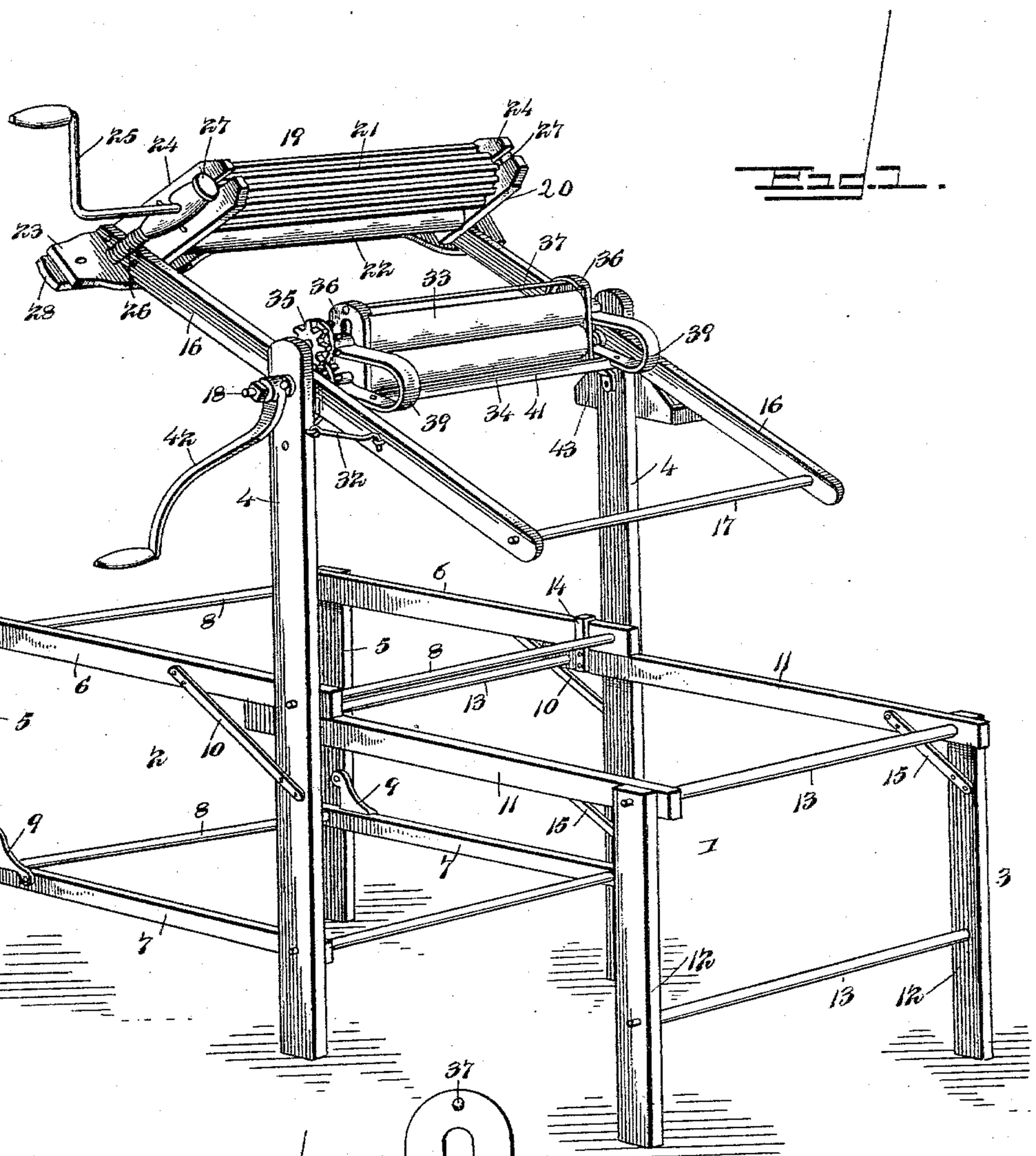
(No Model.) 2 Sheets—Sheet 1.

J. D. BUDD.

LAUNDRY APPARATUS.

No. 597,602. Patented Jan. 18, 1898.



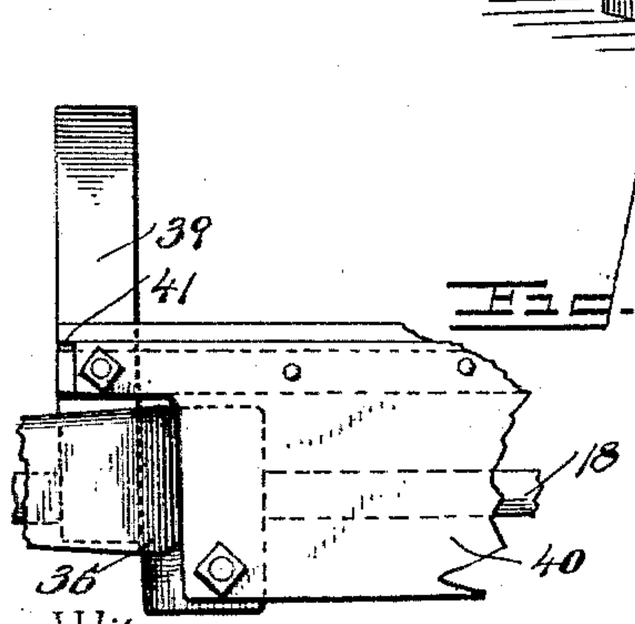


Fig. 6.

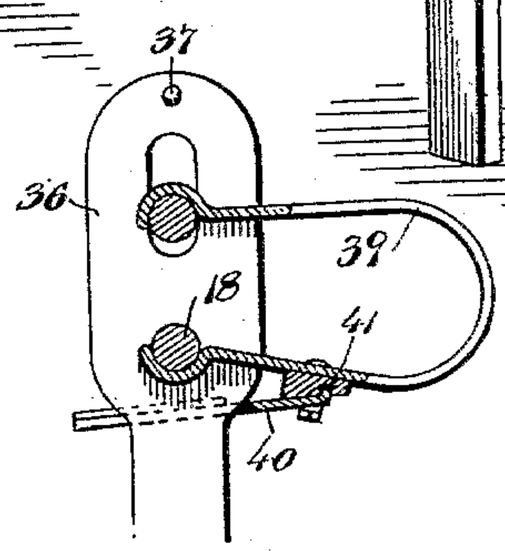


Fig. 5.

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Inventor
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(No Model.) 2 Sheets—Sheet 2.

J. D. BUDD.

LAUNDRY APPARATUS.

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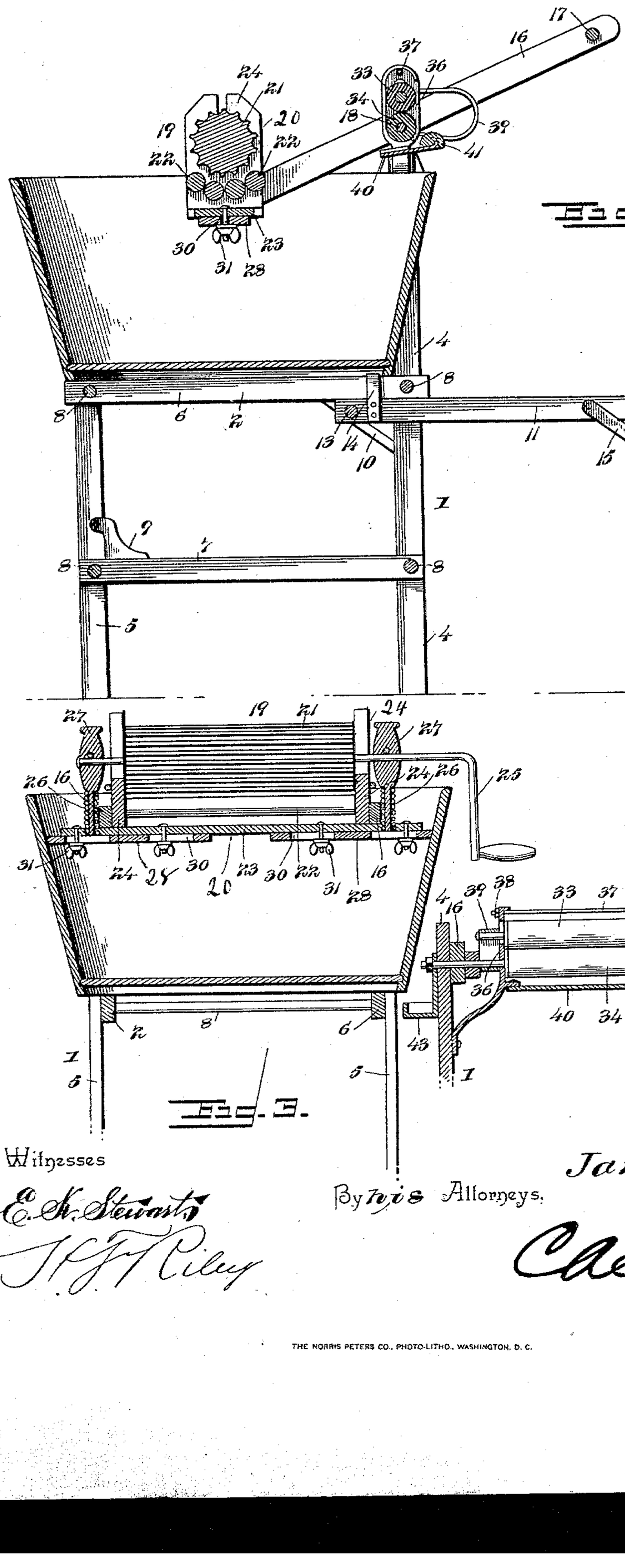

Witnesses

E. K. Stewart

J. F. J. Riley

Inventor

James D. Budd

By his Attorneys,

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UNITED STATES PATENT OFFICE.

JAMES DAVID BUDD, OF INDEPENDENCE, KANSAS.

LAUNDRY APPARATUS.

SPECIFICATION forming part of Letters Patent No. 597,602, dated January 18, 1898.

Application filed March 26, 1896. Serial No. 584,954. (No model.)

To all whom it may concern:

Be it known that I, JAMES DAVID BUDD, a citizen of the United States, residing at Independence, in the county of Montgomery and State of Kansas, have invented a new and useful Laundry Apparatus, of which the following is a specification.

The invention relates to improvements in laundry apparatus.

The object of the present invention is to improve the construction of laundry apparatus, more especially the manner of connecting the shield of the wringer to the wringer-frame and to provide a shield which will both support the wringer-frame at the bottom thereof and serve to connect the wringer-springs with each other and to the frame to prevent such springs from becoming accidentally displaced.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a laundry apparatus constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view, the section being taken through the washing mechanism. Fig. 4 is a sectional view of the wringing mechanism. Fig. 5 is a detail view illustrating the construction of the wringer-springs. Fig. 6 is a detail view illustrating the manner of connecting the springs with the wringer-frame by the shield.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a supporting-frame comprising a main section 2 and a sliding section 3. The main section is composed of a pair of standards 4, a pair of legs 5, and upper and lower horizontal side bars 6 and 7, connecting the legs and the standards and secured to them by transverse rungs or bars 8, and the latter have reduced terminals passing through perforations of the side bars and the legs or standards. The main section of the supporting-frame is supported at its outer end by knees 9, secured to the lower side bars and to the legs, and at the inner end of the main section are arranged inclined braces 10, secured to the upper side bars and to the standards. The main section of the supporting-frame provides a rigid support for a tub or any other suitable receptacle employed in washing.

The sliding section of the supporting-frame is composed of side bars 11, a pair of legs 12, secured to the outer ends of the side bars, and transverse rungs or bars 13, connecting the side bars and the legs and preferably constructed similar to those of the main section. The side bars 11 of the sliding section are arranged directly beneath the upper side bars of the main section and are connected with the same by substantially L-shaped plates or hangers 14, extending over the upper edges of the upper side bars of the main section and conforming to the configuration of the same and slidingly connecting the side bars 11 therewith. When the sliding frame is folded or arranged within the main section, it supports and strengthens the main section, and when extended the frame is adapted to receive a pair of tubs or receptacles and to afford a secure support for the same. The legs 12 of the sliding section are supported by inclined braces 15, secured to them and to the side bars 11.

A rectangular lever-frame 16, composed of side bars and a transverse handle-bar 17, is pivoted to the upper ends of the standards 4 by a transverse wringer-shaft 18. The side bars of the lever-frame are pivoted at points intermediate of their ends, and they support a washing mechanism 19, to which they are secured. The washing mechanism comprises a bearing-frame 20, a yieldingly-mounted corrugated roll 21, and a curved bed arranged beneath the corrugated roll and composed of a series of smooth rolls 22. The bearing-frame consists of a transverse base 23 and parallel sides 24, having bearing-openings to receive the journals of the rolls 22 of the bed and provided with slots receiving the journals of the corrugated roll, one of the journals being extended to form a crank-handle 25, and the journals of the corrugated roll may consist of a shaft extending entirely through the roll or separate journals attached to the ends thereof. During the operation of washing the clothes are passed back and forth

through the rolls between the upper corrugated roll and the curved bed and are rapidly and thoroughly washed without wearing, tearing, or otherwise injuring the fabrics, and the necessary pressure on the clothes is produced by spiral springs 26, secured at their lower ends to the base of the bearing-frame in perforations thereof and carrying at their upper ends stems 27, provided with inclined bearing-openings forming hooks and detachably engaging the journals of the corrugated roll.

In the operation of washing a tub is arranged on the main section of the supporting-frame, the washing mechanism is placed within the tub with the bearing-frame resting against the sides thereof, and in order to render the bearing-frame readily adjustable to suit tubs of different diameters a pair of tub-engaging bars 28 are provided. The tub-engaging bars 28 have slightly-rounded outer terminals, are provided with longitudinal slots 30, and are secured at the desired adjustment by set-screws 31, provided with thumb-nuts. The washing mechanism is adapted to be swung upward above the tub, and it is maintained in an elevated position, as illustrated in Fig. 1 of the accompanying drawings, by a hook 32, mounted on one of the standards and engaging an eye of the lever-frame.

A wringer is mounted between the sides of the lever-frame at the upper ends of the standards and comprises a pair of rubber rolls 33 and 34. The lower roll 34 is mounted on the shaft 18, and the upper roll 33 is arranged within a wringer-frame and is provided with journals, preferably consisting of a shaft extending entirely through the roll. The shaft 18 constitutes the journals of the lower roll, and the two rolls are connected by gear-wheels 35, mounted on the journals and meshing with each other.

The wringer-frame consists of similar side bars 36, having parallel upper portions and depending outwardly-curved portions or arms secured to the inner faces of the standards 4, and the upper ends of the sides 36 are connected by a transverse rod 37, provided with an adjusting-nut 38, adapted to draw the upper portions of the sides of the wringer-frame together to increase the pressure on the rolls.

The journals of the upper roll are arranged in slots of the sides of the wringer-frame, and the said upper roll yieldingly engages the clothes, being forced downward by a pair of substantially U-shaped springs 39, extending outward from the journals of the wringer-rolls and provided at their terminals with curved portions receiving and engaging the journals.

The wringer is provided with an inclined shield 40, consisting of a plate of sheet metal secured between the sides of the wringer-frame to suitable lugs thereof, and the shield is provided at its top with a transverse strip 41, which prevents water from flowing over the upper edge of the plate. The upper face of the transverse strip 41 is recessed to fit the lower sides of the U-shaped springs, and the latter are supported by the shield, which is secured to them by fastening devices that pass through the lower sides of the springs, the strip 41, and the body of the shield. By supporting the springs in this manner their curved ends are prevented from becoming accidentally disengaged from the journals of the rolls of the wringer. The lugs, to which the inclined shield is rigidly secured, are arranged at the bottom of the wringer-frame, and the inclined shield, which extends across the bottom of the inclined wringer-frame, serves as a bottom cross-piece and braces and supports the wringer-frame. The shield is arranged directly between the sides of the wringer-frame and extends slightly in front and in rear of them, as illustrated in Fig. 2 of the accompanying drawings, and it stiffens the frame at the bottom.

The shaft 18 of the lower wringer-roll is extended beyond one side of the supporting-frame and has a crank-handle 42 secured to it, and it also serves to support a soap-box 43.

It will be seen that the laundry apparatus is simple and comparatively inexpensive in construction, that it enables clothes to be readily and rapidly operated on to wash them and also to expel water from them, and that it forms a firm support for a pair of tubs or other receptacles. It will also be apparent that the wringing mechanism is located at an advantageous point and that clothes may be readily passed from one receptacle through the washing and wringing mechanisms without spilling water upon a floor or other supporting-surface.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What I claim is—

1. The combination of a supporting-frame, a wringer-frame comprising similar sides having depending outwardly-curved arms secured to the supporting-frame, a transverse rod connecting the upper ends of the sides, and a nut at one end of the rod, rolls journaled on the wringer-frame, horizontal lugs extending inward from the sides of the wringer-frame and located below the rolls, the horizontally-disposed U-shaped springs having curved ends engaging the journals of the rolls, and the shield connecting the springs with each other and with the wringer-frame, rigidly secured to the horizontal lugs and provided at its upper edge with a strip attached to the springs, substantially as described.

2. The combination of a supporting-frame, rolls, a wringer-frame comprising similar sides having the rolls journaled on them and provided with depending outwardly-curved arms secured to the supporting-frame, a transverse rod connecting the upper ends of

the sides and provided at one end with a nut whereby the sides of the wringer-frame may be drawn together to regulate the pressure on the wringer-rolls, and the shield secured to the sides of the wringer-frame below the rolls and forming the bottom of the said wringer-frame, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES DAVID BUDD.

Witnesses:

JAMES A. OTTO,

J. C. PARKER.