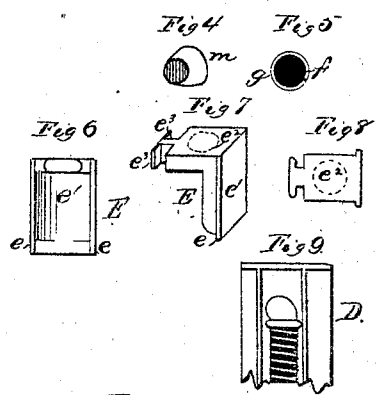
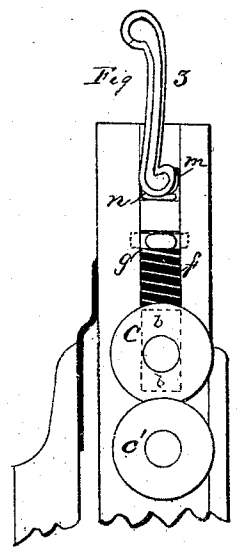
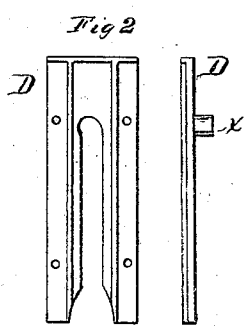
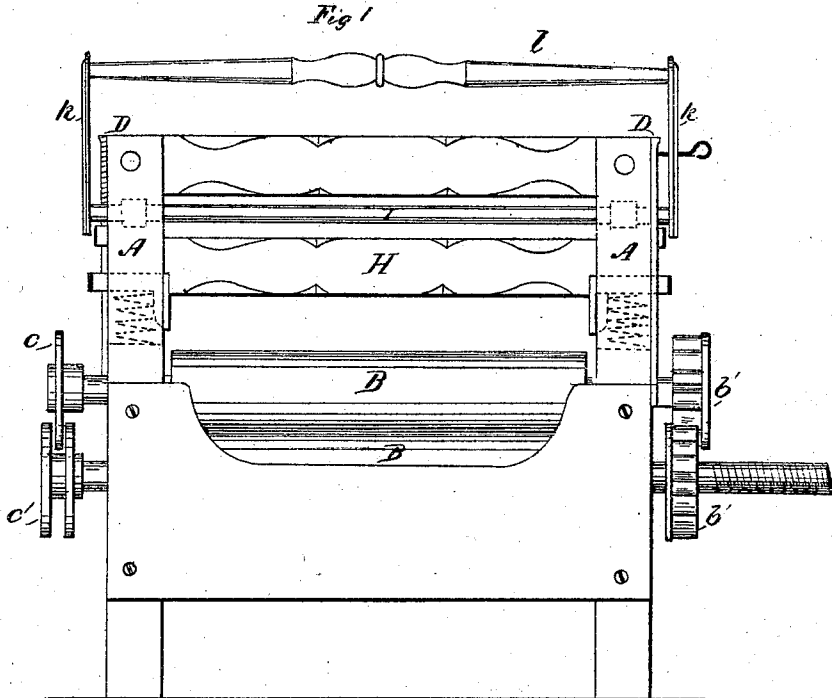


J. YOUNG & L. Y. GARDINER.

Improvement in Washing-Machines.

No. 133,286.

Patented Nov. 19, 1872.



Witnesses  
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 Attys.

# UNITED STATES PATENT OFFICE.

JOHN YOUNG AND LEONARD Y. GARDINER, OF AMSTERDAM, NEW YORK.

## IMPROVEMENT IN WRINGING-MACHINES.

Specification forming part of Letters Patent No. 133,286, dated November 19, 1872.

*To all whom it may concern:*

Be it known that we, JOHN YOUNG, of Amsterdam, in the county of Montgomery and State of New York, and LEONARD Y. GARDINER, of Amsterdam, in the county of Montgomery and State of New York, have invented a new and useful Improvement in Wringing-Machines; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

This invention consists mainly, first, in the employment of guide-wheels of peculiar construction in connection with the cog-wheels for actuating the rolls; second, in the employment of guide-plates upon the posts of the wringer, in connection with certain guides for regulating the movement of the upper roll; third, in the employment of a cam-lever of peculiar construction for regulating the pressure of the upper roll. It further consists, also, in certain details of construction, which will be fully described hereinafter.

In the drawing, Figure 1 represents a side elevation of our improved wringer; and Figs. 2, 3, 4, 5, 6, 7, 8, 9, various views of parts detached.

To enable others skilled in the art to make and use our invention, we will now proceed to describe fully its construction and manner of operation.

A A represent the posts of the wringer, suitably secured together by proper cross-pieces, and provided with slots through which project the ends of the rolls B B, as shown. The lower roll has its bearings in the lower part of the slot; but the journals of the upper roll rest in sliding boxes *b b* at each end, as shown in dotted lines, Fig. 3. Motion is communicated to the lower roll by means of a crank, in the usual well-known manner, and from the lower roll to the upper by means of gear-wheels *b' b'*, as shown in the drawing. As the teeth of these gear-wheels are cast tapering or beveling, in order that they may be readily drawn from the sand, the gear-wheels have a constant tendency to separate from each other laterally as the machine is used; the upper roll being, consequently, drawn against the crank-end of the machine, and the lower roll being forced in the oppo-

site direction. To obviate this difficulty we employ upon the other ends of the roll-shafts, the guide-wheels or disks C C', the first of which, C, is adapted to run in a groove of the latter, as shown, by which means the rolls are caused to turn upon each other without longitudinal movement. D D represent guide-plates, suitably located upon the sides of the posts of the wringer, which are provided with a slot or opening to permit the projection through it of the guides which regulate the movement of the upper roll. E E represent the guide-castings, consisting of the flanges *e e*, adapted to project over the inner edges of the slot in the post A, and prevent lateral movement in an outward direction; bearing-plate *e'*, adapted to support the compound-spring *f g* upon one side; cap *e''*, having a recess to receive and hold the top of the spring; and guides *e'' e''*, adapted to move upon the outside of the guide-plate and prevent lateral movement inward. The guide-plates D also serve to hold the springs *f g* in place, so that the latter are supported upon all sides. The spring which rests upon the bearing-boxes of the upper roll for the purpose of permitting it to yield to allow the passage of different thicknesses of clothing consists of a central core or cylinder of rubber, *f*, and an inclosing coil of wire, *g*, as shown. H represents a cross-bar, which rests upon the top of the guides E E, and is held from lateral movement by means of shoulders. I represents a cam-lever, consisting of a shaft provided at each end with arms *k*, united by a connecting rod or handle, *l*. Near each end and in line with bearing-boxes of the upper roll the shaft is provided with cams *m*, which bear, when in operation, upon a bearing plate, *n*, held in place by suitable guides *n' n'*, as shown. The journals are formed by bearing-plates upon the inner side of the guide-plates D D, and by the bearing-plate *n*. The relative position of the shaft to the guide-plates D is such that no lateral movement is possible. For the purpose of holding the cam-lever in any desired position, I provide one of the guide-plates D with orifices suitably located, into any one of which a securing-pin may be placed, as shown.

The construction described possesses marked advantages. The employment of the guide-disks in connection with the cog-wheels pre-

vents all possibility of any longitudinal movement of the rolls. The employment of the guide-plates in connection with the guides insures the accurate and easy movement of the upper roll. The employment of the cam-lever is preferable to the thumb-screws, because it is much more conveniently used, and because when not held in place it will move automatically in such manner as to relieve the rolls from pressure.

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

1. The combination of the guide-disks C C' with the shafts, rollers, and the cog-wheels, substantially as and for the purpose described.
2. The combination of the guide-plates D with the guides E, substantially as described.
3. In a wringing-machine, the combination

of the double cam-lever, substantially as described, with the bearing-boxes of the upper roll, as set forth.

4. The combination of the guide E and the compound spring *f g*, substantially as described.

5. The combination of the cam-lever, the bearing-plate *n*, the cross-bar, the guide E, the compound spring *f g*, the guide-plates D, and the bearing-boxes *b'*, substantially as described.

This specification signed and witnessed this 11th day of October, 1872.

JOHN YOUNG.

LEONARD Y. GARDINER.

Witnesses:

JOHNSON I. SNELL,

GEO. S. DEVENDORF.