken way-posting seriously, regarding it, apparently, as a fitting matter for the dilettante, with the consequence that there is remarkably little to suggest deliberate contrivance based on careful consideration of requirements, and much, on the other hand, to indicate a purely haphazard and fortuitous treatment.

In the Middle Ages.

Regrettable as such a state of things is from the purely matter-of-fact point of view, there are some compensations, for the vagaries and eccentricities, to say nothing of the survivals from past ages, undoubtedly add to the interest and not infrequently to the gaiety of the road. History has not preserved the name of the thoughtful individual who first realized the need for signposts; nor is there any record of even the approximate date when they began to make their appearance. They were, at all events, an established institution in the Middle Ages, and the old monks, with their concern for the needs of travelling folk, were, from all accounts, not behindhand in the matter, and, in particular, they seem to have been careful to signpost the side turnings leading off from the main roads up to abbeys, etc., which lay away from the beaten tracks. The utility of signposts, however, in an age when most people were unable to read, must obviously have been very restricted, and hence they could never have been very general, and not until the comparatively less illiterate times of the Georges did they have much chance of becoming objects of the wayside.

Signposts nowadays are, as a rule, very prosaic objects (if we except the very ornate ones lately put up by his Majesty the King in the neighbourhood of his Sandringham estates, and the rhyming ones due to the

blind squire of Arley, in Cheshire); but it was otherwise in days ago, when they owed their erection much oftener to private enterprise than to the action of constituted authority. From what may be looked back upon as the picturesque era of signposting, quite a considerable number of specimens are still standing beside our roads, though, naturally, those of so perishable material as wood are not among the number.

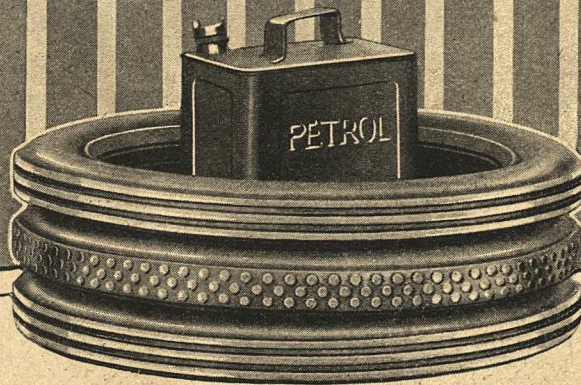
A signpost old enough for Shakespeare to have looked upon, and one upon which, in all human probability, he did look, stands by the main road between Moreton-in-the-Marsh and Broadway: at least the old iron direction hands do, for the original wooden standard has, of course, not survived.

A quaint signpost of a different type, also on a road frequented by Shakespeare, but not erected for many years after his time, is passed near Wroxton, between Banbury and Edge Hill. It, like most of its contemporaries, is a square pillar; it is adorned with a sundial and bears the date 1686. This type of hand-post (it literally is a hand-post, for hands are used to point each direction) can never have been adopted extensively, on account of its expense. For present-day purposes the type would be quite useless, on account of the impossibility of reading it in driving by, and we are not likely to see it copied.

Verbosity in 1700.

Fourteen years later an even less satisfactory kind of direction post was set up on the Worcester road, a little way outside Hereford—a rough stone, rather amateurishly inscribed, "This is the road to Worcester," "This is the road to Hereford," and so on. The redundancy of words and the breaking up of the place names into two lines are points which would not commend this quaint example as a pattern to the modern traveller.

One is reminded of the old adage about the advisability of the cobbler sticking to his last by the shortcomings of signposts when they essay the functions of milestones, for, in most cases, between their computations and the exact distances there are sad



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SIGNPOSTS (contd.).

discrepancies. The Dashwood Pillar, near High Wycombe, being several miles out in all three of its reckonings, is a classic example; while North Country motorists given to straying from the smooth way may be familiar with the old direction stone in the Trough of Bowland, 15 miles from Lancaster, which stubbornly maintains that the distance to the county town is only 11 miles.

In passing judgment on the signposts of other days, it ought to be remembered that the computed mile (as distinct from the statute mile), with its wide local variations, had not then died out. Then, too, as regards London, an error of a mile or two is often explained by the fact that distance was counted from the City, and not, as later, from the West End. On the vagaries and shortcomings of the old order of signposts we can afford to look with indulgent eyes, ignoring them when in a hurry, and accepting them, when in leisure mood, as part of the interest of the road. But, with the modern signpost, we have every right to be sterner, and, unfortunately, only too often, every cause.

Merely Parochial Information.

Looked at broadly, it is more than passing strange that, in a travelling age like this, there should not yet have been evolved any order or system in the signposting of the roads of so important a country as our own. No preliminary general agreement even as to what signposts are for or for whose use they are intended seems to be discernible. The belief which, judging by what may be observed, would appear to be most prevalent among the multifarious authorities is that signposts are for the almost exclusive benefit of people in one adjoining district who may have occasion to travel across the parish to another adjoining district. How else, indeed, are we to explain the absurdly local information to be found, in nine cases out of ten, on parish signposts, to say nothing of such a Gilbertian piece of folly as the painting of certain Irish road signs in Gaelic, redundant to those who know the tongue, being mostly natives, and useless to the vast majority of visitors.

Nor is it only the parochial character of the average sign with which one finds fault. Have we not all of us had the experience of being left in the lurch through a series of signposts not working together, the first, and perhaps the second and third, telling us we were on the right road for our objective, but the next having apparently never heard of the place, a shortcoming due either to want of co-ordination between different authorities, or through failure to recognize that one post should, so to put it, support its neighbours. Lack of any thought-out plan no doubt also explains anomalies in the matter of mileages which signposts often display, so that one may pass several posts without, apparently, making any progress, and even, if the inscriptions are to be believed, actually getting farther away from one's destination.

Useful Functions.

When one considers that the greatest use of signposts is derivable by people from a distance, it hardly seems fair to lay the duty of providing them upon comparatively unintelligent (speaking in terms of matters pertaining to modern travel) bodies like parish and district councils, and expect the task to be carried out with a proper grasp of the subject. The best plan would probably be to confine the business to the county councils, who should first, through a central organization, decide on the general principles to be followed to attain uniformity, and then work, each of them, through a joint committee with its immediate neighbours, so as to avoid any anomalies along the frontier districts.

◆
An 18th century
obelisk signpost
near
Godmanchester.



◆
The Wroxham
Pillar,
near Banbury,
dating back to
the 17th century.

◆
One of the most useful functions of the signpost has been curiously little exploited, especially in this country; I mean the giving of information relative to the advantages or defects of alternative routes. The best example I remember to have seen of this is the following, to be found in the village of St. Maclou, in Normandy:— ROUTES TO TROUVILLE.

The shortest, 27 km., via ———.

The best, 32 km., via ———.

The most picturesque, 30 km., via ———.

An example illustrating another possibility will be found between Wycombe and Missenden, among the Chiltern byways. In this, one arm of the sign reads:

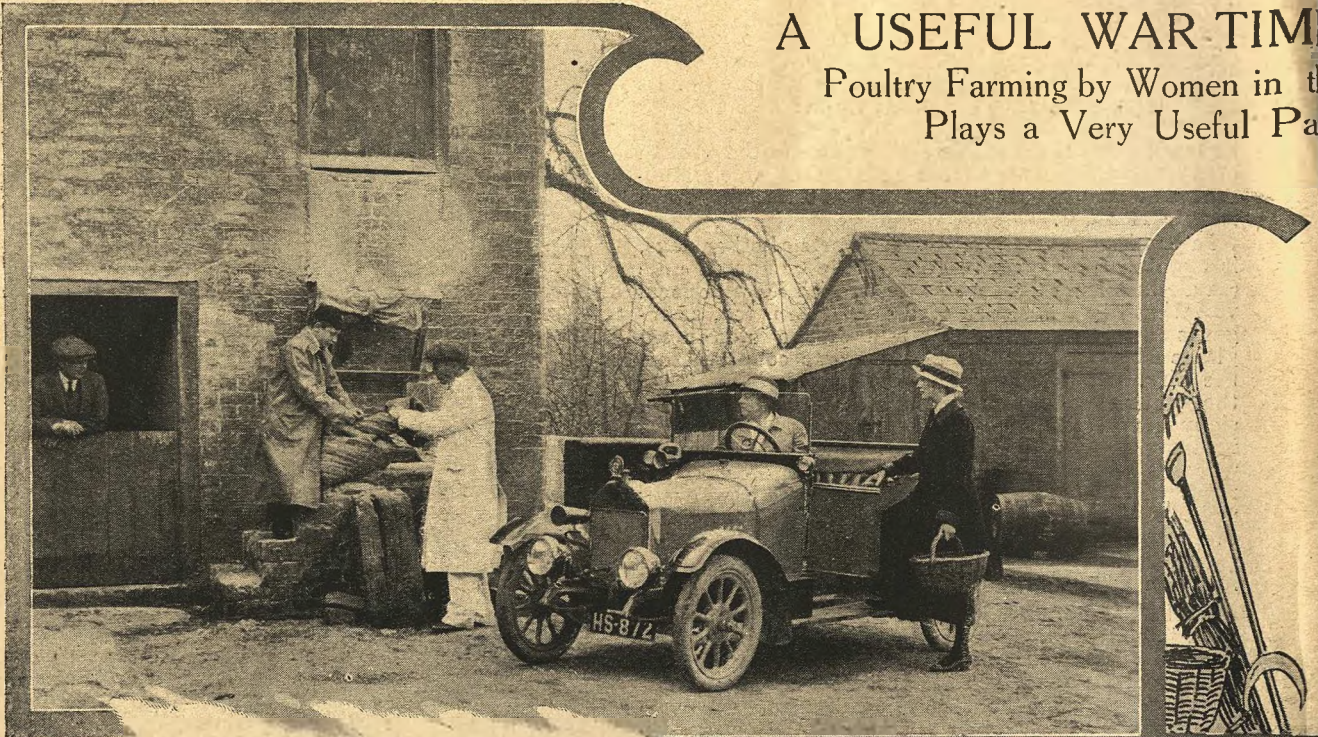
LITTLE MISSENDEN.
(Steep Hill.)

This also illustrates the need for doing the thing completely, in pursuance of a proper plan, or not at all. The hill referred to, though steeper than the descent on the alternative route, is, as a matter of fact, not dangerous with ordinary care. On the other hand, the neighbourhood abounds in far worse hills, and these are left without any warning. Unless the traveller can feel confident that warning notices are never placed where they are not justified, and are always to be found where they are, they miss their mark and the whole effort is wasted. The idea is excellent, and, with capable bodies to carry it out, it would prove of value to strangers to a district.

A Guide to Touring Districts.

◆
Although we fear there will be little motor touring this year, an interesting little booklet on touring districts, "The Roadfaring Handbook," by Reginald Wellbye, has been issued by E. J. Larby, Ltd., Paternoster Row, at the modest price of 6d. The principal touring districts of the British Isles are delineated in map form, the objects of interest and other salient features being marked. There is also information with regard to moderate-priced hotel accommodation.

A USEFUL WAR TIME Poultry Farming by Women in the Plays a Very Useful Pa



FOLLOWING the advice of the Government and those in authority, the women of the Midlands are doing good work in poultry keeping, some on quite an extensive scale. No part of England is perhaps better suited to the breeding of poultry than the verdant slopes of the Malvern, Cotswold and Breton Hills, and in the villages of Broadway, Wilersey, Bretfordton, Childswickham, Coaley, Cleeve Prior, Harvington, Pirton, Webheath, Boeley, Kinwarton, Kemerton, Netherton, etc., and the larger centres of Worcester, Gloucester and Warwick, this industry is rapidly flourishing under the management of enthusiastic ladies, who find it a healthy occupation, interesting recreation and profitable venture.

In many of these villages and smaller towns, "far removed from the madding crowd," and out of touch with the markets, the industry would be anything but profitable without the assistance of a light car. Those who have been dependent upon their horses and traps to bring them into the towns have had to give over their horses to the War Department, so a conveyance which they can entirely manage to look after themselves has been substituted, and a light car is a necessity which will now never be displaced. To start a poultry farm, a good many journeys have to be taken to the nearest town, for it is surprising what a quantity of little articles are required, and here the car comes in most conveniently. Then a keen business woman will purchase food (corn and meal) for the fowls direct from the miller, and her little car is requisitioned to fetch them. The weekly supply of eggs can be carefully packed in hay in a large flat basket which fits in the locker at the back of the car, and taken either to regular private customers, or to the shops or market hall, while a woman who carefully and appetisingly prepares her poultry for the table is always sure of regular customers, if she can deliver the birds herself daintily garnished with parsley and wrapped in spotless muslin or linen.

Many ladies breed a special strain of bird, and these are shown at poultry exhibitions. The prize bird is washed and dried, its legs and feet tended, and it is

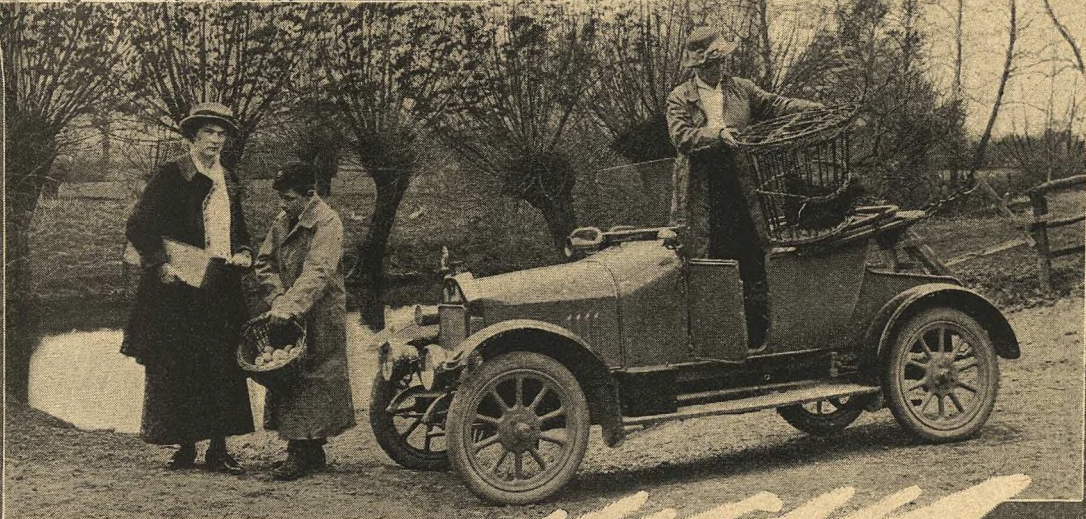


packed in a basket for transit. If the show is held within motoring distance, the lady can take her bird and see it exhibited to the best advantage; but should the distance be too great to convey it by car, it is put on rail at the nearest station, and the owner who has brought her valuable exhibit by light car is able herself to impress the porters that quick transit is absolutely necessary.

Before readers who may be desirous of setting up a poultry farm for themselves start doing so, I advise them to use their little cars to visit adjoining farms and see how they are managed, so obtaining from their owners hints as to how best to make the venture profitable. This I had the pleasure of doing recently, and feeling that I should like to see how women carried out the industry unaided by the sterner sex, I motored to several poultry farms, large and small, entirely owned and worked by feminine enterprise. Perhaps the best example I found was at Coaley, a picturesque Gloucestershire village, nestling under the hills and sheltered by some of the finest oaks, elms and beeches in this fertile district. Here is a

FEMININE INDUSTRY.

Midlands in Which the Light Car
A Famous Poultry Farm.



quaint old farmhouse, surrounded by some 30 or 40 acres of grass land, and being so secluded I found it a little difficult to find. However, at last I came to a couple of white gates, to open which I had to descend, and, traversing a roadway through a field, I came to the house and farm where Miss N. Edwards has worked for some six years, successfully breeding and rearing birds which have won for her honours at home and abroad.

Originally the house must have been quite a small one, but it has been added to from time to time, until now it is quite an excellent specimen of a rambling Gloucestershire manor, and as gardening is one of this lady's hobbies, both the walls of the house itself and the immediate neighbourhood are brilliant with creepers and plants. Ramblers are trained artistically over the buildings, and they bid fair to make a fine show this summer. Miss Edwards delights to exhibit her farm to visitors and interest them in her favourites, and particularly to those who intend setting up "on their own." Every portion of

the farm is scrupulously spick and span, and so interesting that, before leaving, the guest experiences a keen desire to follow in Miss Edwards's footsteps. The first, and perhaps the most interesting, object is the incubator room, in which, during the season, 30 or 40 of these inventions, each containing 240 eggs, are admirably housed. The room is fashioned out of an old cider cellar, over which, in years gone by, a dainty old dame kept a school for the children in the district, and even now the disused oddly-wrought iron staircase, by means of which the scholars ascended to their studies, is to be seen. Now the floor has been removed, opening the building to the roof, and, being beautifully ventilated and free from vibration, the little chicks are hatched successfully. The arrangement and idea are Miss Edwards's own, and she has placed a long narrow table down the centre upon which the babies are packed for despatch, and as they do not require any food for 36 hours after entering the world, they travel comfortably, often for many, many miles, in their little hay-nest box. In an adjoining building are a number of prize birds, each looking in the pink of condition; in fact, it is noticeable that throughout the whole farm there is not one bird sick or sorry. Brilliantly-coloured cards nailed to the pens record the honours of its inmate, and each struts about genuinely proud, no doubt, of what he or she has won.

Next comes the field allotted to the baby chicks, and as it is four acres in extent and contains a quantity of well-appointed pens, the little creatures thrive exceedingly. Another field is allotted to cockerels, another to pullets, etc., etc., so Miss Edwards looks after her treasures in quite a motherly fashion. Ducks, too, are successfully bred, and of these a special company known as Coaley ducks, the colouring of which resembles Buff Orpingtons, are of unusually large proportions.

MARY HARTLEY-SMITH.

THOUGHTS & OPINIONS.

Where the Petrol-electric Car Fails.

The petrol-electric car may be a natural development—it will come from America first—of the dynamo self-starter and lighting set, but will it be an advantage? What of the enormous weight? Surely, also, the frictional losses will be greater. It might be suitable for slow-running, heavy vehicles, but not for fast pleasure vehicles, I feel sure. ELECTRO.

W. Hampstead.

A Criticism of Home-built Cyclecars.

I cannot understand the craze for building home-constructed cyclecars. Take, for instance, the one illustrated, designed by Mr. F. C. L. Johnson. I should be sorry to drive it. Look at the position of the engine: the back cylinder would get red-hot. Why a telescopic steering rod? A nice thing if one of the joints suddenly loosened. Look at the hideous body. The worst of it is these home-built affairs cost as much to make as a decent cyclecar that can be bought new, and in which reliance can be placed. S.J.T.D.

Leicester.

THE STEAM LIGHT CAR.

Where It Fails.

With all due respect to your correspondents, some of whom appear to be working up a little cheap publicity for their own inventions, we do not want the steam car. There is no fascination in driving such a vehicle as there is with the petrol car, and, on the other hand, a lot of messy, uninteresting operations. The steam car is not economical, and the constant need for filling up with water would be as much a nightmare as a leaky radiator on a petrol car. The one nuisance we should have all the time, but the other is curable. With such an incurable complaint, no one would continue to interest themselves in motoring. The steam car has failed, and will fail again, and I advise your readers to put no faith in it, and certainly not their money. GEORGE WATKINS.

Wolverhampton.

The Weight of Steam and Petrol Engines.

I have been reading the correspondence on steam cars with great interest, and I notice that one of your correspondents raises the point that the greater weight of the steam car must have a deleterious effect on tyres. This is by no means the case. On the contrary, owing to the fact that steam cars are not troubled with gearboxes, nor in many cases with a clutch, the tyres last much longer with a steamer than with a petrol car of equal power; this lightness on tyres may also in part be accounted for by the even and vibrationless running which is natural to the steam engine. Some drivers have even gone so far as to claim that tyres last one-third longer on a steam car than on a petrol car.

With reference to the statement made in the same letter that the engine and boiler of a steamer weigh considerably more than a petrol engine, the following figures, quoted by Mr. F. Coleman in a paper which he read before the Automobile Club in March, 1907, may be of interest. He stated that the engine of a 35-45 h.p. Renault weighed 706 lb., that of the engine of a 40 h.p. Napier 681 lb., while the complete power plant (engine, generator and burner) of a 30 h.p. White steam car weighed only 643 lb. It should be mentioned that the White 30 h.p. would be quite equal to either of the two petrol cars mentioned in actual power. These figures need no comment, except that the weight of the gear-box might quite reasonably be reckoned as part of the power plant of the petrol car, which would place the steamer in a still more favourable position. THERMOSTAT.

Westward Ho!

B24

The Price of a Singer.

In an article upon "Used Cars at Reasonable Prices," on page 5 of your issue of 22nd May, you include the following sentence:—"New Singers are now fetching £275 to £300." As this remark is in the centre of a paragraph referring very kindly to ourselves, we fear that it might, in the minds of your readers, be associated with our own opinions and policy. To that possible inference we desire to make a very emphatic disclaimer. We do not believe in—and we are very much averse to—charging premiums for cars over and above the correct makers' prices, even though these cars are scarce and difficult to obtain. We have sold a number of new cars this year, and at makers' prices, despite the fact that we could, no doubt, in practically every instance, have obtained a premium had we so desired. COLMORE DEPOT.

* * We quoted the price that new Singers are fetching to * indicate the comparatively low price of a 1915 model offered by the Colmore Depot.—ED.

A Morgan Coupe.

I am sending a photograph of my 1913 Morgan de luxe runabout, fitted with a coupé top, made by the Wilton Carriage Co., Croydon, which may be of interest to your readers. This little "bus" is now perfectly weatherproof.

25, Riversleigh Avenue, Lytham.

EDWIN KAY.



A coupe top on a Morgan. (See letter from Mr. E. Kay.)

The Average Garage Lathe.

I have been a regular reader of THE LIGHT CAR AND CYCLECAR since the first number, and have always found it one of if not the best publications of its class, but I think it is "up to me" to call your attention to the very misleading opening remarks made by the writer of the article on "The Use and Abuse of the Lathe." To tell the public that the average garage lathe is only fit for rough work is hardly in keeping with your usual fairness to the trade, especially at a time like the present when there are many repair shops all over the country turning out Government work to limits of accuracy much smaller than those needed for motor work, either new, repairs or replacements. Two of the three lathes in my own shop for more than six months past have been turning limit gauges for shell and fuse work to size limits of +.0003 in. on high and -.0003 in. on low, and I am only one of many who are doing like work.

I am well aware that the motor trade is unfortunate enough to number amongst its members, both as masters and so-called mechanics, men who hardly know the difference between a lathe and a chaff cutter, but I do not think their number is sufficient to justify your sweeping remarks. T. C. SMITH.

Coggeshall.

* * The series is by a contributor of great experience, and * the views expressed are his own, not ours.—ED.

Letters should come to hand by first post Wednesday at latest to ensure insertion in the following Monday's issue. Letters cannot be forwarded. If the address does not appear in the paper it is an intimation that correspondence is not desired by the writer.

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for illustrated details of the H.F. Vulcanizers which repair and preserve all tyres. There are a number of models—each one entirely self-contained and ready for immediate service, without previous experience, by following the few simple directions.

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READER

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B25

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cause much less inconvenience and worry to the motorist who uses the Low Acetylene Gas Generator.
 Lights can be turned up or down to any degree—just like coal gas—there is no need to be concerned about your discs, and you can obtain the maximum of light permitted under the new Order.
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SIZE.**
55/-
 Capacity—1lb.
 of Carbide.
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 Car size, 75/-
 May we send you
 full details?

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LOW**

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Expressly designed for the use of those who travel by road. Compact and portable—yet nothing useful is omitted. Shows the great highways with a clearness no other map of its scale can equal. Every motorist should possess one.

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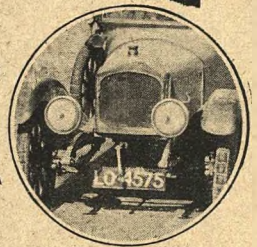
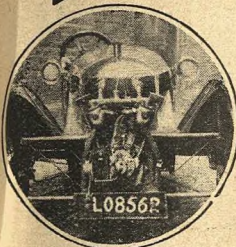
LIGHT CARS for BUSINESS MEN

New 1916 'SINGER,' New 'G.P. MORGAN,'
New 'PERRY' 2-cyl. Coupe, New 10h.p.
M.A.G. 'MORGAN,' New SAXON **In Stock**

- SINGER**, new Aug., 1915, stone grey, dynamo, speedom., 4,500 mls., 2 brand new 700x85 heavy Kempshalls on rear. Like new ... **£235**
- SINGER**, 1914, dynamo, just completely overhauled, repainted, new hood, many extras. Looks, and is, absolutely perfect ... **£190**
- HILLMAN**, 1914. This car been in expert ownership. Every necessary repair effected and 1st class, painted buff ... **£185**
- STANDARD**, 1914, dicky seat, repainted, tyres almost new, speedometer, 5 electric lamps, car perfection ... **£185**
- PERRY**, 1914, dicky seat, speedometer, had very little use, 5 tyres all excellent, body, hood, and all details splendid ... **£135**
- PERRY**, 1913, dicky seat, in course of complete overhaul, 5 new tyres, new hood, and being painted in first-class style ... **£120**
- G.W.K.**, 1915, de luxe body, with dicky seat, just been repainted French grey. This car averages 45 m.p.g. "Ever ready" ... **£140**
- G.W.K.**, 1914, 3-seater body, special high rear body for business use. Big improvement on standard body. Mechanically perfect ... **£145**
- G.W.K.**, 1913, standard model, completely fitted up for petrol or petrol substitute, two tanks, and all special attachments, ready ... **£100**
- VICEROY**, 1914, 10 h.p. 4-cyl., not done 3,000 miles, finished royal blue, five 700 x 80 grooved Dunlops, 5 lamps. Almost as new ... **£125**
- VICEROY**, 1915, 10 h.p., 4-cylinder, light 4-seater body, dynamo lighting set, painted French grey. An exceptional offer ... **£145**
- MORRIS-OXFORD**, 1913, fine 1914 complete power unit, overhauled to perfection, equal to any "M.O." on the road. Special ... **£140**
- CALTHORPE**, nominally a 1913, but we have fitted a brand new 1915 complete engine, repainted buff. Now perfect ... **£155**
- SWIFT**, 1914, 7-9 h.p., completely overhauled, mechanically perfect, finished buff, good tyres, 45 m.p.g., great climber .. **£115**
- MORGAN**, 1914, sporting model, 3 new tyres, 8 h.p. J.A.P. engine, hood, screen, lamps, all tools. Only requires painting ... **£79**
- G.W.K.**, 1913, with special large radiator, excellent tyres 700 x 80, hood, screen, many extras. Absolutely reliable ... **£95**
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FOR CUPS AND HUBS

Two essentials
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For cups and hubs

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"It makes them dumb."
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UPHOLSTERY AND HOOD MATERIALS FOR LIGHT CARS.

Equal in appearance and durability to the best leather.

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By mentioning "The Light Car and Cyclecar" when corresponding with advertisers, you will be working for the cause of the new motoring.

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BOX NUMBERS.—Advertisers desiring to have replies sent care of "The Light Car and Cyclecar" may do so on payment of a nominal fee of 6d. to cover booking and cost of forwarding such replies. The words Box, c/o "The Light Car and Cyclecar," count part of the advertisement.

DISPLAY ADVERTISEMENTS, ordinary issues, £14-0-0 per page. Scale of charges with reduction for series, sent on application.

Copy for, and all matter relating to, advertisements must reach the offices first post Wednesday, and should be addressed to THE MANAGER, "THE LIGHT CAR AND CYCLECAR," 7-15, ROSEBERY AVENUE, LONDON, E.C., to whom all communications concerning advertisements should be sent. If proof of displayed advertisements is required, copy should be forwarded in sufficient time to allow of it being submitted and returned.

Head Offices:—7-15, Rosebery Avenue, London, E.C. Telephone No. 5292 Holborn (four lines). Telegrams: "Pressimus, Holb., London."

Midland Offices:—9 & 10, Burlington Chambers, New St., Birmingham. Telephone No. 2498 Midland. Telegrams: "Presswork, Birmingham." 6, Warwick Row, Coventry. Telephone No. 983, Coventry. Telegrams: "Presswork, Coventry."

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These advertisements are now set in smaller type to meet the Government demand for economy in paper. At the same time the distinctive style of the setting makes it as easy as before to find the advertisement of any particular make of car.

LIGHT CARS AND CYCLECARS FOR SALE.

- A.-C. Sociable, all new tyres and tubes, recently overhauled and upholstered, 3 electric, 1 headlamp, generator, hood, screen, speedometer, new spare parts, tools, clock, good as new, £50, trial given. Russell, c/o Tamplin, Twickenham Green, Twickenham. Phone, 96 Richmond. 186-a103
- A.-C. Sociable, B type engine, fine running order, and in good condition, selling owing to Derby Group, £40 or offer. Queen's Arms, Norland Rd., Shepherd's Bush. 186-a717
- A.-C. Sociable, 1912, hood, screen, 3 lamps, horn, carrier, tyres very good, good running order, £35 15s.; wanted, Ford car. Booth's Motories, Hali. fax. Trade 186-b60
- A.-C. Sociable, 1914, hood, screen, speedometer, tools, etc., overhauled by makers, splendid condition, tyres good, £55. Hurry, Waterloo Rd., S.E. 187-b38
- A.-C. Sociable, 1912-13, repainted and overhauled, perfect order, accessories and spares, trial, bargain, £30; consider motorcycle exchange. Hawkes, 43 Blandford Rd., Bedford Pk., W. 186-b9
- A.-C. Sociable, 8hp, in perfect running order, with hood, windscreen, lamps, luggage carrier, tools, very easy for lady or novice to drive, immediate sale, £60. Apply, Captain Massy, Howleigh Cottage, Taunton. 186-a991
- A.-C. Sociable, 5-6hp, 2 speeds, hood, screen, lamps, tyres and paintwork excellent condition, £38. P. J. Evans, John Bright St., Birmingham. Trade 186-452
- A.-C. 10hp, 1914, dickey seat, 5 detachable wheels, full equipment, £160. Service Company, 292 High Holborn, London. Trade 222-215
- A.-C., late 1915, standard model, small mileage, as new, would consider a good offer. Box No. 8350, c/o "The Light Car and Cyclecar." 186-b66
- A.-C. 5hp, new magneto and carburettor, in good running order, good tyres and hood, any trial. Harper's Garage, Calne. Trade 186-b25

LIGHT CARS AND CYCLECARS FOR SALE
(continued).

- A.-C., 10hp, 1914, 3000 miles, perfect condition, 5 wheels and tyres, speedometer, other extras. 42 to the gallon, fast. Rhydylen, The Mount, Shrewsbury. 186-b24
- A.-C., 1914, 2-seater, painted royal blue, hood, screen, C.A.V. dynamo lighting set, speedometer, 5 Sankey detachable wheels, perfect mechanical condition, fully equipped, bargain, £190. Mebes, Light Car Specialists, 136 Gt. Portland St., W. Telephone, 3423 Mayfair. Trade 186-415
- A.-C., 1914, 10hp, 2-seater, speedometer, extra air valve, 5 detachable wheels, all tyres as new, just been thoroughly overhauled and painted, £170. G.L. Francis and Co., 22 Panton St., Leicester Sq. Trade 186-388
- A.-C., 12hp, late 1914, C.A.V. set, speedometer, clock, 5 Sankey wheels, £180, no offers. Harrison, 50 Oxford St. Museum 1402. 186-461
- A.-C., 1914, oversize tyres, dickey, speedometer, spare wheel, etc., car just repainted, perfect throughout, £170. Stretton and Smith, 23 Woodstock St., Bond St., W. Trade 186-446
- ALLDAYS 1914 Midget, 8-10hp, excellent condition, 3-speed-and-reverse gearbox, 5 lamps, Watford speedometer, hood and screen, £100. Edis, 40 High St., Old Fletton, Peterborough. 186-b32
- ALLDAYS Midget light car, purchased direct from Alldays by present owner and driven less than 5000 miles, with detachable wheels and spare, hood, screen, speedometer, lamp, complete, cost approximately £150, accept £87 for quick sale. Hoather, Bushey Heath, near Watford. 186-b17
- ALLDAYS, 10hp, 1915, 2-seater, dynamo lighting set, 2 horns, etc., repainted grey, £195. Colmore Depot, 49 John Bright St., Birmingham. Trade 186-437
- BABY PEUGEOT, 1915, first-class condition, all accessories, 2 spare tyres, seen by appointment, bargain, £120. Harnsworth, Christ Church, Oxford. 187-a720
- BABY PEUGEOT, de luxe, splendid condition, hood, screen, 110 guineas. 193 Rosendale Rd., W. Dulwich, S.E. 186-b28
- BABY PEUGEOT de luxe, late 1915, painted grey, black wings, hood, screen, luggage carrier, electric side and tail lamps, Stepney wheel, horn, fully equipped, car bad very little use, perfect condition, bargain, £145. Mebes, 156 Gt. Portland St., W. Telephone, 3426 Mayfair. Trade 186-414
- BABY PEUGEOT, late 1915, sporting model, hardly used at all, painted and upholstered blue, price £155. Ware and de Freville, Ld., 6 Gt. Marlborough St. (Oxford Circus), W. Gerrard 6472. Trade 186-391
- BABY PEUGEOT, 1916, 7.5hp, model de luxe, complete with all accessories, £190. Ware and de Freville, Ld., 6 Gt. Marlborough St. (Oxford Circus), W. Gerrard 6472. Trade 186-333
- BAYARD coupe, 8hp, blue, lined with Bedford cord, upholstery covers, 5 lamps, Stepney, tools, £220. Dee Motor Co., Foregate St., Chester. Trade 186-b41
- BAYARD, 2-seater, 1915, demonstration car, disc wheels, Stepney, Watford speedometer, mileage 1200, perfect condition, £170. Higgs, Post Office, Burghfield Common, Reading, Berks. 187-b30
- BEDELIA cyclecar, 7-9hp, twin, 2-speed gear, handle starter, glass screen, lamps, bargain, £25 or nearest offer. Frogmore, Westonozoyland, Bridgewater. 187-b29
- CALCOTT cars. Watkins and Doncaster, Ld., The Hall, 95 Great Portland St., authorized retail and sole wholesale agents for London and the Home Counties. Telephone, 6565-6 Mayfair. Trade zzz-345
- CALCOTT, 1915, wide 2-seater, painted slate grey, black wings, hood, screen, speedometer, dickey seat, 5 Sankey wheels, good tyres, dynamo lighting and T.E.C. electric self-starter, mechanically perfect, indistinguishable from new. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Tel., Mayfair 3426. Trade 186-423
- CALCOTT, 1916, 2-seater, dynamo lighting, speedometer, clock, an almost new car, painted grey, £260, including insurance policy. Below.
- CALCOTT, 1914, 2-seater, dynamo lighting, dickey, usual accessories, £210. Smith and Hunter, 15 Little Portland St., Oxford Circus. Trade 186-396
- CALCOTT, 1916, 10hp. It is difficult to obtain immediate deliveries. We do not state we can supply, but solicit inquiries. English Light Car Specialists, Robinson's Garage, Green St., Cambridge. Telephone 388. Telegrams, "Cars." Trade 186-443
- CALTHORPE Minor, officer's sporting 2-seater, round back, indistinguishable from new, 2424 miles only, speedometer, clock, many extras, besides hood, screen, etc., electric lighting, new tyres, sacrifice 140 guineas. Maesy-bryner, Chadwick Rd., Westcliff. 186-b56
- CALTHORPE, G.D.M. model, 1916, all brand new, electric lighting set, dickey seat, £236 11s., first cheque secures, never been used. Smithies, Livesey St., Rochdale. 186-a997
- CALTHORPE Minor, 1914, in excellent condition, hood, screen, 5 detachable wheels and tyres, 5 lamps, speedometer, £135. "B.," 302 Sangley Rd., Catford, S.E. 186-a988
- CALTHORPE, early 1915, 10hp, with special 2-seater body, C.A.V. dynamo lighting set, 5 Sankey detachable wheels, electric horn, one-man hood, speedometer, etc., exceptional condition, £175 or near offer. Wm. Betts, Ld., 126-8 High St., Wandsworth. Phone, Putney 1698. Trade 186-400
- CALTHORPE, 1914, coupe, just overhauled and repainted, upholstered in Bedford cord, very nice car, £170. Rey, 378 Euston Rd., N.W. Telephone, Regent 4219. Trade 188-432
- CALTHORPE, 4-seater, hood, screen, horn, 2 acetylene beadlamps, 5 detachable wheels with tyres, cream, £190. Colmore Depot, 49 John Bright St., Birmingham. Trade 186-435
- CALTHORPE, 2-seater, Lucas dynamo lighting set, complete with hood, screen, 2 horns, all lamps, speedometer, 5 detachable wheels and tyres, £170. Colmore Depot, 49 John Bright St., Birmingham. Trade 186-436
- CALTHORPE. P. J. Evans, John Bright St., Birmingham. Immediate and prompt delivery 4-seater, coupe, Grand Duke Michael and sporting models. Trade 186-453
- GARDEN monocar, 1915 $\frac{3}{4}$, 5-6 J.A.P., 2-speed, clutch, lamps, mechanical horn, perfect, little used, £68. Nesma Co., 429b King's Rd., Chelsea. Trade 186-b26

**Sold
within
7 two Days** :—

Pleased to say the car was sold two days after the advt. appeared.

Yours truly,

A. IRELAND.

LIGHT CARS AND CYCLECARS FOR SALE (continued).

CARDEN, 2 1914 models, 4-5hp J.A.P. engines, 1 finished in white and black and the other red, £65 and £82 respectively. Maude's, 100 Gt. Portland St., London, W. Trade 186-457

CHATER LEA, 1914, 2-seater, 8hp, 3 speeds and reverse, what offers? Taylor, 62 Ordehall St., W.C. Trade 186-66

CHATER LEA cyclecar, w.-c., 2-seater and dickey, 3 speeds and reverse, dynamo lighting, speedometer, 2 spare covers and tubes, not done 2000 miles, in perfect condition, trial run by appointment, £95. Adderbury, 90 Frohisher Rd., Hornsey, N. Trade 186-4743

CRESCENT cyclecar, 8hp, in good condition, £55. T. Cox, 29 Green St., Cambridge. Trade 186-472

DEEMSTER light car, 10hp, 4 cylinders, 1914, 3 speeds and reverse, live axle, very smart 2-seat body, hood, screen, speedometer, electric lamps, etc., fine bargain, £115. Maxwell Agency, 96 Crown St., Ipswich. Trade 186-552

DUO, 8-10 twin J.A.P. engine, hood, screen, smart, sporty and fast, extra good order, £40, part exchange motorcycle if modern. Maxwell Agency, 96 Crown St., Ipswich. Trade 186-551

DUO 1915 cyclecar, almost new, £90, a bargain, fully equipped. Percy and Co., 337 Euston Rd., London. Trade 186-466

ENFIELD 1916 light cars, 10hp, 4 cylinders, spare wheel and tyre, dynamo lighting set, 2-seater £215, 3-seater £230, coupe £255; cash, exchange and extended payments; 2-seater, £43 deposit and 12 monthly payments of £14 13s. 10d.; similar terms for other models, or other figures considered; quick delivery. Sole London Agents, Service Co., 292 High Holborn, W.C. Trade zzz-570

ENFIELD, 10hp, 4-cylinder, 5 detachable wheels, nickel finish, painted biscuit and black, several extras, only used for demonstration, splendid condition, £150. Roper and Wrecks, 112 Arundel St., Sheffield. Trade zzz-922

ENFIELD, 10hp, 3-seater body, clover leaf type, dynamo lighting, 5 Sankey wheels, speedometer, etc., hardly used, guaranteed, £190 cash, deferred payments or exchange. Service Co., 292 High Holborn, London. Trade zzz-364

ENFIELD 4-cylinder 10hp light car, supplied in March, 1916, all the latest improvements, only done 100 miles, owner having no further use will accept £195. Roper and Wrecks, 112 Arundel St., Sheffield. Trade zzz-282

ENFIELD Autolette, 1914, 8hp, 3 speeds, complete, hood, screen, 5 lamps, horn, speedometer and Stepney, £75. P. J. Evans, John Bright St., Birmingham. Trade 186-452

GLOBE cars and vans, new and second-hand, in stock; also all components; overhauls undertaken. Duke and Bell, Ltd., Globe Car Manufacturers, Carlton Engineering Works, High Rd., Tottenham. Trade 186-476

G.N., touring, racer, cheap, comfortable motor for 2, £70, guaranteed perfect order, very fast, electric lamps, speedometer, photos. 85 Owen Rd., Wolverhampton. Trade 186-512

G.W.K. A Car without a gearbox. Sole agent for Manchester, Gourlay, Fallowfield. Trade 189-e334

G.W.K., 1916 models, buff or blue finish, in stock. Palmer, 202 Great Portland St., London, W. Mayfair 4942. Trade 195-81

G.W.K., 2-seater, Coventry-Simplex engine, hood, screen, lamps, headlights, etc., £92 10s., exchange quoted. Collier, Deal St., Halifax, Latest type. Trade 187-269

G.W.K., 1915, painted black and white, electric side, tail, acetylene headlights, excellent condition, 5 detachable wheels, 700 by 80, £155. Goodwin, Grosvenor, Chine Cres., Bournemouth. Trade 186-521

G.W.K., 1915, de luxe body, with luggage rail, electric lamps, detachable wheels, all oversize tyres, tool box on running board, speedometer and tools, £150. Sussex Garage, 76 Grand Parade, Brighton. Trade 186-4998

G.W.K., 1915 model, perfect condition, electric side lamps, 5 detachable wheels, complete with all accessories, most reliable car, £110; can be seen Beckenham. Box No. 8342, c/o "The Light Car and Cyclecar." Trade 186-4986

G.W.K., G.W.K. light car, 1916 latest model, just arrived from works, immediate delivery, 5 detachable wheels, 5 lamps, horn, etc., the cheapest car to run, make sure of this now. Wilkins, Simpson and Co., 11 Hammersmith Rd., London. Trade 186-1927

G.W.K., 1916 light cars, 2 in stock, latest models, immediate delivery, trade supplied; we are G.W.K. experts and special authorized agents. Wilkins, Simpson and Co., 11 Hammersmith Rd., London. Trade 186-1928

G.W.K., 1913-14, 2-seat, hood, screen, 4 lamps, speedometer, horn, painted biscuit and black, 700 by 80 tyres, 3 months guarantee, 12 months free insurance, tuition free, exchanges and deferred terms 5 per cent., £100. Below.

G.W.K., 1912, 2-seat, screen, 2 lamps, horn, gradometer, tyres nearly new, bargain, £65. Cass's Motor Mart, only address 5 Warren St., Euston Rd., W. Museum 623. Trade 186-425

G.W.K.s, 2, 1916, fitted with hood, screen, lamps, spare wheel and tyre, etc., £195 each, list price 185 guineas; no premiums. Ware and de Freville, Ltd., 6 Gt. Marlborough St. (Oxford Circus), W. Gerrard 6472. Trade 186-394

G.W.K., 1913, hood, screen, spare-wheel, speedometer, just repainted buff, bargain, £85. Elce and Co., 15-16 Bishopsgate Ave., Camomile St. E.C.4. Trade 186-411

G.W.K., 1913, Brolt lighting set, Stepney, speedometer, clock, tyres nearly new, in exceptionally good condition, £110. Alfred Wastnag, 65 Gt. Portland St., W. Mayfair 3005. Trade 187-386

G.W.K., 1913, speedometer, 5 lamps, Stepney and tyre (unused), other tyres as new, been thoroughly overhauled and painted, £95. G. L. Francis and Co., 22 Panten St., Leicester Sq. Trade 186-389

G.W.K., 1915, de luxe, two-three-seater, speedometer, spare rim and tyre, oversize tyres, perfect throughout, done small mileage, £150. Stretton and Smith, 23 Woodstock St., Bond St., W. Trade 186-444

G.W.K., 1914, 9hp model, complete to usual catalogue specification, excellent order and condition, £125. Maude's, 100 Gt. Portland St., London, W. Trade 186-459

HILLMAN, 1914, dickey, carefully owner-driven, engine perfect, coachwork, tyres good, £18 worth extras, electric lighting, first offer over £160. 18 Surbiton Rd., Southend. Trade 186-557

HILLMAN, 1914, 9hp, wide 2-seater, painted buff, black wings, speedometer, extra air, 5 lamps, 5 Sankey detachable wheels, good tyres, perfect mechanically, fully equipped, £187 10s. Mobes, Light Car Specialists, 156 Gt. Portland St., W. Tel., Mayfair 3426. Trade 186-420

LIGHT CARS AND CYCLECARS FOR SALE (continued).

HORSTMANN'S. The best light car irrespective of price, luxurious economy combined with efficiency. Edwards and Parry, the special London agents, can give delivery from stock; every car specially tuned and tested by our Brooklands racing expert, increased power and more miles per gallon for no extra cost; trial runs by appointment. Write for illustrated catalogues, or call at 69 Great Queen St., Kingsway. Regent 5086. Trade zzz-399

HORSTMANN, 1915, de luxe, with Colonial type axle, speedometer, dickey, etc., self-starter, done small mileage, indistinguishable from new, £150. Stretton and Smith, 23 Woodstock St., Bond St., W. Trade 186-447

HORSTMANN, late 1915, 4-cylinder, 3 speeds and reverse, fitted self-starter, 5 lamps, condition as new, £150. Colmore Depot, 49 John Bright St., Birmingham. Trade 186-439

HUMBERETTE, 1914, water-cooled, complete, like new, £90. Freeman, Oakes and Co., Sheffield. Trade zzz-921

HUMBERETTE, 1914, water-cooled, excellent order throughout, had little use, electric light, £105. 37 Dunbar Avenue, Norbury. Trade 186-430

HUMBERETTE, 1913, 2 headlamps, electric side lamps, hood, screen, horn and clock, requires adjustments, £39. Booth's Motories, Portland Pl., Halifax. Trade 186-559

HUMBERETTE, late 1914, w.-c., hood, screen, speedometer, acetylene lamps, Stepney and tyre, etc., just repainted khaki and lined, and fitted new Dunlop tyres and gears, spares, etc., in new condition throughout, £115. Evans, 33 St. James's Road, Southsea. Trade 186-554

HUMBERETTE, late 1914, water-cooled, hood, screen, Stepney, 4 acetylene lights, speedometer, just repainted, excellent condition, £100 or offer. F. Newport, 2 High St., Crawley. Trade 186-545

HUMBERETTES, the largest stock in London, £55 to £125, 1913, '14 and '15 models. Percy and Co., 337 Euston Rd. Trade 186-461

HUMBERETTE, 8hp, 1914, air-cooled, model, with speedometer and all accessories, £70, or near offer; also 8hp water-cooled model, with Stepney, spare tyres and all accessories, indistinguishable from new car, £100 net; inspection and trial with pleasure. Wm. Betts, Ltd., 126-128 High St., Wandsworth. Phone, Putney 1698. Trade 186-402

HUMBERETTES, 1914, air-cooled, £70; 1914, water-cooled, £100; 1913, air-cooled, £65. Phone or call. Hayes, 108 and 344 Euston Rd. Museum 3541. Trade 186-399

HUMBERETTE, 8hp, air-cooled, complete, hood, screen, horn, handsome appearance, £75. Colmore Depot, 49 John Bright St., Birmingham. Trade 186-440

LAGONDA coupe, late 1915, spare wheel, speedometer, etc., car just repainted, very fine condition throughout, £125. Stretton and Smith, 23 Woodstock St., Bond St., W. Trade 186-448

MATCHLESS 3-wheel cyclecar, 8-10hp J.A.P. engine, selling on account of war economy, £50. Miss Stuart, Ranely, Cromborough, Sussex. Trade 187-2851

MATHIS, 1914, sporting model, disc wheels, dynamo lighting, speedometer, etc., £150, or near. Wilson, Bingham House, Petersham Rd., Richmond, Surrey. Trade 186-2996

MATHIS, 10hp, 1914, attractive, smart 2-seater, dynamo lighting, detachable wheels, in exceptional nice order, £155. Percy and Co., 337 Euston Rd., London. Trade 186-465

MATHIS, 1914, 8hp, sporting model, bucket seat, disc wheels, new tyres all round, just been repainted and overhauled, £140. Maude's, 100 Gt. Portland St., London, W. Trade 186-460

MERLIN cyclecar, 8hp J.A.P. engine, never been used, wants finishing, £50. Roper and Wrecks, 112 Arundel St., Sheffield. Trade zzz-283

MORGANS. We are contracting agents. Book for early delivery. Repairs and overhauls guaranteed. Burelli's, 2 Albany Rd., Cardiff. Trade 187-e176

MORGAN, G.P., 10hp, disc wheels, just delivered, officer ordered abroad, for sale, price (with extras), £117 net, no offers. Particulars, Gazon, 30 Evelyn Gardens, London. Trade zzz-314

MORGANS, 1916, sporting, £114 8s.; de luxe, £127; 1914-15 Grand Prix, £98 10s.; Standard models, £59 10s. and £65; exchanges quoted. Motor Exchange, 68 Horton St., Halifax. Trade 187-267

MORGAN, sporting, July, 1915, done 3000 only, splendid condition, hood, screen, £85. 48 Woodfield Road, Ealing. Trade 186-531

MORGAN, sporting, late 1915, 10hp M.A.G., overhead valves, tyres excellent, new on back, lamps, hood, screen, horn, etc., just overhauled, £95 or nearest. C. Kew, Queens' College, Cambridge. Trade 186-523

MORGAN, 1914, standard, splendid condition, electric lamps, speedometer, any trial, £63 cash, insurance included. A. 13 Park Tr., Swindon. Trade 186-514

MORGAN, sporting, 1915½, oversize tyres, lamps, hood, screen, splendid condition throughout, £85. Brookside, Sussex Place, Slough. Trade 186-547

MORGAN, Grand Prix, 1914, water-cooled, Binks, hood, screen, lamps, generator, painted yellow, black disc wheels, perfect condition, £105. 39 Sefton Pk. Rd., Bristol. Trade 186-534

MORGAN, 1914, G.P., No. 1, with J.A.P. engine, side valves, Binks carburetter, complete with hood, screen, Lucas dynamo lighting set, etc., as new throughout and finished white and black, £130; also 1916 G.P., No. 1 model, with J.A.P. engine, side valves, Binks carburetter, Watford speedometer, £125. Maude's, 100 Gt. Portland St., London, W. Trade 186-458

MORGAN, air-cooled, 1914, model de luxe, extra large tyres all round, full equipment, £68. 23 Martell Rd., West Norwood. Trade 186-55

MORGAN, 1914, a.-c., J.A.P., new condition, repainted, new tyres, etc., hood, screen, lamps, tools, jack, spares, tubes, new wings, new armature, £80. G. Meadows, Melville St., Gainsborough. Trade 186-51

MORGAN, 1916, sporting, French grey, practically new, 300 miles, 95 guineas, special luggage carrier, J.A.P. engine, Amac carburetter, hood, screen. 331 Fulham Rd., London. Trade 186-493

MORGAN, 1916, Grand Prix, only run 600 miles, as new, electric lighting, disc wheels, water-cooled M.A.G. engine, £125. R. Somerset, Coldstream Guards, Victoria Barracks, Windsor. Trade 186-493

MORGAN, G.P., 1914, slide valves, special cams and exhaust pipes, speedometer, lamps, hand Klaxon, many spares, recently overhauled, £85. 72 Cornwall Rd., Brixton, S.W. Trade 186-473

MORGANS, 5, in stock, 1914, '15 and '16 models, £70 to £115. Percy and Co., 337 Euston Rd., London. Trade 186-464

MORGAN, Grand Prix model, No. 2, with screen, done one journey, otherwise new, £125. Stevens, 184 Pentonville Rd., King's Cross, London. Trade 186-434

LIGHT CARS AND CYCLECARS FOR SALE

(continued).

MORGAN, water-cooled, Grand Prix, No. 2, overhead valve, J.A.P., complete accessories, screen, etc., grand condition, £38. P. J. Evans, John Bright St., Birmingham.

MORGAN de luxe, in splendid running order, £85. Colmore Depot, 49 John Bright St., Birmingham.

MORGAN, G.P., 1915, screen, 3 lamps, generator, horn, disc wheels, just overhauled and repainted red and black, 3 months guarantee, 12 months insurance free, tuition free, exchanges, deferred terms 5 per cent., £115. Below.

MORGAN, G.P., 1915, 5 lamps, screen, speedometer, 700 by 80 disc wheels, painted blue, £110. Cass's Motor Mart, 5 Warren St., Euston Rd., W. Museum 623. Trade 186-426

MORGANS, new and second-hand, can always be obtained from Elce and Co. Below.

MORGAN 1916 models. Let us book your order for one of these splendid cyclecars. We are contracting agents and can give best deliveries; spare parts in stock. Elce and Co., 15-16 Bishopsgate Ave., Camomile St., E.C. Phone, Avenue 5548. Trade 186-409

MORRIS-COWLEY coupe, 1916 type, only run 2000 miles, painted dark blue and fitted with many extras, cost £318, would accept £285, owner bought larger car. Apply, Box No. 8349, c/o "The Light Car and Cyclecar." 186-869

MORRIS-COWLEY, 2-seater, practically new, all necessary extras, £225 lowest. 14 Clavering Avenue, Barnes, S.W. 186-633

MORRIS-OXFORD, quick deliveries, free tuition, etc., wholesale and retail agents for Surrey and parts of Sussex and Hants., The Haslemere Motor Co., Ltd., Haslemere. Phone, 43. Trade 222-261

MORRIS-OXFORD, overhauled, repainted, new standard body fitted, also van body to fit, 5 wheels, 5 lamps, bargain, £150. Roper and Wrecks, 112 Arundel St., Sheffield. Trade 222-927

MORRIS-OXFORD de Luxe, late (November) 1914, painted stone grey, with 5 lamps, 5 detachable Sankey wheels, 2 horns, including a Stewart mechanical horn, speedometer, clock, perfect in every way and fully equipped. Julian's, Broad St., Reading. Phone, 1024. Trade 222-289

MORRIS-OXFORD, late 1913, hood, screen, 5 lamps, 5 detachable wheels, speedometer, just overhauled and repainted, £125. Mason, 38 Glazbury Rd., West Kensington, London, W. 186-846

MORRIS-OXFORD, 1914, de luxe, £160. Metropolitan Garage, Newcastle Place, Edgware Rd. Paddington 5664. 186-935

MORRIS-OXFORD, 1914, dynamo set, car as new; price and particulars. T. Cox, 29 Green St., Cambridge. Trade 186-470

MORRIS-OXFORD, just overhauled and repainted, running beautiful, £135. Rey, 378 Euston Rd., N.W. Telephone, Regent 4219. Trade 188-430

MORRIS-OXFORD de luxe, 10hp 1914, painted green, black wings, 5 lamps, 5 Sankey detachable wheels, speedometer, petrol can carrier, dickey seat, good tyres, mechanically perfect, fully equipped, bargain, £185. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Telephone, 3426 Mayfair. Trade 186-416

MORRIS-OXFORD, 1914, de luxe, 2-seater, dickey, 5 lamps, speedometer, only run 4000 miles, £185. Smith and Hunter, 15 Little Portland St., Oxford Circus. Trade 186-397

PERRY cars. Sole London and District Agents, Cars and Motor Sundries, Ltd., 175-177 Shaftesbury Ave., London, W.C. Phone, 1432 Regent. Trade zzz-745

PERRYS, 1916, 8hp models, 2-4-seaters and coupes, earliest deliveries, exchanges entertained. R. Bamber and Co., Ltd., 33 Liverpool Rd., Southport. Trade 188-116

PERRY car, with dickey, speedometer, April, 1916, done 500 miles only, Lucas lamps, £145. Apply, 61 St. Paul's Sq., Birmingham. 186-664

PERRY, 1915, 2-seater, 4000 miles, excellent order throughout, £15 extras, sacrifice £120. Thornberry, Glenwood Ave., Westcliff. 186-665

PERRY, 8hp, 1914, 2-seater, hood and screen, 5 detachable wheels and tyres, 5 lamps, new gears, horn and tools, Watford speedometer, insurance policy, £110. H.L.M., 72 Belle Vue Rd., Salisbury. 187-616

PERRYS in stock, latest 1916 8hp models, 3 speeds, complete, hood, screen, lamps, horn, 5 detachable wheels and tyres, £2 2s. tax and 40 m.p.g. P. J. Evans, John Bright St., Birmingham. Trade 186-451

PEUGEOT sporting cyclecar, 4-guinea tax, 60 miles per gallon, £45. Sabin, 27 Silverlock St., Rotherhithe New Rd. 186-a989

PREMIER, 7-9, 2-seater light car, hood, screen, lamps, etc., excellent climber, £58 10s., or exchange. Motories, 68 Horton St., Halifax. Trade 187-268

RILEY light car, 2-seater, with electric lamps, only used 50 miles, bargain, £105, any trial. Timberlake's Garage, Wigan. Trade 186-78

RITZ, perfectly new, latest type car, just arrived, with all fittings, complete, bargain, £125. Timberlake's Garage, Wigan. Trade 186-79

RITZ, 10hp, 4-cylinder, 2-seater, new, £145, keen exchanges quoted. Motories, 68 Horton St., Halifax. Trade 187-270

SABELLA-J.A.P., 2-seater, perfect order, cheap, or exchange G.P. Morgan. 76 Bootle St., Preston. 186-b10

SABELLA tandem cyclecar, 8-10 J.A.P., oil and electric lamps, clock, speedometer, gas head lamp, electric horn, spare wheel and tyre, tools, variable gear, etc., £40. M.A.C., 59 Geideston Rd., Upper Clapton, N.E. 186-b11

SAXON, prompt delivery, 1916 models. Obtainable from the Pioneer Agents, Western Motor Works, Chislehurst, Kent. Phone, Sidcup 180. Trade 192-689

SAXON, 11.9, brand new 1916 model, slightly shop-soiled, overstocked, accept £140. Roper and Wrecks, 112 Arundel Street, Sheffield. Trade zzz-925

SAXON cars. Although the tax is doubled, the Saxon tax is now only £6 6s. Petrol 40 m.p.g. Plenty of latest 1916 models for instant delivery. All spare parts stocked. We usually have demonstration Saxons of latest type at bargain prices. Lowe and Wood, Ltd., 280 Broad St., Birmingham. Trade 191-0197

SAXON new 1916 model in stock, painted cream and black, complete with magneto, £150. Tuke and Bell, Ltd., Motor Department, Carlton Engineering Works, High Rd., Tottenham, N. Trade 186-477

SAXON, 1916, only done few miles, disc wheels, electric lamps, £135. Rey, 378 Euston Rd., N.W. Telephone, Regent 4219. Trade 188-431

LIGHT CARS AND CYCLECARS FOR SALE

(continued).

SAXON, 11hp, 4-cylinder, 2-seater, all accessories, electric horn, Stepney, spare tubes, etc., engine in fine condition, recently overhauled, repainted 1914 model, run 9 months, £90 complete. Apply, Trevone Lodge, Court Lane, Lordship Lane, Dulwich. 186-433

SAXON, H.I. 1915, run 4000 miles, good condition, speedometer, and a lot of spares, ready for immediate service, £100. N. Plevins, Exhall, near Coventry. 186-b2

SAXON, 1915, 11.9, fitted with hood and side curtains, screen, speedometer, acetylene lamps and generator, thoroughly and mechanically sound throughout, and in first-class condition, neat car in appearance, snub lady driver admirably, £108, or near offer. Wm. Botts, Ltd., 126-8 High St., Wandsworth. Phone, Putney 1698. Trade 186-401

SINGER, phaeton or coupe, 1916 models, dynamo lighting, prompt delivery. London Depot, 17 Holborn Viaduct, London, E.C. Trade zzz-39

SINGER, 1916, 10hp., brand new. We have 2 cars in stock, both with dynamo lighting, one with dickey seat, immediate delivery, reasonable prices. Layton's Garage, Bicester, near Oxford. Phone 35. Trade 189-782

SINGER, 1916, 10hp, 2-seater, dynamo lighting, in stock. Palmer, 202 Gt. Portland St., W. Phone, Mayfair 4942. Trade 195-82

SINGER, 10hp, late 1915, Rotax lighting set, complete spare wheel, speedometer, hood, screen, horn, etc., engine absolutely perfect, very fast, 40 m.p.g. consumption, car looks just delivered, bargain, £220. Telephone, Dalston 2238. 186-b53

SINGER, late 1914, dynamo lighting, just repainted dark red, petrol can to match, dickey seat, hood cover, clock, speedometer, 2 horns, rewired throughout, engine and chassis thoroughly overhauled, 2 spare wheels, complete with cover, step mat, spare tube in case, tools, etc., tyres good, this car is in splendid condition, ideal for a lady, lowest price £180. Burn, Aandyke, Janson Rd., Southampton. 186-844

SINGER, 10hp, 1914, 2-seater, dynamo lighting, speedometer, detachable wheels, £190. Dee Motor Co., Foregate St., Chester. Trade 186-843

SINGER, late 1914, splendid condition, £180. Apply, H. Stuart, Hodgsons' Brewery, Kingston-on-Thames. 186-b40

SINGERS, the largest stock in London, £125 to £250, 1913, '14, '15 and '16 models. Percy and Co., 337 Euston Rd. Trade 186-463

SINGER, 1916, 10hp cars, largely used by the Government, list with prices on application; military orders particularly solicited, special precedence in delivery. English Light Car Specialists, Robinson's Garage, Green St., Cambridge. Telephone 388. Telegrams, "Cars." Trade 186-442

SINGER, 1915, dynamo lighting, speedometer, dickey, spare wheel, etc., perfect, unscratched, indistinguishable from new, £230. Stretton and Smith, 23 Woodstock St., Bond St., W. Trade 186-445

SINGER, 10hp, lighting set, latest model, as new, fully equipped, absolutely faultless, bargain, £230, 24 Portland Court, W. 186-a994

SINGER, 1915, 2-seat, hood, side curtains, screen, dickey, just repainted cream and black, dynamo outfit, 5 lamps, speedometer, 5 wheels, 3 months guarantee, 12 months insurance free, tuition free, exchanges, deferred terms 5 per cent., £245. Cass's Motor Mart, 5 Warren St., Euston Rd., W. Museum 623. Trade 186-427

SINGER, 1913, 10hp, just been repainted, in first-class condition throughout, £145. Below.

SINGER, 1913, 10hp, limousine-coupe, lately used by doctor, electric lighting, detachable wheels, many accessories, splendid car for lady driver or doctor, £190, a bargain. Ware and de Freville, Ltd., 6 Gt. Marlborough St. (Oxford Circus), W. Gerrard 6472. Trade 186-392

SINGER, 10hp, 1916, dynamo model, brand new, in stock. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Tel., Mayfair 3426. Trade 186-418

SINGER, 1914, 10hp, Rotax dynamo set, 2-seater, hood, screen, clock, speedometer, electric horn, 5 Sankey detachable wheels, good tyres, painted buff, fully equipped, £190. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Tel., Mayfair 3426. Trade 186-419

SINGER, 1914, 2-seater, dynamo lighting, speedometer, just overhauled throughout, £180. Smith and Hunter, 15 Little Portland St., Oxford Circus. Trade 186-395

SINGER, 1915, 10hp, dynamo lighting, speedometer, Klaxon and bulb horns, 8-day clock, spare wheel, splendid order, £225. Elce and Co., 15-16 Bishopsgate Avenue, Camomile St., E.C. Phone, Avenue 5548. Trade 186-410

STANDARD 1914 light car, £185. R. E. Jones (Garages), Ltd., Swansea. Cash or easy terms. Trade zzz-103

STANDARD, 1914 model, dickey seat, speedometer and full equipment, guaranteed £180. Service Co., 292 High Holborn, London. Trade zzz-977

STANDARD, 9.5hp, 2-seater, hood, screen, dickey, dynamo lighting, detachable wheels, speedometer, clock, horn, tools, £185. Dee Motor Co., Foregate St., Chester. Trade 186-b42

STANDARD, late 1914, 9.5hp, wide 2-seater, hood, screen, Rushmore headlights, side and tail, dickey seat, 5 Sankey wheels, good tyres, speedometer, mirror, Stewart horn, painted grey, mechanically perfect, fully equipped, £185. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Tel., Mayfair 3426. Trade 186-421

SWIFT, 7-9hp, 1914, grey, fully equipped, perfect order, privately owned. 11 Alexandra Rd., Reading. 186-a773

SWIFT, 1914, 7-9, complete with Stepney, hood, lamps, bulb and mechanical horns, heavy grooved Dunlops, £115. Rev. Saunders, C.F., Cherryhinton Military Hospital, Cambridge. 186-b58

SWIFT, 1911, 12hp, dynamo set; price and particulars. T. Cox, 29 Green St., Cambridge. Trade 186-471

SWIFT, 7-9, late 1913, exceptionally good order, hood and screen, Zenith carburettor, Lucas special generator and lamps, tyres as new, any examination, reasonable offer wanted. William Tatman, Midland Rd., Wellingborough. 186-b37

SWIFT, 1915, 7-9hp, complete with hood, screen, lamps, Stepney, tyre and tube, speedometer, driving mirror and Sparton horn, cost complete in June £165, only done 1982 miles, and in new condition, £135, any trial and examination. Forrow, 352 Fore St., Lower Edmonton, London, N. 185-b35

SWIFT, 7-9, 1913, cyclecar, in first-class condition, done 3000 miles, Stepney, hood, with side curtains, screen, speedometer, lamps, etc., price £95. Carter, 72 Northgate, Gloucester. 187-b13

SWIFTS, the largest stock in London, £65 to £130, 1913, '14 and '15 models. Percy and Co., 337 Euston Rd. Trade 186-462

LIGHT CARS AND CYCLECARS FOR SALE (continued).

- SWIFT 1914** cyclecar, 7hp, Stepney, etc., splendid condition, £120. T. Cox, 29 Green St., Cambridge. Trade 136-469
- SWIFT, 7-9hp, 1914**, bought March, 1915, French grey, 4 lamps, hood, screen, etc., any inspection, £110. Newcastle-on-Tyne. Box No. 8343, c/o "The Light Car and Cyclecar." 186-895
- SWIFT, 1914, 7-9hp, wide 2-seater, painted grey, hood, screen, P. and H. headlamps, Stepney, waterproof cover, mirror, disappearing dickey seat, petrol can and carrier, shock absorbers, oversize tyres, fully equipped, £125. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Tel. Mayfair 3426. Trade 186-422**
- SWIFT, 10hp, 1915, Brolt dynamo lighting, slate grey, dickey seat, speedometer, 5 Sankey wheels, good tyres, mechanical and bulb horns, car done under 3000 miles, fully equipped, £235. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Tel. Mayfair 3426. Trade 186-424**
- SWIFT, 7-9hp, 1914, painted slate grey, black wings, acetylene lamps, generator, Stewart speedometer, extra air, oversize tyres, as new, wire wheels, mirror, mechanically perfect, fully equipped, bargain, £120. Mebes, Light Car Specialists, 156 Gt. Portland St., W. Telephone, 3426 Mayfair. Trade 186-417**
- SWIFT 7-9hp cyclecar, complete with clock, speedometer, Stepney, in very good order, £125. Alfred Wastnag, 65 Gt. Portland St., W. Mayfair 3003. Trade 187-387**
- TINY, 1914, 8hp, fitted with dickey, all tyres as new, £100. T. Cox, 29 Green St., Cambridge. Trade 186-468**
- VICTOR cyclecar, model de luxe, 8hp, w.-c., new, with hood, screen, lamps, tools, etc., complete, price £110. See below.**
- VICTOR cyclecar, 10-12hp, 4-cylinder Nero engine, w.-c., 3 speeds and reverse, gate change, specially-finished and smart body, lamps, horn, tools, etc., price £150. See below.**
- VICTOR cyclecar, 8hp twin Precision engine, w.-c., 2 speeds and reverse, very smart body, blue handsomely upholstered, complete with all lamps, speedometer, hood, screen, etc., specially finished and fitted for officer, new, price £120; full particulars on application. Tyler Apparatus Co., Ltd., 11 Charing Cross Rd., W.C. Trade 189-473**
- WARNE, 9hp, late 1913 model, a new car, only used for demonstration purposes, hood and screen, 3 speeds and reverse, Stepney, 5 lamps, dashboard clock, speedometer, £35, a bargain. Maudes', 109 Great Portland St., London, W. Trade 186-456**
- WARNE, 8-10 J.A.P. engine, Binks carburetter, 2-speed countershaft gear, adjustable pulleys, hood, screen, lamps, tyres like new, overhauled and newly painted, engineer's certificate furnished, seen by appointment, price £70, cash, Douglas considered part payment. Glendevon, Portland Rd., Hove, Brighton. 186-539**
- WHITING, GRANTS in stock, cash or easy terms. R. E. Jones (Garages), Ltd., Swansea, London, Cardiff. Trade 192-919**
- WILLIAMSON, the Rolls-Royce of 3-wheelers, new model, in stock, £126, no premium. Motories, 68 Horton St., Halifax. Trade 187-271**
- ZEBRA, 5.2hp, 1914 model, 4-cylinder engine, 50 bore by 100 stroke, fitted 2-seater torpedo body, with hood and screen, painted green and upholstered in black leather, in real good order, £110. The Light Car Co., 331 Euston Rd., London, N.W. Phone, Museum 3143. Trade 186-408**

MISCELLANEOUS LIGHT CARS AND CYCLECARS.

- BRIGHTON.** Perry, Morgan, and other small cars. Turpin's, 22 and 29 Preston Rd. Trade 204-843
- LONDON'S** light car and cyclecar experts. If you are considering purchase of a light car or cyclecar, call and see us; we guarantee satisfaction; exchanges arranged. Percy and Co., 37 Euston Rd., London. Trade zzz-453
- DENBY** motorcycle, 6hp twin engine, wants completing, £25. Roper and Wreaks, 112 Arundel St., Sheffield. Trade zzz-284
- CYCLECAR, 9hp, w.-c., 3-speed and reverse, £50; exchange 3-wheeler or combination. 9 Redcliffe Mews, Hollywood Rd., Earl's Court. 186-163**
- OPPOSED-TWIN** light car, wants slight repairs, owner enlisted, £17, must sell. Newton, Bootle St., Preston. 186-520
- F. MEBS and SONS, the original light car specialists, have one of the largest and most varied stocks of light-type cars in London. All cars fully equipped and ready for immediate use. Pay a visit to our showrooms. We are bound to fill your requirements. 156 Gt. Portland St., W. Telephone, 3426 Mayfair. Trade 186-413**
- CASS'S MOTOR MART, at the time of going to press, have the following light cars actually in stock:—Singer, 1915, dynamo, £245; Morgan, G.P., 1915, £115; Morgan, G.P., 1915, £110; G.W.K., 1913-14, £100; G.W.K., 1912, £65. All above cars overhauled, repainted, guaranteed 3 months, 12 months insurance free, tuition free, exchanges, no combinations, deferred terms 5 per cent, trials free. For full particulars of above cars see small advertisements. If you do not see what you require, call, phone, wire or write, same may have arrived after going to press, as you observe our stock is always changing. If you are in want of a light car, it will pay you to inspect our stock of guaranteed light cars before going elsewhere. You will not regret doing so. Remember, we are always willing to purchase or exchange first-class light cars as per our "Wanted" advertisement, for cash. We will personally call and inspect your car within 150 miles. Above cars can be seen and tried at our only address, 5 Warren St., Euston Rd., W. Museum 823. Trade 186-428**
- PERCY and CO., 337 Euston Rd., have the largest stock of second-hand cyclecars in London, all makes, all prices, all models, from £20 to £300, exchanges arranged. Trade 186-467**
- A sporting monocar, 5-6 J.A.P., water-cooled, Bosch, B. and B. and Chater Lea gearbox, lamps, new tyres, in running order, spare tubes, chain-drive, differential, bargain, £25, or exchange. Plough Garage, Clapham, S.W. 186-a933**
- CHATER-J.A.P., brand new car, 1915, smart 2-seater, 8-10, waterproof Bosch, Zenith carburetter, hood, screen, lamps, never been used, cost £125, gift £67 10s., easy terms quarter down, 12 monthly payments. Wandsworth Motor Exchange, Ebner St., Wandsworth (Town Station). Trade 186-1606**
- SWIFT, 1912, 7hp, 1-cylinder, w.-c., 3 speeds, reverse, 2-seater, just overhauled, rebushed, new painted grey, exceptional condition, 42 m.p.g., hood, lamps, tools, spares complete, bargain, £50. Barlow, 25 Friar St., Reading. 186-a999**

MISCELLANEOUS.

- ACCUMULATORS.** Over 100 sizes always in stock. The cheapest and best house in the trade for reliable accumulators for car lighting, ignition, etc.; stock of slightly shop-soiled accumulators at greatly-reduced prices. The Essex Accumulator Co., 497-499 Grove Green Rd., Leytonstone, London, N.E. Trade zzz-505
- LIGHT-CAR** manufacturers and dealers requiring cheap but well-made and reliable sets of torpedo electric lamps of British manufacture should communicate with the Essex Accumulator Co., 497, 499 Grove Green Rd., Leytonstone, London. Trade zzz-183
- ALUMINIUM** number plates, best quality, any number, raised letters, very handsome, 9s. 6d. per pair. Freeman, Oakes, Devonshire St., Sheffield. Trade zzz-805
- CYCLECAR** components: Channel steel reinforced wood frames, with quarter-elliptic springs, £4 5s. 3d.; countershafts, friction sets, axles, wheels. Denby and Co., Ltd, Ilkley. Trade zzz-936
- HARCOURT** radiators, designed for Humberette, unused, cost 18s., any reasonable offer. Feek, 11 Charnwood St., Derby. 186-b61
- STEAM** car engines, generator tubes, pumps, etc., Serpollet make, 1 light rear axle and hubs, roller bearings, single chain drive, £2. Bertram, Gorebridge. 185-b14
- THE** complete stock of a well-known cyclecar manufacturer, including several practically complete commercial and pleasure cars, cost several thousand pounds, to be sold for a few hundred. If interested, apply, Hawkes, 43 Blandford Rd., Bedford Pk., W. Trade 186-b10
- IT** will always pay you to consult a specialist. We specialize in light cars and cyclecars exclusively, and if we should not have in stock just what you are looking for we can obtain it for you promptly. We charge you for this, of course, but only a nominal amount of 5 per cent on the price paid, and you are sure of getting what you require at the lowest trade price plus our commission. This is far cheaper than paying what you may be asked to pay elsewhere. Give us a trial. We please ourselves by pleasing you, and your recommendation is worth something to us. The Light Car Co., 331 Euston Rd., London. Phone, Museum 3143. Trade 186-405
- ENGINES, 10hp J.A.P., 4-cylinder, vertical, air-cooled, carburetter, fan and clutch, £12 10s.; 8hp J.A.P., 2-cylinder, V. Bosch waterproof magneto, carburetter and fan, £15 10s.; 7-9hp J.A.W.L., 2-cylinder, V. water-cooled, carburetter, contact maker, starting handle, £7 10s. All splendid order. Elephant, below.**
- HUMBERETTE 3** and reverse gearbox, cardan drive, £5; ditto, 2 and reverse, £4; ditto, back axle, bevel drive, fitted 700 by 65 wire wheels and springs, £5. Elephant.
- NEW** components. Light pressed-steel frame, 7 ft. 6 in. wheelbase, fitted dumb-irons, spring brackets, engine and gearbox frame, £3; set 14 in. springs, back 3 ft., front 2 ft. 6 ins., 25s.; 650 by 65 wire wheels, ball bearings, fitted spindles, 7s. 6d. pair; few pairs 700 by 65 wheels, ball bearings, less spindles, 10s. pair; steering wheels, 18 in. diameter, aluminium centres, 10s. 6d., new. Elephant Motor Mart, 10-18 Elephant Rd., London, S.E. Trade 186-474

NOTICE.

Owing to postal delays and irregularities, it is advisable to post advertisements **EARLY ON TUESDAYS** so as to ensure, as far as possible, that they reach us by the **FIRST POST** on Wednesdays. Lately several advertisements have been received too late for inclusion, although despatched on Tuesdays.

FRONT axle, 26 by 2 wheels, band brakes, springs, steering fittings, wheel track 2 ft. 6, 15s.; 2-gallon torpedo tank, oil tank and pump, pipes, 15s.; pair wide wing mudguards, 3s. 6d. F.P.P., 196 Upper Bridge Rd., Chelmsford, Essex. 186-b3

FOR sale, Bozler 2-speed gear, good, price 30s. Box No. 8344, c/o "The Light Car and Cyclecar." 186-a964

ACCESSORIES.

760 by 90 **STEPNEY**, complete, shock absorbers, Lucas generator, lamps, gradient meter, carburetter, speedometer, electric steering lamp. Beardshaw, Auctioneer, Wood Green. Trade 186-b22

BODIES.

SEVERAL new 2-seater light car bodies, upholstered black, roomy, comfortable, latest design. Nesma Co., 429b King's Rd., Chelsea. Trade 186-b27

CLEANING MATERIALS.

WASHED sheep cloths, superior to cotton waste, 2s. 6d. doz., carriago paid. Butcher's, 146 Stockwell Rd., S.W. 186-b7

ENGINES.

ENGINES, 11hp 4-cylinder Salmson, new 8-10hp Belgian 4-cylinder engine, 2-cylinder 8hp Dorman, 2-cylinder Renault, 9hp, all with magnetos, carburetters, etc. Wortham Blake and Co., Waltham Cross. Trade 186-411

EXCHANGES.

EXCHANGE. Motor-bicycles and light cars taken in part exchange for light cars, balance in cash or extended payments as preferred. Service Co., 292 High Holborn, London. Trade zzz-689

EXCHANGE good 2-seater magneto motorcar, perfect order, splendid condition, for magneto motorcycle or piano, or what offers? 170 Cape Hill, Smethwick. 186-b62

IF you wish to effect an exchange of any description, consult the specialists. We please ourselves by pleasing you. The Light Car Co., 331 Euston Rd., London. Phone, Museum 3143. Trade 186-406

EXTENDED PAYMENTS.

EXTENDED payments; all makes supplied; lowest terms. Service Co., 292 High Holborn, London. Trade zzz-698

INSURANCE. Lloyd's motor policies, payable monthly. Before insuring elsewhere, write for prospectus. Manager, General Insurance Co., 199 Piccadilly, London, W. zzz-994

ALBERT LAW (late motorcar manager for Wm. Whiteley, Ltd.). Deferred payment specialist, is now the managing director of the Purley Motor Garage, Ltd., Purley, Surrey. All makes of cars supplied by deferred payments, and he will be glad to advise on these matters free. Ring up 103 Purley (not a trunk call from London), or write, when you can be assured of his personal attention. Trade 189-433

FOR HIRE.

IF you want to hire a Standard, Calcott, Singer or any other make light car, for a day, week-end, week, or month, call at Warren's, 286 Euston Rd., 'Phone, 3081 Museum. Trade zzz-959

DRIVE yourself in a Calcott, Singer, Morris-Oxford, Standard or Hillman. Rey's can let you have one for a day, week-end, week, or month; moderate charges. Rey's are the largest light car hirers in London. Call, write, or telephone (Regent 4219), Rey's, 378 Euston Rd., N.W. Trade zzz-177

HOODS AND SCREENS

HOODS for light cars, 55s.; hoods re-covered in black waterproof leatherette, 45s.; in khaki, 25s. Stockport Garage Co., 37 Wellington Rd. N., Stockport. Trade zzz-189

INSURANCE.

WHY pay your insurance premium a year in advance when you can pay monthly without extra cost? Lowest rates for light cars. Before insuring elsewhere write for prospectus of Lloyd's motor policies, payable monthly. Manager, General Insurance Co., 199 Piccadilly, London, W. zzz-970

REPAIRERS.

THE AZ-NU Works, 21 Rivinghall St., Pentonville, N., radiator, lamp and welding specialists, American radiators a speciality. Trade zzz-817

RADIATOR and lamp repairs by skilled workmen, lowest prices, quickest delivery, no cure, no pay. Lloyd Motor Radiator Co., 277 Monument Rd., Birmingham. 187-1488

OVERHAULS to any make of light car. Morgan expert, official repairer to the Morgan Co., all parts in stock; fully-equipped workshop; experienced mechanics: best work only, moderate charges. S. Hall, Stevenage, Herts., 30 miles from London on the Great North Rd. 186-127

SWIFT MOTOR CO., LD., undertake the repair and overhaul of any make of car at their extensive new premises, 132-134 Long Acre; specialists in light car repairs; renovating and repainting of coachwork, also body-building, panel beating, etc. 132-4 Long Acre, W.C. 187-272

SITUATIONS VACANT.

Defence of the Realm Act

REGULATION 8 (b).

Under the above regulation, advertisements offering situations with firms whose works are situated within 30 miles of London and whose business consists wholly or mainly in engineering, ship-building, or the production of munitions of war, or of substances required for the production thereof, must contain the words:— "NO PERSON ENGAGED ON GOVERNMENT WORK OR RESIDENT MORE THAN 10 MILES DISTANT NEED APPLY."

When the advertiser's works are situated more than 30 miles from London all applications must be made through a Labour Exchange, by means of a box number allocated by the Board of Trade. Forms of application may be obtained from any Labour Exchange, or from the offices of this paper. Each advertisement must clearly state that no person already engaged on Government work need apply.

SITUATIONS WANTED.

KEEN amateur mechanic, does all own repairs, held licence 12 years, drives 500 miles weekly, requires appointment in works or garage, assemble, test, tune, etc., well up in finance or management. Box No. 8351, c/o "The Light Car and Cyclecar." 186-667

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THE Motor Training Institute Ltd., appointed by the Royal Automobile Club since 1907. Write for free illustrated prospectus, or call and inspect our institute—10 Heddon St., Regent St., W., or the works: 21a Loudon Rd., St. John's Wood, N.W. zzz-221

UNLIMITED practical motor tuition until satisfied for one inclusive fee at the largest motor instruction works in the world and situate in the heart of London. Apply, The British School of Motoring, Ltd., 5 Coventry St., Piccadilly Circus, W. The leading practical training institute for the motor industry; fully-qualified staff of instructors; open day and night; special car owner's economy course, saves endless expense (individual tuition at hours convenient to yourself); training also for every position in the motor industry; written guarantee for unlimited tuition until Royal Automobile Club certificate obtained (special course). Call or send postcard for free illustrated prospectus (C.C.). Note address, British School of Motoring, Coventry House, 5 Coventry St., Piccadilly Cir., W. zzz-403

BRIGHTON. Turberville Motor School for ladies and gentlemen and their servants. Driving instruction cars, new 1915 model. Technical rooms filled with complete working chassis. Lady instructor for ladies. Prospectus free. Bath St., Seven Dials. 'Phone, 371 Brighton. 220-512

BRIGHTON. Learn to drive in comfort and safety at the Turberville Motor School, Bath St., on an up-to-date new 1915 model car. Prospectus free. 'Phone, 371 Brighton. 220-513

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ST. MARTIN'S. Stepney wheels from 25s.; also liners, gaiters, etc.

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ST. MARTIN'S. We supply all your requirements. We can buy or sell your car on commission. We can quote you for tyres, lamps, lighting sets, magnetos, carburettors, etc. Call or write, St. Martin's Motor Works, 12 Upper St. Martin's Lane, London, W.C. (one minute from Leicester Sq. Tube). Telephone, Regent 5070. Trade zzz-198

TYRES AND TUBES (continued).

ECONOMIC. Continental 650 by 75 and 700 by 80, very heavy rubber-studded covers, 31s. 6d.; Palmer cord heavy 3-ribbed cyclecar covers, fully guaranteed, latest pattern, 700 by 80 50s., 710 by 85 57s. 6d.

ECONOMIC. Kempshall special oversize non-skid, 700 by 85 and 26 by 3, for 650 by 65, in stock; special allowance for old covers.

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ECONOMIC TYRE CO., 137 Lewisham High Rd., New Cross. 'Phone, New Cross 1393. Open till 9; early closing Thursdays. Trade 186-1950

WANTED.

Cars.

WANTED, for cash, immediately, any makes, second-hand light cars. Rey, 378 Euston Rd. Tel., Regent 4219. Trade 211-420

WANTED. Good second-hand or new light cars purchased for cash or taken in exchange for new cars or motorcycles. Service Co., 292 High Holborn, London. Trade zzz-253

WANTED, light cars, cyclecars, spot cash paid, bring or send. Wands-worth Motor Exchange, Ebner Street, Wandsworth (Town Station). Trade 188-1814

HUMBERETTE, Singer, Calcott, Standard, or any good make for cash. J. Phillips, 184 Elm Park Mansions, Park Walk, S.W. zzz-758

WANTED, Singer, Calcott, Standard, or other good makes of light cars, either for spot cash or exchange. R. Bamber and Co., Ltd., 33 Liverpool Rd., Southport. Trade 188-115

THE PYTCHLEY AUTOCAR CO., LD., are open to purchase for cash any modern and good make of light car; special price for Standard, Calcott, Singer, and Swift light cars. 216 Gt. Portland St., W. Telephone No., Mayfair 4535. Trade 187-163

WANTED, light car, not earlier than 1914, must be in really good condition. Mansions Motor Co., Ltd., 78 York St., Westminster. S.W. Trade 191-175

WANTED. Rey's are buyers for cash of Calcotts, Singers, Standards, Perrys, Hillmans, and all good makes. Regent 4219. Rey's, 378 Euston Rd., N.W. Trade 196-773

WANTED. Rey's will give £225 for 1915 Calcotts, £175 for 1914, £210 for 1915 Singers, and £150 for 1914. Rey's, 378 Euston Rd., N.W. Regent 4219. Trade 198-178

WANTED for cash immediately, any good make second-hand light car, distance no object. Alfred Wastnag, 65 Gt. Portland St. Mayfair 3005. Trade 190-276

WANTED, good second-hand light car, 1914 or 1915 Calcott or Singer preferred. C. 14 Oakley Avenue, Ealing. 186-a724

SINGER, Calcott, G.W.K., or other well-known light car, cash transactions, private owners' offers preferred. Box No. 8352, c/o "The Light Car and Cyclecar." Trade 186-b68

WANTED, 1914-15 light car, known make, 4-cylinder, immediate cash for best bargain offered. Write, Bertram, 1 Church St., Kingston. 186-555

WANTED, Duo or other cyclecar, exchange 1913 3½hp 2-speed model B.S.A. Cowey, 2 lamps, mirror, horn, watch, nearly new Dunlops, spares, condition guaranteed, give cash about £15. Vaughan-Jackson, 113 Wad-don Rd., Croydon. 186-550

LAMBORN MOTORS, LD., require at once a large number of light cars of the following makes, very best prices given:—Singer, Standard, Calcott, Hillman, Morris-Oxford. 3 Elizabeth St., Victoria, S.W. 'Phone, 6111 Victoria. Trade 186-b49

G.W.K. wanted in exchange for 1915½ Morgan and cash adjustment. Brookside, Sussex Place, Slough. 186-b48

These advertisements are now set in smaller type to meet the Government demand for economy in paper. At the same time the distinctive style of the setting makes it as easy as before to find the advertisement of any particular make of car.

WANTED, 1915 G.W.K., full particulars, must be good condition. Clarke, 8 Upper Tooting Plk. Mansions, Balham. 188-b15

WANTED for cash, modern 2-seater genuine second-hand light car, 8-10hp, late 1914 or 1915, no dealers. Write full particulars, stating mileage, to Mackie, 20 Thornsbeach Rd., Catford, S.E. 185-b36

LADY requires immediately modern light car. Tilly, 169 Blackstock Rd., Finsbury Park. 186-404

CASS'S MOTOR MART require to purchase A.-C. Calcott, G.W.K., Hillman, Humberette, Morgan, Morris-Oxford, Perry, Singer, Standard and Swift light cars. Mr. Cass will personally call and inspect your car free of charge, within 150 miles. 5 Warren St., Euston Rd., W. Museum 623. Trade 186-429

F. MEBES and SONS (Est. 1893), the original light car specialists, pay best market prices for high-class light cars. Write fullest particulars, or call with car; prompt cash. 156 Gt. Portland St., W. Telephone, 3426 Mayfair. Trade 186-412

WE specialize exclusively in light cars and cyclecars and are always open to buy any make. Offer us what you have for sale. We please ourselves by pleasing you. The Light Car Co., 331 Euston Rd., London. 'Phone, Museum 3143. Trade 186-407

CALCOTT, Perry and Singer cars wanted at once, high prices paid for reliable vehicles. Smith, 15 Little Portland St., Oxford Circus. T'de 186-398

G. L. FRANCIS and CO require good light cars, not earlier than 1914, best prices given. 22 Pantom St., Leicester Square. Trade 186-350

THE SWIFT MOTOR CO., LD., are prepared to take clients' cars for sale and exhibit them in their splendid and centrally-situated show-rooms, 132-134 Long Acre, and invite inquiries, when full particulars will be forwarded. Trade 188-475

STRETTON and SMITH will pay top prices for Stellites, Calcotts, Singers, Morris-Oxfords, Perrys, or any other modern cars of reputed make. 23 Woodstock St., Bond St., W. Trade 186-449

"THE LIGHT CAR AND CYCLECAR" is the best medium and has the largest circulation.

WANTED—Cars—(continued).

WANTED, Oalcotts, Singers, Morris-Oxfords, Standards, Hillmans, Humberettes, G.W.K.s for spot cash, new or second-hand, good prices. Maude's 100 Great Portland St., London, W. Trade 186-455

WANTED, Grand Prix Morgan, exchange 1913 Waverley light car, value £60, and a brand new 5-hp Martin motorcycle, costing £56. Brickett's Laundry, 23 Martell Rd., West Norwood. 186-b4

WANTED immediately, 9.5hp Standard, late 1914 or 1915 model, fitted with electric light preferred. Full particulars and price, Advertiser, Haddon Hall, Eastbourne. 186-a992

GENTLEMAN requires good English 1913-15 light car for cash. Bennett, Stafford Rd., Sidcup, S.E. 187-a990

WANTED, an A-C light car, in good condition, 1914-1915 model, latter preferred. Box No. 8345, c/o "The Light Car and Cyclecar." 186-a982

Wanted—Miscellaneous.

THE Editor of "The Commercial Motor" will be pleased to be advised of any stocks of old type or obsolete commercial-vehicle spare parts, as well as of spares for those touring-car models which are commonly used for conversion to delivery vans, etc. Particulars should state types and principal parts available, and these will be included in the Spare Parts Bureau list published regularly in the editorial columns of "The Commercial Motor." Letters should be marked "Spare Part," and addressed to "The Editor," "Commercial Motor," 7 Rosebery Av., E.C. zzz-75

WANTED, 4-seater cyclecar body, also 1 set of dome mudguards, for 700 mm. wheels. Particulars and price, Taylor, 21 Stamford St., Old Trafford, Manchester. 186-a1000

BOOKS AND PUBLICATIONS.

"MOTORISTS' HANDBOOK," containing 200 questions and answers; a most useful and instructive book; the novice should always keep a copy on his car, price 1s., by post 1s. 3d. The Motor Training Institute, Ltd. (Dept. D), 10 Heddon St., Regent St., W. zzz-587

"THE LIGHT CAR MANUAL." Written throughout with a scrupulous choice of the simplest wording. Makes every detail of the light car clear as it goes along. Economical running and upkeep specially considered, and all driving problems dealt with. Contains a most instructive section on the control systems of most light cars now on the market. Price, bound in cloth 1s. 6d. net, in paper 1s. net, postage 1s. 9d. and 1s. 3d. respectively from "The Light Car and Cyclecar" Offices, 7-15 Rosebery Av., London, E.C. zzz-684

"THE MOTORIST'S WORKSHOP." The ideal book for every owner of a light car or cyclecar who wishes to undertake his own repairs. Clearly and entertainingly written. Illustrated. 1s. net, post free 1s. 2d. from "The Light Car and Cyclecar" Offices, 7-15 Rosebery Av., London, E.C.

"HOW AND WHERE TO TOUR BY MOTORCYCLE AND CYCLECAR." A book on touring written from an entirely new standpoint—that of the motorcyclist and cyclecarist. Forms a guide to guidebooks, tells of best methods of preparing for tours. Specially planned routes suitable for light cars and cyclecars, 1s. net, post free 1s. 2½d., from "The Light Car and Cyclecar" Offices, 7-15 Rosebery Av., London, E.C.

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For the convenience and security of our readers we have an approval-deposit system. The intending buyer forwards to our office the amount of the purchase money, which will be acknowledged to both parties. Notes or money order save time. Cheques must be made payable Temple Press Ltd., and are acknowledged to seller when "cleared." If a sale is concluded, we forward to the seller the amount agreed upon. If no sale is made, we return the amount deposited. In either case we deduct a commission of 1 per cent. (3d. in the £, 1/- minimum), on amounts deposited up to £50, 1 per cent. on amounts from £50 to £100, and 3 per cent. on amounts exceeding £100, to cover our expenses of booking, postages, etc. Carriage is to be paid by the buyer. If the article is returned, each party pays one way. The risk of damage in transit is the seller's. Articles on approval are not to be retained more than three days, unless by arrangement between the parties. All disputes to be settled by the arbitration of the Editor of "THE LIGHT CAR AND CYCLECAR."

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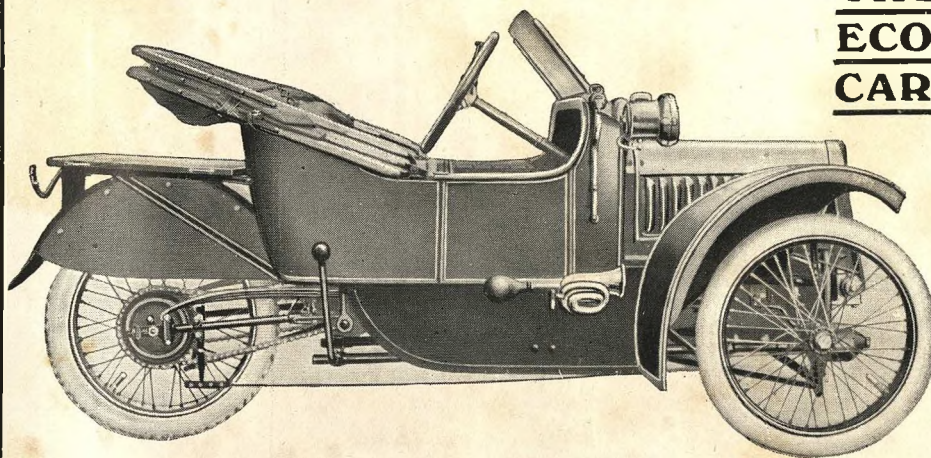
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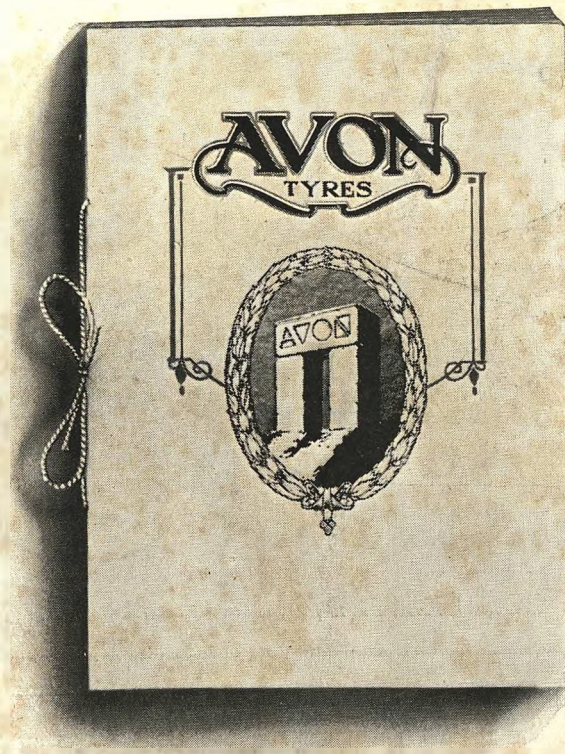
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