



POWELL "JOYBIKE"

Testing the Prototype of a Highly Original
All-British Moped

RAISING the exhilarating cry of "What isn't there, can't go wrong!", the designer of the Powell "Joybike" has subsequently done his best to prove that you can have your cake and eat it too! He has eliminated from this promising and original machine such potential sources of worry as gearbox and clutch, yet has nonetheless provided a free-engine device and three gear ratios by adapting the time-honoured, yet over-neglected, idea of vee-belt primary drive linked to an expanding engine pulley.

This moped from the Birmingham lightweight cycle-building firm of H. V. Powell is a compendium of novel ideas. The Trojan engine, for example, is mounted in an inverted position behind the saddle tube. The gear ratios are selected by a system which combines a handlebar-lever with a back-peddalling device. To change down, it is simply necessary to back-pedal and, at the same time, pull the handlebar lever into whichever gear position is required, where it is retained by a spring-loaded trigger. To change up, you merely release the trigger and allow the main lever to move the requisite number of notches. It takes about five minutes to learn the knack, and after that every gear change is sheer fascination.

Another novelty is the transmission brake, acting on the rear wheel through the medium of the final chain drive. The brake itself consists of a vee-section shoe which is brought into the well of the large countershaft pulley. I found it highly effective, though its power waned after it had been used continually during the descent of a long and very steep hill. It is worth noting, however, that the recorded 25 feet from 20 m.p.h.—a good average—was recorded *after* this, not before.

Though the top speed of 26 m.p.h. is not high, this represented more or less the cruising speed of the "Joybike" on give-and-take roads. Hill-climbing was a little slow, I thought, but of otherwise average standard, though the

machine's overall gearing is somewhat high—almost an inherent arrangement with expanding-pulley devices. On the other hand, the makers have thoughtfully fitted a three-speed Sturmey-Archer hub, so that really effective pedal assistance can be given at a wide range of speeds.

I felt that the riding position could have been modified with advantage to bring the saddle more nearly above the pedals. On the version I tested it was well to the rear, and after 40

NEWS AND VIEWS ON MOPED MATTERS

Throttle Control Cable Problems

ONE of the more annoying forms of trouble which can strike the moped rider is to have the throttle cable snap. There are, happily, various methods of jury-rigging which can help to get you home should this occur.

Once, I rode more than 70 miles on a four-stroke Ducati on which the cable had pulled apart. This machine was equipped with a double-acting twist grip, in which the grip was turned forward to operate the decompressor, and twisted back in the normal way to open the throttle. My answer to the problem, then, was to connect the decompressor cable to the throttle slide, and thus to have a throttle control which worked the other way round from normal. It took a mile or so to become accustomed to it, but thereafter the action became quite instinctive.

Such a solution could be applied to models like the Motobécane range, which use a double-acting grip. On machines lacking such a feature, a good tip is to use the throttle adjuster on the carburettor to keep the slide high enough to give you a speed of, say, 15 m.p.h. on the level, controlling the machine either by means

miles or so one began to wish for a change of position.

Front suspension is by Powell's own design of telescopic fork, with three bearing surfaces. It is a good fork, and very rigid laterally, though with quite a strong rebound which resulted in a rather jerky action on unmade surfaces. On hard roads the machine rode very well indeed.

Debit marks go to the exhaust system for an over-joyous note and to the fuel consumption. The machine is undeniably thirsty—though it must be borne in mind that it is a prototype. A built-in stop for the pivoting sub-frame carrying the countershaft would obviate a degree of twist if too much back-peddalling pressure is applied when changing gear—an important point since flexure of the frame could cause the pulley to foul the chain stays.

These points apart, however, the "Joybike" is a welcome change from the stereotyped run of Continental machines. It is designed essentially for the utility user, and when it is borne in mind that cycle parts can be replaced for the same cost as the equivalent parts of a pedal cycle and that engine spares cost one-third of those for Continental engines it is obvious that in this newcomer to the moped market its manufacturers have something worthwhile to offer.

CENTAUR.

The POWELL "JOYBIKE" at a GLANCE

Maximum Speed: 26 m.p.h. in 30 sec. from rest.

Economy: 100 m.p.g. at 20 m.p.h.

Braking: From 30 m.p.h.

Both brakes 18ft. Not applicable

Front only 37ft. Not applicable

Rear only 25ft. Not applicable

Load carried during test: 200 lb.

Engine: Trojan two-stroke; 38 mm.

bore x 44 mm. stroke=49.9 c.c.; c.r.

6.5 to 1; 1.02 b.h.p. at 3,500 r.p.m.

Gearbox: Expanding-pulley belt primary

drive giving three speeds and free-

engine position; combined handlebar-

lever and back-peddalling control;

chain final drive; separate pedalling

chain with three-speed Sturmey-

Archer hub gear, handlebar-lever

controlled.

Frame: Tubular open frame, of mixed

construction; rigid rear end; Powell

telescopic front forks.

Tank: 1-gallon capacity.

Lights: Head and tail lamps fed direct

from Wipac flywheel magneto-genera-

tor.

Wheels and Brakes: Hub-type front

brake; rear brake of wedge type,

acting in rim of belt pulley on trans-

mission; both hand controlled;

chromium plated rims and rust-proof

spokes; Dunlop 2.00-in. x 23-in. tyres

at front and rear.

Equipment: Mechanical horn, luggage

carrier; centre stand; front, side

and rear shields; number plates,

licence holder.

Finish: Maroon enamel on shields;

silver on cycle parts; chromium-

plated details.

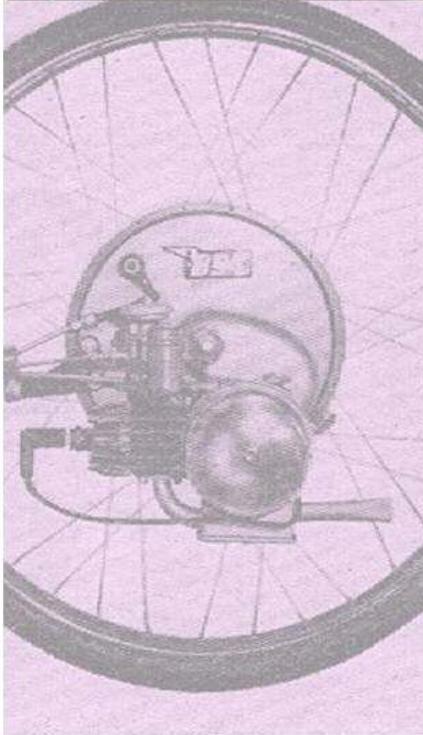
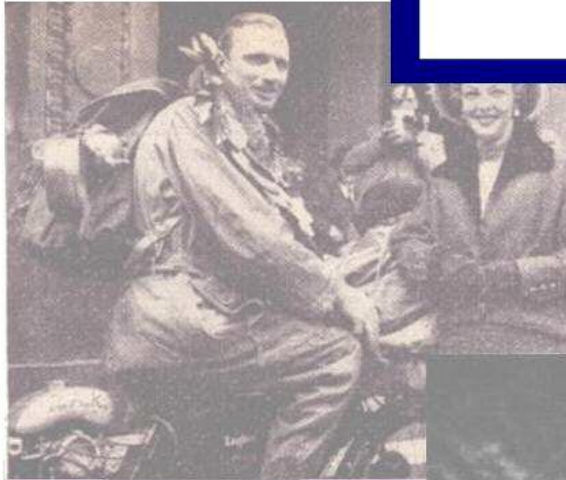
Makers: H. V. Powell (Cycles) Ltd.,

96-98 Birchfield Road, Birmingham,

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Price: £65 inc. P.T.

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