J. TODD.
Wringer.

No. 210,170. Patented Nov. 19, 1878.

Fig. 1.

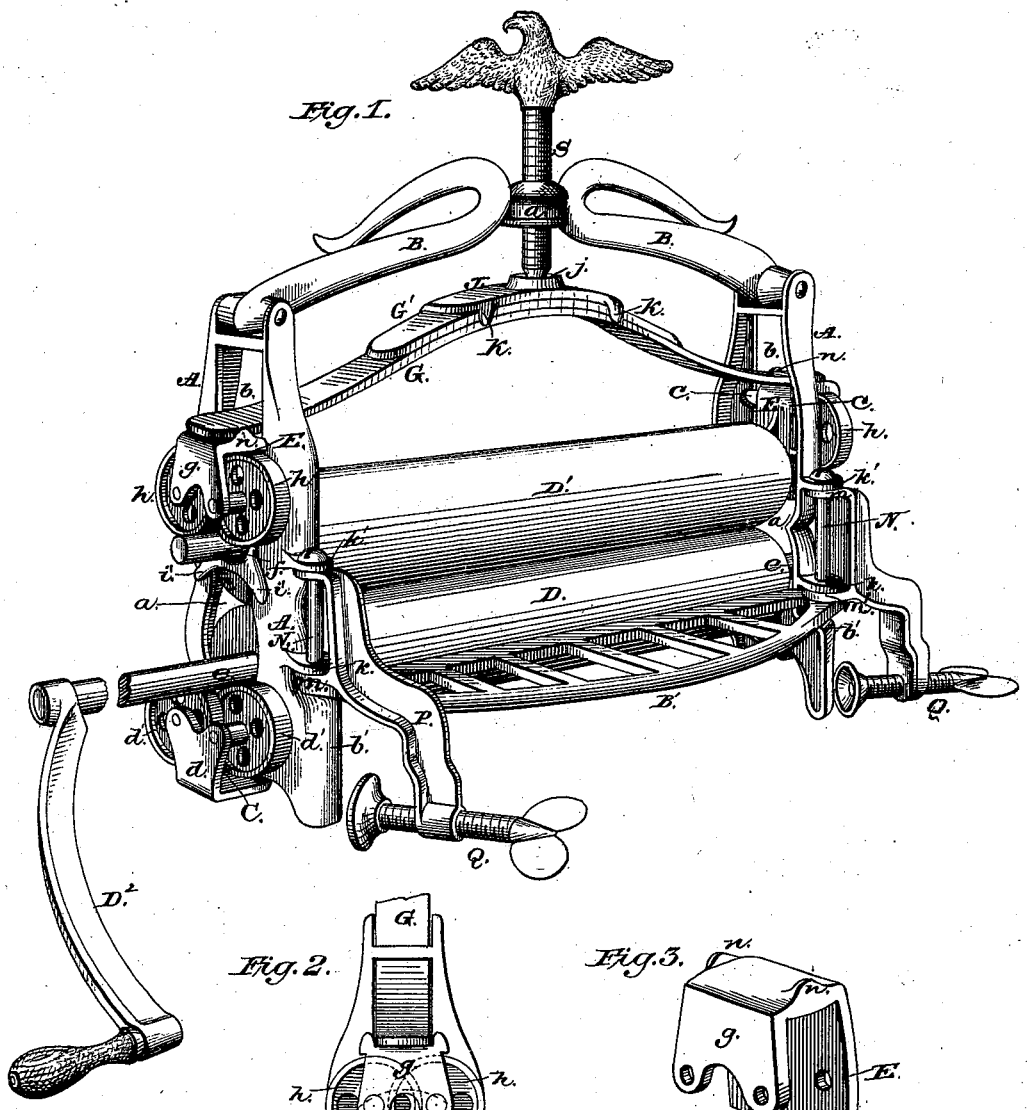

Fig. 2.

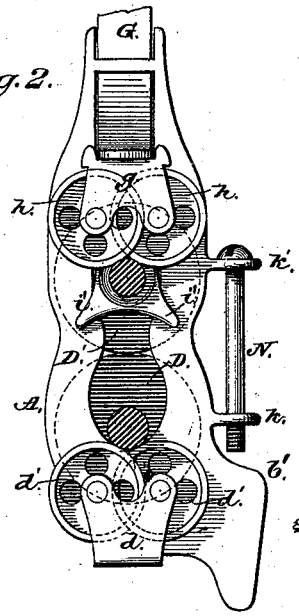

Fig. 3.

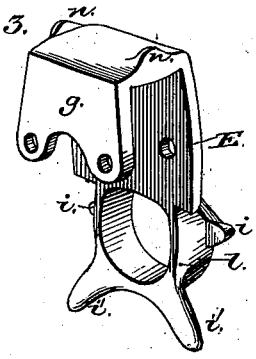

Fig. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES TODD, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN WRINGERS.

Specification forming part of Letters Patent No. **210,170**, dated November 19, 1878; application filed September 28, 1878.

To all whom it may concern:

Be it known that I, JAMES TODD, of Springfield, in the county of Clarke and State of Ohio, have invented a new and valuable Improvement in Clothes-Wringers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of my improved wringer. Fig. 2 is an end view of the same, and Figs. 3 and 4 are detail views.

This invention has for its object the improvement of roller clothes-wringers, wherein the upper roller is automatically adjustable by means of a spring and set-screws, and both the rollers have their bearings on anti-friction rollers; and the nature of the invention consists in the combination, with the vertically-slotted side bars of the frame, of the sliding boxes arranged outside of said frame, having outside offsets, the journals of the rollers extending through said box, and the anti-friction rollers journaled in the offsets of said box, and having their perimeters passing each other, thereby lessening the friction of the rubber rollers.

It also consists in a slide having bearings in its upper portion for anti-friction rollers, and at its lower portion a lug provided at its upper edge with outside stops and at its lower portion with inside stops, whereby the slide is held firmly to its place and allowed to move freely up and down.

It also consists in a box formed at the lower portion of the side bars of the frame, having anti-friction rollers journaled therein, the said box being outside of the side bars, whereby I am able to place the said rollers side by side, and cause them to extend beyond each other, whereby the friction of the journals of the lower roller is greatly lessened, as will be hereinafter more fully described.

In the annexed drawings, the letters A A designate the side pieces of the wringer-frame, connected together at their upper and lower ends, respectively, by the arched bar B and the horizontal platform B′, the former having a slot, *a*, for the adjusting-screw S, and the latter being made in open-work, in order to the more perfect draining of the water from clothing.

The side bars, A, are L-shaped in section, and are each provided with a vertical slot, *b*, upon the edges of which, near their upper ends, are formed the notches *c*. The side bars are cast with an outside upturned portion, *d*, forming a box, C, in which are journaled the anti-friction rollers *d′*, whose journals are made of steel, and have their bearings, respectively, in the said upturned portion and side bars. As shown in Fig. 1, these rollers *d′* are arranged side by side, and extend beyond each other, and afford a rolling bearing of exceptional excellence to the journals *e* of the lower rubber roller, D. This roller is constructed, in the usual way, with an unyielding central portion, generally, and a yielding rubber envelope, and its journals *e* project through the slots *a* of the bars A, to reach the anti-friction rollers *d*.

The upper roller, D^1, is provided with journals *f*, extending through the slots *a* aforesaid, and its perimeter is tangential to that of the roller D, so that when roller D is actuated by a crank-arm, D^2, it imparts by frictional contact a rotary movement on its bearings to the roller D^1, by which means gears and other equivalent devices are dispensed with advantageously.

E represents slides, usually constructed of brass, galvanized iron, or other non-oxidizable metals or alloys, having at its upper part a downturned flange, *g*, between which and the body of the slide are journaled the anti-friction rollers *h*, the journals of which are usually of steel, and which extend beyond each other, as shown in Fig. 1, forming a rolling bearing of great efficiency.

At the lower portion of the slide-body, and projecting horizontally therefrom a sufficient distance on its side opposite to the rollers *h*, is an offset, *l*, adapted to be received in the slots *a* of bars A, and provided, respectively, upon its upper and lower edges with the guide-lugs *i i′*, sufficiently out of line with each other to admit the thickness of the walls of the side bars, A, between them. This offset is introduced into slot *a* by passing the guide-

lugs *i'* through the opposite notches *c* in the edges of slots *a* until the lugs *i* come in contact with the bars A. The slide may then be thrust down until its anti-friction rollers *h* bear upon the journals of the roller D^1, as shown in Fig. 1.

G indicates a semi-elliptic spring, the ends of which project through slots *a* of side bars, A, and bear upon the tops of the slides E, being held against lateral displacement by the spaced lugs *n* on the up side of the said slides. This spring may be composed of one or more leaves, G G', and it is provided with a removable metallic cap, J, having in its upper side a recess, *j*, and upon its edges the downwardly-projecting spurs *k*, that embrace the said spring, and by means of which the said cap is held in position. The under side of this cap corresponds to the curvature of the spring, and is usually provided with a stud, *o*, that is received in a corresponding recess, *o'*, in the leaf or leaves of the spring, this construction, however, not being deemed indispensable, though with a view to holding the leaves of the spring, where two or more are used, the feature of the recessed springs may be advantageous. By setting up screw S the spring is caused to bear forcibly upon the slides E, thereby forcing the upper into more or less intimate contact with the lower roller, thus regulating the pressure according to the thickness of the fabric operated on, and allowing the upper roller to rise automatically for the passage of buttons or of folds of the fabric.

Near the lower ends of the side bars, A, is a horizontal shoulder, *b'*, above which is an eye-plate, *k*, and still farther above the said shoulder a second eye-plate, *k'*, the said shoulders being cast with the side bars.

The ends of the platform are secured to the wringer-frame by means of a bolt, N, passing through the eyes *k k'*, and engaging screw-threaded perforations in the ends of said platform. This bolt also serves as a pivot or hinge pin to a metallic clamp-arm, P, having spaced eyes *m m'*, passing respectively below the eye-plates *k k'*, as shown in Fig. 1. The arm P extends out obliquely from the side bars, and its lower portion is parallel to the vertical side of the shoulder *b'*. In this lower portion, near its free end, is a screw-threaded perforation, in which is placed a clamp-screw, Q. When the edge of a tub is introduced between the shoulders *b'* and the arms P, and the screws Q are set up, the wringer is securely clamped to the tub. The arms P, being hinged to the frame, are thereby adapted to be applied to tubs of various sizes, and in order to the greater security of this adjustment the vertical face of this shoulder is transversely convex.

Having thus fully described my invention and set forth its merits, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the vertically-slotted side bars of the frame, A, of the sliding boxes arranged outside of the frame, and having outside offsets, the journals of the top roller extending through said boxes, and anti-friction rollers journaled in the offsets of said boxes, passing beyond each other and bearing upon the said roller-journals, substantially as specified.

2. In a clothes-wringer, the combination, with the side bars, A, having vertical slots *a* formed therein, and the opposite notches *c* in the edge walls of said slots, of a slide, E, carrying the anti-friction rollers *h* in its upper portion, and provided with an offset, *l*, at its lower part, adapted to be received in said slots, and the guide-stops *i i'*, the former adapted to pass through the notches *c* aforesaid and bear against the inside of the side bars, and the latter to bear against the outside of the same, substantially as set forth.

3. The side bars, A, having outside upturned boxes C at their lower ends, the anti-friction rollers *d'*, journaled in said boxes and extending beyond each other, and the roller D, having journals *e* extending through the said side bars, and having their bearings on said rollers, combined, arranged, and operating substantially as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES TODD.

Witnesses:
WALTER L. WEAVER,
OSCAR S. MARTIN.