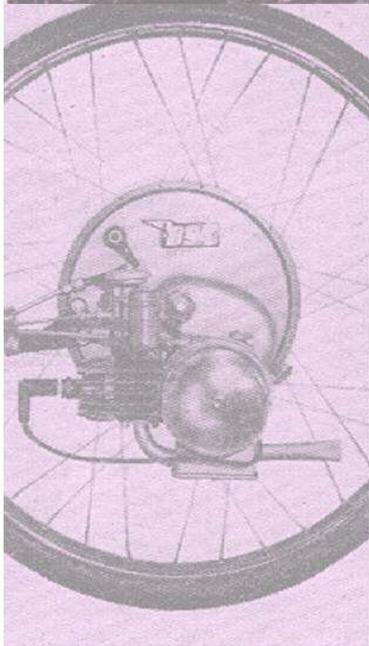
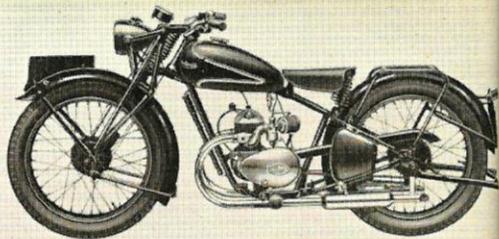


IceniCAM Information Service



Two Francis - Barnetts for 1948



Top: Merlin light-weight.
Bottom: Powerbike with
new forks. Left: Details
of front suspension

NO change is being made in the Francis-Barnett programme for 1948, production being concentrated on the well-tried 98 c.c. Powerbike and the 125 c.c. Merlin.

One or two detail modifications have been introduced, the most notable being new front forks to the Powerbike. Each of the two fork legs of this machine now consists of a single, tapered, tubular D-section blade, which curves slightly in a forward direction at the lower end. Link suspension is adopted, controlled by two pairs of rubber bands. The top and bottom link sets are interchangeable, and each set is made up of a pair of links electrically arc-welded to a distance piece. Lugs for the bottom links are bronze-welded to the fork blades.

Each pair of rubber bands, mounted side by side, has one band within the other, an arrangement which ensures that the springing is progressive in action. When the forks are moderately depressed

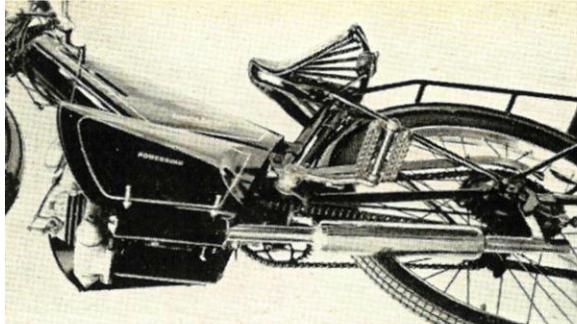
MINOR CHANGES IN 98 c.c. POWERBIKE AND 125 c.c. MERLIN

the outer bands only are stretched, but further depression causes stretching of the inner bands as well.

The lower end of two tubes encircled by the rubber bands passes through an extension of the bottom stem lug. Two large-diameter washers, held in position by split pins, prevent lateral displacement of the rubber. The upper tube is bolted

between the fork blades, a little below the top links. Two flanged thimbles pressed on to its ends hold the bands in position. The headlamp bracket is welded to the centre of the upper tube.

A triple exhaust system is an interesting feature of the Powerbike. This consists of two interconnected expansion chambers, placed side by side, from which gases pass through a short length of exhaust pipe to a normally placed silencer. The latter comprises two pipes, one inside



Worm's-eye view of the Powerbike showing the arrangement of the triple exhaust system

the other, the outer having two baffle plates and the latter, three. Four holes are drilled in the inner pipe near each baffle plate.

Brakes are internal expanding, 4 in rear and 3½ in front. The rear brake is operated by back-peddalling, but is not dependent on the pedal chain. The brake drum is built in the rear wheel separately, and is rod operated by a cam on the bottom bracket spindle. A trip mechanism enables the machine to be moved backwards.

The 98 c.c. Villiers Junior de Luxe single-speed two-stroke engine is slung horizontally beneath the frame, positively fixed to the bottom bracket and firmly bolted to a forward link from the frame. Appearance of the machine is enhanced by the quickly detachable engine shields.

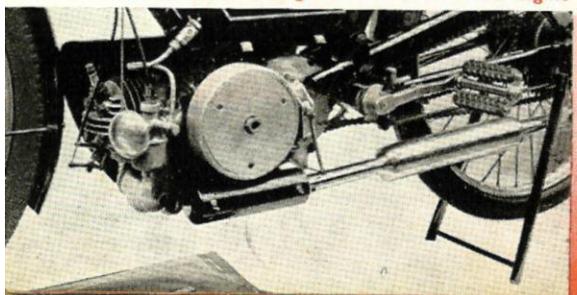
Finish is black with gold lines, with bright parts chromium plated. Dry weight of the machine is about 110 lb (50 kg).

Powered by a 125 c.c. Villiers engine, the Merlin is now fitted with a ribbed front tyre, a change that gives improved steering.

Lubrication is on the petroil system, the tank holding 2½ gal of the mixture. There is also a separate oil tank between the seat stays and chain stays on the near side of the machine. This holds three pints of oil as a reserve supply, and is fitted with a draw-off cock at the bottom.

Rear wheel removal is facilitated by pivoting the rear mudguard at the joint of the seat stays and carriers. Front section of the tubular frame is brazed, and most of the rear section is electrically arc-welded. The front forks operate on the link-action principle with a central

Detachable shields give access to Powerbike engine



spring. Each blade is triangulated, being constructed of three separate tubes, and in the event of damage any of the six lengths may be replaced.

Another noteworthy feature is that the petrol tank may be removed without draining it. The tool box has a shelf which acts as a baffle plate against rattle, and the kit is packed in two separate pouches.

A generous steering lock makes the Merlin extremely manoeuvrable in confined spaces. Footrests and rear brake pedal are adjustable to individual requirements.

The engine has an integral three-speed gearbox, with ratios of 8.1, 13.4 and 23.6 to one. Internal expanding brakes, each 5 in in diameter, are fitted front and rear.

Ignition is by Villiers flywheel magneto, with Villiers direct lighting and parking battery in the headlamp.

Finish is black, lined with gold, with chromium plating to certain parts. Dry, the machine weighs approximately 178 lb (81 kg).

The Powerbike is listed at £44 and the Merlin at £66. Speedometers at £3 3s 6d are fitted as an extra.

Makers are Francis & Barnett, Ltd., Lower Ford Street, Coventry.

Production Incentive

MANY firms found during wartime that offering facilities to their workers for seeing finished products for which they were making various smaller parts gave an added incentive to the efforts put into their production drive.

At the Hercules cycle works in Birmingham, this method is being applied to peacetime production for export, and thousands of their workers now have an opportunity of seeing the completed and final production. In a suitable part of the factory a showcase has been erected displaying one of the latest Hercules sports models against the background of a country scene. Notice boards on either side give details of factory activities and other official information. The display has aroused considerable interest among the workers, many of whom have expressed their appreciation of it.