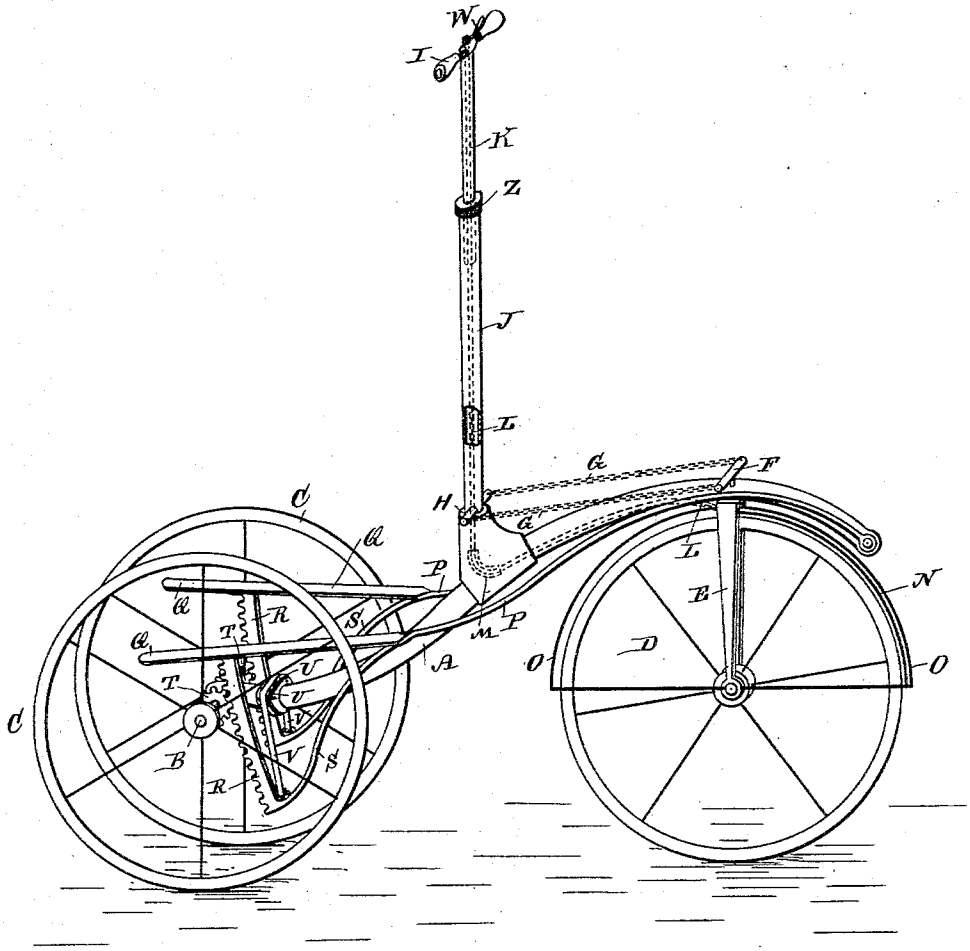
(No Model.)

T. P. & J. B. HALL.

TRICYCLE.

No. 325,338. Patented Sept. 1, 1885.



WITNESSES:

Theo. G. Hoster.

C. Sedgwick

INVENTOR:

T. P. Hall

J. B. Hall

BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

TOMAS P. HALL AND JAMES B. HALL, OF TORONTO, ONTARIO, CANADA.

TRICYCLE.

SPECIFICATION forming part of Letters Patent No. 325,338, dated September 1, 1885.

Application filed January 5, 1885. (No model.)

To all whom it may concern:

Be it known that we, TOMAS P. HALL and JAMES B. HALL, both of Toronto, in the Province of Ontario and Dominion of Canada, have invented a new and improved Tricycle, of which the following is a full, clear, and exact description.

The object of our invention is to provide a new and improved tricycle which is simple in construction and can be operated, steered, and controlled very easily.

The invention consists in the combination, with a reach or tube, of driving-wheels and levers for operating them, foot-boards on the levers, racks on the foot-boards, and pinions on the shaft.

The invention also consists in the combination, with the reach, and driving and steering wheels, of an upright steering-tube on the reach, which tube is connected with the steering-wheel.

Reference is to be had to the accompanying drawing, forming a part of this specification, in which a perspective view of our improved tricycle is shown.

The reach or tube A is curved, as shown, and in the rear end the transverse shaft B is journaled, on the ends of which the rear driving-wheels, C, are mounted. The steering-wheel D is pivoted in a fork, E, swiveled on the reach near the front end, the top pivot of the fork passing through the reach and being provided with a cross-piece, F, connected by wires or chains G with a cross-piece, H, on a vertical tube, J, arranged to turn on its longitudinal axis at or near the middle of the reach. A tube, K, in the tube J is provided on its top with a cross-handle, I, and through the two tubes J K a wire or chain, L, passes, which also passes through a bent tube, M, at the connection of the tube J and the reach, and is connected with the upper end of a quadrant brake-band, N, having its lower end secured to the front of a semicircular guard or frame, O, surrounding the upper part of the wheel D, and secured on the fork E.

The upper end of the wire or chain L is connected with a lever on the cross-piece or handle I. The tube K can be adjusted higher or lower in the tube J, as the person may desire, and the wire or chain L must be adjusted accordingly. A lever, P, is pivoted to each side of the reach A, at the front, and to the rear parts of the said levers the foot-boards Q are secured, one at each side of the reach or tube.

Segmental racks R are secured to the under sides of the foot-boards, and are braced at the free lower ends by brace-rods S. The racks R engage with pinions T, mounted loosely on the shaft or axle B. Pulleys U are arranged on the sides of the reach A, and over them a strap or chain, V, passes, which is connected with the lower parts of the two racks, or with the brace-rods S.

The pinions T are provided with noiseless clutches, of the usual construction, so that they only revolve the shaft when the racks R move down.

The hubs of the wheels also contain noiseless clutches, so that the wheels can only revolve when the axle revolves toward the front.

The operation is as follows: The person places one foot on each foot-board Q, grasps the handle or cross-piece I, and works the levers Q up and down by alternately bringing the weight of his body upon the foot-board. The descending foot-board raises the other foot-board. The racks R engaging with the pinions T, revolve the shaft B and the wheels on the same. By pulling down the end of the lever W the free upper end of the brake-band N is pressed against the rim of the wheel D, and thus the speed of the tricycle is checked.

By arranging the levers P and driving devices in the manner shown and described, the weight of the body is not brought upon the pivots of the said levers, but upon the rear axle, on which the driving-wheels are mounted.

The upper end of the tube J is preferably slitted, and a nut or ring, Z, is screwed on the upper end of the tube J, and is used to clamp the split ends of the tube J firmly against the tube K, thus locking the tube K firmly in the desired position. In place of the ring or nut any other desired device can be used for locking the tube J on the tube K.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a tricycle, the combination, with the reach or tube A, of driving-wheels and foot-

levers for operating them, the steering-wheel D, the guard-frame O on the same, and the brake-band N, held to the said frame in front of the wheel and to a chain or wire connected with the brake-lever, substantially as herein shown and described.

2. In a tricycle, the combination, with the reach or tube A, of driving-wheels and foot-levers for operating them, vertical tubes on the reach and adapted to turn on their longitudinal axes, a brake-lever, W, on the said tube, and the brake-chain or wire L, connected with the lever W and with the brake, and passed through the above-mentioned tubes, substantially as herein shown and described.

TOMAS P HALL.
JAMES B. HALL.

Witnesses:
EDWARD CASSIDY,
GEO. H. SMITH.