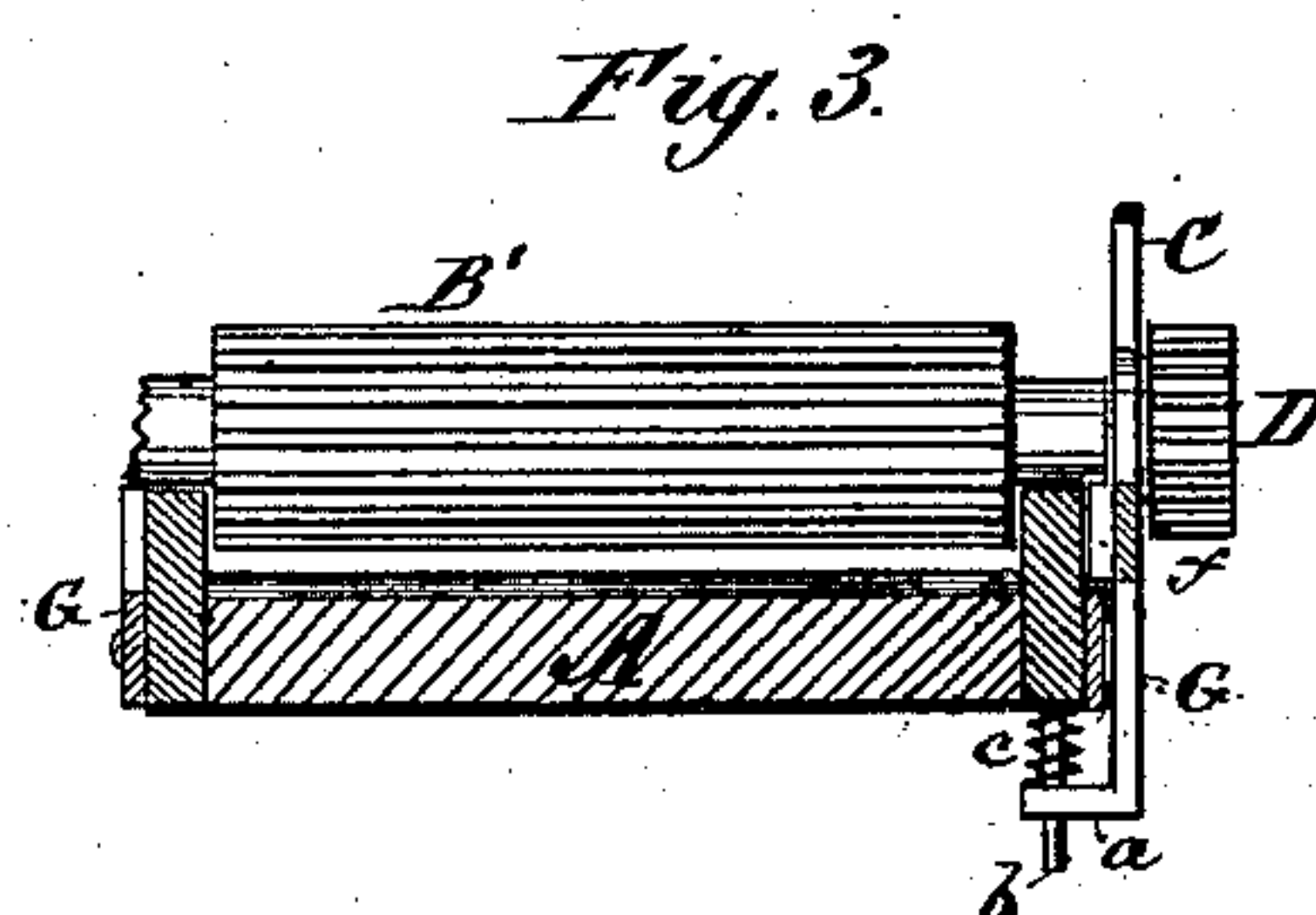
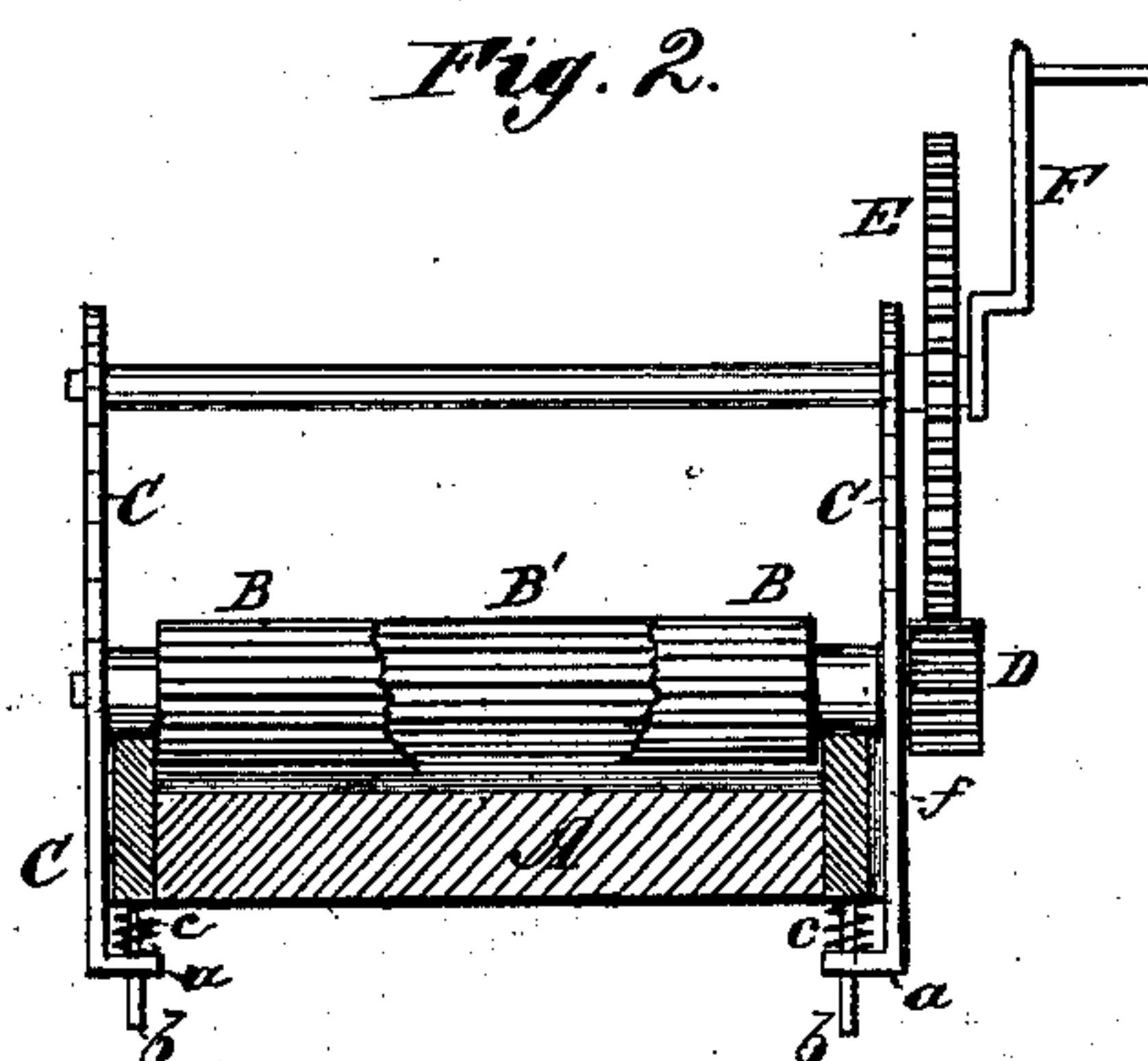
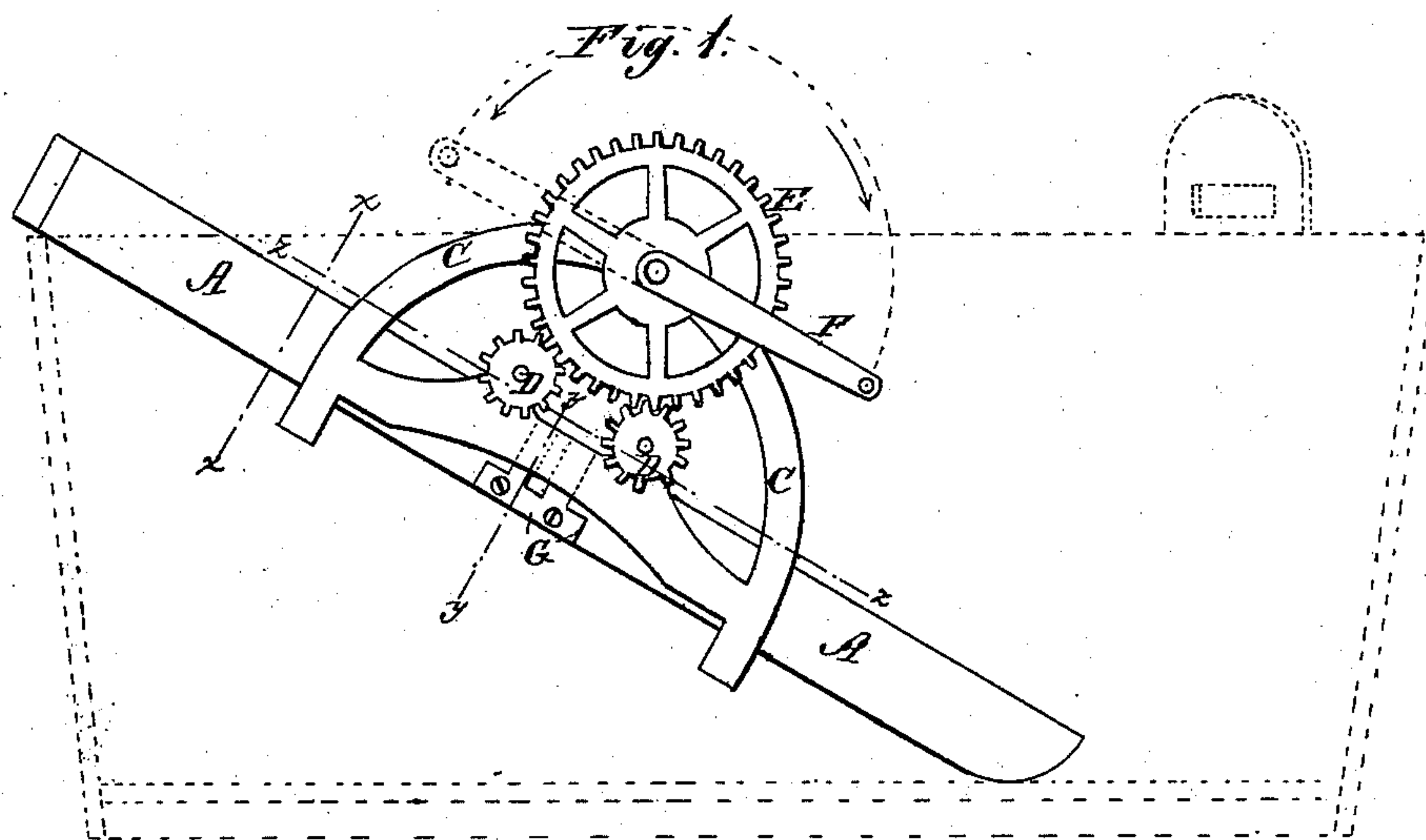


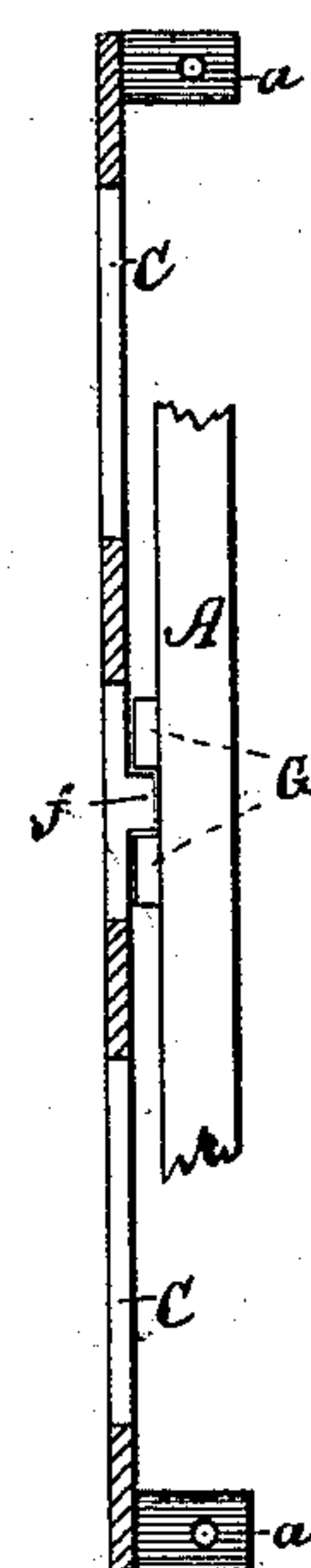
C. E. FOX.  
Washing-Machine.

No. 218,955.

Patented Aug. 26, 1879.



*Fig. 4.*



WITNESSES:

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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

CHARLES E. FOX, OF MOUNT PLEASANT, MICHIGAN, ASSIGNOR OF ONE-HALF HIS RIGHT TO EDWIN EATON WOOD, OF SAME PLACE.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **218,955**, dated August 26, 1879; application filed June 28, 1879.

*To all whom it may concern:*

Be it known that I, CHARLES ELGYN FOX, of Mount Pleasant, in the county of Isabella and State of Michigan, have invented a new and useful Improvement in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to an improvement in the class of mechanical rubbing attachments for wash-boards which consist of one or more rollers arranged transversely of the corrugated face of the wash-board, and having a crank-and-gear attachment, said parts being mounted in a suitable frame, which is attached to the wash-board, and yet adapted to yield to enable the rubbing roller or rollers to act on both small and large fabrics or articles of clothing.

In the accompanying drawings, forming part of this specification, Figure 1 is a side view of my improved washing-machine. Fig. 2 is a cross-section on line *x x*, Fig. 1. Fig. 3 is a section on line *y y*, Fig. 1; and Fig. 4 is a section on line *z z* of Fig. 1.

A indicates a wash-board, such as is in common use for hand-rubbing of fabrics or clothing. The face of the board A may be composed of rollers instead of fixed flutes.

B B' are two corrugated fluted or otherwise roughened rollers, which have their bearings in the side pieces, C C, of a metal frame that is attached to the sides of the wash-board. These rollers may be made of rubber or such other material as deemed preferable.

Pinions D D are keyed on the projecting ends of the roller-axes, and with these a large spur-gear, E, is arranged to mesh, as shown. The axis of said gear is also mounted in the frame C C, and a crank, F, attached thereto.

In using the machine, the board A is placed in an inclined position in a wash-tub, and the pieces of fabric or clothing to be washed are successively raised out of the suds and drawn beneath the rollers B B', to which a reciprocating rotary motion is then imparted by vibrating the crank F.

When the fabric has been rubbed sufficiently the crank is rotated one or more times, to cause the rollers B B' to carry the fabric out from between them and the board, and another piece then takes its place beneath the rollers, which are again vibrated as before.

Since fabrics vary in size and thickness it is necessary to adapt the rollers to exert a yielding pressure on the board A; and to this end the frame-pieces C C are bent inward at the lower end, *a*, and also perforated thereat, to receive pins *b*, which are set in the frame of the wash-board. Spiral or other springs, *c*, are attached to said pins, being interposed between the flanges or bent portions *a* and the frame of the board A.

A metal plate, G, is attached to each side of the board, and provided with a slot to receive a projection or lug, *f*, formed on or attached to the side pieces, C C. These parts—to wit, the plates G and lugs *f*—serve as guides for the frame C C and its attached rubbing mechanism, when said frame is moved in one direction or the other by the action of the springs *c*, or by the interposition of a thicker fabric between the rollers and face of the wash-board.

The board and its rubbing attachment constitute a light, easily-operated, and efficient washing-machine, which may be constructed at comparatively small cost.

What I claim is—

1. The combination, with the wash-board, of the rubbing-rollers, metal frame, and springs interposed between the frame and wash-board to adapt the rollers to yield, as required.

2. The combination, with the wash-board, of the rollers, gearing, and frame-pieces C C, having flanges *a*, the pins *b*, fixed in the board, springs *c*, encircling them, and guides G, all as shown and described.

CHARLES ELGYN FOX.

Witnesses:

WADE B. SMITH,  
M. DEVEREAUX.