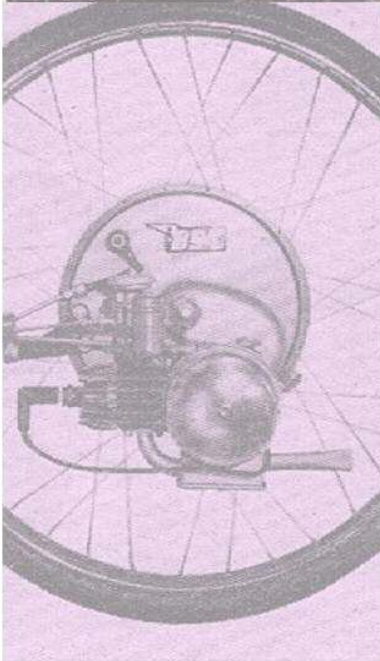


IceniCAM Information Service



www.icenicam.org.uk



IN view of the variety of layouts favoured for cyclemotor units, considerable interest attaches to the fact that the B.S.A. concern, for its first venture into the field, favours a powered wheel. The Winged Wheel, as the B.S.A. 35 c.c. engine-wheel unit is called, is neat yet functional in appearance. No attempt has been made to enclose the engine.

A feature reflecting appreciation of the demands made by speeds higher than those normal for bicycles is the provision of a 9½-in-diameter internal expanding brake in the hub casing. Ignition is by Wico-Pacy flywheel magneto incorporating a lighting coil which provides current for headlamp and tail light. A clutch is fitted, and is controlled by a handlebar lever embodying a ratchet to hold it out of engagement as required.

Considering the small capacity of the engine, comfortable

INFORMATION PANEL

ENGINE: 35 c.c. (36 x 34 mm) two-stroke, with cast-iron cylinder barrel and detachable, light-alloy cylinder head. Petroil lubrication.

CARBURETTOR: Amal, with automatic strangler control. Handlebar lever control for throttle.

IGNITION and LIGHTING: Wico-Pacy flywheel magneto with lighting coil.

FUEL CAPACITY: ½ gallon.

PETROIL CONSUMPTION: All in, under hard-riding conditions, approximately 135 m.p.g.

WEIGHT OF UNIT: 26½ lb (including wheel).

BRAKE: 9½ in diameter, internal expanding.

ROAD TAX: 17s 6d a year; 4s 10d a quarter.

PRICE: £25.

MANUFACTURER: B.S.A. Cycles, Ltd., Small Heath, Birmingham, 11.

cruising speeds permitted by the Winged Wheel were commendably high. Speeds of between 20 and 25 m.p.h. were well within the capabilities of the unit; indeed, as is usually the case, the combination of small saddle, rigid front fork and slim tyres was the limiting factor, rather than engine performance.

The gear ratio of 18.7 to 1 is well suited to the engine characteristics: it proved sufficiently high for there to be no indication of fuss at the highest possible cruising speed, yet low enough to provide excellent climb and easy starting.

Provided that there was little unfavourable wind, long, gradual inclines could be surmounted without losing more than 5 m.p.h. A really stiff headwind had to be met before even light pedal assistance was required on such gradients. A hill approximately three-quarters of a mile long, with a gradient in the region of 1 in 14, could be climbed with only moderate pedalling effort on the part of the rider. The first 50 yards of such a hill would normally induce the average cyclist to dismount and walk.

Vibration was virtually non-existent at all speeds. The exhaust note, above 20 m.p.h., was rather sonorous but never objectionable. Fuel consumption, under give and take, town and country riding, averaged 135 m.p.g.

A definite, unvarying routine was found to give the most satisfactory results when starting the Winged Wheel from cold. After the fuel had been turned on and the throttle lever moved to the extreme left to operate the automatic strangler device, a few seconds were allowed for the float chamber to fill (no tickler

Road Tests of New Models

B.S.A. Winged Wheel

Excellently Engineered 35 c.c. Unit with Gear Drive and Internal Expanding Brake

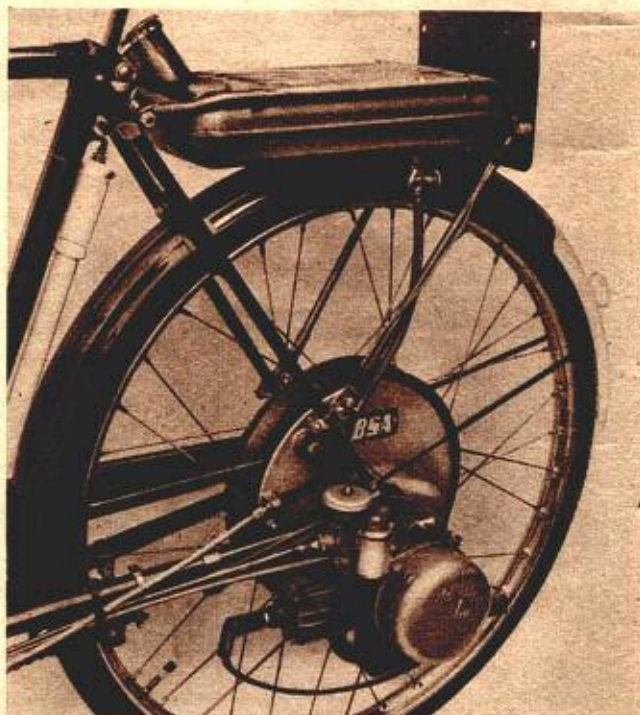
is provided on the miniature Amal carburettor) before pedalling off. As soon as a speed equivalent to that of fast walking was attained, the clutch was engaged. The engine was then permitted to run for about a 100 yards with the choke in use, before the throttle lever was returned to its normal arc of movement.

At speeds above, say, 4 m.p.h., the engine would pull strongly and without fuss. Below that speed power delivery was no more than would be expected from an engine of only 35 c.c., and light pedal assistance was advisable, even if not entirely necessary. Transmission smoothness was of a high order at all but the lowest speeds, when slight harshness was apparent.

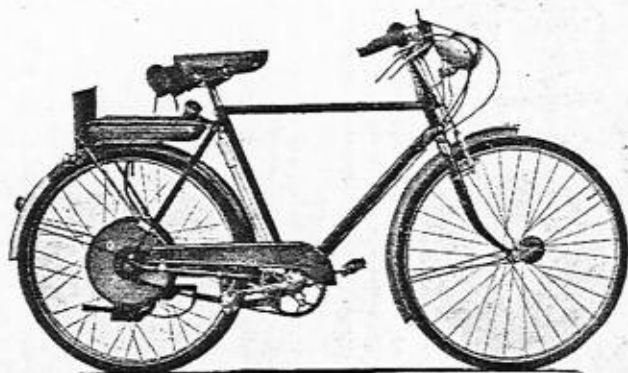
The Winged Wheel was fitted in a B.S.A. roadster cycle of sturdy construction and equipped with stirrup-type brakes front and rear. As delivered, the operating lever for the rear hub brake was clipped on the right handlebar, above the front stirrup-brake lever. With this arrangement it was impossible to apply the front brake and the rear hub brake together; however, it was decided to retain the standard layout, since of the two rear brakes the stirrup brake was the more powerful. For normal stopping purposes, the front and rear stirrup brakes were used together. The hub brake on the test model lacked real power, though a slight improvement was apparent after about 100 miles had been covered. Its real merit came to light when the bicycle was ridden in rain. Whereas the stirrup brakes lost power, the internal expanding brake retained its normal efficiency.

The headlight was found to be adequate for the speeds of which the machine was capable. A good, constant beam of light was obtained at low engine revolutions. A dry battery in the headlamp supplies current for a parking light.

Many times during the course of the test, favourable comment was received from motor cyclists and cyclists alike on the trim appearance and attractive beige enamel finish of the Winged Wheel. After many miles of hard riding, the unit remained commendably clean externally.



The hub of the Winged Wheel incorporates a 9½-in-diameter, internal-expanding brake



IN view of the variety of layouts favoured for cyclemotor units, considerable interest attaches to the fact that the B.S.A. concern, for its first venture into the field, favours a powered wheel. The Winged Wheel, as the B.S.A. 35 c.c. engine-wheel unit is called, is neat yet functional in appearance. No attempt has been made to enclose the engine.

A feature reflecting appreciation of the demands made by speeds higher than those normal for bicycles is the provision of a 9½-inch diameter, internal-expanding brake in the hub casing. Ignition is by Wico-Pacy flywheel magneto incorporating a lighting coil which provides current for headlamp and tail light. A clutch is fitted, and is controlled by a handlebar lever embodying a ratchet to hold it out of engagement as required.

Considering the small capacity of the engine, comfortable

INFORMATION PANEL

ENGINE: 35 c.c. (36 x 34 mm) two-stroke, with cast-iron cylinder barrel and detachable, light-alloy cylinder head. Petroil lubrication.

CARBURETTOR: Amal, with automatic strangler, control. Handlebar lever control for throttle.

IGNITION and LIGHTING: Wico-Pacy flywheel magneto with lighting coil.

FUEL CAPACITY: ½ gallon.

PETROIL CONSUMPTION: All in, under hard-riding conditions, approximately 135 m.p.g.

WEIGHT OF UNIT: 26½ lb (including wheel).

BRAKE: 9½-in-diameter, internal expanding.

ROAD TAX: 17s 6d a year; 4s 10d a quarter.

PRICE: £25.

MANUFACTURER: B.S.A. Cycles Ltd., Small Heath, Birmingham, 11

cruising speeds permitted by the Winged Wheel were commendably high. Speeds of between 20 and 25 m.p.h. were well within the capabilities of the unit; indeed, as is usually the case, the combination of small saddle, rigid front fork and slim tyres was the limiting factor, rather than engine performance.

The gear ratio of 18.7 to 1 is well suited to the engine characteristics; it proved sufficiently high for there to be no indication of fuss at the highest possible cruising speed, yet low enough to provide excellent climb and easy starting.

Provided that there was little unfavourable wind, long, gradual inclines could be surmounted without losing more than 5 m.p.h. A really stiff headwind had to be met before even light pedal assistance was required on such gradients. A hill approximately three-quarters of a mile long, with a gradient in the region of 1 in 14, could be climbed with only moderate pedalling effort on the part of the rider. The first 50 yards of such a hill would normally induce the average cyclist to dismount and walk.

Vibration was virtually non-existent at all speeds. The exhaust note, above 20 m.p.h., was rather sonorous but never objectionable. Fuel consumption, under give and take, town and country riding, averaged 135 m.p.g.

A definite, unvarying routine was found to give the most satisfactory results when starting the Winged Wheel from cold. After the fuel had been turned on and the throttle lever moved to the extreme left to operate the automatic strangler device, a few seconds were allowed for the float chamber to fill (no tickler is provided on the miniature Amal carburettor) before pedalling off. As soon as a speed equivalent to that of fast walking was attained, the clutch was engaged. The engine was then permitted to run for about 100 yards with the choke in use, before the throttle lever was returned to its normal arc of movement.

First published 15 October 1953

B.S.A. Winged Wheel

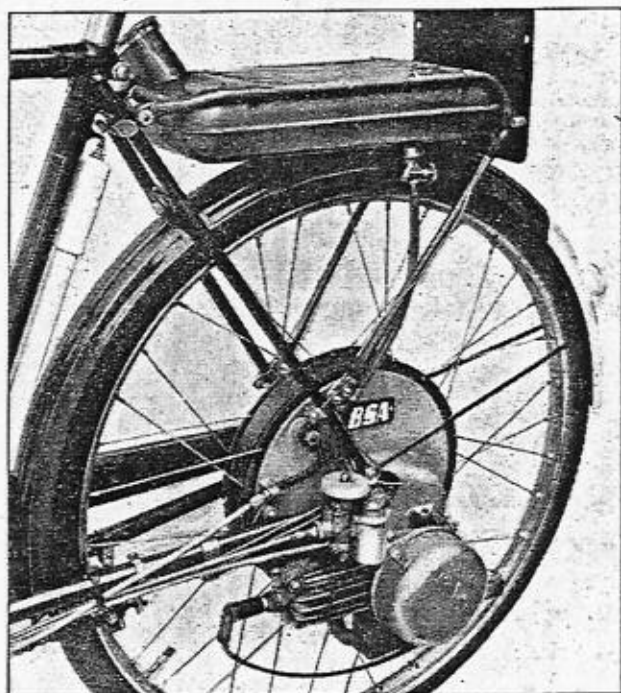
Excellently Engineered 35 c.c. Unit with Gear Drive
and Internal-expanding Brake

At speeds above, say, 4 m.p.h., the engine would pull strongly and without fuss. Below that speed power delivery was no more than would be expected from an engine of only 35 c.c., and light pedal assistance was advisable, even if not entirely necessary. Transmission smoothness was of a high order at all but the lowest speeds, when slight harshness was apparent.

The Winged Wheel was fitted in a B.S.A. roadster cycle of sturdy construction and equipped with stirrup-type brakes front and rear. As delivered, the operating lever for the rear hub brake was clipped on the right handlebar, above the front stirrup-brake lever. With this arrangement it was impossible to apply the front brake and the rear hub brake together; however, it was decided to retain the standard layout, since of the two rear brakes the stirrup brake was the more powerful. For normal stopping purposes, the front and rear stirrup brakes were used together. The hub brake on the test model lacked real power, though a slight improvement was apparent after about 100 miles had been covered. Its real merit came to light when the bicycle was ridden in rain. Whereas the stirrup brakes lost power, the internal-expanding brake retained its normal efficiency.

The headlight was found to be adequate for the speeds of which the machine was capable. A good, constant beam of light was obtained at low engine revolutions. A dry battery in the headlamp supplies current for a parking light.

Many times during the course of the test, favourable comment was received from motor cyclists and cyclists alike on the trim appearance and attractive beige enamel finish of the Winged Wheel. After many miles of hard riding, the unit remained commendably clean externally.



The hub of the Winged Wheel incorporates a 9½-in-diameter, internal-expanding brake