

WILLIAM ALLEN & JOHN W. BOND.

Improvement in Hand Carriages.

No. 115,674.

Patented June 6, 1871.

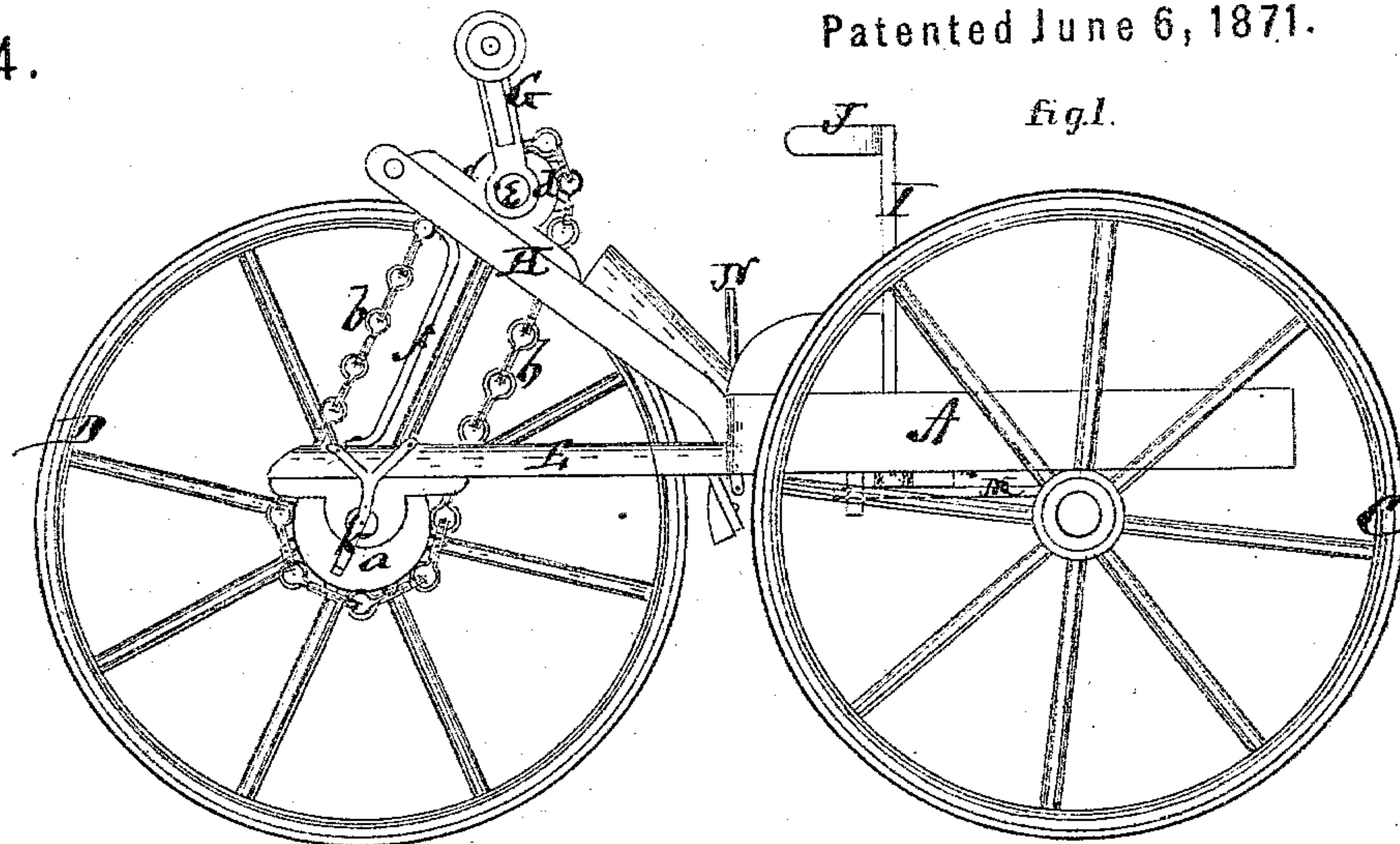


fig. 2.

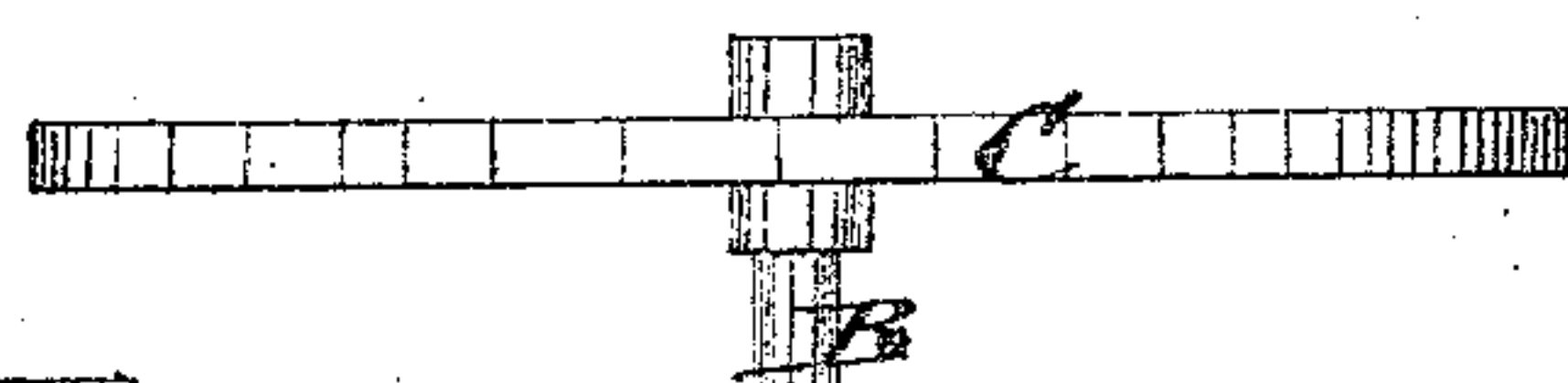


fig. 3.

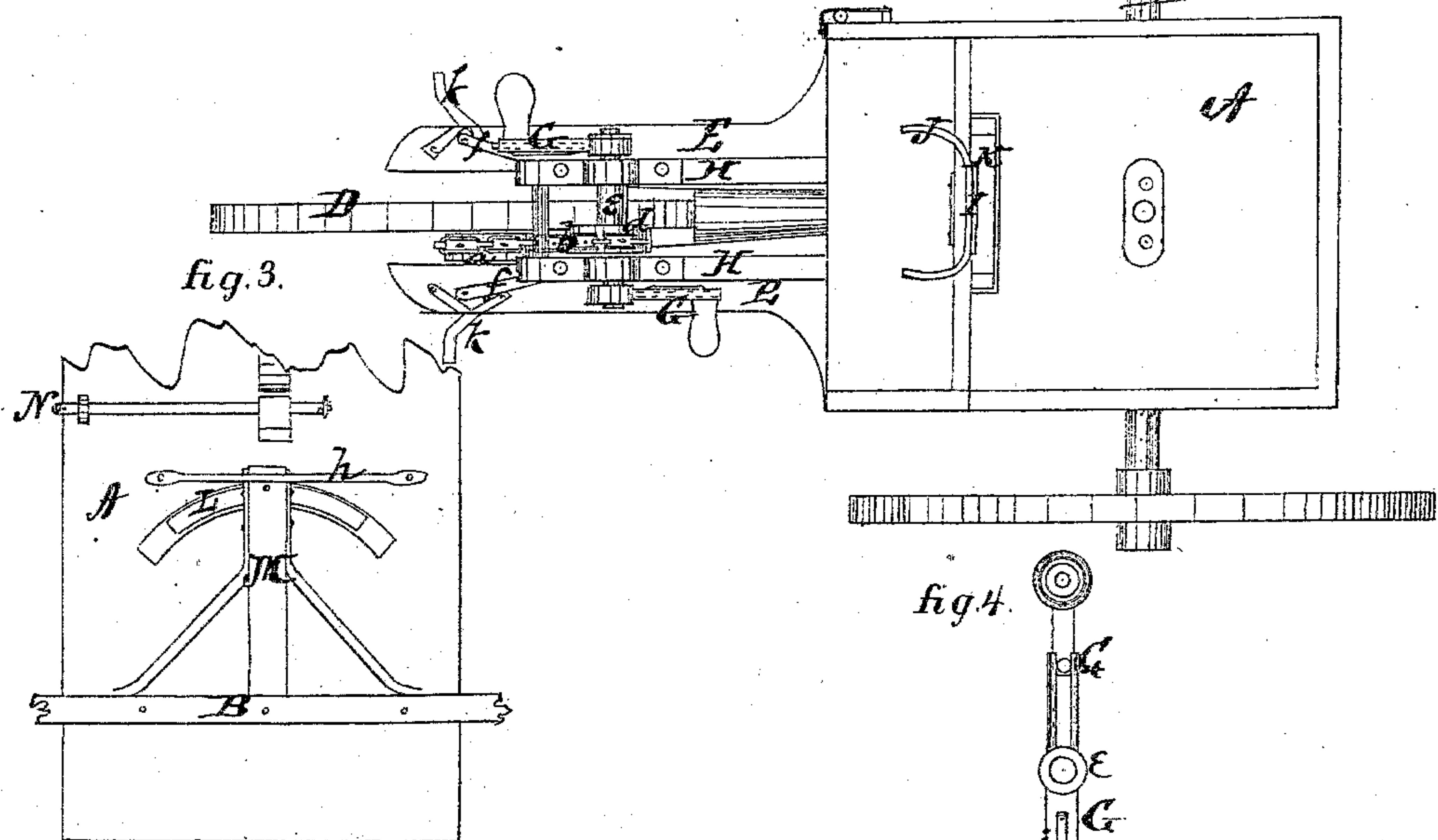
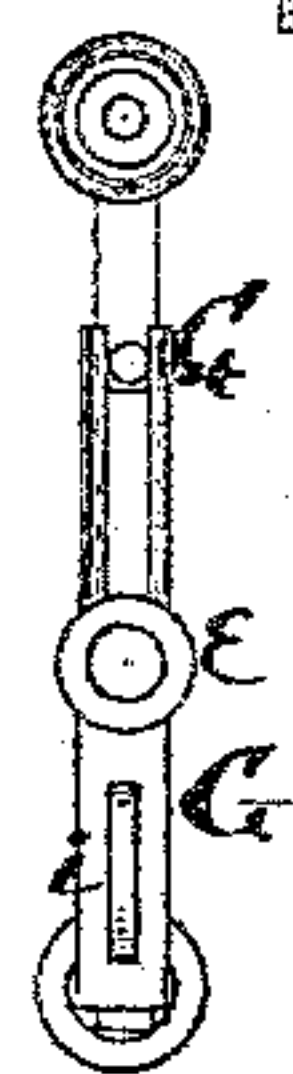


fig. 4.



Witnesses

*Wm Allen*  
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Inventor.

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*per*  
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# UNITED STATES PATENT OFFICE.

WILLIAM ALLEN AND JOHN WESLEY BOND, OF ST. PAUL, MINNESOTA.

## IMPROVEMENT IN HAND-CARRIAGES.

Specification forming part of Letters Patent No. 115,674, dated June 6, 1871.

*To all whom it may concern:*

Be it known that we, WILLIAM ALLEN and JOHN WESLEY BOND, of St. Paul, in the county of Ramsey and in the State of Minnesota, have invented certain new and useful Improvements in Hand-Carriages; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of our invention consists in the construction and arrangement of a hand-carriage, as will be hereinafter more fully set forth.

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

Figure 1 is a side elevation, and Fig. 2 a plan view of our carriage. Fig. 3 is a bottom view of the carriage-body, and Fig. 4 is a side view of the cranks.

A represents the carriage-body, which is pivoted to the center of the rear axle-tree B by means of a bolt running through the center of the box. The wheels C C are mounted upon the axle B, and upon said axle, under each side of the box, we may attach a pulley or roller for the purpose of holding the box or body from rocking, and to give the drive-wheel no chance to rock from side to side. From the front end of the box A extend forward two parallel bars or arms, E E, between which the driving-wheel D is placed. On the hub of the driving-wheel D is attached a toothed wheel, *a*, connected by an endless chain, *b*, with another toothed wheel, *d*, mounted upon a shaft, *e*, which has its bearings in suitable boxes upon a frame, H. This frame stands in an inclined position from the junction of the box A and arms E E, and it is braced by rods *f f* from the front ends of said arms. Upon each end of the shaft *e* is a crank, G, made of two parts, one sliding within the other, and held at any desired length by means of a spring-dog, *i*. By this means the cranks can be extended so as to gain more power, when necessary, in going up hill. The steering is accomplished by means of a lever, I, pivoted to the back of the seat by a bolt. The upper end of the lever has a half-circular piece, J, of iron, covered with cloth, and made

to fit the body four or five inches below the arms, and forms a rest for the back. On the lower end of said lever is about one-fourth of a cog-wheel, K, dropped through the bottom of the carriage. This cog-section is allowed to gear with another clogged segment, L, which is attached to the front end of the reach M. This reach is attached to the hind axle B, and is allowed to play from side to side in a slide, *h*, as shown in Fig. 3.

The person in the seat inclines his body to the side he wishes to turn around to, and by an easy and natural motion of the body steers the machine when in full motion. The steering, it will therefore be noticed, is done entirely by the hind wheels, and the machine can be run backward as well as forward, and can travel up hill when the grade is not more than about four hundred and ten feet to the mile. The same effect in steering may be accomplished by letting the cogs of the segment K break into other cogs in a slide running across the bottom of the box. A chain should then lead from each end of the axletree, near the hind wheels, over a pulley and through the sides of the box, and fastened to the slide at each end. In going down hill the rider lets go the cranks, and has nothing to do but to keep one hand on the brake-lever N.

*k k* are foot-rests attached to the arms E E.

The same propelling mechanism and steering apparatus may be used also on small boats and for traveling on ice.

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

The within-described hand-carriage, supported upon the wheels C C and D, having body A pivoted to the center of the axle B, pivoted upright bar I, head-rest J, clogged segments K L, reach M, and extending arms E E, cranks G G, shaft *e*, wheel *d*, chain *b*, and wheel *a*, the various parts being constructed, arranged, and operating substantially as set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 3d day of March, 1871.

WILLIAM ALLEN.  
JOHN WESLEY BOND.

Witnesses:

EDWARD WEBB,  
WILLIAM BALDWIN.