

M. M. Follett,

Converting Motion.

N^o 76,429.

Patented Apr. 7, 1868.

Fig. 1.

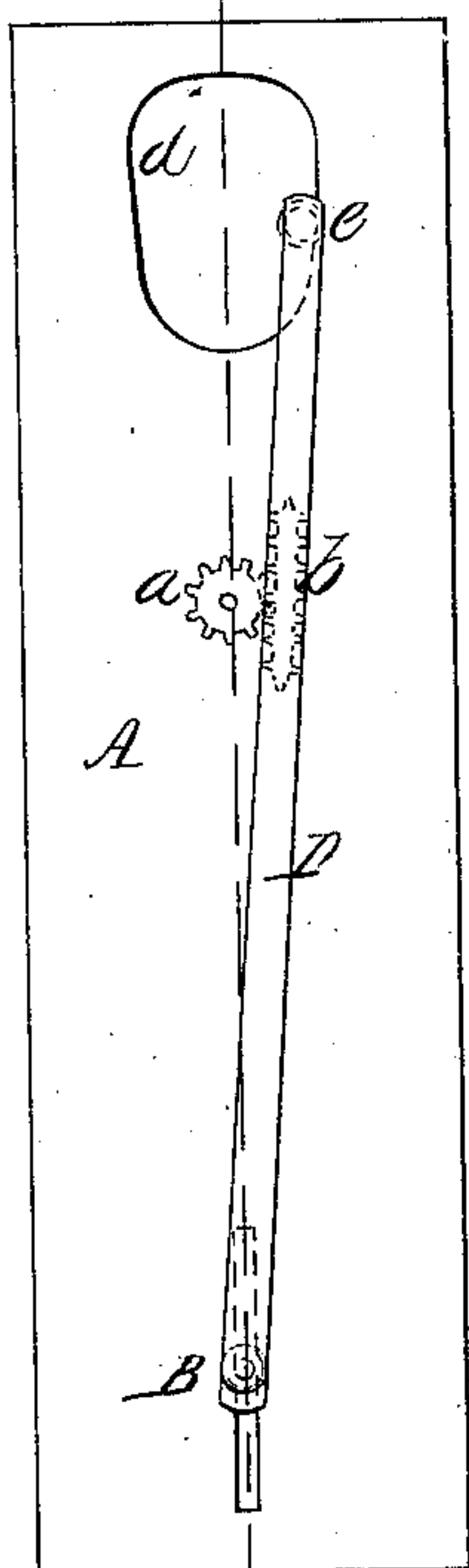
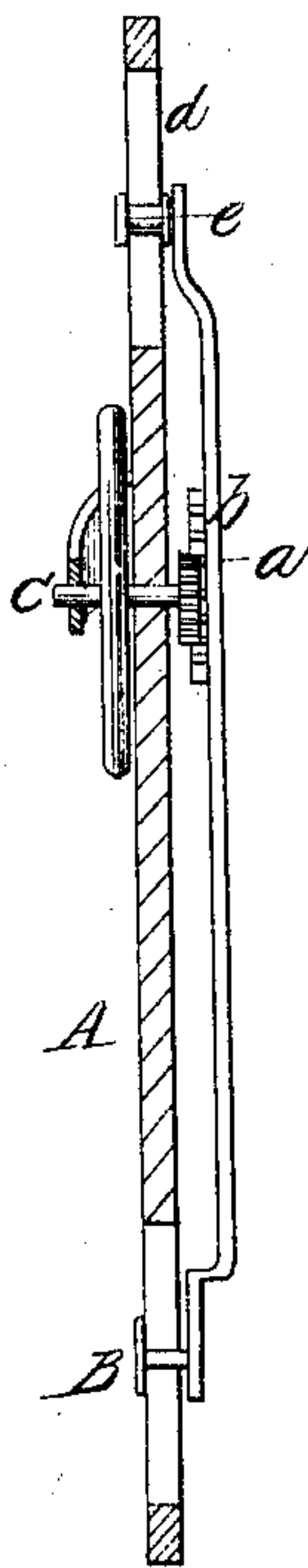


Fig. 2.



Witnesses:
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M. M. FOLLETT, OF WESTBORO, MASSACHUSETTS.

Letters Patent No. 76,429, dated April 7, 1868.

IMPROVED DEVICE FOR CONVERTING MOTION.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, M. M. FOLLETT, of Westboro, in the county of Worcester, and State of Massachusetts, have invented a new and improved Device for Converting Motion; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification.

The nature of my invention relates to a novel means of changing reciprocating motion into rotary motion, or rotary motion into reciprocating, and at the same time changing the relative velocities of the parts having the two different movements.

In the ordinary construction of the connecting-rod and crank the two parts necessarily give the same number of movements, the two being rigidly connected together; *i. e.*, the reciprocating part will give the same number of double movements as the rotary portion gives revolutions. Now my improvement is susceptible of such variation that the rotary portion may be made to give a greater number of revolutions than the number of double reciprocating movements given by the reciprocating part, or the reciprocating part may be reduced in motion if the wheel be used as the prime mover, as will be more clearly shown on reference to the drawings, in which—

Figure 1 represent a plan of my improved device, and

Figure 2 represents a longitudinal section on the line *xx* of fig. 1.

Similar letters of reference indicate corresponding parts.

A represents a bed-plate, on which the cross-head B slides, and which is also the support of the shaft C. D is the connecting-rod, which may be connected to the cross-head in the usual manner, but has on its opposite end a guide, *e*, which traverses around a curved track, *d*, formed in the bed-plate, the object of which is to give to the said connecting-rod a motion in some respects similar to that of the ordinary motion of a connecting-rod when working on a crank.

The size and configuration of the said curved track are governed by the length of the throw of the cross-head, the diameter of the pinion *a* on the shaft C, the length of the connecting-rod, and the distance of the pinion *a* from the cross-head when standing at the centre of the space through which it reciprocates. On the said connecting-rod is arranged a rack, having teeth all around its edge, being secured to the said connecting-rod by one of its sides.

Now, as by means of the curved track *d* and the guide *e* the rack will be carried around the pinion, if the said rack were connected to the pinion by one tooth only, or, in other words, by a pin, it would give one revolution to the same, but as it is provided with a number of teeth, working into corresponding teeth on the pinion, the motion of the said pinion will be accelerated thereby, and if the number of teeth on the rack be the same as those on the pinion it will then have two revolutions to one double movement of the connecting-rod, and as the number on the rack is increased, the speed of the pinion will be correspondingly increased, or that of the connecting-rod diminished, if the wheel be used as the prime mover.

Although I have described the construction of the various parts of my invention, as shown in the drawings, I do not desire to limit myself to the precise construction therein shown, as various modifications of the same may be made without departing from the principle of my improvement.

What I claim, and desire to secure by Letters Patent, is—

The combination and arrangement of the devices, substantially as and for the purpose herein described.

M. M. FOLLETT.

Witnesses:

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