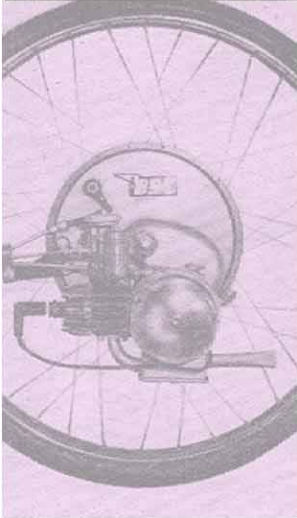


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FRANCIS-BARNETTS for NEXT SEASON

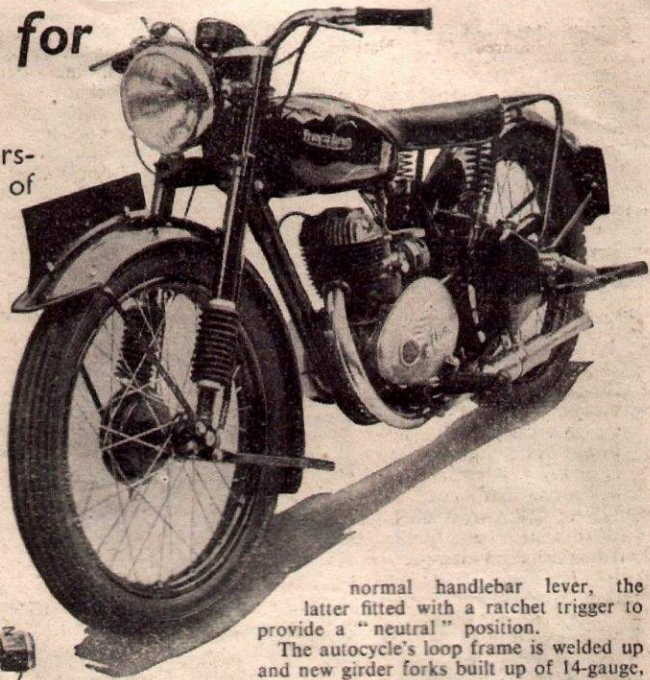
A Redesigned Autocycle and Four Villiers-engined Models Comprise Programme of Utility Machines

FIVE machines continue to represent the range of models offered by Francis and Barnett, Ltd., of Lower Ford Street, Coventry, for 1950. Two of them are the 122 c.c. "Merlins" and, according to whether they are fitted with direct lighting from the Villiers flywheel generator or rectified charging current to a wet battery, they are designated as models 52 or 53. A further two machines are the 197 c.c. "Falcons" which, for the same reasons, appear in the catalogue as 54 or 55.

This quartet are all high-grade utility lightweights, the fifth model in the range being the redesigned "Powerbike" autocycle which was illustrated in this journal on June 30 last.

All machines have Villiers two-stroke engines, the larger four models incorporat-

(Right) The 197 c.c. "Falcon" model 55 with rectified A.C. lighting. (Below) The new autocycle, the "Powerbike."



ing the well-known built-in, foot-operated, three-speed gearboxes. The smallest machine has the Mark 2F 98 c.c. engine, embodying primary drive by an enclosed chain to a clutch and countershaft, which was introduced by Villiers last year. The cylinder of the last-mentioned unit is inclined.

Dealing first with the motorcycles, these are identical, save for engine size, and are practically unaltered from their 1949 prototypes. A few minor modifications have been introduced and the gear ratios have been altered. Among the former may be mentioned that the saddle can now be set for tilt and height, three positive positions having been provided at the nose-support, and adjustable spring posts at the rear.

So far as gear ratios are concerned, these are now as follows:—"Merlin," 7.18, 10.0 and 19.0 to 1; "Falcon," 5.87, 8.2 and 15.6 to 1; and "Powerbike," 11 to 1.

The appearance of the motorcycle models has been improved by fitting a slightly altered handlebar bend and by providing a polished wing motif on the dull-finished surface of the cast aluminium oilbath primary chaincase.

As will be remembered, both "Falcons" and "Merlins" have Francis-Barnett telescopic forks, the exposed portions of the sliders being enclosed in neat dirt-excluding bellows. The use of 20-in. three-rate springs permits of a total movement of more than 5 ins. and provides exceptionally smooth riding.

At the other end the familiar detachable rear number plate-cum-mudguard extension is retained to facilitate wheel removal.

The greatest interest in the 1950 range

lies in the new "Powerbike." As in the case of earlier models, the appearance and utilitarian qualities of this neat little autocycle are enhanced by the detachable shields which enclose the power unit—a new Mark 2F 98 c.c. Villiers, having a light-alloy detachable cylinder head. The flywheel-magneto-generator and the drive to the countershaft are both on the offside of the crankshaft.

This engine was fully illustrated and described in "Motor Cycling" on October 21 last, from which it will be remembered that the crankshaft has three bearings, the shaft proper being supported on two ball-races with an outrigger bush between the sprocket and the generator. The power output of this little engine is now said to be remarkably high.

The two-plate clutch is operated by a

normal handlebar lever, the latter fitted with a ratchet trigger to provide a "neutral" position.

The autocycle's loop frame is welded up and new girder forks built up of 14-gauge, $\frac{1}{2}$ -in. diameter tubing are strengthened at the ends and in the centres by welded-on plates. Rubber bands form the spring elements in the manner now becoming increasingly popular with many makes of machines both at home and abroad.

The $\frac{1}{2}$ -gallon drawn-steel petroil tank is constructed in two separate halves, stitch-welded together. This method serves to avoid localization of heat during manufacture with, consequently, less risk of distortion or cracking. A new design of petroil tap, giving a reserve of three pints, and a better layout of the fuel line, are fitted.

No jockey sprocket is included; instead the tension of the pedalling chain is adjusted by means of a swinging crank bracket with positive locking device.

Happier night riding is ensured by the adoption of a 12-watt head-lamp bulb—double the power of that previously used, the output of the generator having been improved to cope with the increased load.

A large motorcycle-type saddle, 21 ins. by 2.25 ins., Dunlop tyres, a substantial carrier, fully rubber-covered pedals and a tubular tool box, complete the specification of this very attractive little brother of the motorcycle in which every detail speaks of sound construction and an ability, common to all the Francis-Barnett range, to give long service with the very minimum of attention.

Up to the time of going to press the 1950 prices had not been fixed.

On the "Powerbike," a loop frame, the Villiers Mark 2F engine, a new fuel tap, improved rear brake control and adjustable pedal-crank bracket are notable features.

