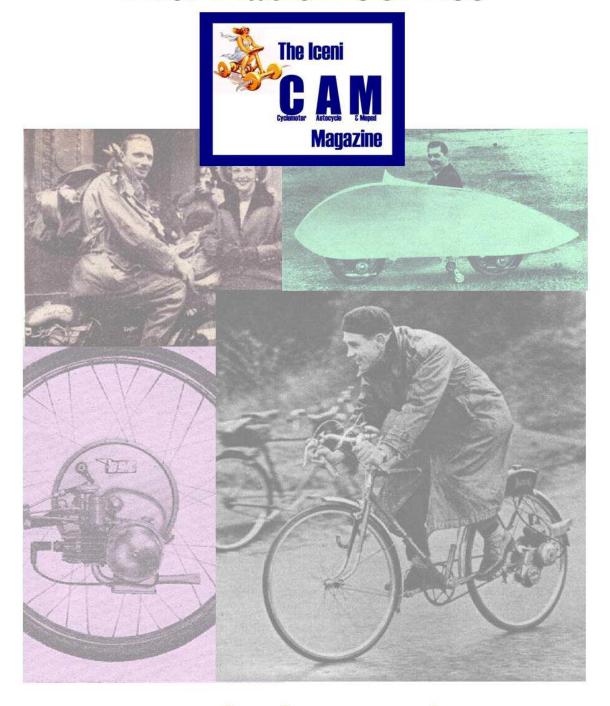
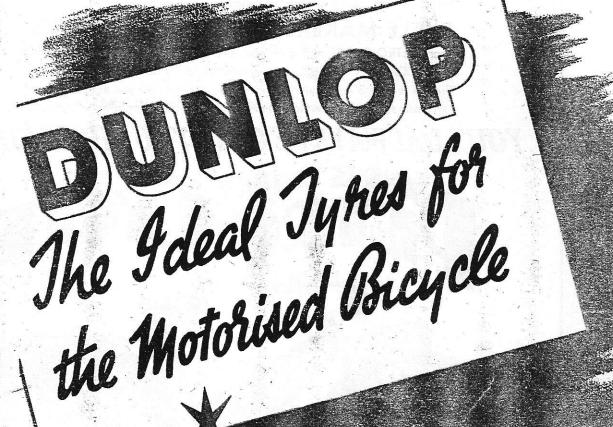
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Your Best Choice because-

No motorised cycle on the market provides the all-round satisfaction of the "PETRO-CYCLE." Every part of the machine has been designed and produced to provide perfect performance with maximum comfort and absolute safety. You can ride your "PETRO-CYCLE" too with the satisfactory knowledge that it is made by one of the oldest firms in the cycle industry who have been

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Your "PETRO-CYCLE" will give you 140 MILES OF CAREFREE CYCLING FOR A GALLON OF FUEL. It will give up to 30 miles an hour in speed. The tax is only 3'4 per quarter and 10'- a year will give you adequate Third Party insurance. See your local dealer Now, or write us for fullest information.

YOU'LL ALWAYS BE GLAD YOU CHOSE THE ..



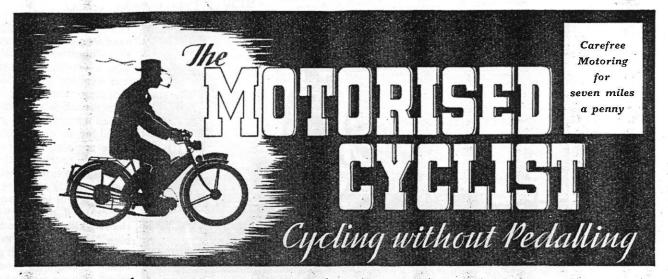
BRIEF SPECIFICATION: Villiers Engine. Girder forks. Rear Stand, Carrier and chain cover. Electric lighting from flywheel magneto. Wheels fitted Dunlop Tyres, $26 \times 2 \times 13$ in. Spring top saddle. Internal expanding brakes, front and rear. Back pedalling brake optional. Tank capacity 9 pints. Finish in metallic silver, panelled blue and lined gold.

PRICE Complete Equipped 18 GNS.

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Please mention "The Motor Cycle and Cycle Trader" when replying to advertisers.



Modern Means of Utility Travel

Motorised Cycling—the Latest Form of Economical Power Transport for Business or Pleasure

In recent years a new type of vehicle has appeared upon the roads of this country, namely, the motorised cycle. Many readers of this journal are already enthusiastic riders. Others have seen these fascinating little machines, have regarded them, perhaps, with a certain amount of curiosity, and have felt that they would I ke to get to know more about them. It is to the thousands of people who feel that they need some form of effortless, economical and reliable transport, whether for business or pleasure. or both, that these remarks are addressed. To those who already have experience of the many advantages of the motorised cycle there is something of interest, we hope, in the history of the development of this form of locomotion.

When one comes to think about it, the whole structure of civilisation rests upon means of inter-communication. From the earliest days man has constantly striven to eliminate distance and to minimise the effort and time required to get from place to place.

A Century Ago

It is now over a century since the first pedal-propelled cycle was invented. It was the outcome of the brains of an obscure Scottish blacksmith, and we regret to say that, in

that unenlightened age, his invention did not receive the credit it deserved. Be that as it may, the pedal cycle did eventually come into being, and for many years the bicycle has been the daily friend not only of thousands, but literally of millions.

But excellent sport, fine recreation and cheap transport that it undoubtedly is, one cannot escape the fact that cycling involves physical effort, that it is comparatively slow,

THE MOTORISTS AVAIL

THE MOTORISED CYCLE

- will enable you to
 Free-wheel up hill
- Be independent of trains and buses
- Cruise all day at 20 m.p.h.
- Travel seven miles at the cost of one penny

CYCLING WITHOUT PEDALLING



and that, therefore, to many people its appeal is to some extent negatived by these disadvantages. On the other hand, motoring is costly and is quite out of reach of the majority of folk in this country.

Public service vehicles, such as buses, trams and trains, run only to a time-table, and sometimes not even to that. Their routes are restricted. Travel often involves over-crowding, stuffiness and the risk of infection. How many winter coughs and colds, we wonder, are traceable to people having to herd together in an unhealthy atmosphere on their way to and from their daily work?

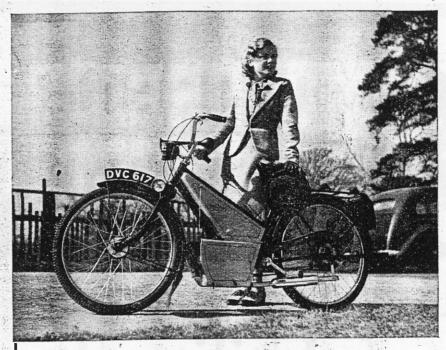
Freedom and Fresh Air

When these things are borne in mind, it is immediately obvious that thousands of people not only would prefer, but stand in actual need of, some form of transport which will eliminate all these disadvantages and give them freedom, ease, fresh air, mobility, and all at little cost.

It is in answer to that demand that the motorised cycle has come into being

But do not let us run away with the idea that this form of transport is new or untried. Since the beginning of the century efforts have been made, and with varying degrees of success, to apply smooth and reliable power to the pedal cycle. For a number of years this object has been in the forefront of the minds of very many clever engineers.

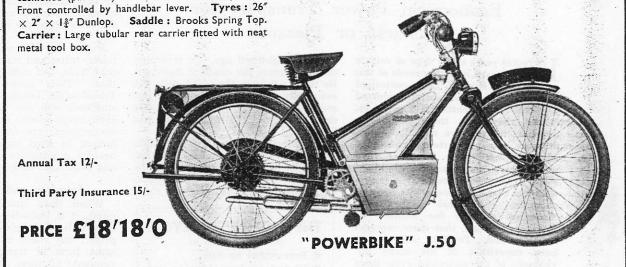
That we have had to wait until the present for its realisation is due to a



The "Powerbike" supplies the need for a motorised cycle with all the luxuries generally associated only with larger machines. It is ideal for utility purposes, shopping, journeying to and from the office and visiting, in fact all the irksome journeys called for in everyday life are made a pleasure to its owner. So simple to ride that anyone after half an hour's instruction feels perfectly at home in the saddle. It will idle along quite smoothly if necessary at less than walking pace. The" Powerbike" will show a great saving on your fares and will give you really economical and clean travel at little more than push-Under normal cycle cost. conditions, the petrol consumption is approximately 120 miles per gallon.

SPECIFICATION

Engine: 98 c.c. Villiers Junior Unit. 50 m/m bore × 50 m/m stroke. Large expansion chamber and final silencer, providing exceptionally silent running. Lubrication: Petroil system. Oil measure fitted to tank filler cap. Proportion of oil to petrol—I in 20. Lighting: Villiers direct Lighting from Flywheel Dynamo. Parking battery in headlamp. Forks: Rubber cushioned (patented). Brakes: Internal expanding 4" Rear and 35" Front. Rear brake, pedal operated by patent mechanism.



Francis-Barneth PDWEREIKE

FRANCIS & BARNETT LTD., LOWER FORD ST., COVENTRY

Modern Means of Utility Travel—continued

number of causes. Of these, one of the chief was the difficulty of making an engine of small size which would stand up to daily use under all sorts of conditions, and which could be depended upon to give long and faithful service without expert attention and without the need for constant fiddling and overhaul.

Such a problem was not easy to answer. Designers had to consider such technicalities as ignition, materials and so forth, and we have had to wait for progress on the part of the electrical expert, the metallurgist, the foundryman and the machine-tool maker before the ideal could be achieved. To-day, thanks to over thirty years of steady industrial development in many directions, the answer has been discovered, and the modern motorised cycle can be relied upon to provide its rider with thousands of miles of trouble-free riding at an expense that is so trifling as to make even cheap excursion fares appear expensive.

If proof were needed of this, it is to be found in the steadily increasing numbers of motorised cycles which are being put into use. In one short year the number registered on the roads has increased threefold, and the figure is steadily mounting. No other type of vehicle can show a record even remotely approaching this, and the very fact that every week reveals still more and more people using this form of transport should be sufficient to dispel any doubts in the minds of even the most sceptical as to the economy, reliability, safety and pleasure which are afforded by the motorised cycle.

What is a Motorised Cycle?

Now, you will ask, what precisely is a motorised cycle? To which we would answer that it is the very simplest form of mechanical transport that there is in existence. We are all familiar with the ordinary bicycle. Picture one of these, duly strengthened up all round (actually the frames are specially designed) and fitted with an engine of just under one horse-power. The motorised cycle is by no means a motor cycle in the accepted sense of the word. It is simply and solely a pedal cycle with a small power unit, which eliminates the need for pedalling when once the machine is under way. It has been aptly described as a bicycle on which you can free-wheel up hill!

The engine works on what is known as the two-stroke principle. We need not go into technicalities in this article, but what that actually means is that the unit has only three working parts. There are no complicated valves, springs, timing gear, or any of the many bits and pieces which otherwise might make for trouble and expense. There is practically nothing to go

wrong, and even if little attentions are required, they do not call for any high degree of special knowledge or skill. Many riders find that the whole maintenance is well within their power, and that they need only the simplest tools.

They take a keen delight in the working of their little mounts, and to anyone of a mechanical bent, the possession of a motorised cycle is a fascinating hobby as well as a means of transport.

On the other hand, there are thousands who neither want nor expect to be bothered with the engine at all. Provided the rider just fills up with petrol and oil, he or she need never



TYPICAL USER No. 1. The businessman can ride a motorised cycle in his ordinary clothing

worry, and all that is needed to keep the little unit in tip-top condition is just occasionally to call in on the dealer from whom it was purchased and let him look it over. This need cost very little indeed, and is a form of insurance of thousands of miles of running with no trouble at all.

Many dealers, in fact, encourage riders to come in three times during the first thousand miles of running, when they can have their machines checked over free of charge, for, of course, a wise dealer is one who sees that his customers are satisfied.

While we are on the subject of reliability, we may as well mention that one engine maker has inaugurated a scheme whereby, under certain conditions, a complete overhaul can be undertaken at an inclusive figure, which is very low indeed. Therefore, the newcomer to motorised cycling can rect assured that he or she (for there are thousands of lady riders) need have nothing to fear from the mechanical side.

As to speed, the motorised cycle is fast enough to enable quite long journeys to be undertaken without fatigue, but not so powerful as to cause any qualms even to the rawest novice. These little machines will do approximately thirty miles an hour, if they are called upon to do so. They will tour all day, week in and week out, at twenty miles an hour or so, or they will potter about equally well at speeds not much faster than that of a pedal cyclist. What could be more ideal?

There are no gears to change, and once the machine is under way, one little lever on the handlebar is all that is required to control the engine.

According to conditions, a rider may expect to get anything from 100 to 140 miles to one gallon of fuel. On another page we deal very fully with all actual running costs.

Learning to Ride

Learning to ride is simplicity itself. Anyone who can ride an ordinary cycle can acclimatise himself to a motorised cycle in a very few minutes, and even a person who has had no experience whatever of cycling, will find very little difficulty in handling his or her mount, so steady and simple is it to ride and control.

Possessing so many advantages, the motorised cycle is indeed a blessing to thousands. People whose work takes them out of doors, such as district nurses, insurance canvassers, salesmen and collectors, find that they can cover twice as much ground with the minimum of fatigue, and at far less cost than bus or train fares. If you, on the other hand, work indoors, the motorised cycle solves the problem of a cross-country journey, it saves time, and there is no need to wait for public vehicles. On a motorised bicycle one is the master of one's own route and one's own time-table. The ownership of such a machine means that you can arrive at work fresh and early, and can ride home in ease at the end of a tiring day without the slightest effort.

Then, too, there is the recreative side of motorised cycling. No longer is there any need to spend holidays and week-ends in one spot. One can roam the country far and wide, explore places that have hitherto only been names on a map, go for picnics, take a trip to the river to fish or to the sea to bathe.

Clubs

In many parts of the country there are clubs composed of riders of motorised cycles. They organise attractive programmes, including runs to selected spots, picnics, sports, social events, and in the winter dances and communal evenings. Membership of such a club costs only a few shillings a year.

It is indeed no exaggeration to say that motorised cycling has opened the gates of freedom to thousands, and if you also would like to join the movement you will find plenty to give you a warm welcome.

6.000 miles on a RAYNAL AUTO

Great Britain France

Germany

Denmark

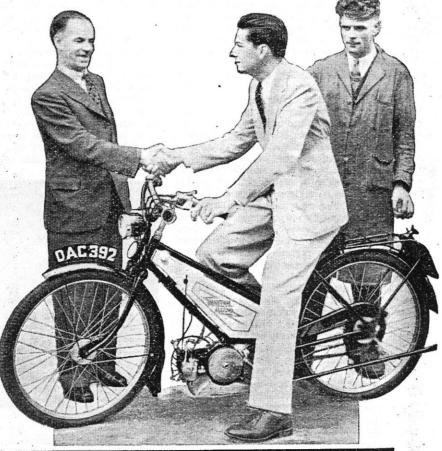
and across the American Continent from New York to San Diego, California.

Mr. James Parker, of San Diego, California, is touring four countries on his Raynal Auto. He reports trouble-free running despite heavy rains and mountain roads. He writes from France "My Raynal Auto is a wonderful bike. Its performance and reliability are just too marvellous for words, and it is greatly admired by these continental folk."

For business

For pleasure

For convenience-



You can depend on a

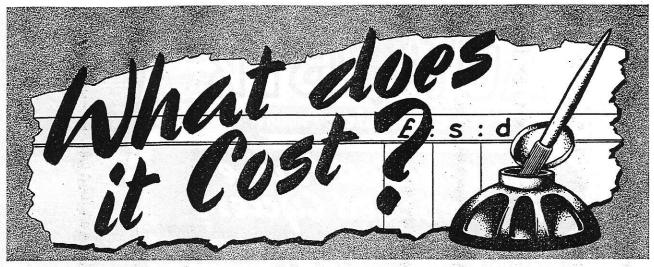
De luxe model as illustrated £18.18.0 complete. (H.P. terms if RAYNAL AUTO

Get a Raynal Auto, and have done with trams, buses and trains. Use it to get anywhere, at any time, at a travelling cost of approximately eight miles for one penny. There is nothing to equal it for business or pleasure and the Villiers engine is so simple, easily controlled and reliable.

The Raynal Auto has exclusive features. The centrally placed stand makes parking easy and safe. The spring fork absorbs road shocks and the large saddle with its special springing gives a comfortable and low riding position. Write us for fullest information and name of nearest dealer.

RAYNAL MANUFACTURING CO. LTD. HANDSWORTH BIRMINGHAM, 21

Ride a Raynal Auto



The Balance Sheet of Motorised Cycling

ROM time to time folk interested in motorised cycling have asked me, "What does it really cost to buy and run one of these machines?" The answer is, very often, that it actually costs nothing at all, and in very many cases the little machine shows a profit. Should that be thought by some to be an exaggeration, I would ask readers to consider the figures given below and then to offset them against the sums they spend on fares.

In this connection one should not forget to include, in addition to the fares involved in getting to and from work, those which have to be disbursed for holiday journeys, for trips while on holiday, and for all those odd occasions such as visits to friends at week-ends, football matches, and so forth.

Yearly Travel Bill

If one were to collect all the tickets bought during a year, the total value they would represent might come as a very considerable shock to quite a number of people.

However, I set out not to deliver a lecture on the high cost of public transport but to give some actual facts and figures about motorised cycling, which, to my mind, is an eminently economical and suitable way of getting about.

To arrive at the total cost of any road vehicle, it is first necessary to divide the charges into two divisions, namely, standing costs and running costs. The former are represented by those charges which are incurred whether the machine is running on the road or just standing at home in the toolshed, and the running costs are those that are incurred by reason of

By Accountant



BUS CONDUCTORS AND DRIVERS use motorised cycles extensively for journeys between home and garage at all hours of the day and night

the machine's locomotion from place to place.

It is obvious, upon consideration, that the cost per mile of a motorised cycle reduces itself consistently with the number of miles covered. Certain charges are incurred to acquire, license and insure the machine. They are

there, but they are not high. To arrive at a cost per mile, these figures have to be divided by the number of miles run and added to the cost of fuel per mile. But do not let us get confused over this. It is better now, bearing these principles in mind, to examine some actual figures.

Cash or Hire Purchase?

First, I have to answer the question, "What does it cost to buy?"

Well, you can either pay cash or acquire the model on very easy hire-purchase terms. Below I quote several alternative schemes. These, I should emphasise, are just examples. They are actual figures drawn from fact, but they must not be taken as being universally applicable. Different agents have different schemes, and the best thing to do is, of course, to consult one's local dealer.

		FOR CAS	H B	UYE	RS.			
	25-			- 2		£	\$.	d.
	Price of Mach	ine				18	18	0
	Tax to end of	current qua	rter				3	4
	12 months 3rd	Party Insur	ance		***		15	0
	Driving Licent	:e					5	0
	Numbering of	Plates and F	ueili	ng			3	
		Total	•		•••	£20	5	0
	FOR							201100
	Scheme " A "	Deposit				5	0	0
-	over 6 months.	Deposit Sundries as	100			_	747	
		Total			•••	£6	'7	0
		And 6 m	onth	y p	ayment	s of	50s	2
	Scheme "B"	Deposit		. 155		3	10	0
	over 12 months.	Sundries as	deta	iled	above	ĭ	7	ŏ
	12 months.	Total	•_	•••		£4	17	0
		And 12 n	nonth	ily p	aymen	ts of	30s	
	Scheme "G"	Deposit			4	4	0	0
	over 18 months.	Sundries as	deta	iled	above	- 1	7	Ŏ
	10 months.	Total .			•••	£5	7	0
		And 18 m	onth	ly pa	yments	of 2	Os.	6d.
	Scheme "D"	Deposit				2	2	0
	over 18 months.	Deposit Sundries as	deta	iled	above	1	7	Ŏ
		Total				23	9	0

It is, of course, possible to economise on the tax by taking it out (Continued on page 9.)

And 18 monthly payments of 25s.



The Greatest hame in Motorised Cycles!

EXCELSIOR were the first concern in England to be solely engaged in the manufacture of bicycles. They were the first to manufacture and market motor cycles. Two years ago they introduced the "AUTOBYK"—the first SUCCESSFUL motorised cycle—the machine that is giving untold pleasure to thousands of people to-day.

The "AUTOBYK" has long since passed the experimental stage—it is an established favourite of proved reliability and economy.

For your journeys to and from business—for long rides in the country or to the sea—you cannot buy a better mount.

POWERFUL DRIV-

2 EXTRA LARGE HUB BRAKES

98c.c.TWO-STROKE ENGINE

HANDLEBAR OP-

120 m.p.g. 25 m.p.h. Handlebar operated brakes. Direct Electric lighting. Separate oil tank (300 miles capacity). 2-in. Dunlop tyres. Soft top fabric saddle. Complete and comprehensive set of tools.



ALL ON

POST THIS COUPON **NOW**

To: EXCELSIOR MOTOR Co. Ltd.,
TYSELEY, BIRMINGHAM 11

"AUTOBYK" Catalogue please

Name

Address

C.T.18/8/39



What Does It Cost?—continued

TAXATION APPLICABLE: For a clear 12 months ending December 31 ... 12s.

To the end	of the year, if	taken out on o	r after:
Feb. 1	Mar. 1	Mar. 25.	May 1
11s. 7d.	10s. 6d.	9s. 6d.	8s. 5d.
The second second second			C4

The figures I have set down for insurance relate to third-party cover only, which means that the policy extends only to claims brought against the rider by third parties, or, as one may term it loosely, a person he may possibly injure. This rate does not cover the machine itself.

A wise rider will take a comprehensive cover, which costs but little



NURSES are enthusiastic users of motorised cycles. They find them not only economical but reliable and convenient

more and of which the provisions are extended to the machine itself. Here is a table of insurance rates, and these, I might mention, are those applying under a special scheme arrived at by the manufacturers in conjunction with certain insurance houses. As a result they are extremely favourable. Such a policy is known as a D/U policy, and details are available from your

D/U	POLICY	RATES.

	5,0			
Third	Party only		 	15s.
Third	Party, fire an	d theft	 	20s.
Comp	rehensive		 	40s.

It is important to note also that this scheme does not impose any additional charges on a rider under 21 years of

Now let us take a typical set of complete running costs. These figures are

for longer periods, as the following based on actual experience and are not additional table shows:— based on actual experience and are not merely theoretical.

STANDING CHARGES PER ANNUM.

53.					S.	d.			
T	ax				12				
D	riving Licence					0			
T	hird Party Insurance		•••		15	0			
		.7.2	2		32	_			
Δ	ssuming the machine	a is	usea	for	-	20000			
100	50 weeks in the year	. the	star	nding	+		S.	d.	
	charge is, per week.	4						7 ½	
					333				
	RUNNIN	G .CC	STS	PER	WE	EK		25	

Based on a weekly mileage of 100.
Petrol and oil
General maintenance ...

In round figures, the sum of running and standing costs is, therefore, 2s. 7d. per 100 miles, and on the above basis the cost per mile is less than one-third of a penny. Fuel and oil, be it noted, cost very little, and, so far as these alone are concerned, the slogan, "Seven miles for a penny," is well justified.

The reader will notice we have not taken into account the buying charge per week. This is because the machine

should last you, free of that cost, long after your payments are completed. Therefore, we should take account, instead of the buying charge, depreciation plus maintenance. latter we have included.

It is very difficult, indeed, to arrive at a depreciation figure, and it has, therefore, been omitted. This charge varies so much with the condition of the machine and for what type of mount it is eventually exchanged, that no hard-and-fast quotation can be laid down. As there is a useful demand, however, for used models in good condition, nobody need worry unduly on that score. In any case, the machine will by then have saved more than that amount, and in consequence it can be legitimately disregarded.

To satisfy the curious, the maintenance figure was arrived at from experience, and included all items such as tyres, chains, batteries, cables and nipples, decarbonising, and so forth, taken over a long period, and averaged out on a weekly basis.

It will be appreciated from the foregoing how very cheap is motorised cycling.

SAVING TIME AND MONEY

A Birmingham lady writes enthusiastically on the advantages of the motorised cycle

I am an enthusiastic rider of a motorised cycle, and should like to take this opportunity of expressing some of my views.

I am employed by Messrs. Joseph Lucas Ltd., in the Inspection Dept. and find my motorised cycle a big convenience for travelling to and from business.

Until I purchased my first machine four years ago I had not previously owned a motor cycle or car of any description, and therefore I was a complete novice to motoring matters. However, the motorised cycle is not a complicated vehicle to manage, and I have never felt overwhelmed by numerous gadgets; so far I have owned four motorised cycles, and it has been very interesting and gratifying to note the improvements which have been effected since the early days.

On my present machine I average about seventy miles per week. From the finance point of view the motorised cycle is a very economical proposition, and I find that instead of having to meet the usual 31- per week for 'bus fares I am able to cover the same distance in less time for 11- per week.

Apart from every day routine travelling to business, I am able to make week-end runs and explore our beautiful English countryside for a ridiculously low cost. I have proved that the motorised cycle will stand up to harder work than is frequently expected; normally it is looked upon as a machine capable of little more than "pottering around," but I have found it possible to undertake long distances without strain upon the machine or discomfort to the rider.

Motorised cycles are now reaching such a stage of perfection that it is a little difficult to suggest any reasonable improvement. Personally, I favour a twist grip throttle control, and if all manufacturers could see their way clear to standardise this fitment, I am sure a great number of prospective recruits would appreciate this.

Signed: (Mrs.) F. I. Moles.

Birmingham.

WATCH THEM CLOSELY IN THE MOTORISED CYCLE DEMONSTRATION

You cannot choose better choose better for all-round Performance!



POWER CYCLES

The H.E.C. proves its wonderful power as a hill-climber.

Anerley Hill, near the Crystal Palace, with a gradient of I in 8, climbed successfully on an H.E.C. Power Cycle without pedalling assistance. (Vide "The Motor Cycle," 25/5/39.)

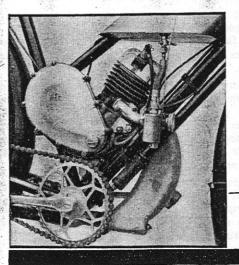
The favourite London Test Hill—Muswell Hill—successfully negotiated, with an 11 stone rider, at 15 miles per hour—without needing the pedals in

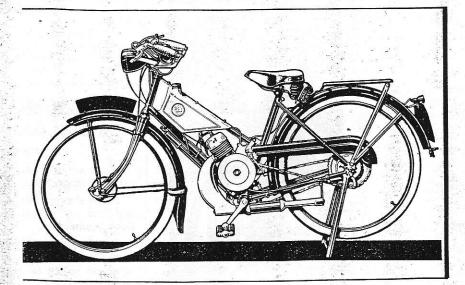
any way. (Vide "Bicycling News," 22/6/39.)

Write for full reports of these special tests, made by "THE MOTOR CYCLE" and "BICYCLING NEWS."

Price 17 GNS.

Complete and ready for the road





ACTUALLY TWO MACHINES IN ONE—FOR ENGINE IS EASILY REMOVED AND YOU THEN HAVE A STANDARD BICYCLE.

H.E.C. Power Cycles add to the pleasure of cycling by cutting out hard work. The compact power unit (shown on left) is cleverly designed to fit "like a glove" into the frame and can be easily removed so that the machine can be used as an ordinary bicycle. The H.E.C. is unapproached in performance and is produced throughout to the highest quality standards. Why not decide NOW to enjoy the pleasure of motoring to work or for pleasure on the latest H.E.C. POWER CYCLE—it works out at less than 4d. a mile. Write or 'phone for fullest details.

H.E.C. POWER CYCLES LIMITED

234, Pentonville Road, London, N.1. Tel.: TERminus 1628





The police find motorised cycles useful

"I SN'T it rather a troublesome business to put one of these motorised cycles on the road?" said a friend to a rider the other day. "Good gracious, no," came the reply. "But," went on the other, "I had an idea there were all sorts of forms to fill in, and tests to pass and all that."

all that."

"Oh," smiled the other, "you are just making mountains out of molehills." There's nothing in that business to cause you any worry. Whatever you do, please don't give up the idea because of fancied formalities."

That conversation set me thinking. I wondered just how many people were frightened of something which need not bother them at all just because

Simple Legal
Formalities
Explained:
What You Must
Do—Learn to
Ride in Five
Minutes

they don't know enough about it, and imagine all sorts of difficulties which have no existence in fact.

By "TARGET"

We will suppose you are a new driver who has never before had anything to do with a motorised vehicle. The first thing you have to do is to see that you have made provision for insurance. Your dealer will see to that and will fill in all the necessary forms ready for you to sign. He will also do the same with regard to the taxation forms, or licence applications, and before he hands the machine over he will have the numbers allocated, painted on the plates, and the "tax" licence all ready in its holder on the machine.

So there is nothing to worry about over that part of the business.

Learner's Licence

But before you are permitted to drive you must take out a learner's licence. This costs five shillings and lasts three months. All you have to do is to fill in a simple form and send it, together with the necessary remittance, to the council in whose area you permanently reside. Good dealers usually keep a stock of these forms, and will readily give you a hand to fill them in. Your dealer will also be able to tell you the address to which it must be sent.

. This job you will have done immediately you decided to purchase the model, so that by the time your new mount stands all ready and waiting for you in the shop you have your learner's licence, and are ready to embark on your new adventure.

-While you are learning to ride you must carry "L" plates, but do not think you need wear them for three months. Experience proves that any reasonable cyclist can pass his driving test in about a fortnight. The test is not severe, and the machines are simplicity itself to handle. When you feel reasonably competent, you apply to be tested (your dealer will tell you where to write) and in a short space of time you are the proud possessor of a fully fledged driving licence, and what a thrilling feeling that is to be sure.

Tax Renewal

Renewing your tax quarterly or yearly or periodically is, of course, quite simple. You will be given a registration book. This contains all details of your machine. Keep it safe. When renewing, send the book, your insurance certificate, an application form duly filled in, and the money to your local registration authority (your council) according to the directions you will find in your registration book.

When you first learn to ride you will do best to treat the machine as just an ordinary bicycle. Do not think it is going to run away with you. Forget for a moment there is an engine at all, pedal away gently, and once you get under power you will wonder why ever you had not tried this way of getting about before.

(Continued on p. 15.)

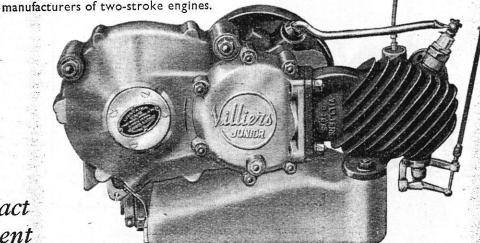
This is the VILLIERS Engine that has taken the push out of cycling to all the

leading

Motorised Bicycles

The Villiers Junior Engine has been specially designed for the Motorised bicycle and is not equalled by any other power unit of its type. All the leading motorised bicycles are fitted with the Villiers Junior Engine because of its proved simplicity, reliability and outstanding performance.

You need no mechanical knowledge to ride a motorised bicycle when the power unit is a Villiers Junior Engine. It will give dependable service because it has been made and perfected by the world's largest



Compact **Efficient** Economical & Dependable

Sooner or later you will purchase a motorised bicycle because it is so easy and cheap to ride. We urge you to make certain that the machine you purchase is fitted with a Villiers Junior Engine. The name is embossed on the engine. It is your guarantee of a power unit of unequalled efficiency and quality. Send postcard for leaflet, "Here is the bicycle you need not pedal."

An unconditional irrespective of milenge

THE VILLIERS ENGINEERING CO. WOLVERHAMPTON

GUARANTEE

The VILLIERS "JUNIOR" ENGINE with MAGNETO and CARBURETTER can be overhauled and made equal to new within twelve months from purchase, ata cost not to exceed 3'O/-

Motorised Cycles Employ -

The Two-stroke Engine

How it Works - Non-technical Description of the Simple Type of Power Unit Fitted to Motorised Cycles

OT only is the engine of the motorised cycle extremely simple to control, but it is also constructionally the simplest form of internal-combustion unit in existence. The writer deals in this article with the fundamental principles of its working and construction, and not necessarily with any one make or design of

In the main, the engine consists of three essentials—a piston which slides in a cylinder, a crank, and a connecting rod which links the piston to the crank. Looking at the diagram below, it will be appreciated that when the piston is pushed down, the crank rotates, and this rotation is what is responsible for turning the sprocket, or chain wheel, fitted outside the engine, whereby the movement is transmitted by the chain to the back wheel of the machine, and so the motorised cycle is propelled.

Explosive Mixture

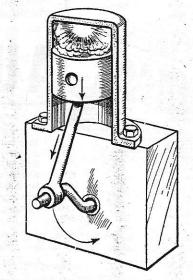
The piston is pushed down by exploding a mixture of petrol and air in the top, or "head," of the cylinder. It is returned again to the top position by the rotation of the crank ready for the next downward stroke.

This explosive mixture is provided by an instrument known as the carburettor, which draws petrol from the tank, air from the atmosphere, and mixes them into a spray through a fine jet, or jets. This mixture is introduced into the cylinder, as will be seen later, by the sucking action of the piston. The explosion is caused by igniting the mixture at the correct moment by means of an electric spark from a sparking plug in the head of the cylinder. Usually this spark is produced by what is called a flywheel magneto.

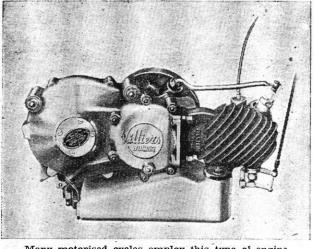
On the outside of the engine, under a cover, is fitted a flywheel

which spins round on the extension of the crank. This flywheel is fitted with an arrangement of electrical coils, pole shoes and other apparatus which cause an intermittent electrical current. This current, which is timed to occur at the right fraction of a second, travels up an encased high-tension wire to the sparking plug and leaps across the gap between two points at its end in the form of a spark.

We have very little space here to go into the details of the ignition apparatus or of the carburettor. We shall have to take them more or less for granted, except just to say that the carburettor is fitted with a slide



Simple diagram showing the principles of the two-stroke engine



Many motorised cycles employ this type of engine

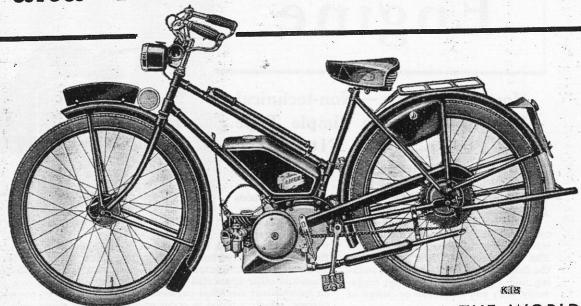
which controls its input into the engine. This slide is connected by cable to a small handlebar lever, and movement of this one lever is all that is necessary to control the speed of the engine when once it is under way. There is also to be found, usually, a separate control which cuts down the proportion of air. This "strangler" is only used when starting off from cold, and is released by the rider when once the engine has got well going.

Ignition and Lighting

We should also interpolate a note here to the effect that the electricity generated at the flywheel is also used to light the lamps. There are other types of ignition apparatus, of course. but we need only concern ourselves with the most common practice on motorised cycle engines, leaving motor cycle considerations out of our sphere.

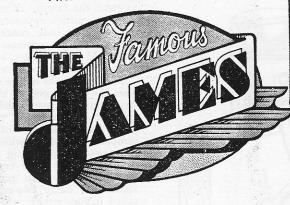
To revert to the engine itself. Every time the piston gets to the top of its stroke—that is, up to the head of the cylinder—an explosion of gas takes place. The crank, therefore, makes one complete revolution while the piston is going down once and up once, or. in other words, the crank revolves once for every two piston strokes. Hence the name two-stroke, as opposed to four-stroke, which is a more complicated type with valves, timing gear and all manner of additions which need never bother the two-stroke owner. In the four-stroke engine the crank revolves once for every four piston strokes. This is, by the way, to show the essential difference

Strongest, Simplest, Safest and Most Serviceable



- TAX 12/- per year.
- SPEED 25-30 miles per hour.
- FUEL CONSUMPTION 120-130 miles per gallon.

HIRE PURCHASE TERMS ARE AVAILABLE-



AND MADE AT THE WORLD-FAMOUS 'JAMES' FACTORY

With the JAMES AUTOCYCLE the riding position is low, and the engine is mounted so as to provide PERFECT BALANCE, making the machine safe and easy to control in heavy traffic. All controls are mounted on the handlebar in convenient position. The engine is very easy to start through the pedalling gear either from a standstill or whilst in motion as the machine is fitted with a reliable hand-operated clutch. YOUR LOCAL DEALER WILL GIVE YOU FULLEST DETAILS OR WE WILL SEND THEM AT ONCE UPON APPLICATION.

AUTOGYCLE

"As easy to ride as a bicycle."

Specification includes :--Villiers Junior Engine 98 c.c. 2-stroke with aluminium alloy piston, ball bearing mainshaft, roller bearing big end. Flywheel magneto. Petroil lubrication system. Villiers needle jet type carburettor. Electric lighting, direct, with head lamp and tail lamp. Internal expanding hub brakes to front and rear wheels. Dunlop tyres. PRICE complete and ready for the road . . 18 Gns.

COMPANY LIMITED JAMES CYCLE

Works: GREET, BIRMINGHAM.

London Showrooms: 21-22, Holborn Viaduct, E.C.1.

The Two-stroke Engine—continued

between the two. All motorised cycle

engines are two-strokes.

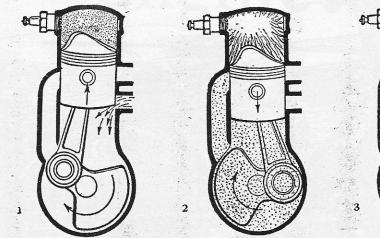
In the walls of the cylinder are cut holes or ports. These are covered or uncovered by the piston on its way up and down. There is an inlet port to let the gas into the engine, a transfer port to send it up to the right place for firing, and an exhaust port through which the spent charge is expelled by way of the silencer and exhaust pipe into the atmosphere.

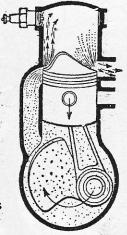
the gas mixture into the crankcase via the carburettor. As it comes down again, the piston compresses this change of gas and forces it up through the "transfer port" from the crank-case to a point in the cylinder now just above the head of the piston. It is now compressing this charge above it and drawing in another below.

When the piston is about to complete its upwards stroke, the spark ignites the mixture in the cylinder engine itself: the crank, the connecting rod and the piston. Nothing there to give any trouble whatever.

The reason, by the way, that oil is mixed with the petrol in the fuel tank is solely for purposes of lubrication of the working parts of the engine. It is a cheap and reliable method of performing this essential task.

In the diagrams it will be noticed that the piston has a "crown" top. This crown, found in the bulk of twostroke engines, acts as a deflector to guide the incoming gas up one wall





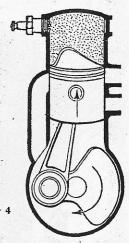


Fig. 1: The rising piston uncovers the inlet port and draws a charge HOW THE TWO-STROKE ENGINE WORKS. of gas into the crankcase, at the same time the upper side of the piston compresses the charge from the previous cycle. Fig. 2: The compressed charge is ignited, the piston descending compresses the charge in the crankcase. Fig. 3: Continuing downwards, the piston first uncovers the exhaust port. Then the transfer port is opened and a new charge enters the combustion chamber from the crankcase. Fig. 4: The piston rising to start a further cycle of operations

The part of the engine housing the bottom of the connecting rod, the crank and its balance weights, is known as the crankcase, in contra-distinction to the "piston chamber," which is the cylinder. Both crankcase and cylinder are gas-tight. There is a special but simple joint between them.

We will now consider the piston being forced up and down as the rider pedals off. As the piston rises it sucks head. The piston is driven down, compresses the second charge in the crankcase, and meanwhile the burnt gases rush out through the exhaust port as it becomes uncovered. The piston is now well on its way down, and the next charge (in the crankcase) is beginning to go up through the transfer port ready for the next

Simple, is it not? There are, you see; only three working parts in the of the cylinder and to act as a path for the escaping burnt gases, so that the live charge and the "dead" charge do not become mixed, and the maximum efficiency is maintained during operations.

We have deliberately kept this outline to the simplest essentials, and hope that the person hitherto quite devoid of any idea of an engine will appreciate how simple the motorised cycle unit really is.

Putting Them on the Road—continued from page 11

As to starting up. See that your tank is filled with petrol and oil mixture in the correct proportions. These will be found in the instruction book and also usually on the filler cap, of which the interior extension is used as an oil measure if necessary.

Turn on the petrol. The tap is on the pipe from the tank to the carburettor. Pull up your strangler wire to give a rich mixture for setting off.

Pull up the clutch lever on the left handlebar, and allow it to be held up

by its ratchet.

Now seat yourself on the machine, ride off for a few yards by pedalling, and then gently let the clutch lever down. This transmits drive to the en-

gine which should then fire. it to get under way for a brief spell, and then release the strangler wire. It is a sign that this wants doing if the engine stutters and emits a smoky exhaust, but do not wait for these signs. Except on the coldest days the strangler can be released within 50 or 60 yards of the start.

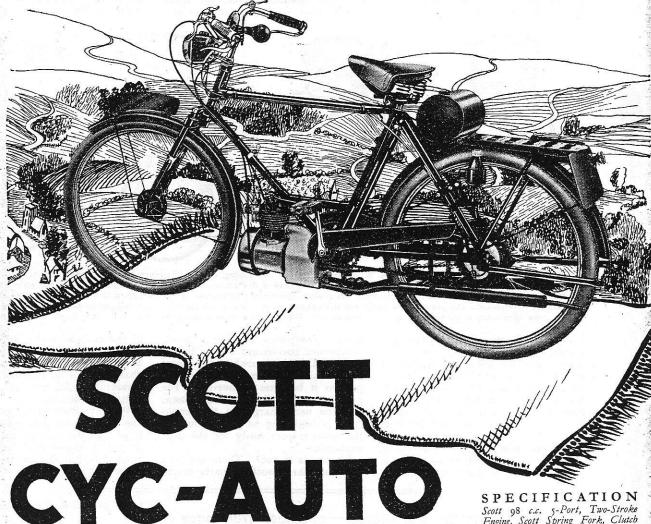
As you drop the clutch you feel the engine begin to cough into life. At that moment you open the little throttle lever on the right bar, until you feel the engine picking up nicely. You should have this lever fractionally open before you let the clutch lever Thereafter, the throttle lever down. will control your speed from a crawl to 30 m.p.h. in the simplest possible

wav.

At any time, e.g., in traffic, closing the lever and pulling up the clutch lever will cause your engine to run slowly and to become disconnected from the drive. Having put your brakes on you wait comfortably at a standstill in perfect safety until you wish to move off. Give a turn or two with the pedals to help the machine get under way, open your throttle a little, drop your clutch in, and hey presto! we are motoring again.

It is rarely that any main-road hill will cause difficulty, but in most cases, if the machine happens to find the gradient a bit too stiff, a turn or two with the pedals while it is still going along will help it over the worst part and off you "freewheel" again.

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The 'freedom of the roads' is yours if you ride a Scott Cyc-Auto! Go anywhere you please—on pleasure trips or to business-without any effort, at an 'all-in' cost of 1/4d. per mile!

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SPECIFICATION

Scott 98 c.c. 5-Port, Two-Stroke Engine, Scott Spring Fork, Clutch and Clutch Brake, Internal Expanding brakes. 140 m.p.g. Running costs
4d. per mile all in. Correct cycling
position. Gent's and Ladies' standard

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Choosing Your Motorised Cycle

Illustrated Guide to Some of the Principal Makes



H.E.C. POWER CYCLE.

Engine: Own 80 c.c. two-stroke. Carburettor: Single lever. Tyres: Dunlop 26 x 13in. Lighting: Flywheel magneto.

Chainguard and stand fitted. .. £17 17 0 complete.

See page 10.



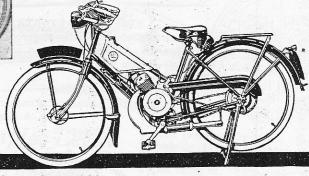
FRANCIS-BARNETT POWERBIKE.

Engine: Villiers 98 c.c. two-stroke.

Carburettor: Villiers. Tyres: Dunlop 26 x 2in. Lighting: Flywheel magneto.

.. £18 18 0 complete.

See page 4.



CYC-AUTO.

Engine: 98 c.c. Scott two-stroke.

Carburettor: Amal.

Tyres: B.T.R. 26 x 2in. extra heavy.

Lighting: Independent dynamo.

Chainguard, carrier and stand fitted.

Price: Standard £17 17 0

De Luxe £18 18 0

Tradesmen's Carrier .. £19 19 0

See page 13.

THREE SPIRES PETRO-CYCLE.

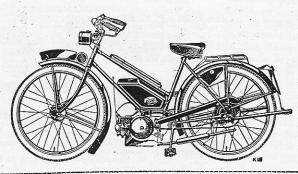
Engine: Villiers 98 c.c. two-stroke.

Carburettor: Villiers.

Tyres: Dunlop $26 \times 2 \times 1\frac{3}{4}$ in. Tank capacity: 9 pints.

Chainguard, carrier and stand fitted.

Price £18 18 0 complete





JAMES AUTOCYCLE.

Engine: Villiers 98 c.c. two-stroke.

Carburettor: Villiers.

Tyres: Dunlop or John Bull 26 x 2in.

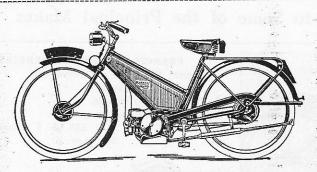
Tank capacity: 9 pints. Lighting: Electric (direct).

Chainguard, carrier and stand fitted.

Price £18 18 0 complete.

See page 14.

Choosing Your Motorised Cycle-continued



EXCELSIOR AUTOBYK.

Engine: Villiers 98 c.c. two-stroke.

Carburettor: Villiers. Tyres: Dunlop 26 x 2in. Tank capacity: 9 pints. Lighting: Flywheel magneto.

Chainguard, carrier and stand fitted.£18 18 0 complete.

See page 8.

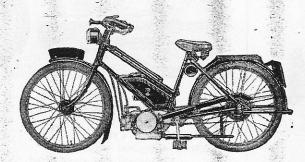


RAYNAL AUTO.

Engine: Villiers 98 c.c. Carburettor: Villiers. Tyres: Dunlop 26 x 13in. Lighting: Flywheel magneto.

> Chainguard, carrier and stand fitted. ..£17 17 0 complete.

> > See page 6.



COVENTRY EAGLE AUTO-ETTE.

Engine: Villiers 98 c.c. Carburettor: Villiers. Tyres: Dunlop 26 x 2in. Lighting: Flywheel magneto.

Chainguard, carrier and stand fitted.

.. £17 17 See page 24.

Where to Buy

Guide to Dealers Who Can Supply and Service Your Motorised Cycle

BEDFORDSHIRE

Bedford.—Brightman & Son, 28/30, St. John St.

"E. J. Brightman & Son, 64, Tavistock St.
"Imperial Cycle & Motor Co., 58, St. Loyes St.
Biggleswade.—Bryants, 72, Shortmead St.
Dunstable.—B. G. England, Half Moon Garage, Watling St.
Flitwick.—W. G. Sharpe.
Leighton Buzzard.—A. E. Rollings, Linslade.
Luton.—A. R. Ellis, 22, Ashton Rd.

"W. Shepheard.
"W. E. Turney, 130, Leagrave Rd.
Toddington.—W. Kempton.

BERKSHIRE
Ascot.—The Heath Garage, Windsor Rd.

" J. P. Scott, Chavey Down.
Cookham-on-Thames.—G. P. Greenslade.
Hungerford.—H. W. Chivers & Son, 4, Bridge St.
Maidenhead.—O. Hildreth & Sons, Market St. Cycle Works.
Timberlakes.
Newbury.—Craven Motor & Cycle Co., Bartholomew St.
Reading.—Hensure Cycle Co., 68/70, Caversham Rd.

" Julians of Reading, Ltd., 27, Kings Rd.

" A. J. S. King, 10/12, Whitley St.
Vincents, Ltd., Station Sq.
South Ascot.—Rice Bros.
Sunningdale.—Sunningdale Motors, London Rd.
Windsor.—S. A. Surplice, 37, Sheet St.
Wokingham.—F. J. Collins, 45, Peach St.

BUCKINGHAMSHIRE
Aylesbury.—Mick Riley, Walton St.
Beaconsfield.—Beaconsfield Motor Co., Ltd.
" Mayne & Sons, Burkes Parade.

Bletchley.—Winslow Cycle Works, Winslow.
Chesham.—Alec Keen, 46, Broad St.
Mayor & Hawkes, 16, Red Lion St.
High Wycombe.—P. Manley & Son, 162/4, Desborough Rd.
Iver.—Bakers Garage, High St.
Slough.—Bates & Co., High St.
S. Moram.
Stoney Stratford.—R. J. Fleming, 17 & 25, High St.
West Wycombe.—R. Stone, High St.
Wolverton.—G. Cox & Sons.

CAMBRIDGESHIRE
Cambridge.—P. H. Allin & Sons, 12, Bridge St.
Flitton Bros., 25-6, East Rd.
Hallen's Motor Specialists, 251-3, Chesterton Rd.
King & Harper, Ltd., 6-7, Bridge St.
Tibbitts & Allen, 30, Regent St.
Duxford.—H. W. Runham, Castle Depot.

Guernsey.—T. G. Moullin, St. George's Cycle Works.
S. A. Taylor, St. Martin's.

Jersey.—Bisson's, 59, Halkett Pl.
Geo. L. Boudin, 20/23, Bath St.
"D. Lucas, Prince of Wales Garage, Minden St.

CHESHIRE
Alderley Edge.—Noel Bracegirdle & Co., Knutsford Rd.
Altrincham.—N. Boden, Regent Rd.
G. W. Brocklehurst, 69, George St.
W. Richardson, 8-10, Oxford Rd.
Antrobus.—C. Johnson, Seven Oaks Garage.
Aston Wrenbury.—Lees Garage.

Where to Buy Your Motorised Cycle

Cheshire—continued.
Birkenhead.—Arminsteads, Oxton Motor Works, 89, Oxton Rd.
Alec Green, 39, Westbourne Rd.
Cheadle.—F. W. White, 2a, Gatley Rd.
Chester.—Davies Bros., 34, Bridge St.
Marstons, Ltd., Bridge St.
W. W. Motors, Ltd., 29, Newgate St.
Crewe.—Ernest Beech, Coppenhall Garage.
E. J. Hilditch, The Garage, Haslington.
Douglas Whitehead, Wistaston.
Ellesmere Port.—Samways Garage, Ltd.
Hoylake.—E. Cattell, Market St.
Hyde.—G. Cheal, Crescent Garage, Gee Cross.
G. G. Mottram, 142, Ashton Rd., Newton.
Knutsford.—J. Butterworth.
Elstone & Price, Princess St.
Macclesfield.—Gleaves Motors, Davenport St.
T. Simister, Station St.
Middlewich.—F. J. N. Cash, Ashfield Garage.
Fosters, 13/15, Lower St.
Northwich.—R. Atherton, Greenbank Garage, Chester Rd.
Eachus Bros., 40, High St.
Rock Ferry.—Bob Simister, 540-544, New Chester Rd.
Runcorn.—J. Smith & Sons, 22, Greenway Rd.
Shocklach.—J. Baxendale, Liverpool House.
Stalybridge.—Sellars & Sons, Stamford St.
Stockport.—Bednalls Cycle & Pram Stores, 77-81, Lower Hillgate.
S. Biskley, 467, Buxton Rd., Gt. Moor.
S. Biskley, 467, Buxton Rd., Cheadle Heath.
H. T. Dugdale, 22, Wellington-Rd. South.
Theobald & Coppock, 6, Chestergate.
Webbs Service Depot, 261, Buxton Rd., Gt. Moor.
Wellasey.—Freemans, 40, Borough Rd.
Wards Motor Stores, 3/13, Leasowe Rd.
Wilmslow.—W. E. Berriman, Hawthorn St.
Daimler Car Hire Service, Station Rd.
Mellors, 4, Lane Ends.
Wirral.—R. W. Grant, Teehey Lane, Bebington.
R. E. Morgan, High St., Neston.
CORNWALL
Falmouth.—V. Barham, 28a, High Street.

CORNWALL
Falmouth.—V. Barham, 28a, High Street.
Hayle.—J. Richards, Foundry Garage.
Launceston.—J. W. Wooldridge & Son, Western Road.
Penzance.—N. Holman & Sons, Ltd., 100, Market Jew Street.
Redruth.—W. E. Jones.
St. Austell.—G. Richards, Central Garage, St. Dennis.
Truro.—Frank Gluyas, Stithians.

West Cornwall Motors, Lemon Quay.

Cumberland
Carlisle.—T. P. Bell, 18–22, Abbey Street.
J. E. Clarkson, 135, Lowther Street.
Keswick.—T. Weightman, Pack Horse Court.
Penrith.—Altham & Son.
J. B. Milburn, Ltd., Central Garage.
Westnewton, Nr. Aspatria.—G. W. Dixon.
Whitehaven.—Mark Taylor, King Street.
Wigton.—W. Dodd, Market Place.

DERBYSHIRE

DERBYSHIRE

Buxton.—Evre Bros.
Chesterfield.—Blacks Radio Stores, 63, Low Pavement.
Service Motors, Knifesmith Gate.
Clown.—N. Fenton, Mill Street.
Derby.—Abbey Cycle Co., 88, Abbey Street.
Haywards (Derby) Ltd., Normanton Road.
W. H. Jones, 115, Normanton Road.
Kaye & Scampton, 14, Saddler Gate.
A. B. Osborne, Greenhill Cycle Stores, Green Lane.
Palins Motors, Osmaston Road.
Rigeston.—A. E. Hudson, Central Garage, Manor Road.
Kegworth, Nr. Derby.—Bryans Garage, 12, London Road.
Long Eaton.—H. E. Butler, 72, Tamworth Road.
Ripley.—Clarke & Gamble, Grosvenor Road.
C. G. Walker, 38, Chapel Street.
Swanwick.—G. Speed.

Swanwick.—G. Speed.

DEVONSHIRE

Barnstaple.—Barrows Cycle & Motor Depot, 129, Boutport Street.

R. Bray, Holland Street.

Hills Garage, 44, High Street.

Bideford.—G. Boyle, Ltd., High Street.

Exter.—Leighton & Delve, Bridgeland Street.

Devonport.—W. Trace, Argyle Cycle Co., Tavistock Road.

Exeter.—Leighton Steer, Okehampton Street.

Wippell Bros. & Row, 213/4, High Street.

Exmouth.—F. L. Edwards, 18, Exeter Road.

Hartland.—Huggins Bros.

Newton Abbot.—J. E. Green & Co., 115-17, Queen Street.

Williams & Sons, 36, Queen Street.

P. H. Sharam, 4, Market Street.

Plymouth.—Glanfield Lawrence (London), Ltd., 82, Union Street.

Tavistock.—Carrs Garage, Plymouth Road.

Tiverton.—Batten & Thorne, Ltd., Hampton Street.

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Torrington.—S. J. Roberts, Calf Street.

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Dorchester.—Napper & Son, High West Street.
Tilleys, South Street.
Parkstone.—Homestead Garages, Ltd., 177, Ringwood Road.
H. Marriott, 344, Ashley Road.
"Shepherds, 354, Ashley Road.
Taylors (Parkstone) Ltd., Tennyson Buildings.
Poole.—Shepherds, 15 & 15a, Wimborne Road.

Dorsetshire—continued.
Poole.—W. H. Williams, Hamworthy.
Sherborne.—Sheppards Garage, Ltd., South Street.
Weymouth.—P. W. H. Pankhurst, Chickerell Road.
"Tilley's, The Esplanade.
"Tilley's, 31, South Street.

DURHAM

Barnard Castle.—Ernest Watson, Galgate.
Billingham.—Dean's Radio & Cycle Stores, 28, Mill Lane.
Bishop Auckland.—Motor Supplies (Auckland) Ltd., Cockton Hill.
Blaydon-on-Tyne.—Glenton Friars, Garden Street,
E. Henderson, 73, Tyne Street.
Chester-le-Street.—C. A. Williams & Son, 61, Front Street.
Crook.—Robinson & Sons, Hope Street.
Darlington.—Duplex Motor & Cycle Co., 10, 12, 14, Grange Road.
White Bros., Northgate.
Ferryhill.—Jones' Prompt Service Depot, West End Garages.
South Shields.—John Hornsby, 88, Westoe Road.
F. W. Peeps, 63, Prince Edward Road.
Spennymoor.—E. & F. Cator 43, High Street.
Sunderland.—Bergs, 41, Crowtree Road.
Binns, Ltd. 8-10, Holmside.
Ken Blakey, Ltd., 7 & 8, Bedford Street.
R. S. Herron, 24, Crowtree Road.
Palmers, St. Thomas Street.
West Hartlepool.—R. Robinson, Avenue Road.
W. Spence, 114, Oxford Road.
Ed. Taylor, 49, Thornton Street.

W. Spence, 114, Oxford Road.

"W. Spence, 114, Oxford Road.

"Ed. Taylor, 49, Thornton Street.

Barkings.—Albons Stores, 115-9, Ripple Road.
Barkingside.—F. Cox & G. T. West, High Street.

Braintree.—H. Bull, Rayne Road Garage, Bradford Street. Booking.

Brentwood.—R. G. Bennett, 111, King's Road.
Boxted, Nr. Colchester.—D. C. Geater, Roseville Garage.
Chelmsford.—C. W. Borcham & Co., City Works, Baddow Road.
Colchester.—J. A. Langley & Son, 23, Military Road.

Parry Bros., 69, East Hill.
Dagenham.—Castle Sports Depot, 290-292, Heathway.

J. Payne & Co., 722, Green Lane.

J. G. Pratt, 147a, Becontree Avenue.

Elm Park.—S. Weller & Co., Ltd., 14, The Broadway.
Fringhinghoe, Nr. Colchester.—S. J. Grubb, Ballast Quay Road.
Frinton-on-Sea.—Connaught Garages.
Goodmayes.—Goodmayes Stores, Ltd., 825, High Road.

"Morgans, Goodmayes Road.

"Raymond Way Motors, 773, High Street.
Grays.—Grays Electrical Co., 63, Orsett Road.

"Raymond Way Motors, 773, High Street.
Grays.—Grays Electrical Co., 63, Orsett Road.
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Grays.—Grays Electrical Co., 63, Orsett Road.

"Barwich.—Harwich Cycle & Radio Supplies, 69, Church Street.
Hornchurch.—R. G. Ramsey & Son, 174, High Street.
Hornchurch.—R. G. Ramsey & Son, 174, High Street,
Hord.—W. J. Foley, 213, Hford Lane.

"H. Holt & Co., 1, Loxford Parade, Hford Lane.

"Morgans, York Road.

"R. C. Wagstaff, 340, Eastern Avenue.
Laindon.—J. Toomey Motors, Ltd., High Road.
Leigh-on-Sea.—A. H. Saunders, 826, London Road.
Lettie Waltham.—F. Bevoll, High Street.
Rainham.—F. B. Croot, Ocean Stores, Upminster Road.
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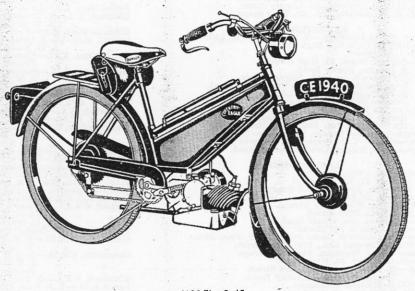
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V. J. Cockle, 2, Milk Street.

Wellington.—H. Sutch, Watling Street.

SOMERSET

Bath.—Holoway Bros., 32, Kingsmead Street.

E. A. Vince, Invincible Cycle Works.

"Wallace & Co., The Cycleries.

Bridgwater.—Anderson & Wall, 18, St. Mary Street.

Harding & Harding, Eastover.

Glastonbury.—L. A. Comfort, High Street.

Keynsham.—E. A. Cannock, The Garage, Bristol Road.

Midsomer Norton.—A. J. Maggs, Radstock Road.

Minehead.—Bradbeer's Garage, Friday Street.

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Shepton Mallet.—H. Millard & Son, 59, High Street.
Somerton.—A. E. Coomer, The Garage.
Taunton.—C. Lock & Co., Corporation Street.

A. C. Westlake, 49, Station Road.
Weston-super-Mare.—Betteridge Bros., The Castle Stores.
Yeovil.—Hebditch & Son, Hendford Hill Garage.

James Moffatt, High Street.

"Smith Bros., East Street Garage, West Coker.
"Yeovil Motor Mart, Hendford.

STAFFORDSHIRE
Blackheath.—C. Elackwell, 3, Oldbury Road.
Bloxwich.—Bradford Service Garage, 51, High Street.
Burntwood, nr. Lichfield.—H. Smith, The Garage, Cannock Road.
Burton-on-Trent.—P. Adocok, Derby Street.

"Pearsons Cycle Depot, 69, High Street.
Burntwood, nr. Lichfield.—H. Smith, The Garage, Cannock Road.
Burton-on-Trent.—P. Adocok, Derby Street.
Gilbert Field & Co.

Cannock.—H. H. Jellyman, Bridge Garage, Walsall Road.
T. E. Stone, Blackfords.
Chasetown.—J. W. Richards, High Street.
Darlaston.—L. Mitchell, Pinfold Street.
Darlaston.—L. Mitchell, Pinfold Street.
H. Wheatley, 2, Church Street.
Hanley,—Hanley Garage, Ltd.
Hednesford,—Haines Bros., High Street.
Hanley.—Hanley Garage, Ltd.
Hednesford,—Haines Bros., High Street.
Longton.—Ridgways, Market Street.
Longton.—Ridgways, Market Street.
Longton.—Raddys, Model End Garage.
Rugeley.—Mantons Garage, Market Street.
Stoke-on-Trent.—Broadway Motors, Liverpool Road.
Stafford.—E. H. Bunn, Market Street.
Stoke-on-Trent.—Broadway Motors, Liverpool Road.
Stretton.—J. Rudman, Bradford Garage, Ivetsey Bank.
Tamworth.—A. Allton & Sons, Bolbridge Street
Stoke-on-Trent.—Broadway Motors, Liverpool Road.
Stretton.—J. Rudman, Bradford Garage, Ivetsey Bank.
Tamworth.—A. Allton & Sons, Bolbridge Street.
W. J. Bates, 41, Green Lane.

"W. J. Hough, The Motor Cycle Mart, 33, Stafford Streets
"Taylor Bros., Green Lane.

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"W. J. Hough, The Motor Cycle Stores,
                   "Mm. Hayward, 37, Snow Hill.
"A. Moore, 175, Wednesfield Road.
Regent Cycle Stores, Cleveland Street.
Nr. Stafford.—Evans Bros., Woodseaves Garage.

Bury St. Edmunds.—F. Colson, Townsend Cycle Stores, 41, Cornhill.
R. R. Minns, 67, St. Andrews Street North.
Hadleigh.—T. Groves, 21–3, High Street.
Ipswich.—Boltons, Norwich Road.
"Jacobi & Son, 75–6, Norwich Road.
"Revetts, 67, St. Matthews Street.
Long Melford.—H. S. Theobold, Little St. Mary's.
Southwold.—Southwold & Dist. Service Garage, Ltd.
Sudbury.—W. C. Green, 98, North Street.
Woodbridge.—J. Tosach & Sons, The Thoroughfare.
SURREY
Ashtead.—Ashtead Motor Works, 53, High Street.
Banstead.—G. Greatley, The Highfield Garage, Brighton Road.
Carshalton.—Bert Chitty, 9, The Parade.
Cobham.—F. C. Bennett, Between Streets.
Croydon.—George Flint & Son, 1a, Tamworth Road.
Farnham.—Heath Bros., Frensham.
Guildford.—E. Pascall (Guildford), Ltd.
"Small Cars, Bridge Street.
Mill Puttick & Son, The Central Garage, Lion Green.
Kingston-on-Thames.—J. Heaman, 13, St. James Road.
Leatherhead.—Taylors, Bridge Street.
Mitcham.—Millar Motors, London Road.
Wilfreds Motors, 177, London Road.
Wilfreds Motors, 177, London Road.
Morden.—Allied Modern Motors, Ltd., 18–19, Morden Court Parade,
London Road.
Morden.—Allied Modern Motors, Ltd., 204, London Road.
Redhill.—Redhill Motor & Cycle & Radio Co., Ltd., 5, Station Parade.
New Malden.—A. V. Cook, 110, Burlington Road.
New Malden.—A. V. Cook, 110, Burlington Road.
North Cheam.—North Cheam Radio, Ltd., 204, London Road.
Redhill.—Redhill Motor & Cycle Works, 50, Brighton Road.
North Cheam.—North Cheam Radio, Ltd., 204, London Road.
Redhill.—Redhill Motor & Cycle Works, 50, Brighton Road.
New Malden.—E. W. Clark, 562–4, London Road.
Thornton Heath.—F. W. Clark, 562–4, London Road.
Thornton Heath.—F. W. Clark, 562–4, London Road.
Welford Motor & Cycle Works, 11, Melford Road.
Thornton Heath.—F. W. Clark, 562–4, London Road.
West Eyrleet.—W. E. Inward, 5, Claremont Road.
West Byfleet.—W. E. Inward, 5, Claremont Road.
West Eyell.—Oldaker
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Where to Buy Your Motorised Cycle

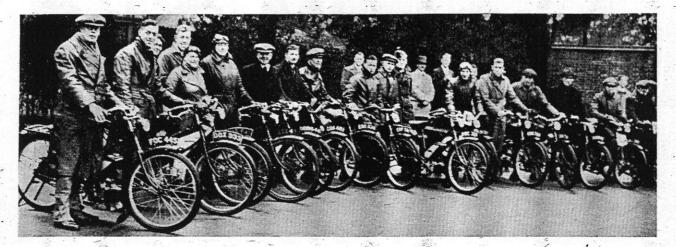
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Where to Buy Your Motorised Cycle

Amberley.—J. C. Cooler, Fishet Garage.
Bexhill en-Sen.—You goes Son. 58, High Street.
Bexhill en-Sen.—You goes Son. 58, High Street.
Brighton.—G. Bradshaws (Sussex) Ltd., 70, London Road.
Chichester.—W. Goodridge & Co., Ltd.
Bastbourne.—Brodshaws (Sussex) Ltd., 70, London Road.
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Chichester.—W. Goodridge & Co., Ltd.
Bast Chinatead.—Rice Bross., 37-4, High Street.
Bast Grinstead.—Rice Bross., 37-4, High Street.
Bast Grinstead.—Rice Bross., 37-4, High Street.
Haywards Heath.—G. Bradshaws (Sussex) Ltd.
Thomas Garage. Wriesheld Road.
Horely.—Coles & West, Ltd., Station Road.
Hove.—G. Bradshaw (Sussex) Ltd., 6, Western Road.
Hove.—G. Bradshaw (Sussex) Ltd., 6, Western Road.
Goes.—Station Road.
Horely.—Coles & West, Ltd., Station Road.
Horely.—Oles & Turner, Ltd., 11, Carlton Terrace.
F. Leonardson-Sca.—Markey Ltd., 6, West Marian.
West Worthing.—Special Road.
Worthing.—Compton Bros. 4, Coronation Buildings, Ham Road.
Worthing.—Compton Bros. 4, Coronation Buildings, Ham Road.
Worthing.—Special Road.
Bell Electric. 1279. Bristol Road South.
Gridesdals Supply Co., 1td, 218, Son Road.
Gridesdal
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Swindon. Morse's, Ltd., 10-12, Regent Street.
Tishney. Swindon Motor Co., 24, Wood Street.
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Tishney. Swindon Motor Co., 24, Wood Street.
Trowheridge. P. Sleightholme, Newtown.
Wylye.—Smith Bros.

WORGESTERSHIRE
Astwood Bank.—C. Harris, Garage.
Bronsgrove.—Chonomas Rof Giles, Casthill Garage, Stourbridge Road.
Conderton, Nr. Tewkesbury.—H., Ancill, Cycle Agent.
Dudley.—C. E. Cope & Sons, Ltd., 193, Ligh Street.
Leigh Ston., 1946-1949. Co., Ltd., 46, Evenham Street.
Leigh Ston., 1946-1949. Co., Ltd., 46, Evenham Street.
Jacksons Cycle Depot, Church Green East.
Shipson-ordou. S. Al., Taylor, The Stour Garage.
Stourbridge.—Bache Bros., Stourbridge Road, Lye.
N. M. Challingsworth, Eaville Street.

"M. M. Challingsworth, Eaville Street.
"Dearsons Cycle Depot, Talbet Street.
"Pearsons Cycle Depot, Talbet Street.
"Pearson Cycle Bender.
"Pearson Cycle Be
                Swindon. Morse's, Ltd., 10-12, Regent Street.
Swindon Motor Co., 34, Wood Street.
Tisbury.—Cecil Marshall, High Street.
Trowbridge.—F. Sleightholme, Newtown.
Wylye.—Smith Bros.
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Motorised Cycle Clubs

How the Social Side of Motorised Cycling is Growing

HE enthusiasm with which the motorised bicycle is being taken up is to be found in the number of motorised cycle or autocycle clubs which are springing up in many parts of the country, for the use of these little machines is not limited to travel between home and workshop. They provide an ideal method of enjoying the countryside at week-ends and holidays for those who can appreciate the beauties of the highways and byways in a leisurely fashion.

Motorised cycling clubs are purely social organisations, and regular week-end runs and tours are carried out to places of interest, while rallies with other clubs, which are frequently arranged, provide opportunities for fraternisation with motorised cyclists in other districts.

Among the principal clubs devoted to motorised cycling, probably the largest is The Birmingham Auto-Bicycle-Club.

Formed as long ago as March, 1936, this now boasts a keen and enthusiastic membership of approximately 600. The clubs's programme includes tours, rallies, competitions, etc., and has built up a solid foundation of good fellowship.

So far this year the club has had a Blossom Time" run with rally and lunch at Evesham (successful despite pouring rain), a Cotswold day run of 120 miles and recently co-operated with the Liverpool club in a monster rally at Lilleshall Hall.

For the immediate future runs are planned for Maxstroke Castle (Coleshill), Trentham Gardens (Stoke), Lud-low and the Clee Hills, British Camp (Malvern), and a circular tour via Henley-in-Arden and Evesham. Less

experienced riders are encouraged to take part in the regular events, as it is felt that once a motorised cyclist has overcome the initial nervousness and tasted the delights of a club run he (or, in many cases, she) will be unable to resist riding at every opportunity.

A programme of winter events possibly including indoor activities is being planned in the near future.

The Hon. Sec. of the Birmingham Auto-Bicycle Club, who extends a hearty welcome to all motorised cyclists in the district to join, is N. A. Rainbow, Braeside, Station Road, Lapworth, Warwicks. Headquarters are at 96, Aston Street, Birmingham,

In Liverpool there is a group of enthusiasts in the Liverpool Auto Cycle Club, the Hon. Sec. of which is Miss May Stanley, 60, Rosthwaite Road, Liverpool, 12. This club recently organised a highly successful rally at Lilleshall, in combination with the Midland Club, when something over 200 riders attended—an excellent turnout for a club of this nature.

In the London district there is the National Auto Cycle Club, with C. B. Bright, of 81, Clifden Road, Clapton, E.5, as Hon. Secretary. This recently formed club already has a membership of 40 and holds runs every Sunday. Moreover, the club is now affiliated to the British Two-Stroke Club, which, among other things, offers the advantage of the use of a well-equipped club-room in Warren Street every Thursday evening. The subscription is 5s. per annum.



CLUB MEETS. Both this and the picture at the top of the page show typical groups on motorised cycle club runs