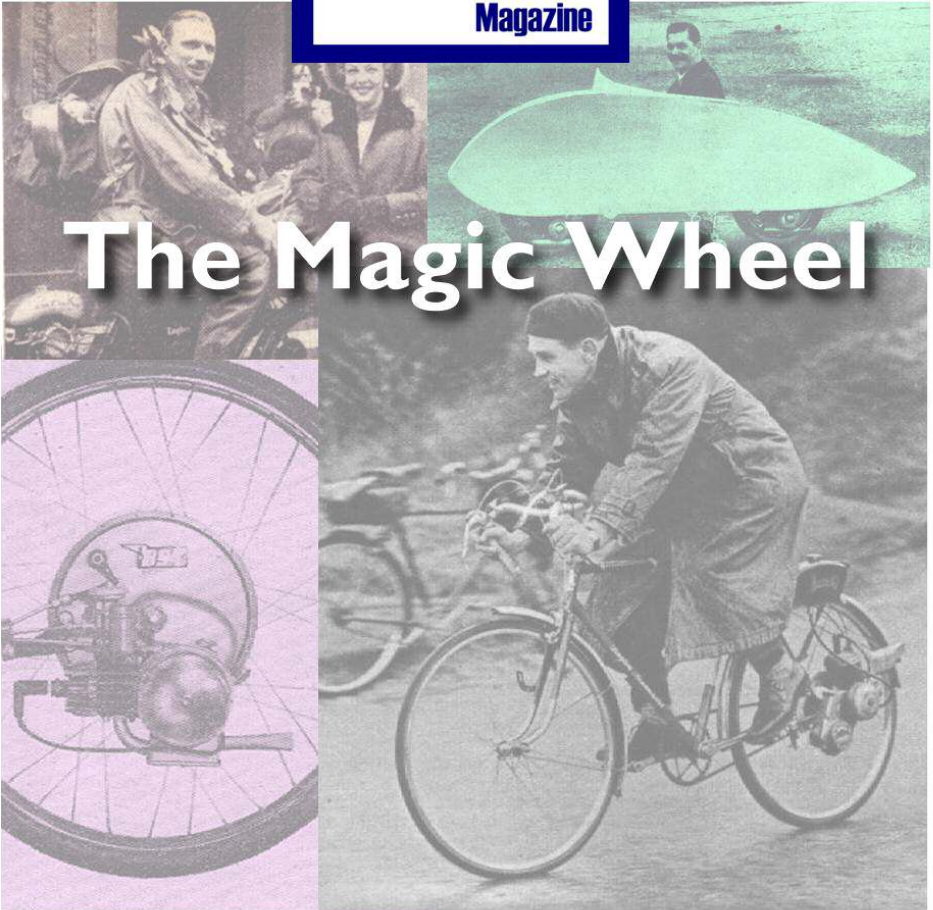
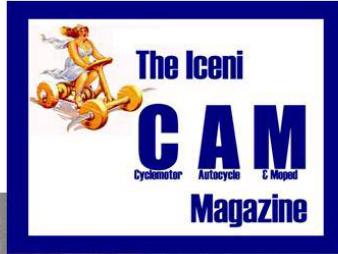


IceniCAM Information Service



The Magic Wheel

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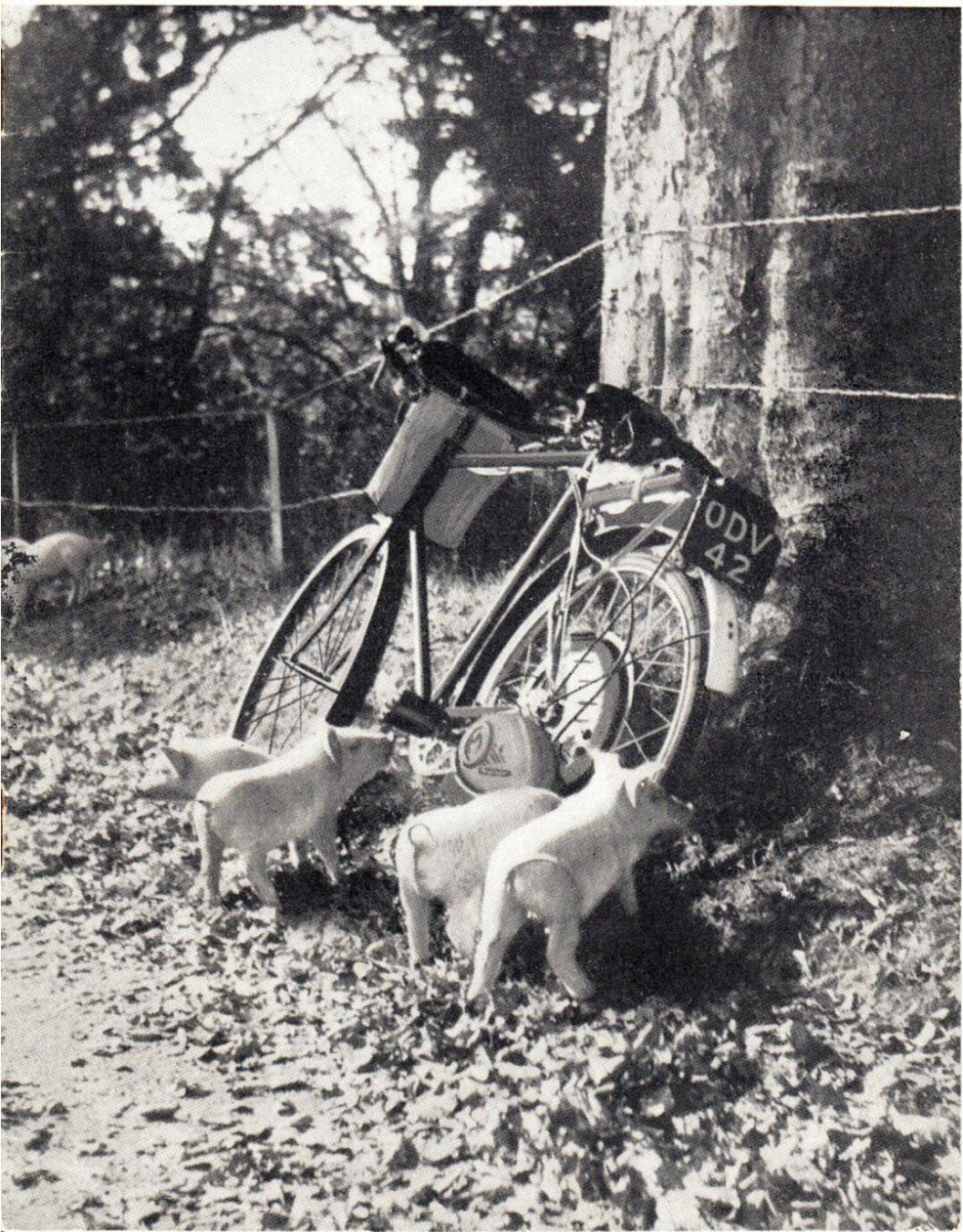
Magic Wheel

A QUARTERLY MAGAZINE FOR CYCLEMASTER OWNERS

Vol. 2. No. 2.

JULY, 1954

Sixpence



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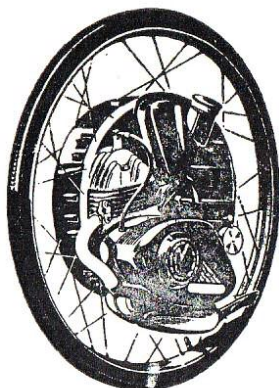
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VOL. 2
NO. 2

JULY
1954



PRICE
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THE MAGIC WHEEL

A QUARTERLY MAGAZINE FOR CYCLEMASTER OWNERS

*All communications should be addressed to
Cyclemaster Ltd., 38a, St. George's Drive, Victoria, London, S.W.1.*

Rear Lights and Reflectors

Whenever new legal regulations are made or forecast, there are always some people who get hold of the wrong end of the stick, and spread stories which get other people worried. They don't do it deliberately, of course, but it happens.

We have received quite a few letters from Cyclemaster owners who have been told that their rear lights and reflectors will soon be illegal, because they are the wrong size or shape or something, and they naturally want to know what they have to do to become law-abiding citizens again.

The answer is that nothing has to be done in a panic.

It is quite true that new regulations will have been made by the time this magazine appears, but they will not apply to machines already in use until October 1st next year—1955. They will apply to *new* machines from a year earlier—October 1st, 1954, but that doesn't affect the user so much as the supplier of the bicycle.

What are the new requirements?

The Road Transport Lighting Act of 1953 says that pedal cycles and solo

motor cycles must have a reflector as well as a rear lamp. These new regulations will lay down specifications for both.

So far as the lamps are concerned, the diameter must be not less than $1\frac{1}{2}$ inches if the lamp is circular. If it is any other shape, the total area must be not less than the area of a circle $1\frac{1}{2}$ inches in diameter. That applies to cycles, motor cycles, and horse-drawn vehicles. For motor cars the diameter must not be less than 2 inches.

On reflectors, the reflecting surface must be the same— $1\frac{1}{2}$ inches in diameter, or of an equal area if the shape is not circular.

So it all boils down to this. If you buy a new bicycle on or after October 1st this year, you must see that it has a lamp and a reflector, and that they are the right size.

If you carry on using the machine you already have, or buy one before October 1st this year, you need not do anything about it for another twelve months, and then all you have to do is buy a lamp and reflector that comply with this law.

WHAT THE SMALLHOLDER WANTS



"I'm almost sure that my Cyclmaster costs me less to run than having my boots soled."

Mr. Arthur D. Saltwell, who sends us this picture, is not only an experienced smallholder, but a very well-known writer on that most important subject. He has had 131 articles published in one journal alone.

He sent us a little article with the photograph, and his heading was "Something for Nothing—or next to Nothing." This is what he wrote:—

"No Brass Farthings"

That's the motor the smallholder wants—something that costs nothing or next to nothing to run. I'm a smallholder so have not got the brass farthings to knock together, and that's where my Cyclmaster comes in.

I use, I abuse my Cyclmaster seven days a week; just popping in and out with my Cyclmaster laden up with

such loads as only a smallholder can get on his poor old bike. What mileage my machine has done over the three—or is it four?—years I've had it I don't know about, but what I do know is I use about a gallon of petrol a month with—don't gallow but I should think—somewhere near a quart of oil every three months, and as for the quart of clutch oil I bought I'm leaving this with my Cyclmaster in my Will so that my beneficiaries may continue with plenty of clutch oil.

Any way what I really wanted to tell you is that I know little or nothing about my Cyclmaster except that it always goes, and about all I do is to give it an occasional all round drink, and I don't know—but I think—I'm almost sure that my Cyclmaster costs me less to run than having my boots soled.

You ought to know about ESPERANTO

Seasoned travellers will tell you that the English language, with perhaps a smattering of French, will take you almost anywhere in the world.

Well, that may be so, provided you stick to the main routes and large cities, and even then the English you hear may not always be immediately intelligible. And a smattering of French won't go far in Norway or Greece, or your few halting words of German in Portugal or Italy.

An easy solution of this language problem has been found, and has passed the test of practical use over many years.

International Language

It is the international language, Esperanto. It is spoken in all the five continents. And what is more important for our purpose, it is not confined to the big cities; its users are to be found in the most unexpected and out-of-the-way places.

Esperanto is a language put together by a brilliant Polish philologist named Zamenhof, and first published by him at his own expense in 1887. The operative words are "put together"—it is not an *artificial* language made up of words invented by its author. Its grammar and vocabulary have been carefully distilled and simplified from the most widely-known existing tongues—mainly English, French, German, Russian, Spanish, Italian, Latin and Greek. All these elements were smoothly moulded into a simple living language, phonetically uniform and of astonishing flexibility, capable of expressing the finest shades of meaning, and now possessing a vast literature of its own.

Plenty of Textbooks

Text-books are available in dozens of languages, and any person of average intelligence can acquire a working knowledge of it in a few weeks, with or without a teacher. There are only sixteen rules of grammar; there are no

irregular verbs to memorise, and by a simple system of prefixes and suffixes you can largely build up your own vocabulary from a comparatively small number of roots as you go along, with the certainty of being instantly understood by any other Esperantist in any part of the world. There are no dialects—the pronunciation is standard everywhere—and what was good Esperanto sixty years ago is good Esperanto today.

Here is a sentence in English: "*How beautiful is that mountain, with the lower slopes clad in green trees, and the white summit kissed by the clouds!*"

And here is the same sentence in Esperanto:

"*Kiel bela estas tiu monto, kun la malaltaj deklivoj vestitaj per verdaj arboj, kaj la blanka supro kisata de la nuboj!*"

If you go to the trouble of learning this international language, how do you proceed to put it into use?

The Five-Pointed Star

Obviously, having launched yourself and your trusty Cyclemaster into some foreign countryside, you cannot just go around asking everybody you meet whether he or she speaks Esperanto.

No, Esperantists are a little better organised than that. There are two principal ways of making contact with fellow Esperantists, if you do not already possess the names and addresses of any through correspondence.

First, there is the badge, which all Esperantists should wear, and which it is to be hoped you will never fail to wear yourself. It is simply a five-pointed green star. Just that—no more. And if you can persuade one of your friends to make you a little pennant to mount on the handlebars or front mudguard extension of your Cyclemaster, so much the better. If it is rectangular, it should be three-quarters green, with the upper quarter next to the mounting white, and in the centre of the white quarter the five-pointed green star. If it is triangular,

it can have a broad green border, enclosing a white triangle containing the star.

The second way, however, is less "chancy" than hoping to spot a badge on a passer-by.

The Esperantists have formed an organisation called the Universal Esperanto Association (Headquarters address: Heronsgate, Rickmansworth, Herts.), which has voluntary representatives, known as "Delegitoj" or Delegates (the plural ending "j" is pronounced like the English "y") in many hundreds of towns and villages all over the world. They undertake to serve their fellow Esperantists by any means in their power, and as they usually know most of the Esperantists in their own locality they can introduce you to somebody who can assist you even when they are unable to themselves.

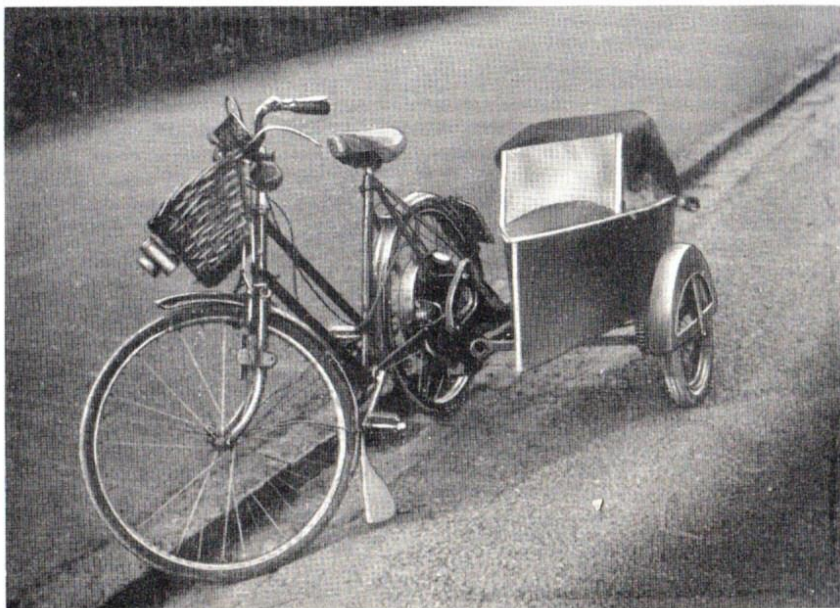
Every year the U.E.A. issues a Yearbook (Jarlibro) to all its members, which contains, among a great deal of other information, an up-to-date list of the names and addresses of all the Delegates.

With the Yearbook is enclosed a perforated sheet of gummed and dated slips, which you attach to letters to Delegates as proof of your membership. You are asked to enclose with your letter an international reply-coupon (obtainable at all main post offices)

When you are going abroad, you write to Delegates in the places you propose to visit, giving them the approximate date and time at which you propose to call on them or their nominees.

The great advantage of this form of holiday is that you can visit any country you fancy, irrespective of whether you understand its language or not. You avoid all waste of time and money on translators and interpreters. You can converse with all kinds of interesting people on an absolutely equal linguistic footing.

If you want to know more about Esperanto, you can obtain details of available text-books and so on from the British Esperanto Association (Inc.), 140 Holland Park Avenue, London, W.11.



Mrs. J. D. Andrews, of Reading, receives a guinea for this photograph of the "Trinder" side-car from which her son (nine-months old) "sees the world." As the ordinary fixing plate of the pedal-cycle type side-car would not fit on to the hub of the Cyclemaster wheel, the hub nut was extended about 3 inches by means of a steel bar suitably threaded to screw on to the hub spindle at one end; welded to the fixing plate, threaded and fixed with a nut at the other end. The standard fixing clamps were also extended by welding steel bar "spacers" to these ($\frac{1}{2}$ inch dia.). There was, however, a little bit of "play" owing to the $\frac{3}{8}$ inch extension, so a steel bar ($\frac{3}{8}$ inch dia.) was welded to the rear end of the plate and bolted to the seat column, just under the seat.

GOING ABROAD THIS YEAR?

This is the second of two articles which we are publishing by permission of the Editor of "The Vauxhall Motorist."

Belgium

A small country with fine sands and sea coast, attractive hilly scenery in the Ardennes, and a wealth of interest in its fine old architecture and art galleries. Small inns and country hotels are not expensive, but in the fashionable coastal resorts, in the main touring centres and in cities such as Brussels, first-class hotel accommodation is likely to be on the expensive side. Food in Belgium is solid, good and varied—usually very much to the English taste. Beer is good and plentiful, and wines (imported) are not more expensive than they are at home.

Price of petrol:

6.35 and 6.60 francs a litre
1 Belgian franc=1.75 pence

Denmark

Another country with fine sea coast and sands. Not many hills, but lots of waterways, and much to attract holiday-makers who seek constantly-changing interest without a great deal of travelling. In general, hotels are simple and not at all expensive. In Copenhagen many first-class hotels are available. But accommodation during the summer is always hard to get and prices are considerably higher than those generally ruling in the country. Food is very good and varied, cold food predominating in the country hotels. Beer is plentiful and not too expensive; wine is imported and rather more costly than at home.

Price of petrol: 0.77 krone a litre
1 Danish krone=12.40 pence

Holland

There is an attractive coast with several excellent bathing resorts on the North Sea, and in the interior are cities

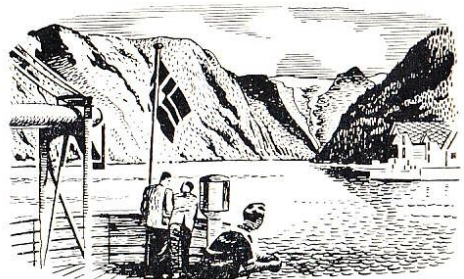
of great interest, such as Amsterdam, The Hague and Rotterdam. Art lovers will enjoy Holland; and the splendid network of flat roads makes the country easy motoring territory. Hotels in the countryside are simple, clean and homely, and the food good though not very elaborate. In the cities will be found excellent first-class hotels and equally excellent restaurants—prices, of course, being on a corresponding level.

Price of petrol: 0.372 guilders a litre
1 guilder=22.75 pence

Norway

A country of great beauty, largely unspoilt, and with magnificent rivers, lakes, woods and mountains. Roads are adequate, although sometimes rougher than is general in Europe. In the south will be found pleasant, "soft" farming country, and many of the larger towns (including the capital, Oslo); in the middle, around the Bergen area, are the fjords and mountains, and some of the most striking scenery; and in the north, wild, deserted and lovely countryside. Hotel accommodation in Norway is usually of a very high standard. Some places offer delightful, simple country hotels. In other places, hotels which were destroyed during the war have now been rebuilt on very modern lines; often somewhat severe from the outside, these hotels are usually beautifully decorated and furnished inside. In the cities there is usually a range of hotels from first-class down to small boarding houses.

Norway is an inexpensive country by British standards. The small country hotels take very good care of visitors at quite low rates. The rebuilt modern hotels, although somewhat dearer, still offer excellent value for money. First-



class hotels in cities have charges comparable with first-class hotels in most places.

Food in Norway is good, plain and plentiful, with strong accent on cold dishes. Beer at about 2s. a bottle is available at most hotels, and often wine can be bought, too. Spirits are obtainable at few hotel bars.

Price of petrol:

0.94 and 0.96 krone a litre
1 Norwegian krone=12 pence

Portugal

Speaking generally, Portugal is less developed and therefore more "unspoilt" from the touring point of view than most European holiday grounds. The main roads from the Spanish frontier to the Atlantic coast are good, and hotel accommodation very adequate generally; in cities and resorts such as Lisbon, Estoril and Coimbra, very high-class hotels are available. Charges are reasonable—about 30s. a day in the small establishments, up to 50s. at first-class hotels. One of the most popular resorts is Estoril, about half an hour from Lisbon, with one or two pleasant beaches, where there are small inns along the road between. An area less well known, but with fine beaches and many good hotels, is the south-west corner of the peninsula.

It must be remembered that the overland route to Portugal entails a long drive down through France and across Spain, and a minimum of three weeks' holiday is usually required to give even a brief stay in the country.

Price of petrol: 4.60 escudos a litre
1 escudo=2.98 pence



Spain

A fascinating country, with the very popular Costa Brava on its Mediterranean coast and the well-known resort of San Sebastian and innumerable small resorts on the Atlantic coast. Further south, opposite the north African coast, between Gibraltar and Malaga, are other splendid sandy beaches. In addition to its coastal attractions and the hot sunshine of spring and summer, Spain possesses towns and cities of very great interest—although many motoring tourists consider the intervening roads rather bare and monotonous.

Hotel accommodation in Spain is good and (except for several luxury hotels) inexpensive. So much so that anyone planning to visit the Costa Brava or the coast south of Barcelona between the middle of June and the middle of September should make certain in advance of hotel reservations. Food, except at hotels in the cities and big resorts, is very Spanish and rather rich in character, and has the merit of costing very little. In the cities will be found, of course, the usual cosmopolitan hotels

In a Nutshell

FOREIGN TRAVEL ALLOWANCES: £50 for each person over the age of 12, £35 for children under 12; in addition there is a "motor cycle" allowance of £10. (These allowances do not apply to Scandinavia, where for all practical touring purposes there are no longer any currency restrictions.)

DOCUMENTS: You will need a passport for each passenger, and various documents for the car according to the countries to be visited. The only sensible course is to arrange the documentation through the A.A. or R.A.C., who charge a small fee.

INSURANCE: Your insurance company can supply you with a special "overseas touring" card, covering you in the countries you intend to visit.

CUSTOMS: Usually quick and straightforward at Continental frontiers; it is well to be prepared for a less cursory examination on arrival back in Britain.

ROADS: It can be taken for granted that main roads will present no difficulties; secondary roads on the Continent are, in general, best avoided by those unused to overseas motoring. It is as well to familiarise oneself with the road-signs used on the Continent, which differ from those used in Britain. The A.A. or R.A.C. will help members here.

PETROL: The prices given at the ends of each of the "country" sections, together with the pence equivalents to the different currency units, are taken from the Shell Touring Service List of Retail Selling Prices. Where two prices per litre are shown, they refer to "ordinary" and "super" grades. One Imperial gallon=4.54 litres.

offering food and accommodation of a standard equal to similar places elsewhere in Europe. Local beer of a kind is available, but Spanish wine is both enjoyable and cheap, and goes well with the climate and the food.

The Spanish Mediterranean coast offers a great variety of small resorts, many with sandy beaches, or at least a sandy bay with good bathing. Hotels are small, usually picturesque, and generally built for a hot summer climate. Because the hotels are not very big they rapidly become fully booked, and a great deal of wandering about at night may face those who assume that they will find accommodation on arrival without previous booking.

A number of very attractive rest-houses and inns are scattered throughout Spain; some have been specially built, some are converted monasteries or old castles. They have been established to make accommodation available in districts where normal hotels are hard to find or non-existent, and to get accommodation in them you have to book very early. (An article on them appeared in the *Motorist* for May/June last year).

Price of petrol: 5.5 pesetas a litre
1 peseta=approx. 2¼ pence

Sweden

Magnificent lakes and forests characterise the Swedish countryside. The rate of exchange makes the country comparatively expensive compared with Norway and Denmark. Hotel accommodation throughout Sweden is of a very high standard; clean and simple in the villages, very up to date and often luxurious in the cities. As in Norway, many first-class hotels have been entirely rebuilt since the war, and in some places completely new ones have been erected. Food in the bigger hotels is of the very highest order, with a wide choice of dishes—not only the traditional Swedish dishes, but internationally-known ones as well. In the first-class hotels and restaurants meals are fairly expensive, but in the countryside—where the food, although good, is much simpler and less varied—the cost is quite reasonable. Beer is easily obtainable, as well as a

good selection of wines.

Price of petrol: 0.58 krone a litre
1 Swedish krone=17.15 pence

Yugoslavia

Now that Yugoslavia is “open” for touring again, more and more British holiday-makers are being attracted by the marked change it offers from the conventional European touring grounds. Probably the most popular area is the Dalmation coast, with its well-known resorts on the Adriatic Sea, its fine beaches and its many ancient buildings. Inland are the enormous forests and the Alps, as well as the capital city of Belgrade and towns of great historical interest such as Sarajevo and Mostar. The national costumes worn in different parts of the country are always an attraction to camera enthusiasts.

For those armed with the usual customs documents, there are no restrictions so far as motoring is concerned. For the most part roads are rough and ready by British standards, and in the summer often very dusty. Petrol is reasonably easily available in the principal towns and villages; but it must be borne in mind that Yugoslavia is not one of the Continent's highly-developed touring areas, and service facilities are limited.

Hotels are classified in four categories—“de luxe,” “A,” “B,” and “C”—and the variation is considerable. Full-board accommodation at “A” grade hotels costs about £2 per day, at “B”-grade hotels about 30s., and at “C”-grade hotels about £1 a day. Travellers' cheques can be cashed at all the principal towns.

Price of petrol: 56 and 84 dinars a litre
1 dinar=0.28 pence





A Tricycle for the Cyclemaster

This sturdy and beautifully-built machine is the Harding Model C, built by R. A. Harding (Bath) Ltd.

Built throughout of solid drawn steel tubing of the finest quality, it combines lightness and strength. The 22-inch frame is stove-enamelled and rustproof.

The overall length of the machine is 5 ft. 2½ in., and the width is 2 ft. 5½ in., which means that it will pass comfortably through an ordinary 2 ft. 6 in. doorway. Saddle and handlebars are adjustable to the convenience of any individual of normal size, but machines can be built to special sizes if the necessary measurements are provided.

Front wheels are 18 in. fitted into standard front cycle hubs, and either Dunlop or Avon tyres are fitted. The 6½ in. cranks are fitted with rubber pedals.

The machine has two brakes, and in addition, of course, a very powerful

backpedalling brake is built into the Cyclemaster wheel.

Equipment includes reflector, tool-bag, pump, spanner and so on.

The price of the tricycle is £22, plus purchase tax of £4 2s. 6d. (making £26 2s. 6d.). The Cyclemaster wheel costs £27 10s., upon which no purchase tax is payable, so that you can obtain the complete outfit for £53 12s. 6d.

Included in the price of the Cyclemaster is a lighting dynamo, and the extra charge for wiring and providing the necessary electric lamps is only £2 5s. The tricycle carries a guarantee for twelve months, and deferred terms can be arranged.

The manufacturers do not appoint agents, but will gladly supply through your local Cyclemaster dealer. Should you prefer to deal direct, the address is 19 Lower Bristol Road, Bath.

About Your CARBURETTOR

By The Engineering Manager

It is the function of the carburettor to mix the petrol (petrol and oil) and air in the correct proportion so that almost complete combustion takes place and, therefore, maximum efficiency is obtained.

This would be very easy if the engine was intended to run only at a constant speed and load. As a constant rate of supply of both parts of the mixture would be required, adjusting devices on their inlets would then be unnecessary.

The Cyclemaster engine, as with all road vehicles, however, is required to work under an almost infinite variety of conditions—slow and fast; up hill and down; traffic, twisty roads and all the rest.

It is impossible for any carburettor to give the ideal mixture under all combinations of circumstances, but very complicated instruments are now produced for motor cars which almost approach this ideal. It is our opinion, however, that cycle motor engines should be equipped with the simplest possible device which is capable of giving good performance and economy. Both types of carburettor we use achieve this object very well, provided they are clean and correctly adjusted.

Don't Wipe with Rag

Cleaning the carburettor, which is fully dealt with in your Instruction Book, consists only of dismantling the carburettor, cleaning the parts by washing them in clean petrol and rebuilding by reversing the dismantling procedure. We definitely advise against wiping any parts with rag. The bits of fluff which adhere to the parts could block the jet very quickly after reassembly.

Mixture adjustment is carried out by turning an air screw (A) on the float chamber cover. Screwing the air screw "in" enriches the mixture; screwing it "out" weakens it.

The level of petrol in the float chamber, is very important, and is controlled by a simple valve which works on much the same principle as the cistern of the cold water tank in your house.

When the level in the float chamber falls a tapered valve (B) attached to the float falls away from a fixed seating and so admits fuel to the float chamber. As the level in the float chamber rises the float rises until the taper again presses on to its seating, thus cutting off the supply. This process continues constantly and automatically.

Beware of Dirty Fuel

If the operation of this valve is hindered in any way it will upset the working of the carburettor. If the petrol level falls too low, the engine may possibly fade out altogether. If the level becomes too high, more than the correct quantity of fuel will flow through the carburettor jet. This, of course, makes the mixture too rich, with consequent bad performance, excessive fuel consumption and a high rate of carbon formation. The most common cause of this sort of failure is grit from dirty petrol or oil lodging on the valve seating.

From the float chamber, petrol is fed to the mixing chamber by means of the jet (C). This jet is simply a very small hole through which, during normal running, all the petrol has to go. The diameter of this hole is not more than 1/50th of an inch, which again means that even the smallest particle of foreign matter can cause trouble.

The jet controls the maximum amount of petrol which can flow through into the mixing chamber and therefore the flow of fuel when the throttle is fully open and the engine working at speed. It is at the bottom of the jet tube (D) underneath the throttle valve (E). The top end of this tube projects into the mixing chamber opening through which the air passes on its way into the engine.

When no air is passing over the tube petrol does not flow, because the petrol level is controlled by the float chamber so that it does not reach this height. However, the petrol level is quite near to the top of the tube and as air rushes over the top of this tube it draws out the petrol in the form of a fine spray exactly in the same way as any of the hand sprays which are in common use in the home.

Generally speaking, the more air coming through the carburettor the faster it passes the jet tube and the more petrol is drawn out. This condition applies all the time the throttle is fully open. When the throttle is partially closed the velocity of the air is increased and the throttle valve is shaped in such a way that the path of the air is deflected downwards over the jet and this restricts the rate at which the fuel is drawn out.

How Suction is Controlled

The suction on the jet tube is controlled entirely by the shape of the throttle valve. As the throttle gets lower in the mixing chamber the bottom of the valve fits quite closely over the top of the jet tube and this almost cuts the supply of fuel off altogether. A small amount for low speed running and idling is introduced into the engine by means of a slot (F) cut into the bottom face of the throttle valve in the same direction in which the air is flowing.

Mixture adjustment is provided by allowing some air to come through the jet tube with the petrol. The amount of air is controlled by a valve (A) on top of the float chamber and this valve can be adjusted without dismantling the carburettor.

As the main quantity of air passes over the jet tube it draws out petrol together with the air from this valve. If the valve is closed, or nearly so, the amount of petrol drawn up from the jet is excessive, but as the air valve is opened the ratio of air to petrol is much increased and so the mixture is weakened.

Because of the petrol which collects in the air passages when the throttle is closed an added advantage of this arrangement is that the jet tube momen-

arily supplies neat fuel immediately on opening the throttle, followed very quickly by petrol and air.

The mixture must be enriched when the engine is to be started from cold.

In the B.E.C. carburettor a rich mixture for starting is obtained by supplying petrol to the air stream from two jets instead of the usual one. The second jet (G) is only in operation when the extra petrol supply well (H) has been filled by opening the valve (I) which controls the supply from the main float chamber. Being connected to the float chamber the well will only fill up to the level of the float chamber, therefore, it cannot overflow however long the control valve is kept open. Approximately five seconds will usually fill the well.

On starting up, the extra petrol is drawn through the second jet until this supply well becomes empty. The return to the normal running mixture happens automatically before you have travelled very far.

The valve is held on to its seating by a spring, a flexible wire (J) and ring being attached to the top for manual operation, therefore petrol cannot possibly be used through the valve and also jet (G) when you are riding.

If the petrol filter is choked, the mixture will be weak and if the air filter is choked the mixture will be rich—so it is important to keep both clean.

One final point. Of necessity, the petrol jet is to one side and some little way away from the float chamber. Therefore, tilting the carburettor away from the vertical will cause the petrol level to rise or fall in the jet tube even though the same level be maintained in the float chamber. In fact if the angle of the carburettor is a long way out, petrol may spill over the top of the jet tube and leak from it when the engine is not running.

It is essential that the float itself is vertical and this is best checked by making sure that the top face of the float chamber is horizontal.

Remember that every time that you use the easy starting control more petrol than normal is supplied to the engine—so use it only when the engine is really cold.

THE AMAL CARBURETTOR

The main principles of the Amal carburettor are, at least for normal running, similar to those of the B.E.C. It embodies:

- (1) A float chamber to control the petrol level.
- (2) A mixing chamber to mix the petrol and air in the correct proportions.
- (3) A device to enrich the mixture when starting from cold.

The float chamber works in the same way as that in the B.E.C. carburettor except that the inlet valve itself is at the bottom. The instruction books for this model show how it works.

The mixing chamber is fitted with a throttle valve which is shaped to control the flow of air over the jet tube, but in addition a tapered needle is suspended from the throttle valve so that this needle enters the jet tube as the throttle is closed. As the needle is thicker at the top the further it is lowered the more space it takes up in the jet tube. In this way it restricts the rate at which

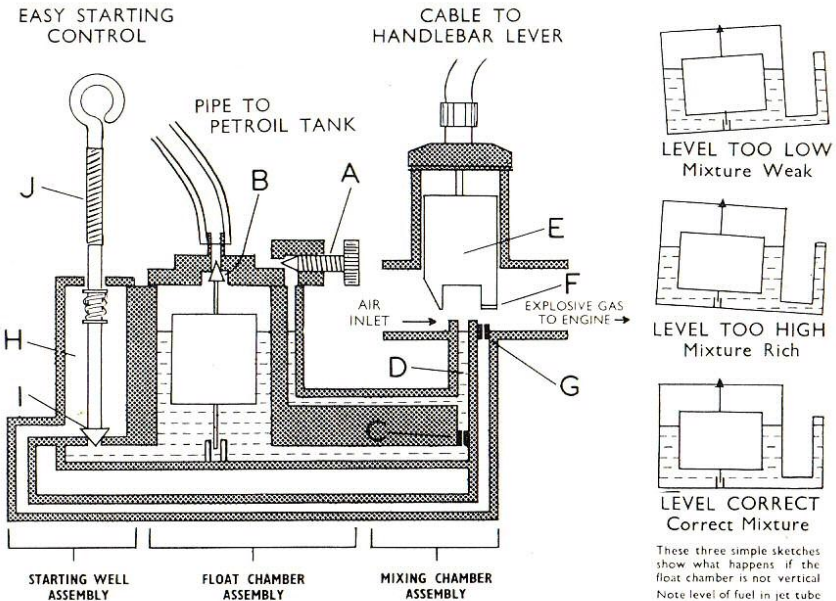
petrol is drawn through the jet at small throttle openings. In other words, the throttle valve restricts the air and the needle restricts the petrol so that the mixture remains the same as far as possible at all throttle positions.

The mixture supplied by the Amal carburettor can be adjusted by altering the position of the tapered needle—provision is made for it to be set in any one of five positions.

In the Amal carburettor the mixture is enriched by closing the shutter on the air inlet so that a great suction is put on the jet when the engine revolves, but the engine will not run for very long unless this valve is opened to allow the right amount of air to get through.

An air filter which is choked with dirt will produce almost the same result as closing the shutter—so keep it clean.

To get the best economy, remember to use the choke only when the engine is cold and open it as soon as the engine will run satisfactorily without it. Easy manipulation without dismantling is possible with the use of a new type control (see p. 48 for details).



Diagrammatic Section of B.E.C. Carburettor



Mr. T. R. Williams, of Carshalton, sends this snapshot of a young enthusiast who believes in looking after maintenance.

Pictures You H

Here is a selection of the best snapshots we have received of "The Magic Wheel" was published. The pick of that appears on our cover, for which Mr. F. Palmer wrote a cheque. Senders of other pictures have received a cheque but please do send us good sharp prints, as large as possible. It is impossible to print from them, and all we can do is to write on the back of a print, please do so as large as possible. If marks come through, and this also means the



Above: Three students of Manchester Grammar School leaving for home. Snap sent to us by Mr. J. M. Snowdon (on left). Below: Interesting work for students of St. Crispin's Secondary School, Wokingham (sent by Mr. K. V. Williams).



Above: Miss T. Williams on a tour round Northamptonshire. Below: An eight-month old



Have Sent Us

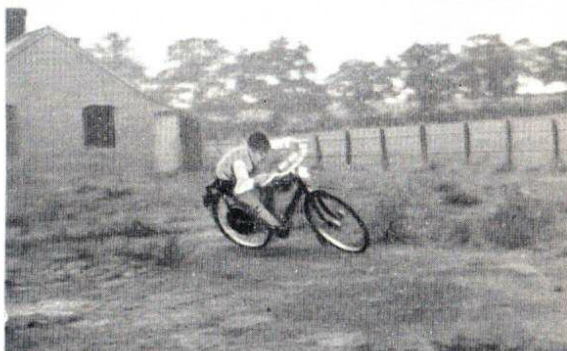
ceived from our readers since the last number of the bunch, in the Editor's opinion, is the one of 21 Pound Street, Exmouth, has received a yards. We welcome interesting photographs, as possible. If they are small and fuzzy, it do, very regretfully, is return them. When htly as possible. If you press heavily, the hat the picture cannot be reproduced.



Pere Eternal, Father of Mariners. Miss Jean K. Milne, of Stoneleigh, Surrey, took this snap during a tour of Normandy and Brittany.



Helma Watts: a self portrait taken during a 200-mile Northumberland. Below: A home-made carrier for Master Conlan, of Dublin, sent in by daddy.



Above: While Mr. C. R. Hill, of Rugby, was dozing in the sunshine, this is what his son, Nigel got up to. Below: Master Barron, of Halifax, gets used to the feel of things on his father's Cyclemaster.



PACKED with THRILLS

By H. J. Lewis

"I cannot cease to marvel that our little machines should have come through so successfully."

Last summer, my wife and I toured the northern Highlands of Scotland from Fort William to Skye, Durness, Tongue and down to Kingussie.

The first 450 miles were packed with more thrills than many a Continental tour, and although snow and glacier were missing, rocky coasts, beautiful lochs and expansive moors and glens were with us all the time. We even had to slow down when a herd of deer bounded across the road in front of us one day, and there was always something of interest to see.

We encountered strong, cold winds, and starting in a heat-wave we had foolishly discarded warm clothing. Some days we had to rush sudden steep hills, see-sawing on top and aiming at the road to left or right, seldom straight ahead. Always up and down, sometimes twisting and turning through sunlit woods along the shore of a blue loch framed in the mountains.

Single-width Roads

All the roads were single width, with frequent passing places. Cars do not often wait on cyclists, who have to take their chance on the edge of the road. When lorries and coaches appear, one just has to retreat to the last passing place. Some surfaces were excellent, but many were bumpy and some were strewn with sharp-looking stones; yet we had only one puncture.

Most hills were rideable, but we sometimes ran up against gradients up to one in six, resulting in some hurried dismounts. Hotel charges were also steep but youth hostels and friendly houses, spotless and polished, with lots of

scones and crumpets (and, wonder of wonders, even in the most remote parts, push-button lavatory cisterns!) enabled us to run our course and remain solvent.

Dirty Heel-taps

Our one difficulty was fuel. Petrol pumps are owned by hotels, with many hilly miles between. We carried a reserve quart can and filter funnel. The latter was a godsend on one occasion when we got the dirty heel-taps of two cans. To fill our tanks and provide a reserve, our can had to be filled twice. Although some proprietors were friendly and co-operative, most grugged the bother, and some (even when we were taking a meal) declined entirely. Had we carried a pint of light oil to cover our whole tour (instead of half a pint), we should have saved trouble. Only once did we get single Shell, and once a disgruntled proprietor put in triple Shell before we could stop him. What a blessing if one could buy Cyclemaster petrol in quart containers.

"when I think . . ."

We both agreed that this was one of our finest holidays, and our colour snaps bear witness to the scenery. But when I think of the rough roads and severe gradients, the manhandling on and off small ferry-boats and through narrow gangways of steamers, the occasional drenching rains with fierce winds, not to mention a one-in-five descent for two miles over boulders and heather, I cannot cease to marvel that our little machines should have come through so successfully.

H. J. LEWIS.



Some of the magnificent scenery enjoyed by Mr. and Mrs. Lewis on their tour of the Highlands. Above, Sqrnnan Gillean, and below, the rocky shore of Loch Scavaig, both in Skye.



THE THINGS YOU SAY!

We receive hundreds of letters every week, and they are all dealt with promptly by post. Most of them deal with matters of interest only to the owners concerned. When points of general interest are raised, the letters, with brief comments, will be set aside for publication in this feature.

Ferry Charges

Dear Sir,

In one of your early issues you published a letter about high parking charges for bicycles fitted with auxiliary engines. Here is another instance of over-charging.

The Clyde Navigation Trust charge one penny for a cyclist travelling on their Renfrew Ferry. If the cycle has a small engine, the rate charged is as for a motor cycle—fourpence. The annoying thing is that the conductor on the ferry as often as not asks for a penny only in these circumstances, and the traveller has to draw his attention to the fact that he is wrong, and insist upon paying four times as much. If this is not done, the ticket collector on the other side will spot the mistake at once, and send the rider back to the conductor to pay up.

Glasgow.

S. M.

(It seems all wrong to us, and we trust it will not be long before most of these anomalies are sorted out.—Ed.)

One Quart equals ???? Gallons

Dear Sir,

While I have every sympathy with your correspondents who have had difficulty at filling stations, in buying less than a gallon of fuel, I must in fairness state that I never have come up against this "refusal to serve" problem; neither have I had any trouble over mixing. I just ask them to fill the measure with the proper brand of oil, and then do the mixing myself.

My first two calls for a fill-up with a new Mercury Cyclemaster are worth recording. At the first I found myself awaiting my turn behind a most luxurious saloon car, the liveried

chauffeur calling for fifteen gallons and paying for them with a generous tip in addition. The salesman, with the name of the establishment on his spotless white coat, served my modest quart and a measure of oil with the same willingness, and asked to have a good look at my machine, which was the first of its kind he had seen.

The other call was at a tiny village garage in Essex. When I asked the boy who seemed to be in sole charge of the place for a quart, he asked, "How many gallons will that be?" I had to show him how to dial the quart, work out the cost, and tell him how much change to give me out of half-a-crown.

Chingford.

H. H.

(We'll bet he knew the position of every football team in every league, though.—Ed.)

Can Anyone Help?

I have recently come out of hospital after a fifth operation, this time on my left foot only. Previously I have had two on each foot. As a result of these ops. I have not the confidence to ride my Cyclemaster as the nerves have been cut out of my toes and my feet are not very strong and I have to wear special shoes.

May I ask your advice *re* selling; I have a Mercury cycle and have fitted Cairns extra tank, Smith's Speedometer and mileage recorder, carrier, saddle bag, Continental lock, stand, brand new dynamo set and a new horn. The machine is insured until July 15th but no road licence has been paid for 1954.

Farnborough.

R.E.S. (Miss)

(If any reader can help Miss R.E.S. to sell her machine, and will write to us, we shall be very glad, and will pass on the letter.—Ed.)

All for a Club

Dear Sir,

I am all for a Cyclemaster Club, and you can rely upon my full support when one is started in this district. I understand that Cyclemaster has now been on the road four years, and there must be many enthusiasts as proud of their machines as I am, I would like to see the number of Clubs kept down, so that each could benefit to the full, instead of having the same benefits spread over a great number of districts. What I would really like to see is a rally of nicely-cleaned machines. We could all meet at some convenient place, tanks topped up and a reserve quart of petrol, and go on a seventy-mile round trip. But there would have to be a call at a nice half-way house!

Stratford.

W. E.

(We don't want to be spoil-sports, but we aren't too sure about the half-way house. Cyclemasters, like motor cars, tend to run a bit too well on mild-and-bitter.—Ed.)

Bed & Breakfast Ten Shillings?

Dear Sir,

My wife and I both have Cyclemasters, bought in July 1952, and wonderful holidays on the road they have provided. Now that I am pensioned, however, the cost of bed and breakfast at hotels makes a holiday very expensive. Is there any means of ascertaining the locations of inns, or even ordinary houses, off the beaten track and the main roads where accommodation is obtainable at around ten shillings per person per night?

Could you, or any of the tens of thousands of Cyclemaster users, give us any assistance? For your information, I would like to say that my wife and I have averaged fifty miles a day on each of our four tours not only without any difficulty, but with absolute pleasure.

Carshalton.

B. T. L.

(We shall be able to collect and disseminate lots of information of the kind you want when the Clubs are really going. In the meantime, can any reader help?—Ed.)

Just Wonderful

Dear Sir,

My quarterly *Magic Wheel* is too valuable to miss, so please note my change of address. The magazine has prevented us having repairs, thanks to the hints and advice it contains. My Cyclemaster has not let me down yet; she is just wonderful. Rochester is hilly, so I shall rely on her more than ever. Easy does it!

Rochester.

Mrs. F. M. B.

(The Engineering Manager will be pleased—and rightly so.—Ed.)

Dripping Oil

Dear Sir,

I find that when I am cycling there is a slow drip of oil from the carburettor. It isn't very much, of course, but it does cover the wheel with a thin film of oil, which collects dust from the roads so that the wheel has to be cleaned more often. To overcome this, I have fitted underneath the carburettor a small tin-can two inches across by half an inch deep. This collects the oil and keeps the wheel clean.

Sherburn Hill.

S. H.

(An extra fibre washer fitted between the needle valve seating and the float chamber would slightly lower the level of the fuel and prevent the dripping. But there are, of course, no objections at all to the little drip tray, which is a very useful idea.—Ed.)

Pillion Passenger

Dear Sir,

I find your magazine very interesting. Do you not think, however, that the practice of carrying a pillion passenger should be discouraged? It is, after all, a power-assisted cycle, not a motor cycle.

Alcester.

Mrs. C. M. F.

(We do not advocate the carrying of a passenger on an ordinary cycle fitted with a Cyclemaster wheel. But prolonged tests have convinced us that with a machine designed for the job, there is no risk at all.—Ed.)

JUST TICKING OVER... By The Idler

I was most interested to note the emphasis placed by *Power and Pedal* (in a road test report) on the "cleanliness and out-of-the-wayness" of the Cyclemaster power unit. To my mind, that really is a great attraction, for when you fit the wheel you fit everything—there are no odds and ends of things to fix elsewhere on the bicycle.

The considered opinion of the writer of that report was that the Cyclemaster is "an attractive proposition for all those who want a cyclemotor for the original purpose of the breed—to provide the pleasure and utility of cycling without the physical labour involved." And he concluded that although patterns and layouts may change, "this excellent engine in a compact unit will be seen on our roads for a long time yet."

Let's hope so!

I hardly expected to read about Cyclemaster in *The Financial Times*, especially as I am not wealthy enough to be interested in the sort of news that famous newspaper publishes, so that I never buy it! But a friend of mine sent me a copy some while back, and marked an article under the heading "The World's Cheapest Motoring." According to that article, there were under 30,000 bicycles with small auxiliary engines in use in this country in September 1950. This had increased to 122,500 by August 1952, and there are now more than twice that number. Production of Cyclemaster engines was given as 130,000, of which 35,000 had gone overseas. That was just about right when the article was published.

Have you heard the story about the "bent"? The instruction book gives details of how to do a certain job, but advises the owner not to tackle it "unless you have a bent for this work."

One owner wrote and said he would like to buy a bent—how much was it? And we haven't made up our minds yet whether he was doing a little leg-pulling or not.

The Edinburgh and District Cyclemaster Club is still going great guns. One of the members sent me a list of club runs that have been fixed over the next couple of months. There is one every Sunday right up to and including July 4th—and I have no doubt that another list will be out by then, carrying through to the end of the summer. I don't know Scotland well enough to recognise all the places the members are visiting, but very interesting they sound, with intriguing names like Rumbling Bridge and Red Caves. Any Cyclemaster owner in the Edinburgh district who would like to join should drop a line to the Secretary, Mrs. G. Bain, 19 Southfield Road East, Portobello. Her telephone number is Portobello 3300.

If you live in the Manchester district you know to whom to write, don't you? No? Sorry. It is Mr. Tom Lee, of Saxon Jefferis Ltd., 674 Wilmslow Road, Didsbury, Manchester, 20.

Do I see a ray of hope, or don't I? New regulations published by the Ministry of Transport make it an offence to park a vehicle within 45 feet of a Zebra crossing on what is called the "approach" side, which will be marked by a double line of studs. Pedal cycles are exempted from this ban, and a statement issued by the Ministry specifically states (I quote from the *London Morning Advertiser* of March 30th). "Pedal cycles are exempt from the prohibition whether motor-assisted or not, provided they have no side-car."

It looks as though the authorities are

really beginning to accept that the fitting of a small engine to a bicycle does *not* turn it into a motor-cycle. If I am right, then we may see the end of a lot of the anomalies that surround cycle motoring—including, perhaps, the rather farcical test. Or is that too much to hope?

* * *

Only a few days after I had written the preceding lines, I read the following in *The Motor Cycle*, and quote in full because (to coin a phrase) I couldn't agree more:—

Cycle or Motor-Cycle?

“It is estimated that there are now over 200,000 cyclemotors on British roads. They are subject to taxation and compulsory insurance; their riders have to undergo the same driving test as riders of large-capacity motor cycles. To most motor cyclists this situation seems neither just nor logical, since the clip-on is not in any real sense a motor cycle. Nearly all clip-on engines are designed to provide cruising speeds of under 20 m.p.h. A bicycle so equipped is just as easy to ride as one without an engine. Indeed, it is probably true to say that a rider's competence in traffic is increased when he no longer has to apply his uneven energies to propel his machine. His steady speed enables him to steer effortlessly on all but the steepest gradients. Moreover, relieved of the onus of pedalling, the cyclemotorist is able to concentrate his mind exclusively on the control of his mount.

“In the circumstances, it is illogical to separate cyclemotorists from pedal cyclists. How much longer, therefore, must the cyclemotorist continue to be subject to the expensive farce of the driving test? It is accepted in many areas that, after application has been made for a driving test, there is likely to be a waiting period of between six and eight weeks before the test is undergone. If the test for clip-on users were abandoned, the congestion on waiting lists would be immediately relieved. And such a move would provide a useful first step toward freeing the clip-on from compulsory taxation, thus bringing Britain into line in this respect with Continental countries.”



Photo by courtesy of the Motor Cycle and Cycle Trader.

More Cyclemaster Successes

Cyclemasters again showed up very well in the annual trial for cyclemotors held this year on April 25th over a 35-mile course in Kent and Surrey.

There were thirty-six entrants, and the event included tests for starting and stopping, hill-climbing, silence and control generally.

To obtain a first-class award a rider had to lose no more than ten marks out of the hundred with which he was credited at the start. One of the successful entrants was Mr. W. H. Griffith, who went round the whole course on a Mercury Pillion model, with his wife as his passenger (see picture above). Another Cyclemaster owner to secure a first-class award was Mr. E. A. R. Chisholm.

Mr. R. Elliott, also riding a Cyclemaster, gained a second-class award (no more than twenty marks lost).

The honour of being picked out by Professor A. M. Low for having the quietest machine also went to a Cyclemaster owner—Mr. J. F. Meyrick.

SOME OF THE 1,400 POINTS WHERE YOU CAN GET GOOD

Cyclemaster SERVICE

Many readers have asked us to publish a list of all dealers from whom they can obtain service and parts: that we are afraid, would occupy too many pages. On the other hand, there are many dealers who wish to advertise such service, and here is a list. Dealers who wish to be included can obtain full details from Cyclemaster Ltd.

	Telephone		Telephone
BEDFORDSHIRE			
BEDFORD. J. P. Simmons & Sons Ltd., 43-49 Tavistock Street.	2984		
LUTON. Dickinson & Adams (Luton) Ltd., Bridge Street.	3535		
BERKSHIRE			
READING. Great Western Motors (A City Motors, Oxford, Branch), 12-14 Station Road.	3036		
CORNWALL			
ST. AUSTELL. R. S. Damerell & Son, Whitemoor and High Street, Nr. St. Austell.	—		
DERBYSHIRE			
DERBY. Kennings Ltd., Queen Street.	40211		
DEVONSHIRE			
PLYMOUTH. P. Pike & Co. Ltd., 88 Union Street.	3108		
EXETER. B. R. Warne, Bottom of South Street	55108		
DURHAM			
DARLINGTON. White Bros. (Darlington) Ltd., 205-209 Northgate.	2379		
ESSEX			
CHELMSFORD. County Motor Works (Chelmsford) Ltd., Duke Street, (Opposite Station).	3674/5		
ROMFORD. Kenistons, Victoria Road.	6283		
HAMPSHIRE			
ANDOVER. Anna Valley Motors, (Andover) Ltd., Bridge Street.	2344/5		
ROMSEY. Davidson's, Bell Street.	2091		
HERTFORDSHIRE			
HODDESDON. Norris's, 16 Amwell Street.	3266		
NEW BARNET. Lawson Pigott Motors Ltd., 184/6 East Barnet Road.	BAR 2353		
ST. ALBANS. Grimaldi Bros. Ltd., 188 Hatfield Road.	5595/6		
KENT			
BROMLEY. Davis & Hill Ltd., Ravensbourne 101 Bromley Common	2634/5 and 3020		
BROMLEY. H. E. Hills & Son, 481 Bromley Road, Downham.	HIT. 4197		
CHATHAM. The Chatham Motor Co. Ltd., Railway Street.	3413/4 and 45865		
DARTFORD. E. C. Bate, 62 West Hill and 32 Lowfield Street.	2748 and 3548		
FOLKESTONE. Martin Walter Ltd., 235-241 Cheriton Road.	3103		
SEVENOAKS. Angus Motor Cycles, (A. S. Herbert), 4-7 Station Parade.	3338		
LANCASHIRE			
BOLTON. Bradburys, 55 Bridge Street.	5781		
LIVERPOOL, 1. J. Blake & Co. Ltd., 110 Bold Street.	Royal 6622		
LIVERPOOL, 2. Bob Sergent Ltd., Moorfields.	Central 7398		
LANCASHIRE (cont.)			
MANCHESTER. Graham Bros. (Motors) Ltd., 7-15 Peter Street.	Blackfriars 9887/8/9		
MANCHESTER. Tom Mellor Ltd., 274 Deansgate.	Deansgate 6181/2		
MANCHESTER, 20. Saxon Jefferis Ltd., 674 Wilmslow Road, Didsbury.	Didsbury 3446 and 5340		
PRESTON. Barton Motors (Preston) Ltd., Corporation Street.	3203		
URMSTON. Jack Bamford, 114 Flixton Road.	2388		
LEICESTERSHIRE			
LEICESTER. A. & P. Radio & Cycle Stores, 15-17 Knighton Fields Road West.	32731		
LEICESTER. Batchelor Bowles & Co. Ltd., 60 London Road.	60268		
LEICESTER. Reader's, 61/63 Aylestone Road.	59554		
LEICESTER. Smith & Parker, 75½ Narborough Road.	65360		
LINCOLNSHIRE			
GRANTHAM. Grantham & District Motor Cycle Centre, 6 London Road.	789		
LONDON			
EAST DULWICH. Bellamy's, 3 Lordship Lane, S.E.22.	New Cross 0666		
HAMMERSMITH. Lawson Pigott Motors Ltd., 320/22 King Street, W.6	RIV 4111		
WALTHAMSTOW. Jack Nice, 129 Grove Road, E.17.	Coppermill 1920		
MIDDLESEX			
NORTHWOOD. Colliver Fisher at Northwood Ltd., 14 Station Parade.	777		
POTTERS BAR. F. W. Andrews, 6 Hatfield Road.	4410		
NORTHAMPTONSHIRE			
NORTHAMPTON. Grose Ltd., Marc-fair.	31682		
NORTHUMBERLAND			
NEWCASTLE-ON-TYNE. George & Jobling, Forth Street.	23105		
NOTTINGHAMSHIRE			
MANSFIELD. W. S. Humphry Ltd., Albert Street.	1205		
OXFORDSHIRE			
HENLEY-ON-THAMES. City Motors Ltd., Reading Road.	1115		
COWLEY, Oxford. P. Church, Hollow Way.	Oxford 77094		
OXFORD. City Motors, Gloucester Green.	2231/2/3		
STAFFORDSHIRE			
BILSTON. Hines of Bilston, 29 High Street.	42200		

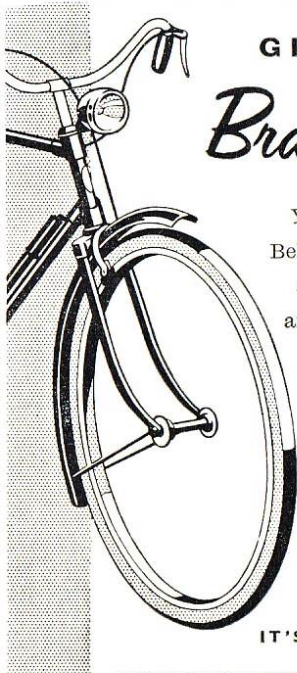
Continued opposite

SOME OF THE 1,400 POINTS WHERE YOU CAN GET GOOD

Cyclemaster SERVICE

(Continued from opposite page)

	Telephone		Telephone
SURREY			
CROYDON. Westbrook & Marley Ltd., 14-16 Park Street.	2061	HULL. Jordan & Co. (Hull) Ltd., Story Street.	36809
FARNHAM. Heath Bros., 119-120 East Street.	6477	YORKSHIRE (North)	
RICHMOND. Grand Garages (Richmond) Ltd., The Circus, Kew Road.	3833	YORK. Bensons for Bikes, 45 Goodramgate.	2702
WARWICKSHIRE			
BIRMINGHAM. 6. Aston-Auto-Motors, 173/77 Aston Road.	ASTon Cross 3201/2	YORK. North Riding Motors Ltd., Clarence Street.	3220
BIRMINGHAM. 14. H. Jones, 1052 Yardley Wood Road.	War. 2554	YORKSHIRE (West)	
BIRMINGHAM. 27. Smith's Garage, (Acocks Green) Ltd., 164/6 Yardley Road, Acocks Green.	ACO. 1079	LEEDS. Rowland Winn Ltd., County Garage, Woodhouse Lane.	32221 (6 lines)
BIRMINGHAM. 4. Whitworth's, 14 Corporation Street.	Central 3965	SHEFFIELD. Frank B. Roper Ltd., 158 London Road.	51011/2
COVENTRY. Frettons of Coventry, 4 Fretton Street, Off Corporation Street.	62919	WAKEFIELD. J. B. Smith, 26 Wood Street	3146
LEAMINGTON. Frettons of Leamington, 15 Clemens Street.	338	SCOTLAND	
WARWICK. J. L. Vaughan, 9 Old Square. (Also at Leamington and Kenilworth).	Warwick 621	S.M.T. Sales & Service Co. Ltd., All Branches.	
WORCESTERSHIRE			
WORCESTER. H. A. Saunders Ltd., 34 Foregate Street.	2495	GLASGOW. John MacLean, 378, Cathcart Road.	Pollock 2823
		WALES—DENBIGHSHIRE	
		COLWYN BAY. Red Garages (North Wales) Ltd., Old Colwyn	55281
		GLAMORGAN	
		CARDIFF. Glanfield Lawrence (Cardiff) Ltd., 2-10 City Road.	20531



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IT'S AN  PAINT

TIPS *worth* REMEMBERING

By

The Engineering Manager

Removing the Wheel

In both the Instruction Book and the Workshop Manual our detailed instructions for removing the wheel suggest that the handlebar levers are removed from the handlebars and the cables detached from the frame. In this way the cables and controls are left attached to the wheel in exactly the same way as when the Cyclomaster unit was new.

If a unit is being removed for return to our Service Department we much prefer to receive a wheel in this way and then we can carry out proper tests including the controls. However, if you are taking the wheel out for decarbonising or repairing a puncture, it may save time, (and this depends a lot on how the cables are fastened to the frame) if the cables are disconnected at the engine end.

As far as the clutch cable is concerned, all models are the same. You first remove the C.M. cover, then screw in the external cable adjuster as far as it will go. Put a spanner or wrench on one of the legs of the operating lever and then turn this lever anticlockwise until you can pull the inner cable nipple from the slot in which it rests. Screw out the external adjuster from the crankcase casting and then simply pull out the cable.

The method of removing the carburettor cable depends on which type of carburettor is fitted to your machine. In the case of the Amal the easiest way is to take off the carburettor, leaving this assembly attached to the cable where it will hang quite safely if your machine is not being moved about.

To detach the cable from the B.E.C. carburettor simply take off the carburettor cover and then unscrew the knurled cap of the mixing chamber. This cap, together with the adjuster, throttle valve and the return spring,

will remain attached to the cable. The rest of the carburettor will come away with the engine and wheel.

When re-fitting the throttle valve great care should be taken to ensure that it is correctly positioned in the mixing chamber. The slot which runs off the side must fit over the projection inside the carburettor body.

Using the Clutch

The clutch and transmission are both capable of performing satisfactorily for long periods, even if they are abused but care to avoid this abuse will naturally make the parts last much longer.

It is obviously wise to avoid any condition which makes the engine feel "jerky." And one of the most common causes of this is travelling too slowly with the clutch engaged. If you are wanting to travel below four or five miles per hour, the engine will then be rotated too slowly for it to work smoothly. Therefore, the clutch should be disengaged by lifting the lever towards the handlebars. This then disengages the drive from the engine to the wheel and you can proceed as slowly as you wish, still keeping the engine running.

An experienced rider will know how to release the clutch so far that he can feel the clutch plates rubbing against one another and transmitting some of the power to the wheel but if you cannot do this, try disengaging the clutch altogether and then pedalling your machine until you again want to go faster than walking speed.

Loose Nuts and Bolts

Bicycles, as with all other road vehicles, are subjected to the effects of vibration, which are caused by defects in the surfaces of roads, but however bad a road may be, the frequency of the vibration is relatively quite low.

(Continued on page 48)

For **ALL** the News
About **ALL** the cyclemotors

READ

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The Journal of the Cyclemotor

4d. monthly from your newsagent

(or by subscription 5/6 yearly from : H. Marshall & Son, Ltd.,
Temple House, Tallis Street, London, E.C.4.)

NEWS . LETTERS . ROAD TEST REPORTS
PICTURES · TECHNICAL ARTICLES · CLUB EVENTS

A NEW ENGINE OIL

FOR YOUR CYCLEMASTER

For many months, CYCLEMASTER engineers have been subjecting an entirely new oil to severe testing on road and bench. Results were so consistently outstanding that it is now to be sold by all CYCLEMASTER dealers under the name “**Cyclemaster Superfine Oil.**” Our tests proved that it not only possesses the highest lubricating qualities, but also gives

MAXIMUM POWER

Your engine will maintain highest output over long periods

MINIMUM CARBON

Less deposit in the head and less clogging of exhaust ports and silencer

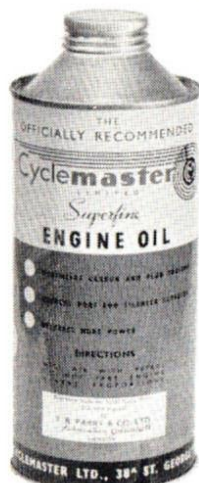
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3/10

IN QUART
TINS

(Continued from page 46)

When an engine of any sort is fitted to your bicycle a slight additional vibration cannot be avoided. This extra vibration may be so slight that it can hardly be felt by the rider but its characteristic is exactly opposite to the vibration which comes from the road. The vibration from the engine is slight but it has a relatively high frequency. This vibration may tend to loosen some of the fittings on your machine which have remained quite tight before the engine was installed. This is the reason why we suggest a regular check over of all nuts and bolts, including those of the bicycle itself.

If you notice that any part of your cycle is coming loose frequently it is often rectified satisfactorily by the fitting of a spring washer under the head of the nut. Your Dealer will advise and supply these washers very cheaply if you require them.

Permanent Magnets

In Issue No. 4 of *The Magic Wheel*, we gave some information about the operation and servicing of the magneto. In this we explained that the flywheel contained powerful electro magnets for generation of the electric current which produces the spark. One of our readers has quite rightly pointed out that these magnets are not electro magnets but they are, in fact, permanent magnets. To those of our readers who are familiar with the electrical side of the engine this incorrect information will not have caused any concern. They will have spotted the mistake quickly and will fully understand that it does not affect the other information in any way. To those readers who do not understand the difference between magnets of this sort, I would say that an electro magnet derives its power from some external source, such as a coil of wire wound round it through which an electrical current can pass but a permanent magnet is of a different material and after having been magnetised it maintains this magnetism over a very long period without any external assistance.

Remote Choke Control

During the past month or so we have

been testing a control for operating the choke of the Amal carburettor without dismantling from the normal riding position. In fact, although the control knob of this attachment does not go as far as the handlebar, it is quite easy to operate with the machine in motion.

The best position for the control knob is on the frame top tube and, in fact, the clip is manufactured to fit securely on this size of tube. Flexible inner and outer cables go from the operating knob rearwards and downwards on to the engine, where they are attached to the body of the choke by means of a well made die cast ring. The outer cable is clamped into a projection on this ring and the inner cable carries a small bracket, the lugs of which grip the lever of the choke.

Two types of bracket are available so that either type of choke unit can be operated. One of the main advantages of this control unit is that there are no holes of any sort to drill on the engine or carburettor. The big advantage over other types of choke controls we have tested is that it does not put any pressure or strain on the carburettor or choke mounting and that the strangler shutter can be opened or closed, or the opening adjusted to any position required whilst the machine is in motion.

We feel sure you will find this choke control is very good value for money. It costs 6s. plus postage in some cases.

The manufacturers are West Alloy Die Castings Ltd., Oldfields Road, Sutton, Surrey, and your Dealer has full details.

Draining the Clutch Casing

We have stated that we do not consider it necessary to provide means of draining the oil from the clutch casing but one of our readers has suggested a very good method of doing so if you wish. He suggests using an ordinary bicycle pump with a piece of plain rubber or plastic tube in place of the connector. The washer of the pump is then reversed so that if the tube is pushed down into the clutch housing to the bottom of the oil the pump will then draw the oil up into it when the pump shaft is withdrawn.

Cycl**master** Accessories

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- - - -	6 6
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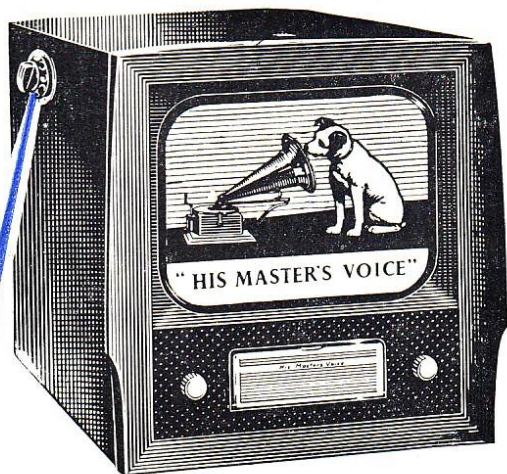
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