

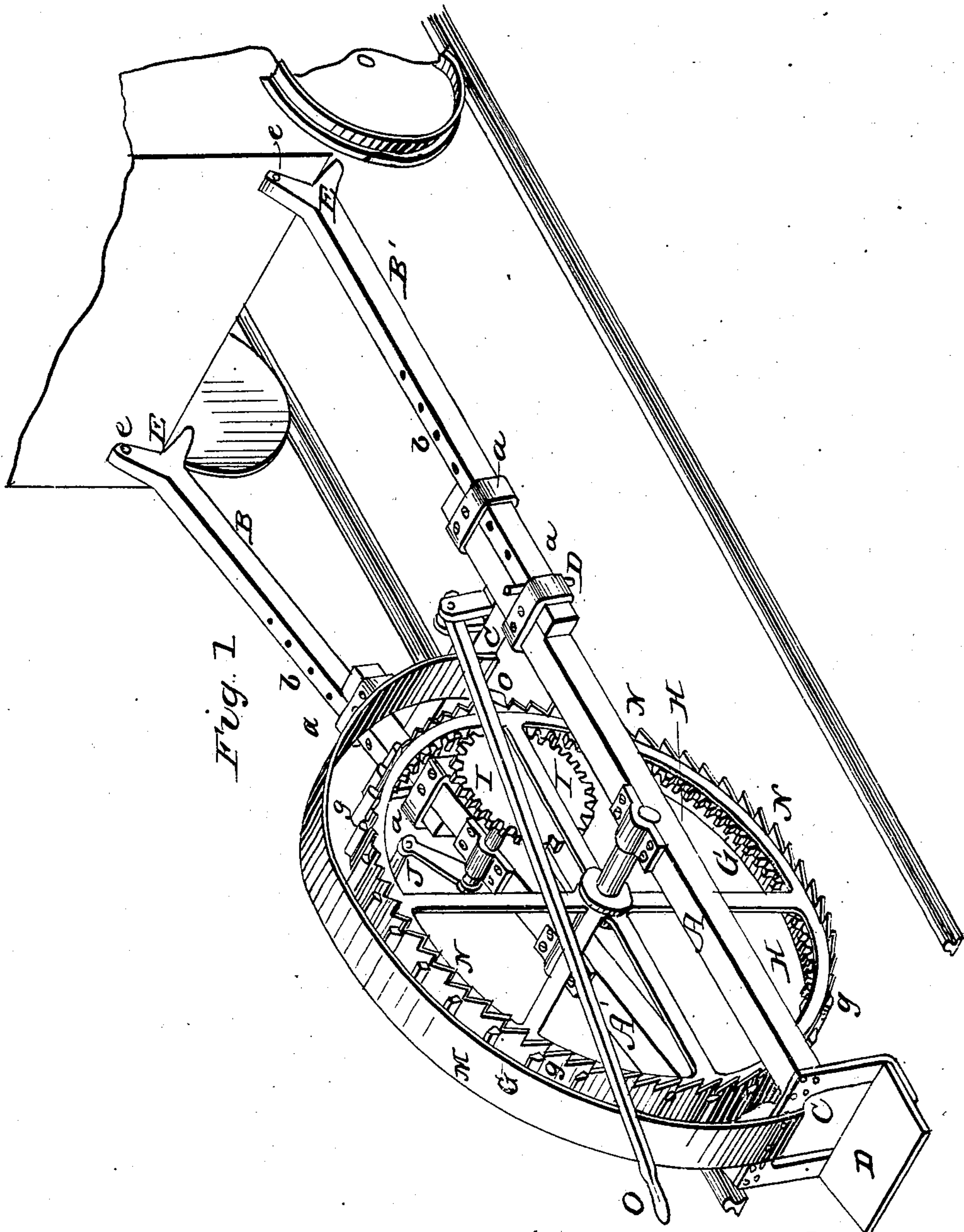
BOSWELL & BRINDLE.

2 Sheets—Sheet 1.

Car Starter.

No. 87,136.

Patented Feb. 23, 1869.



Witnesses
Jas H. Layman
Samuel Knight

Inventor
J. Boswell
J. W. Brindle
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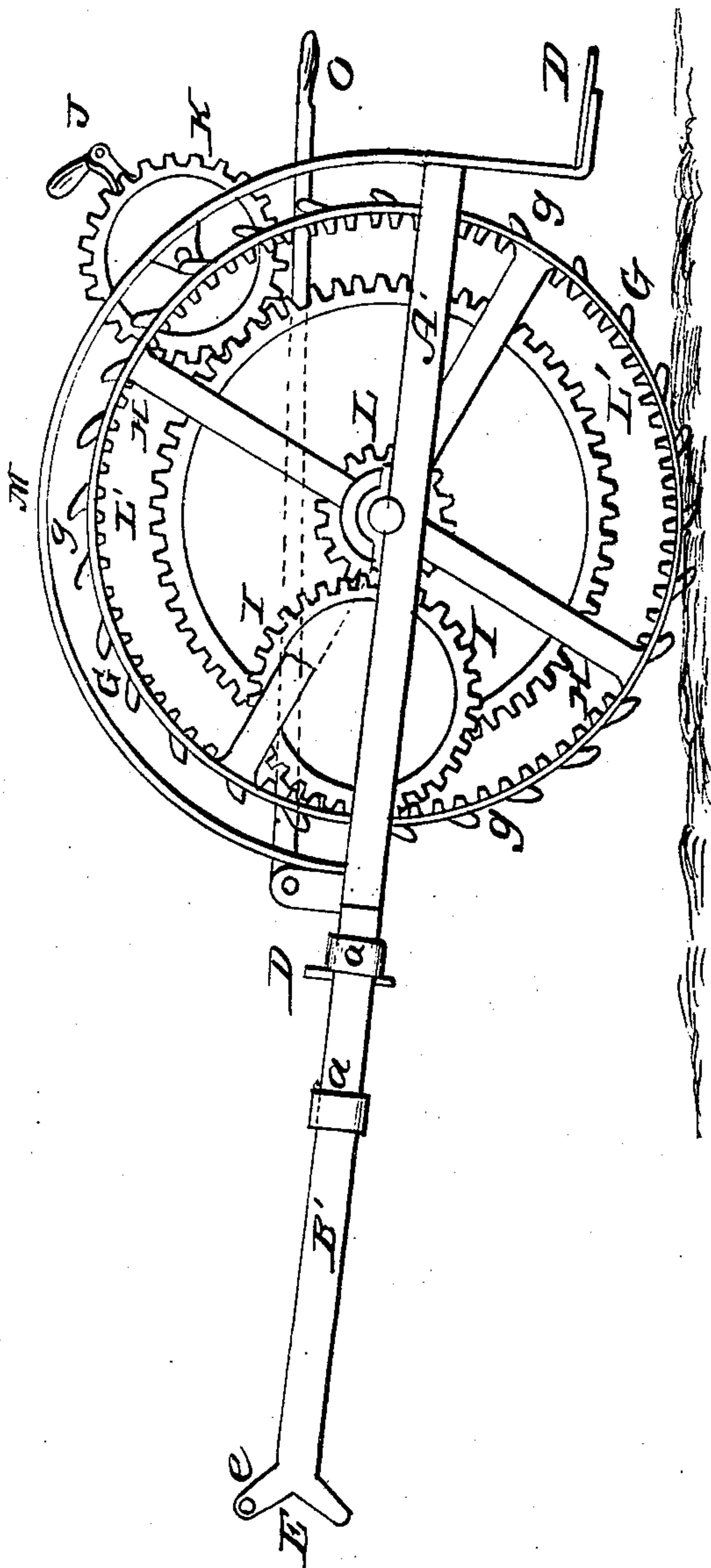
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United States Patent Office.

JOSEPH BOSWELL AND JOHN W. BRINDLE, OF WILMINGTON, OHIO, ASSIGNORS TO
THEMSELVES AND JACOB P. BRINDLE, OF SAME PLACE.

Letters Patent No. 87,136, dated February 23, 1869.

IMPROVED CAR-STARTER

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that we, JOSEPH BOSWELL and JOHN W. BRINDLE, both of Wilmington, Clinton county, Ohio, have invented a new and useful Car-Starter; and we hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Our invention relates to a device for moving or shifting of cars upon a railway without the aid of an engine, and consists essentially of one or more thills or poles, which being presented obliquely upward against the end of the car, are impelled forward by means of one or more cranks or levers acting through suitable gearing upon a ground-wheel or wheels.

Figure 1 is a perspective view, representing a simple form of our invention.

Figure 2 is a side elevation of a somewhat more complex form where great power is desired.

Each thill is composed of two main portions A A', which, with their cross-bars C C' and platform D, constitute the frame proper, and two sliding or extension portions B B', which respectively occupy sockets or guides, *a*, in the main portions A A', and are capable of being, one or both of them, sheathed within or alongside said main portions, or secured in any extended condition by pins, D', entering holes *b* in said extensions.

This extensional feature is, however, not absolutely essential, and may be omitted; that is to say, each thill may consist of one piece.

Each thill terminates in front in a crotch, E, for engaging the lower corner of the car, and the upper member of each crotch may have an orifice, *e*, to take a pin to be inserted in a staple to be attached for that purpose to the car, or said member may have a loop or eye to engage over an upturned hook upon the car.

The object of this hook or orifice is to prevent the ends of the thills slipping off and becoming disengaged from the car.

Journalled to the thills, near their rear ends, is a ground-wheel, G, provided on the interior of its rim with cogs H, into which meshes a pinion, I, having a crank or winch, as in fig. 1, or, where great power is required, said crank may have an independent pinion,

K, fig. 2, operating, through intermediate gearing L L', upon the pinion I.

The traction of wheel G upon the ground may be secured or increased by means of any suitable spurs or ribs, *g*, upon the periphery of the wheel, or said wheel may be adapted to operate upon the railway itself, or upon racks placed upon the ground for that purpose.

Attached to the frame, so as to enclose the upper half of the ground-wheel, is a guard or sheath, M.

The ground-wheel may further have a ratchet, N, which, being operated upon by a long purchase-lever, O, enables great power to be employed in starting the machine.

In order to insure the lever engaging with the ratchet, it may be provided with a pawl, *o*.

The operation is as follows:

The crotched ends of the thills being secured to the lower angle of the car, the operator mounts the platform, and, turning the crank or working the lever, causes the ground-wheel to rotate, and the implement to advance along the ground; and to push the car before it.

The extensibility of the thills enables the implement to be applied to cars of diverse height, and allows the direction of the force to be varied, and the traction of the ground-wheel thereby regulated.

We claim herein as new, and of our invention—

1. The car-moving implement, consisting essentially of a ground-wheel, G, operated by a crank, J, or its equivalent, and having one or more thills, A A', as and for the purpose set forth.

2. The arrangement of ground-wheel G, fixed thills A A', extensions B B', crotches E, crank J, and gearing I, substantially as set forth.

3. The combination, with the thills A A' and ground-wheel G, of a lever, O, adapted to operate upon a ratchet, N, upon said ground-wheel, for the purpose designated.

In testimony of which invention, we hereunto set our hands.

JOSEPH BOSWELL.
JOHN W. BRINDLE.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.