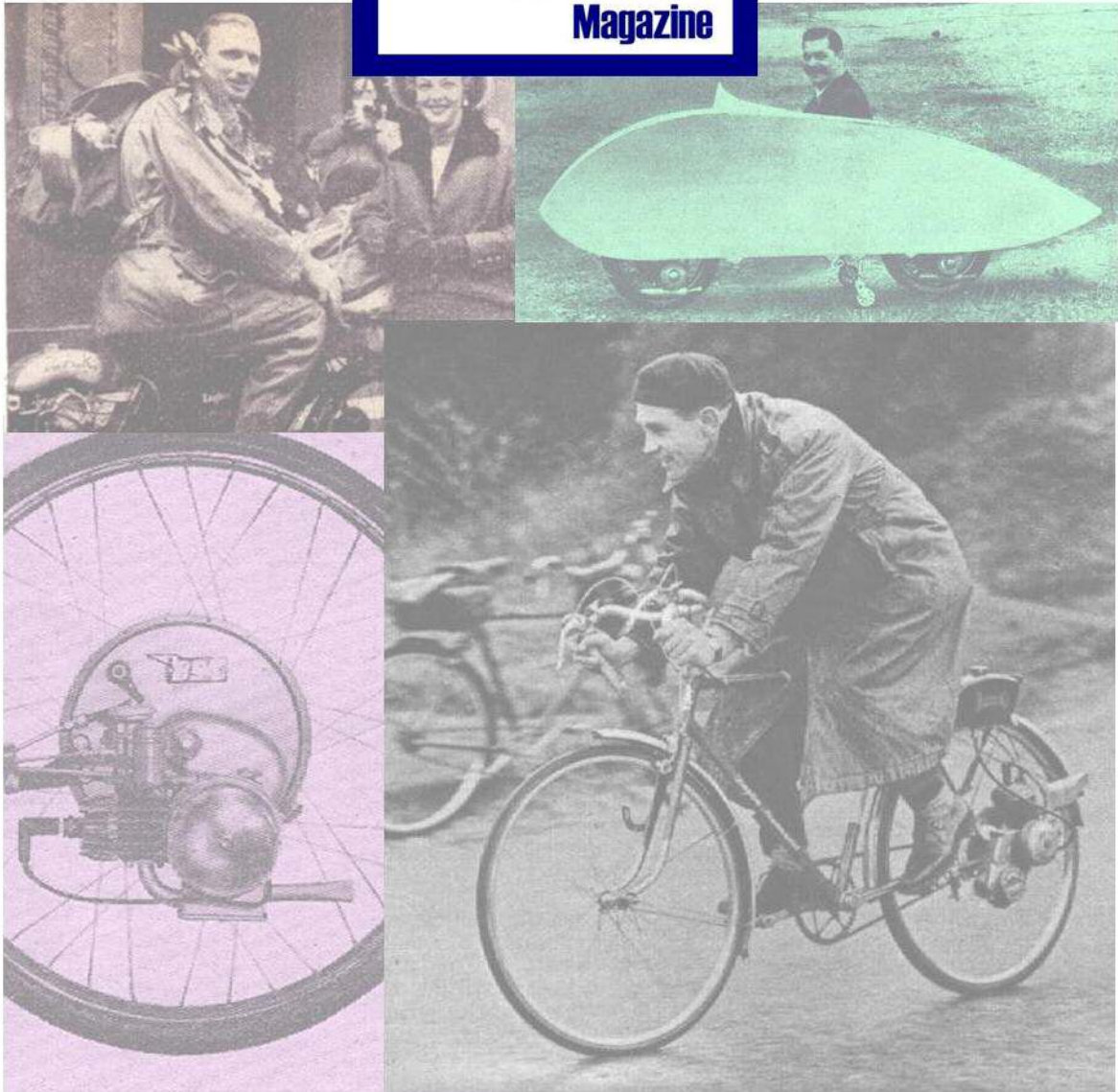


IceniCAM Information Service



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The Amazing **LOHMANN**

18 c.c. COMPRESSION IGNITION CYCLE MOTOR

- ★ No Electrics — No Carburetter, Magneto or Sparking Plugs — Nothing to Go Wrong
- ★ Bottom Bracket Mounting — The Ideal Position for Road Holding and Stability
- ★ 300 m.p.g. . . Ample Power and Light Weight (only 11 lbs.) Priced at only 24 Guineas (H.P. Terms Available)

Read what **MOTOR CYCLING** says:-

A CYCLEMOTOR WITHOUT "SPARKS"

"Motor Cycling" Tests the German 18 c.c. Lohmann Compression-ignition Engine

AFTER several years of exhaustive testing by its manufacturers in Germany, the highly unconventional 18 c.c. compression-ignition Lohmann cyclemotor, weighing only 11 lb., is to be marketed in this country by Britax (London), Ltd., 115-129, Carlton Vale, London, N.W.6. During the past few weeks one of these engines, fitted to an Armstrong bicycle, has been undergoing test by members of "Motor Cycling's" staff, who obtained very favourable results.

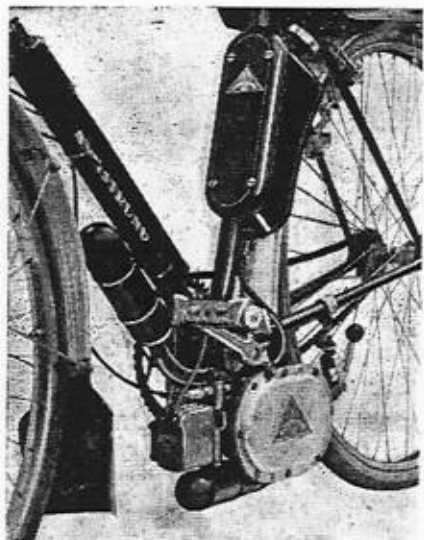
The most striking feature of the Lohmann, at first sight, is its diminutive size. It attaches neatly below the cycle's bottom bracket and drives the rear wheel through the medium of a geared rubber roller, the unit being held in contact with the tyre by a simple lever-actuated toggle.

Further examination reveals the lack of "electrics" and of a carburetter. The former are replaced by an ingenious device whereby the one-piece working cylinder and head—contained within the light-alloy cylinder casing, which carries the cooling fins—rotates about a trapezoidal thread in

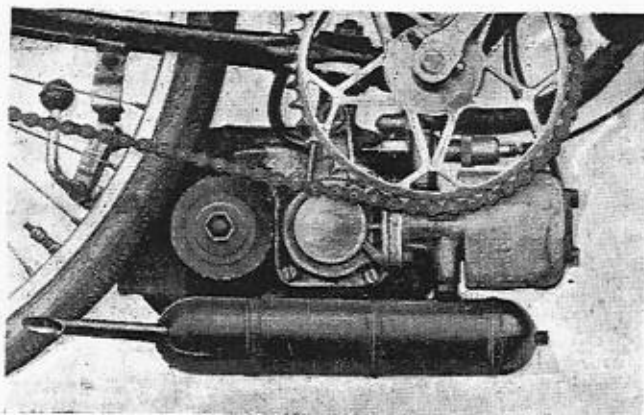
the false head. In this way, the volume of the combustion space is increased or decreased, according to the direction of movement. The transfer ports are radial slots cut into the sliding cylinder and the light-alloy piston is, thereby, well lubricated and cooled by the fresh mixture. The movement of the sleeve is controlled by a double-acting cable—which also operates a decompressor in the cylinder head—actuated through a twist-grip on the left handlebar.

Fed by gravity from a neat quarter-gallon tank faired into the saddle pillar of the cycle, fuel is passed through a metering device, which includes a needle-valve. Air is induced, first, through a large filter-cum-silencer clamped to the front down-tube, and the flow of mixture is controlled from a

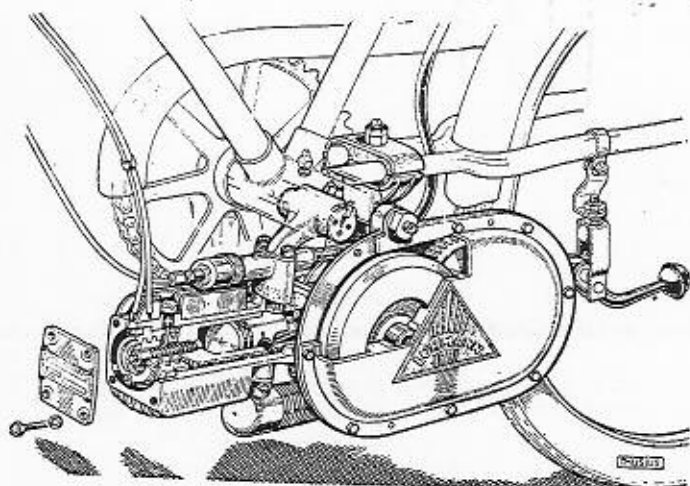
(Below) Two twistgrips are used to control the engine. That on the left actuates the sliding cylinder, while that on the right operates the throttle.



Clearly seen in this three-quarter front view (above) are the small dimensions of the Lohmann cyclemotor and the disposition of the auxiliary components. Note the neatly faired fuel tank.



Compact power. Attached below the bottom bracket, the 18 c.c. Lohmann (above) drives the rear wheel through an overhung rubber roller. The demountable silencer is of generous dimensions.



The construction of the Lohmann, and details of the movable sleeve are seen in this sectioned drawing.

twist-grip on the right handlebar. The charge is taken into the crankcase and transferred in the normal way to the working cylinder, where it is highly compressed, the heat generated by this compression being sufficient to ignite the gas.

The throttle control is provided with a spring stop and movement past the stop provides an extra-rich mixture for starting and, during the test, it was necessary to pedal only a few yards before the engine would fire. With the decompressor in action and the throttle at the starting position, the machine was pedalled away. Then the left twist-grip was turned to full compression, when the engine would respond immediately. It was necessary to continue pedalling for a minute or so afterwards, until the unit had warmed up, when the throttle and compression were both eased off until the little unit was purring over. At this stage, the main difficulty lay in hearing the exhaust at all, so excellent was the silencing.

Although the smallest cyclemotor yet tested, the Lohmann's power belies its size. The manufacturer's claimed maximum of 15 m.p.h. on level roads was exceeded on more than one occasion and the unit proved to be fully capable of sustained cruising at full throttle without any ill effects. More amazing was its flexibility. By the proper co-ordination of throttle and compression—there is only one correct compression for each degree of throttle opening if the best results are to be obtained, but the factor is not critical within reasonable limits—it was possible to slow down almost to a standstill and to pull away again without pedal assistance. Although some snatch would occur, the unit was quite up to the job of cruising on a small throttle opening as slowly as the

average pedestrian walks and then accelerating away up a gradient, while tight turns under power were demonstrated to all and sundry.

On hills, the Lohmann's performance was astounding and its ability to slog its way up a stiff gradient would have done credit to an engine of twice its capacity. Some of the toughest hills in Brighton were climbed with pedal assistance which amounted to little more than sitting easily on the cycle and twirling the cranks, while gradients in the region of 1 in 8 could be climbed with no assistance at all. Only once did the combined efforts of rider and engine fail and on that occasion the tester simply stepped off and, thanks to the flexible unit, walked alongside for a few yards while the engine, firing smoothly, propelled the cycle up the hill!

Fully warmed up, the engine could be started before the cranks had been revolved once. Indeed, "Motor Cycling's" staff delighted in bewildering onlookers by simply half-opening the throttle, and "walking" the cycle away with the decompressor open. A few paces, and the compression was turned on, whereupon the engine would fire immediately, allowing the rider to mount on one pedal and swing himself aboard the model.

It might perhaps be thought that the need for operating two controls would make the Lohmann difficult to master. This, however, was not the case. The machine was handed over to a number of different drivers. One was an experienced cyclemotorist; another was a car-driver who had never previously ridden a motorized cycle; yet others had had no previous experience of two-wheeled powered vehicles of any kind. It is significant that, with one exception, none had

the slightest difficulty in driving the machine and in obtaining the correct relationship between the controls.

As might be expected with so small an engine, the fuel consumption proved to be almost ridiculously low, well over 300 m.p.g. being obtained, on an average, in running that included a great deal of accelerating and hill climbing.

In this country, Lohmann engines are equipped with settings suitable for the use of petrol. It is possible to run on paraffin, but before visions of motoring at 16 miles per penny arise, it should be pointed out that, when used as fuel for a road vehicle, paraffin is liable to an extra half-crown a gallon duty, bringing the price to a few pence more than that of a gallon of petrol. Only one trouble arose during the course of the test. After a particularly gruelling run, it was found that the decompressor could not be operated. The fault was traced to the control cable—which had stretched—being out of adjustment. A minute's work banished the trouble and no further defects were noted. Vibration was pleasantly absent except for a slight period at around full throttle on the level, while four-stroking was almost non-existent. Both the unit itself and its fuel tank and lead kept commendably clean, with the exception of a tendency for the underside of the silencer to become oily.

It was felt, however, that an improvement could be effected by increasing the ground clearance allowed beneath the silencer, as this grounded on more than one occasion, happily without damage.

A welcome newcomer to the British market, the Lohmann is priced at 24 guineas and deliveries should commence shortly.

**It's so simple that -
EVEN A LAYMAN CAN FIT A LOHMANN!**



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