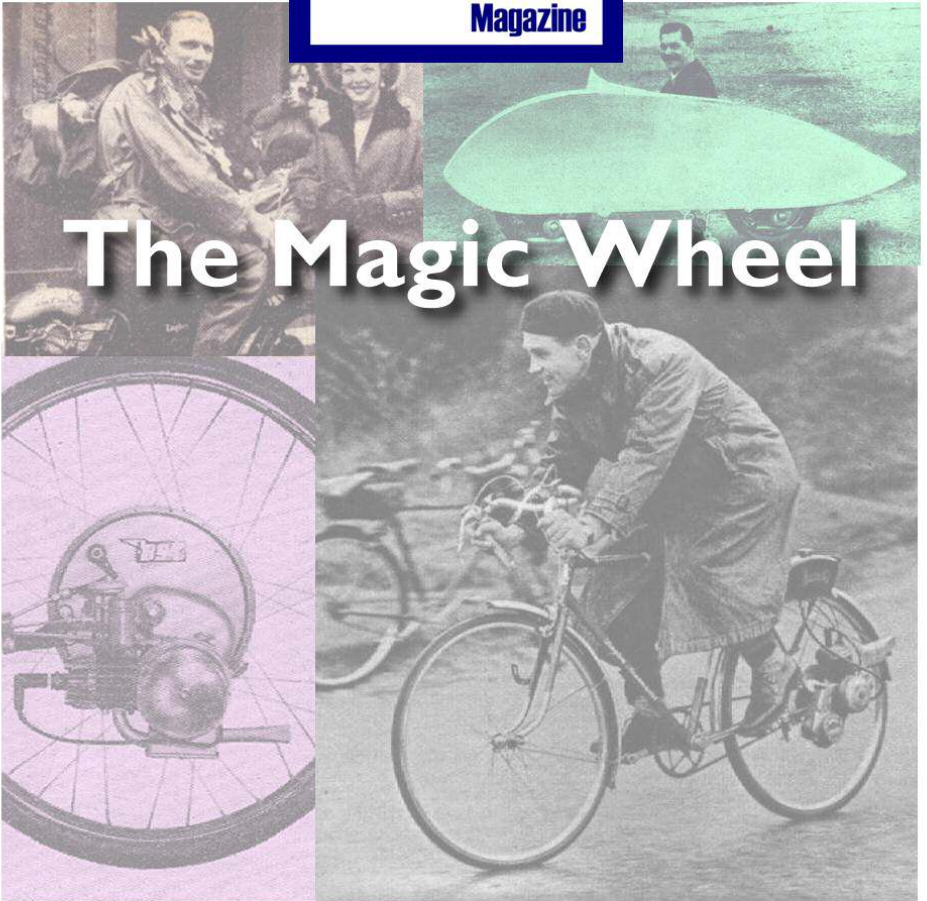


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The Magic Wheel

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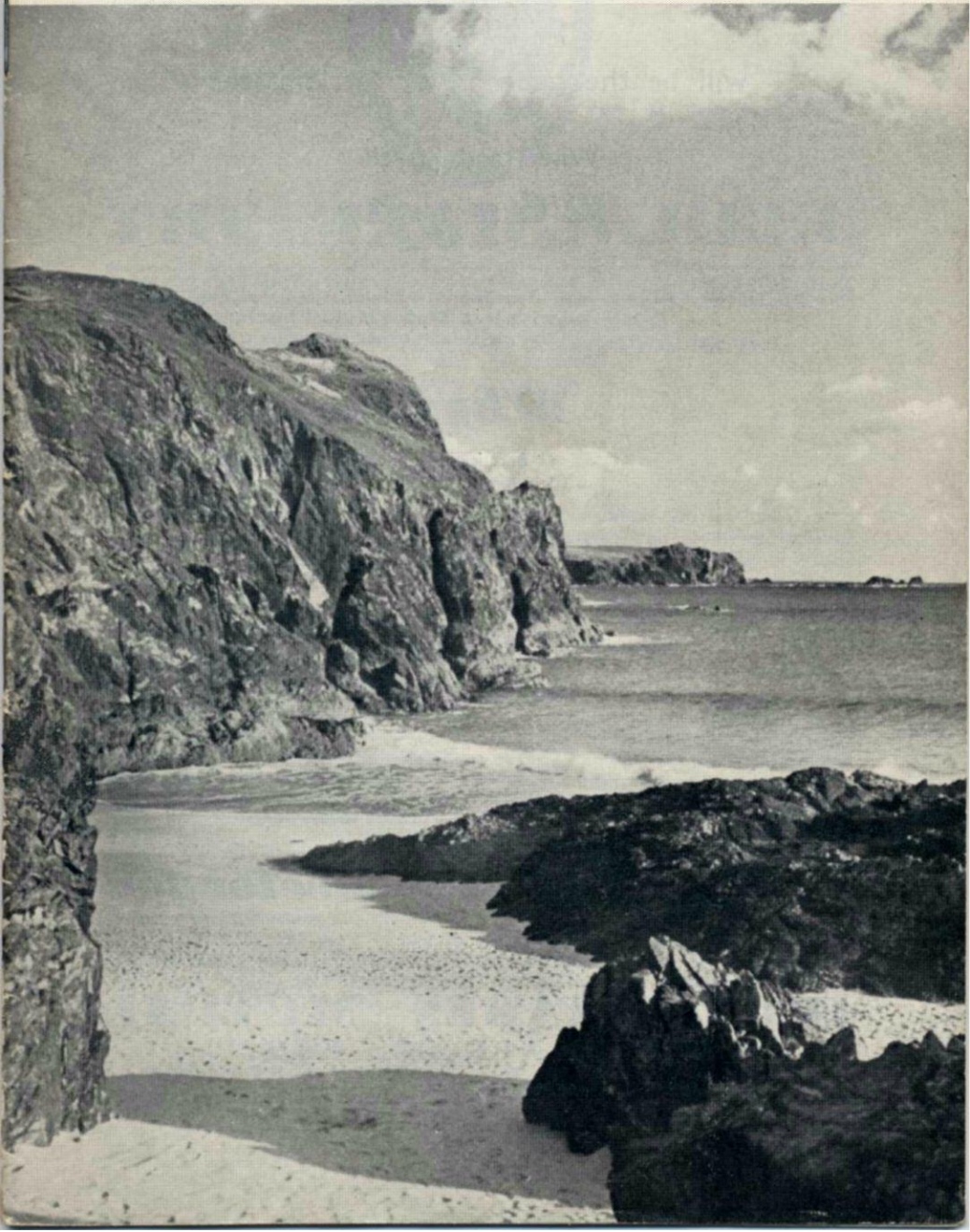
Magic Wheel

A QUARTERLY MAGAZINE FOR CYCLEMASTER AND CYCLEMATE OWNERS

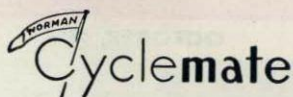
Vol. 3. No. 3.

OCTOBER, 1955

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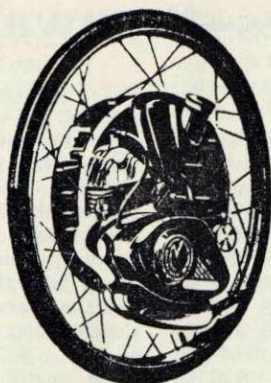
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VOL. 3
NO. 3

OCTOBER
1955



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THE MAGIC WHEEL

A QUARTERLY MAGAZINE FOR CYCLEMASTER AND CYCLEMATE OWNERS

*All communications should be addressed to
Cyclemaster Ltd., Tudor Works, Chertsey Road, Byfleet, Weybridge, Surrey.*

The Importance of Being Earnest

THE TITLE of our editorial for this issue is not meant to indicate that we are launching out on a judgment of Oscar Wilde. Rather we are taking at their face value the words which he so cleverly used for the title of his play.

For by earnestness in this connection we mean that serious application which is the accepted meaning. And we are thinking of seriousness towards the little chores of maintenance.

Many will remember the letter we published in the last issue from a 72-year-old reader who vowed that he wouldn't part with his Cyclemaster for £100. And why was he so pleased with it? Well, there are of course all the many virtues which we have talked about in the past and which are constantly persuading more and more people to take up the Magic Wheel that Wings Your Heel, but the one feature which seemed to appeal to this man more than any other was reliability. Quite right too. The Cyclemaster is justly famed for its ability to keep on going without giving trouble.

But, you know, no machine can be expected to keep on turning and working for an indefinite period without a little care. This is a wonderful age we live in but no gifted inventor has yet found a method of counteracting friction, and friction means wear which in turn leads to a decrease in the engine's efficiency.

What difference will a little care make? Why, it will stall that day of decreased efficiency and banish it into the dim and distant future. You'll find regular oiling and greasing, removal of dirt and similar little jobs will cut down friction to the absolute minimum, make your engine run sweetly and save your petrol. It is worth it isn't it?

You will find all the details of the regular maintenance which should be carried out on the Cyclemaster in the instruction booklet which is supplied with each machine. Stick to them diligently and you will gain satisfaction from the Cyclemaster's performance and compliments on its good appearance.

Rural Rides—Cornwall

By the Wanderer

YES, I KNOW. This is the second article in the series and both have been about the south-west. But I must ask you to forgive me this time. You see, I have just returned from a holiday touring Cornwall so it is hardly surprising that I should wish to devote the second feature in the series to that strange mixture of the barren and the beautiful, the enchanting and the ugly which forms the westernmost tip of our island home.

I promise you that I shall get well away from the west country for my next article. Indeed, I shall be happy to do so, for although I might seem to have a certain propensity for the south-west, I can assure you that I am really just as happy in the Norfolk Broads area or in the beautiful hills and valleys of the Lake District.

Well now, to Cornwall. For those who have not visited the Duchy it is hard to know just how to begin describing it, for it has an atmosphere all its own and the like of which is not to be found in any other part of the country. To begin with, Cornwall belies the English tradition of a countryside of fertile green with flourishing trees sprinkled lavishly about. Down there the rough winds which blow in from the Atlantic make the farmer's task an unenviable one and what trees there are are short and tough, quite unlike the huge oaks and majestic elms of "up country."

Then the land is very hilly too. I would say it is certainly the place for using a Cyclemaster rather than pedal cycling. Some of the hills are so steep that no roads climb them. There is the famous Carn Brae, for example, a long, rock strewn hill that lies between Redruth and Camborne and is surmounted by a small castle and a monument. And there are many others similar. Barren, covered with bracken and rough stony paths, these hills split up the available farmland. But they do give very fine views over the penin-

sula. Instructive views too, for from one of these heights one can usually see the nature of the surrounding countryside and also a potted history of the industries of Cornwall. There are the many mining chimneys and buildings which litter the area around Redruth and Camborne; the white clay hills of the china clay region of St. Austell, and very often it is possible to see a vast stone quarry where great hunks of Cornish Granite are blown out with charges of dynamite.

But it must be admitted, that apart from these interesting sidelights, the real attraction of Cornwall is its magnificent sea coast. From one of the hills down the centre of the land it is often possible to see the sea on both sides but if you want to get the best view it is necessary to go down to the coast and ride along the little roads which skirt the cliffs. Then, by leaving the road and walking the few yards to the cliff edge one can enjoy the most magnificent views of rocks and roaring breakers that can be found in the land.

I think that there is nothing finer than to sit on top of one of those precipitous cliffs on a fine summer evening and watch the sun slowly descending into a shimmering ocean, while the gulls wheel silently below and far off can be heard the song of the lark as it hovers over its nest hidden in the bracken at the cliff top. It always reminds me of a poem by W. E. Henley which begins:

"A late lark twitters from the quiet skies"

But we must get down to hard facts. I could go on talking about my own favourite bits of Cornwall till the cows come home, but you are interested in knowing where the spots are and what roads will be the most rewarding. Well, a particular favourite of mine is the little "B" road which runs from Portreath along the coast to Gwithian and Hale and then down by St. Ives and Zennor to Land's End. There are

wonderful views all along this road and nobody should go to Cornwall without travelling along it at least once.

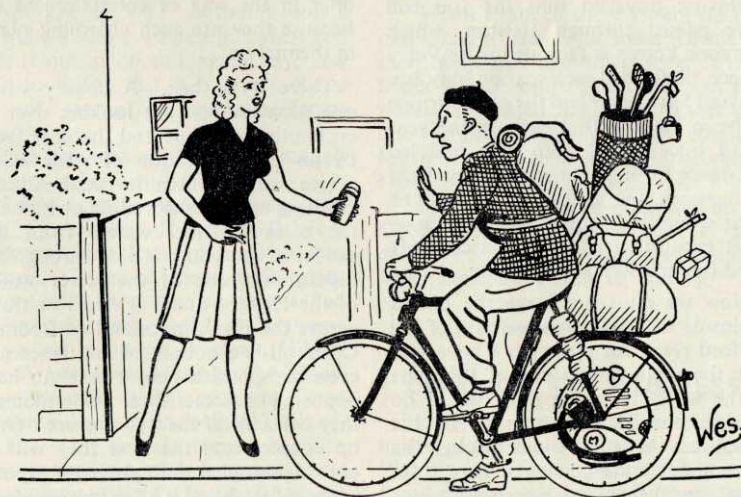
One of the most impressive sights in that area is a spot where the cliffs are even higher than usual and where the sea has carved a small piece out so that the rocks form a sort of mouth. In fact, the spot is known as Hell's Mouth and it is easy to realise, once one has seen it, how the name was given, for the view is so awe inspiring in its grandeur that the simple unsophisticated people who first lived there can easily be understood for associating it with the Devil.

The North Coast is equally rewarding in the other direction too. Travelling north-east from Newquay, the coast road, again only class "B," gives access to such charming spots as Watergate Bay, Mawgan Porth, Bedruthan Steps, Harlyn Bay, and Pentire Head. Over the Camel river at Padstow and one can travel on to Tintagel, where from the ruins of the famous ancient castle which is traditionally associated with King Arthur and the Knights of the Round Table, you can see one of the finest seascapes in the whole of England.

Of course, it would be impossible for me to extol the virtues of every single

beauty spot along the coastline of Cornwall. There are so many of them and each has its own particular charm. But there are a number of common assets which you are almost bound to find. First of all, there is the imposing beauty of the rocky cliffs. Then there are the beautiful golden sands. And they really are golden, this is not just a tag from a tourist agency's propaganda. Then you have the charming villages which are found on the coast. Some of them have fascinating histories connected with pirates, and fishing, others make up what they lack in history by their present day attractions. Looe, for example, and Fowey, two spots on the south coast which are justly famous for their old world charm, have attracted many a painter who wished to catch the homely beauty of sunlight playing on colour washed cottages and brightly-painted fishing boats.

Talking of painters, we mustn't forget that St. Ives is a well-known artists' colony—and for the very reasons that we have been discussing. There are many seascapes that they can paint there and also the charming narrow streets and tiny cottages of St. Ives itself, not to speak of the little harbour with its stone walls and many-coloured boats.



"No thanks, I don't want to overload the Cyclemaster"

But I am afraid I am rambling again. Let us now take a more orderly look at the south coast and see what Cornwall has to offer on that side.

Travelling back east from Land's End, if we assume for the moment that the north coast has been visited on the journey westward, we soon find that once again we have to take to the "B" road to follow the coast line, for the main road through Cornwall, the A30 which runs all the way from London, passes down the centre of the peninsula and is only really attractive up country where it passes across Bodmin Moor. (Incidentally, if you do cross Bodmin Moor, don't miss stopping at the Jamaica Inn, made immortal by the novel of that name by Daphne du Maurier).

Famous spots on the south coast which are well worth visiting are Porthcurno, Lamorna Cove, Praa Sands, Mullion Cove and Kynance Cove. This will have brought you to the Lizard Point, the southernmost point in the British Isles,

Here again there are some magnificent views of rock, sea and sky and if you want a memento to remind you of that place you can buy a little souvenir made of serpentine rock, fascinating in its many colours, which is only to be found at the Lizard.

Having travelled thus far you will have passed through Helston, which everyone knows is famous for its Furry Dance, performed each year on May 8th. I myself have never had the good fortune to be in Helston that early in the year but I once met a man who had led the dance through the streets, bedecked in morning suit and top hat, and he assured me that though it was a somewhat exhausting ritual it was certainly good fun and well worth seeing.

Now we must not leave the Lizard peninsula without some mention of the Helford river, for although I have said that the main attractions of this part of the world lie along the coast, I do consider the Helford area to be the exception. Where it winds through the green countryside (sheltered here from those winds) there are wonderful vistas of quiet waters and tiny sailing boats

with coloured sails. You can sit in one of the tiny villages which huddle in the wooded hills by the river's edge and eat a cream tea in the afternoon sun. To my mind a much better pastime than trudging the sticky streets of a large-scale resort where admittedly there are more diverse attractions but where also it is difficult to find any real peace and certainly very hard to get "far from the madding crowd."

This is not to say that Cornwall lacks places where arrangements for the entertainment of large numbers of people are to be found. Bude, Newquay, Penzance, Falmouth—they all have their big hotels and concert parties and so on, but I like to feel that the Cyclemaster owner who reads this will be more concerned with using his own transport to get away from the main centres and enjoy the more basic attractions of the countryside.

Coming further back along the coast from the Lizard we come to what is really the more popular side of Cornwall. Here almost every name is familiar from guide books, railway posters and hotel advertisements, but despite what I have just said about madding crowds, I think they are well worth going to see. Mevagissey, Polperro, Fowey and Looe are popular not so much because they have so much to offer in the way of entertainment but because they are such charming places in themselves.

There it is then. A county where one moment you are looking over an enchanting seascape and the next faced by an ugly collection of mine ruins; where you can watch the rough Atlantic crashing against sheer cliffs or bathe in the calm Channel waters from fine sands; where you can ride through the lush countryside of the lower waters of the Helford and Fal rivers or travel across the bleak moorland of Bodmin. Cornwall is a county of antitheses and even the Cornish people seem to have opposing characteristics. One moment they will talk of the "foreigners" from up country and the next they will be exchanging jokes with you over a pasty in the pub. I find it a fascinating place. I hope you will too.

1,600-mile Grand Tour



Miss Jones at a Youth Hostel at Havång on the south coast of Sweden. On the right are the hostel warden and his wife with their own Cyclemasters. Note that in Sweden a powered bicycle does not have to pay tax so no registration numbers are necessary

MISS EILEEN JONES is a great Cyclemaster enthusiast. Last summer she completed a 1,600-mile tour on the Continent through Belgium, Holland, Germany, Denmark and Sweden. The trip took nearly six weeks and the total expenses were about £56. Which makes you think, doesn't it? At first it sounds like quite a sum of money but when you work it out at 26 shillings a day, you begin to realise that it is a very cheap way of seeing so many different countries.

From here on we'll let Miss Jones tell the story in her own words:

"I flew from Lympne to Ostend and then 'Cyclemastered' through Belgium to Bruges and Antwerp and up into Holland. There I spent a fortnight touring with three cyclists that I had met in the youth hostel at Antwerp. We visited Nijmegen, Arnhem, Hilversum, Amsterdam, Alkmaar and Haarlem. We also cycled over the Great Dyke into the extreme north of Holland.

"There my friends turned back to return to England, while I went on alone across the north of Germany to visit friends living east of Hamburg.

"From there I rode on northwards through Schleswig-Holstein into Denmark and then went by steamer across to the island of Bornholm in the Baltic. I travelled all round the island before getting another steamer across to Sweden.

"When I landed there I went up the east coast to stay with some friends at their home north of Sölvesborg. I had hoped to ride on to Stockholm but the roads in Sweden are grim. Even the one National Highway is often cobbled for mile after mile and all the other roads are of gravel or sand.

"So I rode round the coast and up to Goteborg on the western side of the country. There I caught the steamer which carried me back to Tilbury."

CHANGE OF ADDRESS

Please note that the offices of Cyclemaster Ltd, have been moved from Victoria to Tudor Works, Chertsey Road, Byfleet, Weybridge, Surrey. Telephone Byfleet 3145/6/7.

Map-reading Made *Easy*-2

By Peregrine

IN MY LAST ARTICLE, you will remember, we spoke of the ways a beginner can start to teach himself map-reading, and I said that the first things to master were the most important symbols and how to orientate the map. Now we can go on from there.

I think it is safe to say that all maps make distinctions between the importance of roads. Anyway I have never seen a map which marked all roads the same. Usually there is a much wider, heavier line for the really important main road or trunk route with decreasing width and a paler colour to show roads of less importance. By far the most popular colour for roads is red but it is by no means standard practice to use red for all classes of roads. Some maps mark smaller roads in brown or yellow or mauve. However, a quick reference to the legend will soon settle that point.

You will find that almost without exception map makers who are reproducing parts of this country follow the Ministry of Transport's classification of roads and mark the "A" roads boldly, the "B" roads not quite so boldly and the unclassified roads quite thinly, if at all. Often, too, they will make distinctions between the trunk routes and the ordinary inter-town "A" roads.

For example, there are two main routes which one could take from London to Birmingham. The Trunk route passes through St. Albans, Dunstable and Towcester, by-passes Coventry and thus arrives at Birmingham. This road, although it is on the whole quite wide, does have some very narrow sections. But most of the heavy traffic to the Midlands uses it and hence it is classed as a trunk route and marked heavily on the map.

But the second route, which passes through Aylesbury, Bicester and Banbury is an "A" road, but marked more lightly on the map because it is not so wide and it does not carry the same volume of traffic (though it is a road I would recommend if you are riding to

the Midlands—there are some very pleasant spots along it).

Once you have discovered which are the 'A' and which the 'B' roads, you will find it easier to plan your route from one point to the next according to how you wish to travel. If you are intent upon covering the ground as quickly as possible, then it's the 'A' road for you; but if you like to 'potter' along the by-ways finding the pretty secluded spots then you should stick to the 'B' roads.

We are fortunate in this country in having good surfaces on nearly all our roads. On the Continent it is quite usual to find fine motorways stretching across the countryside with excellent surfaces. But once off those highroads you are likely to be shaken about quite a bit on the subsidiary routes.

One other point. The fact that a road is classified "A" does not always mean that it is wide and has a good surface. Some of our readers who have journeyed into the Highlands of Scotland will soon tell you that up there some of the "A" roads are little better than gravel tracks. So you see, a little experience is sometimes better than any map and even though you are confident of your ability to find your way it sometimes pays dividends to ask.

Finally, while we are talking about roads and how they are marked, you will often find that maps give the numbers of the "A" and "B" roads alongside them. This can be very useful if you are travelling alone and do not wish to keep stopping to consult the map. You can then plan your route before you start and memorise the route before you start. Then, on the journey, all you have to look for is the number of the road.

Take our previous example of the road from London to Birmingham. You would look at the map, see that the main road is A5 and that A47 branches off it at Weedon for Birmingham. All that is then necessary on the journey is to keep on A5 to Weedon, make sure you change on to the right road and then travel straight through to Birmingham.

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.

Curious Number Plates

Dear Sir,

A reader has asked if any of us have interesting number plates. Well, I have been the proud owner of two Cyclemasters, the first having the registration HOW and the second NOT. You can guess the remarks that both have caused.

Lymington

G. J. B.

(I think I can!—Ed.)

Touring France

Dear Sir,

My wife and I have just completed a successful tour of the Loire Valley and the south-west of France on our Cyclemasters and we feel that a large measure of thanks for a most happy tour is due to the excellence of the Cyclomaster.

Over a distance of about 600 miles covered, no trouble whatsoever was experienced beyond a very occasional fouled plug. Although our daily mileage was only about 60, we felt that this, in view of the strong sun, was sufficient.

Luggage was carried on carriers which I adapted and strengthened for the purpose, the weight being kept down to 18 lb. each. This method of carrying proved most successful and was based on a recommendation made by another contributor to the magazine.

The Cyclemasters aroused much interest whenever we stopped, since there is nothing like them in France, although the great majority of cycles there are motorised.

Nearly all the garages have a portable pump containing petrol mixture, but I did not fill from them because the proportion of oil seemed to be rather high. I thought it better to carry my oil separately and do my own mixing in a spare can. This does make me look forward, however, to the day when these pumps will be available in this country with the correct proportion of oil.

Incidentally, at Le Mans we had the pleasure of a run along the famous Le Mans Motor Racing course, since it forms part of the public highway. This must be the smoothest stretch of road in all France—it was a real pleasure! I could not help thinking how modest our 16 m.p.h. compared with the 200-odd achieved along the same road only a little previously

London, S.E.6.

L. W.

(But that "modest" pace was the key to the good holiday, wasn't it? About petrol mixers, there are certainly a number of designs approved. It seems to be a matter now of waiting for the manufacturers to turn them out in big numbers and the garages to install them.—Ed.)

"Heavens Above!"

To a Cyclomaster owner, it would be a tragic deal
To go to a Heaven that was without the Magic Wheel;
It would be better to go to Hades
With the car-driving ladies.
In the Great Beyond it will be a permanent fixture
To have Petrol Stations willing to supply the correct mixture;
And there will be politeness, too,
From the Petrol Station crew.
And it will be nothing short of sheer felicity
To have a magneto using Celestial electricity.
The roads will be in a perfectly Divine state;
The absence of gaping holes will be simply great.
Nowhere will be seen the warning "No Parking Allowed"—
You will pop your machine on the nearest cloud.
But best of all—from every point of view,
The other drivers will be angels—just like you.

Stanley Preston.

Impressions Summerised

By Aries

WELL, not even the most sour and grumbling Englishman could complain of the summer we have had this year. Week after week of glorious sunshine while thousands were having their annual break from work—a national tonic really—and also, we could hardly believe it, an August Bank Holiday which was one of the finest days of the year.

And how did the nation react, once it had recovered from the initial shock? Magnificently, I would say. It seemed to me that everyone leapt at the opportunity to get out in the sun and air and make the most of it.

But there was one impression that came to me as I travelled around during those long summer days which has probably struck many other readers. It is that a good proportion of the vehicle owners who pack the roads to the sea and the beauty spots during the fine weather and at the week-ends are not nearly as experienced as those that we came across in our normal day-to-day journeys.

It's hardly surprising really. There must be thousands of families which own cars and can only use them at the weekend or for the annual holiday. Not everyone who owns a car, a motor cycle, a scooter, or even a Cyclemaster is using their vehicle all the time.

Now I do not belong to that somewhat vitriolic crew who believe in slanging the "Sunday motorist" at every opportunity.

I like to think that I am broadminded enough to realise that practice is the secret of efficiency on the roads and if a chap just doesn't have the chance to practise it's hardly his fault if he makes a few innocent blunders. Of course, you understand that when I say "casual" owners I do not mean that they are casual in the off-hand sense of

the word. I know only too well that many of them take what little driving and riding they do very seriously indeed and they try very hard.

But even so, we must face the fact that they are likely to be a little disconcerting to the man who is used to acting according to a sort of unwritten code amongst road users—the little "tricks of the trade" if you like, which the regulars learn gradually as their experience grows.

Now what can the regulars do to help out the "casuals"? The secret, to my mind, lies in one word—courtesy. If we bear the other person's circumstances in mind, exercise a little forbearance and help all we can by giving good clear signals, giving way at corners and roundabouts and generally acting as though we really understand the other chap, then I am sure there will be a happier feeling of friendliness on the roads which will in turn help to decrease the number of accidents.

The testing time, of course, is when one really comes across an offender. The fellow who does all the wrong things in a misguided attempt to gain a few yards. When he appears it is far better to set him an example rather than let him upset you. You will usually find that he is only just ahead of you at the next set of lights or traffic block anyway so there doesn't seem to be much that can be said in favour of his methods.

No, I would rather give way a little, help the inexperienced man along and console myself with the thought that maybe one day there will be enough courtesy-minded people on the road to make it unnecessary for the Minister of Transport to issue a warning before the Bank Holiday week-end.

The Cyclemaster Coaster Hub

UP TO CYCLEMASTER unit 50,000, the wheel was mounted on a hub containing ball journal bearings much the same but smaller, of course, than those used in the hubs of the majority of motor cars. The hub consisted of a shaft (wheel spindle), two bearings and a tubular shell with external flange, on which the wheel drum was mounted. An ordinary cycle type of freewheel was mounted on the outside, therefore the hub itself contained only bearings to provide efficient rotary movement and no other mechanism.

Because the pedals were used only occasionally, it was soon decided that a more robust freewheel could offer many advantages. Also, many requests were received for a hub brake, and both these improvements were possible at the same time, by introducing what is generally known as a back-pedal brake hub.

On wheel No. 50,001, this change took place. A redesigned hub shell was used, very similar in size to the original, but designed internally to take the B.S.A. new "Eadie" hub mechanism. This consists of standard hub parts, except for the spindle, brake cone and arm.

Braking power is obtained by squeezing two cones together, into the ends of a fixed brake band assembly, which in turn, is expanded so that it grips the internal bore of the hub shell (see Fig. 1). As the pressure on the cones is exerted from rearward movement of the pedals,

it follows that the greater the pressure on the pedals, the tighter the brake band grips inside the hub, and as the band cannot rotate, it offers great resistance to further movement of the hub and consequently, the wheel.

Demonstration using the actual hub parts, is the only really satisfactory way of describing its operation. However, some assistance can be obtained from the exploded drawing (Fig. 3) and reference to this and the part numbers will often be made.

It will be noticed that the brake cone (U.42) has flats on the small end and so that it cannot rotate, these fit into a slot in the brake arm, which is, in turn, locked on to the frame. The brake cone serves another purpose in that a bearing track is cut in its outer diameter, so that it carries the bearings on which one end of the hub revolves. Two slots are cut in the inner end of the brake cone into which fits the tongues which project inwards from the periphery of the brake band assembly (U.39).

This brake band assembly consists of an outer ring or sleeve of bronze, which is wrapped over two semi-circular pieces of steel. The sleeve is rather like a spring clip and it expands when the two half circles of steel are opened out. Its springiness does, in fact, return the band assembly to normal size when the brake is off. To prevent it rotating, the sleeve is riveted to one of the steel half circles, which, as already described, are prevented from rotating by the tongues

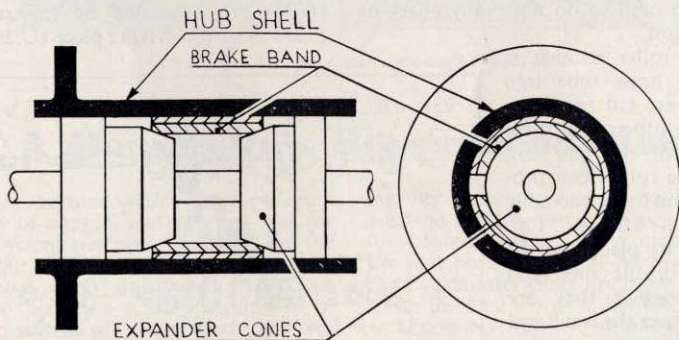


FIG. 1.

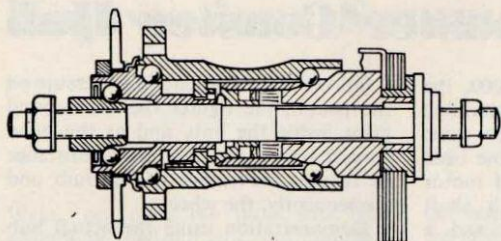


Fig. 2. Section through back pedalling hub brake

which project into the brake cone. The outer surface of the bronze sleeve when expanded, makes contact with the inside of the hub shell and so provides the braking power.

Where the brake cone (U.42) fits into the brakeband assembly (U.39), it is tapered, but this alone does not provide the necessary expansion. A similarly tapered sleeve projects into the other end and this part is called the actuator (U.34). Cams are cut in its outer faces and these locate with similar cams on the inside face of the drive roller retainer (U.32). Rotation of the chain sprocket rearwards reacts through the driving piece (U.29), on to which it is screwed and locked; then through the drive rollers (U.31) to the retainer itself.

Why does this not happen when pedalling forward? The answer lies in the construction of the actuator and the other small parts assembled to it, making the actuator assembly. This assembly comprises the actuator itself (U.34), the roller retainer (U.35), two rollers (U.36) and the washer and circlip (U.37 and U.38). The last two items serve only to keep the assembly together and so do not really affect its operation.

The roller retainer is a thin brass tube into which are cut two slots for the rollers and these slots are of such size that the rollers can project, but not actually pass through. The rollers are placed on the inside of the tube and together they are placed over the small end of the actuator so that the rollers are in line

with the two flats on the actuator body. There are two springy ears at the other end of the roller retainer and these press on the inside of the brake band assembly when the two units, namely the band assembly and the actuator assembly, are fitted together.

Two small keys are pressed inwardly into the roller retainer in such a position that they leave the two small rollers in the centre of the flats at all times when pedalling forward. At this time, these keys cause the actuator rollers and the roller retainer to revolve as a unit inside the brake band assembly.

Any rotation of this assembly in the other direction is arrested by the rollers, which are expanded by relative movement between the actuator and the roller retainer. The retainer spring bears lightly on the inside of the brake band assembly and this offers slight resistance to its movement. The rollers therefore "climb up" the flats of the actuator and are forced outwards until they touch the bore of the band assembly. As soon as this happens, the actuator is locked tightly so that further movement rearwards by the pedals, operates the cams and exerts a high pressure on the expanders.

These parts which are assembled between the sprocket and the actuator, make up the mechanism required for operating the freewheel. In much the same way as the two actuator rollers are expanded, so the five drive rollers (U.31) are expanded by the relative position of the driving piece (U.29) and

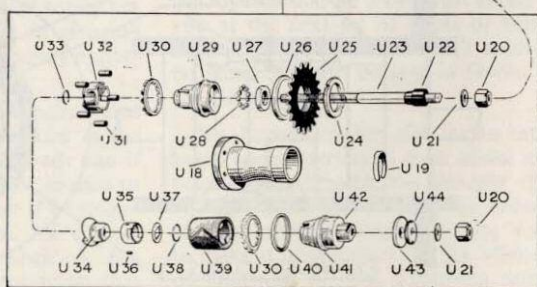
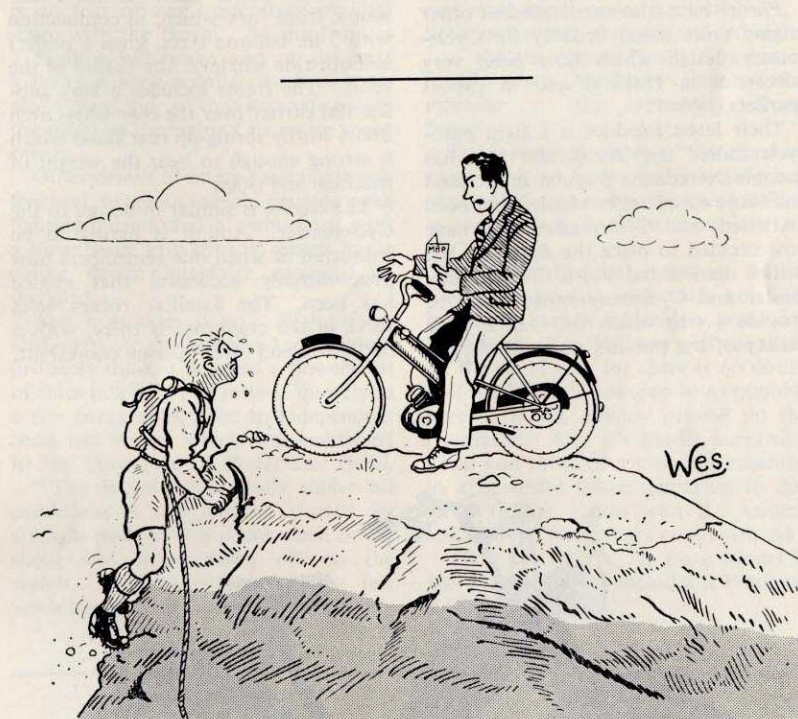


Fig. 3

the drive roller retainer (U.32). During forward pedalling, the slight resistance of the roller retainer, causes the drive rollers to "climb up" the faces machined on the driving piece and the rollers then grip tightly in the bore of the hub. This gripping provides the forward drive, but when pedalling stops, forward motion of the hub releases the rollers and they then run freely at the lowest point of the flats on the driving piece.

Between the rollers and the sprocket,

a bearing track is machined in the driving piece in exactly the same way as on the brake cone at the other side. This provides the other wheel bearing on which the hub revolves. It will be seen from the sectioned drawing (Fig. 2) that there is a small bearing inside the driving piece. This comes into operation only when the pedals are in use for propulsion, during which short time, it takes over the duties of the hub bearing from the larger one on the outside.



"Hmm!—Must have taken the wrong turning."

A Housewife's Recommendation

Our cartoonist Wes seems to find plenty of unusual and amusing uses for the Cyclemaster and Cyclemate, as the example of his work above will show. But on a more "down-to-earth" plane, how's this for a good summing-up of the qualities of those machines? It came to us from a housewife who uses her Cyclemaster for shopping and fetch-

ing her daughter from school. Her husband has his own car which he uses for business work. This means that she had no transport of her own until the Cyclemaster came upon the scene—hence the final words in her list.

"Economy, facility, mobility, practicality, manoeuvrability, simplicity, adaptability and—equality!"

The BERINI

A New De Luxe Autocycle marketed by Cyclemaster Ltd.

IT MAY NOT BE KNOWN to some of our readers that the popular Cyclemaster engine was originally designed in Holland by the Pluvier Company and was manufactured by them in that country as well as by Cyclemaster Ltd. in England.

Pluvier have also manufactured other engine units based broadly on Cyclemaster design which have been very successful in Holland and in export markets.

Their latest product is a light autocycle called the *Berini* and this has become exceedingly popular in Holland and those countries in which it has been marketed, and Cyclemaster Ltd. have now decided to place the *Berini* on the British market and add it to the Cyclemaster and Cyclemate range so as to provide a trio which will suit a wide variety of the public's purse of choice.

It is felt that this 49 c.c. machine will have a strong appeal to those who may be seeking a more highly powered machine.

The *Berini* is a de luxe machine having a specially designed frame which incorporates the petrol tank. It has a telescopic front fork which, in conjunction with 2 in. balloon tyres, gives a perfect smooth ride whatever the nature of the road. The frame includes a very substantial carrier over the rear wheel arch and a sturdy spring-up rear stand which is strong enough to bear the weight of machine and rider.

The engine is similar in design to the Cyclemaster. And it is hardly to be wondered at when one remembers how phenomenally successful that engine has been. The familiar rotary inlet valve in the crankcase is there, with a flat piston and three-bearing crankshaft.



One look at this picture will show just how good-looking the *Berini De Luxe* is

Once again following the very latest design trends, the engine is slightly over square, having a bore of 40 mm. and a stroke of 38 mm. But there has been a considerable increase in power with the new design. The 49 c.c. unit develops 1.8 b.h.p. at 4,500 r.p.m.—power enough to give the machine a top speed of nearly 40 m.p.h.

As has been pointed out in these pages before, if you have the speed you must also have the ability to stop. But there is no fear of any inadequacy on that score with the Berini. At the front is a Phillips hub-brake and at the rear a Beckson back-peddaller, both of them really powerful, so that it is safe to use the machine throughout its entire speed range.

Other details of interest are the Bosch flywheel magneto which provides the lighting current and a carburettor with a novel twist grip throttle which has a choke device integrally mounted in the grip.

And how does it go? Well, if we said what we really believe you would probably think it was just a flowery bit of sales talk. Let us instead quote you a few paragraphs from an independent road test report which was published in the May issue of *Power and Pedal*.

“The Berini starts easily under all conditions . . . It can be started by a single push of one pedal when on its stand and then driven off on the clutch . . . It takes only a very few yards to warm up . . . it goes smoothly

and effortlessly up to 35 m.p.h. . . . The acceleration is good enough to put the Berini ahead of most urban traffic on the getaway . . . Hill climbing is a new experience . . . free-wheeling up 1 in 10 drew startled glances from passers-by and glowering jealousy from other cyclistmotorists . . . the cycle also behaved perfectly . . . luxury standards of comfort and safety that we have never known bettered on any type of vehicle . . . silence, both as to exhaust and mechanical noise, is excellent . . . both brakes are smooth and powerful . . . the photograph hardly does justice to the really handsome lines of the machine . . . the immensely strong frame . . .”

The test report ends up “for the man who wants to have cyclistmotoring just as good as it can be bought, this machine is a great buy.” What more can we say?

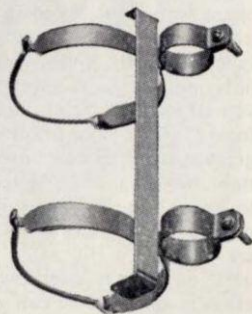
Only that the first machines are on the way now and very soon you will be seeing them in the dealers' windows. Very soon after that you will see them on the street too, for there is no doubt that the Berini is going to be as popular here as it has already proved on the Continent. And it's hardly surprising when you think of a powerful machine in a beautiful frame giving up to 200 miles to the gallon with the utmost reliability. What more could you ask?

The price for the De Luxe Model is £65 11s. 9d. which includes a Purchase Tax of £10 11s. 9d.

Cycl**master** Spare Fuel (Petrol) **CARRIER**

Due to the reluctance of some Petrol Station Attendants to serve small quantities of petrol and oil there has arisen a strong demand by Cycl**master** owners for some simple means of carrying a spare supply of petrol. To meet this we have designed a simple and inexpensive device to hold a Quart Tin which can be easily fitted to any part of the bicycle frame. It is made of strong strip steel with grey coloured finish. Price (without tin) 3/8 (4/2 post free) Container Tin (1 Quart) to fit Carrier 1/6

Available from all Cycl**master** Dealers
or from Cycl**master** Ltd.,
Tudor Works, Chertsey Road, Byfleet, Surrey.



JUST TICKING OVER . . . By The Idler

WHAT ARE YOUR TASTES IN MUSIC? Personally, I like to think mine are pretty catholic. Just the other evening, for example, I heard a Bach concerto, a popular record programme and then Elton Hayes singing to his small guitar. It was while listening to the last that a thought struck me. I suppose the modern equivalent of the troubador is the itinerant musician who plays to the pits of music halls throughout the country, but surely there must still be one or two people who wander around, collecting the old folk songs or even just singing round a camp fire at a Boy Scout camp. I remember so clearly how popular the guitar seemed to be when I went on a trip to Germany some time ago. Every scout troop seemed to have two or three. What all this comes down to is that I am wondering if anyone wanders about the countryside with a guitar on his back and a Cyclemaster beneath him (or her of course).

It would seem to be a rather pleasant compromise between the traditions of yesteryear and the demand for progress of today. Are there any troubadors of the second Elizabethan age? I should very much like to hear from any there might be.

* * *

An interesting letter from Mr. R. N. Wilcox arrived on my desk the other day. He seems to be one of these chaps who is interested in statistics and averages. I think they are a fascinating type, especially those who are particularly interested in sport and can tell you all sorts of strange facts and figures, from the lap record of Silverstone to the greatest distance ever covered in a hop, step and jump. Mr. Wilcox would like to know what miles-per-hour averages owners of Cyclemaster obtain when they are touring. He says "Perhaps a question in the magazine will bring some answers and then we can get an average between the "bashers" and the "Dood-

lers." Well now, come on all you bashers and doodlers, what sort of averages do you get? And remember now, this is a subject on which proud owners are very apt to go way off the rails and try to tell you that because they did 59 m.p.h. for some of the way they must have averaged 58, so no rough guesses, please. Our statistical type wouldn't like it.

* * *

Regular readers will remember that a few issues ago we talked about the Barnsley and District Cyclemaster Club in this column. I remember thinking at the time that it sounded as though there was a hard nucleus of keen enthusiasts up there and I certainly seem to have been right. A letter from the acting secretary, Miss B. Aspinall, tells me that during the 1955 season no less than 28 week-end runs have been organised, starting in mid-March and ending towards the close of September. This flourishing band of wanderers ranges to and from places as far apart as the Lake District and Nottingham on these Sunday all-day runs. And that's not all. From April to September there are also Thursday evening runs and from April to October Saturday afternoon rides are arranged. Sounds to me as though there is some good organisational work going on up there. Is there anyone who can better such a full programme?

* * *

Those of our readers who were in London during the Railway strike will probably have noticed, as I did, the great increase in Cyclemasters which were to be seen on the roads at that time. It seemed that many people who lived some distance outside the City and therefore normally used public transport for daily journeying to and fro brought their Cyclemasters into action when they found that trains were few and far between and packed to the

doors at that. Now I am not sure whether it is my enthusiastic imagination or not, but I have an idea that since the strike ended there have been more machines pottering around amidst the London traffic than there were before. It would be nice to think that Cyclemaster owners who at first were not keen on travelling twenty to thirty miles a day on their machines had been converted by the force of dire circumstance. On the other hand, of course, it may just be that the exceptionally good summer we have had has led some who like to be out in the sun when there is any to enjoy rather than down below in a stuffy tube to throw away their weekly season and take to their personal transport. Whichever is the case, I find it engrossing, during my lunch break to wander about keeping an eye open for any Cyclemasters.

* * *

You remember that charming story about the sheepdog called Ida who could not walk too well? I'm sure

many readers were as touched as I was to hear about her owner's bright idea of fixing a trailer behind her Cyclemaster so that the two of them could tour around together. Now we have received a picture from Miss A. W. Riley, the proud owner in question, and I think they make a very attractive combination, don't you? The picture is published by courtesy of the *Northern Echo*.

* * *

A friend of mine has recently bought a Cyclemaster. Knowing my connection with them he was soon round to my house to show off his new acquisition. Well, I must confess that my first sight of the machine was somewhat disconcerting. You see, his bicycle was quite unlike any other I had ever seen. In the round that is—I had seen many like it in American films. You know the sort of thing—very wide handlebars, outsize wheels, a fantastic number of springs under the saddle. Of course, I asked him how he had come upon such a machine. And the reply was even



more surprising. It turned out to have been made by our old friends the Hercules company. Naturally, I wanted to know the story, and I soon found it out. Apparently, it was the policy of cycle makers before the war to cater for the tastes of their overseas customers, so when this particular machine was built in 1939 (destined for Canada) the popular trend was followed. Now, of course, our style of bicycle is tremendously popular over there and there is no need to make a special export version.

So this machine, built a la Americaine and prevented from being exported by the sudden outbreak in hostilities, finally fell into my friend's hands after years of storage. He finds it "just the job," for the big wheels, balloon tyres and so on all make for the ideal machine on which to fit a Cyclemaster. He's definitely an enthusiast now.

* * *

I saw an interesting letter in *Power and Pedal* the other day from a Cyclemaster owner who lives in Peebles. He said he had fitted a Stadium windscreen and visor to his machine to give protection against rain and snow, since he does not like goggles. "It is the best buy I ever had," he says, and describes how it stops the cold wind, keeps him

dry in rain and checks flies during the summer. Sounds like a good buy at £3 5s.

* * *

A Cyclemaster owner who braves the worst the weather has to offer is Mr. F. Ransome of London. He has written in telling me how he goes touring at the week-end in all sorts of conditions setting out early in the morning. His machine is fitted with a Headen leg shield and a speedometer and in the winter he can be seen riding round the London area well wrapped up in heavy coat, gauntlet gloves, riding helmet and goggles, not to mention the large map case slung over his shoulder. Mr. Ransome is a translator by profession, so there is another "line" to add to our ever-growing list. He first heard about the Cyclemaster when he was acting as an interpreter over in Germany with the Control Commission. Perhaps riding out into the wintry dawn is not everybody's idea of the ideal Sunday pastime but he certainly seems to enjoy it.

* * *

ON THE COVER

The Wanderer's Rural Ride for this issue lies through Cornwall. Our cover picture shows Kynance Cove, on the Lizard Peninsula.



Scottish Newsletter

By Charles W. Knight

THE *Magic Wheel*, which I receive regularly, inspires me to contribute some lines from this side of the Border, as there seems to be a dearth of observances from this quarter, and in any case, some information could be of assistance to prospective visitors, by "Magic Wheel," to our bonnie bens and glens, (in spite of our reputed rainfall).

I have been the proud possessor of a Cyclomaster engine fitted to my cycle for over two and a half years now, and must have covered well over 20,000 miles. This includes, of course, twelve miles to and from work in Glasgow every day, encountering all sorts of weather conditions. I am very pleased to say that the engine itself has never let me down, nor have I to date found it necessary to turn it in for repairs, with the exception of wheel truing.

The foregoing is, therefore, most remarkable when considering the type of country and long, hard riding my machine has had to undertake. For two years now my holidays have been spent "on the bike," covering over 600 miles during each, with my son, now aged twelve, riding pillion. Areas covered included some of the loveliest as well as the toughest, in Scotland, and not always in the best of weather conditions. Petrol consumption was about 3½ gallons each tour, and filling station attendants were very co-operative.

The advice and help offered by passing motor-cyclists and fellow cycle-motorists, if I appeared to be in trouble, was also remarkable. Quite often we had merely stopped to perform some minor adjustment, or to stretch our legs. We always travelled well-prepared for rain or cold, well knowing our climate and the altitudes we could expect to reach.

We found that foreign tourists were most interested in the engine, and Americans in particular gazed with amazement at us moving along at 20 miles per hour, and with what appeared

at first glance to have no means of propulsion. One Canadian and his wife were so interested in details that they almost missed the ferry steamer at the Forth Bridge, which would have delayed them maybe two hours.

On various occasions comments have been made by correspondents to the magazine regarding average speeds for various distances. I should like to add mine. One evening very recently I left Knilachard, near Aberfoyle (the recent site of a film unit producing *Rob Roy*) at 7.30 p.m. and arrived in Glasgow at 9.10 p.m. This is a distance of 34 miles and my average speed, therefore, works out at 20 miles per hour. There was no wind, but the road was typical of most roads in the North West of Scotland. I am sure no-one could possibly complain about this performance.

Any breakdowns I've had, whole or partial, have resulted from punctures, slack spokes, leaking petrol tank or frayed cables, and most of these can be traced to the severe punishment received from our city streets. All my punctures without exception, have occurred in the city, and not on our Highland roads.

In conclusion, let me say that as I am an enthusiast on this type of transport, and have a pretty sound knowledge of conditions and facilities in this part of the country, I would be very willing to impart any information I can to help a prospective tourist, should they wish to communicate with me. In this way, our magazine once more can be a splendid medium for supplying advice and news.

(For readers who wish to take advantage of Mr. Knight's kind offer, his address is 141 Byres Road, Glasgow, W.2. —Ed.)

Taking summer snaps? If your Cyclomaster is in a good one, why not send it to us. We would like to publish it if suitable.

A GUIDE FOR DREAMERS

By Stanley Preston

THERE MUST be others, like myself, who before becoming Cyclemaster owners, hardly knew the difference between a piston ring and an exhaust pipe. But then, I was always the dreamy impracticable type when it came to practical or technical matters. At home, we never speak about the watch I tried to repair and which sprang apart as I loosened the wrong screw. And since I repaired the door latch, we live in constant fear of burglars.

But we dreamers, who like to keep a tight hold of the child-like joy of wonder, can soon look ridiculous in more learned company. The lofty race of technically-minded motor-cycle owners will want to know certain things about your Cyclemaster, and if you wish to retain a vestige of dignity, you must *appear to know* the answers to one or two sinister questions.

First of all, they will probably ask: "how many c.c.'s?"

Now, this must be answered quickly and easily, without hesitation, otherwise you will be branded forever as an idiot. (It is consoling to note that they assume you know what c.c.'s are, and they just want a simple, round figure.) So your answer, as swift and sure as the downstroke of your piston will be "25" or "32."

Of course, you may tend to forget, and you can bring to your aid the following simple mnemonics. (This crazy Greek word means "devices to assist the memory," though what device you use to remember the word itself is not apparent.)

If yours is the earliest model, then you can help to remember your c.c.s by thinking of Christmas Day—the 25th. This date is memorable as the time you get those pairs of woollen socks, year after year, from dear old Aunt Clara of Dagenham. Alternatively, bar-room sportsmen will perhaps best recall "25"

as the elusive outer ring of the "bull" on their dartboard.

For the 32 c.c. model, there are two striking examples. How many points to the compass? or, in case you were playing truant when they gave that lesson at school: How many teeth in a full set?

Another sure question will be: "What does she do to the gallon?" It is gratifying, even to the non-technical type to be able to reply: "Oh, anything up to 240. Roughly 30 miles to the pint." The owners of roaring 250 c.c.—500 c.c. machines will gasp incredulously; and it is an increased pleasure to add, in an offhand way:

"I filled her up about a fortnight ago . . . I think . . . Well, a fortnight or three weeks—I'm not certain."

Technicalities here

Some keen inquisitors will even ask: "What's your plug gap?" and here you may be caught out, if not by giving a wrong figure, at least by an amateur vocal rendering. Don't mumble: "Point-nought-one-eight." This will invite scorn. You must glibly say: "About eighteen thou," just as if you normally used the word "thou" in every other sentence. (By the way, the plug gap is the part that isn't there at the end of a bent prong in the lower half of the porcelain-topped little object that sticks out of that corrugated casing that looks like a toast-rack. Sorry to have to give such a technical description, but at least that should clear up any doubts.)

A disconcerting question is: "How many revs?" This is quite a stunner, especially if you haven't the faintest idea what "revs" may be. A concise reply is "About four thousand five hundred, at twenty." This, however, is difficult to memorise, and perhaps it

will help if you link it with some vague personal ambition.

Think of the figure £4,500 as the amount you'd like to be paid a year (and who wouldn't?) Or if, just the vague desire is not enough, how much a year you think you're worth. There you are! The same figure—£4,500.

Quite often you will hear someone say: "It's amazing what these little two-strokes can do." Now, they are not being offensive, as I used to believe, in calling your Cyclomaster a little two-stroke, and you don't need to feel upset. I have it on the best authority that there are two main types of engine, the two-stroke and the four-stroke. All you need to know is that yours is a two-stroke, and a little one at that.

For instance, the owner of a larger two-stroke may ask: "What's your mixture?" but don't lick your lips and say eagerly: "Old and Mild" or "Gin and It"—he is referring to the proportion of oil to petrol. So if you buy it ready mixed and haven't the vaguest

idea, the answer is "1 in 25, or thereabouts." (Always add "or thereabouts" and he will think you are the daring experimental type.)

Of course, you may come across some questions that are highly technical, and in that event I suggest you pull out the petrol tap, and, nodding politely, so very politely, drive away . . .

Editor's Note:

We are half inclined to believe that our contributor is a little off the beam in thinking that Cyclomaster owners are not very "well up" on technicalities. One wouldn't think so to judge by the letter's we get expressing satisfaction with our technical articles. However, if there should be some of our readers who have problems and are shy about asking what seem to be elementary questions, don't be afraid to write and ask us. We are here to help you get full value from your machine and we will be pleased to deal with any problems, no matter whether they be elementary or far advanced.

And Now—FLEAS!

COLLECTING, delivering, searching, re-searching—we had begun to think that we had heard so many different and unusual uses for a Cyclomaster that we were beyond being surprised any more. But, of course, we were wrong. "There are more things in Heaven and earth, Horatio, than are dreamt of in your philosophy."

Yes, this unusual application took us completely by surprise. For Mr. Chapman of Wellingborough in Northamptonshire uses his Cyclomaster to collect fleas. Now, lest anyone should think that our respected reader is some sort of entertainer who runs a circus and makes all who see him and his miniature menagerie itch, let us hasten to inform you that the sort of fleas he collects are not those which most are familiar with,

by reputation if not by experience, but water fleas, the little *Daphnia* type which live in ponds and stagnant pools.

And what are they used for? Why, for feeding fish. For Mr. Chapman is a tropical fish keeper, a member of that growing band of enthusiasts who decorate their homes with lovely aquaria containing exotic and fascinatingly-coloured water creatures.

On fine nights in the spring and summer he is to be seen around the Wellingborough district burbling along the roads on his Cyclomaster, making a tour of the ponds. His equipment is a fine net and a can, and when he returns with the can bearing evidence of his labours his fish feed on the best live food there is—and no doubt they thrive on it too!

SOME OF THE 1,400 POINTS WHERE YOU CAN GET GOOD CYCLEMASTER & CYCLEMATE 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		LANCASHIRE (cont.)	
BEDFORD, J. P. Simmons & Sons Ltd., 43-49 Tavistock Street.	67541/2	MANCHESTER, 3. Tom Mellor Ltd., 274 Deansgate.	Deansgate 6181/2/3
LUTON, Dickinson & Adams (Luton) Ltd., Bridge Street.	3535	MANCHESTER, 20. Saxon Jefferis Ltd., 674 Wilmslow Road, Didsbury.	Didsbury 3446 and 5340
BERKSHIRE		LEICESTERSHIRE	
READING, Great Western Motors (A City Motors, Oxford, Branch), 12-14 Station Road.	3036	LEICESTER, A. & P. Radio & Cycle Stores, 15-17 Knighton Fields Road West.	32731
CORNWALL		LEICESTER, Batchelor Bowles & Co. Ltd., 60 London Road.	60268
ST. AUSTELL, R. S. Damerell & Son, Whitemoor and High Street, Nr. St. Austell.	—	LEICESTER, Reader's, 61/63 Aylestone Road.	59554
DERBYSHIRE		LEICESTER, Smith & Parker, 75½ Narborough Road.	65360
DERBY, Kennings Ltd., Queen Street.	40211	LINCOLNSHIRE	
DEVONSHIRE		BOSTON, Boston Motors Ltd., 56/58 High Street.	3991
PLYMOUTH, P. Pike & Co. Ltd., 88 Union Street.	3108	GRANTHAM, Grantham & District Motor Cycle Centre, 6 London Road.	789
EXETER, B. R. Warne, Bottom of South Street	55108	LONDON	
DURHAM		EARLSFIELD, A. Gatto, 206/212 Garratt Lane, S.W.18.	Battersea 4364
DARLINGTON, White Bros. (Darlington) Ltd., 205-209 Northgate.	2379 and 2533	EAST DULWICH, Bellamy's, 3 Lordship Lane, S.E.22.	New Cross 0666
ESSEX		HAMMERSMITH, Lawson Pigott Motors Ltd., 320/22 King Street, W.6	RIV 4111
CHELMSFORD, County Motor Works (Chelmsford) Ltd., Duke Street, (Opposite Station).	3674/5 6283	LEE GREEN, Penfold Motors, 2-22 Burnt Ash Road, S.E.12	1202/3/4/5/6 Coppermill 1920
ROMFORD, Kenistons, Victoria Road.		WALTHAMSTOW, Jack Nice, 129 Grove Road, E.17.	
HAMPSHIRE		MIDDLESEX	
ANDOVER, Anna Valley Motors, (Andover) Ltd., Bridge Street.	2344/5	FELTHAM, Reo Motors Ltd., 59 High Street.	2990
ROMSEY, Davidson's, Bell Street.	2109	NORTHWOOD, Colliver Fisher at Northwood Ltd., 14 Station Parade.	777
HERTFORDSHIRE		POTTERS BAR, F. W. Andrews, 6 Hatfield Road.	4410
HODDESDON, Norris's, 16 Amwell Street.	3266	NORTHAMPTONSHIRE	
NEW BARNET, Lawson Pigott Motors Ltd., 184/6 East Barnet Road.	BAR 2353	NORTHAMPTON, Grose Ltd., Marefair.	31682
ST. ALBANS, Grimaldi Bros. Ltd., 188 Hatfield Road	5595/6	NORTHUMBERLAND	
WELWYN GARDEN CITY, Dickinson & Adams Ltd., Bridge Road.	32623	NEWCASTLE-ON-TYNE, George & Jobling, Forth Street.	23105
KENT		NOTTINGHAMSHIRE	
ASHFORD, C. Hayward & Son, 20-46 New Street.	334	MANSFIELD, W. S. Humphry Ltd., Albert Street.	1205
BROMLEY, Davis & Hill Ltd., Ravensbourne 101 Bromley Common	2634/5 and 3020	OXFORDSHIRE	
BROMLEY, H. E. Hills & Son, 481 Bramley Road, Downham.	HIT. 4197	HENLEY-ON-THAMES, City Motors Ltd., Reading Road.	1115
CHATHAM, The Chatham Motor Co. Ltd., Railway Street.	3413/4 and 45865	COWLEY, Oxford. P. Church, Hollow Way.	Oxford 77094
DARTFORD, E. C. Bate, 62 West Hill and 32 Lowfield Street.	2748 3548	OXFORD, City Motors, Gloucester Green.	2231/2/3
TUNBRIDGE WELLS, Ashplants Ltd., 11 Camden Road (also at Maidstone).	1869	STAFFORDSHIRE	
SEVENOAKS, Angus Motor Cycles, (A. S. Herbert), 4-7 Station Parade.	3338	BILSTON, Hines of Bilston, 29 High Street.	42200
LANCASHIRE		STAFFORDSHIRE	
BOLTON, Bradburys, 55 Bridge Street.	5781	STAFFORDSHIRE	
LIVERPOOL, 1. J. Blake & Co. Ltd., 110 Bold Street.	Royal 6622 Central 7398	STAFFORDSHIRE	
LIVERPOOL, 2. Bob Sergent Ltd., Moorfields.	Blackfriars 9887/8/9	STAFFORDSHIRE	
MANCHESTER, Graham Bros. (Motors) Ltd., 7-15 Peter Street.		STAFFORDSHIRE	

Continued opposite

SOME OF THE 1,400 POINTS WHERE YOU CAN GET GOOD
**CYCLEMASTER & CYCLEMATE
 SERVICE**

(Continued from opposite page)

	Telephone		Telephone
SURREY			
CROYDON. Westbrook & Marley Ltd., 14-16 Park Street.	2061	WARWICKSHIRE (cont.)	
FARNHAM. Heath Bros., 119-120 East Street.	6477	NUNEATON. W. J. Taylor, 24 Charles Street.	2659
GUILDFORD. Stanley Godfrey & Co., Onslow Street and Bridge Street.	2212	WARWICK. J. L. Vaughan, 9 Old Square. (Also at Leamington and Kenilworth).	Warwick 621
KINGSTON. G. W. Wilkin Ltd. 84 Eden Street.	2241	WORCESTERSHIRE	
REDHILL. W. & L. Wheeler Ltd., 17-19 Cromwell Road.	938	WORCESTER. H. A. Saunders Ltd., 34 Foregate Street.	2495
RICHMOND. Grand Garages (Richmond) Ltd., The Circus, Kew Road.	3833	YORKSHIRE (North)	
SUSSEX			
EASTBOURNE. S. C. Woodhams & Co., 336/8 Seaside.	3558	YORK. Bensons for Bikes, 45 Goodramgate.	2702
WORTHING. Masons, 151 Montague Street and Tarring Crossing.	1206	YORK. North Riding Motors Ltd., Clarence Street.	3220 and 3225
WARWICKSHIRE			
BIRMINGHAM. 6. Aston-Auto-Motors, 173/77 Aston Road.	ASTon Cross 3201/2	YORKSHIRE (West)	
BIRMINGHAM. 14. H. Jones, 1052 Yardley Wood Road.	War. 2554	LEEDS. 2. Rowland Winn Ltd., County Garage, Woodhouse Lane.	3222/1 (6 lines)
BIRMINGHAM. 27. Smith's Garage, (Acocks Green) Ltd., 164/6 Yardley Road, Acocks Green.	ACO. 1079	SHEFFIELD. Frank B. Roper Ltd., 154/168 London Road.	51011/2
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COVENTRY. Frettons of Coventry, Service Station, 325 Foleshill Road and at Leamington Spa.	62919	SCOTLAND	
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TIPS *worth* REMEMBERING

By
The Engineering Manager

DETACHABLE CYLINDER HEAD

The first 111,859 Cyclemasters had a cylinder head which could only be removed after the engine had been taken out of the wheel. After that number a change was made in the design of certain parts so that the head can be taken off for decarbonisation while the engine is still in the bicycle. Owners of 32 c.c. Cyclemasters before that number may like to know that this modification can easily be carried out to their Cyclemasters to give them the same advantage. A Quickly-Detachable Cylinder Head (Part No. B07), three Cylinder Studs (Part No. B13), and three new Cylinder Head Nuts and Washers (Part No. B02) will be required at a total price of 11s. 6d. These can be obtained from Cyclemaster Dealers.

This change is best made when decarbonisation is necessary. If you ask your Dealer to do this for you, he will supply and fit the new parts at the same time. If you do this work yourself (you will find full instructions in the *Magic Wheel* for January, 1955), proceed exactly as shown there until after the actual decarbonisation has been completed. After refitting the cylinder, fit the three new studs (which are slightly shorter than the old ones), by screwing the shorter thread into the crankcase, using two of the old cylinder head nuts locked together on the upper thread—do not overtighten them. Drop on the cylinder head, and fit the washer and nut on each stud. It is important that only the correct washers are used for this purpose, as they are made exactly to size to align the cylinder head accurately.

When your Cyclemaster next needs decarbonisation, it will only be necessary to take off the cylinder head, by removing the three nuts and washers. The piston crown, cylinder head, and

exhaust port can then be decarbonised. If inspection of the transfer ports in the cylinder shows that they need cleaning, it will be necessary to take off the cylinder and this, as before, involves taking the engine out of the wheel, but this is normally only necessary about every third time. Decarbonising of the exhaust port on the other occasions can now be carried out far more quickly.

SMOOTH CONTROLS

Last month a Cyclemaster owner rode into our Service Depot for a few small parts and while they were being fetched from the stores, got into conversation with me. He asked me to try his Cyclemaster, so I set out to take it a mile or so up the road. As soon as the engine had started I knew that the Cyclemaster was a good 'un, but that I should never enjoy riding it in its present condition. This unhappy feeling was all because his throttle and clutch controls were sticky and stiff. When I got back, I told him that there was something about his machine which I did not like, and asked him to guess what it was. He was obviously one of those owners who takes good care of his Cyclemaster (we suspect that he had given it a special wash and brush up before he came to see us), and so he was rather surprised at this. He made one or two guesses, but did not get near the real trouble.

I asked him to wait outside for a few minutes, took his bicycle away, and had the controls removed, lubricated, refitted, and adjusted. Then I took his bicycle back to him and asked him to ride it, without saying what had been done. I watched him when he mounted and saw at once that he had realised what it was. He rode round opening and closing the throttle, and engaging and releasing the clutch, finding out

how much pleasanter riding could be with correctly adjusted controls.

We suggest you try the controls of your Cyclenmaster critically when you ride it next. You may find that there is a lot of "play" on the levers, before their movement has any effect on the operation of the carburettor or the clutch because the inner wire of the cable is too long. In an extreme case, this will mean that the clutch will never free completely, and that the throttle will never open fully—affecting the performance considerably. Adjustment is provided on both cables to take up such play—your Instruction Book tells you in detail how to do it. One reminder here—do not take all the play out of the clutch cable; there must be enough to enable the tip of the clutch lever to move freely a quarter of an inch—if not, the clutch plates will not engage fully, and will slip and wear under load.

Stiff control operation may be caused by levers with over-tightened or unlubricated pivots, or by something working stiffly at the business end of the cable. By far the most common cause of stiff controls, however, is that the cables do not follow a smooth line between the handlebars and the engine. We have seen some bicycles on which the control cables are mounted in such a way that they have several tight bends in them, so that the friction between the inner wire and the outer casing makes the cable, and therefore the lever, stiff to operate. If you suspect this of the cables of your cycle (do not forget that this applies also to cable-operated brakes), it is worth spending a few minutes disconnecting them and re-fixing them to the cycle, so that they run in smooth curves all the way.

These cables are greased when they are manufactured, but if they have been in use a long time, it is worth while taking them off, holding them vertically and letting a little cycle oil run down the inner wire into the casing. Leave them hanging vertically for a time so that the oil can get all the way down between the two. When you have refitted them and adjusted the controls you will find that the time spent on this job will have been well worth while.

STRIPPING THE ENGINE

If you intend to completely dismantle the engine, you should be in possession of our Workshop Manual. This gives all the information necessary in order that the engine can be dismantled with the minimum of inconvenience and danger of damaging any of the parts.

Experience in our Service Department has shown that in some instances, attempts have been made to remove by force, the induction part of the main engine casting, and in this way, damage has been caused to the casting itself. At this stage, we should point out that if any one of the three parts of the engine casting are damaged beyond repair, it is necessary to replace the complete assembly. This is machined as an assembly, as manufacture in this way is the only method of maintaining correct alignment of the main bearing bores.

Due to the general design of the engine and the space available, it is impossible to make the induction casting in such a way that pullers can be designed for withdrawing it. The safest method of removal is to take out all the attachment screws and heat the casting up to just about the temperature of boiling water. This will make the bearing bore a little larger, so that it then pulls off the crankshaft bearing without the use of excessive pressure. It is important not to overheat, otherwise there is a danger of distorting the casting and also, damaging the main bearing.

If this sort of service is required, we suggest that you put the repair in the hands of a dealer who is accustomed to dealing with problems of this nature. Under no circumstances should a screw-driver or chisel be driven in between the two castings. The damage caused may make it almost impossible to repair them and consequently, a complete set of new castings will be required.

* * *

ANY PROBLEMS?

If you have any servicing problems, why not write in and get the advice of our Service experts?

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When you buy your Cyclamate its lighting set is fitted with Vitality Bulbs specially made to give the maximum head and tail light at all speeds and to withstand vibration.

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A user writes "Since using Cyclenmaster oil my mileage between decarbonising has gone up enormously. When using ordinary oil I decoked about every 1,000 miles. With your oil my unit maintains its top performance up to and over the 2,000 mark. When stripping my engine down after 2,150 miles, I found very little carbon in inlet ports, the rings quite free and the carbon on piston much softer."

E. J. F.



3/10
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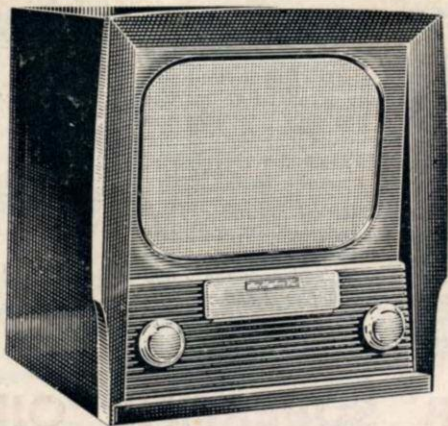
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