

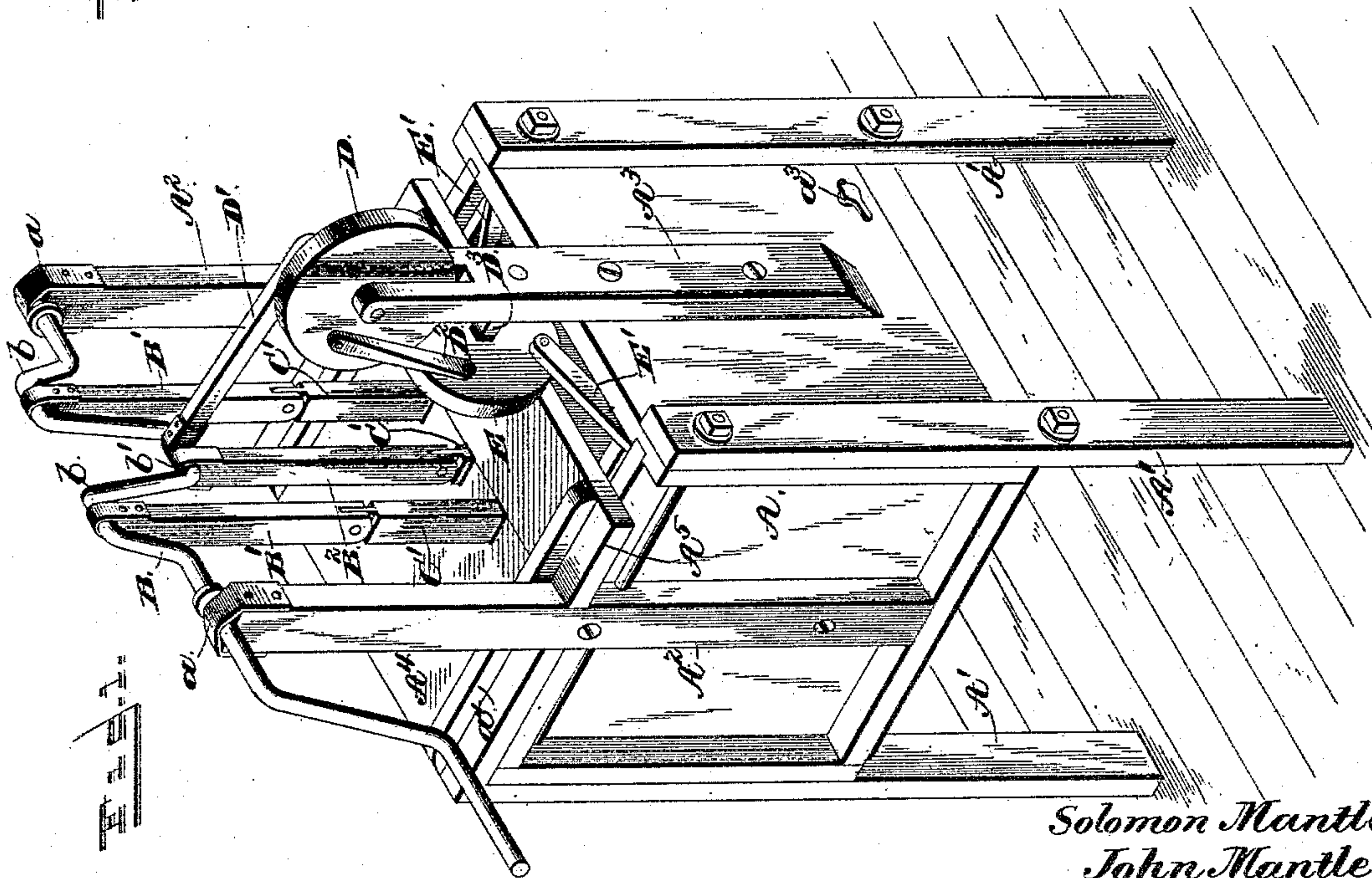
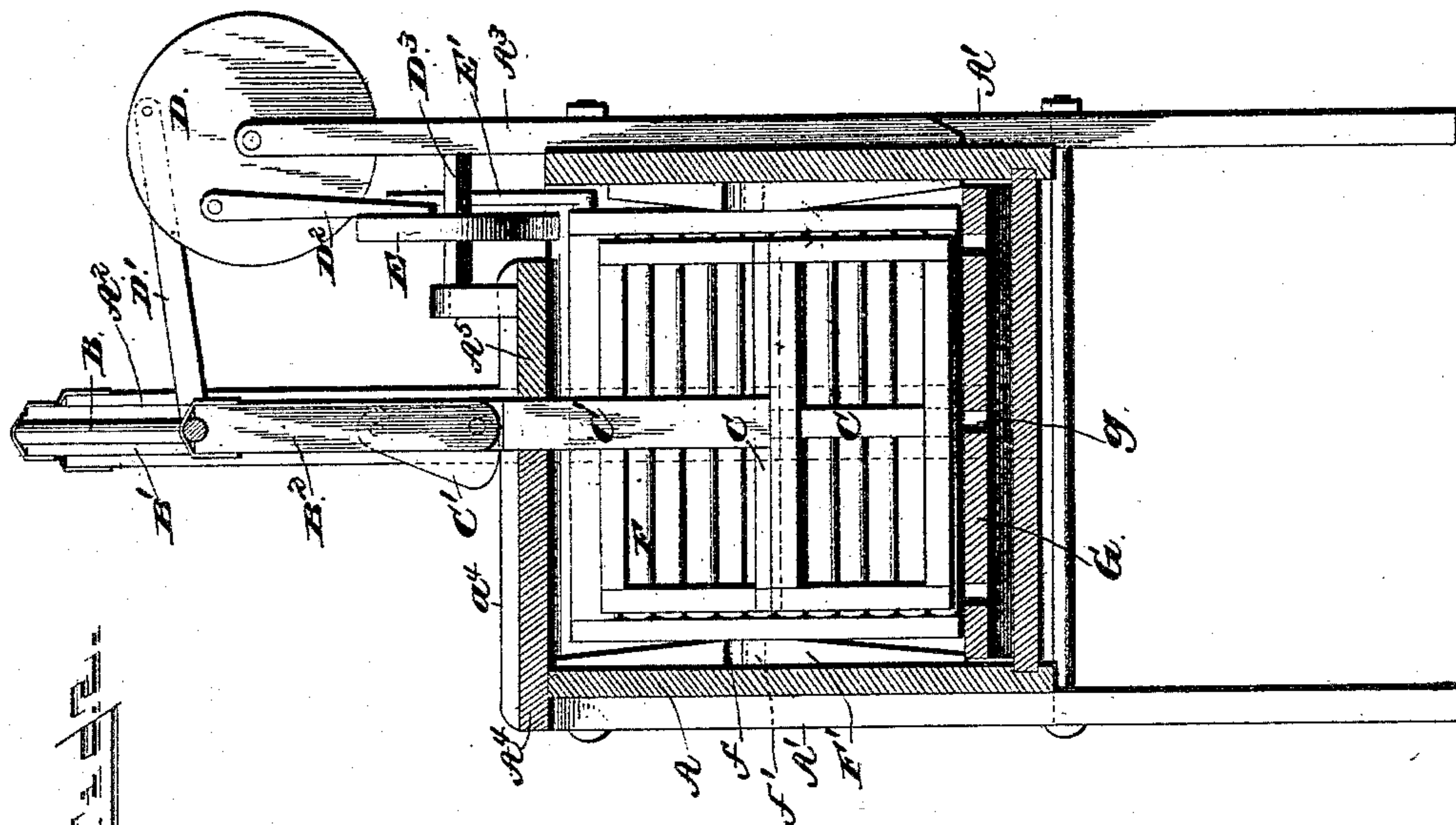
(No Model.)

2 Sheets—Sheet 1.

S., J. & C. MANTLE.
WASHING MACHINE.

No. 401,190.

Patented Apr. 9, 1889.



WITNESSES,

L. S. Elliott.
E. M. Johnson

Solomon Mantle.
John Mantle.
Charles Mantle.
INVENTORS

by *[Signature]* Attorney,

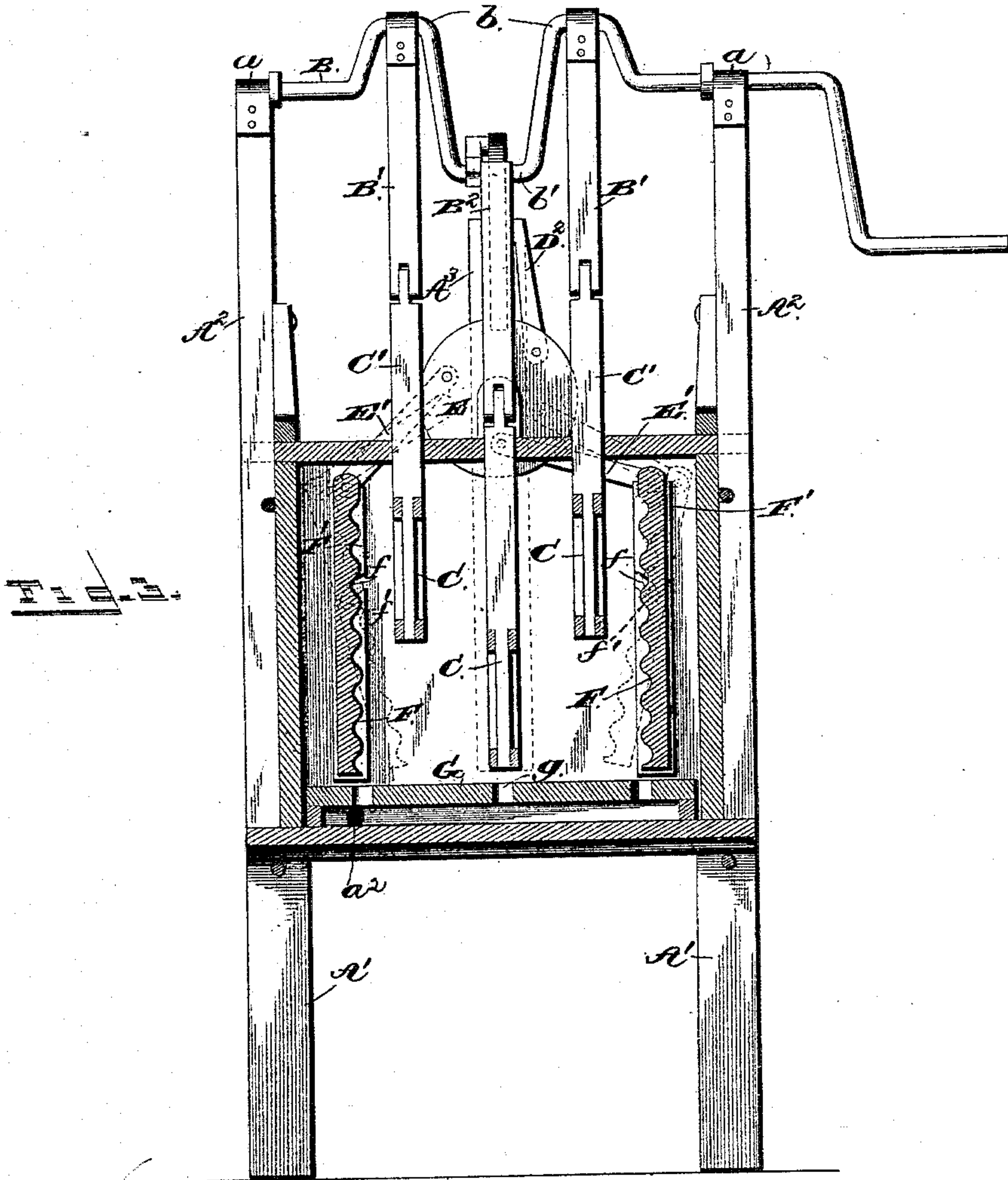
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UNITED STATES PATENT OFFICE.

SOLOMON MANTLE, JOHN MANTLE, AND CHARLES MANTLE, OF PENFIELD,
ILLINOIS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 401,190, dated April 9, 1889.

Application filed October 4, 1888. Serial No. 287,141. (No model.)

To all whom it may concern:

Be it known that we, SOLOMON MANTLE, JOHN MANTLE, and CHARLES MANTLE, citizens of the United States of America, residing at Penfield, in the county of Champaign and State of Illinois, have invented certain new and useful Improvements in Washing-Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in washing-machines.

The essential feature of this invention consists in the use of vertically-reciprocating pounders in connection with side oscillating rubbers.

Our invention consists in the construction and combination of certain mechanical devices, as will be more fully hereinafter described and claimed.

In the accompanying drawings we have illustrated our invention, like letters of reference being used to designate similar parts in the several views; and therein—

Figure 1 is a perspective view of our improved washing-machine. Fig. 2 is a transverse vertical section of the same. Fig. 3 is a longitudinal vertical section thereof.

A indicates the washing-box supported by legs A'. The said box has two uprights, A², secured to the central part of two sides thereof, extending up above the top. To the rear side of said box another upright, A³, is secured, and projects a short distance above the top of the box and has its upper end slotted.

On the top ends of the uprights A' a crank-shaft, B, is secured by strap-boxes a, or any other form of box may be used, if desired. The one end of said shaft is bent to form an operating-handle, and between the uprights cranks b and b' are formed therein, the crank b' being of greater depth than the other two cranks, b. To the said cranks b and b' pitmen B' are connected, and have their lower ends mortised to receive tenons on the upper

ends of posts C'. A pivot-pin is passed through each mortise and tenon, and a hinged joint is thereby formed. The uprights C' have pounders C attached to the lower ends thereof. The said pounders are vertically reciprocated by the crank-shaft B, the central poulder being depressed, while the ones on each side thereof are raised, as fully shown in Fig. 3.

The washing-box has a supplemental raised bottom, G, having perforations g therein, and the lower part of one end thereof is provided with a drain-opening, a², made regulable by an exterior cut-off, a³. Within said box uprights F' are mounted, and have downwardly-curved slots f therein to receive gudgeons f' on the sides of oscillating ribbed rubbers F. The pounders C work between the rubbers F, as shown in Fig. 3.

In the upper slotted end of the uprights A³ a disk-wheel, D, is mounted, and is given a semi-rotary movement by a pitman, D', attached thereto and to the central crank, b', of the shaft B. From the front side of the upright A³ an arm, D³, projects outwardly at right angles, and has a semi-rotary disk-wheel, E, mounted on the end thereof at right angles to wheel D. The wheel D is connected to wheel E by a pitman, D². The wheel E has pitmen E' attached thereto at one end at different elevations, and at their opposite ends the said pitmen are attached to the top part of one end of each of the rubbers F.

By operating the crank-shaft B the pounders C are vertically reciprocated, as hereinafter set forth, and at the same time the wheel D is given a semi-rotary movement by pitman D', and said motion is imparted to wheel E by pitman D², which in time alternately draws the rubbers F inward toward or outward away from each other through the pitmen E'. The rear of box A is open to permit free action of the pitmen E', and is also provided with a removable cover, A⁴, having guide-strips a⁴, adapted to fit over a top board, A⁵.

The clothes are placed in the machine and the pounders force the same upward and downward, due to the alternate motion thereof. The rubbers F oscillate inward and outward and the clothes are forced against the ribbed surfaces thereof and cleansed. The

said rubbers also press the clothes inward toward the center, to be thereby more effectually acted upon by the pounders.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a washing-machine, the combination of the washing-box having uprights, the crank-shaft, the vertically-reciprocating pounders attached to the crank-shaft, the semi-rotary disk-wheels connected to the crank-shaft and to each other by pitmen, and the side oscillating rubbers connected to one of said disk-wheels by pitmen, substantially as described.

2. In a washing-machine, the combination, with the pounders and rubbers, of the crank-shaft and disk-wheels, one of which is mounted at right angles to the other, and pitmen connecting the crank-shaft to the upper disk, the disks to each other, and the rubbers to the lower disk, substantially as described.

3. In a washing-machine, the combination

of a washing-box having uprights, the crank-shaft having depending pitmen with mortised ends, vertically-reciprocating pounders having posts with upper tenoned ends adapted to fit into the mortised ends of the depending pitman and forming a hinged joint therewith, the reversely-situated semi-rotary disk-wheels connected to the crank-shaft and to each other by pitmen, the oscillating ribbed rubbers having gudgeons working in curved slots in strips mounted in the washing-box, and the pitmen connecting said rubbers with one of the disk-wheels, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

SOLOMON MANTLE.
JOHN MANTLE.
CHARLES MANTLE.

Witnesses:

T. J. CAMPBELL,
GEO. W. SHARP.