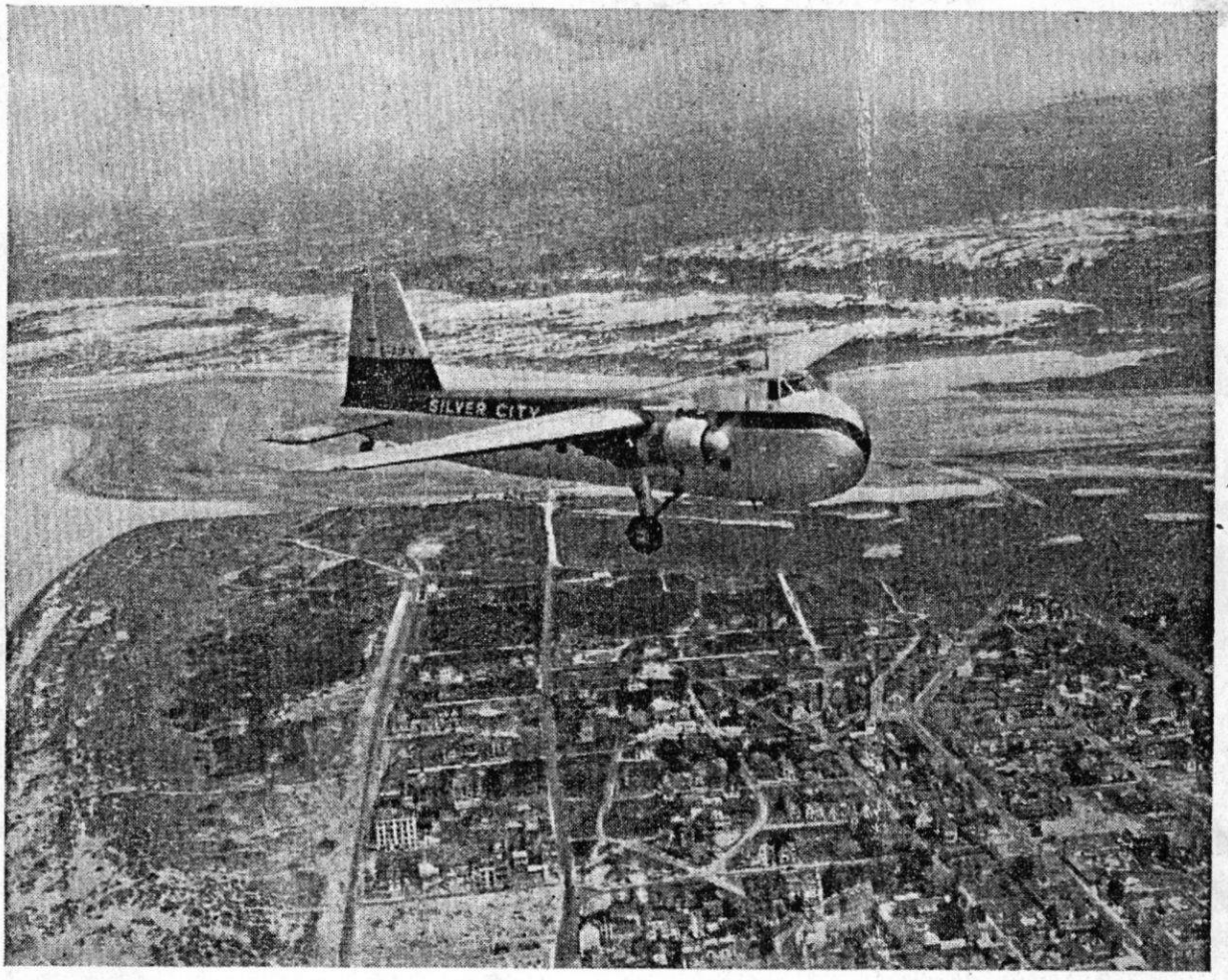
A NEW UNIT TESTED

JUNE, 1953 MONTHLY 4D

POWER & PEDAL

The Journal of the Cyclemotor



Le Touquet from the air with a Silver City Freighter carrying cyclemotorists to Frauce

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WHOSE TRIALS?

CYCLEMOTORING in this country is as yet in its infancy, barely recognised by governments, only casually noticed by the general public and still a matter of trial and error experiment by riders. In these circumstances the Auto Cycle Union deserves the gratitude of Trade and public for its work in organising the Motor Assisted Cycle Demonstration Trials, the second of which was held on April 26th, at Wembley Stadium. The British Two-Stroke Club, whose officials and volunteer helpers handled the actual running of the Trial will also receive thanks and congratulations for their cheerful, efficient and experienced hard work on the actual day.

For some reason or reasons unknown, the organisation was left very late, much too late for the event to be given adequate publicity or for proper planning of entries by manufacturers and clubs. This is a matter that can and almost certainly will be remedied next time and this alone will ensure a larger and more representative entry, but apart from that there were signs that few involved in the organisation and running of the Trial had any very clear idea of what its objectives should be.

Motor cyclists are so accustomed to the idea of any trial being a trial of performance that it is positively a new concept for them to think any other way. The qualities of a cyclemotor are those which provide as much as possible of the advantages of the ordinary bicycle, cheapness, handiness, silence and " ever-readiness ", with the additions of comfort and freedom from physical effort. These are not the standards of the motorcyclist, certainly not of the type of motor cyclist who customarily organises and participates in trials, and it would seem a matter of logic amounting to sheer necessity that a major say in the type of event organised for cyclemotors should be that of the cyclemotorists themselves.

There is in existence, we understand, an organisation of manufacturers of our machines but what it does or even what it was meant to do are something of an official secret. If this body would take on the responsibility of preparing a formula that would help in the establishment of standards by which their products could be tested and judged by the public this would be a thing of real value.

When *Power and Pedal* was just a bright idea in the editor's mind a leading manufacturer offered help with the words: " I believe your work will be good for the cyclemotor business and anything that's good for the business is good for us ". May these words be now turned round and addressed from the buying public to C.A.M.A. as a request for some active work in the direction of popularising cyclemotoring as a whole.

SELLING THE RIGHT BICYCLE

In our road test report this month the tester, a motor cyclist of long experience with still a taste for real high speed motoring, frankly admits that he did not dare to test the flat-out performance of the machine under favourable conditions, this after making a point of paying tribute to the stability of the cycle. He comes to the very obvious conclusion that high performance engines demand special cycles, and makes spring forks his first need.

This is even more of a problem in Britain than on the Continent because of the governmental discouragement of complete motor assisted cycle design by Purchase Tax discrimination, a tax on road safety itself. At present we can only urge dealers who sell high performance motors to work for the safety of their customers and other road users by making it a matter of duty to see that these products go into strong and properly equipped bicycles.

There are several sound proprietary spring forks and attachments on the market and tandem wheels are available for the fitting. If none of the special cycles so far produced appeals to the buyer there should still be a ready sale for these variants of standard design. Perhaps it is true that this responsibility should not rest on the shoulders of the dealer but in the present circumstances it cannot conscientiously be avoided.

COMMENT

by CLIP-ON

The Spirit That Moves Us

OF all the calls for help that reach the *Power and Pedal* office the most plaintive is the one that asks simply for a usable reserve petrol container. Plaintive to my mind because it should never have been a problem if the motor manufacturers or the petrol companies had taken the slightest interest in the problem.

Every maker who turns out a machine with a tank capacity of less than half a gallon knows perfectly well that his customers will have to devise some means of breaking down petrol purchased into smaller quantities of petr*oil* in the tank of the machine. Yet, so far as I know, not a single maker has catered for this need by selling a neat, portable tank to match his engine, clip or strap on to his machine and pour out easily into the main tank without splashing. Why?—I haven't a clue.

All the same the petrol companies are the greater villains in this respect. On the continent, simply because they measure in litres instead of gallons, petrol is sold in the right quantities for cycle motors as a matter of course. Some companies serve ready mixed petroil direct from the pumps and all garages take the serving of premixed juice for granted. The petrol and most of the pumps are made and sold by the same people in, say, France as in England but for some reason or reasons unknown they find it worth while selling a litre across the channel but not a quart here. Now there are a quarter of a million of us cyclemotorists here and the number is growing daily. We use a fair amount of petrol and a lot of oil. Who wants this market?

Trade Developments

That Institution of the cycle and motor cycle world, the *Cycle and Motor Cycle Trader* is promising "big developments" in the cyclemotor field in the near future. No details are given but rumour hath it that new names as well as new models will appear at or before the Show. An earlier paragraph in the same issue, however, raises a point in connection with the motor cycle trade that might well have a lesson in our own sphere, that a multiplicity of models reduces the value-for-money factor of the product by adding to the production costs of the factory as a whole.

This is not yet a problem in the cyclemotor field and perhaps it never will be, but it started me thinking that the lesson might not only apply to the number of different "models" produced. The delightful prescription quoted in the *Trader* from an American aircraft man is to "simplificate and add lightness" *and it is never more true than of cyclemotors.* Other things, even price, being approximately equal a motor that is simple and light will be a better job for us than one with weight and complication. This may not be true of the motor car or motor cycle trade but it is true of cyclemotors. It is amazing how little many cyclemotor users know or will ever know about what makes the darned thing tick and we are far from having a service station in every village. This means that quite a few "dead" motors will have to be pedalled to technical assistance some time or other and then the owners will have to pay for service. A light and simple machine wins on both counts and will be cheaper to make and buy as well.

Mystery Machine

A reader's query that baffled our *Q. & A.* department concerns an autocycle that he believes to be of French origin. He calls it a *Dunelt*, says it has the name *Le Chesnay* on it and guesses it to be of around 98 c.c. It has a roller drive that is engaged by a winding handle arrangement. This reader comes from Hastings and says he has seen other similar machines in that district. Does anyone know this make—where, when and how?

Brakes

Watching the performances in the brake test of the recent A.C.U. Trial, I was struck by the wide differences in demonstrated stopping power being spread over the entry regardless of type of machine, brakes or weight of rider. Entrants took from six to thirty feet to stop on the same piece of ground and there was simply no consistency about the results at all.

The worst offenders quite obviously had no front braking power to speak of at all and the fact that the actual stopping place was on a down grade caused these riders to slide considerable distances with locked rear wheels, much to their own amazement by the look of things. Trade riders shared the

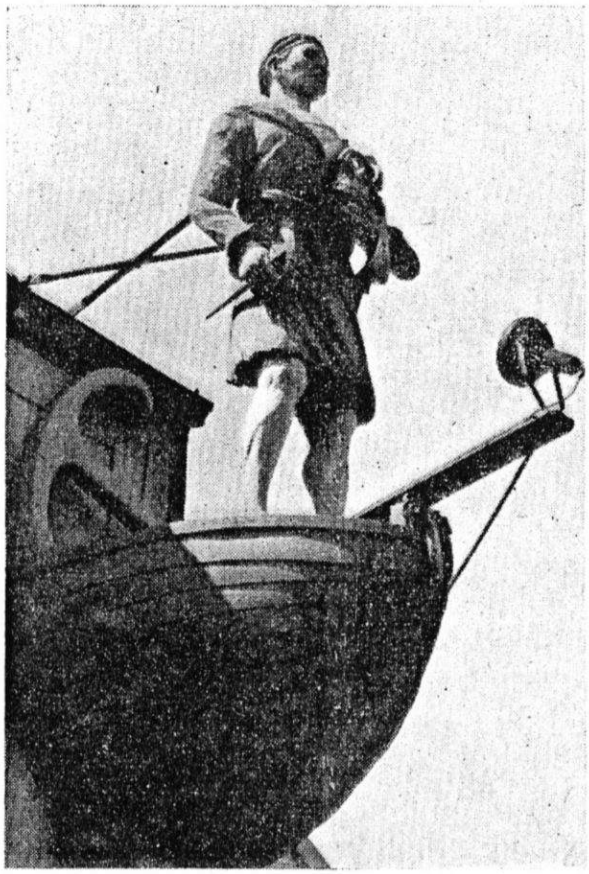
honours or dishonours with private entrants and "L" plates figured amongst the sheep as well as the goats. On the whole, however, the steadiest performances came from the older men despite the fact that most of these were also pretty heavy jockeys. So it appears that this was not a test of brakes so much as brake maintenance and the staider riders on their own machines are better at maintenance than either the youngsters or the Makers and Agents crews.

Personally I have always found that a good calliper brake properly adjusted is a fine stopper and also is the most sensitive brake to handle, allowing for fine variations in pressures, yet modern motor cycle brakes of the internal expanding type are quite as good in these respects and also less at the mercy of the weather than the exposed shoe types. It would be interesting to make some comparisons under properly controlled test conditions. Perhaps the A.C.U. will oblige now that they are taking an interest in the "under-60 c.c." class.

More Law

In Grimsby, according to a correspondent, the clip-on is also a motorcycle for passenger carrying purposes.

This reader has been in the habit of carrying his small son on a properly constructed seat on the crossbar of his cycle, a conventional thing in the cycling world and completely safe both for rider and child. Recently, however, he was stopped by a policeman who told him that the law required the passenger on a motor cycle to be seated *behind* the driver. So far as I know there has not been a test case on this point, but even if there were it would be rather like trying to add a pound of butter to a Beethoven symphony and give the answer in terms of gum drops. The plain fact is that the present law simply does not cope with cyclemotors and there is no reason why it should—it was not designed to.



Inn Sign

The 300 years old Public house, The Crown and Anchor at Shoreham, Sussex, has always possesed a figurehead. The original figure, which can be seen in old prints, was thought to be from the St. George, a ship in the Battle of Trafalgar. The present figure, about 7 feet tall, is about 25 years old but has no historical significance. Its one effect, however, has been that the pub is known by many people as The Pirate.

The Press

As a journalist I try to feel kindly towards those fellows who make the big money on the popular press, but the *Daily Mail* Motoring Correspondent tried me hard in his four inch "report" on the A.C.U. Trial.

Such terms as "pip squeak motors" and "phut phut machines" do not describe the new event in the history of personal transport that the cyclemotor really is, and the National Press is ill-served by such cheap condescension from "motoring correspondents" whose standards of judgment appear to be the comfort of their own plump bottoms on the upholstery of the opulent cars they "borrow for test".

The modern cyclemotor is a fine piece of precision engineering and does a much bigger job of work than any luxury saloon. If the *Mail* wants a cyclemotoring correspondent *Power & Pedal* will oblige.

HOW IT WORKS II

The Electrical System

by

BROOK LISTER C.A.E.T., C & G (V.E.)

In explaining the operation of a two-stroke engine last month, I mentioned that the fully compressed mixture was fired by an electric spark.

This article is concerned with how that spark is produced and timed to occur at the right moment.

Is there anything clever about this spark job ? There undoubtedly is. When an engine is running at 3,000 revolutions per minute, the magneto, whose job it is to make and deliver the sparks, is producing 50 DISTINCT sparks every second.

At this engine speed, one revolution of the crankshaft takes .02 (1/50th) of a second, and the duration of the spark is much less than that, for it must occur at a precise time within that 1/50th of a second.

In addition, within the very limited time at its disposal, the spark must give off sufficient energy to fire the mixture. Magneto designers, using the Cathode Ray tube long before it became an essential part of your Television Set, had placed pictures of the spark magnitude, voltage, duration, etc., upon their Oscilloscope screens and assessed what are the critical features governing ignition—modifying design here and there until the magneto as we know it to-day was produced.

Your magneto is a precise scientific piece of equipment, capable of producing 8 to 10,000 volts from a flick of the pedals.

How does it work ?

To explain this to someone with no electrical knowledge whatever is an impossibility within the scope of this publication. One cannot read a pamphlet and become a doctor !

Here is the story for readers who have done some study in the electrical field.

If a permanent magnet is moved past a coil of insulated wire, the "lines of force" surrounding the magnet will, in "cutting" the wires, produce a voltage (potential difference) between the free ends of the coil.

This will not, as it might be thought, discharge itself by a current, flow through the coil, for it is being urged in one direction only and current will only flow if the two free ends of the coil are joined to form a closed circuit.

If the circuit is completed as just described, the magnitude of the current flowing (amperes) will depend upon the strength and speed of the moving magnet, the number of turns of wire in the coil, and the resistance (Ohms) of that wire.

If the magnet be now moved past the coil in the opposite direction, a current will flow in the coil and external circuit also in an opposite direction.

A simple way in which an electric current can be generated (see sketch) is by arranging a magnet or magneto around the internal priphery of a wheel (in our case, a flywheel, which is very conveniently needed for engine performance) letting these magnets pass very closely to a soft iron core upon which is wound a coil of wire.

Alternating voltages (giving rise if the circuit is completed via a lamp, say, to alternating currents) will be produced at the coil ends. If the circuit is not "closed" no current flows and there is no resultant "drag" on the flywheel. This answers the question often asked as to whether a lighting-embodied magneto takes the same power to drive when lights are switched on as it does when they are "off".

So much for the lighting side of the story. By suitable selection of materials, disposition of air gap, etc., the output can be arranged to "flatten off" at a pre-determined engine speed, so obviating the risk of burnt out lamp bulbs.

The Magneto Side

Please look at sketch (1) which is a simplified picture of an ordinary flywheel magneto.

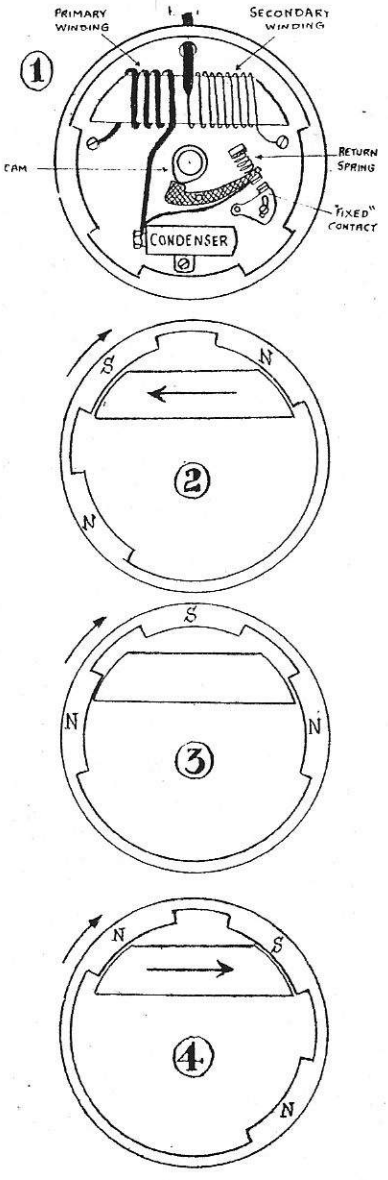
An iron core has wound upon it two coils of insulated wire. In practice, one is on top of the other.

The PRIMARY WINDING consists of relatively few turns of thick wire. This is the one in which currents are initally generated. It has one end connected to "earth", whilst the other, after "calling" at the insulated terminal of the condenser, is connected to the insulated moving point of the contact breaker.

The SECONDARY WINDING consists of a great many turns of fine wire, very carefully wound, interleaved with silk or glass insulation, subjected to moisture removal treatment and impregnated with high-class insulating varnish. This is a transformer winding, whose task it is to "transform" the low-voltage-high-current of the primary winding into a high-voltage-low-current supply for the sparking plug. One end of this secondary winding is connected to "frame", or "earth", while the other passes via the H.T. lead to the plug. The only way this circuit can be closed is by current

leaping the plug gap to earth, and travelling back via the carcass of the engine to the earth connected end of the secondary winding.

A characteristic of such a two-winding transformer arrangement is that when current STARTS, GROWS, DECREASES, or STOPS in the primary winding, the voltage across the ends of the secondary winding also changes.



If you are not familiar with transformer theory, please read the next bit slowly, or you will miss the point.

The voltage difference between the ends of the secondary winding is directly proportional to the RATE OF CHANGE of current in the primary circuit. This means that if the current in the primary grows or decreases slowly there will be little voltage produced across the secondary winding.

If, however, even over the same current range, we can make primary current grow to a maximum, or drop from a maximum to zero in a split second, a huge voltage will be produced at the secondary winding ends. It has been found convenient and effective to use the second of the two methods of producing instantaneous high voltage from a magneto.

Now look at sketch (2). A 3-pole flywheel magnet system, in rotating, is passing the iron core carrying our primary and secondary windings. Taking, as a convention, that magnetism operates from North to South, a flow of magnetism is passing at this moment through the core from right to left as shown by the arrow.

Now pass to sketch (3). In continuing, the flywheel has now reached a stage when two "like" poles are in proximity to the core, and magnetism through the core is now almost non-existent. The contact breaker points being closed, current in the primary circuit is dying to a minimum.

Please now consider the third position (sketch 4). A position has now been reached when magnetism is flowing through the core from Left to Right—in short a complete reversal of magnetic flow has been arranged tending to reverse the current in the primary winding.

Primary current with relation to time can be plotted on a graph (or as I have said, shown on an oscillograph) and designers can arrange for the cam-operated contact points to "switch off" the primary current at its peak value prior to reversal.

If this is done, the primary current in "collapsing" from a maximum to a minimum extremely quickly would produce a high voltage in the secondary winding.

However, current in a coil does not "like" being suddenly stopped, and two other pieces of "jiggery-pokery" come into the story aimed at halting the primary current in its tracks as it were.

Firstly, the magnet system as you have seen, in revolving, aims at this moment by reason of magnetism reversal to inject a strong counter-voltage trying to force a current in the opposite direction to the original, so putting a violent braking effort on the primary current.

For the second point, look at the sketch (1) again. When the contact breaker points open, the primary current which was previously flowing through them now has no alternative but to pour into and tend to charge the condenser. Immediately (and all the above, of course, occurs in a micro-second) the primary pressure eases off due to the magnetism reversal, the condenser (think it out) discharges itself back through the primary winding to earth and its current discharge direction is such as to assist in the collapse of the original primary current.

All this very rapid change of primary current from maximum in one direction to zero and even beyond in opposite sense produces an immediate high voltage across the plug gap inside the engine cylinder, so high as to leap that gap even under compression ; firing the mixture.

Another most useful function the condenser performs, and indeed it is questionable if a commercial magneto could have been made without solving this point, is, that absorbing the primary current surge

at the moment of point opening, it prevents that current trailing across and burning the contact breaker points.

A final point, not always realised by electricians. The H.T. lead and plug gap form a " condenser ", which, although it happens rapidly is " charged up " before ignition occurs. Any parallel leakage (moisture ?) on that " condenser system " will lower its voltage. Any increase in capacity will tend to increase the voltage of the system and the quantity (coulombs) of electricity finally dissipated in the spark. In fact, provided one can keep it dry and leak-free, a long H.T. lead can be more effective than a short one !

Correspondence

The Editor is not responsible for the views expressed by his correspondents. Letters should be typed or written on one side of the paper only and may be signed under a nom de plume for publication, but must be accompanied by the sender's name and address

Fuel for Two-Strokes

In your test report on high grade petrol in the May issue, it was stated that : " all available petrols were tested except benzole mixture which is not favoured for petroil lubricated two-strokes by some tradition now lost in the past" This statement surprised me for, having tried most of the new petrols I find my Cyclemaster likes National Benzole Mixture best ; and the fine carbon it produces simplifies the scraping out of the exhaust port. Perhaps, therefore, this " tradition " should be investigated.

Having got that off my chest, I would like to thank you for producing such an excellent magazine and for filling in the gap, felt so long by cyclemotorists. My only criticism is that I would rather have a picture on the cover (as on January, February, and April issues) than an advertisement.

OTU 206.

Manchester

Cyclemotor Required

In two years of daily use of a popular roller-driven " clip-on " covering on long and short trips over four thousand miles, I have come to the conclusion that the only worthwhile cyclemotor is that which has positive drive like the *Cucciolo* (too expensive) or the *Cyclemaster* (too small capacity).

I have suffered all the usual, but nevertheless galling, troubles —slip in wet and frosty weather, broken spokes, seized free-wheels, worn-out rollers (2), parts breaking and being lost due to vibration, etc. Spare parts, compared with those of a car, are very expensive, and all the information available from the manufacturers is the usual " Consult your accredited dealer ", also an expensive job.

After much experience, and talks with others of the sport, I am convinced that the cyclemotor of the near future must be :

(*a*) A unit of the *Cyclemaster* type —thus no trouble with roller slip, freewheels, or tyres.

(*b*) Of 50 c.cs—32 is too small.

(*c*) Backed by a cheap spares service and a manufacturer's Workshop Manual available to all.

With a unit of this description, moderately priced, those of us who are healthy users of power and pedal, will travel hopefully and with an easier mind.

Your magazine is excellent—make it bigger and increase the price to sixpence.

J. H. FAWCETT

Durham.

Lamp Bulbs

I was interested in the article on " Lamp Bulbs " as I had the same trouble of burning out rear bulbs with my existing dynamo when I converted my cycle to power. As the rear number plate must be illuminated by law, my dynamo rear lamp was disconnected and only still fitted because I found it useful for carrying a spare bulb, but after aforesaid trouble as an experiment I connected the two rear lamps plus headlamp to the dynamo. Since then I have done hundreds of miles during darkness under full power without any bulb trouble and still get an excellent beam from my headlamp Two rear lamps in the interests of road safety are better than one,

and the expense of the extra one is nil to run apart from the first cost of the bulb. I am sure some readers will have dynamo rear lamps "lying about the house" and will find the tip useful. The bulbs to use are head 6V05A and rear 6VO4A.

The dynamo is a *Philidyne*

D. G. ROBINSON

Newcastle-on-Tyne

Cyclemaster Experiences

I have owned a Cyclemaster nine months, repairs and expenses apart from usual, NIL.

I am 13½ stone and can negotiate 1-10 hills with a little assistance—my 9 stone friend gets up them like a Norton—

Great importance should be shown to the 5 grooves on the carburettor needle, second from top shows a great absence of four stroking and a single electrode plug should be used—does not soot up so quickly. But Cyclemasters are like women, all a little different so you must fiddle on your own and not take too much notice of well meaning friends.

Your little Mag wants brightening up a bit and a few adverts and glossy paper even if it's 6d. Should go far.

JOHN GREELY.

Bristol

Cyclemaster Carburettor Cover

The strips of rubber fixed to the top and bottom of the carburettor cover soon fall off, and if not replaced the vibration causes it to cut into the petrol tank and metal casting housing the clutch. A good substitute can be made from an old fuel pipe (that connects the tank to the carburettor). Cut down its length with a sharp razor blade and then insert the edge of the Carburettor cover into the cut, it will grip on quite firmly and requires no adhesive.

G. J. RAINES

Hornchurch

2-stroke or—

Since I seem to have caught Mr. L. S. Roake on a raw spot I think I had better put things right.

In a car or a motorcycle I should expect to find a four-stroke engine. A cyclemotor is quite a different proposition, however. As I see it, a cyclemotor is a simple attachment for taking hard work out of cycling. If we are to have gears and special frames and the like then an autocycle or lightweight motor-cycle will fit the bill.

I did not say that a four-stroke engine was complicated, I merely

said it was more complicated than a two-stroke.

Since when, by the way, has a four-stroke had a greater output than a two-stroke of similar capacity ?

Lastly, I would like to say that if a steam engine for a cycle is marketed I would be very interested to read of it in your magazine ! My plea for simplicity was directed to manufacturers rather than to users.

I wish Mr. Roake " Good hunting " on his " Little Pup ".

L. SMITH

Newton-le-Willows

—4-Stroke

Congratulations upon the very welcome journal for the " cycle-motorist ". How I hope it increases in size and popularity.

In writing, I am supporting our friend of the " Four-stroke ", (March issue) and also Mr. Holt of Ilford.

I am the proud possessor of a *Cucciolo* fitted to the first of Mr. Holt's special bicycles.

The bicycle is faultless, and the *Cucciolo* has proved to be the finest engine on any bicycle. It is amazing. I have done over 8,000 miles, and I live in a hilly district, but there is not a hill around that will even extend the engine. I feel it will climb anything. I have *often* done over 40 m.p.h., and I average over 300 m.p.g. on petrol, and yet have never touched the engine. So let's have some information on " Four-strokes " now and again, as there are thousands of us.

Supporting Mr. Holt, I am still looking for a rear hub spindle that will take, washers, chain adjusters, mudguard stays, and a carrier, and still leave room for the complete nuts, and let them be tough steel that will not strip its threads.

Let us also have wire cables that keep their nipples, even if they have to be heavier, as I have had six in as many weeks, and one only lasted one day.

Let us have tubular, curved, all one piece rear carriers like Auto-Cycles to which we can attach the rear number plate, and so eliminate that eye-sore,—the number plate —swinging and rattling on a protesting mudguard.

In closing, will somebody *PLEASE* tell me why twist grip throttle controls have to be on the right side ? when all signals are given with the right hand leaving one without complete control of the machine—so silly !

I would like to see your (our) journal bigger, and slightly more expensive, and yet, I would rather it stayed as it is, and appear more often, as it seems such a long time to wait from one issue to the next, and I find myself counting the days to the new issue.

" NEVER SATISFIED "

Romford

Controls—And Goggles

I have been a cycle-motorist for about four years now, and was a motor-cyclist for some years before that.

Always wishing, therefore, to retain some of the features of the larger machines on my own cycle-motors. I found the following to be (to my mind, anyway) indispensible.

Firstly, the twist grip throttle while this cannot be used where the throttle and decompresser are combined, on other models it is a blessing in traffic where I do all my riding. Also it does away with the wrist-ache accompanying the lever control. Incidentally, even with the decompresser models, a small finger-lever can be fitted to raise the valve.

Secondly, a handle-bar mirror (a large one). This speaks for itself.

Thirdly, (especially on the Cycle-master, a choke control on the handlebar. The lever I use is the one originally supplied for the throttle. The return spring I use is the compression type, but when using this type, it must be housed in a loose sleeving, or it merely buckles instead of compressing.

A small item of clothing not yet mentioned in these pages is a pair of goggles. I am sure there are thousands like myself whose eyes—even at 20 m.p.h.—are a target for flies, dust, motes and even beams, not to mention the excess irritation of the lachrymal glands. Well, after trying dozens of pairs of goggles (I've spent more on goggles than on spares and repairs) I have at last found the perfect pair. They are called *Hyaline.* They consist of a perspex front, shaped and worn exactly like spectacles, large enough to prevent wind and foreign bodies, and small enough to escape ridicule. They don't steam up, either!

The best of luck to this magazine and here's wishing you more Power to your Pedal.

REG. MORGAN

S.W.6.

LIGHTING FOR POWER ASSISTED CYCLES

For those requiring lighting equipment for power assisted cycles Lucas offer three sets, two for use where a lighting coil is incorporated in the fly-wheel magneto. They are Lucas Lighting Sets Nos. 431 and 331 and have Lucas Cycle Headlamps Nos. 304 and 313 respectively. The Lucas No. 304 Headlamp with its patent shockproof rubber bracket is also included in the third set, the tyre driven dynamo lighting unit, specially designed for power assisted bicycles. The set number is 413. All headlamps have provision for standby batteries and all sets take the Lucas VT31 rearlamp which also gives ample number plate illumination.

The Gentle Art of Touring

by

THE EDITOR

QUITE possibly vegetables firmly believe that their way of life is a Good Thing. Roots firmly in the ground, security of sustenance and mating by courtesy of the buzzing bee, they may argue, is obviously the best of existences and the vegetable the happiest of living things. But Man is a mobile creature who finds close ties irksome and, therefore, likes to take his pleasures on the move—hence the Tourist.

Touring is simply travel for pleasure. The tour may take an hour, a day, a week or a year and cover a continent, country, county or even a garden. The rules of the game are wide open to any interpretation the individual cares to apply for himself and it is in learning to apply the rules that give him the greatest pleasure and satisfaction that the tourist gains pleasure by experience.

Within this definition the cyclemotor tourist is indeed a fortunate man, for his range is wide enough to satisfy all but the most ambitious of travellers while his means of locomotion permits a very close approach to the territory and its people in which he travels. I I know of an enthusiast who has covered 600 miles in a two-day tour and got pleasure out of it! Others would be content with a tenth of that mileage and claim a greater benefit. On the whole the only guide to the most suitable mileage for, say, the annual holiday is that which can be achieved without the effort of sheer travel reducing the time and energy, available for the enjoyment of the places visited and the personal contacts made. The spells in the saddle need only be reasonably comfortable to be enough enjoyment in themselves, but it is the pauses that will make up the memories of the tour that are carried home and enjoyed over and over again until the next holiday time comes round.

Writing as a cyclist and motorist of many years and a couple of hundred thousand road miles experience, I can only advise on the basis of the new and very real pleasure that I have found from the use of the modern cyclemotor. So far as planned mileage on tour is concerned I think the best formula is that the target should be the same figure as you would fix if you were doing the trip on an ordinary pedal cycle. The full advantage of the engine can then be used to make a tremendous addition to pleasure in all or any of the following three ways:

(*a*) To remove all physical effort from the riding, perhaps leaving some for walking, climbing, swimming, etc.

(*b*) To enable detours and dalliances to be made at will without upsetting schedules.

(*c*) To carry extra baggage for the comfort of the body or as books, maps, camera, etc.

I am aware that this sounds a modest suggestion, almost as if I lacked faith in the ability of cyclemotors and their riders to travel real distances, but I am firmly convinced that this line represents the real value of motor-assistance to cycling. Speed and range are not the essence of true touring pleasure; ease, comfort and interest are, and these are best obtained by not being too ambitious over distances in the saddle. If you want a touring ground that is a long way from home—Well! Railways were made to carry you and your machine at a mile a minute, cycle-motors were not.

How far a trip should be scheduled in advance is a question that crops up in any discussion on touring, and the red herring of the pleasure of planning in anticipation is more often than not permitted to obscure the discussion. Planning a tour does not mean fixing time and mileage schedules and should not. The pleasure of touring is more than anything else in its freedom and the mere fact of having to be at point X at such and such a day and hour kills that pleasure stone dead. A headwind or a puncture can make a day's pleasure into a strenuous scramble if the schedule is fixed, but if the plan simply is to enjoy a given area in a given time the delays will simply be different opportunities to meet people and enjoy things closer at hand.

The bogey of accommodation is often raised against my demand for full freedom as an essential for real touring, but in my experience a bed of some sort can always be found in any territory worth touring in. The only thing is that the search must not be left too late. The safest and often pleasantest thing is to seek the overnight resting place at lunchtime (The pub or cafe is an excellent place to start the enquiries), and having found it, to dump the surplus kit and go out light in the afternoon and evening. Touring this way I have only once come unstuck for a bed and that was in the Severn Valley with a party of four in wartime (!).

So many tourists look towards the Continent these days that a word about touring there is not out

of place. It is so much worth while as to be a necessity for the intending tourist to join the A.A. or R.A.C. and leave the formalities to them. You will need a Carnet for the export and re-import of your machine. This lasts a year and should cost you £3. 10s. 0d., *should*, because the above organisations will get them for cycle-motorists at 35/-. Your home driving licence will serve you in France, Switzerland, Italy, Belgium and Luxembourg, but an International Licence is needed in Holland, Germany, Austria and Spain (Again see organisations.) As you can now fly your machine across the channel for five bob in twenty minutes plus, of course, a couple of pounds for yourself and another five bob for the Minister for Air, there seems no reason for staying in Britain, unless you want to.

Once on the other side, go about the tour exactly as you would here. Keep the mileage down, go as you please, eat and drink what comes and enjoy yourself.

In the non-industrial areas over most of Western Europe the accommodation problem is easier for the tourist than in this country. Even the one cafe in quite a small village has a couple of rooms to let and cheaply at that. Language is no problem at all if you are of a friendly and cheerful disposition. If you are not maybe you had better not go touring at all.

That, perhaps, is the real secret of happy touring, the ability to co-operate with the inevitable, to take what comes and like it.

"Everything that happens to me is either a pleasure or an experience", wrote Margot Asquith (I believe), and suggests by implication that in either case it was worth having. Take that as a standard and the gentle Art of touring is yours for your pleasure. But remember that it is a *gentle* art—Take it easy. F.L.F.

NEWS

TOURING THE HARD WAY

Peter Lee-Warner, on his way to Australia from London by *Power-Pak* motor, has now covered over 4,000 miles and reached Baghdad in time for the Coronation celebrations there. He has now travelled through France, Italy, Yugoslavia, Greece, Turkey and Transjordan to Iraq.

He found the going very tough in Greece, where the roads are far from ideal for the poor old cyclists. "Oh for the English Roads" he cries. He reports that all his equipment is standing up very well to this gruelling test and that the synchromatic drive, half horse power motor is working like two horses.

He broadcast from Baghdad, and hopes to make other radio reports en route.

A PILGRIM'S PROGRESS II

by **Arquata**

In Which Pilgrim is Tested

THE three months during which the provisional licence was valid was now running out so I duly attended the appointment made for me to take the driving test. First came a brief scrutiny of a few old licence plates—eyesight this, and then, the inquisition.

"I want you to go down this turning on the right, first to the right, first to the right again, right again, in other words round the block and keep on going until I tell you to stop. You won't see me but I'll see you". Off I went, one length of the rectangle being a busy trolley-bus road, and I did exactly what he told me to do. On entering the home straight, I kept on, continued for about half a mile, when without incident, I came to a dead end. Realizing I had taken him too literally, I returned to the starting point recommenced and completed again six circuits, when the examiner stopped me and said "now go round the other way". This was much easier being all left hand turns. He also said he would appear suddenly as I was going round and call out "Stop!" to see whether I could pull up quickly in an emergency. I was glad it wasn't a wet day. He duly appeared suddenly from behind a tree, we both did our stuff and he was satisfied with that part of my performance, anyway, because he said was I familiar with the Highway Code?—Here I began to feel very small beer. Some questions were to me, as they would be to most experienced cyclists, fair and easy, and I thought I knew ALL the Highway Code, but he found me out on one or two questions, e.g. what's the first thing to do after an accident?

Now by this time I knew it was no good trying to bluff these boys, cover up, or hedge. I had been replying spontaneously with the first thing that came into my head. Somehow or other he'd got me into that frame of mind. Out it came then, without premeditation:

"See if I'm hurt!"

"Yes", said he, patiently, "and after that?"

"See if the other chap's hurt". He got a bit testy at that (although I hadn't the slightest intention of being facetious), and forthwith got down to brass tacks.

"What about reporting it to the Police?"

"Yes, at once".

"What do you mean at once?"

"As soon as possible".

"What time limit?" He was relentless now. Why I answered "seven days" I just don't know but this brought the surprisingly mild comment that I was only guessing and that the limit specified in the Highway Code was 24 hours.

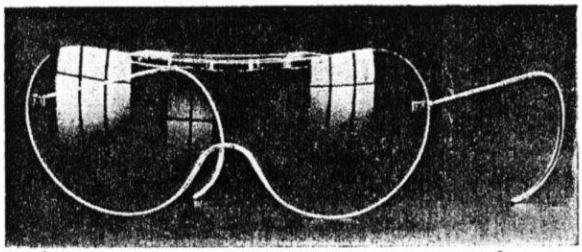
Came a few more questions which I think brought the right answers and then one which completely baffled me.

"What is the signal to stop?". Frankly, I just didn't know. I knew the signal for slowing down and that to indicate intention to turn right or left, but not "stop". All I could visualize was the signal given by the horse-bus drivers of old as they trod on their foot-brake lever and made a circular motion above their heads with the whip. Self-consciously, I raised my right hand, which made a tremulous sort of movement as though I was waving to someone across the road. He passed on to the next question.

A useful reminder to examinees when on this signal queston is to remember that there are two sides to it—viz: the one who gives the signal and the other who sees it. What he was after, perhaps, was the signal the policeman gives when he wants a driver to stop, so maybe my semi-hilarious wave wasn't too far out after all. I made the grade, however, and his confidence in me has been justified for I've ridden, I should say, over 17,000 miles since 1949 and, touch wood, have kept clear of trouble.

I felt quite proud of myself when I abandoned those "L" plates; much as a young chap does when he leaves knickerbockers behind and wears long trousers for the first time. I made my daily 16 mile cross-country journey, mainly without incident. All of us will have to have, it seems, at least once, the experience of an inexplicable failure of the engine, only finally to discover that the fuel has been used up and the tank empty. Another time, going peacefully along, the engine died for some unknown reason. Naturally, I carried a spare plug which fired at once, and I resumed the broken journey. But the plug taken out was reasonably clean. This mysterious failure was solved some time later when I had a similar halt. This time I examined the inside of the connecting nut, under

the rubber hood on the ignition lead which fastens to the plug. The thread on this plug was practically smooth : caused, I suppose, by the constant vibration there. Normally, it would be sufficient so long as contact held, but inevitably a time must come when it would just jog off the contact and fail to find another. I replaced the rubber-hooded connection with a bakelite affair, which cost 1/6. I couldn't quite see the function of the bakelite hood so took it off and left the bare metal to metal connection. Most chaps with a mechanical turn of mind are inquisitive and they frequently get answers to their questions. I did in this case. It seemed to me that the lead to the plug was not quite secure, so I leaned over the handle bars with the intention of giving it a short turn, only to get a smart electric shock.

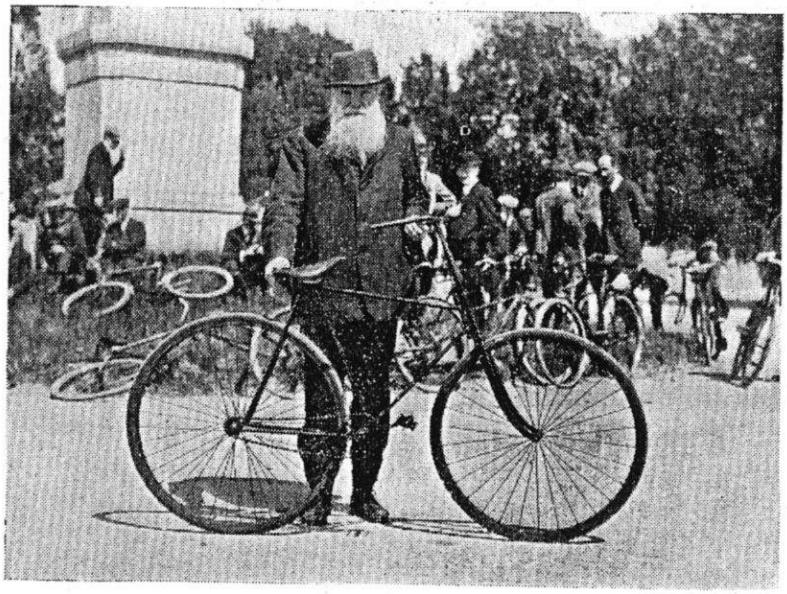


The HYALINE 3030 GOGGLE

After receiving the letter from Mr. Morgan published in our correspondence columns, we contacted the makers of the *Hyaline* goggles he refers to and obtained a pair for examination and test.

The 3030 goggle, as it is catalogued, is a light, comfortable unit, offering full protection for the eyes and a wide visual range. It is inconspicuous when worn but showed itself able to stand deliberate maltreatment including bending and flexing, banging on stone and throwing against a wall. The *Hyaline* seems capable of guaranteeing real protection under road conditions.

The manufacturers will supply single goggles direct at 11/- post free and offer to help the enterprising club secretary to give service to his members and make an honest bob for the club funds, by supplying clubs in orders of one dozen or more at 25 per cent. off list price. Spare fronts cost 5/6 each. The makers are : J. & R. Fleming, Ltd., 146 Clerkenwell Road, E.C.1.



THE DUNLOP STORY *John Boyd Dunlop, here seen at the Annual Meet of the Irish Cyclists Old Timers Fellowship at Donnybrook, Dubiin, in July 1918, made the first pneumatic tyres. His daughter, Wee Jeannie Dunlop of those days, recently told the story as she actually saw it.*

SO accustomed are we to the life that depends on airborne wheels that it is indeed difficult to recollect that the pneumatic tyre was only invented in 1887. There was almost an air of unreality about the talk given to the Pedal Club at luncheon a few weeks ago by Mrs. Jean McClintock, daughter of the legendary John Boyd Dunlop, telling of her own personal recollections of the making of the very first tyre.

"My brother," said Mrs. McClintock, "had been given a tricycle and in an unguarded moment my father said to him, 'I can make you the fastest wheels in the world'. From then on he was given no peace, so he set to work in my mother's spare bedroom, and I well remember her being very upset by the confusion when it was turned into a temporary workshop, with a motley assortment of strips of rubber, cloth,

elm, solution and scissors strewn all over the place ; and she became considerably ruffled when she found the American elm strips were left soaking in her bath . . . . ."

She went on to tell how the young Dunlop on his tricycle was able to challenge local racing cyclists, thus making them interested in the pneumatic tyre for speed. One of them, W. Hume, rode a pneumatic-tyred machine in the Belfast Queen's College Sports and came in first in all events. This was the start of the industry that now keeps the world moving on land and in the air at speeds that John Boyd Dunlop would have considered quite impossible.

However, Dunlop did appreciate the immense possibilities of his invention. In a press interview in 1897, when asked if he considered cycling a craze, he said, "Anything which facilitates locomotion cannot be a craze. It must be permanent as it pervades all nature. Motion and locomotion are the order of the Universe and must be permanent."

An interesting thing about the story is that Dunlop was his own first convert. He had never ridden a bicycle in his life at the time he made the first pneumatic tyres, but he had one made for him in 1889 and rode it until 1918, when he was 78 years old. This machine is now in the Belfast museum. Dunlop himself made very little money out of his invention and had little ambition to be a rich man. It is amusing to note, however, that what he did make was sent by his wife to her brother in Australia to establish a sheep farm, and the wool from these sheep is still the basis of his family's fortunes to-day.

John Boyd Dunlop was a far-sighted, ingenious and practical man, loved and respected in his own time. It is pleasant to record that such a man became a pathfinder for the technical advancement that makes our civilisation move.

Ladies: This Time It's Hats

While wandering through a large well-known West End store last week, I discovered the perfect head-gear for the practical and would-be smart lady-rider! The female version of the deer-stalker. . . . made in delightful colours of velveteen. The flaps and ribbons are perfect for insuring that it won't fly off at speed and it is also excellent for keeping the hair in order. The flaps may also be "put up" amd the ribbons tied on top when not riding.

The girl who has to arrive at the office looking as neat and tidy as her bus or car colleague I admit has a more difficult task. I suggest for her either the new "jelly-nean" cap which covers the hair completely, or the little knitted cap I have sketched with gloves to match. A casual short swagger coat or duffle coat are both warm and smart over a divided skirt which insures cycling with ease and safety. For muddy weather the "office girl" could wear ribbed woolly stockings over her office nylons and short rubber boots. There are a lot of these about now in a wide range of colours and very reasonably priced at about 20s. Her indoor shoes could be carried in the pannier bag on her bicycle.

Of course I realize that a skirt and duffle coat are not suitable for really impossible days of pouring rain, sleet or snow. The answer to those days is the all enveloping mackintosh—a riding mackintosh preferably, as this is designed for sitting astride a horse and therefore is just as suitable for sitting astride your bicycle! These mackintoshes are designed with straps on the inside flaps to fasten round each leg, thus keeping the mackintosh in position when sitting astride. I suggest a plastic cape tucked away in the pannier of the bicycle for the day when it might rain and on the other hand it might not! There are a great many of these days in England, they start warm and sunny and end in a thunderstorm just as you emerge from the office. The plastic cape folds into a tiny space when not required and can cover all in an emergency.

A Designer

ROAD TEST REPORT

POWER BY "ITOM"

MANY of the most interesting designs in cyclemotor engines that we see on our roads are of Italian origin and in particular we are inclined to note them specially for performance. The latest of these in our road test experience, however, is more than interesting—it is going to set new standards in performance and cause many of us to revise our ideas on what can be got out of a pint pot: more than a quart by the look of it.

The *Itom* is the name of this engine, and it is a roller drive, under-the-bracket, two-stroke of 48 c.c. Out of this capacity it produces a speed range of 5/35 m.p.h. and pulls hard all the way up. It climbs magnificently and accelerates better than most of the cars it passes so easily. It is light, easy to drive and has a pedal-operated engaging gear that is so simple and obvious that it is now quite impossible to understand why all the engines are not engaged that way. Altogether the *Itom* is quite a machine.

Actually a machine of this *marque* made a tentative appearance on the British market a couple of years ago as an over-the-rear-wheel unit with little to distinguish it from an already popular model of not dissimilar appearance. This new model, however, is not only new in its position on the machine. This *Itom Tourist*, to give it the full model name, is designed to do some real travelling over any distances that the rider cares to undertake, so that it not only has a high maximum but also cruises comfortably at 20 m.p.h. or so at comparatively low revs., economically and without fuss or stress. Although not heavy the engine is solidly built and care has been given in the design to ensure long life as well as immediate high performance. The big end and main bearings are rollers and the bearing surfaces large enough for an engine double the size. The well-finned iron barrel is spigoted into the crankcase and held by three long bolts that pass right through the cylinder casting and thread into the crankcase, the aluminium head being secured by long-shanked hexagon nuts in accordance with modern motor cycle practice.

A well-domed piston fits into the hemispherical head, carries two rings and a circlip-retained gudgeon pin that fits into a floating small end bush. Flywheel ignition with lighting coils comprise the conventional electrical system and the whole assembly pivots on a sturdy arrangement of clamping blocks under the cycle frame immediately abaft the bottom bracket.

The front end is secured *on* or *off* by a toggle system actuated by a pedal lever exactly like those used for foot changes on motor cycles. The cranked lever is mounted on the near side of the machine so that the rubber-covered end is set conveniently to the left toe, just in front of the pedal. The lever is pressed down to engage and lifted up to disengage the engine roller from the tyre.

As the flywheel magneto projects somewhat from the side of the crankcase, the engine is supplied with a special cycle crank to take the left pedal, clearing the magneto cover by just enough. At first touch this seems to be rather awkward, but in fact any rider becomes used to the "outboard" position of the left pedal quite quickly. The *Itom* never requires pedal assistance when running, but tests of the cycle as a cycle without the engine in use demonstrated that the new pedal position is no disadvantage when pedalling.

On the road the control system is almost perfect. The machine is moved away as an ordinary cycle for a couple of turns of the pedals, then the engaging lever is tapped with the left toe and the engine is engaged and pulling smoothly immediately. When approaching a traffic stop an upward flick with the toe disengages the drive and the cycle silently freewheels to a stop or, more often, wriggles easily through the standing traffic until the lights go green and the power can be brought in immediately for a getaway that leaves most of the cars behind.

The acceleration of this engine is almost out of the cyclemotor world and the sheer amazement of many car and truck drivers when the *Itom* got out in front and just stayed there was one of the delights of the test. It even accelerates uphill and the pedals became simply footrests 99 per cent. of the riding time. There is plenty of pull at 8-10 m.p.h. which is the most useful speed for cyclemotors that have to climb, and on level roads the engine could be left in and would pull away without pedal assistance from literally walking pace.

At this point, in order to discuss the performance of the engine, it is necessary to put in a word about the cycle used in the test. It was a Phillips P.1. model that is described as a Sports Light Roadster, a handsome, sturdy machine with a rigid, brazed-up frame, longish in the wheelbase and moderately priced at £13. 11. 5. Its stability and roadholding at all speeds were first class and the side-pull calliper brakes proved super-stoppers, well up even to the high performance of the *Itom* engine. With this mount it was

possible to use the speed of the engine on good road surfaces and to establish that the top speed on the level was in the region of 35 m.p.h., but only on good surfaces. To make real use of this engine on ordinary and second rate roads in safety spring forks become an essential and heavier wheels desirable for long life (both of rider and machine).

Frankly we did not dare to test the potential top speed "through-the-gate," *i.e.* in a downhill swoop with the throttle wide open, although it can be said that the engine seemed to get smoother as the revs went up and there was never any sign of stress at speed. The most comfortable and sensible speed for cruising was about 20 m.p.h. with the throttle about one third open. This speed could be maintained uphill and down dale with ease and it was cruising this way that most of the test was carried out, including the petrol consumption test which yielded an average figure of 177.4 m.p.g.

On the wrong side of the account we have to criticize the *Itom* severely for noise. It is much too noisy, in fact it makes a devil of a row when really being used and there is no excuse for this on a machine that has so much speed to spare for a little extra silencing. Another drawback is that the magneto projects so far on the nearside as to foul the curb when parking. As has been mentioned the special crank that clears this does not create any difficulties over pedalling but it does limit the ground clearance enough that some care is needed not to make lefthand turns with that pedal down. The machine can actually be parked on a dead flat surface by simply leaning it on the left pedal!

The only other weakness of the machine is a tendency to roller slip in wet weather on hard roads (There was no slip at all in wet weather on grit roads). Much of this slip is noticeable only because of the unusual amount of power the *Itom* provides for transmission and the best way out of it was to go easy with the throttle. The machine is supplied with alternative rollers, the steel one as tested and a carborundum one, but *Power and Pedal* earnestly requests riders not to use this latter kind of roller with the positively located type of engine or we shall have to publish the "Focus On Tyres" article all over again.

Talking of tyres, the amount of slip experienced and the method of engaging and disengaging gear by the foot lever, without using the decompressor except in the wet might have brought some tyre trouble in the course of the test. Actually the beautiful clean tread of the *Dunlop* "*Motorette*" was absolutely unmarked at the end of the several weeks. It was deliberately run at varying pressures and seemed to take the high speeds and rough usage for granted. It is definitely the "tyre-for-the-job".

To sum up: The *Itom* is a very high performance unit which, with a little attention to details, may find a big niche in the British cyclemotor market. It was a pleasure to test it and its performance will long be remembered.

SPECIFICATION

"ITOM Tourist". 39 mm. bore 40 mm. stroke, 48cc. Two-stroke. Iron barrel, alloy head, domed piston, roller big end and main bearings. Flywheel magneto with lighting coils. Dellorto carburettor. Under bracket mounting, lever and toggle pedal engaging gear. Steel-roller drive. ½-gallon cylindrical tank mounted on down tube. Price, complete with special wide clearance crank £28. 10s. 0d.
Makers: "Itom" Industria Torinese Meccanica s.r.l. Torino. Italy. British Importers: Adimar, Ltd., 26 Brixton Road London, S.W. London Distributors: Barry Bros., 129 Praed Street, W.2.

A.C.U. MOTOR-ASSISTED CYCLE DEMONSTRATION TRIAL

SUNDAY, 26th APRIL, 1953

PROVISIONAL RESULTS

SUMMARY OF RESULTS

1st Class	47
2nd Class	9
No Award (NA)	3
Non-starters (NS) ...	4
Retired (R)	1
Excluded (for early arrival (Ex)	2

No. 2 Winner of Silence Award

No.	Name of Driver	Make of Motor Attachment or Machine	Cubic Capacity	Starting	Hills	Silence	Brake	Total Marks R'nd.	Award
1	C. Cole	Power Pak	49 c.c.	—	—	—	—	100	1 Class
2	A. K. Brimmer ...	Cyclemaster	25 c.c.	5	25	—	5	70	Winner of Silence Award
3	H. E. Evans ...	Power Pak	49 c.c.	5	—	3	5	87	2 Class
4	Miss N. Garlick ...	Ducati Cucciolo	48 c.c.	5	—	3	3	88	2 Class
5	E. G. F. Moreman	Power Pak	49 .c.c	—	—	5	5	90	1 Class
6	D. T. Fudge ...	Power Pak	49 c.c.	—	—	—	2	98	1 Class
7	R. Dendy ...	Ducati Cucciolo	48 c.c.	—	—	3	3	94	1 Class
8	R.E.A. Gunn ...	Cucciolo	48 c.c.	—	—	5	6	85 (4 min.)	2 Class
9	T. W. Hallworth	Cyclemaster	32 c.c.	—	10	—	10	80	2 Class
10	D Bennett	Cyclemaster	25 c.c.	—	—	—	4	96	1 Class
11	E. A. Chisholme ...	Cyclemaster	32 c.c.	—	—	—	2	98	1 Class
12	J. P. Mullins ...	Cucciolo	48 c.c.	—	—	3	3	94	1 Class
13	H. Huff	Cucciolo	48 c.c.	—	15	—	1	84	2 Class
14	D. Thomas... ...	Minimotor	49 c.c.	—	—	3	2	95	1 Class
15	C. King	Mobylette	49 c.c.	—	—	—	—	—	N.S.
16	C. L. Mouton ...	Power Pak	49 c.c.	—	—	3	—	97	1 Class
17	D. G. White ...	Cyclemaster	32 c.c.	—	—	—	3	97	1 Class
18	F. W. Nunn ...	Cucciolo	48 c.c.	5	—	—	4	—	Ex.
19	A.W. Jones ...	Ducati Cucciolo	48 c.c.	—	—	3	3	94	1 Class
20	C. B. Goddard ...	Power Pak	49 c.c.	—	—	3	5	92	1 Class
21	F. Miller	Mosquito	38.8 c.c.	—	—	5	5	84	2 Class
22	A. Miles	Cucciolo	48 c.c.	—	—	3	3	94	1 Class
23	R. H. Bury ...	Tailwind	49.5 c.c.	—	—	—	3	97	1 Class
24	J. H. Edwards ...	Minimotor	49 c.c.	—	—	3	2	95	1 Class
25	E. G. Grosvenor ...	Power Pak	49 c.c.	—	—	2	10	82	2 Class
26	A. Pointer ...	Trojan Minimotor	49 c.c.	—	—	5	2	93	1 Class
27	Mrs. L. A. Huff ...	Cucciolo	48 c.c.	5	—	3	1	91	1 Class
28	R. S. Varney ...	Cucciolo	48 c.c.	—	—	—	4	96	1 Class
29	G. E. Goddard ...	Cucciolo	48 c.c.	—	—	—	3	97	1 Class
30	E. Stringer ...	Cucciolo	48 c.c.	—	—	—	3	97	1 Class
31	J. Brenner ...	Minimotor	49 c.c.	—	—	—	—	—	N.S.
32	K. J. Poole ...	Ducati Cucciolo	48 c.c.	—	—	—	2	98	1 Class
33	J. V. Jebson ...	Mosquito	38 c.c.	—	—	—	2	98	1 Class
34	L. J. Barry ...	Itom-Tourist	48 c.c.	—	—	—	—	—	N.S.
35	A. C. Phillips ...	"Jet"	50 c.c.	—	—	3	4	93	1 Class
36	J. E. G. Rutland ...	Cyclemaster	32 c.c.	—	—	3	2	95	1 Class
37	G. M. Denton ...	Trojan Minimotor	49 c.c.	—	—	5	2	93	1 Class
38	M. J. Stevens ...	Cyclemaster	32 c.c.	—	—	2	5	93	1 Class
39	L. J. Hurford ...	Trojan Minimotor	49 c.c.	—	—	3	2	95	1 Class
40	J. Smith	Power Pak	49 c.c.	—	—	5	2	93	1 Class
41	F. M. M. Steiner	Cyclemaster	25 c.c.	—	15	2	4	79	N.A.
42	J. Saggers	Power Pak	49 cc.	—	—	5	2	93	1 Class
43	W. H. Griffith ...	Cyclemaster	32 c.c.	—	—	3	1	96	1 Class
44	D. Gabriel	Berini Cyclemotor	32 c.c.	—	—	3	9	88	2 Class
45	J. F. Meyrick ...	Cyclemaster	32 c.c.	—	—	5	3	92	1 Class
46	A. Jackson ...	Power Pak	49 c.c.	—	—	3	4	93	1 Class
47	E. L. Aldridge ...	Cyclemaster	32 c.c.	—	—	—	3	97	1 Class
48	S. A. Parker ...	Power Pak	49 c.c.	—	—	5	2	93	1 Class
49	J. G. Tanner ...	Cyclemaster	32 c.c.	—	—	5	5	90	1 Class
50	B. Shipley ...	Mosquito	38.5 c.c.	—	25	5	3	67	N.A.

51	G. Ellerman ...	Cyclemaster	32 c.c.	—	—	3	6	91	1 Class
52	R. L. Bennett ...	Minimotor	49 c.c.	—	—	3	1	96	1 Class
53	K. E. Stringer ...	Cucciolo	48 c.c.	—	—	2	3	95	1 Class
54	A. J. Ganly ...	Mosquito	38 c.c.	—	—	5	3	—	Ex.
55	N. O. Bartholomew	V.A.P.	48 c.c.	—	—	5	—	95	1 Class
56	H. Easton ...	Power Pak	49 c.c.	—	—	—	—	—	N.S.
57	D. B. M. Wright ...	Ducati Cucciolo	48 c.c.	—	—	5	3	92	1 Class
58	P. F. Burke ...	Cyclemaster	32 c.c.	—	—	2	5	93	1 Class
59	M. H. Hassell ...	Cucciolo	48 c.c.	—	—	5	2	93	1 Class
60	A. G. Wall ...	Cyclemaster	32 c.c.	5	missed section	R	—	—	R
61	J. C. Underwood ...	Mosquito	38 c.c.	—	—	3	2	95	1 Class
62	B. Hunter ...	Itom-Tourist	48 c.c.	5	—	5	1	89	2 Class
63	J. Latta	Tailwind	49 c.c.	—	—	—	4	96	1 Class
64	W. Jopp	Power Pak	49 c.c.	—	—	5	4	91	1 Class
65	P. H. Barry ...	Itom-Tourist	48 c.c.	—	missed section	5	1	—	N.A.
66	K. L. Mercer ...	Trojan Mini-Motor	49 c.c.	—	—	3	4	93	1 Class
67	A. R. A. Smith ...	Tailwind	49 c.c.	—	—	—	3	97	1 Class

CYCLE MAKER'S VIEW

The Coventry Eagle Cycle and Motor Company has been making bicycles for more than 50 years and has also a long record of manufacture in the motor cycle field, from the lordly "Flying-8" with its handsome bulbous tank as wide as the back of a horse to the neat and sturdy pressed steel frame lightweights of later years that cost less than most of our clip-on outfits of to-day.

In view of this record *Power and Pedal* was pleased to receive from the Company a statement under the heading "Powered Cycling In Safety" which shewed a real interest in and study of the relation of the standard cycle to the cycle-motor engine. The statement claims that all Coventry Eagle dealers have been advised to pay special attention to the roadworthy condition of any machine that comes to them for the attachment of a motor, notes that the motor may mean increased mileages as well as speeds, and therefore call for more frequent maintenance.

Special note is made of the efficiency of brakes, the adjustment of steering head bearings and hubs. The Company offers as its "considered opinion" the statement that the powered cycle should not be ridden at more than 20 m.p.h. and concludes:

"A powered mount should be ridden at no more than usual cycling speeds. The purpose of the engine is to save physical effort, NOT to enable the rider to travel faster. Those who seek extra speed will be well advised to purchase lightweight motor cycles rather than fit engines to their cycles.

"To enjoy powered riding it is not necessary to have a bicycle that has been specially designed to take a motor. Such mounts are more heavily built, and accordingly cumbersome to pedal. That detracts from their usefulness, and the fitting of an engine should not spoil the machine for pedalling when the user feels inclined for a little exercise" (!—ED.)

THE NEW UNIT by B.S.A.

At the last Earl's Court Show we had a private view of the new wheel but this strange modern idea that the fewer people know about a thing the better the publicity kept the news a secret.

Our own enquiry to the firm has received no reply up to the time of going to press and the advertising agents for the company say they know nothing about it, but the "Financial Times" of Wednesday May 6th, carried a story with some detail of the new unit.

The B.S.A. *Winged Wheel*, as it is called looks rather like a cross between a *Cyclemaster* and a *V.A.P.* A 9½in. drum forms the hub of the wheel and the engine itself, with its carburettor and magneto, lies horizontally on the near-side of this drum, the cylinder facing forward. Drive is by train of gears through a clutch, all contained within the enclosed drum itself.

According to this report the engine is of 35 c.c. with the usual cast iron cylinder and alloy head. A *Wipac* flywheel magneto looks after the sparks and lights and the carburettor is an *Amal*. A separate fuel tank holds half a gallon of petroil and the claimed mileage is 200 per gallon.

The B.S.A. Company is the largest maker of motorcycles in the world and has ready made export fields providing an outlet for really large scale production that could mean high quality at very competitive prices. The price quoted for the *Winged Wheel* is £25 complete and this, with the real service facilities that may be expected from such an organisation, is an attractive proposition.

No details are given about performance and we frankly distrust the report which quotes 1 b.h.p. from 35 c.c., but *Power and Pedal* will take the earliest opportunity to test and report fully when circumstances permit.

CLUB NEWS

The cyclemotor section of the British Two-Stroke Club has been re-named the London Motor Assisted Cycle Section to encourage riders in other districts to form similar groups of their own. The secretary makes a point of mentioning in his current report that membership of the section is open to riders of fourstrokes as well as the more familiar two-strokes and records that there are already two *Cucci's* in the section.

All three section members who entered for the A.C.U. Trial gained awards, two firsts and a second. The participation of the secretary in the event gave him the opportunity for fresh contacts and half a dozen new members on the books are the result. Club teams will be formed to take part in any trials, rallies or other events for cyclemotors and the organisers of such events are asked to send details to the secretary:

MR. BERT EVANS,
10 ELIA STREET, LONDON, N.1.

JUNE FIXTURES

Sunday, June 7th

Run to SOUTHEND-ON-SEA. Meet at the Cookery Nook, 2 Station Pde., Newbury Park, 10 a.m.

Sunday 21st June

SOUTHERN TOUR — Guildford—Horsham—Pease Pottage. Meet "Better Ole Cafe", 82 West Road, Isleworth 10 a.m.

Sunday, 28th June

BRIGHTON. Meet "Jacks Cafe", Morden (Surrey) Underground. 10 a.m.

Members or visitors who prefer may start from Mr. Evan's home (Address above) at 9 a.m. or pick up at Blackfriars Bridge at 9.15 a.m. on the dates mentioned. All cyclemotorists are invited to join in club runs.

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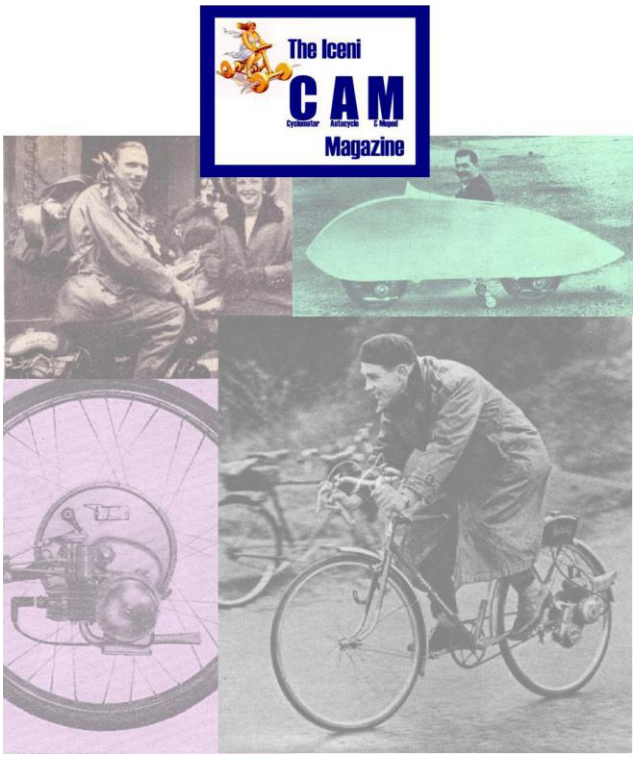

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