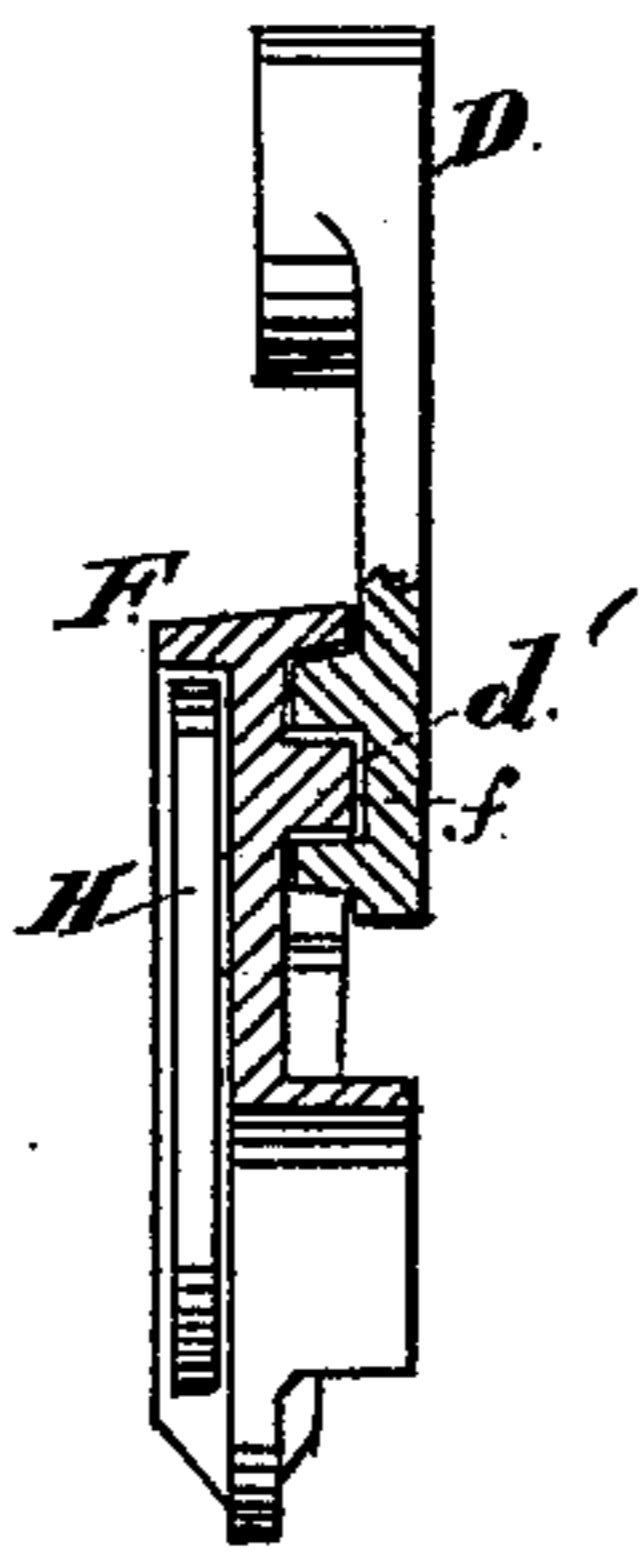
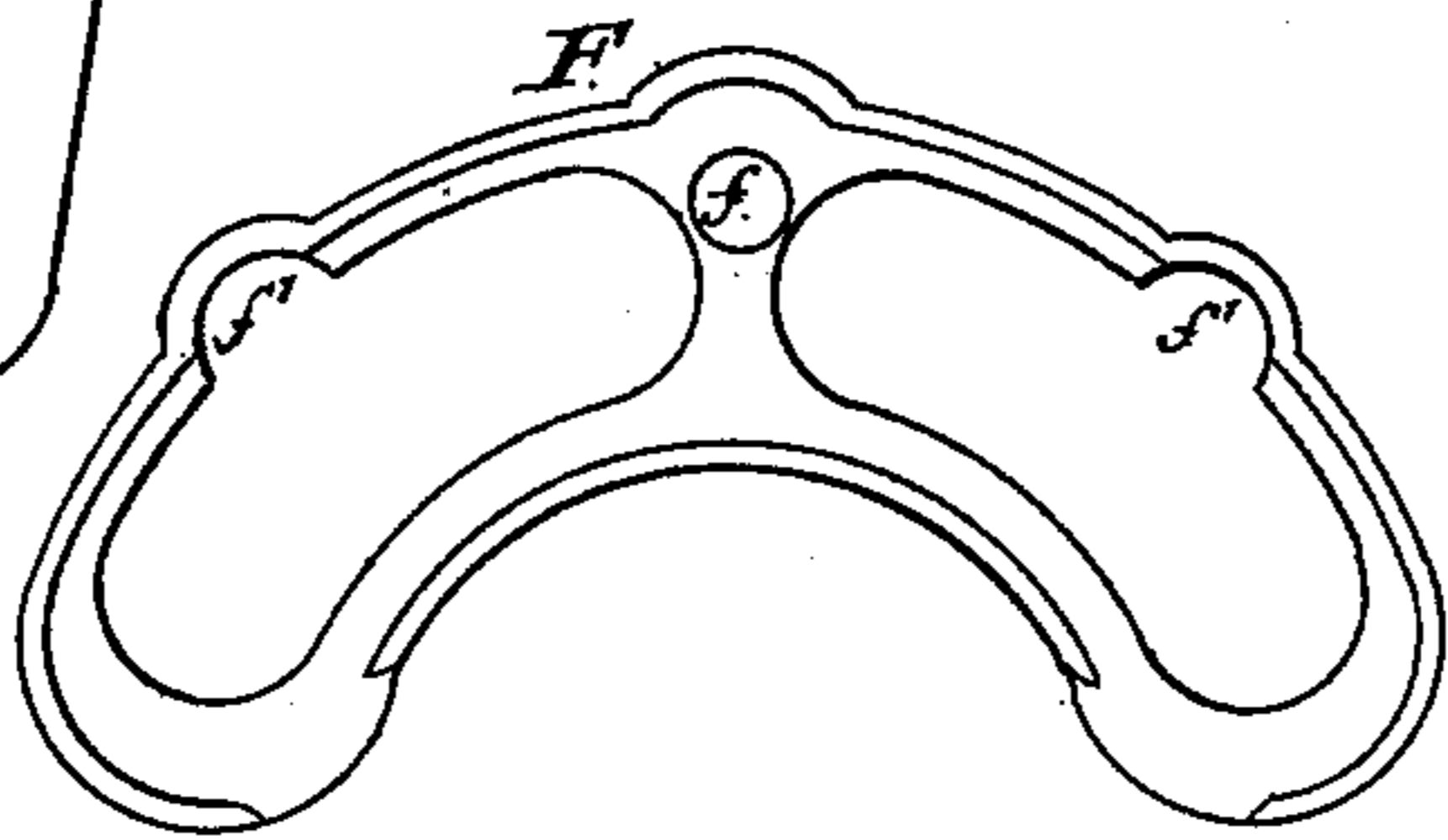
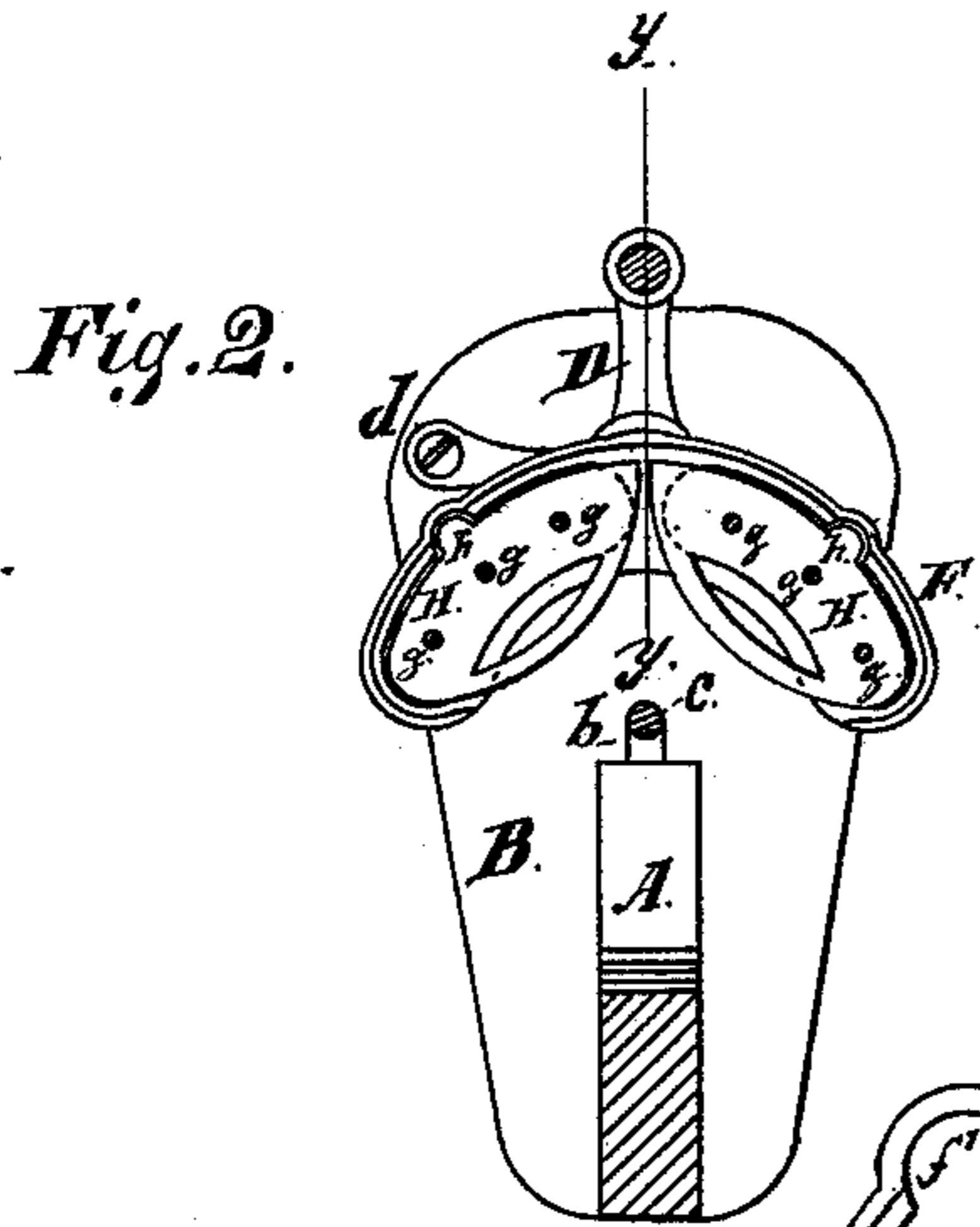
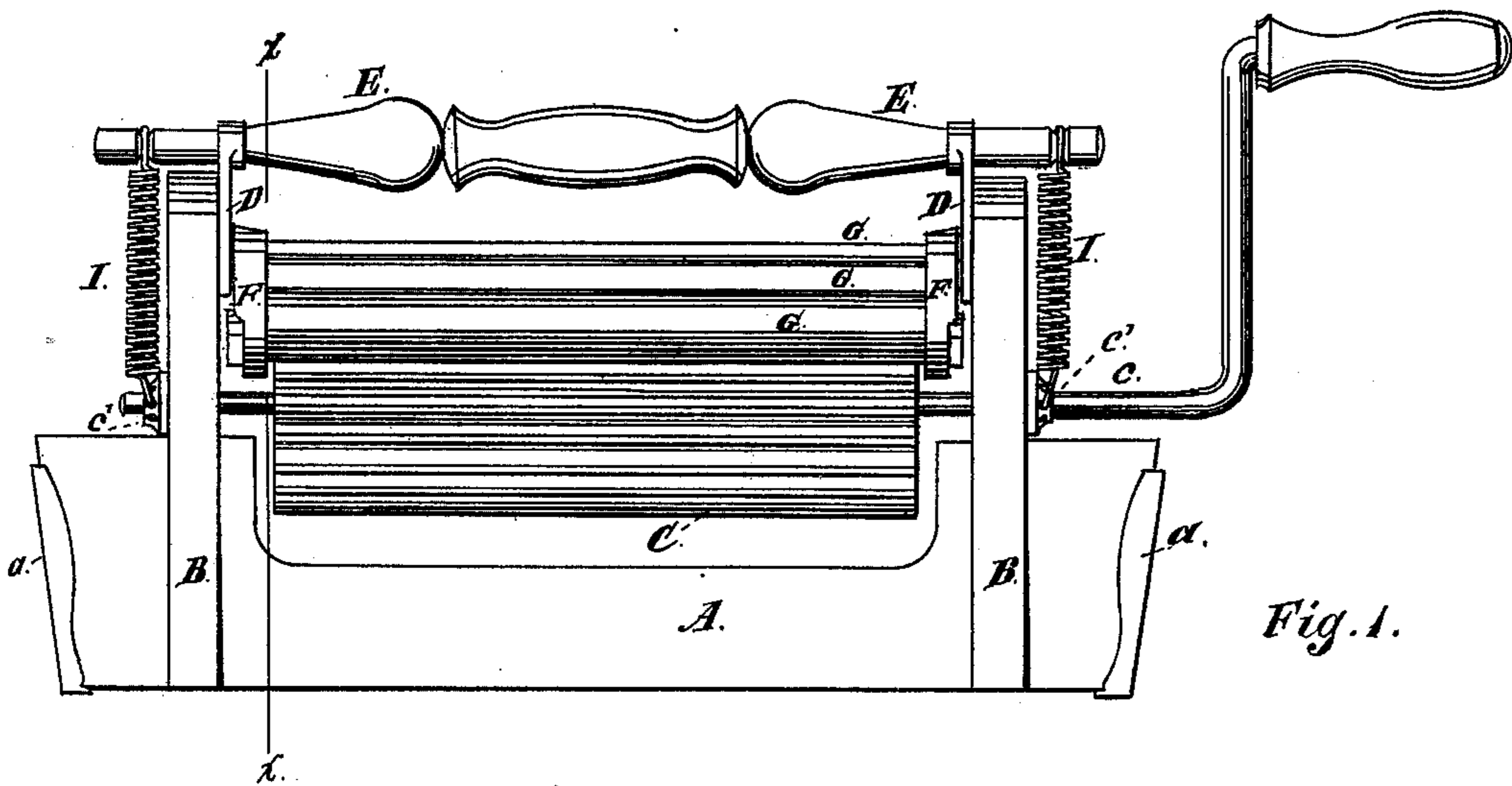


WASHING-MACHINE.

No. 176,596.

Patented April 25, 1876.



Witnesses:

Amirish J. Bruns.
L. M. Harris.

Almon H. Calkins,
Inventor:

By Coburn & Thacher
Atty.

UNITED STATES PATENT OFFICE.

ALMON H. CALKINS, OF CHICAGO, ILLINOIS, ASSIGNOR TO WILLIAM T. CALKINS, OF SAME PLACE.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **176,596**, dated April 25, 1876; application filed January 15, 1876.

To all whom it may concern:

Be it known that I, ALMON H. CALKINS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Washing-Machines, which is fully described in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a side view of the machine. Fig. 2 represents a transverse section, taken on the line *x x*, Fig. 1. Fig. 3 represents an enlarged view of the supporting-plates, in which the sections of the jacket have their bearings; and Fig. 4 represents an enlarged transverse section, taken on the line *y y*, Fig. 2, the section being broken so as to leave the upper end of the handle-support entire.

The object of my invention is to support the roller-jacket of a washing-machine in such a manner that it will readily yield in all directions to accommodate different thicknesses of material passing through the machine.

The invention consists in constructing the jacket of independent sections of rollers, which are supported in loose bearings in a rocking plate at each end, and also in several details of construction, as will be hereinafter more fully set forth.

In the drawings, A represents the base-board, and B B the standards, of the machine. The lower ends of the standards are slotted, as shown at *b*, Fig. 2. A corrugated roller, C, is fixed to a crank-shaft, *c*. This shaft has metallic bearing-pieces *c'* placed upon it, and in putting the machine together the shaft is first slipped up through the slots in the standards to the upper end thereof, and the bearing-pieces *c' c'* are then firmly secured by screws or otherwise to the standards, after which the base-board is also inserted in the slots of the standards, and firmly secured in position. The base-board is provided at its ends with slotted plates *a a*, by means of which the machine is attached to the tub. A bell-cranked arm, D, is pivoted to each standard at *d*. The upper ends of these arms are enlarged and perforated for the reception of the ends of a handle, E. The end supporting-plates F are provided with short lugs *f*, which

are inserted in corresponding recesses *d'* in the arms D, as seen in Fig. 4. The plates F have their central portions cut away, as seen in Fig. 3, and there are circular recesses *f'* in their upper edges, which serve as bearings for small plates, to which the rollers are attached. The jacket of rollers, which is placed above the large roller C, is constructed of independent sections, formed by uniting several small rollers, G, by means of end pieces H, to which the rollers G are pivoted at each end, as seen at *g*, Fig. 2. The sections are held in working position by placing the end plates H underneath the rim of the plate F, and bringing the projection *h* on the end plates H within the recess *f'* of the plate F. To the ends of the handle E are attached springs I I, the lower ends of which are attached to the bearing-plates *c' c'*, and their tension made adjustable by means of a hook on the lower end of the springs, which is inserted in any one of a series of holes in the plates *c' c'*. The loop at the upper end of the springs is made sufficiently large to be easily slipped off from the ends of the handle.

It will be seen from this description that great freedom of motion is obtained for the jacket of rollers, so that it will yield readily in almost any direction. This is accomplished by three independent movements: first, the sections of rollers are independent of each other, and have a limited rocking motion within the flanged rim of the plates F; secondly, the plates F have an independent rocking motion upon their bearings *f*; and, thirdly, the jacket may be raised bodily, the arm D turning upon its pivot *d*, and the springs I I yielding to permit this adjustment. There is, therefore, scarcely any possibility of clogging in passing clothes through the machine, and especially is the clogging sometimes experienced at the center of the jacket where the sections come together, obviated by making the end plates of the sections entirely independent of each other.

The springs I I attached to the handle E hold the jacket down to its work, and if at any time greater pressure is desired, it is readily obtained by placing the hand upon the handle E and forcing it down.

The machine can be quickly dismantled for repairs or packing by throwing the springs I I off from the handle, and turning the entire jacket back upon the arms D, when the sections and plates are easily separated, there being no permanent attachments, and the handle is slipped from the arms D D. By removing the screws which hold the bearing-plates *c' c'* and the base-board A in position, the dismantling of the machine is completed, as the base-boards, standards, and roller C may then be separated from each other.

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

1. The combination, substantially as described, of pivoted, rocking, supporting plates F, and a sectional roller-jacket, the sections of which are independent of each other, and are provided with bearings in the supporting-plates, so as to have a limited rocking motion independently of the rocking movement of the supporting-plates.

2. The combination, substantially as described, of the corrugated roller C, and yielding jacket of rollers constructed in sections, which are independent of each other, and have bearings in pivoted rocking supporting-plates.

3. The combination, substantially as de-

scribed, of the rocking supporting-plates F, end pieces H, and rollers G, for the purpose set forth.

4. The combination, substantially as described, of swinging arms D, pivoted to the frame of the machine, and the roller-jacket, having its supports therein, for the purposes set forth.

5. The combination, substantially as described, of the swinging arms D, pivoted to the standards B, supporting-plates F, and end plates H, for the purposes set forth.

6. The combination, substantially as described, of the handle E and the pivoted arms D, for the purposes set forth.

7. The combination, substantially as described, of the pivoted arms D, jacket of rollers supported thereon, handle E, and springs I I, connected to the frame of the machine, for the purpose set forth.

8. The combination, substantially as described, of the handle E, supported in the arms D, springs I I, and plates *c' c'*, provided with a series of holes, and rigidly attached to the standards of the machine.

ALMON H. CALKINS.

Witnesses:

L. A. BUNTING,
HEINRICH F. BRUNS.