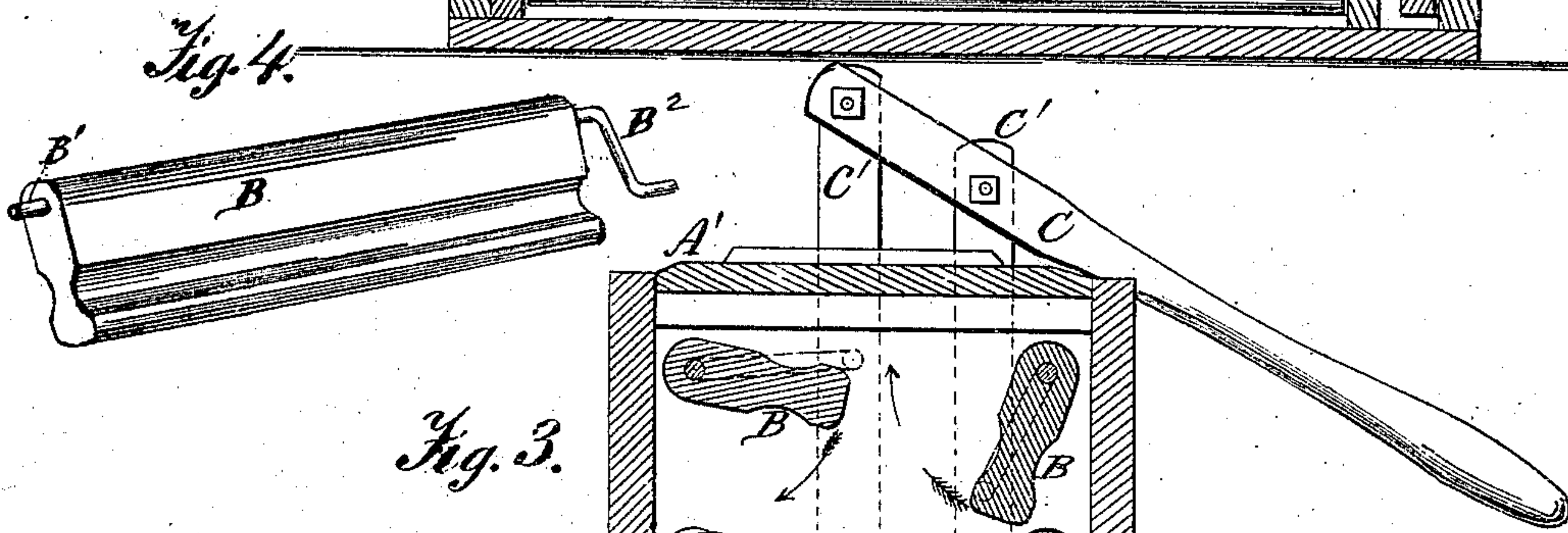
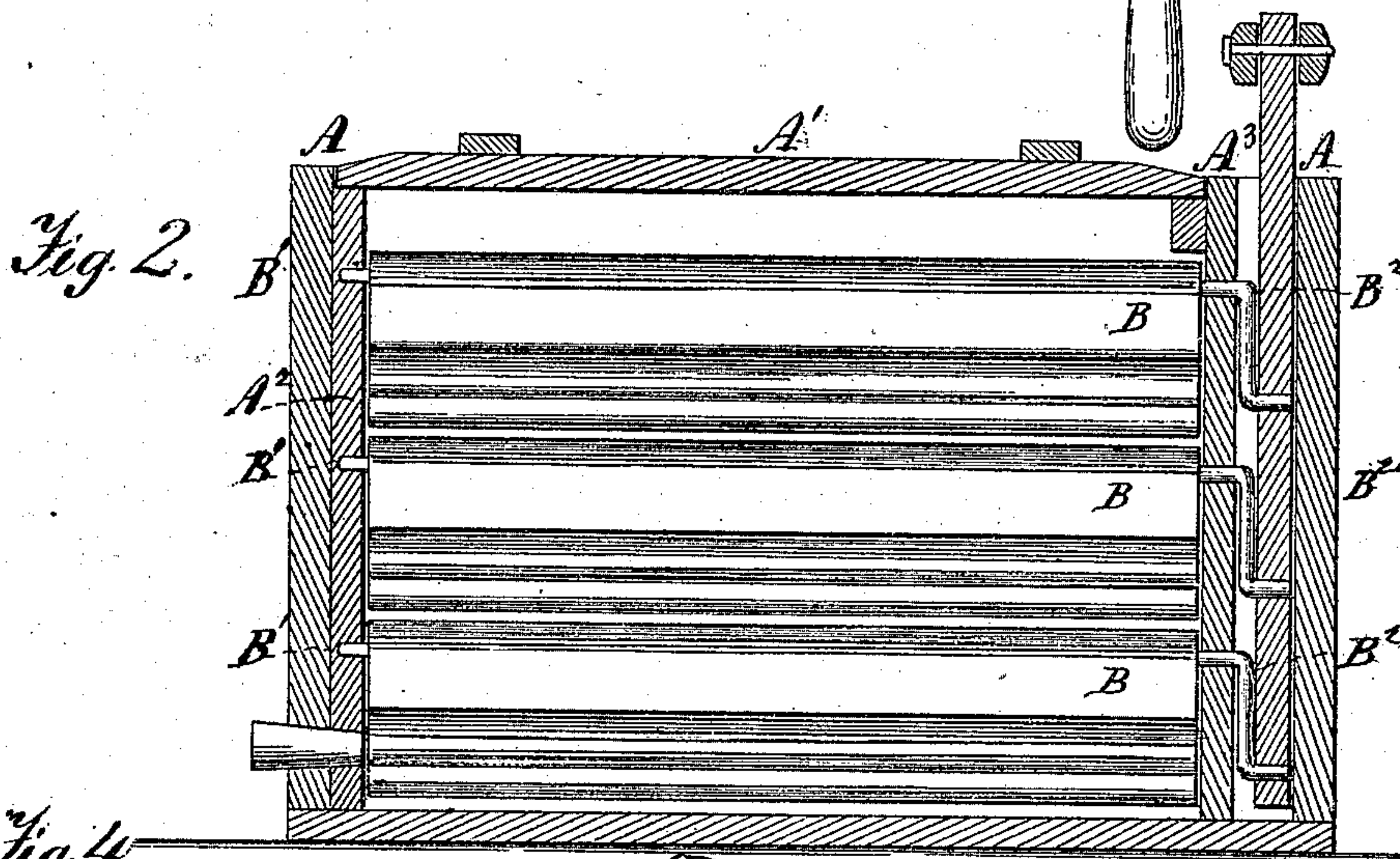
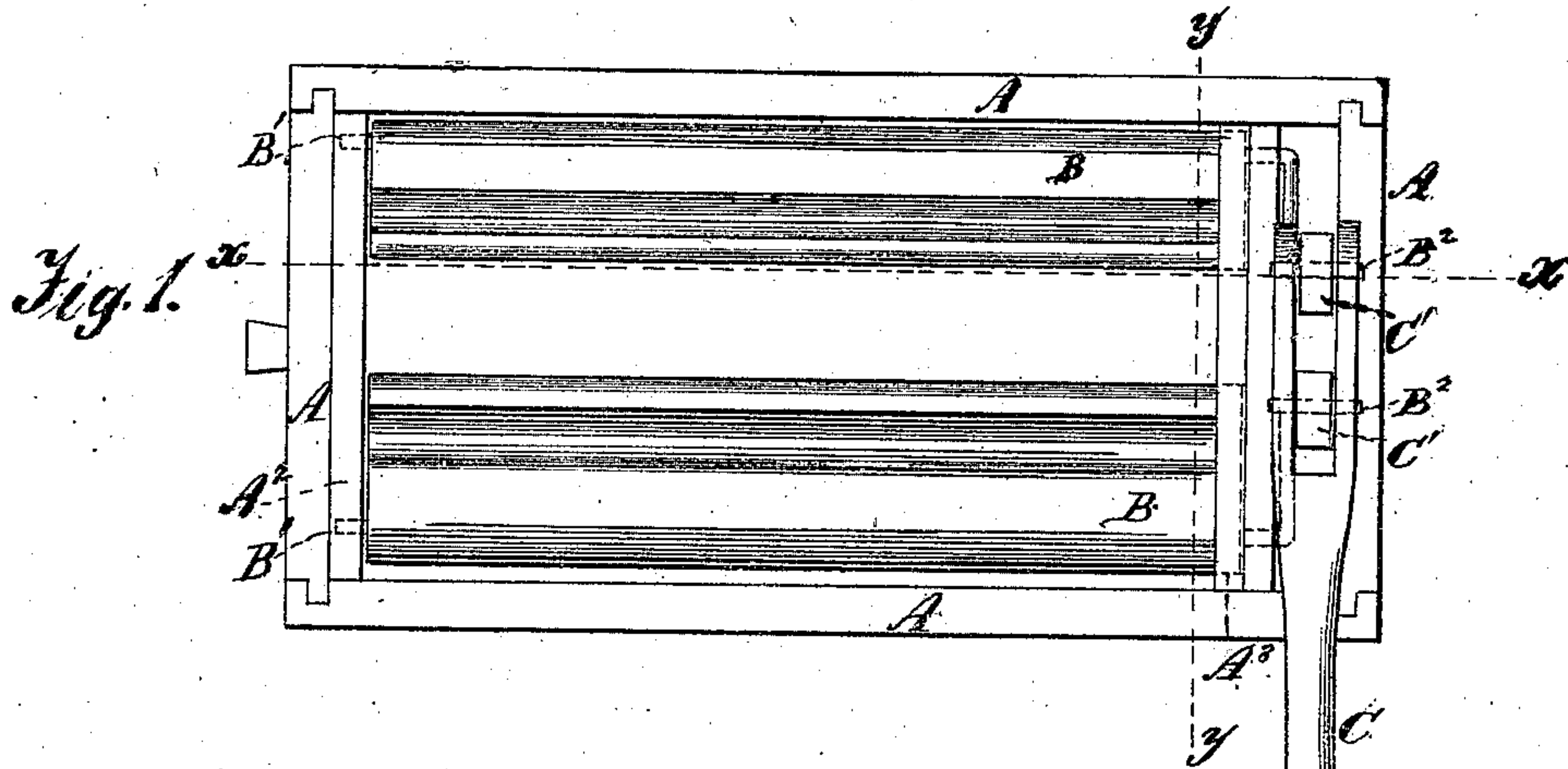


G. L. WITSIL.
Washing-Machines.

No. 133,736.

Patented Dec. 10, 1872.



Witnesses.
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W. Bradford

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Attys

UNITED STATES PATENT OFFICE.

GEORGE L. WITSIL, OF BEVERLY, NEW JERSEY.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 133,736, dated December 10, 1872.

To all whom it may concern:

Be it known that I, GEORGE L. WITSIL, residing at Beverly, in the county of Burlington and State of New Jersey, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification:

In the drawing, Figure 1 is a plan view of my improved machine, showing the box or tub, the oscillating rollers or beaters, and the lever which operates them. Fig. 2 is a vertical section on line *x x* of Fig. 1, showing one row of rubbers and the method of operating them, together with the outlet for the water. Fig. 3 is a transverse section on line *y y* of Fig. 1, showing the different position of the rubbers, the lever by which they are operated, and the rods and cranks by which the rubbers and the lever are connected; and Fig. 4 is a perspective view of one of the rollers as it appears when removed from the machine.

Corresponding letters refer to corresponding parts in the several figures.

In constructing machines of this character I use a rectangular vessel, A, composed of any suitable material and made of any suitable dimensions. This vessel is so constructed as to cause it to hold water without leaking, and is provided with a removable cover, A¹, so that the clothes to be washed can be readily inserted into and removed from the vessel A. It is important that this cover should fit the vessel A as closely as possible, in order that the steam from the water may not escape during the process of washing the clothes, as it has been found that in most cases the hotter the water is maintained during such process the better the result produced. Secured to the inner surface of one of the ends of the vessel A there is a support, A², for the ends of the rubber (soon to be described) to turn in. This support may consist of a piece of wood or of suitable metal, which shall cover the entire inner surface of the end A; or it may consist of two vertical pieces fastened to such head at the proper points for receiving the journals of said rollers. In that end of vessel A which is opposite to the one which has the support A² secured to it there is placed a partition, A³, which is at some distance from the end A of the vessel. The space thus left between the partition A³ and the head A forms

a chamber for the reception of the cranks upon the ends of the beaters, and for the movements of the rods which connect such cranks to the lever which operates them. The rollers, which have been previously referred to, are marked B B; and consist of bars which extend from partition A³ of the vessel A to the journal-bearings upon its opposite end. These rubbers may be of wood, and of the form shown in Figs. 3 and 4, or they may be of any other suitable form that will present a suitable surface for acting upon the material to be cleansed, and, if preferred, they may be covered with some non-corrosive metal, and have their rubbing-surfaces corrugated for the purpose of more effectually cleansing the clothes. These rubbers are supplied with journals B¹, which rest and turn in the support A², while their opposite ends are supplied with cranks B², which have their bearings in the partition A³. For the purpose of imparting motion to the rubbers or beaters B a lever, C, is provided, which is arranged as shown in Fig. 3, or in any other suitable manner for giving motion to two vertical connecting-rods, C' C'. One end of this lever is bifurcated, so as to allow it to receive the upper ends of said rods, which form the two pivotal points upon which the lever works. The rods C' C' extend from the lever C down into the chamber in the end of vessel A far enough to allow their lower ends to receive and support the outer ends of their lower cranks B², the ends of the other cranks being inserted into said rods at the proper points, as shown in Fig. 2, so that upon the movement of one of the rods C' all of the cranks and rubbers connected therewith will be moved with it.

By reference to Fig. 3 it will be seen that the arrangement of lever C, connecting-rods C' C', and roller B is such that when one set of the rollers has been brought into the nearly-vertical position, shown in Fig. 3, they will remain in that position while the other set are being brought into the nearly-horizontal position shown in the same figure, and that while the last-named movement is being made the clothes which are placed between the faces of the rollers will be held in a state of rest upon the then stationary rollers, and will thus be subjected to the rolling action of the rollers, which are moving into their horizontal posi-

tion, and when they have been returned to their vertical or nearly vertical position the opposite ones are reversed, and the rubbing operation is repeated as long as the machine is kept in motion.

It is apparent that the form of the lever C may, if it is desired, be changed, so as to have a handle upon both of its ends, in order that two or more persons may aid in operating the machine, or another lever may be added at the opposite end by supplying the necessary cranks and rods for it to act upon.

The rubbers may be placed at any desired distance from each other, and there may be as many of them as is required, according to the work to be done.

D refers to a pipe, which is provided for drawing off the water from the vessel.

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

1. The within-described combination and arrangement of the lever C, connecting-rods C' C', and rollers B, whereby one set of the rollers is caused to remain stationary while the others are in motion, and vice versa, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEO. L. WITSIL.

Witnesses:

D. P. HOLLOWAY,

W. BRADFORD.