C. C. KERR.

Hand-Car.

No. 210,332. Patented Nov. 26, 1878.

Fig. 1.

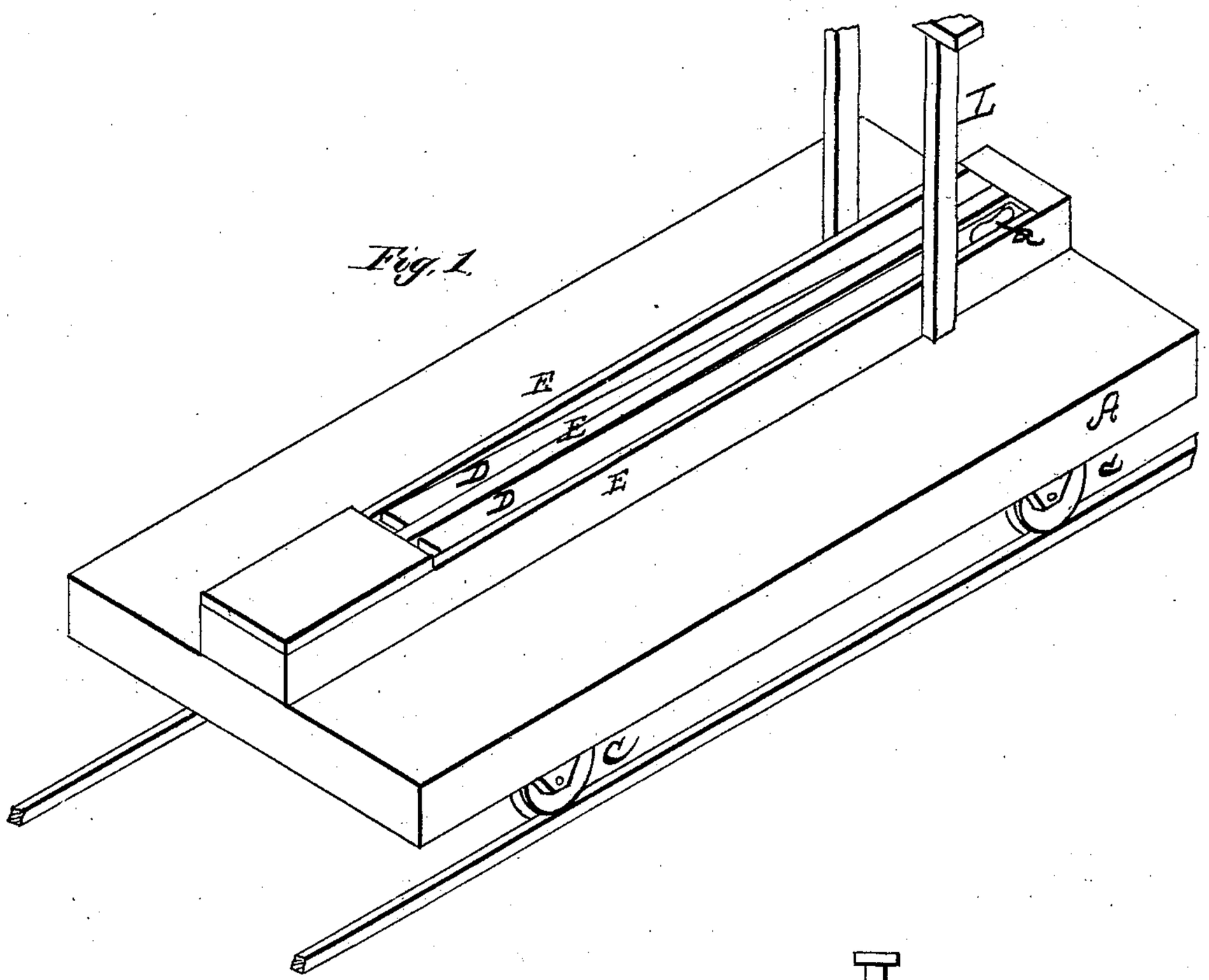



Fig. 2.

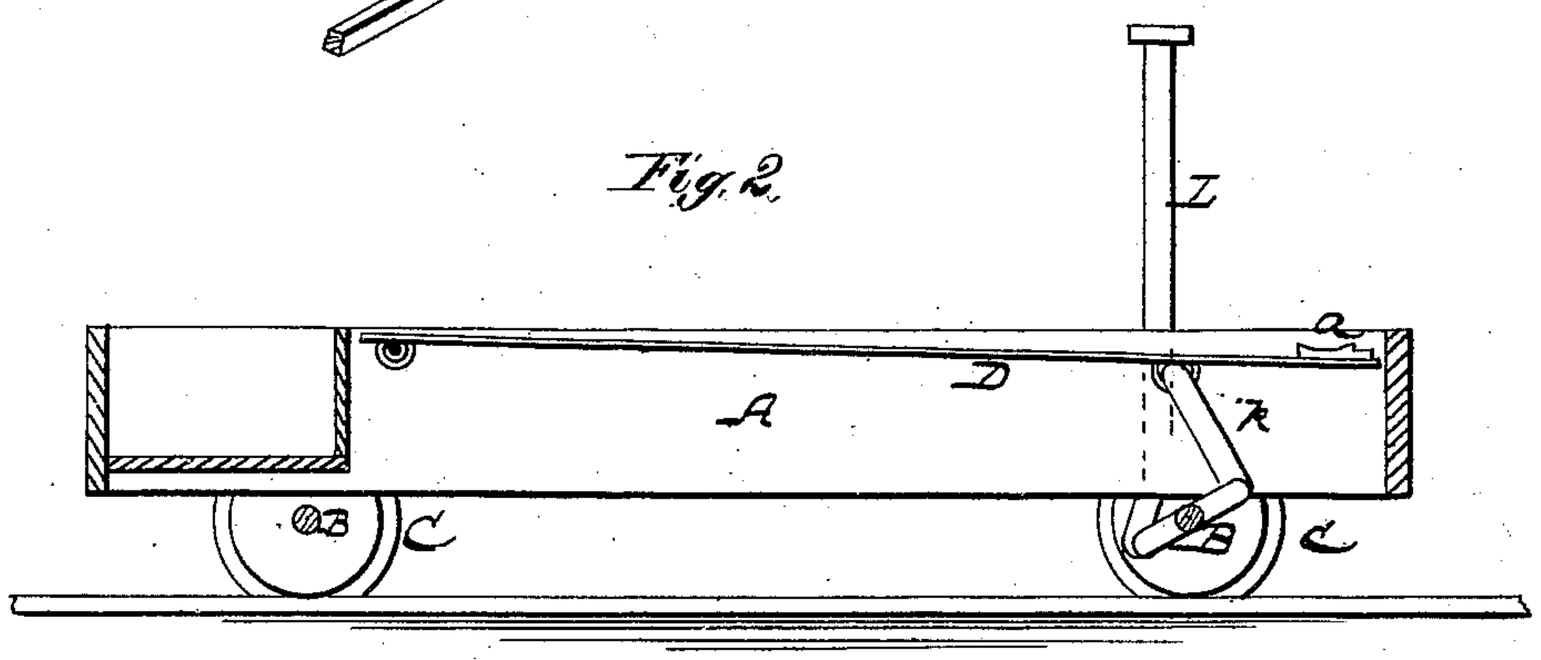
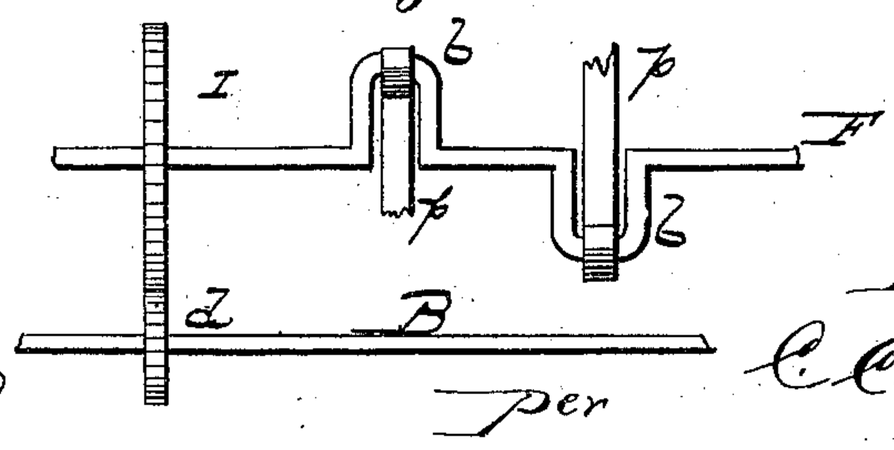



Fig. 3.




Witnesses:

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per

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# UNITED STATES PATENT OFFICE.

CHRISTOPHER C. KERR, OF SPRINGFIELD, MISSOURI, ASSIGNOR TO HIMSELF, J. ECHELBERRY, J. N. MILLER, J. W. McCULLOH, M. ECHELBERRY, AND R. S. WADDELL, OF SAME PLACE.

## IMPROVEMENT IN HAND-CARS.

Specification forming part of Letters Patent No. **210,332,** dated November 26, 1878; application filed August 29, 1878.

*To all whom it may concern:*

Be it known that I, CHRISTOPHER C. KERR, of the city of Springfield, in the county of Greene, and State of Missouri, have invented certain new and useful Improvements in Hand-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in the construction and arrangement of devices for operating a hand-car by the weight of the person using the same, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view of a hand-car embodying my invention. Fig. 2 is a longitudinal section of the same, and Fig. 3 is a detailed view of a part thereof.

A represents the frame of my hand-car, provided with the axles B B, having wheels C C on their ends in the usual manner.

The frame or platform A has three longitudinal beams, E, inserted or framed into it near the center, which beams form two longitudinal openings in the car, in which openings are pivoted two levers, D D. The free ends of these levers are provided with suitable foot-pieces at *a a*, upon which the operator stands to work the car.

Each lever D is by a pitman, *p*, connected with a crank, *b*, on a shaft, F, the two cranks on said shaft being placed at opposite directions, as shown in Fig. 3.

On the shaft F is secured a cog-wheel, I, which meshes with a pinion, *d*, on one of the axles B, so that the power from the levers will be transmitted to the axle and rotate the same so as to propel the car.

L represents a frame or brace attached to the car for the operator to take hold of.

The operator stands on the foot-pieces *a a* at the ends of the levers D D, and, by throwing his weight alternately on one foot and then on the other, the levers are worked so as to rotate the shaft F, and by the gearing I *d* transmit such motion to the axle of the car. In other words, the weight of the operator propels the car or furnishes the propelling power.

The mechanism is simple and not liable to get out of order.

I am aware that a hand-car has heretofore been propelled by hand-levers connected with crank-axles, and I am also aware that velocipedes have heretofore been propelled by means of treadles connected with a crank-axle, and I therefore lay no claim to such inventions.

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

A hand-car constructed with two central longitudinal compartments, and furnished with the elongated levers D D, said levers being suitably connected to crank-shaft *b*, and adapted to be operated by one or more persons standing thereon and alternately throwing their weight upon the levers, as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CHRISTOPHER C. KERR.

Witnesses:

ORLANDO H. BARKER,

MARSHALL ECHELBERRY.