

(No Model.)

2 Sheets—Sheet 1.

M. JOHNSON.
MANUAL MOTOR.

No. 482,180.

Patented Sept. 6, 1892.

Fig: 1.

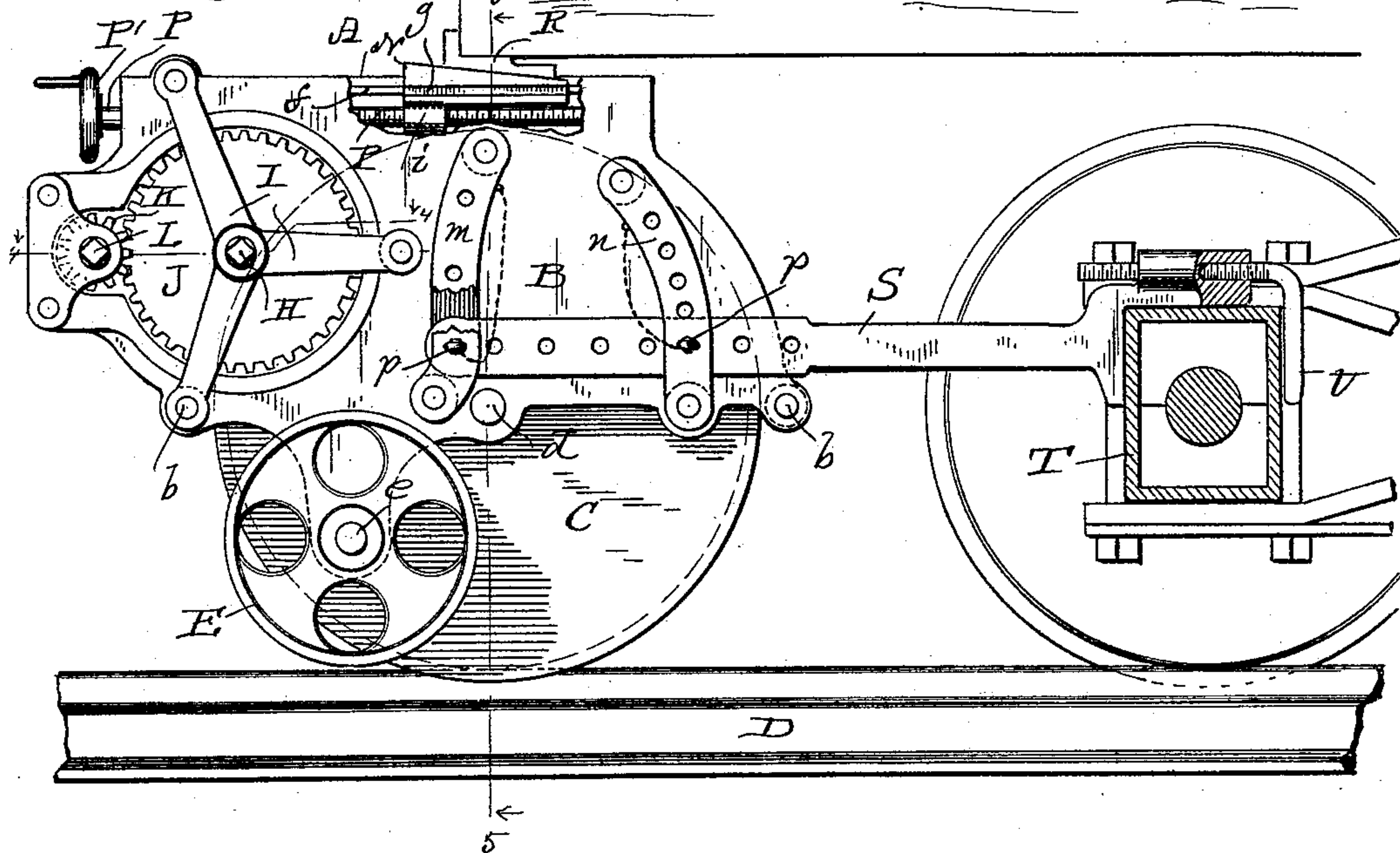
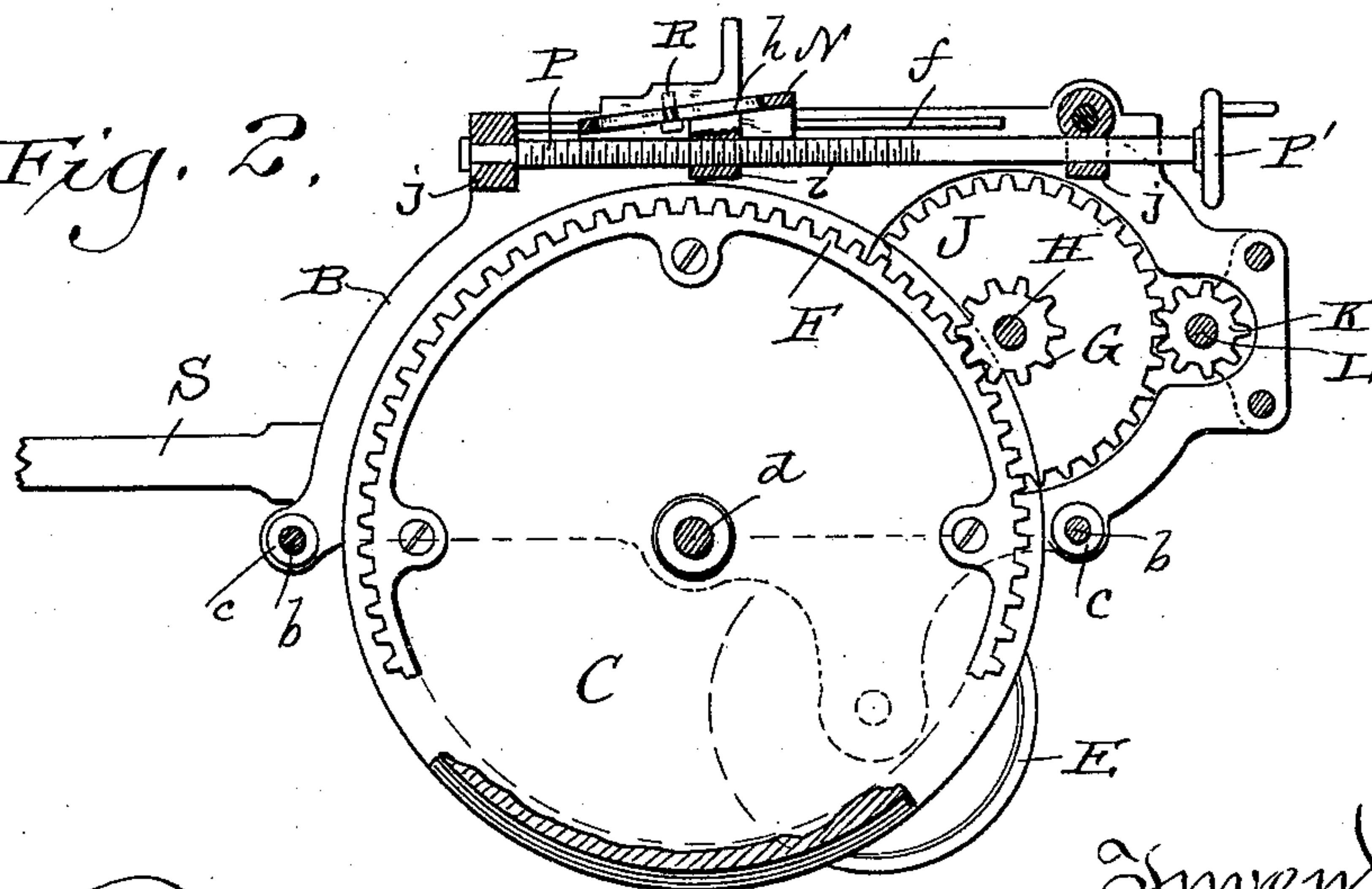


Fig. 2.



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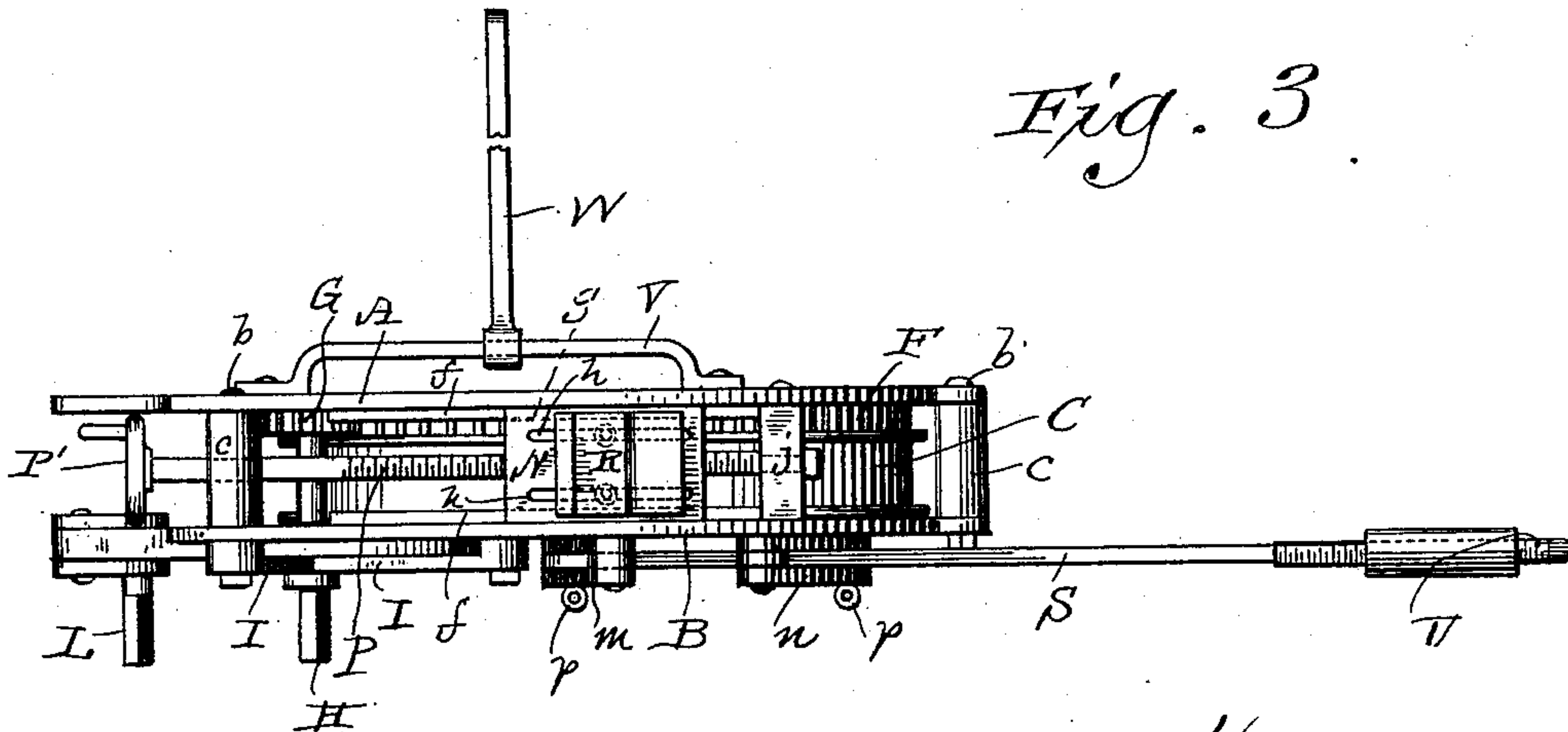


Fig. 3.

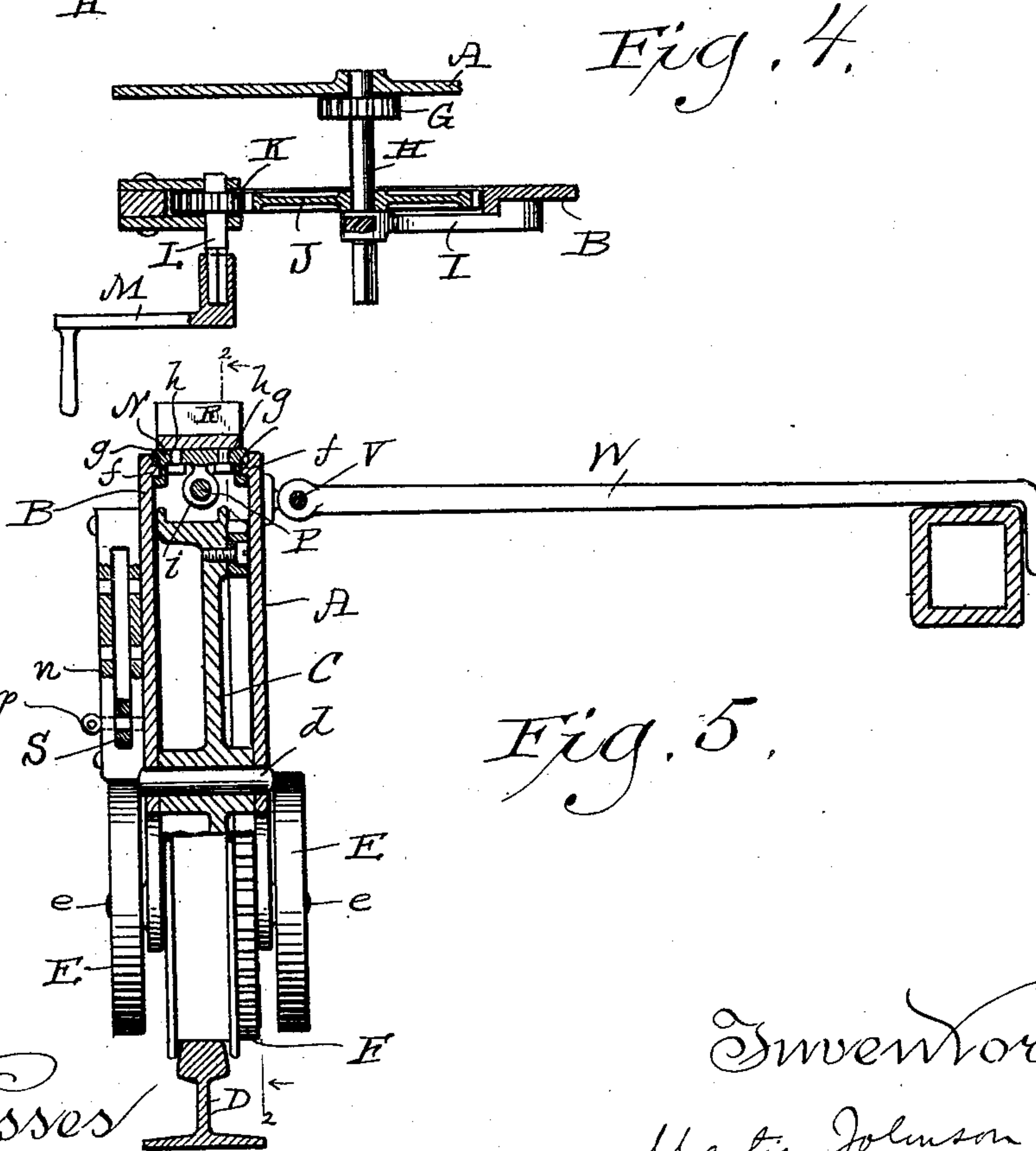


Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE.

MARTIN JOHNSON, OF MILWAUKEE, WISCONSIN.

MANUAL MOTOR.

SPECIFICATION forming part of Letters Patent No. 482,180, dated September 6, 1892.

Application filed May 11, 1892. Serial No. 432,625. (No model.)

To all whom it may concern:

Be it known that I, MARTIN JOHNSON, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Manual Motors; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide a simple manual motor for moving railway-cars when a locomotive is not obtainable for the work; and it consists in certain peculiarities of construction and combination of parts to be hereinafter described with reference to the accompanying drawings and subsequently claimed.

In the drawings, Figure 1 represents a side elevation of my motor partly broken away and in position for use in connection with a railway-car; Fig. 2, a vertical longitudinal section on the line 2 2 of Fig. 5; Fig. 3, a plan view of the motor; Fig. 4, a horizontal section on line 4 4 of Fig. 1, and Fig. 5 a vertical transverse section on line 5 5 of Fig. 1.

Referring by letter to the drawings, A B represent two parallel plates arranged a suitable distance apart and united in any suitable manner to form the main frame of the motor, the connecting means herein shown being a series of transverse bolts *b*, surrounded by spacing-sleeves *c*, the latter being arranged intermediate of said plates.

Fast in the plates A B is an axle *d*, and loose on this axle is a flanged wheel C, that runs on a line of track-rails D when the motor is in operation, and loose on studs *e*, projecting laterally from said plates, are two plain wheels E, parallel to each other, on opposite sides of the flanged wheel, but eccentric thereto. When the motor is in position on a line of track-rails, the eccentric disposition of the plain wheels E with relation to the flanged wheel C brings them above said track-rails out of the way of possible obstructions. The motor being off a line of track-rails and at rest all three of the aforesaid wheels will touch upon the ground; but if said motor be tilted to raise the flanged wheel it may be rolled about from place to place on the plain wheels, the latter being of a diameter preferably less than that of said flanged wheel.

Bolted or otherwise rigidly secured to one side of the flanged wheel C is a gear-wheel F in mesh with a pinion G, fast on a shaft H, the latter being shown as having its bearings in the plate A and a spider I, that is secured to the plate B, this spider serving as a guard for a gear-wheel J, that is also fast on the shaft. The latter gear-wheel meshes with a pinion K on an arbor L, that has its bearings on the plate B, this arbor and the shaft H being squared at their outer projecting ends to fit a corresponding socket in one extremity of a crank M, the latter being shown in Fig. 4 engaged with said arbor.

The plates A B are provided upon their inner sides, adjacent to their upper edges, with longitudinal ribs *f*, that loosely engage corresponding grooves *g* in a wedge-block N, provided with longitudinal slots *h*, and in one piece with the block is a depending screw-threaded sleeve *i*, that is engaged by a correspondingly-threaded rod P, that turns in suitable bearings *j* intermediate of said plates, and this rod is shown as provided with a crank or hand wheel P'. Engaging the slots *h* in the wedge-block N are lugs or pins depending from a step R, that in practice is positioned under one end of a car, as shown in Fig. 1. Bolted or otherwise rigidly secured to the outer side of the plate B are slotted brackets *m n*, engaged by one end of a bar S, the latter and each of the brackets being provided with a series of perforations, as is also shown in Fig. 1. Pins *p* engage perforations in the bar S and brackets *m n* to hold said bar at various elevations and angles, and that end of this bar farthest from said brackets is in the form of a clamp for engagement with a car-axle box T, the clamp being preferably provided with a longitudinally-adjustable section U, in order to adapt it to car-axle boxes of various widths. As shown in Figs. 3 and 5, the plate A is preferably provided with a traveler V for a rod W, and the latter has its free end in the form of a hook designed for connection with the draw-bar of a car; but in place of the hook I may employ an adjustable clamp, if the latter becomes necessary, because of varying width of draw-bars.

While I have shown the hook-rod W as a means for steadying the motor when in position for use, the said rod may not be neces-

sary at all times. The clamp-bar S not only serves as a connection between the motor and a car, but it also serves as a handle for propelling said motor about a railway yard or station.

In practice the motor is placed in position on a line of track-rails and coupled to a car by the clamp-bar and hook-rod above described. The step R having been placed under the adjacent end of the car-body, the screw-rod P is actuated to operate the wedge-block N against said step, and thereby raise said car-body and bring its weight on the motor. To start the car, the crank M is placed on the arbor L and power transmitted through the pinion K, gear-wheel J, pinion G, and gear-wheel F to impart rotation to the main or flanged wheel C of the motor. The car being started, the speed may be accelerated by changing the crank M from the arbor L to the shaft H, and sometimes, especially with light cars, it may be more convenient to apply said crank to said shaft in the first instance.

The motor may be attached to either end of a car as may be most convenient, and if found desirable it may be provided with means for distributing sand to the track-rails on which it operates, and it may also be desirable to provide the motor with a brake as well as a step or platform for the operator.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A manual motor that comprises a suitable frame, a single-track wheel having its axle supported by the frame, an actuating mechanism in gear with the wheel, and suitable means for detachably connecting said frame with a railway-car, substantially as set forth.

2. A manual motor that comprises a suitable frame, a track-wheel having its axle supported by the frame, an actuating mechanism for the wheel, suitable means for detachably connecting said frame with a car, and surface wheels supported on the aforesaid frame eccentric to the track-wheel, substantially as set forth.

3. A manual motor that comprises a suitable frame, a track-wheel having its axle supported by the frame, an actuating mechanism for the wheel, a wedge-block longitudinally adjustable in said frame, a step loose on the wedge-block, and a suitable bar carried by the aforesaid frame for connection with a car-axle box, substantially as set forth.

4. A manual motor that comprises a suitable frame, a single-track wheel having its

axle supported by the frame, an actuating mechanism in gear with the wheel, and a car-connecting bar capable of positive vertical and angular adjustments on said frame, substantially as set forth.

5. A manual motor that comprises a suitable frame, a single-track wheel having its axle supported by the frame, an actuating mechanism in gear with the wheel, a car-connecting bar, and a car-connecting hook at right angles to the bar, said bar and hook being carried by said frame, substantially as set forth.

6. A manual motor that comprises a suitable frame, a single-track wheel having its axle supported by the frame, an actuating mechanism in gear with the wheel, and a car-connecting bar carried by the frame and having the outer end thereof in the form of a clamp provided with a longitudinally-adjustable section, substantially as set forth.

7. A manual motor that comprises a suitable frame, a track-wheel having its axle supported by the frame, an actuating mechanism for the wheel, a wedge-block loose in the frame and provided with a screw-threaded sleeve, a screw-rod engaging the sleeve, a step loose on the wedge-block, and suitable means for connecting said frame with a car, substantially as set forth.

8. A manual motor comprising a suitable frame, a track-wheel and surface wheels connected to the frame, a train of gearing controlling the track-wheel, a wedge-block longitudinally adjustable in said frame, a step loose on the wedge-block, and a car-connecting bar adjustable to various elevations and angles on the aforesaid frame, substantially as set forth.

9. A manual motor comprising a suitable frame, a track-wheel and surface wheels connected to the frame, a train of gearing controlling the track-wheel, a wedge-block longitudinally adjustable in said frame, a step loose on the wedge-block, a car-connecting bar, and a car-connecting hook at right angles to the bar, said bar and hook being carried by the aforesaid frame, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

MARTIN JOHNSON.

Witnesses:

N. E. OLIPHANT,
JOHN E. WILES.