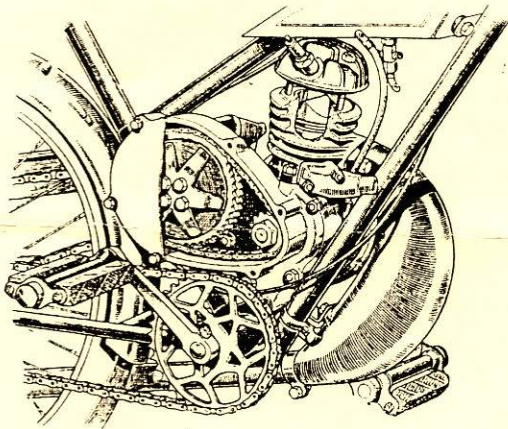


THE H.E.C. POWER CYCLE

First Description of an 80 c.c. "Wilfred"



In this drawing of the new power-unit the duplex primary chain and the unusual type of single clutch spring can be seen. Note also the high deflector on the piston crown.

MOTOR CYCLING has recently carried out a short test of an experimental H.E.C. Power Cycle, an interesting new machine in the "Wilfred" class. Production machines will have a 9-pint petrol tank, a three-point instead of two-point engine mounting, and an Amal carburetter. These details were not incorporated in the model tested.

The makers claim that with the engine and clutch removed, the H.E.C. becomes a normal bicycle, and, accordingly, the unit is extremely compact.

The 80 c.c. two-stroke engine is fitted with a detachable aluminium alloy cylinder head and a Lo-Ex piston. A roller-bearing big-end is another feature and the die-cast crankcase incorporates an oil-bath chain case and clutch housing. The drive to the clutch, which is of the cork-insert type, is by duplex chain. A trigger on the handlebar control enables the clutch to be held out of engagement when the pedalling gear is used.

Independent Chain Adjustment

The chains from the clutch and from the pedals to the back wheel are of the same section, and each has independent adjustment. A very efficient exhaust system is employed, consisting of a well-shaped expansion chamber and a tail-pipe containing two concentric perforated tubes. Ignition and lighting are looked after by a flywheel magneto. The gear ratio is 14 to 1.

The brakes on the machine tested were both hand-operated and of the internal-expanding type, but the manufacturers are fitting a back-peddalling rim brake for the back wheel. This will overcome the difficulty of operating the back brake and clutch levers with the same hand.

The first impressions gained by *Motor Cycling's* man when he took delivery of the H.E.C. were of the extraordinary degree of silence and the watch-like tickover at low speeds. Acceleration from a standstill was very impressive and in London

traffic the H.E.C. would keep its place in any traffic stream, as a comfortable 30 m.p.h. can be maintained.

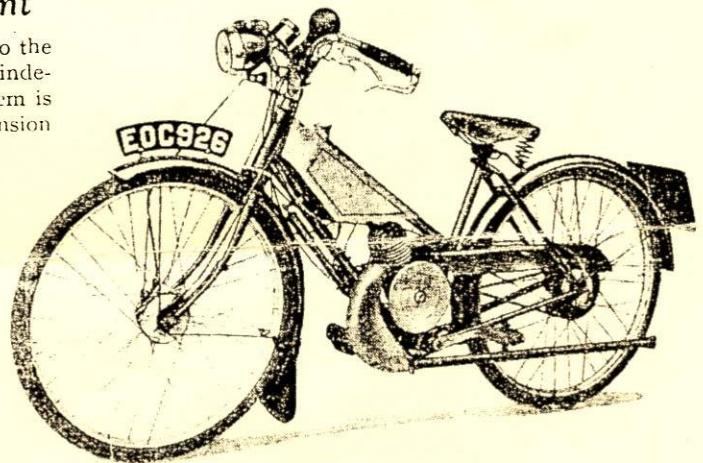
Over many miles of wet tramlines the H.E.C. never gave the tester an anxious moment, the low saddle position and the 1½-in. section tyres giving complete control.

It was found that the little machine would crest the rise on Purley Way (about 1 in 10 on the steeper side) at 20 m.p.h., so a visit was made to something stiffer to test the hill-climbing abilities. Sanderstead Hill, on the Croydon-Westerham road, and the long 1 in 7½ Hayes Lanes, Kenley, were tried, and both saw the tester in the saddle at the summit, although a certain amount of "l.p.a." was needed.

It seemed that something really difficult was necessary to bring the machine to a standstill, and Pebblecombe Hill, near Dorking, which has an average gradient of 1 in 8 for half a mile and maximum of 1 in 5 was chosen. After one unsuccessful attempt it was found that the best method of tackling an acclivity of this nature was to keep in the saddle until the speed dropped to about walking pace, and then to dismount. The machine would then continue to the top under its own power, at the same time assisting the rider up the gradient. In this way very little effort is needed to crest even the most formidable hill.

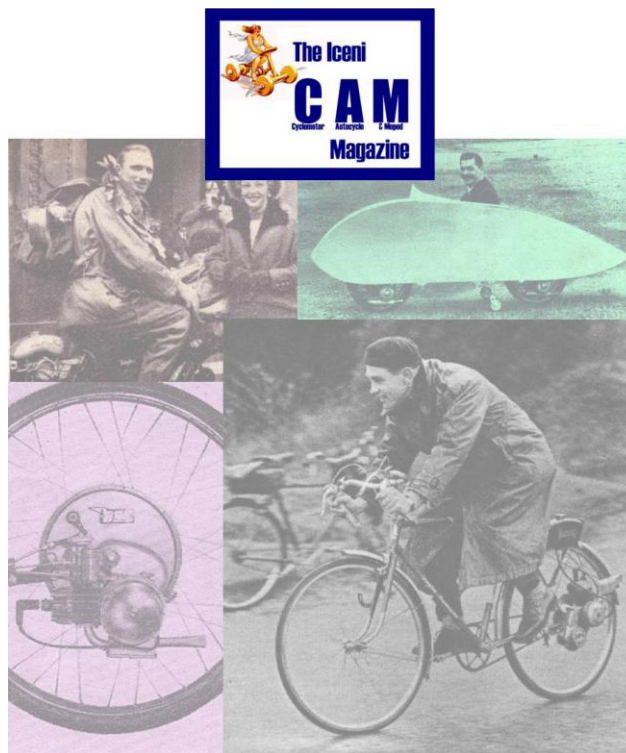
The machine always handled well and would stand any amount of hard driving. On one occasion it was galloped for mile after mile over main roads in Surrey and Sussex at very nearly its maximum speed yet at no time was there any sign of the engine seizing up, and at the end of the run it was still buzzing along quite happily.

Petrol consumption worked out at about 140 m.p.g. of petrol and oil mixture. With tax at 12s. per annum and insurance from about 7s. 6d. per annum, the machine would be extremely cheap to run and the price with full equipment is only £17 17s.



Although the H.E.C. is a normal bicycle, and can be used as such, the engine fits very neatly into the frame. The speedometer is not a standard fitting.

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