No. 846,212. PATENTED MAR. 5, 1907.

W. C. JOHNSON.

MOTOR CYCLE.

APPLICATION FILED NOV. 26, 1906.

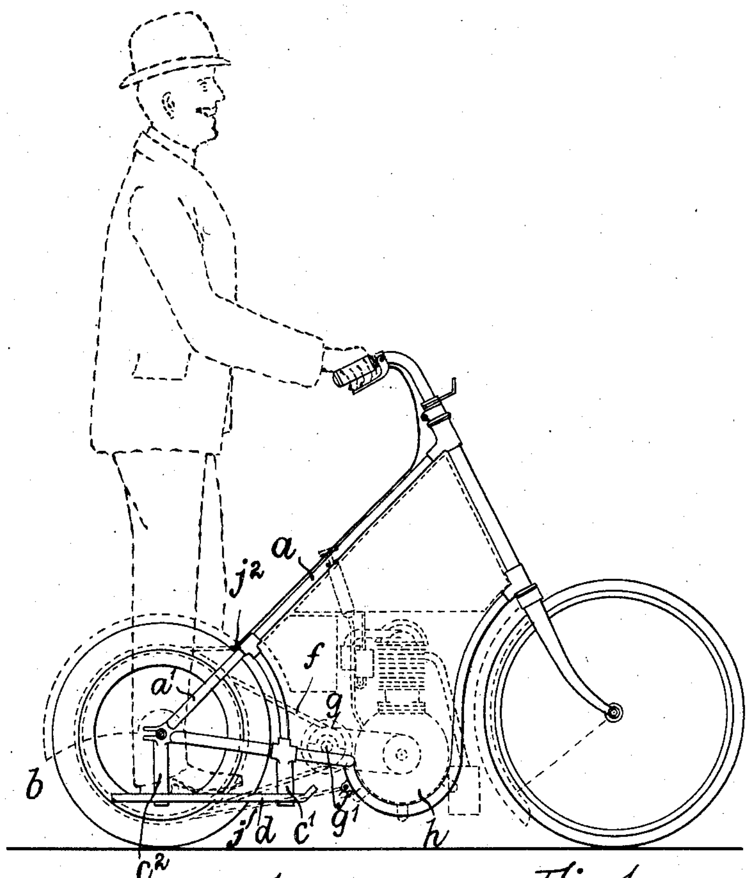

Fig. 1.

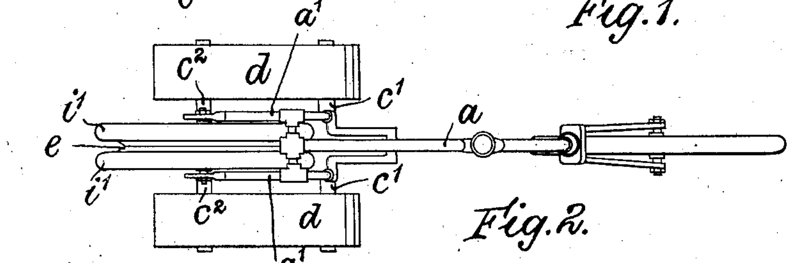

Fig. 2.

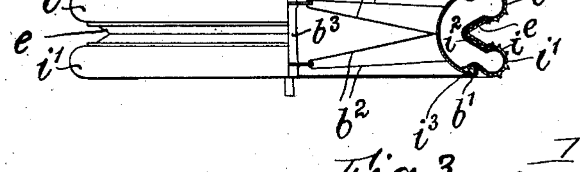

Fig. 3.

Attest:

C. S. Maxwell

Edward N. Sarton

Inventor

Walter C. Johnson

by Richards & Co

Att'ys.

UNITED STATES PATENT OFFICE.

WALTER CLAUDE JOHNSON, OF COLEMANS HATCH, ENGLAND.

MOTOR-CYCLE.

No. 846,212. Specification of Letters Patent. Patented March 5, 1907.

Application filed November 26, 1906. Serial No. 345,196.

To all whom it may concern:

Be it known that I, WALTER CLAUDE JOHNSON, subject of the King of Great Britain, residing at Broadstone Farm, Colemans Hatch, in the county of Sussex, England, have invented new and useful Improvements in Motor-Cycles, of which the following is a specification.

This invention relates to a motor-cycle the arrangement of the parts of which is such as to conduce to special economy in construction and safety in use.

A leading feature of the invention consists in the adoption of such proportions and relative disposition of the parts that the rider stands more or less exactly erect, with his feet raised only a little above the surface of the road.

Both the front steering-wheel and the rear driving-wheel are of comparatively small diameter, the latter being made with twin rims or treads, between which is mounted a motor-driven wheel, whereby a propelling effort is derived from the motor by a pitch-chain or band.

The frame is **A**-shaped, the bar connecting the two legs being placed low down and adapted to carry the motor.

On the accompanying drawing is shown a motor-cyclette constructed in accordance with the foregoing description.

In this drawing, Figure 1 is an elevation showing the general arrangement of the parts of the machine. Fig. 2 is a plan in which the mud-guard of the driving-wheel, the motor, and the handle-bar are removed; and Fig. 3 is an enlarged view of the driving-wheel, half in plan and half in section.

According to these figures it will be seen that the distinctive features of the cyclette is its adaptability to carry at the lower forked end a' of its back leg a a comparatively wide-rimmed driving-wheel b, formed with twin treads, and to provide supports c' c^2 for a foot-rest d on each side of the wheel, the foot-rests d d being raised only a few inches above the level of the road. A second important feature of the contrivance consists in the driving arrangements. In the neck between the two treads a wheel-rim e is pneumatically supported. This rim (shown in the drawing as of **V**-section) is embraced by a band f, which also partially wraps a pulley g, which is secured to a counter-shaft g', which by means of a pitch-chain and a pair of chain-wheels is driven by the motor h. The elastic mounting of the wheel-rim e thus obtained will serve to maintain a suitable tension on the driving-band f to prevent slip.

In the deflated condition of the pneumatic tire the wheel-rim e can be easily inserted within the hollow of the rim of the wheel b and around the outside of the middle of the width of the tire-cover i. The flexible cover i is made of appropriate lengths of periphery at the various parts of its width to enable it when inflated to have a cross-profile, as shown in Fig. 3, there being two fortified treads i' i', a neck i^2 between the treads, adapted to fit the interior of the wheel-rim e, and fortified edges i^3 i^3, whereby a secure attachment may be made with the overhanging edges b' b' of the rim of the wheel b.

A suitable form of braking arrangement may be adopted, such as is at present employed by bicycles, or, alternatively, a brake-band j may be adjustably secured to the frame at j' and carried around the outside of the driving-band f, to be attached at j^2 to a Bowden transmission organ, which is operated by a hand-lever on the handle-bar in the usual way.

b^2 b^2 are wire spokes whereby the rim of the driving-wheel b is secured to the hub b^3.

The employment of a twin-tread driving-wheel in the present invention in which the center of gravity of the machine and rider is comparatively low and, on account of the standing attitude of the rider, is easily shifted laterally will enable the cycle to stand erect when at rest, and the normal liability to skid will be lessened, and by inclining onto one rim when rounding a corner the rider will be able to still further lessen the liability to skid on account of the non-central situation of the supporting-rim.

On account of his erect position the rider will be able to incline his body so as to regulate the pressure on the steering-wheel to the desired degree for safety against skidding and for efficiency in propulsion.

I claim—

A motor-cycle having a front steering-wheel and a twin-tread rear driving-wheel of less diameter than the steering-wheel, a suitable frame in which said wheels are journaled,

a motor carried within said frame, operating connections from the motor to said driving-wheel, and a foot-platform located upon each side of the rear wheel below the axis thereof, upon which the rider may stand astride of the rear wheel and readily mount and dismount therefrom, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER CLAUDE JOHNSON.

Witnesses:
F. H. LANE,
H. D. JAMESON.