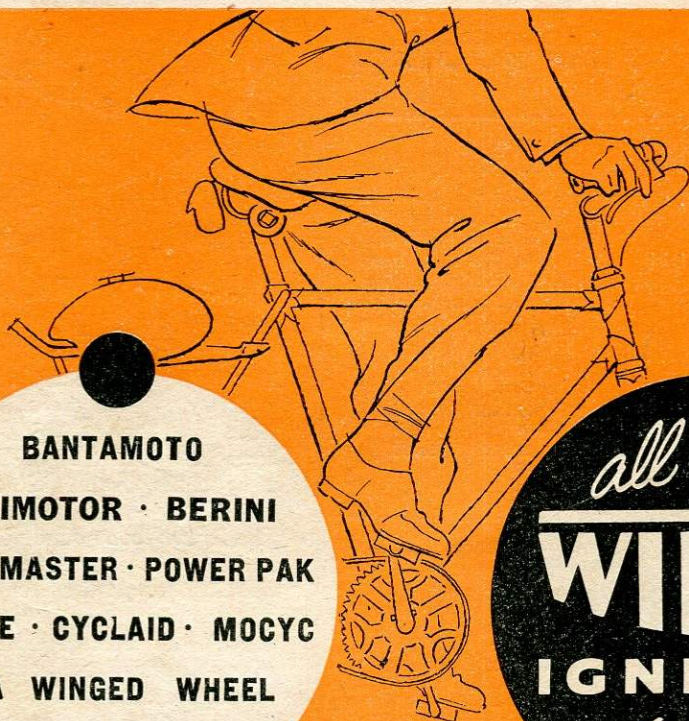


NOVEMBER, 1953

MONTHLY 4<sup>D</sup>

# POWER & PEDAL

The Journal of the Cyclemotor



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CYCLEMASTER · POWER PAK

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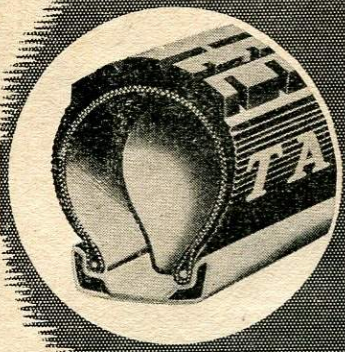
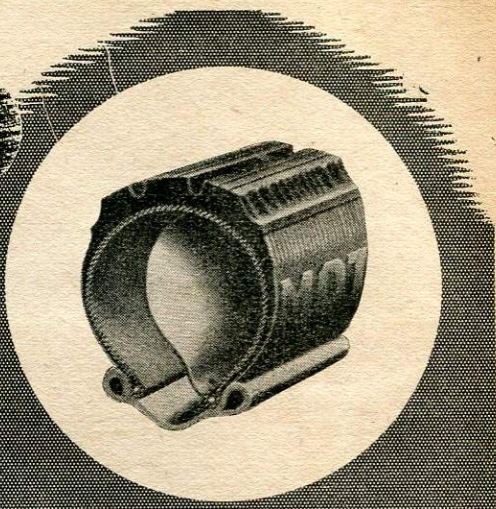
A PRODUCT OF THE WIPAC GROUP, BLETCHLEY, ENGLAND

**“Power Pak” Tested** —page 18

THERE IS A

# DUNLOP TYRE

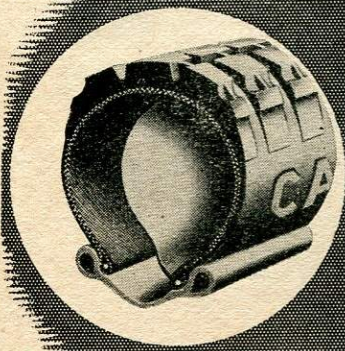
**FOR EVERY  
MOTORISED CYCLE!**



## DUNLOP TANDEM

A wide section tyre which has already earned a great reputation on roller drive tyre units. It is available in size  $26 \times 1\frac{1}{2}$  and  $26 \times 1\frac{3}{8}$ . The tread pattern gives low rolling resistance with high durability.

	Dunlop Tandem Cover	Dunlop Tandem Tube (With Schrader Valve)
$26 \times 1\frac{1}{2}$ Wide Section	15s. 0d.	5s. 9d.
$26 \times 1\frac{3}{8}$ Wide Section	15s. 0d.	5s. 9d.



## DUNLOP CARRIER

This tyre recommended for motorised wheels has a Dunlop Roadster pattern tread with a reserve of strength to give trouble-free running under really hard conditions. Already fitted as original equipment on power wheels with  $26 \times 1\frac{1}{2}$  rims it is also available in Oversize for  $26 \times 1\frac{3}{8}$  rims to provide additional traction and comfort.

	Dunlop Carrier Cover	Dunlop Carrier Tube (With Schrader Valve)
$26 \times 1\frac{1}{2}$	16s. 6d.	5s. 11d.
$26 \times 2 \times 1\frac{3}{8}$ Oversize	21s. 2d.	6s. 0d.

## DUNLOP MOTORETTE

A new tyre specially designed for auxiliary engined cycles. Produced in three sizes for use with motor attachments irrespective of whether the drive is by roller, chain, belt or motorised wheel.

The tread compound of this wide section tyre has special abrasion-resisting properties for extra long mileage. Also the ribbed tread pattern provides an ideal path for the driving wheel of roller drive units. The casing is reinforced to withstand the higher speeds and strains of motorised cycling.

	Dunlop Motorette Cover	Dunlop Motorette Tube (With Schrader Valve)
$26 \times 1\frac{3}{8}$ Wide Section	15s. 0d.	5s. 8d.
$26 \times 1\frac{3}{8} \times 1\frac{1}{2}$	16s. 6d.	5s. 8d.
$28 \times 1\frac{1}{2}$ Wide Section	16s. 6d.	5s. 8d.

*Made to give you*

★ EXTRA MILEAGE

★ EXTRA DRIVE

★ EXTRA SAFETY

Editor: FRANK L. FARR

*Editorial and Advertising Offices:*

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# PETROIL

THE changeover in the position of the two-stroke engine from being the interesting but rather fussy hobby of a minority of motorcyclists to its present standing as the simple, hard working and incredibly reliable universal i.c.e. of to-day has taken place so gradually that many people have hardly noticed it. Not only are more than half the current registrations of motorcycles two-stroke engined machines; nearly all cyclemotors, most outboard units for marine use and thousands of light agricultural machines are also of this type.

Over the years many lubrication methods have been tried for two-strokes, but these have all finished up in the museums and one of the major factors in the popularity of the two-stroke to-day is the general acceptance of mixing the oil with the petrol and feeding the mixture *via* the carburettor to the engine crankcase—the “petroil” system.

Unfortunately this desirable, indeed essential simplicity breaks down at one important point, that of supply—it is virtually impossible to buy petroil in this country, only the oil and petrol, usually in the wrong proportions, and which have to be mixed on the spot or put separately into the tank. Admittedly neither the oil companies nor the engine manufacturers have been much of a help over this with their

complex charts and often meaningless nomenclature and symbols, but the real cause of the trouble is the Law in the shape of the regulations concerning the storage and sale of spirit.

One remarkable effect of this is to create hundreds of thousands of habitual criminals; for the majority of the two-stroke users in Britain of all types regularly and quite illegally purchase and transport through the streets, usually in old oil tins and like containers, gallons and half-gallons of petrol which they mix with the appropriate grades of oil and then store in garages, sheds or even coal-bins or bathrooms. This is a ludicrous state of affairs which reflects little credit on the trade or on the law itself. It is, furthermore, inefficient and some means of providing petroil direct to the user must be found and quickly, for the nuisance grows day by day as the number of two-strokes increases.

We can sympathise with the garage man who will not keep cars waiting for their five or six gallons apiece while he measures a capful of oil to a quart of petrol for a cycle-motorist, but we maintain that he should have the mixture ready to serve *and there is no difficulty about this*. Two mixtures one for cyclemotors and one for the large engined autocycles and motor cycles, would solve the

problem for 90 per cent of two-stroke users in the country.

Since the recent amendment of the Finance Act, 1931, it has been legal to sell premixed petroil, but the problem of delivery still remains. It cannot be expected that garages will go to the expense of providing underground storage tanks for the relatively small quantities of petroil sold. We suggest, however, that a safe dispenser is already available in almost every garage—the metal oil cabinet, serving usually by hand-pumps from 30 gallon drums. One of these units would provide the two mixtures desired and a couple of pourer measures in each would make service quick, easy and efficient.

There can be no objection on safety grounds to the use of these cabinets on the forecourts of petrol stations. After all petrol is not a high explosive and any section of main road in town has hundreds of gallons of it moving around in the tanks of vehicles. From the point of view of public safety it would certainly be much preferable to the present illegal storage in homes. All that is needed is a change of regulation by the Board of Trade and the stations can operate petroil service almost overnight.

*Power and Pedal* believes that the time is now and we doubt if anyone can produce a sound argument against petroil service being implemented forthwith.

# COMMENT

by

## CLIP-ON

STUDENTS of all sorts and kinds at all times have to be constantly reminded that it is necessary to read and understand the question before attempting to answer it. It seems that I should have tendered some such reminder when I set the problem last month of building up a specification for the "ideal" cyclemotor. A number of letters have already been received and more will no doubt reach me before these lines appear in print, but most of them failed to observe the rules of the game I laid down.

The idea is to build up a composite specification from actual components or ideas that *already exist* in present cyclemotors (or associated machines such as motor-cycles, outboard motors and the like). That was why I started off with a short list of the things I like myself in various makes and models. Too many readers simply stated requirements in general terms. Have another go, readers, but watch out for pitfalls. One laddie wrote in that he wanted the *Itom* kick-on engaging gear and the synchromatic clutch of the *Power Pak*—Surely not both necessary at once!

### Service Faults

Our articles last month on the problems of service from the opposite angles of the Agent and the Disgruntled Buyer caused quite a lot of comments to flow into this office, some on one side and some on the other. A line that I found particularly interesting, however, was from yet another angle on the business, that of the makers of machines and equipment.

One personal acquaintance who produces an accessory which I know to be a first class job from every point of view waxed most bitter about his experiences in trying to get retailers to handle it. He is an engineer of some standing in his own sphere and naturally tried to sell his product on its technical merits, but he found no interest at all in that approach from 90 per cent of the dealers he spoke to. "They only had one answer," he says, "The X Company give 27½ per cent. off for the 'Trade'".

Whilst fully appreciating that the retailer, like everyone else in the business, is not selling things for fun but for profit, it seems to me that this attitude is a very short sighted one from the dealer's viewpoint. If he makes it his business to know the technical values of the things he sells he can honestly advise customers on their requirements and it is that sort of salesmanship that brings the customer back again for something else next time. The Sell and Forget attitude may make a profit on the sale but only once.

### Retailer's Angle

In fairness to retailers in general it must be admitted that the cyclemotor business is still only in its infancy in Britain and there is not enough trade in many districts for the shop keeper to live on that alone. Nevertheless the success of several of my own acquaintances shows that real service does bring its rewards in hard cash and regular business. In a few years there will be a million cyclemotors

in Britain and any trader who builds up a good reputation now will be in clover for the rest of his career.

Incidentally one such writes in to tell of his "Ideal Customer" as follows:

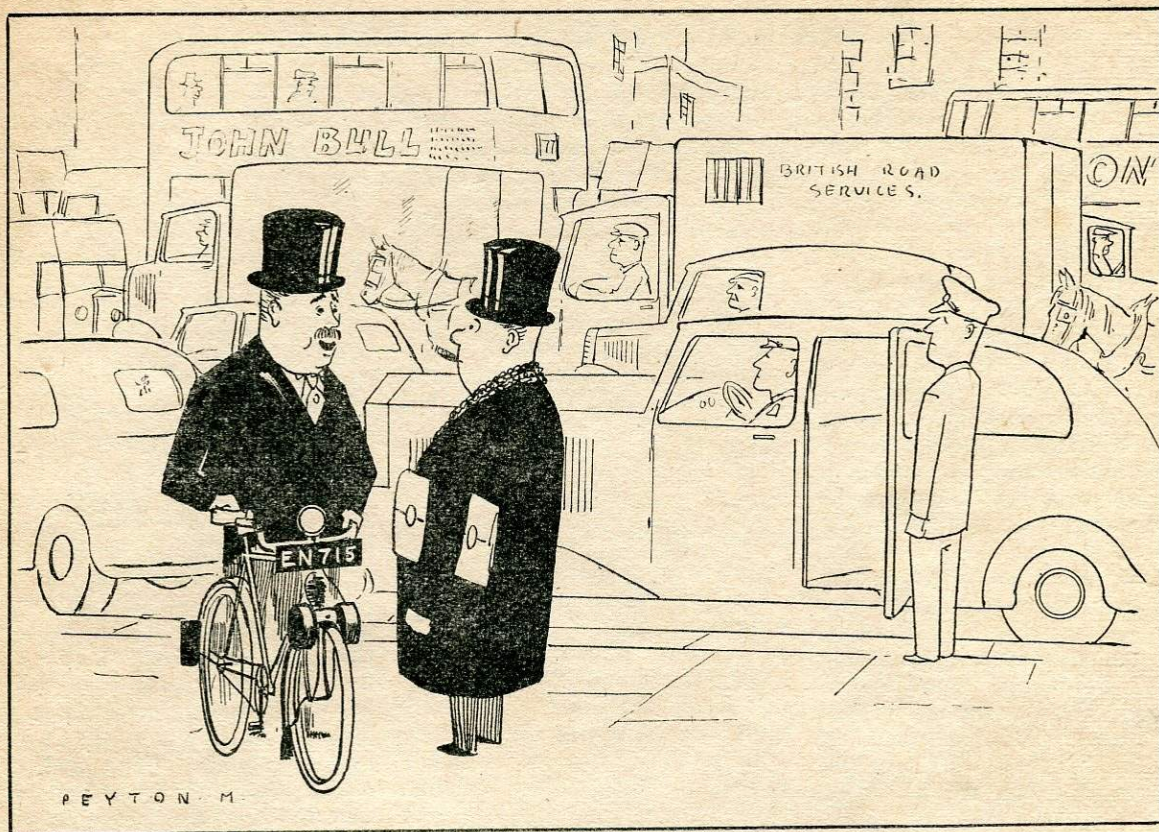
*"We like elderly, non-mechanical men and women. When it stops they make sure there is some petrol in the tank. If there is and still "no joy"—straight to us, one and sixpence worth of service and they're on their way for another month or two."*

I don't see why they have to be elderly to have that much ordinary common sense, but I see his point.

### Reserve Tanks

Until the authorities who make the regulations governing the storage and distribution of petrol get around to the idea that two-stroke users are legitimate buyers of petrol, some form of reserve tank is a virtual necessity for every cyclemotorist who ventures more than a few miles from home. I know of only one tank that is made for the job and does it perfectly and that is unobtainable in Britain (although the Editor is trying to do something about that). Meanwhile various suggestions have been received from readers, most of which have some merit but none of which really fill the bill. I have just seen a particularly good suggestion from Eric Moreman who is Captain of the Brighton Cyclemotor Club as well as being a trader in the locality.

He says that the lightweight food(?) bottle carrier used by



*"Sorry I can't accept your offer of a lift, old man, I'm in rather a hurry"*

racing cyclists is fitted perfectly by the one pint oil tins of the Castrol Company. As the tins cost nothing and the fittings are very light, efficient and reasonably priced this would seem to be a Good Idea.

He also says he has converted a *Minimotor* tank that had damaged its engine mounting bracket into a reserve tank suitable for *Cycle-master* users, but I take a poor view of the idea of adding still further loading to a rear engined cycle especially as the adaption is described as a "carrier-cum-tank". What holds the front wheel down? —The weight of the oversize rear tyre, perhaps!

### Big Cycles

My good friend Bert Evans of the London M.A.C. Section of the British Two-Stroke Club takes me to task for my remarks about the size of some of the cycles now being turned out as specially designed for use with cyclemotors. He says that his own machine of a well-known make has a full sized auto saddle on which he can sit upright with both feet on the ground.

This is all to the good but I happen to know that his machine was supplied by a certain agent in Essex who has already made quite a name for himself in the cycle-motor field. This agent is a very

old and experienced cyclist and motorcyclist and is, furthermore, a pertinacious type who keeps on and on at manufacturers until they give him what he asks for, I suspect, for the sake of peace and quiet. He is supplying and currently advertising *eighteen* and *twenty* inch frames for his machines, and I have yet to see these figures on any manufacturer's catalogue.

I stand by my contention that the standard sizes quoted by cycle manufacturers are too large in the main and warn users against accepting delivery without trying the both-foot - on - the - ground - while - seated - on - a - wide - saddle test. It is a must for safety and comfort.

# 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*

## "Cucciolo"

I intended answering Mr. Smith's letter last month to tell him how mistaken he was, in taking those figures he quoted as true. As J. G. Wells states (October issue). The *Cucciolo* rating is 1.58 b.h.p. at 5,200 revs. p.m. although the handbook gives it as 1.2 b.h.p. at 3000 revs.

As for him not understanding that a four-stroke engine developed more power than a two-stroke. Why, does he think?, do the big International racing "bikes" go in for costly four-strokes, if a cheaper two-stroke would give them as good a performance. If he is still not sure let him try his *Mini*, against a *Little Pup* for speed, and hill pulling in top.

In reply to Mr. Wells, I would like to tell him that this unit is the best on the road, and I have tried most of them, even the *Vincent*. It will do *everything* the makers claim, and the *Motor Cycling* test report was "well over 40 m.p.h. reached," and "from a stop on a steep hill, reached 30 m.p.h." at the top" with no pedalling.

Answering W. M. Black, the engine he wants is a *Cucciolo* which is chain driven, so a 3-speed gear *can* be used. Is very light (173 lbs.) disconnects for cycling, making it as easy to pedal as a bicycle. Weather has not the slightest effect upon it, and it is the fastest of the lot.

Again the *Cucciolo* is the answer to E. Norton, as I have pedalled my *Cucciolo* as much as ten miles while cycling with a friend, for fun.

In fact, the only complaint I can find with the *Cucciolo* is its noise

not the exhaust that is quiet—but a noisy unexplained whine, that nobody seems to be able to define.

Wishing all success to your paper. Let's have lots more letters

R. PARKER

Romford

## "Cucciolo" Again

As several queries have appeared in your correspondence columns in recent issues, regarding the performance of the *Cucciolo* in comparison to 2-stroke engines, may I say the following, after 2 years ownership of a *Cucciolo*:

It can climb long hills that seem to stand up straight in front of you at 25/30 m.p.h.

From ambling along at 5/6 m.p.h. in bottom gear—with *no* drag on the engine, one can "change up," and accelerate or cruise at a constant 30 m.p.h.—and if the throttle is fully opened, watch the speedometer go over the 40 m.p.h. mark—and the feeling of power from the engine is effortless.

I have never yet seen any other make of cycle engine approach anywhere near this performance, and for the extra price, and if you require an utterly reliable engine—test a *Cucciolo*

E. R. TAYLOR

S.E.23

## Different View

I thought the following comments might interest Mr. Williss, I note that he asks for opinions on the *Cucciolo*. My machine has never exceeded 36 m.p.h., on a

level road with a slight breeze behind me, and at this speed the whole cycle is vibrating badly. I am always afraid that the chain will snap at this speed since in view of the small driving sprocket it is rotating very rapidly.

With regard to pulling power the machine would probably climb that 5½ to 1 gradient he mentions in his letter, I know that it fairly romps up hills of 1 in 10. In top gear however it can manage short steep hills fairly well but I find that over long, even fairly reasonable gradients, once the speed drops below 20 m.p.h. the engine revs. drop quickly and on gradients of this sort I find that pedal assistance is better than changing gear since in bottom gear the engine is screeching at 15 m.p.h. With regard to petrol consumption I once achieved 328 m.p.g. on a long run of 100 miles. However I think that the engine was running just a bit weak at the time and I now average about 280—290 m.p.g. on long runs. I have several times done 100 miles in one day and once 150. The engine is badly affected by winds and as I mentioned before will not pull well below about 18 m.p.h. On calm days however, and on flat roads it will potter along at about 12 m.p.h. in top gear quite nicely but thumps a bit when accelerating from this speed, acceleration is good from 20 to 30 m.p.h. in calm weather.

The big drawback is the hideous gear noise. I think it must be the most noisy cycle motor on the road, the noise is nerve racking since it is not consistent like a

noisy exhaust and causes me embarrassment when travelling through towns.

I would be pleased to hear other readers comments on the engine, and especially to hear whether any one else has trouble with the slip sprocket, I have renewed the spring in mine and it still sometimes slips in a forward direction.

T. N. FRATER

Wallsend

—and a Good Tip

The idea of using a *Cucciolo* tank as a reserve tank for cycle-motors with existing small capacity tanks is a good one except that the cost of a *Cucciolo* tank is about £3 which makes it prohibitive.

I should like to pass on a tip to

owners like myself of *Cucciolo's* who find that the mechanical noise which is normal on this make is causing them distress especially on long trips. If the petrol tank which normally is fixed by four stays to the front down tube is altered in position so that the lower two stays are reversed and the tank lowered and refixed with the lower stays on to the rear seat tube it will be found that the noise is decreased. Apparently the new position being between the rider and the engine deflects quite a portion of the noise to the ground and I have found that this alteration in the position of the tank has made long trips quite enjoyable in the reduction of noise.

FMX 809.

Wembley

The Right Cycle

For some fifteen months I have ridden a 25 c.c. *Cyclemaster*; I first fixed the wheel to an old *B.S.A.* cycle, available in the family and rode this for close on a year roughly four days in every week; during that period I also did an extensive continental tour. Three months ago I changed the unit over on to a specially built *Norman* frame, supplied without a real wheel and equipped on the front with a balloon tyre and a hub brake.

The change-over has been entirely beneficial on the score of comfort and, because of greater solidity, even of engine performance. But, unmistakably, I have changed over from a power-assisted cycle to an auticycle.

On the old cycle I could and did, cycle for miles with the engine

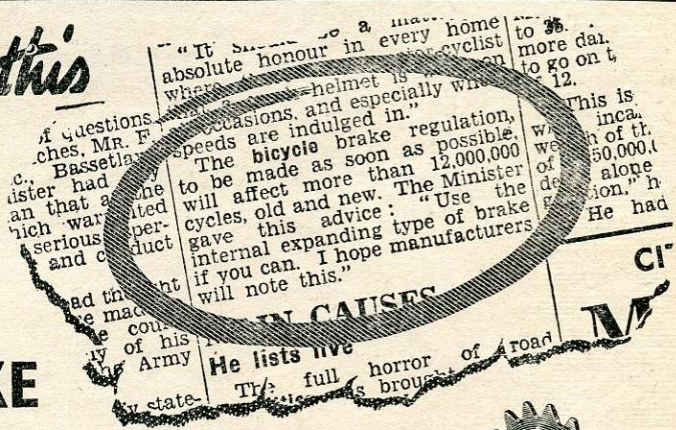
**CYCLISTS!** *Read this*

FOR SAFE CYCLING fit a

**PERRY**

**COASTER HUB BRAKE**

—all the safer to cycle with!

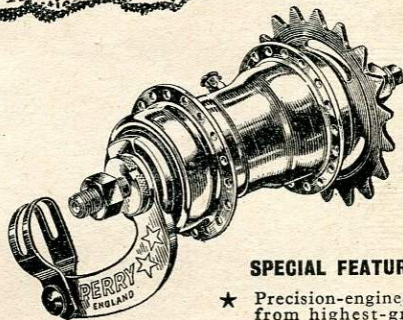


Instantaneous in action, the dependable PERRY internal expanding Coaster Hub Brake requires only slight foot pressure to bring you to a smooth steady stop. Your hands are always free for steering and signalling. Can be fitted easily and quickly to your pedal-operated or motorised cycle.

**SEE YOUR LOCAL CYCLE DEALER NOW!**

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**SPECIAL FEATURES.**

- ★ Precision-engineered from highest-grade materials.
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  - ★ Brake surface totally enclosed, giving complete protection against dust and grime.
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disengaged, without clutch drag, so that I disagree with Mr. E. Norton on that score. With the new heavy frame and balloon front tyre I have had to pedal a few miles but I would no more do that for pleasure than one would on a 98 c.c. autocycle.

My first experiences with the engine were rather like Opt-I-Mist's, owing—as it turned out—to a slightly defective part in the motor. I am glad to say that Messrs. *Cyclemaster* not only replaced it as well as some other parts free of charge, but continued to take the greatest trouble about my engine for months after that, even after the guarantee period had expired. For months I cursed what I thought the insufficient climbing power of the engine until I discovered the trick of climbing at low revs.; instead of trying to climb a gradient at maximum speed with much pedal turning, (the proper thing to do over a short or easy gradient), I now tackle steep hills slowly. Throttling down to as low as the motor will go and keeping the pedals turning at the same time, I find I can climb even Highgate West Hill without any pedal strain; progress is slow but there is practically no resistance on the pedals. I do not know if this is an orthodox method applicable to any other engine and should be interested in other riders' comments or reactions.

Perhaps this will help Mr. W. M. Black.

I too solved my spare tank problem in France, by buying the spring-clip holder for a two litre can attached to the front fork. What Mr. Snowdon does not however mention is the second purpose of these "free" cans. They contain 2 litres of *Solexine* the ready mixed petrol mixture marketed by B.P. for the ubiquitous *Velosolex*. The tins are not in fact sold free, but cost 120 francs over and above the cost of the petrol; but as they are return-

able and are simply exchanged against a new tin when empty this hurts only the first time. The French *Velosolex* rider therefore not only has an excellent spare tank but buys the correct petrol mixture at most cycleshops in the most convenient form.

As so many people already own bicycles when they think of motorising, I still think that the clip-on has as much future as the "built-in" cyclemotor, despite the latter's admitted technical superiority. The wheel unit seems to me a good compromise between the two alternatives; you avoid buying a young motorcycle and yet spare your cycle frame.

I recently did my first full day trip with exact measurements of consumption and mileage. London—Brighton—West Worthing—London (129 miles on the meter took just under two tankfuls, i.e.  $\frac{1}{2}$  gallon. This gives 260 m.p.g. on a long run involving some hills and some longish flat stretches

F. M. M. STEINER

W.C.1.

### Perfection Already

In connection with the appeal by "Clip-on" for a perfect specification for cyclemotors, I venture to put forward my views.

Surely the ideal motor attachment is with us in the shape of the new *B.S.A.* unit. All the important features are embodied in this unit, for example:—

1. *Gear Drive*. No tyre destroying rollers.
2. *Efficient built-in brake*. An essential safety factor. Most cycle motorists are still hazarding their lives by relying on ordinary cycle brakes.
3. *Accessibility for routine maintenance* without removing engine.
4. *Good performance*—reasonable economy (165 m.p.g.)

and cruising speed of 20 m.p.h.

5. *The motor is a complete engine-wheel unit* (no broken free-wheels). This inspires confidence that it has been designed for the job.

These few points shew to my mind that the *B.S.A.* is certainly miles ahead of anything yet produced (*Cyclemaster* and *Cucciolo* excepted) and with attention to silencing and vibration as mentioned in the recent road test should enjoy immense popularity. A 48 c.c. engine would probably give quieter running without affecting the speed.

I must mention that I have not yet joined the ranks of the cyclemotorists but hope to do so in the near future, of course I have no connection with *B.S.A. Ltd.*

PROSPECTIVE WINGED WHEEL  
N.10.

### Cameracraft Corrections

Once again I have my *Power and Pedal* better than ever. One of its best features is the large amount of space devoted to readers' letters giving their appreciations and grouses about the various motors they own, one can learn a lot from them.

Upon checking through my article "Camera Craft" I see that three errors have crept in that put the whole text wrong, two are printing errors and one I am sorry to say is mine. I hope that I shall be in time to have them corrected in the next issue as anyone reading the article who has a knowledge of the subject will wonder what on earth we are talking about; they are as follows.

Paragraph 2. Line 18. "camera is of a focal length of  $4\frac{1}{4}$  in. This should read  $4\frac{1}{8}$  in. (four and one eighth inches) I can only regret this error, I do not make mistakes as a rule but my typewriter does not have the  $\frac{1}{8}$  in. symbol and I intended to write it in, as I only finished

typing the article at 2.0 a.m. I can only plead fatigue.

Paragraph 2, Line 20. "down to full will render every." This should read f11. i.e. the stop f No.

LIGHT FILTERS. 3rd. column page 17, line 7. "want to get a good effect use a" This should read a good plucky effect. If you check my article you will see that I did write it like this and you will appreciate how it does alter the value of the article.

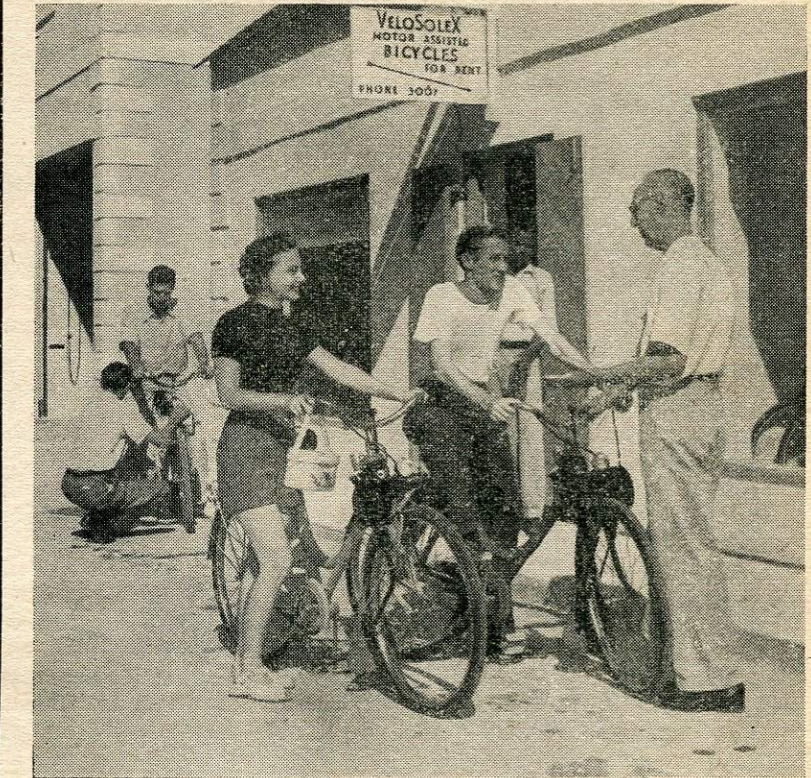
On the correspondence page Mr. F. Ransome has asked where he can obtain a roll film holder for his 9 x 12 c.m. plate camera. These are now obtainable from any photographic dealer but are all made for the 120 size film,  $\frac{1}{4}$  plate films in the roll form are no longer manufactured in this country as the Amateur demand is for the smaller sizes. Using a  $3\frac{1}{2} \times 2\frac{1}{4}$  negative in a  $\frac{1}{4}$  plate camera is not a disadvantage but to my mind a big advantage, the lens fitted to a folding camera is usually of a rather short focal length and although it gets a lot in does not give a very good perspective, by using a 120 film he will get the effect of using a lens of long focus which is ideal for pictorial work and just the thing for portraiture. There are one or two makes of R.F. Holders on the market. One *The Rada* costs £4. 13s. 6d. plus £1. 10s. 5d. purchase tax in the  $3\frac{1}{4}$  and  $2\frac{1}{4}$  and  $\frac{1}{4}$ -plate sizes. In the 9 x 12c.m. size it is the same price but bears no purchase tax so Mr. Ransome is lucky.

Keep *Power and Pedal* as it is with plenty of readers' letters, road test reports and candid comments and all will be well.

T. WAYMOUTH PRINGLE  
S. Croydon.

### Tandem Stand

Congratulations for *Power and Pedal*. It's wonderful value for money, please keep it small and good, a few adverts,



This picture comes from Nassau, Bahamas. Many countries have the hiring system and it is found that sales benefit from this form of introduction. (Photo by Freddie Maura)

Re tandem stand problem, in the October number (Messrs. Caddick and Ratcliffe) I have a home made one in use for nine months now which cost me about 10/-! as the Trade said it would cost too much to make single stand as there was no demand for them. So I bolted two strips of mild steel to the single tube 5in. x 1in., welded  $\frac{3}{8}$ in. apart at the bottom end to form a shoulder, then bolted a Y-shaped piece on to form the legs, joining them together with two rivets and a single spring to keep the legs up when not in use, and found I was able to start my *Cycle master* while it was on the stand.

F. HUTSON

Gosport.

### Rear Stand

In your August issue, W. H. Ratcliffe, and now in the October issue F. H. Caddick, both of E.17, were inquiring about back wheel stand for a tandem. I have a stand that fits on to the spindle, and this keeps the rear wheel well off the ground; when not in use, it is held in the up position by two springs. It is a very strong job, and I feel sure it will answer the purpose for a tandem.

I bought it for 8/- at George Grose, of New Bridge Street, near Ludgate Circus, E.C.4.

I have been a reader of the *Power and Pedal* since June, I find it very interesting, keep it as it is. Wishing you every success.

A. E. GRIFFITHS

N.17.

### Legal and Technical

Regarding PPD451, I am in full agreement with the "Law" on the point of Driving Tests. There is no comparison between *driving* a car and *riding* a cyclemotor. In the first case you just sit back and take notice, with a little bit of footwork to break the monotony and a fairly rigid steering column. On a cycle you have to balance and on many occasions drive with one hand on a very flexible steering system. You also have to rely on the manoeuvrability of the vehicle and not the weight.

One reader complains of punctures. My own machine is a *Power Pak* unit and has travelled between 20,000-28,000 miles with no major breakdowns. My only complaint is tyre wear. The motor is perfect but I feel if the makers redesigned it to fit under the bottom bracket with a reduction gear-clutch-sprocket and chain drive on the off-side it would be a great improvement. They could still retain the normal chain for pedalling and fit a double sprocket on the rear wheel to take the extra chain.

I am sure if they based their ideas on these lines and left the friction drives alone their sales would increase three-fold.

The best of luck to you Mr. Editor and remember your next step is a fortnightly publication

P. J. PRATT

N.W.10.

### Photographic Articles

I have, like quite a lot more, been a reader of your paper since the first publication. I think it is just the paper us P/A people require, and desire, but why, oh why, must you spoil it by inserting a camera section? In the last issue there was two and a third pages, valuable space, taken up with this "hobby."

This "hobby" let me assure you is not what I buy *Power and Pedal* for, and I am sure many

more of your readers feel as I do. There are quite a few camera craft monthlies on the market and camera interested people will buy them. I am also quite sure that this type of "fiend" will not buy "photography and how it's done" to read silly articles on how to run his Mini.

Please cut out this section, and give us more hints on how to get the best out of our little engines.

NORMAN CORRIGAN

Grimsby

### Ways and Means

I was particularly interested in Mr. H. E. Gregory's letter in *Power and Pedal* for July, re getting the best results from a Minimotor. I have had one for nearly 3 months and have done about 1,500 miles. I started from scratch knowing very little about I.C. engines and even less about cyclemotors, and have had to find out the hard way by trial and error and experiment.

I believe that poor results are often due to the adding up of a lot of small factors each helping one another.

Incidentally I have found it difficult to obtain information on many points and have had to search through quite a few text books. Couldn't you give us articles on all the finer points of decarbonising *e.g.* what to clean coke off pistons with and especially how else to remove it from the exhaust system. I know caustic soda will do it with a steel silencer but aluminium ones are never mentioned. I have tried *Tide* in boiling water but it isn't very successful.

Also can't we have an article or articles on *YOUR* specification for a cyclemotor or even a series by different writers? There are now quite a few types available but surely in most of them there must be room for improvement. Perhaps manufacturers might take note of such suggestions. For instance surely it is possible for us to have a British cyclemotor with a two-speed gear? It doesn't have

to be a 4-stroke either; many prefer the 2-strokes' essential simplicity.

C. W. HAGE

Stapleford

### Power Pak

I have been fortunate in several respects lately. First I discovered *Power and Pedal*, and then I was able to obtain all the back issues.

Having recently become the proud owner of a *Power Pak* synchromatic drive cyclemotor imagine my surprise and delight when I read in your November 1952 issue under the heading "Luxury comes to Cyclemotors", the glad tidings that you would give a full report on the new *Power Pak* and also a test report. Feverishly I ploughed through all the other back numbers but alas! no report and what's more no Service Department article. What's happened Mr. Editor? Surely your many *Power Pak* readers would welcome your reports on this fine little job.

I have only two small criticisms of the *Power Pak*—one, when the tank is full and well screwed down a certain amount of Petroil will *always* find its way out over the top of the tank, and two—the silly little strip of material used to secure the back half of the mud-guard to the engine which very soon breaks away due to vibration. Incidentally my *Power Pak* is fitted to a *Robin Hood Sports Tourist* cycle and at first the vibration at speed was excessive. Being a new owner I would welcome any hints or tips from other *Power Pak* owners.

Finally, may I add my voice to the many and say how much I look forward each month to *Power and Pedal* but please! Mr. Editor give us a definite publishing date, so that we do not worry our News-agents to death!

F. BELL

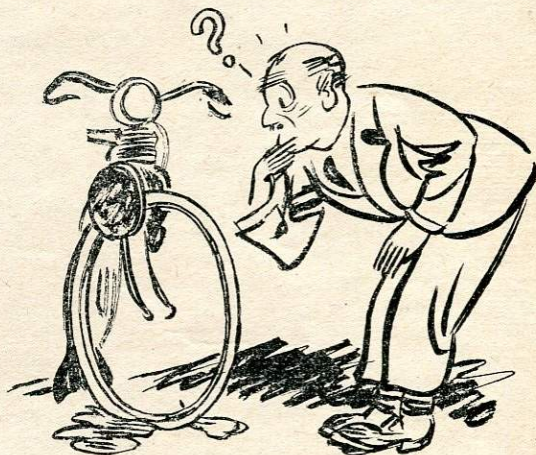
S.E.25

(*Power and Pedal* is published on the 23rd of each month for the next month—ED.)

# In Which Pilgrim Goes to Market



by  
Arquata



AS an habitual frequenter of market places, I like to watch and listen to the clever patter of the gadget vendors and to see the wrapt, sometimes pathetic looks on the faces of the women clients of the dusky seer with the coloured feather headdress, whose customers seem to lap up, hook line and sinker, the bed time stories he tells them.

One day I spied a newcomer. There he was with a bike wheel, complete with tube and cover, into which were stuck several stiff wires—in one side, out the other. There were about six of these *i.e.*, twelve holes in all. He held up the wheel for all to see.

Pulling out one of these wires, he spat on his fingers—very dirty—and applied the result to the spots. As usual bubbles shewed where the air was escaping. One by one he removed the other pieces and again bubbles shewed evidence of leaks.

With appropriate patter he spun the wheel slowly and again pumped up the tyre until it was brick hard—I felt it. Once more he applied his

disgusting spittle to the spots on the cover, but not a bubble.

I pondered—why the uniformity of the bits of wire? Why not such odds and ends as one unfortunately does in fact pick up at times? tacks, drawing pins, flints, nails?

The magic behind all this cost but a bob, sufficient for one wheel, so I bought a packet. This comprised some badly printed directions, a paper bag containing a pinkish powder and a small paper funnel. According to the salesman, all one had to do was to make a paste, to the consistency of cream, by adding water to the powder and pour the mixture *via* funnel into the tube, re-insert the valve, pump hard and thenceforth forget that the word puncture ever existed.

Sez you!

I know as well as anyone that if there was anything in this story

the stuff would be on sale in all cycle shops, or inserted by the tyre makers, but I wanted to see where the catch was. To be frank I had a faint hope that there might be something in the vendor's claim, and if so, it was just what I needed for my own riddled tube.

Carefully I poured the mixture as directed, spun the wheel slowly—part of the magic—and pumped up hard. I listened—not a sound, not a bubble. Somewhat incredulous, I cycled a mile or so and on returning the tyre was still quite hard.

Was this the answer to the maiden's prayer? No. It wasn't, for the next morning the tyre was as flat as a pancake and the rim touching the ground all squashy and wet. Wearily I pumped up again, but, have you guessed? That tube had just had it.

# Converting a Mini. to Chain and Clutch Drive — A Reader's Interesting Experiment

by  
J. STRACEY

MY first cyclemotor had a capacity of 29c.c. which I made, using a roller driving on the front tyre, but after travelling about 200 miles, I decided to give up this form of transport for the following reasons:

1. Friction drive in wet weather was pretty useless.
- (2) Exhaust gases and oil flew back on my clothes
- (3) Tyre wear
- (4) Vibration
- (5) 29 c.c. capacity too small

This enterprise cost me only £2. 10s. 0d., so I could not grumble.

My next thoughts were, if it would be possible to modify a ready-made friction drive engine of 49 c.c. capacity to a chain drive, as I was against the roller drive on to the tyre.

## Quite Simple

Looking through various catalogues the *Mini-Motor* seemed the best buy, so I next bought a hand book to find out how it was made, and if my idea of a chain drive would be possible. Anyway before I had anything schemed out, I saw a second-hand MK.I. engine for sale in a local cycle shop for £6. 10s. 0d. which I thought cheap, so I bought it.

Having purchased an engine I decided to fit it and to see how it ran. The engine behaved very well with plenty of power, which was lacking in my 29 c.c. home-made power unit, but the old troubles came back, with bad slipping in wet weather, and mud and grit from the roller dripping off at each side and getting into my three-speed and bearings of my

wheel. With the throttle open, very bad vibration, and wobble on the back of the bike was considerable.

Anyway I took the unit off, cleaned it up, and started on my chain conversion. I made some rough sketches and found the following modifications had to be carried out to the engine unit before I could start on the chain transmission.

The existing bracket on the petrol tank cut off and rewelded on the centre line, the induction tube shortened, a new exhaust and petrol feed pipe made. The engine rotation had to be reversed, but this is quite simple if you sit down and think about it long enough. No modification to my cycle was necessary.

The unit could then be positioned in the cycle frame, using the same clamping on the front of the tank, bolted to the down tube from the steering column, and a special clamp made and fitted on to the tube from the saddle stem on to the back engine mounting.

The reduction I used was approx. 13: 1 in middle gear of the *Sturmey Archer*. All sprockets and chains are cycle standard for easy and cheap replacements.

## Standstill to 35 m.p.h.

The first tryout using chain transmission was without a clutch which I thought I would not require but I found the transmission was too solid, and there was no means of disconnecting power drive for pedal drive. I could have pedalled with the decompression valve

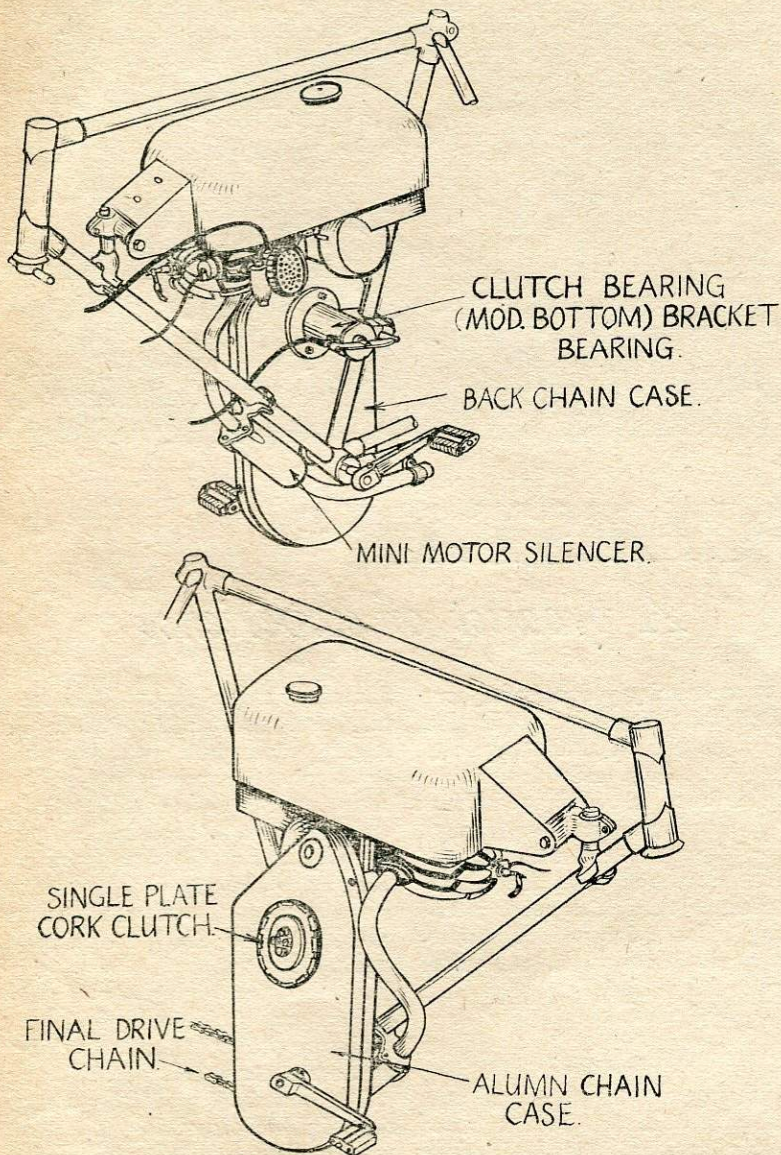
open, but for any distance this is hard going. The final drive chain is either used for pedal or power drive to the three-speed in the back wheel.

So a clutch had to be designed and this was a tricky problem, because I could only spare 1½ ins. in thickness otherwise the right hand pedal would foul. I got over this difficulty and made a single plate cork clutch 4¾ in. diameter and 1½ in. thickness. The clutch shaft and housing were cut from the bottom bracket of an old cycle frame, this proved very successful and spares are easily obtained.

After a tryout with the clutch everything seemed alright and I got down to painting the tank and making a few extras such as an enclosed aluminium chain case, etc.

Up-to-date I have travelled just over 1,900 miles without any serious mechanical failure to the chain drive, but I have replaced the main bearings and fitted new rings to the second-hand engine.

I find my cycle much better for riding and vibration is cut down to a minimum. The performance of the engine using the three-speeds in the back wheel is very flexible. I can pull away from a stand-still by slipping the clutch, and with a favourable wind a speed of well over 35 m.p.h. can be reached quite easily. But for general use I use ¼ throttle in top gear and can cruise 22-28 m.p.h. without the engine racing (This saves engine wear). The petrol consumption is approx. 170-180 m.p.g. Considering no pedalling has to be done this is pretty good.



The engine takes most hills without pedal assistance and being slung between one's legs (motor cycle practice) the cooling air stream is much more effective. The cycle under power behaves very well at both low and high speeds. I have fitted sprung forks which improve riding no end.

### In the Garden Shed

The engine in its new position is very easy to get at for decokes and adjustments. The cylinder can be removed from the crankcase without removing the whole engine from the tank. The chain tensioning is done by swinging the engine up or down, being pivoted about the front clamp.

No damage can be done if the cycle falls over, which it has done when put against the kerb with a strong wind blowing. The engine unit is guarded by the pedals and handlebars.

The whole conversion was carried out in my 6ft. x 8ft. garden shed, excluding the welding of the tank exhaust tube and clutch housing. I have an old 3in. screwcutting back-geared lathe, which I used for the sprocket adaptors and making of the clutch, etc. All other tools I used were hand tools, bench and vice.

The cost for the chain conversion was approx £2. 10s. 0d. and with the cost of the second hand engine unit it works out to £9. Of course there were a few extras such as hooter, licence holder, sprung forks, rear light, but these items are nothing to do with the chain conversion itself.

*This block was made from drawings created by Mr. Stracey. We have also seen several photographs of the machine and it does appear to be a most workmanlike job, fitting neatly into the cycle frame and harmonising well with general appearance. It is clear that a really capable mechanic with some simple equipment at his disposal can experiment usefully in the cyclemotor field.*

(From a report in "Fietsmotor")

A Well-tried engine in yet another guise.

The "CycleStar" is a 32 c.c. one-piece machine with many interesting features.



## The "CYCLESTAR"

*A product of experience*

THE relative advantages and disadvantages of the different methods of transmission as used on cyclemotors are a source of continuous discussion wherever riders foregather. Different types of roller, chain, gear and belt drive all have their devotees and the machines are still new enough to Britain for few riders and, we believe, no manufacturers to have tried more than one type in practice.

In Holland experience is both longer in time and wider in scope and there are more makers who produce cyclemotors as their main job, so it is interesting to follow their trends of design.

One such firm with a lot of experience and a big output is N.V. Pluvier of Rotterdam. Immediately after the war they took up the now famous Auto-Union engine design, first of 26 and later of 32 c.c. and used it in the *Berini*, a lightweight, carborundum roller, front-driver and then the *Cycle-master*, the hub unit that has been

so overwhelmingly successful here in Britain. With this considerable experience of such contrasting units in style, position and transmission behind them, the next production of the Pluvier concern was bound to be of very special interest, not only to users as such but all students of design. And it is most interesting indeed, for it incorporates the same famous and well-tried engine *with chain primary and roller final drive*.

### The Cycle

Unhampered by the legal and fiscal anomalies that beset makers in this country, the Hollanders naturally design their cyclemotors for the job they have to do, which means that most of them are built-in-one-piece machines. The *CycleStar*, as this new machine is called, is one of these and a very neat-looking job too. The light but strong open frame is of conventional appearance which is improved rather than marred by the well-shaped 3-pint fuel tank that

fills the space between the seat tube and the rear mudguard. A largish chainguard provides full cover for the normal pedal-driven chain from road dirt and the rider's clothing from the chain on the off-side, and a ribbed aluminium housing on the nearside covers the flywheel magneto and provides an oil-bath drive for the primary chain. So compact is the unit that only the air intake of the carburettor projects beyond the chaincase in front and only the silencer appears below it.

The standard model has a very neat lightweight spring fork that uses rubber as the medium for springing and damping. The design is unusual in that it has the whole of its linkage and suspension gear at the bottom of the forks, but it is noted that the designers are the men who made forks for the world famous D.K.W. motorcycles so it can be taken that they know their business. The machine tested, handled notably sweetly in eliminating minor road shocks

and engine vibration at the handle-bars. This model is also equipped with hub brakes fore and aft, the rear being foot operated.

Pivoted suspension under the bottom bracket sets the cylinder horizontally and permits the rocking movement that engages or frees the carborundum roller from the tyre. Control is effected by a "clutch" lever on the left handle-bar. This lever is pulled to engage the drive as with the *Berini*, not released as with the *Cyclemaster*, and the clutch is not to be slipped. "if it is", remarks the report, "the lesson will be learned at the expense of tyre rubber". The only other control is the throttle lever that also incorporates the choke control and eliminates the need for dismounting after a few yards running to unchoke.

The engine itself is, of course, the well-known 32 c.c. two-stroke with a rotary valve in the crankcase and a flathead piston. 0.6 b.h.p. is obtained at 3,800 r.p.m. which on the overall gearing of 17.8 to 1 gives a road speed of 20 m.p.h.

With 26in. x 1½in. wheels and 1½in. tyres the complete machine weighs 61 lbs. and sells in Holland at just under £40. A "popular" model without the spring forks and drum brakes costs £36 and we congratulate our cyclemotoring comrades in the Netherlands on having such attractive machines at so reasonable a price.

The idea of the geared roller drive, which is the most interesting point about this production from N.V. Pluvier stable, is not by any means new. We have seen it on the *Mosquito* and *Lohmann* here and now have it on the *Firefly*. Broadly speaking the advantages claimed for the roller drive are light weight, low cost and simplicity (or perhaps absence) of maintenance and the complete detachability of the engine from the cycle if required. Against this the chain, gear and belt drive, people

claim a positive drive that is free from slip in any weather and a lower rate of tyre wear.

Geared rollers, however, and we believe that the *CycleStar* is the first geared carborundum roller, can offer a larger bearing surface to the tyre and should be able to reduce both slip and wear by this and their lower revolutions. High performance is not aimed at with this machine and it can be safely assumed that this drive will deal adequately with the modest loads it has to transmit. We would certainly like to see the *CycleStar* here.

**"FIREFLY" ROAD TEST**

The illustration featured in the road test report of the *Vincent "Firefly"* in our September issue was of that unit mounted in the *Sun "Motorette"* cycle specially designed for use with that engine. It should be noted, nowever, that the actual model tested was a *Phillips* cycle.

X X X X

**"HEPOLITE" PISTONS**

Last month's picture at the head of the piston article was of a group *Hepolite* products for various makes of cyclemotor.

The piston at top left was a *Mosquito* type, a long-skirted piston in cast iron. The remainder are of *Heplex* silicon alloy.

Top Row : *Power Pak*, *Cyclemaster* and *G.Y.S.*

Bottom Row : *VeloSolex*, *Cyclaid* and *Minimotor*.

X X X X

**M.A.C. SECTION B.T-S.C.**

It is regretted that the 1,000 mile non-stop run, due to have taken place on Saturday, 26th September, had to be cancelled. This was caused by the great cost involved in such a venture and the riders could just not afford the run. The run was cancelled too late to inform the papers and it is hoped that members were not put out by this.

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# HISTORY

by  
S. V. Holroyd

## The History of the Saddle

**W**HAT with solid tyres and the shocking condition of most roads outside cities, two-wheeled vehicle riders of sixty years ago, had uncomfortable rides. True, the advent of the pneumatic tyre helped a lot, but for all that, those old time riders were just as concerned with comfort as we modern ones. Many were the ideas put forward with a view to improving saddles on cycles. A host of innovations and materials practically glutted the saddle market, and the patents office, too. Riders were "saddle conscious"

In the 1890's, there appeared to be three main classes in which saddles were divided—pneumatic, spring, and absorbent. In the first class, saddles were often mounted on "balls of air" so that the rider sat on air and received less shock and vibration. The second class of saddle, very much as our present day saddle, was mounted on springs of different sorts. In the third class an absorbent padding was used, such as

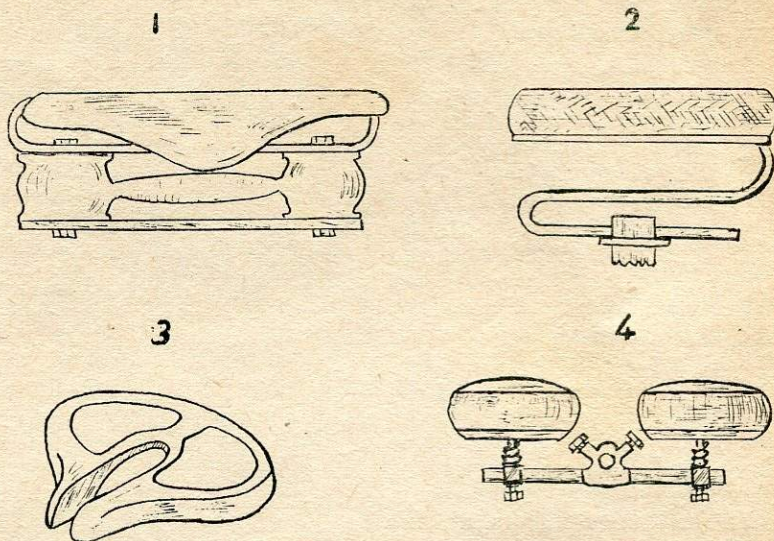
hair, rubber, or moss. Classes two and three were often combined per absorbent saddle top and spring mounting.

### Inventors' Dream

The rough sketches of saddles of sixty years ago give us an idea of some of the types then in existence. Number one shows a saddle with a solid leather top on a rigid framework fixed to a pneumatic mounting or air cushion which, as will be seen consisted of two ball chambers and a connecting tube between them. In fact, this connecting piece was a "relief chamber" for the air in the balls when it was compressed by weight on the saddle. Provision was made for the tensioning of the saddle top. Sketch number two is an absorbent-cum-sprung type and reminiscent of the sort of saddle one connects with present day farm tractors. The solid top, appropriately packed with some absorbent stuff, was fixed to the bent spring bar as depicted. Often

this type of saddle was without a peak as many saddles indeed were in the old days. In sketch number three, a "moulded" saddle top is shown and the two recesses received cushions or pads. The peak was short and recessed or bifurcated "to prevent perineal pressure" it being almost a craze a long time ago to sell the public "anatomically designed saddles" that "prevented internal injurious pressures". Of course, there were both ladies' and gentlemen's saddles—the former being much smaller and neater.

Sketch number four is not a saddle made for two but for one. The idea again being connected with anatomy. This type had both absorbent and spring cushioning design, the padded tops being mounted on springs clamped to a cross bar. The centre of the bar held a clamp and two bolts, and the centre hole slid on to a bar or tube, the two bolts then holding the cross bar secure. The two pads could be adjusted on the cross bar for

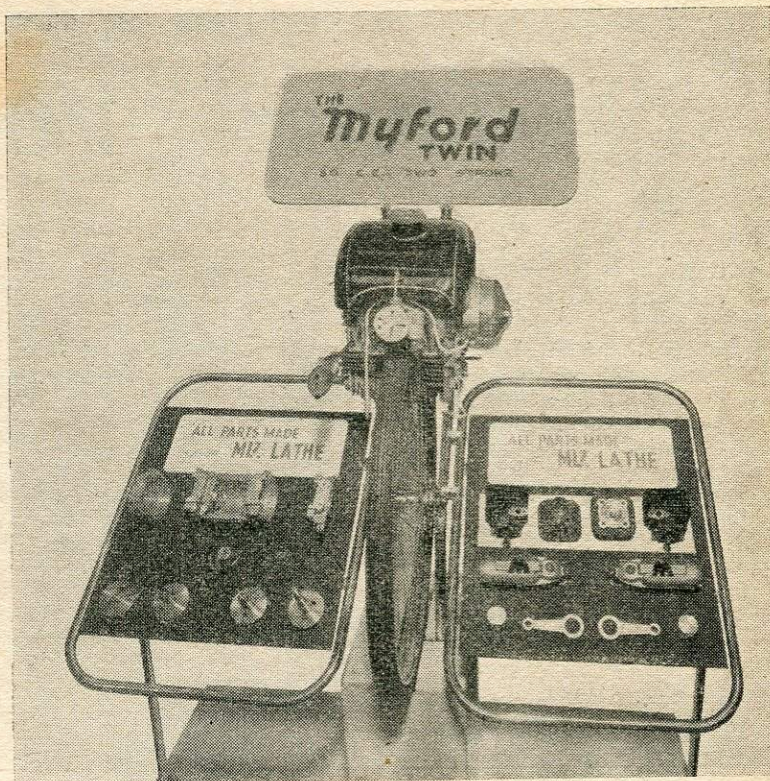


We're Sorry, but—  
**IT'S *NOT* FOR SALE**

distance. Of course, the pads were either oval or round without peaks. There were saddles of leather and interwoven cane—like the thing one sees in cane bottomed chairs to-day, and saddles of interwoven spiral springing. The idea of air cushions for motor cycle seats is not new by any means. It was applied to cycles of sixty years ago and in the main, consisted of an "elastic cover" filled with air and fixed to either a saddle top or to a suitable framework. Or in other specific cases, the "air cushion" consisted of rubber tubing suitably shaped and fixed to the saddle top. Even sponge rubber was utilised.

Saddle mountings were often complicated and more so when some brainy inventor, for instance, designed a saddle that had two separate parts, left and right, that could move up and down according to the rider sitting on it. There were elastic tops for saddles also, and these were made from strips of strong elastic stretched between pommel and cantle, and in a like-wise manner, thin spiral springs were also used. There was a variety of saddle coverings or tops but in the main, leather held sway. One kind of saddle was made up of hundreds of spring tensioned "protrusions" covered over with material. These plungers were supposed to absorb shock and give the rider the feeling that he was riding on velvet!

Time was when hammock saddles were slung between steering head and seat tube but the saddle in its present day form is not really very far ahead of its precursor of fifty and sixty years ago. It may be lighter in weight (if that in many cases) but it is doubtful if it is much more comfortable than many a saddle sat on by the end of the nineteenth century two wheeled rider. The vast improvement in our modern riding comes from the greatly improved road surfaces more than anything else.



THE neat and unusual cyclemotor depicted above was displayed at the Model Engineering Exhibition in London last year by The Myford Engineering Company, Ltd.

The unit is a rear wheel roller drive job but is unique in that it is a twin cylinder two-stroke of 49c.c. The two "pots" are inverted on either side of the wheel and the roller is mounted on the common crankshaft between them. The unit was reported to be very smooth and to have excellent pulling power at low revs.

Unfortunately it is not for the market and was shewn by the Myford Company purely to demonstrate the capabilities of their ML7. 3½ in. Metalworking Lathe on which all the components of the cyclemotor were machined. The Company advise us that they have no intention in the immediate future of producing either engines or kits for the market and they do NOT want to receive enquiries on that subject. They have however, an attractive and well illustrated booklet (Publication No. 704), which describes the ML7 Lathe in detail and will be glad to hear from those interested.

We publish this picture as one of interest and in the hope that it will encourage some maker to study the market for engine kits and some readers to "have a go" at making bits and pieces if not complete units for themselves.

The address of the Myford Engineering Company, Ltd., is: Neville Works, Beeston, Nottingham.

## ROAD TEST REPORT

### A Very Popular Machine

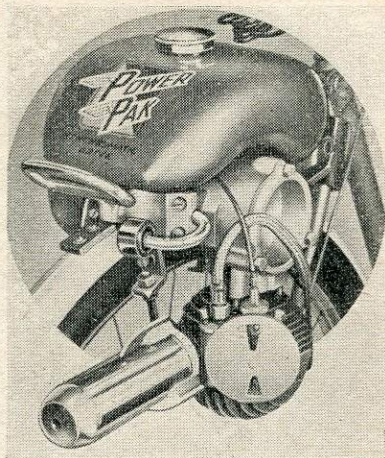
*The*

# “SYNCHROMATIC” POWER PAK

THE persistent demands from our readers for test report and service contributions, the number of the units seen on the roads and the enthusiasm of many dealers of our acquaintance had already convinced us that the “Synchromatic” *Power Pak* was a cycle-motor with a rather special appeal even before we had tested one. Now that we have had that opportunity we understand why the riders are so pleased with themselves and their mounts, for “The Pak”, as they call it, is a very attractive proposition.

On the paper the engine is quite a normal single cylinder two-stroke, bore 39 mm., stroke 41 mm., capacity 49 c.c. It has a deflector head piston, the usual alloy head and iron cylinder barrel, *Wico-Pacy* flywheel magneto with lighting coils and a steel driving roller. The unit is mounted over the rear wheel with the cylinder inverted and is engaged or disengaged by means of a hand lever operating in a positive “gate” on the near side seat stay of the cycle.

Closer examination immediately demands notice for the very high finish of all parts and this characteristic is notable throughout the assembly. The whole unit is a beautifully finished engineering job and the designer has given attention to quality in the smallest details. Bearings are of generous size for their various jobs and the provision of roller bearings for the big end and ball-races for the mains, driving roller (2), clutch thrust and



*It looks good too—The synchromatic “Power Pak”*

clutch housing bearings indicate that this engine was not designed and built to a price but to a desired specification.

The unit is attached to the machine by a bracket and two bolts on the seat stays. Just aft of this is a large pivot bearing on which the whole outfit hinges to engage or disengage the roller drive from the tyre. At the rear end a strong steel stay attaches to the wheel spindle on the offside, its upper end providing the anchorage for the engaging lever through a flexible rubber bush and the adjustment for the roller setting to micrometer accuracy by means of a screw thread and two nuts. The forward end of the engaging lever emerges, on the nearside of the unit as mentioned, to a “gate”

with two notches so that either engaged or disengaged the positioning is positive and firmly locked and there can be no bouncing of the roller on the tyre when driving or scraping when freed.

A major issue has been made of the damping of vibration and the claim of the makers that the steel roller driving on a pneumatic tyre is the finest shock-absorbing drive available is backed up by the provision of rubber vibration damping mountings for both the main securing clamp and the engaging lever gate in addition to the bush already referred to on the rear locating stay. This means that the entire assembly is rubber mounted at all points of contact with the cycle and the benefits of this system can definitely be appreciated in the riding comfort of the machine.

So far this description goes equally well for the “Standard” model of the *Power Pak* which is still marketed and has a good following. But the machine tested was the model introduced last year at Earl’s Court incorporating the “Synchromatic” clutch.

The clutch itself is a perfectly simple and straight-forward single-plate friction disc design mounted on the extension of the crankshaft between the driving roller and the flywheel magneto. It engages smoothly and disengages cleanly, drag being negligible and unfelt when standing at a tickover. The interesting part of the idea lies in the method of operation

which is by twist grip, the same twist grip that operates the throttle control. When the grip is in the "closed" position the clutch is withdrawn and the engine is free to tick over with the machine at a standstill. On getting away the grip is opened as soon as the pedals get the cycle moving, the clutch engages and the twist grip then operates the throttle in the normal manner. A soft click is felt when the grip is closed down to the point of clutch disengagement and this provides enough guide for the engine to remain "in" with the throttle almost shut if required.

No decompressor is fitted to the "Synchronatic" model, the space in the head being filled by a plug. This reduces the driving controls to one.

The machine tested was a very light, short wheel-based model, an excellent cycle for its designed purpose but its designed purpose was not motor-assisted cycling. The frame was too short and too high, the wheels too light and narrow, the bars too straight and too low, the chain unguarded and the bicycle lighting and audible warning device completely illegal as well as unsuitable. Yet, despite these handicaps, we record it as a tribute to the unit that we thoroughly enjoyed riding the machine and in particular used it in preference to available alternatives for longish trips across town and out into the country.

### On the Road

Maximum speed on the flat appeared to be just under 28 m.p.h. but the slightest favourable grade or tail wind could put this up to somewhere around 35 m.p.h. and the interesting thing was that this over-revving caused no distress to the engine nor any excessive noise or vibration to create alarm and despondency in the mind of the rider. On the level the engine took over the job of propelling the machine at about 6 m.p.h. and

accelerated smoothly up from that with a particularly lively response to the throttle between 15 and 25 m.p.h. This was more than handy as it enabled the rider to manoeuvre with confidence in traffic well out in the centre of the road.

That manoeuvreability and acceleration as well as high cruising speed were of a high order was demonstrated one Sunday morning when a 32 mile run was accomplished non-stop at an average speed of 24 m.p.h. including the complete crossing of London. The bicycle bucked and bounced uncomfortably but the engine was perfectly happy all the time. The most comfortable cruising speed was always that determined by the road surface and traffic conditions, the *Power Pak* apparently being quite happy and fuss-free at any speed within its range.

The exhaust noise was a bit more than we think desirable, especially at night, but better than most of contemporary machines. The note, moreover was so "clean" as to be really pleasant to an ear tuned to and interested in things mechanical. It is, however, unfortunately true that even in the

middle of the twentieth century most people are not so appreciative as ourselves to the sound. We have heard some folks say that steel rollers "whirr" on the driving tyres and it was true that when running down hills at speed with the clutch disengaged and the engine stopped we could hear the roller whistling away to itself merrily on the smooth-treaded *Motorette* tyre, but we thought the modest noise quite pleasant and in any case it could not be heard while the engine was running.

There was no mechanical noise from the unit at all and we give full marks for this very desirable achievement. We have never met a unit better in this respect in our whole testing experience. Another endearing feature was that the engine hardly ever four-stroked. Even on a mere whiff of gas it purred like a cream-filled pussy cat.

The makers' claim that their specially designed and well finished roller never slips was justified for all practicable purposes although in fact we did manage to make it slip in wet weather by ham-handling the throttle at low road speeds and also when starting with a dead

## VITALITY Bulbs

### for CYCLEMOTORS



YOU can rely absolutely on VITALITY BULBS, Britain's finest bulbs for Cyclemotors. Superb in every detail, they give you *better* and *longer* lighting—and only Vitality Bulbs have these unique features:

- ★ Specially made for Cyclemotors.
- ★ Individually made and tested three times.
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Special types for Cyclemaster and Power-Pak.

WITH NORMAL DYNAMO SETS: The dynamo will give a high output due to the higher speed. Use the same Head Bulb as for pedal cycles, but fit a Tail Bulb of high rating (e.g. 6v. 15a, instead of 6v.0.4a Tail).

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NEVILLE PLACE  
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engine. The amount was trifling however, and we would not have noticed it if we had not been looking for it.

The *Power Pak* seems to have earned a reputation for running rather hot, to the extent that the makers themselves have taken the rather unusual step of recommending the use of low octane fuels in addition to the heavier than usual oil content prescribed. Our test machine was obviously well run in, but we have to record that we were unable to get it too hot, even when we tried, either on the mixture in the tank when taken over (whatever that was) or on our usual test mixture of premium-spirit/TSL at 24 to 1.

On the subject of decarbonisation, the *Power Pak* is very accessible throughout and in particular the silencer is unusually getatable so that it and the all important exhaust port can be kept clear with the minimum of effort. If this is done, decarbonizing proper need only be undertaken at very infrequent intervals.

No cyclemotor is perfect and there are some criticisms to be recorded. It is a stupid nuisance that the choke control is out of safe reach from the saddle, necessitating a stop to open it after a cold start. This should be dealt with at once.

The standard complaint against over-the-rear-wheel roller drives that they throw mud and grit at the freewheel is unhappily borne out on this unit and the makers have produced a neat little freewheel guard for 5/- to reduce this trouble. This, however, is starting at the wrong end and we see no reason why the roller should not be effectively screened where the mud-slinging starts.

It is not a light unit at 25 lbs. dry and cyclemotors are not run dry as rule so that with a full tank and the neat chromium plated carrier which the makers (wrongly in our opinion) fit, it is near

enough 30 lbs. and this is too far back on the machine so that the weight is felt when manhandling and when riding with the engine disengaged. There is no apparent reason why the whole unit should not come several inches forward to bring the weight within the wheelbase. The pivot could be in front of the seat stays if necessary to effect this. If this was done and some weight saved in the construction, the engine would be unfelt on the road and one of the major objections to "back-enders" eliminated.

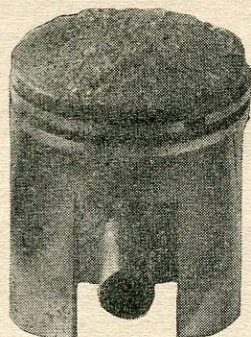
The common trouble with British motors that they lack guts at low speeds is less true of the *Power Pak* than any other tested but we feel that it could be improved a little in this respect with advantage.

These minor criticisms apart, the *Power Pak* is a first class motor,

one of the very best, and approaches the ideal for comfortable, fussless riding, ease of handling and maintenance and long, reliable service. We look forward to seeing "The Pak" on the roads for many years to come.

**POWER PAK, Synchronomatic clutch model 39 mm. bore x 41 mm. stroke, capacity 49 c.c. Deflector head piston with 2 rings. Iron Barrel, alloy head, "Amal" carburettor, "Wipac" flywheel magneto with lighting coils. Needle roller big end bearing, ball main, driving roller-bearer, clutch thrust and end ings. Machined steel roller drive to rear tyre lever engagement with positive location. Rubber insulated mountings all round. Tank capacity 1/2-gallon fuel consumption 174.2 at 20 m.p.h. average. Price 26 gns.**

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



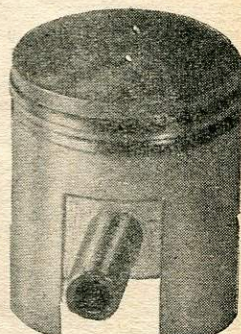
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## 28th CYCLE AND MOTOR CYCLE SHOW

Earl's Court - November 14-21  
Open 10 a.m. - 9.30 p.m.

It is the world's biggest Cycle and Motor Cycle Show and it will be opened by Mr. Eden.

Admission 2/6; Season ticket 10/-

Twenty-two manufacturers will exhibit bicycles and tricycles; 26 motor cycles and auto cycles; 6 sidecars; 7 power units; 7 tyres; and 84 accessories. In all, 162 exhibitors will occupy an area of 145,000 square feet.

This year's catalogue runs to 64 pages and is larger than usual 9in. x 12in. approximately, printed in two colours, black and red, on white paper. The price is 1/6. It opens with a picture of the Queen, who is patron of the Show. It contains a buyer's guide with

## Flashes

particulars of all exhibitors; a centre spread with a plan showing all stands with their numbers; a "Welcome to Overseas Visitors" in English, French, German, Spanish, Dutch and Italian; four articles of special interest to cyclists; four articles of special interest to motor cyclists; and an article on power units.

### Films

Two new films in colour, "Kick Start" for motor cyclists and "Awheel in Britain" for cyclists, will be shown for the first time by *Dunlop* during this year's Cycle and Motor Cycle Show.

Each film runs for 35 minutes and will be put on three times a day beginning at noon.

## CLUB NEWS

London Motor Assisted Section., B.T.—S.C.

THE results, so far as the four cyclemotor entries are concerned, of the Scott Trial held in the Denham area on September 20th, were as follows:

D. FUDGE, <i>Power Pak</i>	93 marks
H. EVANS, <i>Itom</i>	90 marks
J. SMITH, <i>Power Pak</i>	Retired
D. SPRIGGS, <i>Power Pak</i> ,	Retired

A new venue for Club Nights has been found at "THE STAR" on the corner of Walworth Road and Deacon Street, almost adjoining Elephant and Castle Station. Buses 4, 12, 45, 48 and 196 pass the door. The club room is on the first floor and entrance is through the Saloon Bar. Parking in the cul-de-sac alongside the premises or in a nearby garage if desired.

Club Nights will continue to be held on alternate Tuesdays as heretofore.

Of special interest to cyclemotorists will be the meeting of Tuesday, November 24th, when the editor of *Power and Pedal*, will talk on "Design Trends in Cyclemotors" as an introduction to a discussion on the requirements and regulations of future national trials. *Everybody's ideas and experiences are wanted.*

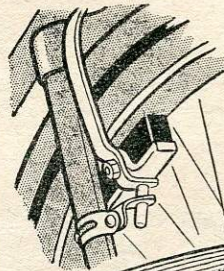
The runs programme for November will be as printed in Club News last month (*in error*—Ed.)

## LONDON TO NEW ZEALAND AIR RACE

The great Air Race to New Zealand, covering 12,155 miles, is now over and although all the aircraft taking part had been thoroughly tested—engines, instruments, lighting—every aeroplane in the Race carried *Ever Ready* Torches and Batteries as emergency lighting and signalling equipment.

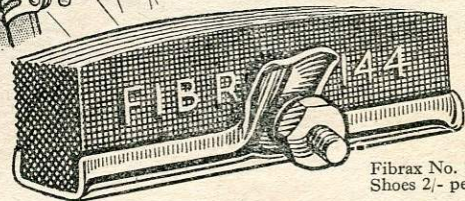
## WORLD PAK-TOURIST, LOST, ARRIVES NEW YORK

After being lost for twenty-eight days, Peter Lee-Warner, who is riding round the world on a half horse *Power Pak*, has arrived in New York. Fascinated by Hollywood he stayed there until the dollar shortage forced him on his way. He was the only cyclist in that affluent city. He remarks that the ordinary American is doing a lot of moaning at present—about Korea, Taxation and Politics.



## CYCLE-MOTORISTS!

This is Your  
BRAKE BLOCK



Fibrax No. 144 in  
Shoes 2/- per pair

The extra power your motor gives calls for the special braking you get in the FIBRAX 144 Brake Block. Extra size, sturdy and efficient, it *stops*—smoothly yet firmly. Standard on G.P.O. cycles and for most tricycles—11d. a pair. Fits any normal 'shoe'.

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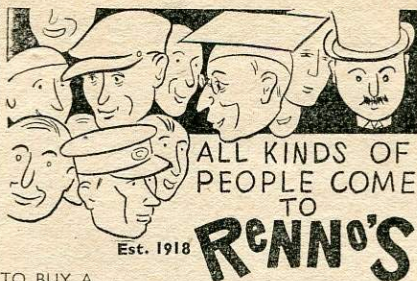
NATIONAL  
ROAD SAFETY  
WEEK  
OCT. 17-26

## NATIONAL ROAD SAFETY PLAY COMPETITION

The Royal Society for the Prevention of Accidents is offering prizes totalling £100 for a play with a Road Safety theme. The first prize is £50, the second £25 and there are five consolation prizes of £5 each.

The play should have an acting-time of 20-30 minutes, and should be suitable for acting mainly by young people. There should be no more than six speaking parts (excluding extras). The play may be "serious or comic; horrific; mythical; domestic; set in country or town; or even be in tableau form."

Entry forms and further details can be obtained from the Secretary, the Royal Society for the Prevention of Accidents, Terminal House, 52 Grosvenor Gardens, London, S.W.1.



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### Cyclmaster

32c.c. MOTORISED WHEEL BECAUSE **RENN'S**  
HAVE BEEN ESTABLISHED FOR 35 YEARS ALSO  
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1951 Cyclmaster with Gents large Touring Cycle. Splendid condition	... 12 gns
1951 Minimotor and Ladies 3-speed Raleigh Cycle. Just like New	... 25 gns
1952 Powerpak fitted to Gents semi-sports cycle. First class condition	... 25 gns
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1953 Cyclmaster 32c.c. with Mercury cycle. Just like new	... 30 gns
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1953 Powerpak Synchronomatic gears fitted to Tandem. Fine outfit	... 37 gns
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"We have definitely proved that your adverts do pull. Tell that to the Doubting Thomases"  
writes one of our regular advertisers.

**YOU HAVE UNTIL NOVEMBER 1st TO GET INTO THE SHOW NUMBER**

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 Grips 6/6, Pencil-beam Spotlamps 13/-  
 Deep-sprung Mattress Saddles 27/6,  
 etc. etc. All post free. If you can't get  
 it, write us - we probably have it at  
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 Forks can now be seen and obtained  
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**DECLARATION**

I declare that I am the owner of the above cycle/s and that the above statements are true and complete in every respect and that the cycle/s insured will be kept in good and thoroughly sound condition. I further declare and agree that if such statements and particulars which I agree shall form the basis of and be considered as incorporated in the policy to be issued by the **UNITED KINGDOM FIRE & ACCIDENT INSURANCE COMPANY LIMITED** are in the writing of any person other than myself such person shall be deemed to have been my agent for the purpose of filling in same and the Insurer shall not be affected by the knowledge of such person, whether also an agent of the Insurer or otherwise.

Date..... Signature .....

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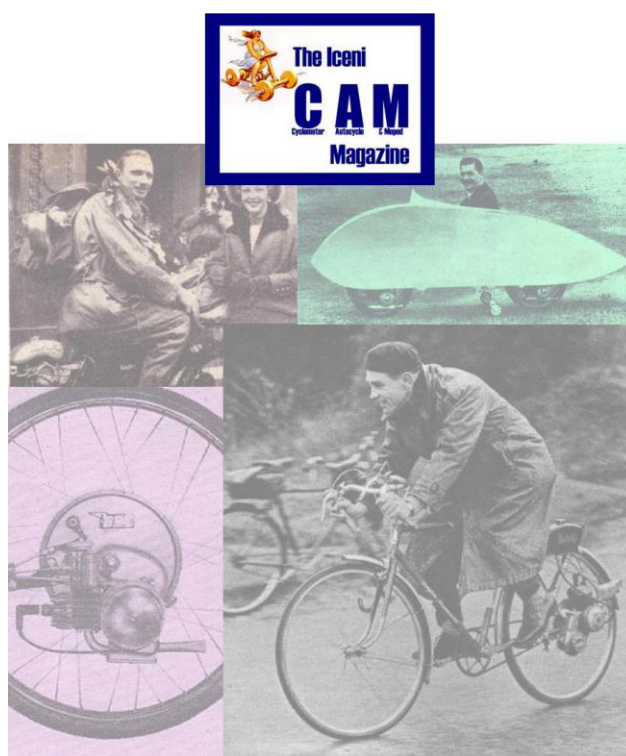
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