

Otis C. White's Chair Seat Raiser.

No. 120,919.

Patented Nov. 14, 1871.

Fig. 1.

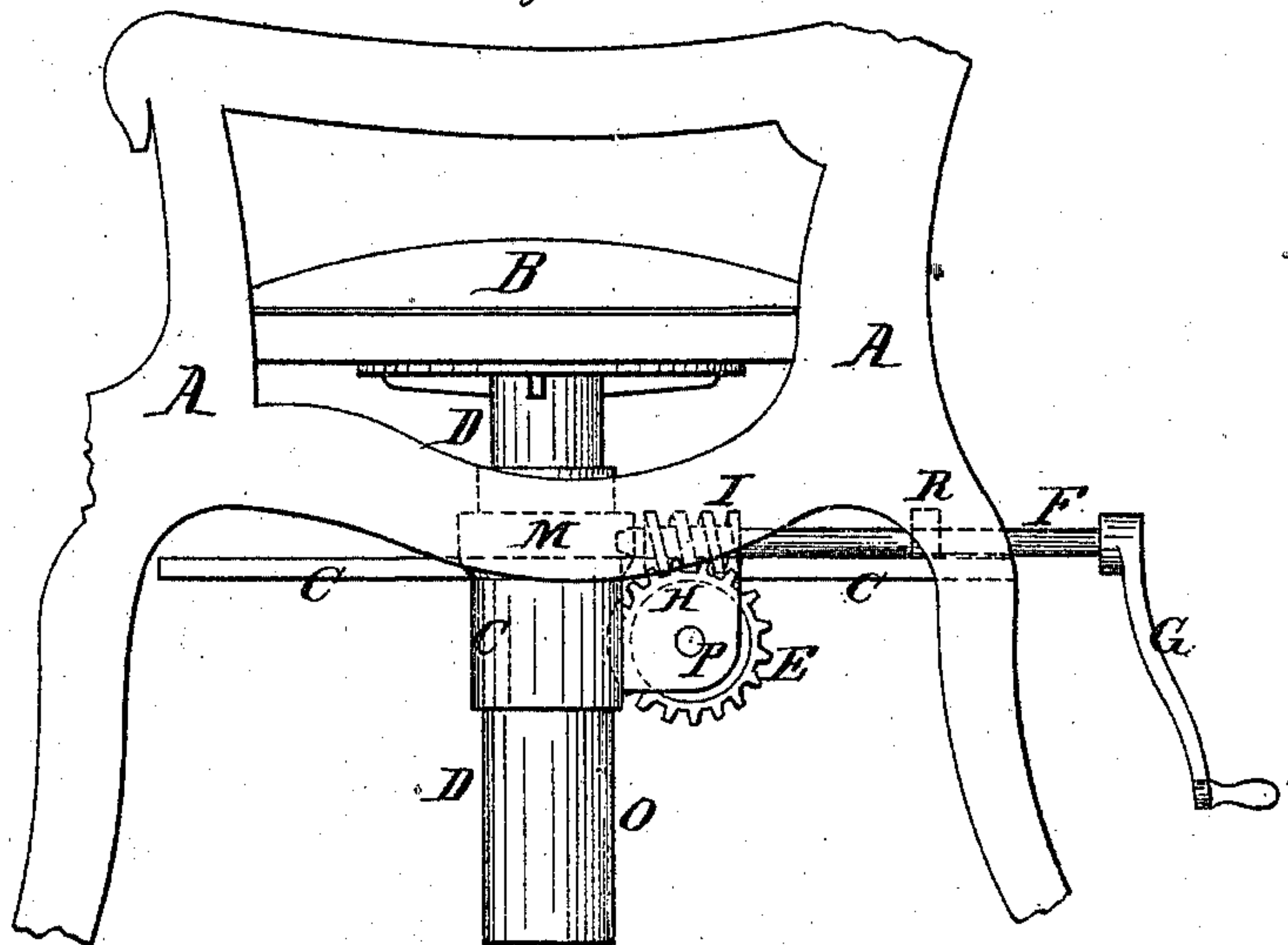


Fig. 2.

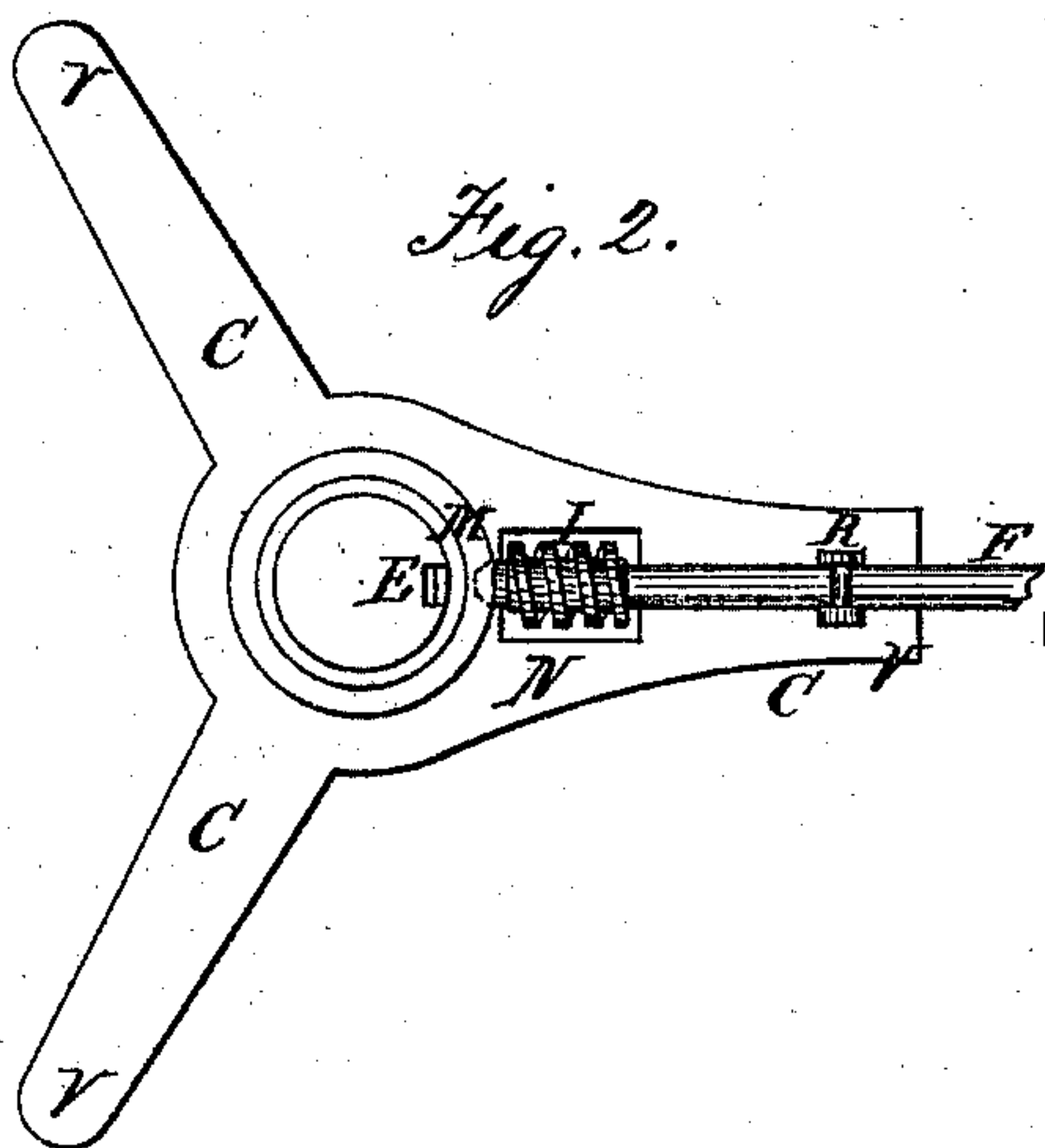
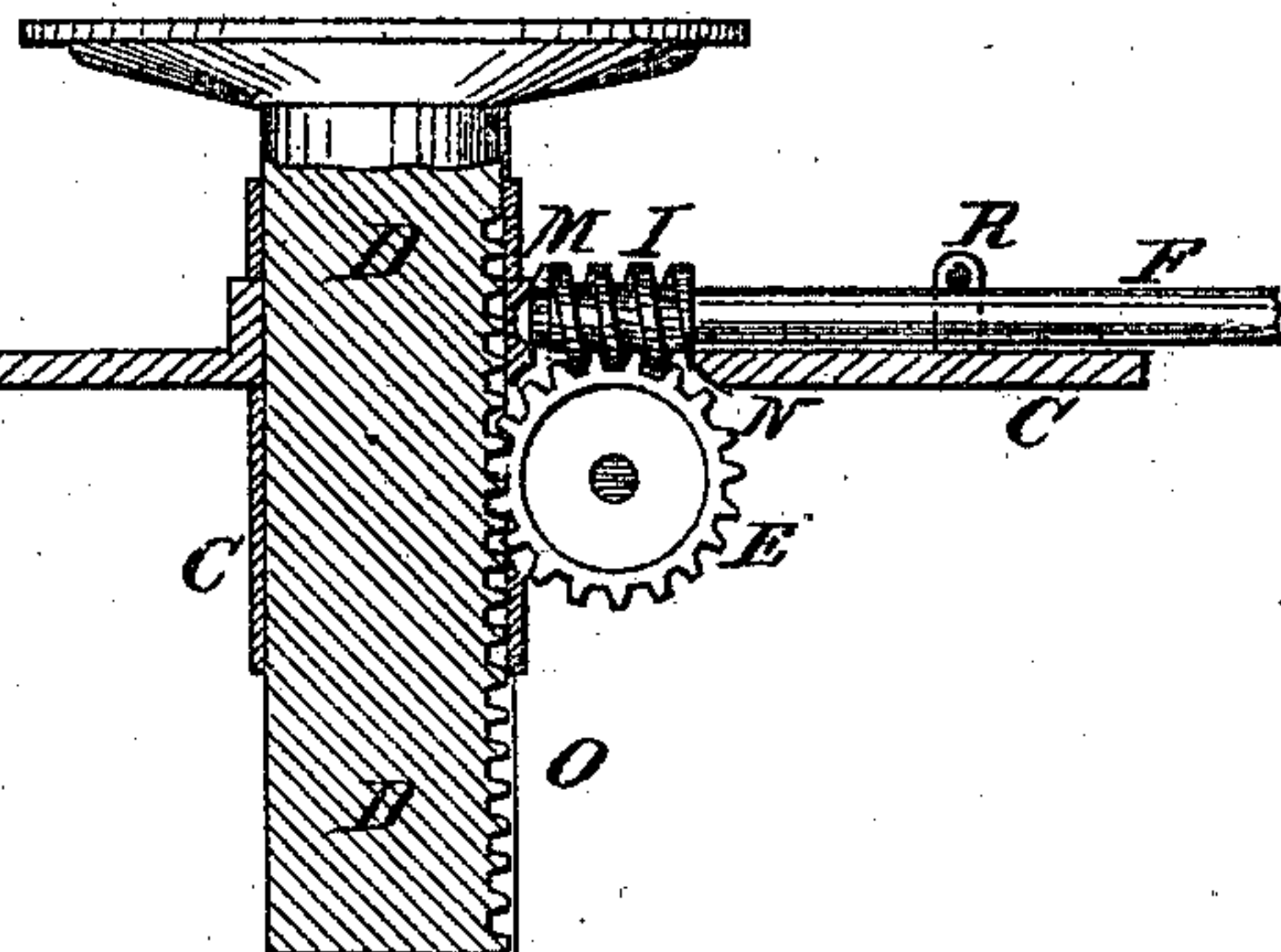


Fig. 3.



Witnesses.

Clement Meserve.

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Inventor.

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UNITED STATES PATENT OFFICE.

OTIS C. WHITE, OF HOPKINTON, MASSACHUSETTS.

IMPROVEMENT IN DENTISTS' AND BARBERS' CHAIRS.

Specification forming part of Letters Patent No. 120,919, dated November 14, 1871.

To all whom it may concern:

Be it known that I, OTIS C. WHITE, of Hopkinton, in the county of Middlesex, in the State of Massachusetts, have invented a new and Improved Mode of Raising the Seats of Dentists', Barbers', and other Chairs; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to a new and improved mode of raising the seats of dentists', barbers', and other chairs by a cheap and easy method, its cost being much less than that of those now in use, and its parts not liable to get out of order. The nature of my invention consists in the arrangement of a worm working into a worm-wheel which meshes into a rack, this rack being cast into the slide-rod, on the top of which the seat to be raised is attached. The worm, worm-wheel, and rack are all used from the casting without any fitting, thereby obviating the necessity of cutting. By having the rack recessed and the worm-wheel working closely into the recessed rack, the slide-rod being round, on which the seat is fastened, is secured from turning in its bearings. By this method double the usual weight can be raised with ease.

In the accompanying drawing, Figure 1 represents the chair-seat raiser as applied to a chair. Fig. 2 represents a top view of the seat-raiser with the slide-rod withdrawn, and showing the projection of worm-wheel into the recessed rack. Fig. 3 represents a sectional view of the seat-raiser, showing the worm, worm-wheel rack, and main support of the working parts.

Similar letters of reference indicate corresponding parts.

In Fig. 1, A A represent the frame of the chair. B is the seat, and is attached to the slide-rod D D, which moves through the cylinder in the main

support C, shown in Fig. 3. The slide-rod D D has a rack, O, shown in Fig. 3, cast in one side, the width of the worm-wheel E, and is recessed in, the teeth not coming out quite to the surface of the slide-rods D D, shown also in Fig. 4. E, the worm-wheel, which works into the rack and is held in place by projections cast with the main support, one of which is represented by H, the other being on the opposite side of the worm-wheel E. I, shown in Fig. 3, is the worm, which is cast with the shaft F, and has its bearings at K and M. The end M is made somewhat pointed to relieve it from friction. The worm-wheel and rack have teeth at an angle to correspond with the pitch of the screw, so that they will work together in the same plane. The main support is secured to the frame of the chair at the point V V V, Fig. 2. G is the crank by which the seat is operated.

The operation of my machine is as follows: On turning the crank G the worm I revolves the worm-wheel E which works into the rack O, thereby raising or lowering the slide-rod D D, as desired.

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

1. In combination with a chair having a seat to be raised and lowered, a metal spindle, D, having a vertical series of gear-teeth, o, on the spindle, the points of the teeth being flush with or sunk below the outer surface of the spindle, substantially as described.

2. The combination, with the movable frame for the seat, of a spindle, D, having a vertical gear-rack thereon, a worm-wheel, E, engaging with the teeth of said rack, and a worm, I, on the actuating-shaft F, as shown and described.

OTIS C. WHITE.

Witnesses:

CLEMENT MESERVE,
ALBERT G. BREWER.

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