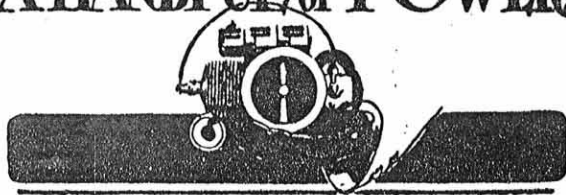




ALL the JOY
WITH
A HANDFUL of POWER.



FOREWORD.

THE YOUNG ENGINE ATTACHMENT is not an experiment. It has been steadily evolved ever since its original conception in 1913, by the most careful experiments and researches of skilled engineers, and now, in 1921, backed by its wonderful successes since it was first offered to the public at the end of 1919. It definitely takes the place which it has made for itself by its general excellence and utility, among the recognised means of personal transport; a thoroughly warranted, and generously guaranteed article, universally needed and appreciated.

WHAT IT DOES.

THE YOUNG ENGINE ATTACHMENT will take even the heaviest riders up hills that no cyclist would attempt to ride, and will travel at a speed of 25 miles an hour on the level road, at the cost of A FARTHING A MILE, and with the maximum amount of comfort and ease.

HOW IT IS MADE.

The manufacture of the YOUNG ENGINE ATTACHMENT is carried out entirely at The Waltham Engineering Co.'s own Works, at Waltham Cross and Enfield, under the most careful supervision. Only the very best of materials are used, and these are first subjected to the most careful and searching tests.

THE ENGINE.

THE YOUNG ENGINE ATTACHMENT consists of a single cylinder, patented, high efficiency, two-stroke engine, of an improved pattern, containing many technical improvements peculiar to itself, mounted horizontally above the back wheel of the cycle, on a welded steel chassis, supported by tubular stays.

THE LUBRICATION.

The lubrication is by means of the Petroil system. This is absolutely automatic, and requires no care whatsoever whilst riding. NOTE. Always use one pint of oil per gallon of petrol.

ITS USES, ADVANTAGES & CHEAPNESS.

THE "YOUNG" ENGINE ATTACHMENT fits any standard well-built cycle, and for business or pleasure, it is equally suitable.

THE "YOUNG" ENGINE ATTACHMENT will take YOU to your business in half the time, and without the crush and annoyance of trains or trams, and without the unnecessary exertion of the old-fashioned pedal cycle. The Business Man needs it to carry him swiftly to his work and home again. The Professional Man, the Doctor or the Clergyman for instance, needs it. The Busy Housewife needs it to shorten her daily shopping. Who is there who does not need a "YOUNG" ENGINE ATTACHMENT?

With it you can travel comfortably and swiftly, and be independent of time tables and bus routes. **ABLE FOR A FARTHING A MILE.**

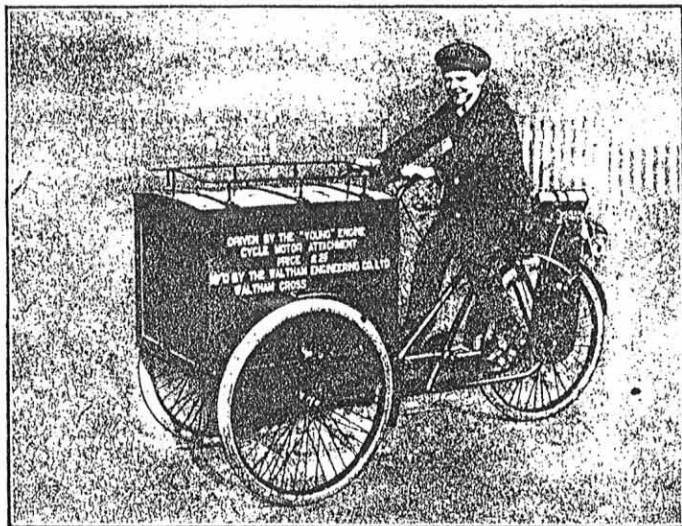
THE "YOUNG" ENGINE ATTACHMENT is the cheapest form of transport, and the most enjoyable of pleasure, and YOU, whatever is your business or occupation, need a "YOUNG" ENGINE ATTACHMENT just as much as anyone else.

THE "YOUNG" ENGINE ATTACHMENT is inexpensive to buy, cheap to run and maintain, almost everlasting, entirely reliable, and can be garaged anywhere where a pedal cycle will go, even upstairs if necessary.

FOR BUSINESS MEN.

Up-to-date business men all over the country are fitting "YOUNG" ENGINE ATTACHMENTS to their Carrier Tricycles and Cycles with every possible success and satisfaction.

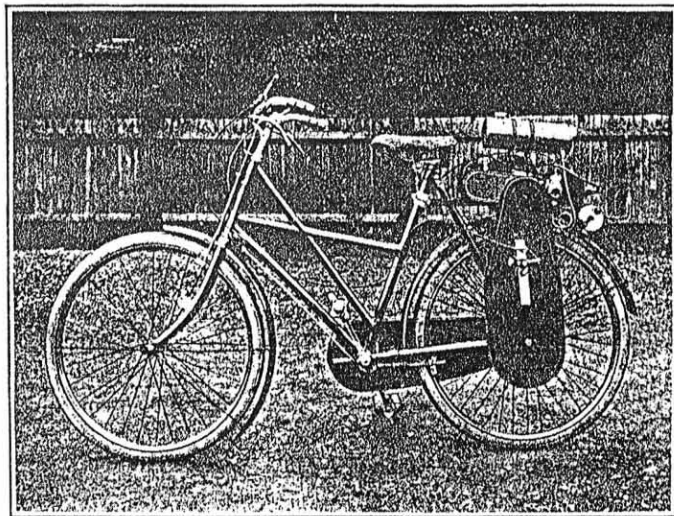
THREE MILES FOR THREE H'PENCE.



THE "YOUNG" ENGINE ATTACHMENT can be supplied fitted to an Alldays' Standard Carrier Tricycle as illustrated, or, if you prefer it, we shall be delighted to fit your own Carrier Tricycle for you at our Works for £25 : 12 : 6

It is so simple that any intelligent lad can work it, and it will carry as much in a day as three Carrier Tricycles without THE "YOUNG" ENGINE ATTACHMENT. THE "YOUNG" ENGINE ATTACHMENT fitted to Carrier Tricycles is exactly the same as is fitted to pedal cycles, except that the gear ratio is 16 to 1, and it is guaranteed to carry 2 cwts., travel 12 miles per hour on the level; to climb a 1 in 12 gradient without pedal assistance, and to travel 80 miles per gallon of petrol. We are prepared to maintain for 5 years if you desire it and will send particulars of our maintenance scheme on receipt of a post card.

Specification of the Waltham Engineering Co.'s Special Ladies' Cycle.



Price complete with cycle £32 : 17 : 6

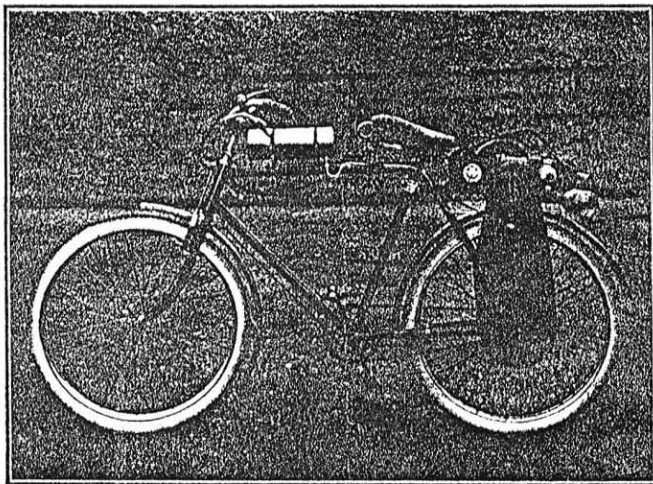
FRAME. 22 in. 18 Gauge Tubing, Brazed and Butted Joints.
WHEELS. 26 in. x 1 1/2 in. 14 Gauge Spokes.
TYRES. 26 in. x 1 1/2 in. Palmer or Dunlop. Carrier Tubes.

PEDALS. Rubber Treads.

STAND. If required can be supplied at an additional cost of 10/6
CYCLE. Lined gold, Handlebars and Rims heavily plated.

This Cycle is specially built to suit the Young Engine Attachment. We only supply it in the one size, as we find that a low riding position gives much greater comfort and ease of handling. The tallest rider can use this Cycle, because she need only pedal when starting the Engine.

Specification of the Waltham Engineering Co.'s Special Gents' Cycle.



Price complete with cycle £51 : 17 : 6

FRAME. 22 in. 18 Gauge Tubing, Brazed and Butted Joints.
WHEELS. 26 in. x 1 1/4 in. 14 Gauge Spokes.
TYRES. 26 in. x 1 1/4 in. Palmer or Dunlop. Carrier Tubes.

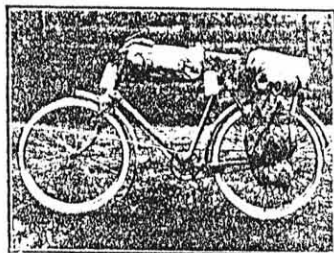
PEDALS. Rubber Treads.
STAND. If required can be supplied at an additional cost of 10/6
CYCLE. Lined gold, Handlebars and Rims heavily plated.

This Cycle is specially built to suit the Young Engine Attachment. We only supply it in the one size, as we find that a low riding position gives much greater comfort and ease of handling. The tallest rider can use this cycle as he need only pedal when starting the Engine.

PRICES & PACKING.

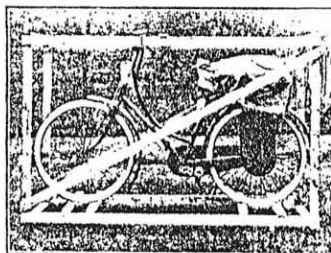
"Young" Engine Attachment to fit any standard Cycle, Ladies or Gents.	£23	:	0	:	0
" " " fitted to our specially built and strengthened Gents' Cycle	£31	:	17	:	6	
" " " " " " " Ladies' Cycle	£32	:	17	:	6	

We will fit your own cycle for you at a charge of 12/6.



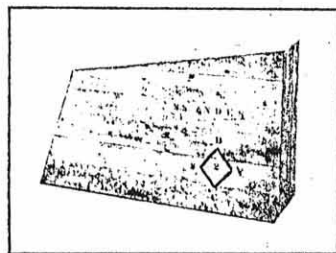
No. 1.

We will pack your Cycle for you like this for 5.-. This packing is suitable for England and Wales, but the Railway Companies will only accept cycles packed like this at Owners' Risk. This packing cannot be used for Sea Journeys.



No. 2.

We will crate your Cycle for you for £1 (crate not returnable). The Railway Companies will accept Cycles crated at Companies' Risk. This crate is suitable for Ireland, and short sea and long railway journeys.



No. 3.

We will case your Cycle like this for 55.-. It can then be shipped to any part of the World.

Packing No.1 usually meets the requirements of our Customers.

COMPLETE SPECIFICATION
OF THE "YOUNG" PATENT ENGINE ATTACHMENT.

ENGINE.

	High-efficiency Two-stroke of improved design.
CYLINDER.	Cast Iron, Bore 2½ in., Stroke 2½ in.
PISTON.	Aluminium Alloy, Three Rings.
CRANK.	Hardened Steel Crank Pins and Spindles.
CRANK CASE.	Aluminium Die-Casting.
BEARINGS.	Phosphor Bronze Bushes.
IGNITION.	High Tension Magneto.
CARBURETTOR.	Waltham Engineering Co.'s Patent Single Control, Floatless Carburettor.
FLYWHEEL.	Heavy External Pattern.

TRANSMISSION.

	3/16 in. by ½ in. Pitch Roller Chains, through a Counter-shaft Clutch.
CLUTCH.	Leather to metal cone Clutch, Handlebar controlled, mounted on a hardened steel Hub, carried on Ball Bearings, so that when the clutch is engaged and the engine running, no power is lost.

Mr. T. Franklin,
24, Falkland Place,
Kentish Town, N.W.5.

Sir,

I have used one of your Engines for some time now and it not only takes one cycle along, but it takes two cycles, carrier and me and my brother, so that they are better than any Motor Cycle.

(Sgd.) T. Franklin.

70, Maids Causeway,
Cambridge,
17th January, 1921.

Dear Sirs,

The Carburettor and Tank came safe to hand on Friday and on Saturday I parcel posted to you the old carburettor and tank.

Now, first, I want to thank you for all your kindness in putting little matters right without question or murmur.

Secondly, I am now glad that the petrol pipe was partly blocked with verdegrijs for if it hadn't been I should never have appreciated the new carburettor as I did yesterday. It was a revelation to me after the running I had on the old one. The machine will now run at a walking pace (4.5 m.p.h.) and respond to increased throttle at once.

Wishing you all the success you deserve.

I am,

Yours much obliged,
(Sgd.) Jasper Lyon.

The Waltham Engineering Co., Ltd.,
Waltham Cross,
London, N.

A FEW RECENT TESTIMONIALS.

50, Highland Gardens,
Ilford.

25th November, 1920.

Dear Sirs,

You will be glad to know that my machine is running perfectly. I have made a number of short journeys and tested it on hills and with loads. It took two persons freewheeling on cycles on the level, each being towed together by placing their hands on either of my shoulders, and that at a speed of 15 or more miles per hour, and with petrol lever only two-thirds on. I did 36 miles to-day and included Bald Hind Hill, Chigwell. I have climbed Hog Hill from the Collier Row side which is the steepest, and some hill climbing tests were on with motor-cycles, and the watchers were surprised to see me come up it. Your claims in the pamphlet for the machine are entirely substantiated.

I am pleased to voluntarily testify to the advantages and reliability of the machine. It is a real help to a middle age man. It is controlled so easily—one does not fear being run away with or difficulties as to traffic. In any congestion one can cut off the power and the clutch, and the machine is on the instant an ordinary push bike and it is pedalled quite easily, the balance is more reliable than an ordinary push bike, the additional weight making for steadiness.

I wish you continued success.

Yours truly,
(Sgd) F. H. W.

E. U. Morey,
The Broadway,
Totland Bay.
Nov. 26th, 1920.

Messrs. The Waltham Engineering Co.
Gentlemen,

I have much pleasure in informing you that the "YOUNG" ENGINE ATTACHMENT is giving me much satisfaction and I am most pleased with it, I can truly say it does all you claim for it. I must admit a little prejudice against the carburettor at first, but find on trial that it is quite alright. By the way, the Attachment has made quite a stir on my rounds this week. I think it is quite likely you may have other orders from the Island.

I have every confidence in the attachment, with many thanks.

Yours faithfully,
(Sgd.) E. U. Morey.

C. Vaughan & Co.,
207a, South Street.
Moor,
Sheffield.
22nd February, 1921.

The Waltham Engineering Co., Ltd.

Dear Sirs,

We received from you one "YOUNG" ENGINE ATTACHMENT and cycle complete on Monday, 7th day of February. We are highly satisfied with it after giving it the ten days trial, and find it meets with your guarantee.

Trusting to be able to place some orders with you in the near future.

We are,
Yours truly,
(Sgd.) C. Vaughan & Co.

Order No.....

Date Received.....

Date of Dispatch.....

Please do not write in this space.

CARRIAGE.

The following rates are in force for the carriage of Cycles fitted with Young Engine Attachments per Passenger Train on February 23rd, 1921. Any subsequent increase in these rates must be added.

Miles.	Cycles not Crated.	Cycles Crated.
Up to 12	2s. 3d.	3s. 0d.
13 to 25	3s. 6d.	4s. 6d.
26 to 50	4s. 6d.	6s. 0d.
51 to 100	8s. 3d.	10s. 6d.
101 to 200	11s. 8d.	15s. 9d.
Every additional 50 miles ...	2s. 3d.	3s. 0d.

PACKING AND CRATES.

The various types of packing and crates are illustrated on page 13 of this Booklet. Machines for Ireland and Abroad must be crated or cased.

PRICES.

Straw and paper packing, suitable for England and Wales, 5/-.

Crates, suitable for Ireland, short sea journeys, and the North of Scotland, £1, (not returnable).

Cases for export, suitable for any part of the world, £1 15s 0d., (not returnable).

Guarantee and Warranty OF YOUNG ENGINE CYCLE MOTOR ATTACHMENT.

No..... fitted with.....Carburettor No.....

THE WALTHAM ENGINEERING COMPANY, LTD., hereby Guarantee that their Young Engine Cycle Motor Attachment will:—

1. Propel an ordinary pedal cycle 130 miles on 1 gallon of petrol.
2. Carry a rider weighing 12 stone up a gradient of 1 in 12 without pedal assistance.
3. Propel an ordinary pedal cycle at the rate of 25 miles per hour on a level road.

CONDITIONS.

The Purchaser is given Ten Days from the date of delivery to accept or challenge this guarantee, after which period it will be deemed to have been accepted.

If the Purchaser is not satisfied, the Attachment must be returned to the Company's Works at Waltham Cross, where it will be tried by one of the Company's testers. If it should fail the Company will dispatch immediately a proved Attachment, and pay the carriage both ways,

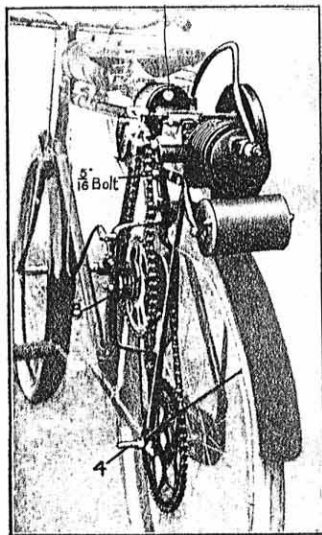
Warranty.

THE WALTHAM ENGINEERING COMPANY, LTD., undertakes to replace **Free of Charge** any part of their Young Engine Cycle Motor Attachment which may break through faulty material or bad workmanship during the period of **Five Years** from the date of delivery; provided that the part, or if the Company thinks necessary, the Attachment complete, is returned to their works carriage paid.

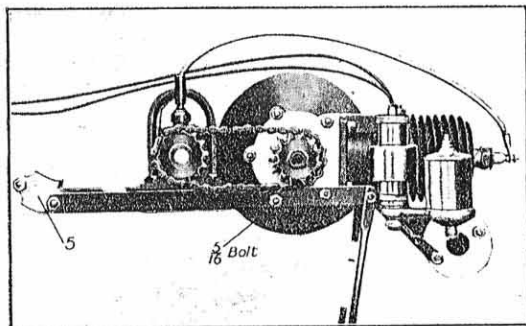
No other responsibility is intended, and no further responsibility than to replace the part **Free of Charge** is undertaken by the Company.

Date.....

For THE WALTHAM ENGINEERING COMPANY, LTD.



Chain Case Removed
Showing Transmission.



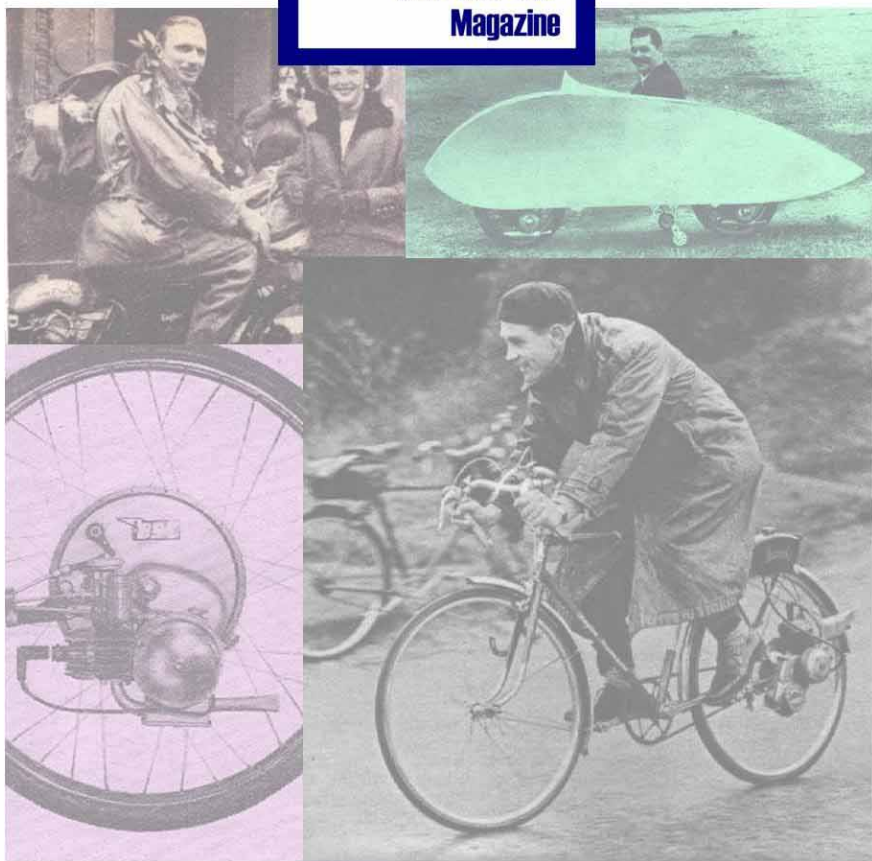
Power Unit showing method of fixing to Cycle.

Details of "YOUNG" ENGINE ATTACHMENT to fit your own cycle.

Price £23 : 0 : 0

IceniCAM

Information Service



www.icenicam.org.uk