

JULY, 1953

MONTHLY 4^D

POWER & PEDAL

The Journal of the Cyclemotor

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CYCLEMASTER

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POWER PAK

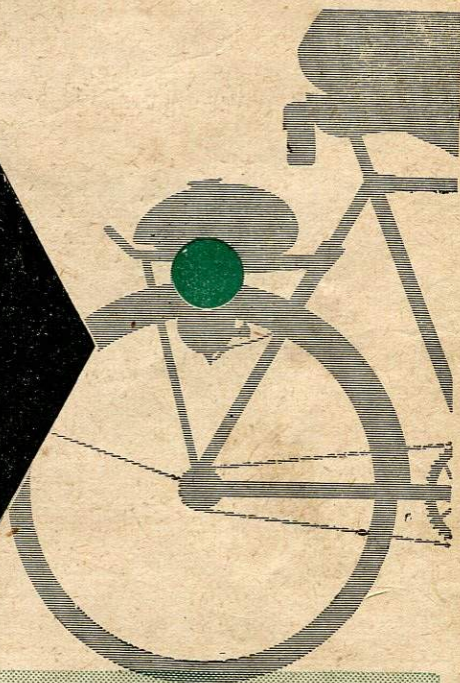
TEAGLE

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all fit

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IGNITION**

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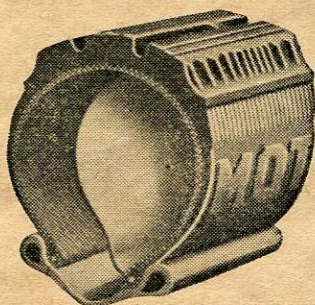
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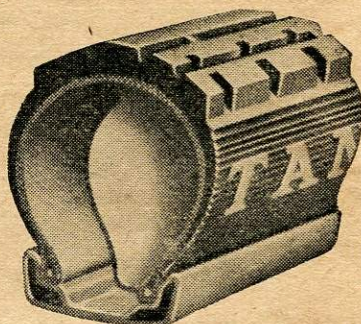
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Editor: FRANK L. FARR

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SAFETY FACTS

AN analysis of the registration figures recently published for the early months of the year shew that registrations of new motor-assisted cycles were the highest in any category of the motor cycle groups. 4,768 were registered in January and February and the indications are that this figure has been exceeded month by month since. An interesting thing is that in addition to the thousands mentioned above, 10 under-60 c.c. *sidecar outfits* were also registered during those months.

Such heavy sales indicate that the cyclemotor has really arrived and to stay, as this journal has maintained since its inception and, as some ninety per cent. of the salesmanship which has put these motors on the road has been done not by the Trade but by the riders themselves, a rapidly widening market can be confidently forecast.

There are some people, however, who view this expansion of twentieth century logic to taking the hard labour out of cycling with some dismay. There is much gloomy headshaking among people who never have ridden and never will ride cyclemotors about "adding to the dangers of the roads"

and "tearing about the countryside." Unfortunately as the *Trader* pointed out in their editorial of May 16th.

"Pronouncements on road safety for cyclists by people and organisations whose qualifications for the job are more often governed by their emotions than by their practical experiences rarely have any value, although they frequently attract attention in the Press."

and it will be necessary for the cyclemotorists themselves to find organisations to confute these bench-seat critics by producing facts.

The facts about cycle motors and road accidents are that on the latest Ministry of Transport figures available the cyclemotor is the safest form of two-wheeled transport on British roads.

Final figures published for March, when the newly registered cyclemotors mentioned above were all on the roads, mostly with "L" plates up, shew 1 cyclemotorist killed and 140 injured, 75 per cent.

of them slightly, as against 63 motorcyclists killed and 2,281 injured, while pedal cyclists lost 49 killed out of 2721 reported casualties. (This last figure excludes the tragedy of casualties to cycling children under 15 as there is no comparable class in the power-driven world). It must be allowed too, that many slight accidents to cyclists are never reported to the police at all.

If we take the proportions of the various vehicles at the latest estimates we have been able to find, 250,000 cyclemotorists, 1,000,000 motorcyclists and 4,000,000 cyclists, we find that in proportionate figures cyclemotoring is safer than pedal cycling by a little and nearly five times as safe as motorcycling. This bears out fully the contention of *Power and Pedal* in our editorial of March last, that by encouraging the use of the cyclemotor we will add to the safety of our roads.

The facts are on our side and incontrovertible. It should be the duty of all those people and organisations that profess an interest in road safety to study and assist in the development and sale of the best types of motor-assisted cycle by every means.

COMMENT

by

CLIP-ON

Hot Comfort

SUMMER having come and, at the moment of writing apparently, gone, the reactions of many cyclemotorists show that there is no form of transport in the world so pleasant on a hot day as the motor-assisted cycle. I have myself gratefully ended a day cooked between the desk and the car with a short run in the dusk on my machine and found it the most soothing and comfortable of experiences, the most complete restorative. Questioning others, I found similar experiences—the rule, except for two riders who looked rather blank at my suggestion that they were the most fortunate of people in the heat wave. I noted that both rode lightweight cycles with rigid frames and forks and both used fairly fast motors. There would seem to be a lesson here. To paraphrase M. Litvinov, "Comfort is indivisible".

Brake Tests

My remarks last month about the brake test in the A.C.U. trial have roused several correspondents and one anonymous but aggrieved telephone caller to complain that this test itself was not a fair one. The most important point raised was that the heavier rider was penalised two ways—he came down the hill faster freewheeling and then had more weight to stop from this higher speed as well. This is true, although my own observations were that such riders did not do at all badly on average, but it is difficult to see what can be done about it. The same handicap is apparent in

the hill-climbing tests, of course, but any sort of weight bonus or penalty marking system would be too complicated to be practicable.

Other complaints were that some of the machines whose only means of disengagement was the withdrawal of the clutch seemed to come down rather slowly, suggesting clutch drag as a help to the brakes, and that it was impossible to judge exactly at what point the brakes were applied. Personally I thought the experienced B.T.S.C. stewards looked after that one quite well, but what can be done about clutches?

A Dutch Example

The Hague Cyclemotor Club (H.F.C.) Spring Trial incorporated a brake test that ingeniously was marked on timing alone. Competitors freewheeled down a slope, braked to negotiate an "S" bend then freewheeled again to a finishing line. Standard time was that of the fastest competitor (11 secs. in this case) plus 1 and additional marks were lost for overshooting the finishing line.

This test would appear to cancel out weight advantage and eliminate the clutch drag and braking line complaints as well. It would seem to be worth the cost of a time-keeper for next year's A.C.U. Trial and the simple instruction to "freewheel down as fast as you can and stop on the line" should be easy enough for the most casual entrant to understand and follow.

Belgian Law

The Editor (may peace be with him) has taken some pleasure in

producing cuttings which suggest that my recent strictures on English law relating to the cyclemotor could be matched elsewhere.

It appears that the change in the law in Belgium on January 1st of this year declared that cyclemotors were to be exempted from the Road Tax as paid by motor vehicles but should become instead, liable to the ordinary Cycle Tax, in return for the payment of which they received the small cycle number plaque. This was received with rejoicing until it was discovered that the Ministry in drafting the law had forgotten to relieve them of the necessity for carrying the normal motor number plates as before. The position at the moment is, therefore, that the Belgian cyclemotorist is under an obligation to carry *three* number plates. May all lawyers be damned, say I.

Good Service

That wide sales should be accompanied by good service facilities, if obvious, has its limits and a delightful story from Indonesia indicates just how far the demands can go beyond the economic line.

It appears that thousands of *Mobylette* machines have been sold there and, of course, the occasional spot of bother was covered by the importer's guarantee. One machine turned up by air at Djakarta from Bandung, a distance of 180 kilometers, accompanied by a letter written in Malay saying that the machine did not work any more. When the blocked filter had been cleaned it did work and was flown back again to Bandung.

Artist at Work

"The true motor-assisted cycle is a light, handy go anywhere machine and has many advantages over other forms of transport."



However, the money seems to come back in other ways. One rider flatly refused to accept a free fuel tank to replace under guarantee his which had split at the seam. "What—Nothing to pay now and then twice as much for something else later on? No thank you". Indonesia must be quite a place to sell cyclemotors. The *Mobylettes* sell at around £95 each.

Home Made

From time to time readers send in descriptions (usually incomplete) with photographs (usually unreproducible) of machines they have built or converted themselves, but at least these enthusiasts seem to know what they are doing and the machines do run.

Our Netherlands contemporary, *Fietsmotor*, recently described one that definitely did not come up to scratch in these respects. It has a 98 c.c. side valve, four-stroke engine

on a standard but antique 24in. roadster cycle. Wooden wedges under clips located the engine-gear unit in position but none were spared for the fuel tank which floated as it pleased. There was no horn, clutch or front brake and some spokes were missing from the front wheel.

When this monster appeared on the road the police, not unnaturally, took a hand in the game and found that the proud constructor was a pupil from the local technical college.

Home Assembled

More practical and interesting is the idea of a German manufacturer to supply cyclemotor parts as a kit to be made up in the home.

All model builders in this country are familiar with this system of selling and there seems to be no reason why it should not work here. The machine is reported to be a com-

pression ignition job, similar to the *Lohmann* but simpler, of 25 c.c. and producing .8 b.h.p., at 6,000 r.p.m. That sounds quite a power unit to come off the kitchen table.

Incidentally, there is quite a widespread interest in the c.i. engines these days and I hear news of another in Germany, one in Italy and one in Spain. As we have now reached the point where the modern flywheel mag is larger, heavier and more expensive than the engine it serves in many cases, there would seem to be plenty of reason for looking to the "diesel", as we will all persist in calling it, for the ultra-light and compact engine of the future. I remain, however, firmly of the belief that no motor-assisted cycle engine should need more than one driving control and until the c.i. people can compete in sheer simplicity with the present sweet little petrol motors the sparking plug will remain with us,

A PILGRIM'S PROGRESS III

by Arquata

In Which Pilgrim is Troubled

Came the day when I got a puncture in the front (driving) tyre. On my push bike, of course, mending a puncture would be a simple measure. Turning the bike upside down, the most time taken up would be in finding the leak, and with reasonable luck one could expect to be on the road again in ten minutes at the outside. But with an engine the bike must remain on its two wheels. Once I did turn mine upside down, after emptying the petrol tank, of course, but I gather that this is not to be recommended because in that position, lubricating oil gets into places it shouldn't and upsets the ignition. On my *VeloSolex* however, this question is taken care of, for the wheels themselves can be taken out in a few minutes. I took the opportunity here of changing covers front to back and *vice versa*.

But soon I was in trouble again, a puncture in the back wheel this time, but the same cover of course. Again, one dirty night, about a mile from home, down it went again. When I got home I took out the tube and then found that as I mended one hole another and yet another appeared. This seemed to beat cockfighting. I had had my push-bike for fourteen years (second-hand at that) and during that time, incredible as it may seem, I hadn't had a single puncture. I had ridden in all weathers over all sorts of roads including the broken-glass-strewn roads in London during the later blitz and the doodle-bug nonsense. Of course, you don't believe me and I don't blame you, but it is absolutely true. You

can imagine this sort of treatment got me down. What could I do but blame either the cover or tube, or both. So these I sent up to Michelin for examination and report. They later told me they could find no manufacturing fault in either tyre or tube, but, and this I thought was significant—a nod being as good as a wink to a blind horse—they recommended me to get into touch with the selling Company for a check up on the bike.

Now, during this forced lay up—while waiting for replacement cover and tube ordered—I seized the opportunity of taking the two wheels to a skilled cycle engineer to have them trued up, as a colleague told me the back wheel seemed slightly buckled, and it was obvious to the touch that the spokes of the front wheel were quite slack. The cycle engineer went into raptures over the wheels, which he said were in excellent condition, apart from slight adjustments to the rims of both wheels. The spokes of the front wheel, though, he said were very loose. Incidentally the plating on these wheels, is still, after $3\frac{1}{2}$ year's wear, in quite good condition. They are of French make. Are these people better than our manufacturers at this kind of thing?

By this time the new cover and tube had come and I began the re-assembly. The last operation was to fit the front wheel, but when I tried to do this, I felt like chucking the whole lot into the nearby Thames. I was in fact right back

where I started, for, try as I would that infernal front wheel just cocked over at an angle and defied all my efforts to get it into its true position, dead under the carborundum driving wheel. What now? I was completely baffled.

It so happened that at that time the firm were sending out to purchasers of these machines a reply paid questionnaire as to performance and so on, and they got a reply from me, but not on the post-card, it was'n't big enough, several typewritten pages in fact. I had simmered down a bit by this time and realised that in all new ventures of this kind teething troubles are inevitable. I tried to be helpful, but I gave them full details of my predicament. Seated on a box in my shed I gazed despondently at the lugs where the spindle goes (the wheel was out) when I noticed that the hole of one lug differed in size from the other. I got some sealing wax and took an impression of each in order to get a close up view: from which I concluded that the hole in one lug had been filed to allow the spindle to go further into the lug.

Then I got a reply from the firm. Would I take the machine to their expert for a check up. Owing to a misunderstanding at home I failed to get a 'phone message as to which Depot to take it and of course went to the wrong one. The two are about three miles apart and I'm equi-distant from either. However they were good enough to pack me, machine and all, into a van and I was soon at the right spot. There I was met

with attention. They almost put down a red carpet for me. But again the expert at first took up the line as did Cheerful Charlie on my earlier effort to get this trouble put right. I showed him my wax impression. No comment from him (wise man). He went through all the usual motions with a spanner and finally managed to get the wheel into something like it's true position. "There you are. How's that?" I'd managed to do that much myself only to find, after riding it even a few yards that it had gone aslant. So I replied that it looked alright but would *he* try it. He went a few turns round the pumps with the engine on and came to a stop. Then he saw what I had many times seen. The wheel was completely cockeyed.

He was with me at last. He removed the wheel and went off with it leaving me holding the handlebars looking down discon-

solately at the empty space. Then I was startled. I saw something I'd never before noticed: the bottom ends of the two forks were at an unequal distance from the ground. There was no doubt about it. Had the difference been slight it would not have been noticeable. Therefore as it was visible from where I stood the fault must be considerable. So it was, for when the expert returned with the wheel and I pointed out what I'd seen, he produced a measure and checked the difference. The expert retired and was gone some time. When he returned he told me he had been on the 'phone to his chief: they were sending for fresh front forks and would I attend in two days time. When I did the fitting was perfect. It was a million to one chance and it had to happen to me, but the firm treated me very well and there have been no further reasons for complaint.

BOURNEMOUTH I.T.A.

JULY FIXTURES

Sun. 5th **Fishers Pond, Eastleigh** (Soton & Newbury Groups), Bear Cross 11a.m. Cadnam 1.30. Tues. 9th **Studland Heights** (via ferry) Bear Cross 2.30 Sandbanks 3.15. Sun. 12th **National Rally**, Hendon Aerodrome. Tues. 14th **Badbury Rings**, Bear Cross 2.30 Wimborne 3.05. Sun. 19th Picnic with **Soton Group (New Forest)**, Bear Cross 2.30. Tues. 21st **Ringwood** via **Burley**, Bear Cross 2.30. Sun. 26th **West Moors**, (Petrol/Electric) Bear Cross 2.30 Tues. 28th **Canford Cliffs**, Bear Cross 2.30.

A.C.U. RALLY

JULY 11th-12th

Each control will open at 2 p.m. on Saturday, the 11th July, and will close at such time as it will no longer be possible for any driver calling at that control to reach Weston-super-Mare by 11 a.m. on Sunday, July 12th, at an average speed of 25 miles per hour,

*Entries close June 29th. Forms and details from:
A.C.U. 83 Pall Mall, London, S.W.1*

POWER and PEDAL

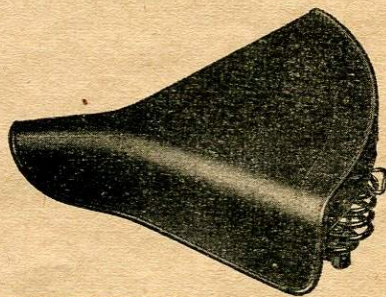
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Correspondence

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

32 c.c. Power

I have just received the June number of *Power and Pedal* which I read with the usual pleasure. Certainly double the size, and if necessary, the cost, I say. It would be well worth the extra money.

I was interested in the letter from J. H. Fawcett of Durham on the type of cyclemotor required. While, in general, I agree with his remarks, I think he has underestimated the *Cyclomaster* engine in airily dismissing it as too small. I am a very satisfied owner, and find that although the capacity is only 32 c.c., the general performance is more or less equal to a 49 c.c. roller-drive model. I think this is because most of the power developed is, due to the design, transmitted to the back wheel and not dissipated in roller slip, etc.

Again, should a cyclemotor engine be too powerful. This is a big question, and frankly I think that the troubles of roller-drive to which he refers, slip, tyre wear broken spokes, etc., are very largely due to the pounding which the wheel receives from a powerful little engine. No doubt the engines are excellent, but the normal cycle wheel, with its long, flexible spokes is not built for the job, and I think that these troubles are unavoidable. The *Cyclomaster* wheel is built for the job, and this is, I think, the foundation of satisfaction. I certainly have found no lack of speed or power on hills, and have at the same time enjoyed reliability.

My log to date may interest your readers. Total mileage 2107, petrol consumption 241 m.p.g., break-

downs, nil. Top speed on level varies considerably according to wind conditions. It is normally about 20/22 m.p.h., but has been nearly 30 m.p.h. under favourable conditions of road and wind. Rear tyre looks almost new, and should do 6,000/7,000 miles with luck. I decarbonise the unit myself, and find the job easy and interesting, but it entails removing the wheel from the cycle.

I agree with John Greely about the carburettor needle jet. When running in was finished, I dropped the needle one notch and immediately obtained easier starting, no four-stroking, a cleaner engine and the petrol consumption improved by 40 m.p.g. I certainly recommend other owners to experiment and not to accept the maker's standard as final.

K. ELTON

Birmingham

"Weight"

After reading through all the road Test reports published in your excellent magazine, it has struck me as singular that one important factor that should be quoted in all cases, the weight or weights of the person or persons conducting the tests, is always omitted.

I think you will agree with me that to say, for instance, that "the mighty atom" never normally requires pedal assistance when running, is rather a sweeping statement to make if the tester weighs only 9 stone.

I bring the point up because I am in the heavyweight class (15 stone) and am contemplating buying a

new 32 c.c. chain drive to replace my present 49 c.c. roller drive.

Many thanks for your reply to my previous letter and your advice—It worked.

JOHN D. CUNLIFFE
Runcorn, Cheshire.

(The regular tester who writes the reports weighs 13½ stone in normal riding kit. The technical bod who checks performances is a mere 10½. We also have a tame guinea-pig who believes that i.c. engines work by witchcraft but who occasionally has a go, weight 13 stone. We are surprised to find how little difference weight makes to the performance of most machines

—ED.)

Four-strokes and b.h.p.

I should like to thank Mr. Smith (June Correspondence) for clearing the air, and whilst I appreciate his points of view and am in agreement with some of them, there is, however, one comment in his letter that I certainly cannot let go unchallenged.

In his third paragraph he says "since when, by the way, has a four-stroke greater output than a two-stroke of similar capacity".

In my previous letter I was referring to maximum power (B.H.P.) and not torque. I am quite certain that because of better breathing and because the design lends itself more readily to tuning, the four-stroke can always be made to produce more B.H.P. than the two-stroke of similar capacity. As we are concerned with the cyclemotor, I should like to ask Mr. Smith how many motors he can name producing an equal B.H.P. to that of the *Cucciolo*.

If however, Mr. Smith is thinking in terms of torque, and not B.H.P. then in the lower R.P.M. range the two-stroke might show up to advantage, but not necessarily so.

Mr. Smith says the cyclemotor is a simple attachment for taking the

HARD work out of cycling, and I agree with him, but personally prefer that little extra complication to take ALL the work out of cycling, for with the *Cucciolo*, pedal assistance is not necessary.

My machine, by the way, is fitted with the Holt's special frame and a three-speed rear wheel, thus giving me a choice of six speeds, (more complication?) yes but well worth while. My petrol consumption over the past 8,000 miles is 240 to the gallon.

Best of luck to Mr. Smith and thank you Mr. Editor for an excellent journal.

L. S. ROOKE

Catford, S.E.6.

Fuel Consumption Claims

I was quite surprised to find *Power and Pedal* on my newsagent's counter, not being aware that there was a journal devoted to cycle-motors. I would like to compli-

ment you on this issue, and to wish it years of life.

Perhaps you could put the publishing date somewhere so that we may not find them "sold out," or even quote a subscription rate for say 12 months.

I feel that if your main concern is to keep the wheels turning you won't go far wrong. There are so many aspects of cyclemotoring that it need not dry up for lack of material.

Maybe we could have some readers opinions on m.p.g. We have two *Cyclemasters* which do about 170 m.p.g., yet the makers claim over 200, and I see Gamages are claiming 300 m.p.g., if these claims are extravagant no good can come of it, only a disgruntled purchaser. Perhaps you could arrange an "article" with hints on better efficiency.

S. MIBILL

Whetstone

Touring in France

I intend going to Paris for a week by my *Cucciolo*, leaving London sometime in early August, and flying from Lypnye to Le Touquet by Silver City Airways.

I shall be very grateful if through the *Power and Pedal*, I could ascertain if any cycle-motorist intends making this trip about the same time; any advice regarding accommodation, etc., from anyone who has made this journey would be appreciated.

OVER FORTY

S.W.17

More Mini-Motor Experiences

I was particularly interested in your number with the Mini Road Test Report. I claim to keep my motor in a very reasonable state of maintenance yet I never get the results of "Mini-Motorist" of Nottingham nor even your road tester. How ever they get 25 m.p.h.

Your cyclemotor needs the TELELINK (REG'D) CONVERSION SPRING FORK

Here is a scientifically designed spring fork incorporating the latest ideas in controlled suspension. Sensitive action throughout, and the fully patented Neidhart rubber damping gives that delightfully progressive action—exclusive to TELELINK.

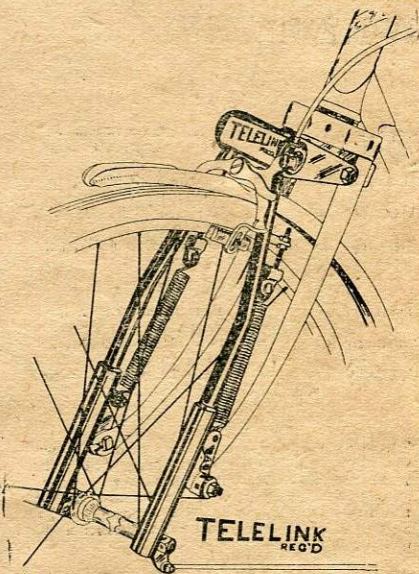


BOLTED TO YOUR OWN FORK!

If you can mend a puncture, you can fit the TELELINK! —but in less time! You will be amazed at the smooth ride you get. No more broken frames—no more aching wrists. Send for our illustrated leaflet,

Or by post 79/6

At present, the model suitable for caliper or hub type brakes is available. Cable operated stirrup type brake model ready shortly. Watch our announcements



State make of machine when ordering.
Standard finish—black and chrome.
Suitable for 26" wheels only.

B.S. DEVELOPMENTS, THE GARLAND, FARNBOROUGH ROAD, FARNBOROUGH, HANTS.

I don't know. I have completed 3,000 miles and although Essex is comparatively a flat county I have found that the average speed at all times has never exceeded 16 m.p.h. whatever the carburettor setting, with about 170 m.p.g. using a 45 jet. Perhaps "Highwayman" is like myself and picked a "slow-un". Incidentally my motor is fitted to a solo machine.

H. E. GREGORY

Rainham, Essex.

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TAIL Ref. 429 6v 3a 1.8w 15mm ball balloon
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FOR NORMAL DYNAMO SETS

The same head bulb as recommended for use with the dynamo on pedal cycling should be used, but higher rating tail bulbs must be fitted to stand the higher output of the dynamo due to the higher cycling speed (For example 6v 15a instead of 6v 0.4 a tail, the price for which is 9d. plus 1/4d. P.T.)

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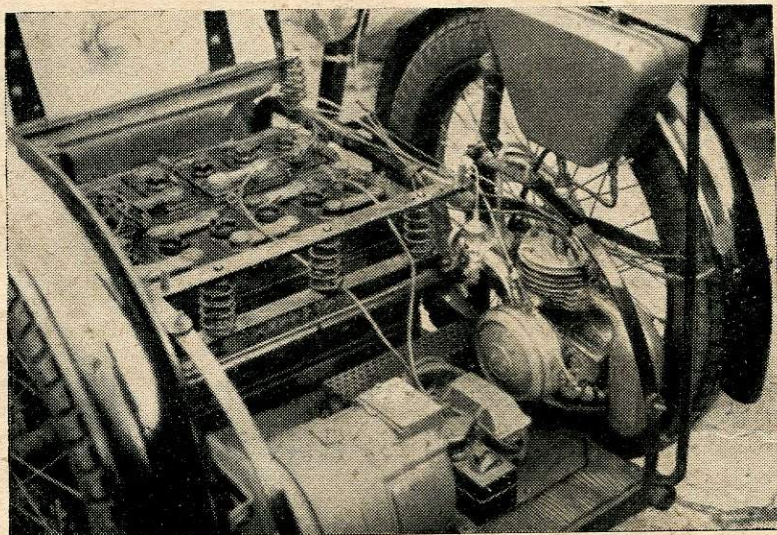
Tricycle Conversion

As readers of your periodical *Power and Pedal* and also pioneers in the introduction of cycle motors to this district we thought the enclosed photos may be of interest to you.

The photos of the invalid chair are of a conversion that we carried out for our client Mr. Clarke of Bradfield, Nr. Ipswich, who is completely crippled in both hands and feet and therefore unable to start an ordinary motor invalid

electric motor control box. The method of operation is as follows, the chair is started off on the electric motor with the clutch of the V.A.P. engine out, when sufficient speed has been obtained the clutch of the cycle motor is released and the petrol motor started, the electric motor is then switched off enough to just run the motor so as not to be a drag on the petrol motor, when a hill is reached the electric motor is brought into operation and the hill climbed with the aid of both the electric and petrol motors.

This conversion has enabled the



chair which he has tried. He asked us if we could fit an auxiliary engine to his electric chair as he found that he could not do the journey to Ipswich and back, a matter of about 30 miles or so comfortably on one charge of his batteries, having several steepish hills on the way.

After consideration we decided to try and fit a V.A.P. cycle motor of 48 c.c. with the results as you can see from the photos, it has been accomplished without interfering with his electric drive whatsoever. The clutch lever we fitted so as to be operated by his foot and the throttle and decompressor controls were fitted on to his existing

maximum speed to be raised from 10 m.p.h. to 20 m.p.h. with very infrequent charging of the battery which previously had to be charged daily. We consider this conversion to be a great credit to the skill and inventiveness of our mechanic Mr. E. Kitson.

We wish your periodical every success and would like to suggest that the quality of the paper and the lay-out be improved at an increased price.

JACOBI'S CYCLES AND MOTORS

Ipswich.

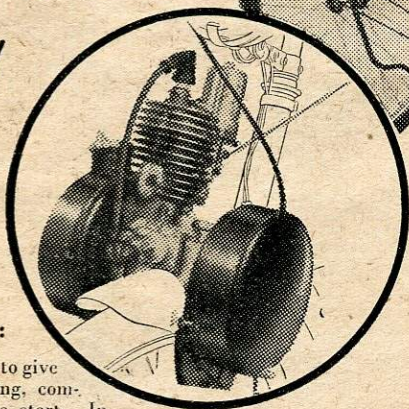
ARE YOU LOOKING FOR THE *BEST* MOTORISED BICYCLE?

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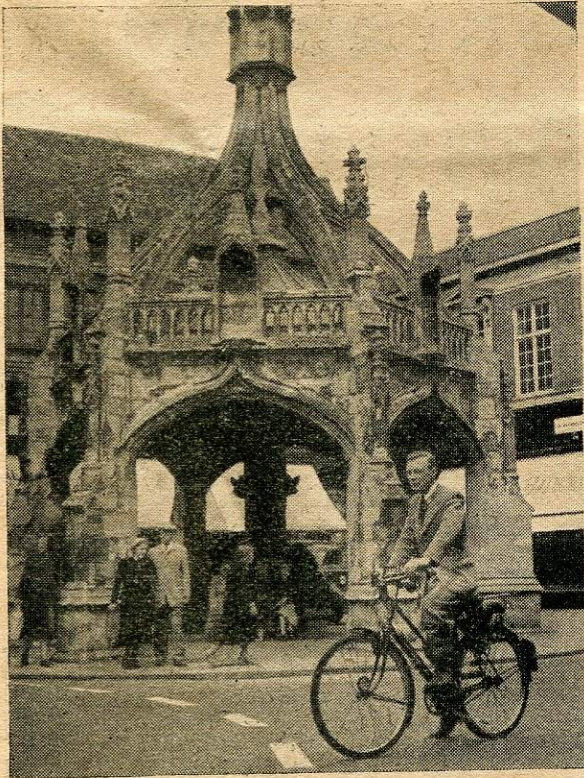
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To Solex (Cycles) Ltd., 223/231, Marylebone Road, London, N.W.1

Please send me full details of the VELOSOLEX and name of nearest stockist.

NAME.....

ADDRESS.....



The Author, his machine and Poultry Cross, Salisbury

A GOOD FRIEND

by

A. M. PERRY

"No!" said my wife.

"Yes!" said I.

We were arguing whether I should raid my bank balance and invest in a *Power Pak* for my cycle. I couldn't make my wife understand that the £30 or so I would spend (including insurance) was a practical investment. True, it would take a few months to pay out £30 in bus fares, but undoubtedly the day would come when my *Power Pak* would pay for itself.

That day is now here, and my

wife is glad that she relented. Or perhaps it would be more true to say we reached a compromise. I agreed to sell my racing cycle, whose handlebars were so low that my nose almost touched the front tyre, and have the engine fitted to my wife's more sedate and comfortable Raleigh. She had been thinking of selling this, anyway—said that more walking would do her good.

I sold my cycle for £8 and put down the extra to buy the motor.

Then came the great moment. Starting up for the first time ever on a motor assisted cycle. Well, I pedalled and pedalled, and the motor hissed and whirred. But it wouldn't so much as go "pop". Desperately, I took the instruction book from my pocket and read all over again the things I had to do. Result: I discovered I hadn't turned on the petrol tap! How many cyclistmotorists have been as forgetful and later laughed at themselves for expending so much wasted energy?

I have always liked cycling, but pedalling each day from Amesbury (near Stonehenge) to Salisbury—a distance of nearly nine miles—can be fatiguing. The road is unpleasantly hilly, and if a strong wind happens to be blowing across Amesbury Flats the going is hard indeed. So to me a *Power Pak* was a godsend. It yields me all the natural joy of cycling while relieving me of its drudgery. What more delightful sensation than to average 18 m.p.h. from my home and arrive fit for the day's work? "Does the road wind up hill all the way?" asks the poet. "Yes, to the very end," but what matter if your cycle has the help of a powerful little motor?

If you know Amesbury at all, you may recollect the steep hill just outside the town on the road to Salisbury. Buses have to crawl up it, non-mechanised cyclists are compelled to walk, but I am up it on my cycle in half a minute, pedalling it is true, but with no more fatigue than if I were cycling along a flat road. Coming into Salisbury, Old Sarum looms up unmistakably, its turfy outline hiding from view the Cathedral spire. It is another miniature Everest, but on a windless day I have climbed it at speed, the engine purring happily as if to tell my

feet, "Thanks all the same but I can take this on my own."



Every cyclemotorist longs to discard his "L" plates, but examiners will not issue a "pass" certificate until they are satisfied a cycle is safe and the driver is competent. With cyclemotorists growing in number every day, there is reason to suppose that examiners are becoming stricter in their judgments, the more so, I believe, because a person qualified to drive a cyclemotor is also entitled to drive a motorcycle. This strikes me as strange, and I am convinced that separate tests are needed. I know that many examiners will agree with me, since obviously there is a world of difference between driving a cycle at a

maximum of 25 m.p.h. and driving a motorcycle at anything up to 70 m.p.h.

I shan't easily forget the day I took my driving test. I arrived in Salisbury only a minute before the appointed time, spent five minutes looking for the examiner's office, and would probably not have found it for another quarter of an hour had not the examiner himself spotted me. For all my lateness he was in a good humour, but now, if ever I take a test to drive a steamroller or a mowing-machine, I shall take care to be at the examiner's in ample time.

All went well with my test until suddenly the machine began to drag and I had to pedal hard to ride up only a slight rise. "Having trouble?" asked the examiner. I stammered some excuse, not having the least clue as to what was

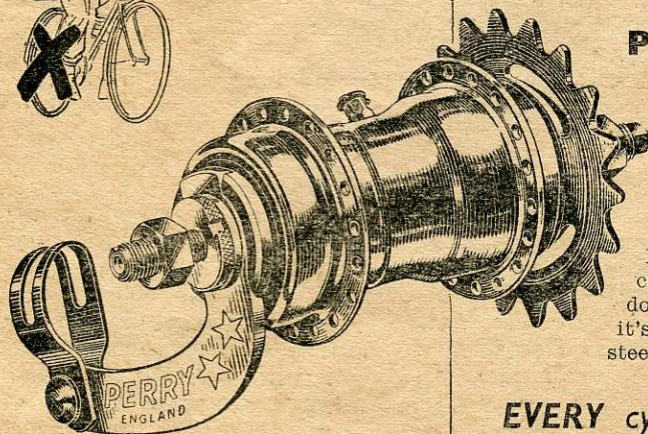
wrong, but supposing that the fault was with the motor. It was only after I had been given a "pass" and I was out of the examiners sight that I found out what had happened: one of my front brake blocks was jammed tight against the rim! Be warned: make sure before you take a test that your machine is thoroughly roadworthy.

As a journalist, I use my *Power Pak* to take me into the Wiltshire countryside, to report on the activities of the villages, whether fetes, funerals or parish councils. It's all in a day's work, and what more pleasant at the end of it—if a journalist's day ever does have an end—than to cycle home in the cool of a summer's evening, scornful of hills and undaunted by distance. Yes, my cyclemotor is a good friend.



ALWAYS CYCLE IN SAFETY—FIT A

PERRY Back-pedalling Brake



X marks the spot where the PERRY coaster hub brake fits on your bicycle, to give you that extra stopping power which makes all the difference. Operated by backward pressure on the pedals, the PERRY safety brake gives you absolutely controlled braking, whether for coasting slowly down hills or sudden emergency stops. And, because it's a foot-brake, your hands are always free for steering, signalling and handling controls.

EVERY cycle is better for a
PERRY COASTER HUB BRAKE

—all the safer to cycle with!

Ask your dealer for a demonstration,
or write for free descriptive literature
to Perry Chain Co. Ltd., Tyseley, Birmingham, 11.

HISTORY

by

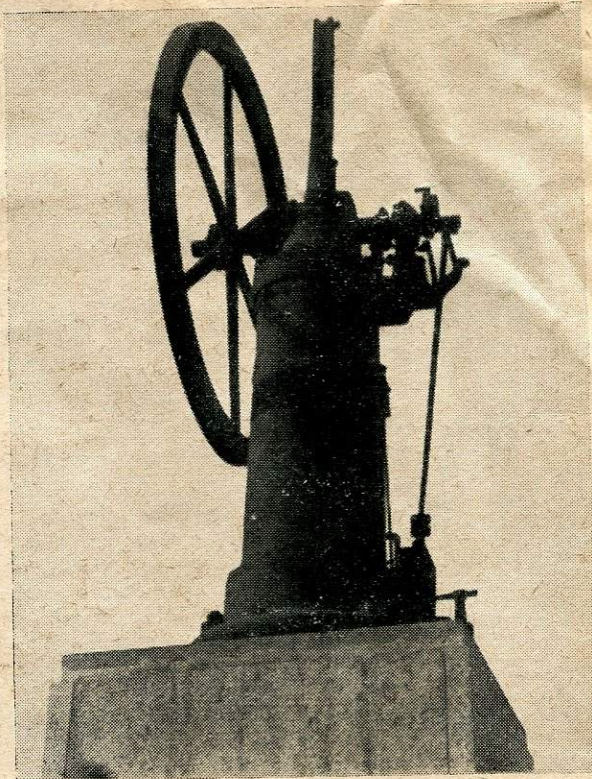
S. V. Holroyd

Nicholaus August Otto (1832-1891) was a traveller in general provisions and yet despite this somewhat non-mechanical calling, he built his first engine working on the two-stroke principle in 1861. It was not the sort of two-stroke motor that could be attached to a cycle, but it was the fore-runner of them. Otto's first two-stroke engine was slow, noisy and cumbersome and rated at 3 h.p. but was good enough to enable the inventor to get a gold medal at the Paris Exhibition of 1867 for the "best gas motor". It was, in fact, at the time, a sensational success.

Otto was a real pioneering type of inventor and he built many types of engines. During his time, the steam engine reigned supreme and there was no practical engine available for use in the "horseless carriage" apart from steam ones. Gas and other types of engine then extant were unsuitable for propelling carriages although of course they were used for many other different purposes. Hot air, electric, and very impractical gas engines were tried out in carriages as the motive power but somehow they did not really seem suitable. Otto paved the way for another famous inventor, Diesel, by his general inventiveness and research for a suitable engine which would propel a carriage easily and economically and without too much trouble. Diesel tried using fine coal dust as a fuel in the earlier types of Otto engines.

Otto and Langen (the latter concerning himself with "atmospheric engines") set up a factory in the district of Deutz in Cologne and the "atmospheric engine" was the outcome of the desire to build engines working on other volatile fuels (other than gas) and to build

"One of the original Otto engines now mounted on a pedestal outside Deutz railway station (Cologne) not far from the original factory started by Otto, two-stroke engine pioneer."



them smaller and more powerful. The success of the Otto engine lay in its practical and economical functioning and others did not come "near it". From steam to volatile spirit and air and from huge lumbering engines feet high and wide, to engines that fit the hand, is a far cry—especially when the latter are by far more quieter and efficient, but it is so with the two-stroke engine. In his wildest dreams, Otto could never have foreseen the outcome of his "gold-medal winning engine". He would have laughed to have seen a matchbox size two-stroke engine propelling a model aircraft high in the sky; he would have been astonished to have seen a pedal cycle purring along with a two-stroke engine of a few c.c. fitted to it; he would have been amazed to have seen a neat compact two-stroke engine snugly fitting inside the width and diameter of the rear wheel of a cycle. These little

motors in their many forms compared with his huge six-feet tall two stroke engine with its huge wheel, rack, pinion and levers would seem impossible.

Otto must have spent many hours travelling by train and horse drawn carriages before and probably even after he invented his two-stroke engine. Not for him the convenient, economical, and efficient little two-stroke engine gently purring his cycle along! He would have loved it all—even as he loved his gigantic engines, those "monsters" of his creation of nearly a hundred years ago destined to be the precursors of the "midgets" of to-day which have opened up a new era for the man-in-the-street of 1953 even as it did for those in 1861. A memorial tablet affixed to his house of birth (Holzhausen, Tanuus) says: Without his discovery—no auto—no aircraft". One is tempted to say, no motor-assisted cycle, either!

A PRICELESS DELIGHT

With acknowledgements to
 "Op De Solex"
 Amsterdam,
 and translated
 by
 Nel Clegg

AT the end of June and the beginning of July, anyway, you will probably remember, there was a heat-wave. It is true that I didn't see a single sparrow fall from a roof, but it was even too warm for that. For no sparrow ventured out on a sweltering roof at all: they have become much too cautious. Yes! It would be complete folly for a sparrow to sit down on a red-hot roof when there is the foliage of thick, sturdy trees. Only in former days did they do such a thing, in the time when birds were still afraid of aeroplanes, and horses of motor-cars.

Human beings . . . oh well . . . they remained the same. For in that terrible heat I saw them—as of old—drag themselves in pitiful crowds to Scheveningen, where they can't get me to go, if it is hot, even at a rate of ten guilders an hour.

And in the late afternoon I have seen these crowds trudge back and stagger back, completely ruined by lemonade and burning sand, by cool, sweet ices and blazing heat. And they remind one much more of a troop of wretched deported prisoners, returning after a day of torturing labour, to their penal settlement, than of the happy homecoming of respectable fellow-

citizens who have had a day's pleasurable outing.

It was terribly hot. And you must know that I don't like heat at all.

But it was lovely, it was glorious!

No, don't think my brain has melted! I know perfectly well what I am writing. I am writing that it was nastily hot, and that I don't like such weather at all.

But it was wonderful! It was delightful!

For there is no greater pleasure in the world when it is very, very hot, than to mount your *Solex* and to start out just as you are, in your sport-shirt, on a tour.

There are people who keep on exclaiming, on such stifling days: "I would give a thousand pounds for it to cool off".

It is much cheaper, man! Buy a *Solex*! Buy freshness!! I have learned something from Thyl Uylenspiegel. He was glad when it rained, for then sunshine was on its way.

I cannot stand the heat very well. But I am glad when the sparrows . . . anyway, you know what I mean, I am glad when it is very hot, for then my *Solex* gives me freshness.

At that pace of just about eighteen m.p.h., in thin trousers and a sport-shirt, the freshness climbs up on you. It flutters through your trouser-legs up your grateful thighs, it flutters along your manly chest and your (beautifully curved) back, and while the cow lies panting under a tree, the countryman suffers, the townsman nearly expires, you sit there singing on your *cycle*.

Dear reader, that has happened to me. I rode in the direction of

Loosduinen, of Monster, found myself suddenly in De Lier—I don't know myself what route I took. I just rode because it was such a delight to ride, and a little while later I found myself on the shadowy, low bicycle-path from Gouda to The Hague, and there, from the opposite direction, a young woman passed me by, brown legs, short grey linen skirt, brown arms, spotless white blouse a cheerful, happy, pleasant face. On a cyclemotor too! And while she buzzed past me I heard her sing. Then I was overcome by an emotion. Korea, Atom, Egypt, Mossadeq, Iron Curtain, threats here, threats there

Relaxing laughter shook me, and gratefully I looked back a moment. There she went, young and healthy, enjoying the freshness which climbed up on her, softly singing happy and content.

Then I, grey-haired man, started to sing too. What, I don't remember. But I am sure it was not "And then we go to the pleasure-garden!" No, that it was, definitely not.

I don't remember what I sang for it was my heart that did it. My heart sang . . . even though it was so terribly hot.

And when I alighted somewhere in the shadow to have a quick cup of tea, and the fat woman who served me said, puffing: "Isn't it hot, Sir!", pointing to my *Solex* I answered that on such a machine that didn't bother me. She said: "An hour ago I had two people here who said the same thing".

If you can afford it, buy a cyclemotor, even if only with a view to very hot days.

A delight! a priceless delight,

THE SERVICE DEPARTMENT SAYS :

A feature provided by manufacturers' service departments on machine maintenance.

The CYCLEMASTER

The Cyclemaster will perform better and wear less if the following simple servicing items are carried out regularly. The weekly check takes about twenty minutes, and the quarterly check only about an hour.

Weekly Maintenance

First, clean the Cyclemaster wheel and engine ; efficient maintenance work is not possible on muddy or oily parts.

Check that all nuts, bolts and screws are tight, especially the nuts on the frame bracket. The exhaust flange nut should be tightened when the engine is hot. Pump up the tyre (45-50 lbs. sq. in.) for 1½ in. tyres and 35-40 lbs. sq. in. for 2 in. tyres, depending on the rider's weight).

If the clutch is correctly adjusted it will be possible to move the clutch lever about a quarter of an inch (measured at its tip) before the resistance of the clutch springs is felt. Primary adjustment for this free travel is provided by the screwed cable nipple at the point where the clutch cable enters the engine casting (Drawing 1). Slacken the locknut. To increase the free travel, screw the nipple clockwise (into the casting) and *vice versa*. Tighten the locknut. When sufficient clearance can no longer be obtained by the nipple, use the adjusting nut on the clutch itself. This nut (Drawing 1) is reached by removing the "CM" cover. Before moving the nut, set the nipple to the mid-way position. Hold the adjuster B firmly with a screwdriver, and

slacken locknut A. To increase the free travel of the clutch lever, turn the adjuster to the left (unscrewing it). Tighten the locknut, and test the free travel of the lever. If it is not the required quarter of an inch, make final adjustment by means of the cable nipple.

The hub should be lubricated with a little light machine oil. To uncover the oil hole in the hub, the spring clip which covers it must be rotated slightly. The oil may be inserted by an oil-can with a long nozzle, or by letting the oil run down a piece of thin wire. Replace the clip after oiling to prevent dirt entering the hub. Oil the secondary chain, from clutch shaft to drum. This is best done with the wheel off the ground and the clutch disengaged, so that the wheel can be rotated freely.

Clean the exhaust fishtail with a piece of stiff wire.

Quarterly Maintenance

Check the oil in the clutch chamber by removing the "CM" cover and the clutch chamber filler plug. Oil should just show on the tip of a screwdriver blade inserted ¾ in. below the face of the filler plug hole. If necessary, add one of the recommended SAE 140 oils to bring the oil up to the correct level. It is important not to over-fill.

While the "CM" cover is off, check the contact breaker points gap. If the magneto fitted is a Bantamag, the points must be checked through the hole in the

flywheel marked "CCW. Rotation". (Drawing 2). If adjustment is necessary the screw A which locks the fixed contact must be slackened before adjustment is made by moving the plate B. In the case of the earlier pattern Wipac Series 90 Magneto, the points must be checked with the flywheel in the position shown in Drawing 3, so that the points are just visible immediately beneath the words "Set Contacts .018in.", stamped on the flywheel. Both locknuts A and B must be slackened with a screwdriver before the points can be adjusted by moving plate D. It is necessary to rotate the flywheel to reach nut A, but it must be returned to the setting position to check the adjustment. The points of the later pattern Wipac Series are checked with the flywheel in the position shown in Drawing 4. To adjust the points, slacken screw A a quarter of a turn, and then turn screw B until the points gap is correct. Tighten screw A.

The points of each pattern of magneto should be adjusted so that a .015 in. feeler gauge will just pass between them .018in. is the maximum gap. The gap should be re-checked after the locknuts have been tightened. N.B. serious damage may occur if any attempt is made to remove the flywheel without the special tool available for the purpose.

Next remove the sparking plug, using the spanner supplied with the wheel. When the points have been scraped clean, adjust the gap to .018-.020in. The side electrode only should be moved—the insulation may be damaged if the centre electrode is bent. When refitting the sparking plug, make sure that the copper washer is in place between the plug and the cylinder head.

To examine the spokes, the wheel should be off the ground and the clutch disengaged, so that each spoke can be examined and tested by tapping it lightly with a screw-

driver. A loose or broken spoke will be shown up at once by the absence of a metallic ring when it is tapped. If adjustment of the spokes is necessary, it should be carried out by your Dealer, who will be able to true the wheel accurately. Incorrect spoke adjustment will quickly cause spokes to break and the rim to buckle.

The adjustment of the secondary chain (from clutchshaft to wheel drum) should now be checked; there should be nearly, but not more than $\frac{1}{2}$ in. total slack in the chain. (The following hub instructions apply only to models fitted with a Coaster Hub. For freewheel models, see Owner's Instruction Book or Workshop Manual). If adjustment is necessary slacken nut 1 (see Drawing 5) and then the thin locknut 2. By using a thin "C" Spanner, or by tapping lightly, move the eccentric

3 until the chain tension is correct. After tightening nuts 2 and 1 re-check the tension and adjust again if necessary. (On some models nut 2 is omitted. In these cases adjustment is made with nut 1 and eccentric 3 only).

With the wheel still off the ground, check the hub bearing adjustment. If the wheel rim is held lightly between thumb and finger, side play on the bearings should be just perceptible, but it should not be possible to rock the rim more than $\frac{1}{64}$ th (about the thickness of a table-knife). If adjustment is necessary, slacken both spindle nuts, and the thin locknut 2 (if fitted). Using a spanner on the flats of the spindle at the pedal chain end, rotate the spindle clockwise to reduce the play, or *vice-versa*. When the adjustment is correct, tighten the locknut (if fitted) and the two

spindle nuts. Finally, re-check the adjustment of both the secondary chain and the hub bearings, to ensure that they have not been altered by the tightening of the spindle nuts.

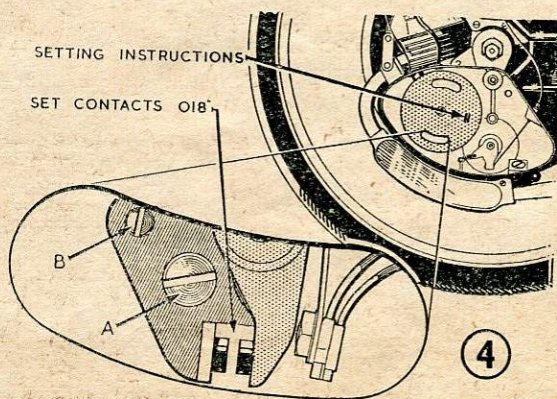
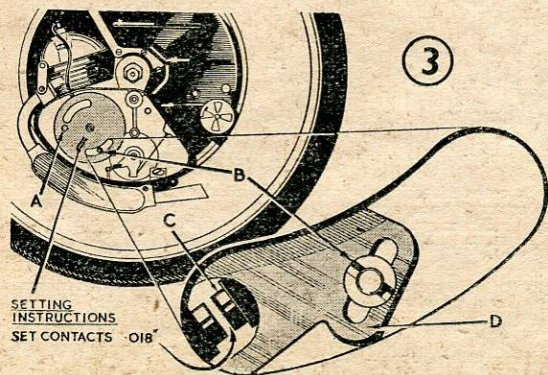
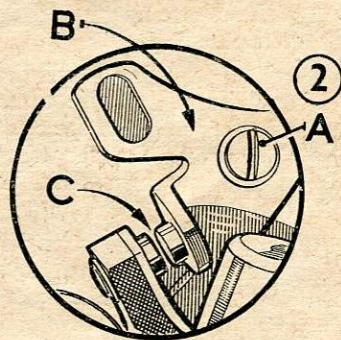
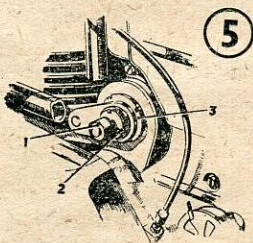
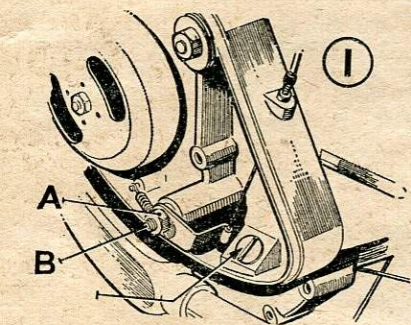
The last of the quarterly maintenance items is to clean the air cleaner. It should be removed and rinsed in petrol. When it is dry, pour a little engine oil on the gauze, and then refit.

Overhauls

We have not attempted, in these brief notes, deal with major overhauls to the Cyclomaster. If such work is carried out, the following points should be remembered (particularly if the Workshop Manual is not available):—

1. Do not attempt to remove the flywheel without the extractor made for the job.

continued on next page



Cyclemaster, continued

2. When the cylinder is removed or replaced, it must be moved straight up or down. If it is rotated, the piston rings may be broken.
3. The piston rings are very brittle. They should be removed with great care, using three equally-spaced thin metal strips to ease them off the piston.
4. The crankshaft distance piece must be inserted between the crankshaft cheeks whenever end-pressure is applied to the crankshaft or its bearings. If this tool is not used, the cheeks may close up, causing failure of the big-end bearing.
5. If the engine castings are separated, paper gaskets should be fitted in the joints between the castings when re-assembling, even if these have not previously been fitted.
6. When refitting cylinder studs, care must be taken not to overtighten them, or the threads in the alloy engine castings may be damaged.
7. To convert a 25 c.c. engine to 32 c.c., the only parts required are cylinder, cylinder head, and piston assembly. Therefore, if replacement of one of these parts is necessary as the result of wear, the opportunity may be taken to convert to the larger capacity.

continued from col. 3

the minimum of dearer Continental petrol and thereby save in total cost and in foreign currency. All vehicles are permitted to fly with their tanks three-quarters full.

A filling and service station is already in existence at Silver City's Southampton ferry terminal.

Flashes

Hiring of cycles is common though surprising little done in this country but normal enough on the continent. A note from France says that their Cycle and Motor Cycle Union has now fixed rates for the hire of cycles and cycle-motors there. The rates run from about 4/- an hour to 12/- a day, £3 per week, etc: plus a £20 deposit and compulsory third party insurance. The idea is good but at those rates we think most people would buy their own.

Prices are news these days. Since the *VeloSolex* announcement in the last issue of this journal that their built-in-one machine was reduced to £32 (plus P.T. £6.

13s. 4d.) for the very completely equipped job, *Minimotor* have brought the price of their famous unit down to £16. 10s. 0d. and at the same time extended their guarantee to 12 months. Now comes the announcement that Motor Imports have reduced the price of their lightweight front-drives, the *Berini* to a new low figure of £15. 19s. 6d. The future begins to look interesting.

Save Francs. For the convenience of motorists and motor-cyclists using the cross-Channel air ferry, Silver City Airways has installed a filling and service station at Lympe Airport, Kent. This facility enables motorists to use

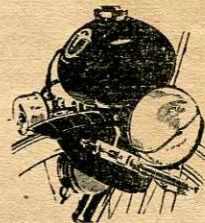
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LOOK! CASH PRICE NOW
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Trouble Free
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15 MILES for 3d.

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SAVES TIME and FARES and ENERGY

The BERINI Cyclemotor with its easy declutching device fits any make of bicycle, and gives effortless cycling at over 15 miles for 3 pennyworth of petrol/oil mixture. The BERINI is light, robust, and reliable. 32 cc., two stroke engine. Weight only 15½ lbs.

SEND FOR ILLUSTRATED BROCHURE & NAME OF NEAREST AGENT to DEPT. P.P

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TEST REPORT

**T. S. L.
Oil**

MANY readers of this journal applied for the free samples of the new Two-Stroke Lubricant recently offered by Slip Products, Ltd., in these pages and the interest reported was considerable. We have, therefore, made a series of tests of the oil, using three different engines, four different petrol/oil ratios and two technically experienced drivers. The results have been positive and satisfactory.

The three machines used comprised a front-driver, one under-the-bracket and one over-the-rear-wheel job and the range was 32 to 49 c.c. For the purposes of the test all the engines were run on mixtures varying from 16 to 1 down to 28 to 1, and two of them were afterwards stripped down for examination.

At the heavier proportion there was visible smoke from the exhausts but little appreciable carboning up at the ports. Fourstroking was, however, common on all three machines at the lower throttle openings on 16 to 1, even on one that was noticeably free from this trouble on ordinary lubrication. This situation improved as the proportion of oil was cut down to the lightest ratio of 28 to 1.

Some deliberately hard driving at this ratio did not cause the engines any distress and the two stripped afterwards were in perfect condition, but it must be allowed that both test drivers were experienced men with engineering knowledge and mechanical consciences.

No variations worth counting were observed in petrol consumption with any of the machines, but as none was heavily carboned-up this might not have been a decisive

test. Better consumption figures *might* be achieved after 1500/2000 miles running as compared with other oils having heavier carbon contents. Only prolonged tests can prove this conclusively. Apart from this carbon freedom, the great advantage of using T.S.L. was in the superstarting at all temperatures. It seems that this lubricant cannot gum up even with outdoor over-night parking at freezing point.

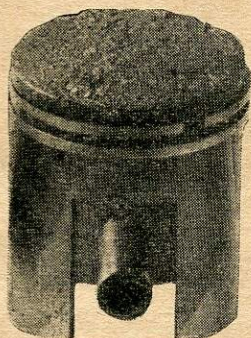
The conclusions of *Power and Pedal* are that, whatever the needs of high-performance, hot-running 125 and 197 c.c. motorcycle engines, the inevitably overcooled cycle-motors should be run by the general public at 24 to 1 on T.S.L. for optimum performance and safety with an ample margin for ham-fisted driving if occasioned. At this ratio it affords exceptional starting, efficient lubrication at all

temperatures and noticeable freedom from carboning up of ports and pistons.

T.S.L. is a synthetic material used as an additive to highly solvent petroleum oils. It is resistant to oxidation and is an effective detergent as well as a tenacious lubricant under a wide range of conditions. The really interesting factor, however, is its peculiar dual role in the viscosity field.

At freezing point the viscosity of T.S.L. in Redwood figures is well within the limits indicated for SAE 20, but at boiling point the qualities are those of an oil of SAE 30. This remarkable characteristic of giving a high degree of miscibility with freedom and easy starting when cold as well as first class lubricating qualities when hot is certainly a very real selling point for the Slip Company's product.

T. S. L. A SUPERIOR OIL FOR TWO-STROKE ENGINES



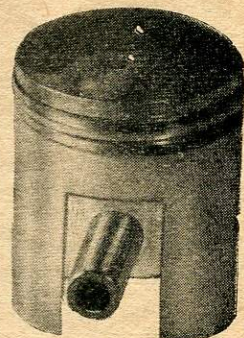
After 2000 Miles using an approved Branded Lubricant

To prevent bearing corrosion, carbon deposits, engine friction and wear

Saves 10% more petrol than other lubricants

Lively starting and continuous full-power development

NO PREMIXING



After 2500 Miles using "T.S.L."

1/2 pint "wallets" ..	12	1 quart tins ..	63
1/2 pint tins ..	23	1 gallon tins ..	176
1 pint tins ..	36	5 gallon drums ..	75

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A NEW DUNLOP TUBELESS CAR TYRE

TUBELESS cycle tyres have been marketed in the past and car tyres on this principle have been used in the U.S.A. for the past year, but the Dunlop Rubber Company's demonstration of their own new tubeless car tyres with built-in puncture sealing material, given at Fort Dunlop on May 21st., marked a real step forward in tyre design that is bound to have a considerable and permanent effect so far as road users in this country are concerned.

The demonstrators subjected the tyres to every kind of strain, applying visible distortion by circling a heavy car at speed, deliberately running over standing 2in. nails and carrying on the tests with the nails in the tyres for miles, bashing more nails in with a hammer and then pulling them out to shew there

was no air leak and checking pressures after each test with consistently successful results.

The tyre is basically an ordinary *Dunlop* cover plus a lining of rubber to replace the tube, a layer of tacky puncture seal under the tread and a rubber reinforcement at the beads to provide an air-tight seal against the rims. The wheels are ordinary standard pressed steel car wheels and the demonstration included fitting and testing a tyre on an old, worn rim.

Because of the obvious danger of leaks at the spoke holes, cycle wheels do not lend themselves to this kind of development in tyres, but new materials and designs for our wheels may not be so far away and the Dunlop Company's new design is a thing to look forward to in the cycle world of the not too distant future.

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NEW BRITISH CYCLEMOTOR

The Vincent Firefly

IT appeared at the A.C.U. Trial in 1952 and bobbed up in various export markets after that, but the *Miller* engine unit has been something like the ghost of a cyclemotor until now. Now the news is out that the unit is being put into production by Vincent Engineers (Stevenage) Ltd., famous as makers of the world's fastest standard motorcycle.

The new unit is to be known as the Vincent *Firefly* Cycle Motor and is an under-the-bracket job of 48 c.c. The drive by a large roller used with a reduction gear ensures a good bearing area on the tyre tread and is claimed to eliminate slip entirely under any conditions as well as saving the tyre from wear. A *Miller* A.C. generator provides both lighting and ignition current and the coil is concealed in the lower part of the long five-pint petrol tank that fits on to the down tube of the cycle frame.

Controls are a clutch lever operating the sliding mechanism that engages and disengages the drive and a combined throttle and decompressor lever. The complete unit with petrol tank and controls weighs under 20lbs. and the price is £25

The performance of the *Firefly* is reported to be particularly good at low revs., hill-climbing and traffic-speed running being notably desirable characteristics. It appears to be an excellent job and a welcome newcomer to the British market. We look forward to having the opportunity to test the machine and report fully in the near future.

CLUB NEWS

The London Motor-Assisted Cycle Section of the British Two-Stroke Club report their best, run to date along the Thames valley through Henley and Wallingford to Oxford, with everything going well except for the inevitable broken throttle cables (Why don't they use rods—ED).

Membership is being built up steadily and the Hon. Sec., Mr. Bert Evans of 10 Elia Street, Islington, N.1. is full of confidence, enthusiasm and the desire for more. Their runs for July are:

5th. BRIGHTON. Meet at Jack's Cafe. Morden Underground Station at 10.0 a.m.

19th. CAMBRIDGE, meeting at George's Cafe, 30, Green Lanes, Palmers Green, N.13, at 10.0 a.m.

We were pleased to receive *Bear Cross*, the magazine of the Bournemouth and District Group of the Invalid Tricycle Association. These people do some real runs on their varied machines and are shewing a great interest in the cheap and light power units that the cyclemotor trade has made available. There might well be a revolution in invalid tricycle design in the near future if enough of the right people take an interest in this market. *Power and Pedal* will be happy to give any assistance possible to invalid tricycle users either individually or collectively through the Association.

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REVIEW

A Handbook on Cyclemotors

**Autocycles and Cyclemotors—
3rd Edition Iliffe & Sons, Ltd. 5/-**

THOSE brave people who produce technical handbooks for non-technical readers are always faced with a job of compromise and it is on the success or otherwise of this achievement of compromise that their works are mainly to be judged. From this angle the handbook now produced in its third edition, written by the staff of the *Motor Cycle* must be accorded full marks for a lot of useful information in an understandable style.

The style is chatty, if somewhat verbose in parts, and the book can be regarded almost as reading matter, while at the same time there is plenty of real meat in technical detail, adequate illustration, some useful trouble-tracing charts and a really efficient index. It is a pity that so much space is devoted to the 98c.c. autocycle, a class that is on its way out as the 50 c.c. machines come more and more to the fore, but the general information about the working, care and servicing of two-stroke engines in general is of value to all cyclemotor users.

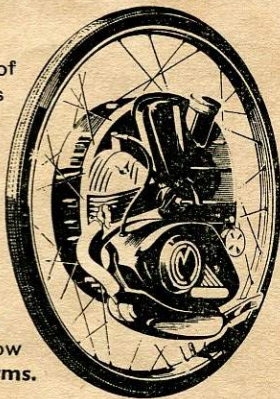
Unfortunately there is complete silence on the most important piece of advice needed by the intending cyclemotorist — The

choice of the type of machine for his requirements; and no word on the major problem of special tyre requirements for most engine designs. Sins of omission that will mean that the makers' handbooks and back numbers of *Power & Pedal* will still be necessary alongside this manual. There is little sign of personal experience in the needs and deeds of the cyclemotor world, technical matters apart (Even the covering letter which brought the review copy referred to *Power and Pedal* as "your quarterly publication").

Any novice or intending driver will learn from it but the book demonstrates clearly that there is a real need for a handbook written by cyclemotorists for cyclemotorists — and soon.

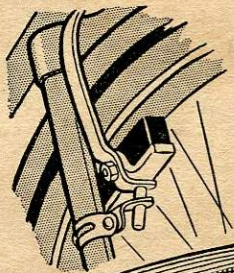
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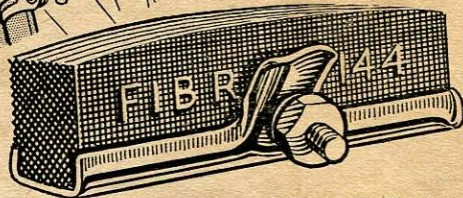
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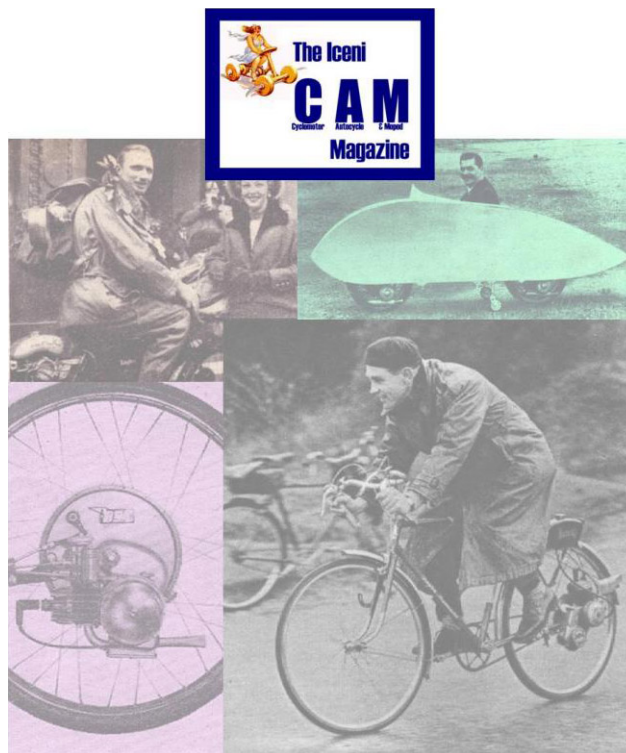
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