

W. McCLURE.
Rotary Churns.

No. 135,281.

Patented Jan. 28, 1873.

Fig. 1.

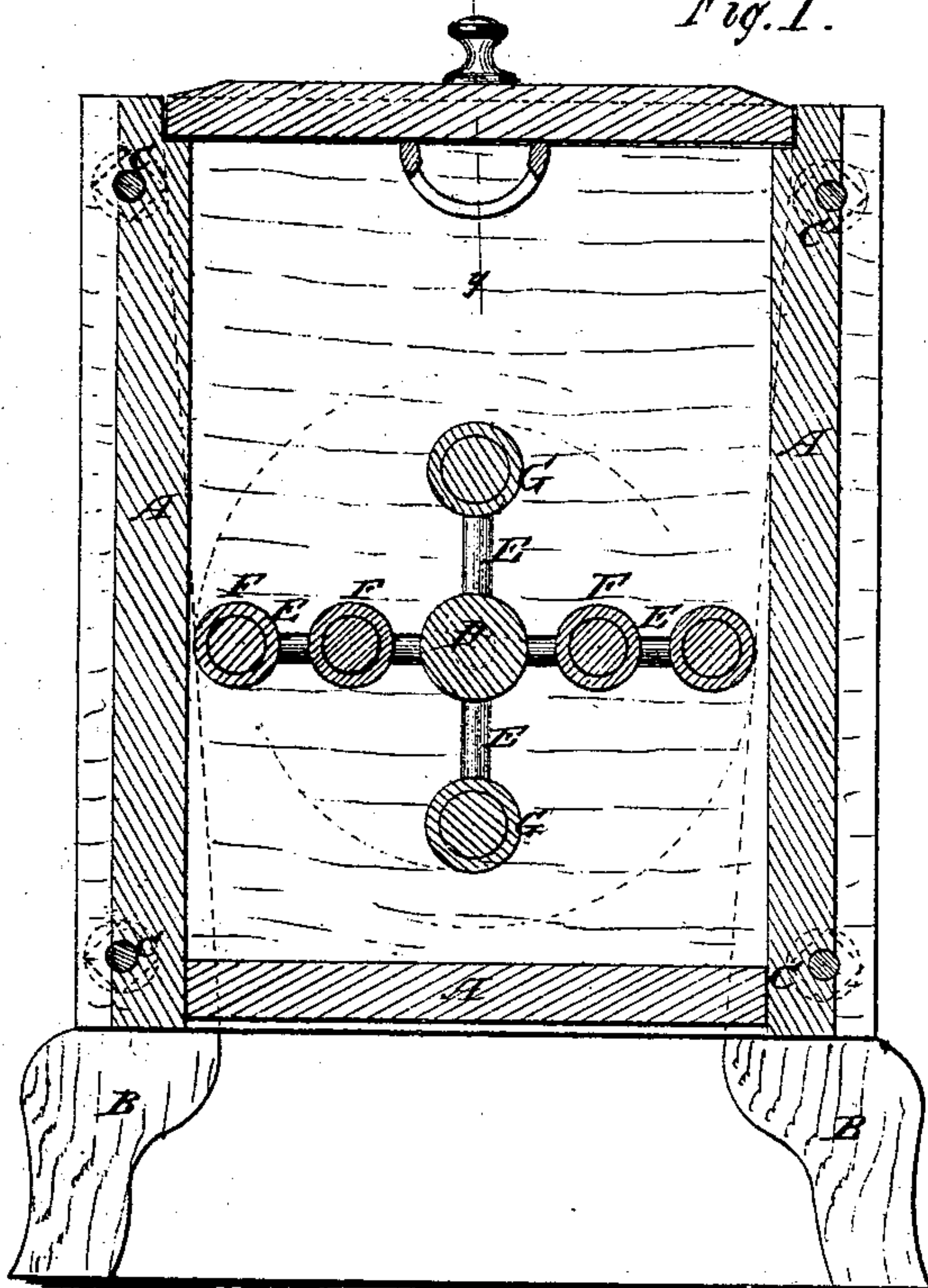


Fig. 2.

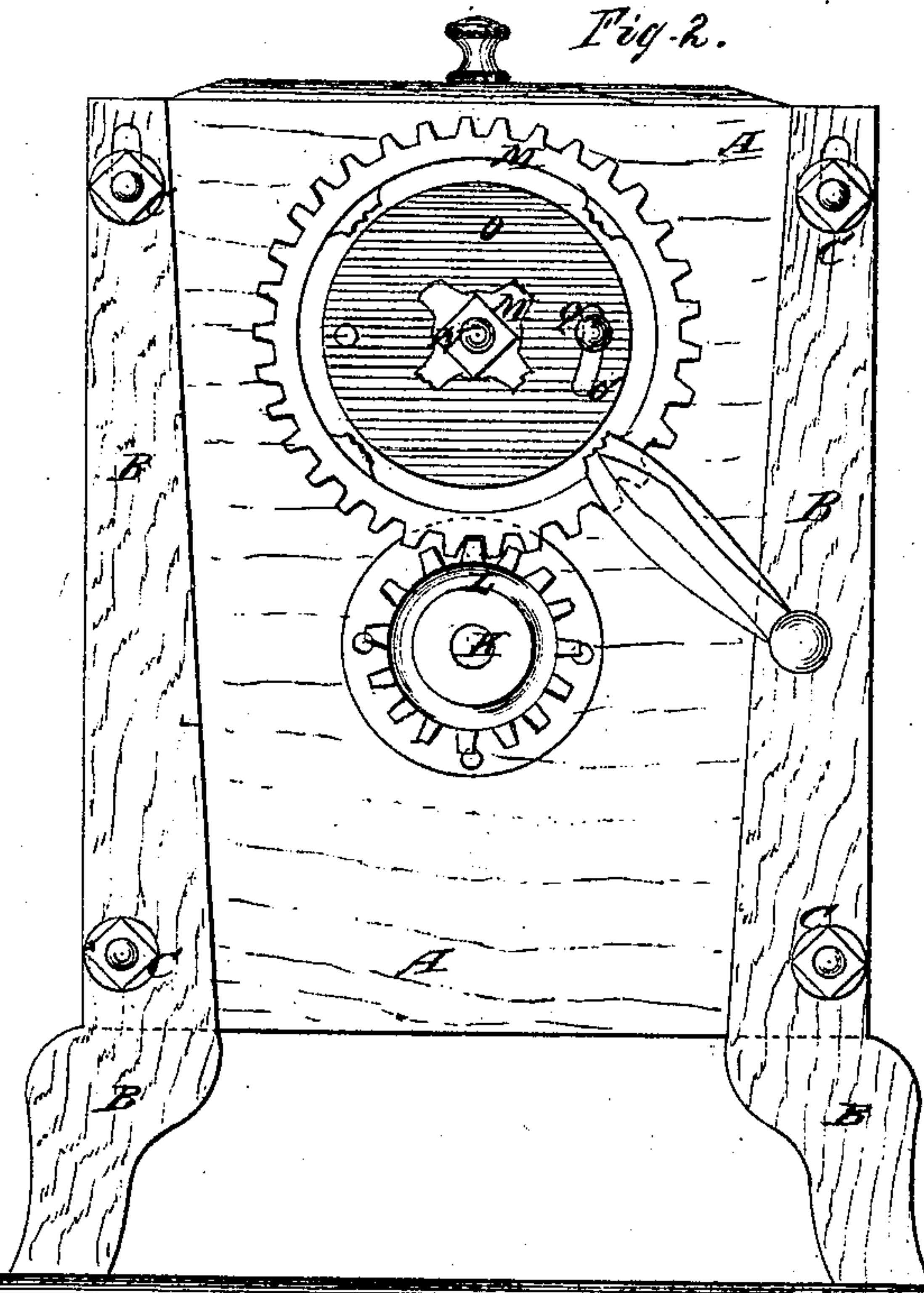


Fig. 3.

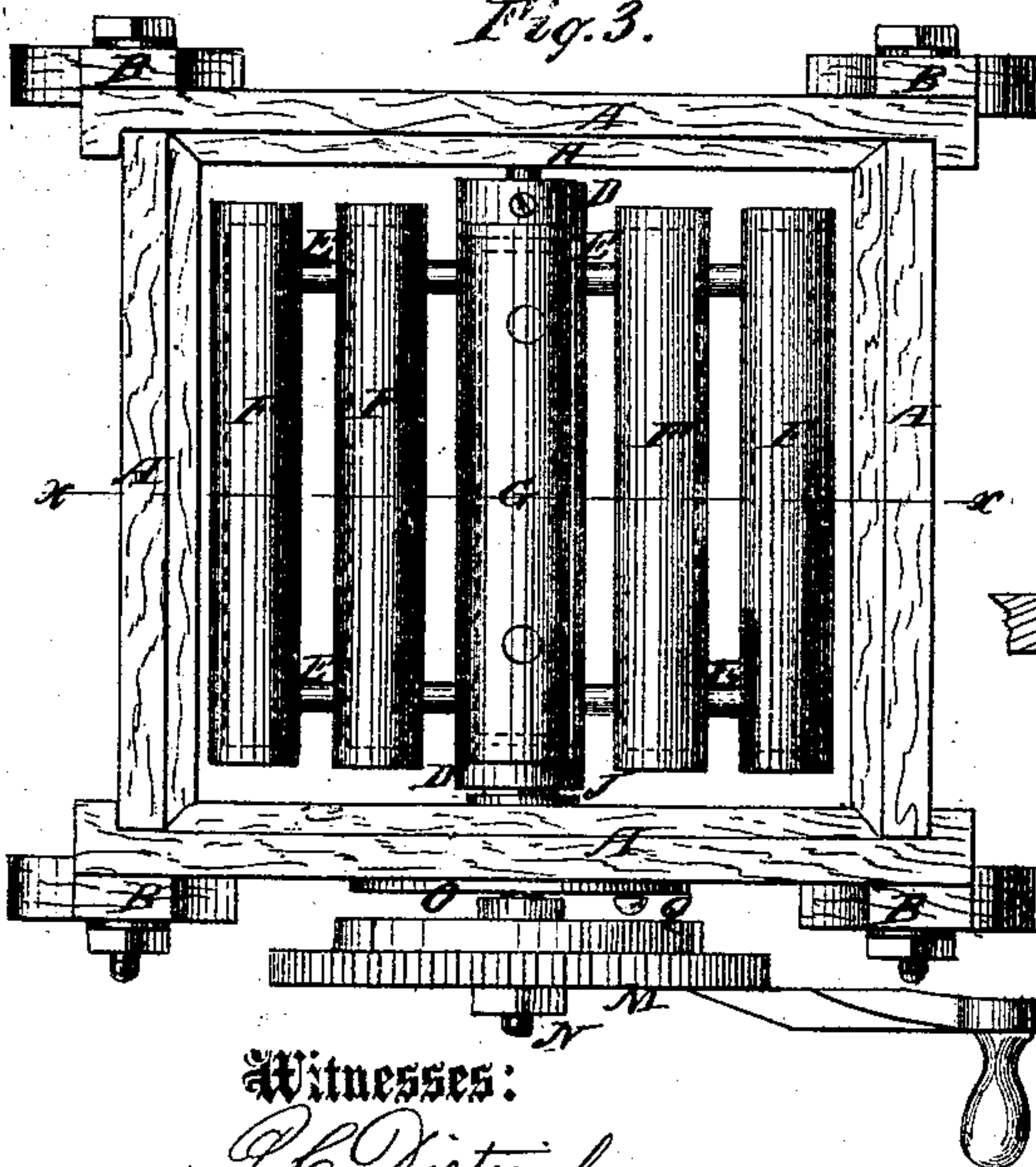


Fig. 4.

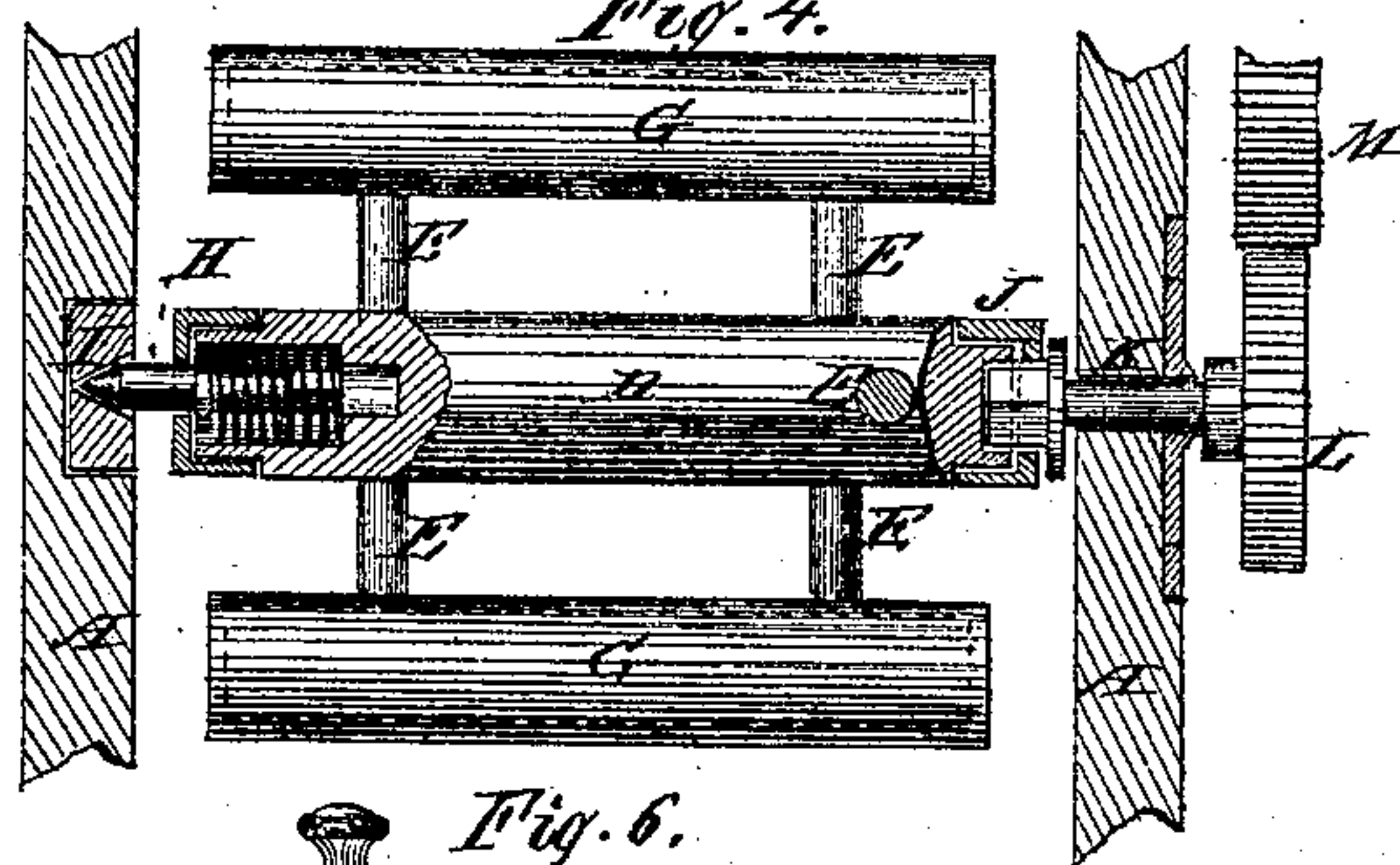


Fig. 6.

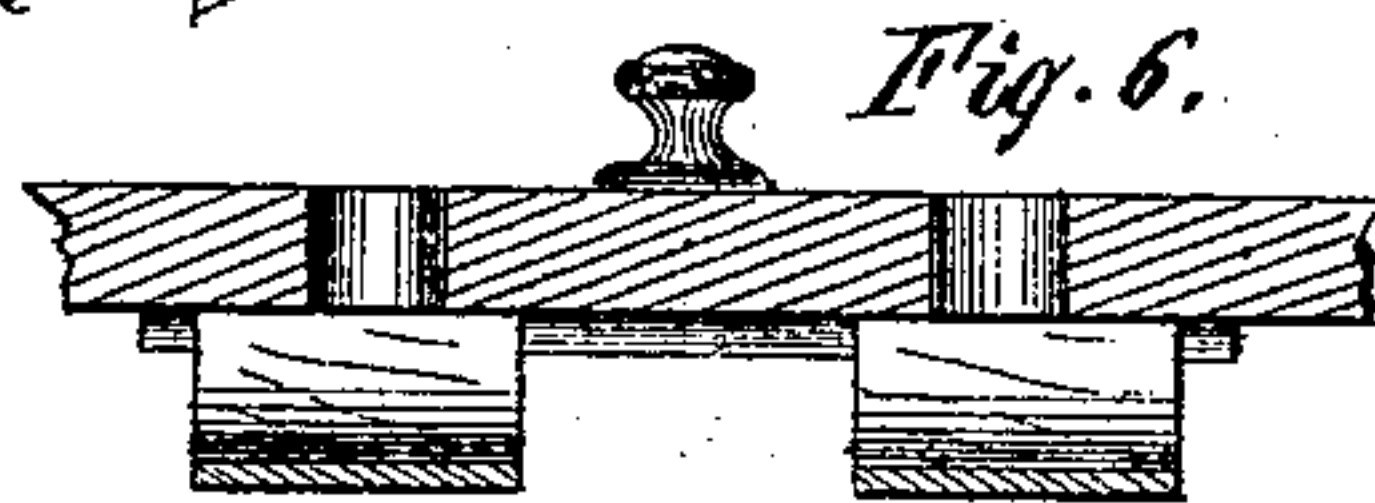
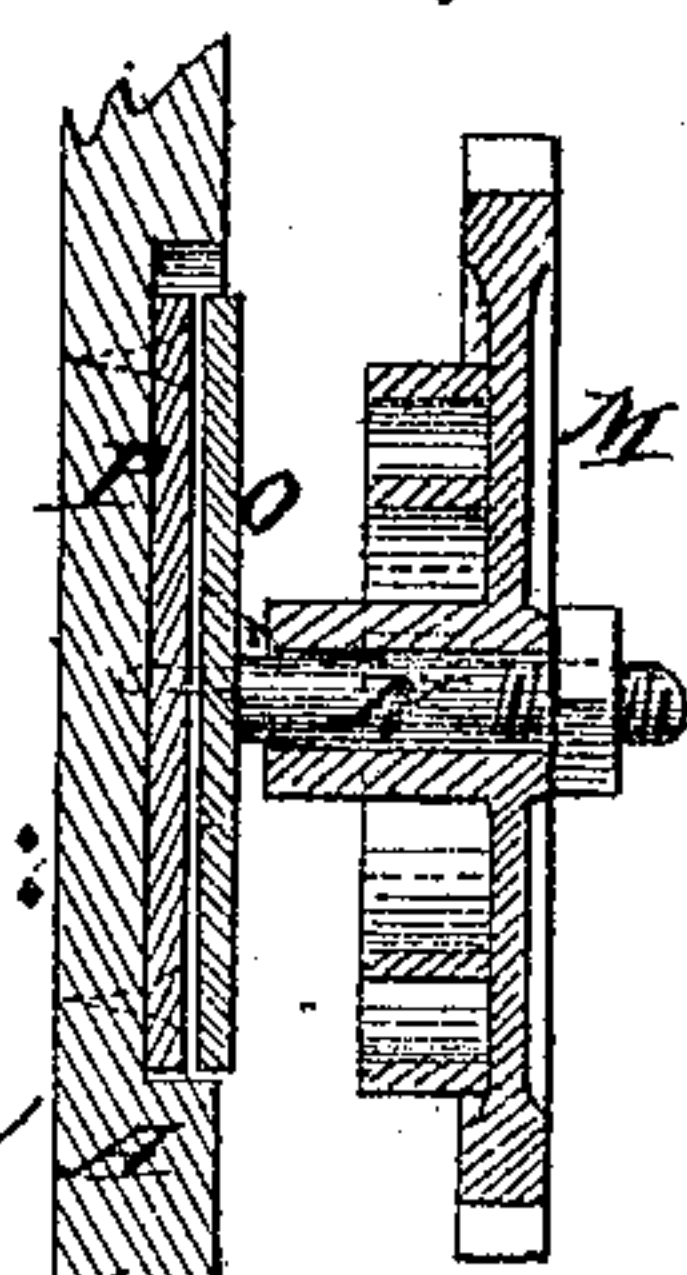


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILSON McCLURE, OF SINKING SPRING, OHIO.

IMPROVEMENT IN ROTARY CHURNS.

Specification forming part of Letters Patent No. 135,281, dated January 28, 1873.

To all whom it may concern:

Be it known that I, WILSON McCLURE, of Sinking Spring, in the county of Highland and State of Ohio, have invented a new and useful Improvement in Churns, of which the following is a specification:

Figure 1 is a detail sectional view of my improved churn taken through the line *x x*, Fig. 3. Fig. 2 is a front view of the same, part of the drive-wheel being broken away to show the construction. Fig. 3 is a top view of the same, the cover being removed. Fig. 4 is a detail view of the dasher, showing the manner in which it is pivoted to the box and connected with the driving-gearing. Fig. 5 is a detail sectional view of the drive-wheel and its supporting device. Fig. 6 is a detail section of the cover taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved churn, simple in construction, convenient in use, effective in operation, and not liable to get out of order; and it consists in the spring posts or legs and the binding-rods, constructed and arranged in connection with the box A as hereinafter described, and in the dasher formed by the combination of the shaft, radial arms, and weighted round bars.

A is the box, which is made with the grain of the wood running horizontally or around the box and with the end edges of the ends of the box inserted in grooves in its sides. B are the legs or posts, upon the inner sides of the lower parts of which are formed shoulders for the lower edges of the end parts of the sides of the box to rest upon. The legs or posts B are so formed that their upper parts, when left free, may stand out from the sides of the box A. C are rods placed in grooves in the upper and lower parts of the outer sides of the ends of the box A, and which pass through holes in the end parts of its sides. The rods C also pass through holes in the legs or posts B, and when the nuts are screwed upon them they draw said legs B close up against the sides of the box A, so as to press said sides against the end edges of the ends from the bottom to the top of the box. By this construction the shrinking and swelling of the wood will not tend to open the seams of the box, but will

only vary its height. For this reason the holes in the upper parts of the legs or posts B through which the rods C pass are made in the form of short slots, to allow the upper rod C to move up and down with the swelling and shrinking of the wood without affecting the tension of the rods or allowing the joints to open. D is the dasher-shaft, to which are attached four—more or less—pairs of radial arms, E. To the alternate pairs of radial arms E are attached two round bars, F, at a little distance apart; and to the other pairs of arms E is attached a round bar, G, in such a position as to be opposite the space between the round bars of the other pairs of arms, as shown in Fig. 1. The part of the round bars F G between the arms E is made hollow and is filled with iron or other suitable heavy material, to cause the dasher to strike the milk harder and heavier and to give it a steadier motion, adapting it to serve as a fly-wheel. In one end of the dasher-shaft D is inserted a pivot, H, which is held out by a coiled spring inserted in a recess in the end of said shaft. The spring-pivot H works in a socket, I, attached to the inner surface of one side of the box A. In the other end of the shaft D is formed, or to it is attached, a square socket, J, to receive the squared inner end of the pivot K, which passes out through a hole in the side of the box A and has a flange formed upon it which rests against the inner surface of the side of the box A, against which it is gently pressed by the action of the spring-pivot H, to assist in preventing the escape of milk through the hole in which said pivot K works. To the outer end of the pivot K is attached a small gear-wheel, L, into the teeth of which the teeth of the drive-wheel M mesh. The drive-wheel M works upon a gudgeon, N, and has a crank attached to or formed upon it, by means of which motion is given to it. The inner end of the gudgeon N is firmly attached to a disk, O, which is pivoted eccentrically to a disk, P, by a screw, rivet, or other suitable means, and which is further secured to said disk P by a clamping-screw, Q, which passes through a curved slot, O', in the disk O and screws into the disk P. The disk P is firmly attached to the side of the box A.

By this construction, as the box A swells and shrinks by loosening the screw Q, the

drive-wheel M may be adjusted to always gear properly into the gear-wheel L.

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

1. The spring posts or legs B and rods C, constructed and arranged in connection with the churn-box A substantially as herein shown and described, and for the purposes set forth.

2. The dasher formed by the combination of the shaft D, radial arms E, and weighted round bars F G with each other, substantially as herein shown and described, and for the purposes set forth.

WILSON McCLOURE.

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