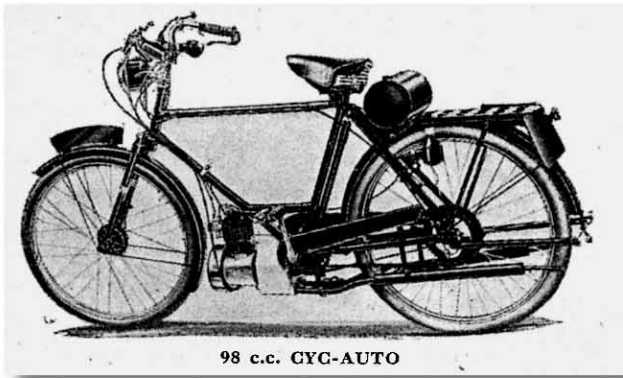


The Motor Cycle, October 24th. 1940

Potted Reviews of the Various Ranges :



98 c.c. CYC-AUTO

Cyc-Auto

Ingenious Bicycle-type Machines Incorporating a 98 c.c. Scott Two-stroke Engine

IN both appearance and design the Cyc-Auto is, of all auto-cycles, the nearest approach to a bicycle. The 98 c.c. Scott two-stroke is mounted in front of the bottom bracket with its crankshaft in line with the frame and drives the back wheel by a reversible worm gear and chain. A series of transfer ports is provided in the chromium cast-iron wear-resisting cylinder; the piston has a conical, symmetrical crown and is made of aluminium.

An outstanding feature of the engine is that it is a two-stroke which will not four-stroke; it may misfire at speeds below about 12 m.p.h. with the machine running light, but there is no four-stroking. The engine is both free from fuss and vibration. On a recent test which *The Motor Cycle* carried out the consumption of petrol worked out at 160 miles to the Imperial gallon of petrol—which means approximately 170 m.p.g. of petrol! This was at a speed of 20-22 m.p.h. over an undulating road. The maximum speed is some 30 m.p.h.

A clutch is fitted on all models, which include open-framed and "Gent's"-framed De Luxe machines and a tradesman's carrier.

(Cyc-Auto Works Co., 381, Uxbridge Road, London, W.3)

Excelsior

The Very Popular "Autobik" : Well-made Lightweight Two-strokes and the Famous Manxman Range

THE name "Excelsior" conjures up thoughts of road races—of wins in the Tourist Trophy and other famous International events; it also brings to mind a remarkable series of two-stroke lightweights which have earned fame for themselves in every part of the world. War or no war, the famous "Manxman" models are still being made, even in small numbers. These are overhead-camshaft super-sports machines of 250, 350 and 500 c.c.

Numerically, the De Luxe model "Autobik" holds pride of place. This has the flat-topped piston Villiers autocycle unit, with all that means in form of economy and lasting qualities, and ingenious plunger-type sprung front forks, which are especially notable for the fact that they have no hinged joints and, secondly, the springing is adjustable.

Next in order of popularity comes the well-made 125 c.c. lightweight, Model K.O., which has the Villiers engine-gear unit—a fully fledged motor cycle with a performance which is little short of amazing. This machine, incidentally, has 3-in. section tyres and a 2½-gallon fuel tank. Another model with a large following is the "K.1 Pioneer," which has a 148 c.c. two-stroke engine and a separate three-speed gear box. This machine is also available as the "K.D.1," the "D" standing for separate dynamo lighting. The "K.1," it should be added, has direct lighting from the flywheel magneto.

(Excelsior Motor Co., Ltd., Birmingham, 11)

Francis-Barnett

A Firm that has Made a Speciality of Two-stroke Lightweights : Attractive "Powerbike" and "Snipe" Models : The All-enclosed "Cruiser"

WITH the present big demand for economical lightweights the two most popular Francis-Barnetts are the "Powerbike" and the 125 c.c. "Snipe." The former, as its name implies, is an autocycle—a particularly attractive one incorporating a number of ingenious, well-proved features. The



98 c.c. de Luxe EXCELSIOR Autobik

engine is the De Luxe Villiers autocycle unit, which is of flat-topped piston design and capable of propelling the machine 140 miles on a gallon of petrol. This is housed in an open-type frame and has on each side neat, effective engine shields, free from any drumming. Maximum speed is about 30 m.p.h., and the machine is capable of breasting hills even as steep as 1 in 7 without any pedal assistance.

The "Snipe" is on different lines; it is a true motor cycle and, while small and light—it only weighs 125 lb. unladen—accommodates a 6ft. rider in reasonable comfort and, in its bottom gear of 22.7 to 1, will climb practically any hill that provides wheelgrip. The machine is also outstandingly economical, 140 m.p.g. being a fair claim, which, as the tank holds two gallons, gives a remarkable touring range. The engine is the 125 c.c. Villiers, built in unit with a three-speed gear.

Two "Cruiser" models are made; both are of 250 c.c., and one has the deflectorless Villiers two-stroke engine and the other the more cart-horse-like deflector-piston model. These machines constitute the best protected motor cycles on the market, with their clever built-in engine enclosing shields, leg-shields and very effective mudguards. There are also 98, 148 and other 249 c.c. Villiers-engined two-strokes available.

(Francis and Barnett, Ltd., Lower Ford Street, Coventry)



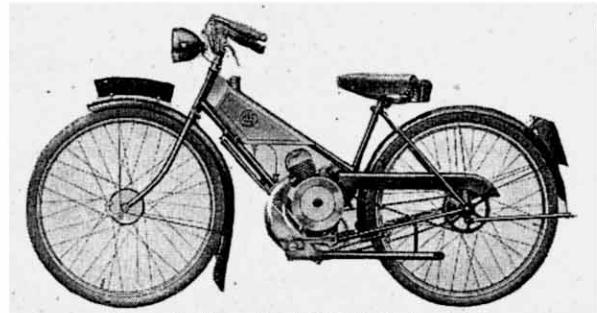
H.E.C.

A Neat Autocycle Fitted with an 80 c.c. Levis Engine

AN interesting feature of the H.E.C. Power Cycle is that it is fitted with a Levis engine, a two-stroke of 80 c.c. This has a detachable aluminium cylinder head and, unusual in a two-stroke, roller bearings on both sides of the crankshaft, as well as a roller big-end. Features of this neat little autocycle are a clutch, a welded-steel fuel tank of $1\frac{1}{2}$ gallons capacity, a spring-up rear stand, and the recently introduced larger brakes and stronger hubs.

A point which the makers emphasise is the ease with which the complete unit can be removed when, eventually, the time comes for an overhaul. Then if the tank and number plates are taken off the owner has, in effect, a normal pedal cycle.

(H.E.C. Power Cycles, Ltd., Levis Works, Stechford, Birmingham, 9)



80 c.c. Levis-engined H.E.C. Power Cycle

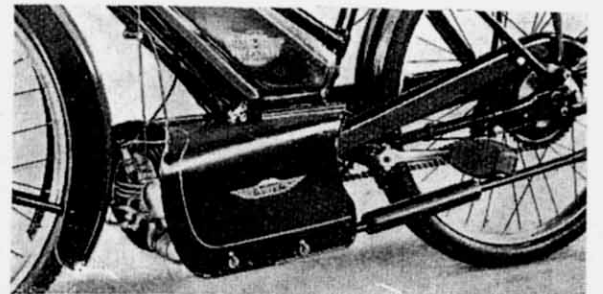
James

A True De Luxe Autocycle : Wide Range of Well-made Lightweights

VERY important side of the James programme is the two "Auto-Cycles," beautifully made machines which have achieved remarkable success. Both machines, the "Standard" and the "De Luxe," are fitted with the De Luxe type of Villiers autocycle unit, which employs a flat-topped piston and is famed for its slogging power and economy. The "De Luxe" model more than lives up to its name, for the specification includes a speedometer, a resilient mounted handlebar, engine shields, a well-balanced front mudguard, a guard for the pedal chain and a chromium-plated tank.

On the motor cycle side the makers of the James for many years have had a great name for their exceptionally good-steering lightweight two-strokes, which are well made and magnificently finished. All models have Villiers engines, and the sizes listed are 98, 125, 148, 197 and 247 c.c. The most popular among overseas buyers are the "L.12" and "L.17." Each of these is fitted with a Villiers engine built in unit with a three-speed gear box. The "L.17" is available with a cylinder capacity of either 98 or 125 c.c., while the "L.12" is of 197 c.c. Among the features of the latter model are a tank of no less than three gallons capacity, 3in.-section tyres, a carrier, valanced mudguards and a dual exhaust system. This machine, incidentally, has a 5 $\frac{1}{2}$ in. ground clearance.

(James Cycle Co., Ltd., Greet, Birmingham, 11)



JAMES 98 c.c. de Luxe Autocycle

New Hudson

A Well-made Autocycle with a Number of Special Features

THE makers of the New Hudson have recently re-entered the motor cycle world with a beautifully finished and well-designed autocycle. This has the de luxe Villiers engine unit of 98 c.c., mounted in a sturdy frame, by means of a special cast bracket. A valuable feature of the machine is that the rear fork ends are of the forward drop-out type, which renders rear wheel removal particularly easy. The rear wheel, incidentally, is built with 11-gauge spokes and is, the makers claim, the sturdiest rear wheel employed in any autocycle.

Other features of the machine are a patented shock absorbing handlebar stem incorporating cushion rubbers, a two-piece heavy gauge steel tank with only one welded seam, stout chain guards over both the pedalling and driving chains, and a strong luggage carrier of really sensible size.

(New Hudson, Ltd., Garrison Lane, Birmingham, 9)



98 c.c. New Hudson "Auto"



Norman

An Autocycle with Motor Cycle Front Forks : A Sturdy,
Well-made Lightweight

IN the forefront of the Norman range are three "Motobyks." A unique feature of the De Luxe model is that it is fitted with a lightweight motor cycle type of spring fork. This is of pressed-steel design, with a central compression spring. The Standard model is similar in general design except that it has normal bicycle-type front forks. There is also a tradesman's carrier model "Motobyk." This, incidentally, has a slightly lower gear than the personal transport models, namely, 13.0 to 1 as against 11.75 to 1. Each of these machines has the 98 c.c. De Luxe type of Villiers autocycle unit, which, as compared



98 c.c. NORMAN "Motobyk"

with the standard Villiers unit, has a detachable cylinder head, a flat-topped piston and a more powerful flywheel lighting set. Internal expanding brakes are fitted to all models.

The range is completed by a sturdy lightweight motor cycle fitted with a three-speed Villiers engine-gear unit, which can be of 125 c.c. or 98 c.c. at option. This machine weighs approximately 125 lb. and is stated to have a maximum speed of 40 to 45 m.p.h. Among the features are 3in.-section tyres, legshields, a 1 $\frac{3}{4}$ -gallon welded-steel tank and adjustable handlebars. Average petrol consumption, it is claimed, is 125 miles per gallon.

(Norman Cycles, Ltd., Ashford, Kent)