(No Model.) 3 Sheets—Sheet 1.

J. MILLIRON, Jr.

HAND CAR.

No. 312,572. Patented Feb. 17, 1885.

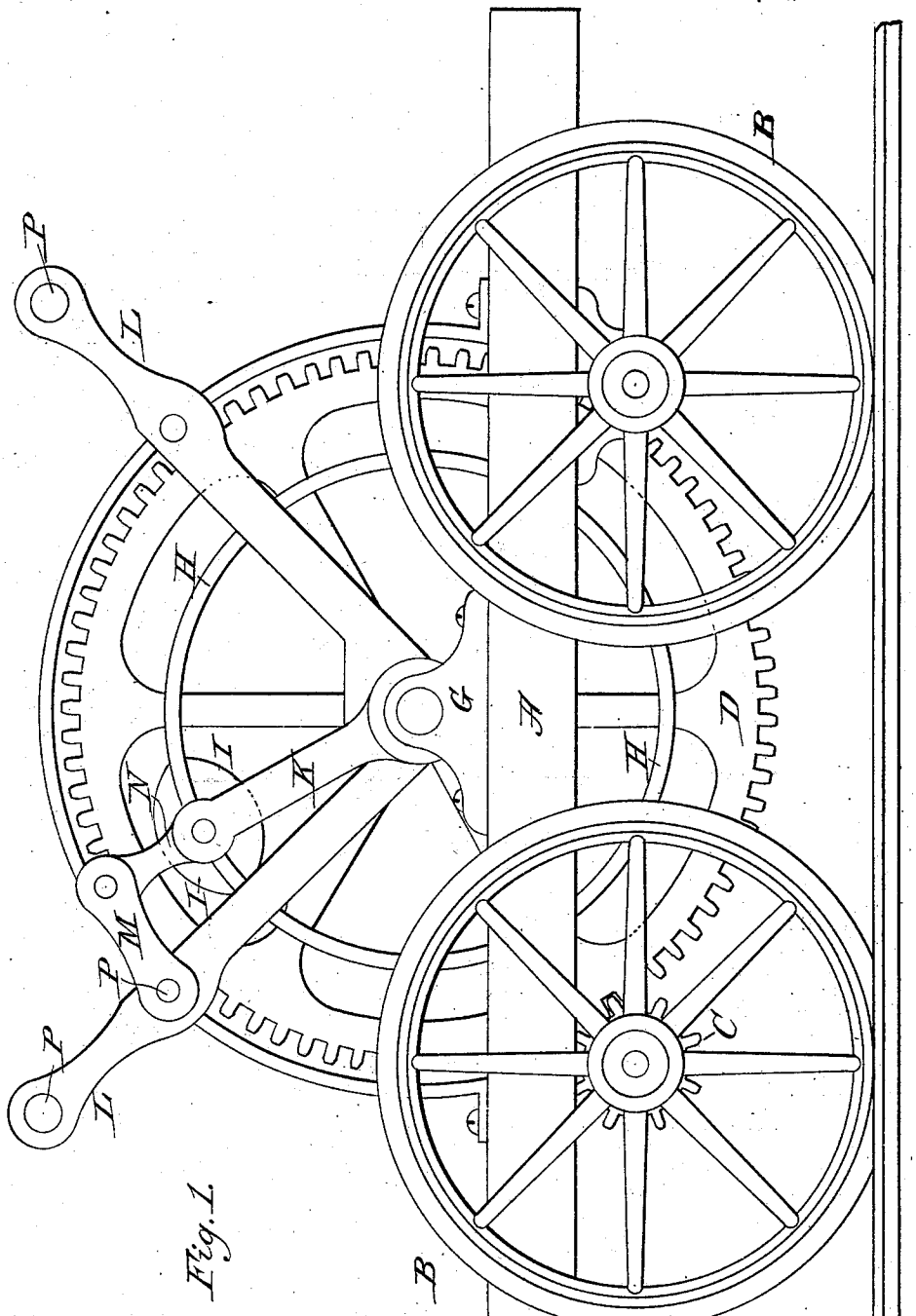

Fig. 1.

Attest:
H. C. Schott
A. R. Brown.

Inventor:
Jacob Milliron Jr.
Geo. J. C. Paschen atty

(No Model.) 3 Sheets—Sheet 2.

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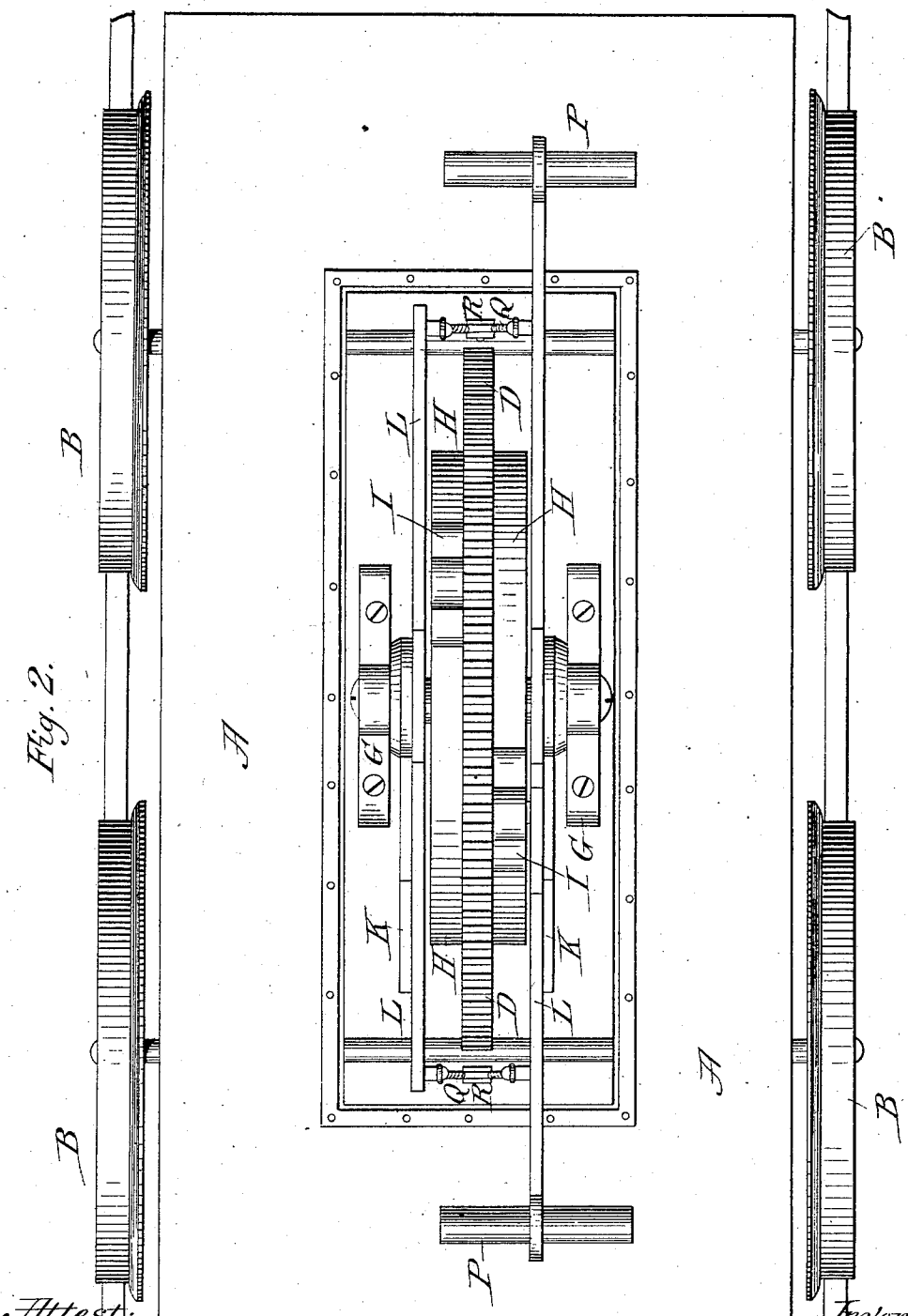

Fig. 2.

Attest:
F. H. Schott
N. R. Brown.

Inventor:
Jacob Milliron Jr.
per F. C. Dashiell Atty

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 3 Sheets—Sheet 3.

J. MILLIRON, Jr.

HAND CAR.

No. 312,572. Patented Feb. 17, 1885.

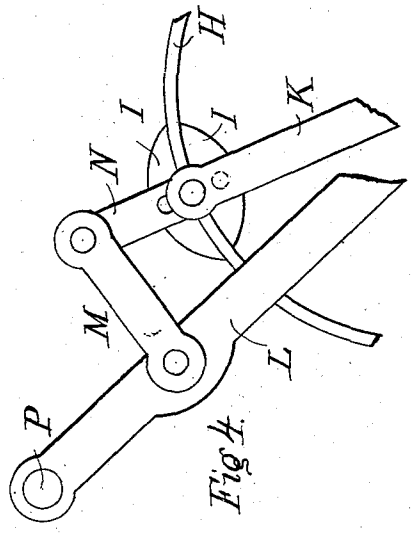

Fig 4.

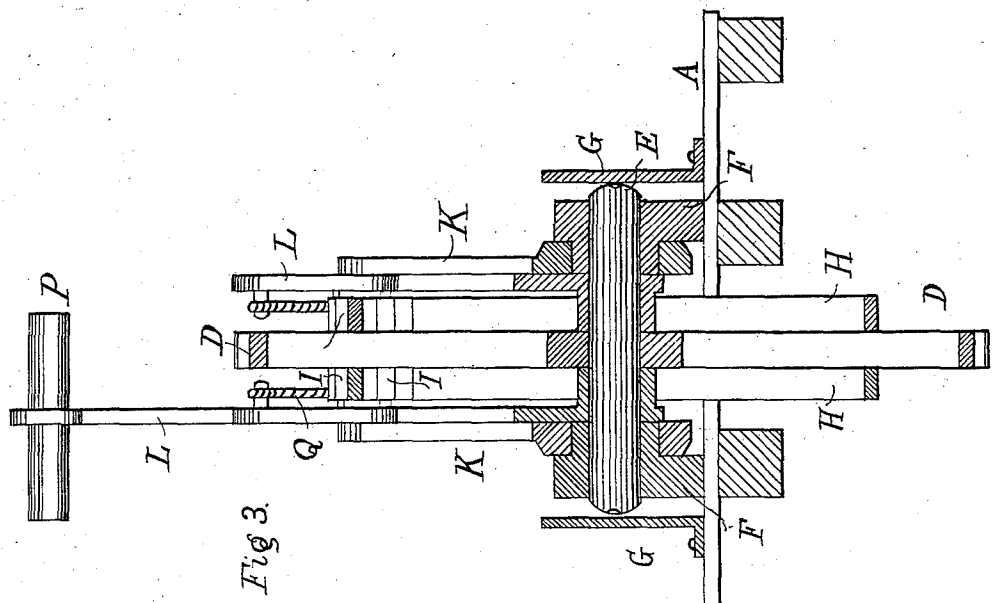

Fig 3.

Witnesses.
Fred E. Tasker
A. A. Brown.

Inventor.
Jacob Milliron Jr
per J. C. Tasker
atty.

UNITED STATES PATENT OFFICE.

JACOB MILLIRON, JR., OF NASHVILLE, TENNESSEE, ASSIGNOR OF ONE-HALF TO SYLVANUS W. STEELE, OF SAME PLACE.

HAND-CAR.

SPECIFICATION forming part of Letters Patent No. 312,572, dated February 17, 1885.

Application filed October 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, JACOB MILLIRON, JR., a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Car-Propellers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to mechanism for propelling hand-cars; and it consists in the construction, arrangement, and combination of parts, as hereinafter more fully described, and specifically set forth in the claims.

In the annexed drawings, illustrating my invention, Figure 1 is a side elevation of a hand-car provided with my improved propelling mechanism. Fig. 2 is a plan view of the same. Fig. 3 is a cross-sectional view, and Fig. 4 is a detail view, of the actuating-levers and clutches or driving-clamps.

Like letters of reference designate like parts in the several views.

A is the body or platform of the car, and B B are the wheels. On the axle of one or both wheels is a gear, C, that meshes with a large gear-wheel, D, which is mounted loosely on a shaft or journal, E, that is supported in bearings F F. The shaft E is supported in its bearings F F in such a manner as to be readily withdrawn for the purpose of unshipping the large gear-wheel or its actuating mechanism when required, and at the outer side of each bearing F is a detachable bracket or stop-plate, G, that prevents lateral displacement of the shaft E when in position.

To each side of the large gear D is secured a ring, H, with which the driving-clamps I I are made to engage.

K and L are levers loosely mounted on the shaft E, or other convenient axis, and connected above by pitmen M N, the driving-clamps I I being pivoted to the lever K and pitman N, as shown in Figs. 1 and 4. The lever L, on one side of the gear D, is provided with handles P P, and this lever is connected with the corresponding lever on the opposite side of the gear by means of rope-connections Q Q, which are passed beneath sheaves R R, as shown in Fig. 2, the opposite ends of the ropes being secured to pins or lugs on the levers. It will be seen that as the double-armed lever L on one side is rocked on its axis the corresponding lever on the opposite side will be actuated reversely through the connections Q Q, so that the driving-clamps I I at each end of the car, as shown in Fig. 2, will alternately engage with the rings H H, and so rotate the gear D, thereby propelling the car. The arrangement of levers K K and pitmen M N is such that the pivoted clamps I I will engage the rings H H when the levers L L are thrown in one direction, and will become disengaged when said levers are thrown in the opposite direction. By arranging and connecting the opposite levers L L as shown in Fig. 2 the gear D may be rotated with a positive, uniform, and continuously steady motion. It is obvious, however, that one pair of driving-clamps and one set of levers may be dispensed with, if desired.

Instead of employing the rings H H, the periphery of the gear D may be flanged, so as to afford a bearing-surface for the driving-clamps.

The propelling mechanism of the car is preferably inclosed in a guard-frame, S, of any suitable construction, so as to lessen the liability to accidents.

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

1. The combination, with the gear D, having driving-rings H H, of the levers K L, pitmen M N, and pivoted clamps I I, substantially as described.

2. The combination of the gear D, having rings H H, the levers L L, connected by ropes Q Q, passed beneath sheaves R R, the levers K K, pitmen M N, and pivoted clamps I I, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB MILLIRON, JR.

Witnesses:

W. E. EASTMAN,

G. W. DAVIS.