

(Model.)

J. S. GILL, Jr., & G. B. ALEXANDER.  
Velocipede.

No. 227,685.

Patented May 18, 1880.

Fig. 1.

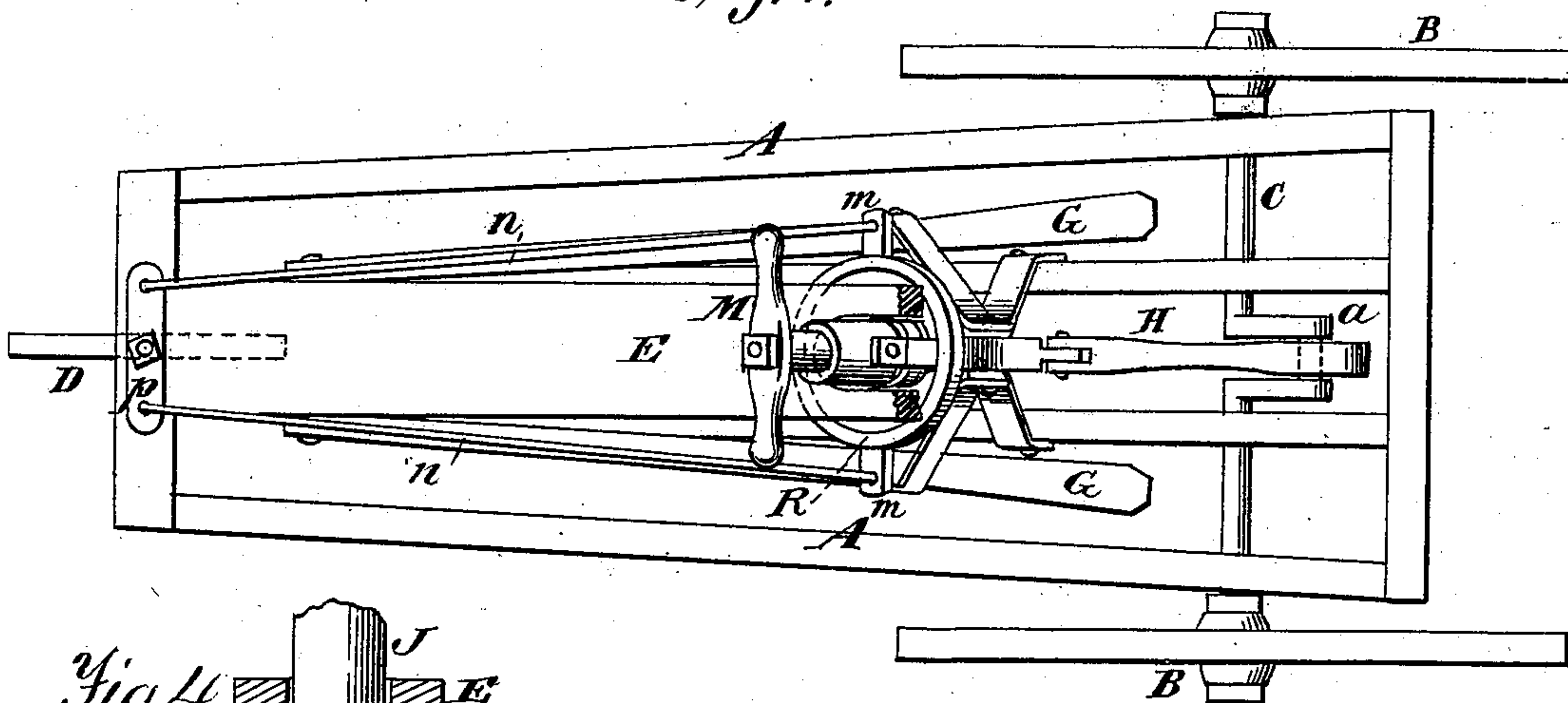


Fig. 4.

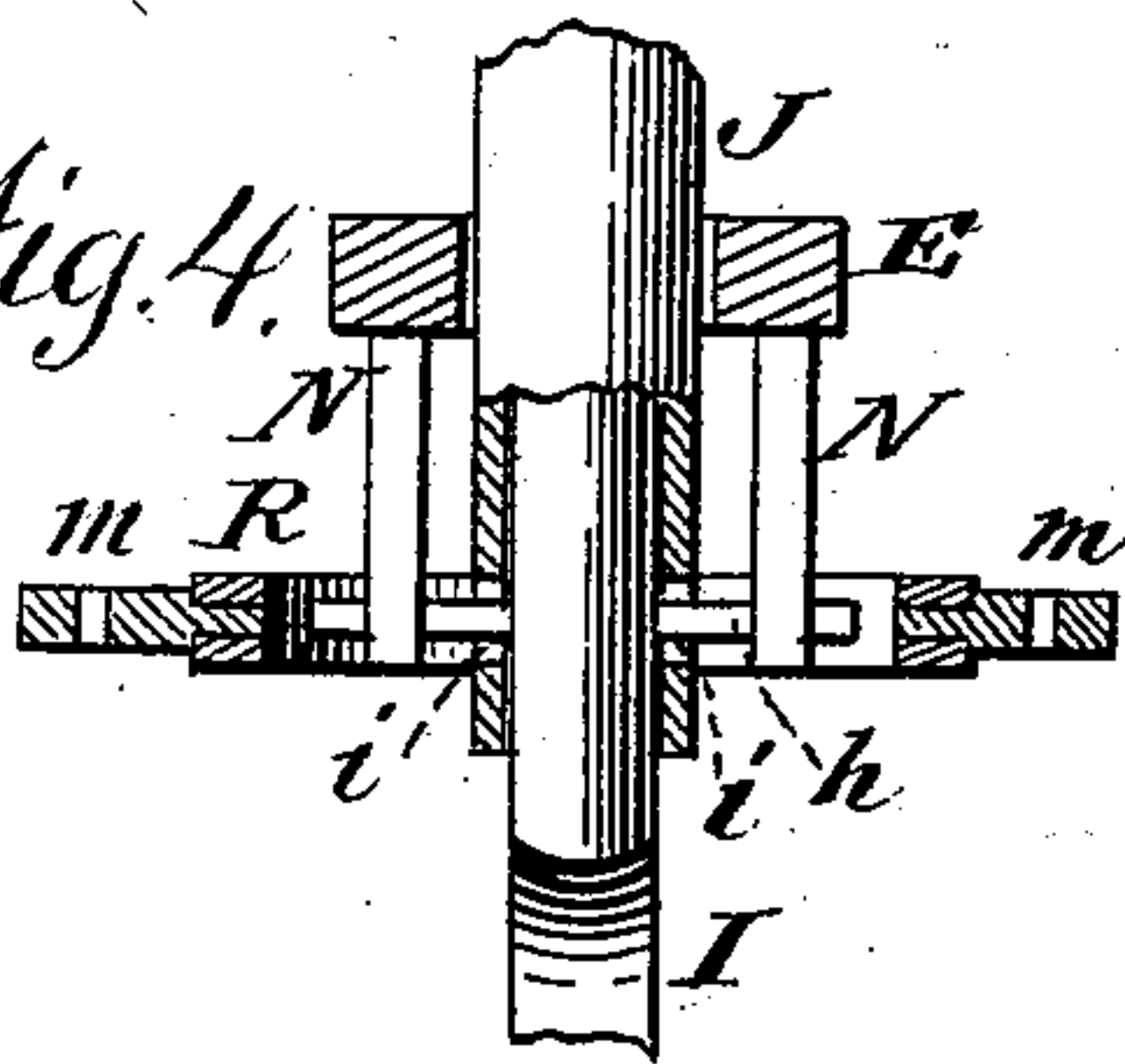


Fig. 2.

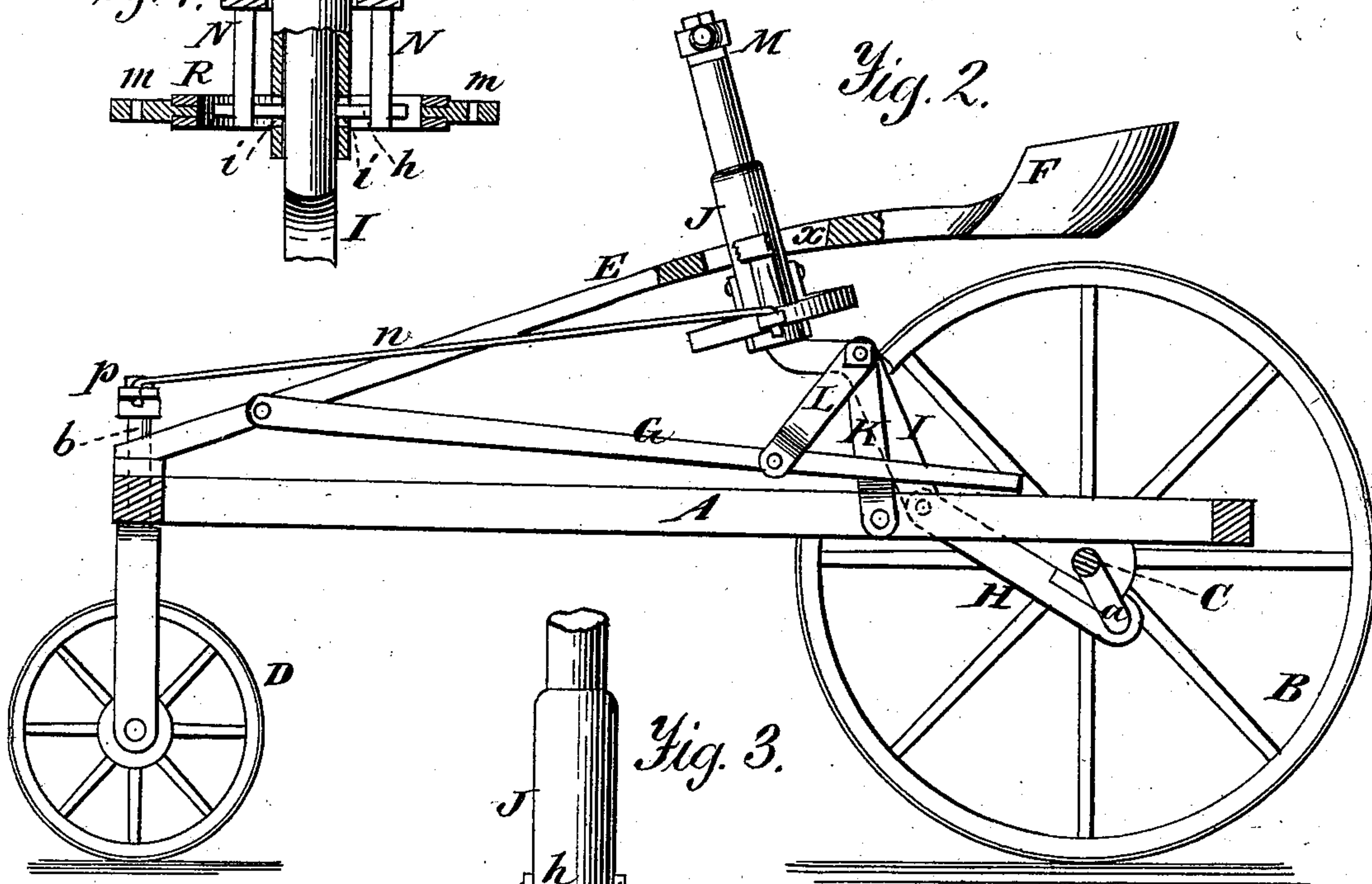
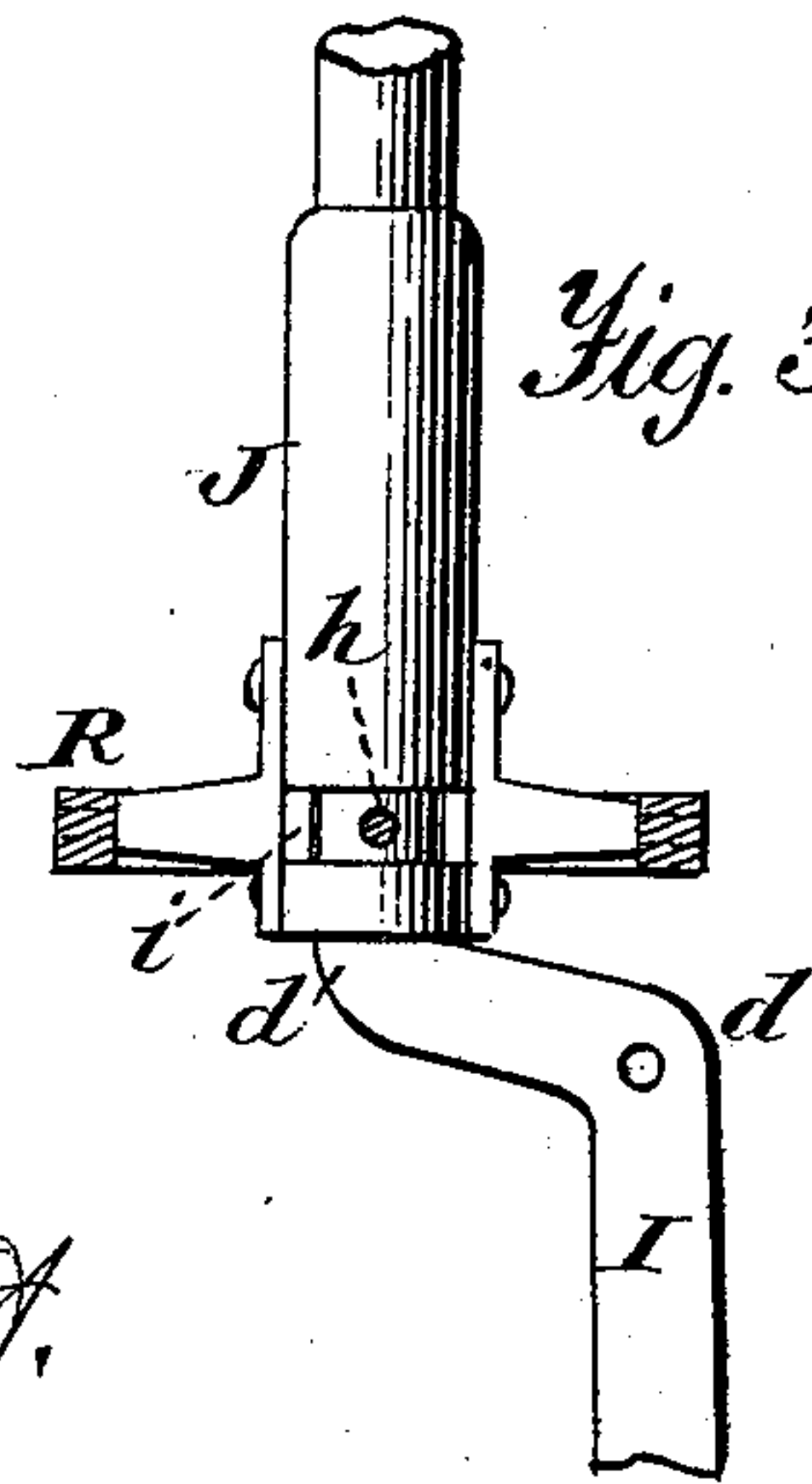


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## VELOCIPEDÉ.

SPECIFICATION forming part of Letters Patent No. 227,685, dated May 18, 1880.

Application filed March 31, 1880. (Model.)

*To all whom it may concern :*

Be it known that we, JOSHUA S. GILL, JR., and GEORGE B. ALEXANDER, of Richwood, in the county of Union and State of Ohio, have  
5 invented certain new and useful Improvements in Velocipedes; and we do hereby 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  
10 make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Our invention relates to velocipedes or other  
15 similar hand-propelling vehicles; and it consists in certain peculiarities of construction, as will be hereinafter more fully set forth, and pointed out in the claims.

In the annexed drawings, to which reference is made, and which fully illustrate our invention, Figure 1 is a plan view of a velocipede embodying our invention. Fig. 2 is a longitudinal vertical section of the same; and  
20 Figs. 3 and 4 are detail views of the operating-lever.

A represents the frame-work of the velocipede, supported at the rear end by wheels B B, rigidly secured to the ends of an axle, C, which is formed with a crank, *a*, in the center.  
30 At the front end the frame is supported by a single caster-wheel, D, having the stem *b* of its horn swiveled in the frame, so that the wheel may be turned more or less in either direction for guiding the velocipede.

At the front end of the frame is secured the seat-bar E, which extends rearward and has the seat F upon its extreme rear end. To the forward portion of the seat-bar E, on each side, is pivoted a treadle, G, which also extends  
40 rearward sufficiently far to permit the rider to place his feet on both on them when seated on the seat F.

The crank *a* of the axle C is, by a pitman, H, connected with the lower end of the operating-lever. This lever is made in two parts, I and J. The part I is of the form substantially as shown in Figs. 2 and 3—that is to say, it has two bends or angles, *d d'*. The pitman H is connected to the lower end of this  
50 part I. At the bend *d* two pivoted links, K K,

connect the lever with the frame, and two other links, L L, connect it with the treadles G G.

The lower end of the part J of the operating-lever is in the form of a tube or socket, and fits over the upper end of the part I. This  
55 part J passes up through an elongated slot, *x*, in the seat-bar E and has a handle, M, attached to its upper end.

The lower end of the tube or socket has two slots, *i i*, opposite each other, and a pin, *h*,  
60 passing through the upper end of the lever I, projects through said slots and into rigid hangers N N, secured to the seat-bar E, the said pin *h* thus forming the pivot upon which the operating-lever may be rocked backward  
65 and forward.

On the lower end of the part J of the operating-lever is attached a wheel, R, on opposite sides of which is a swiveled projecting lug, *m*. These lugs are in a line with the pivot  
70 *h* when the handle M is held straight across, and they are, by rods *n n*, connected with a cross-bar, *p*, on the stem *b* of the caster-wheel.

The person occupying the seat, as he pulls the operating-lever toward him, throws his  
75 weight, with his feet, on the treadles, and as he pushes the lever from him he necessarily transfers the weight of his body from his feet to his seat, which principally propels the machine.  
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By the lever being in two parts, and the ring or wheel R having the swivels coming in a direct center with the pivot of the lever, and which holds the two parts of the lever together, when the lever rocks it leaves the guiding-rods *n n* of the same length all the time.  
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Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a velocipede or similar vehicle, the combination of the crank-axle C, pitman H, and the angular lever I, pivoted in hangers under the seat-bar, and connected by links with the frame and with the treadles, substantially as herein set forth.  
90

2. The combination, in a velocipede or similar vehicle, of the slotted seat-bar E, treadles G G, angular lever I, connecting-links K L, pitman H, and crank-shaft C, substantially as and for the purposes herein set forth.  
100

3. The operating-lever made in two parts, I and J, the part I being of the angular form shown and pivoted in hangers under the seat-bar, and the part J made as a tube or socket  
5 to fit on the upper end of the part I and capable of limited rotation in either direction, in combination with the seat-bar, connecting-links, treadles, pitman, and crank-axle, substantially as and for the purposes herein set  
10 forth.

4. The combination of the lever I J, wheel R, attached to the part J, and provided with

swivels *m m* on a line with the pivot of the lever; the connecting-rods *n n*, and the caster-wheel D, with cross-bar *p* on its stem, substantially as and for the purposes herein set forth. 15

In testimony that we claim the foregoing we have hereunto set our hands this 3d day of March, 1880.

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Witnesses:

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