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D. W. NORRIS & N. E. WOODS.

Wringer.

No. 167,015. Patented Aug. 24, 1875.

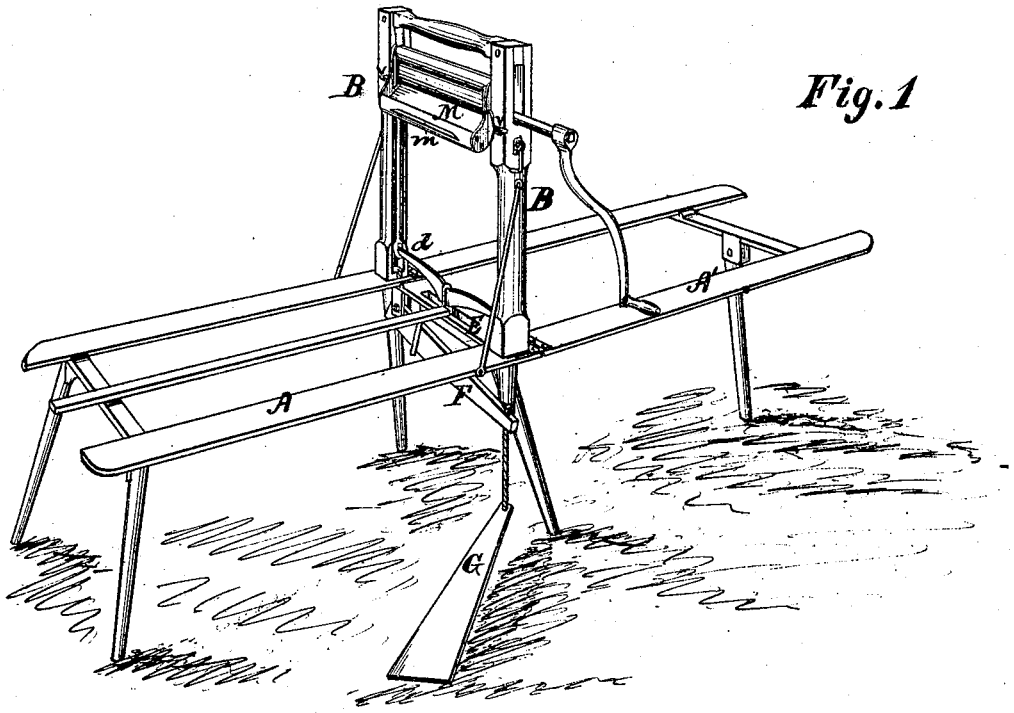

Fig. 1

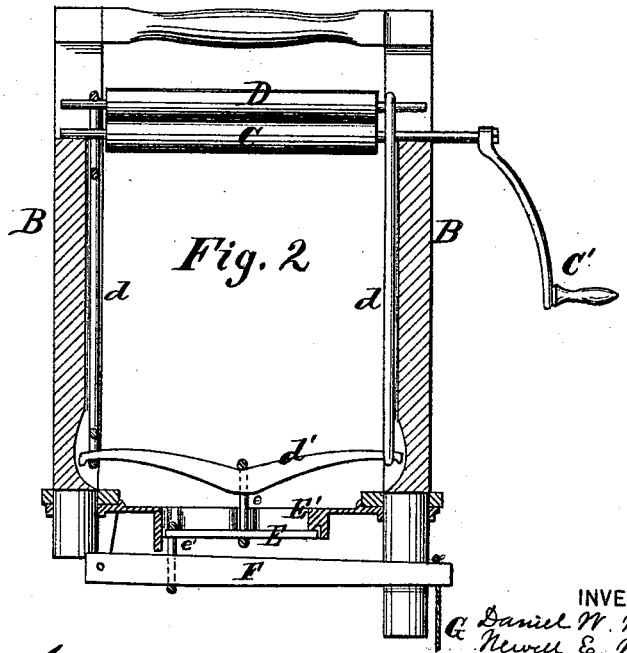

Fig. 2

WITNESSES

Granville Lewis

M. C. Lench

INVENTORS

Daniel W. Norris

Newell E. Woods.

By Hill Tellewortt

ATTORNEYS.

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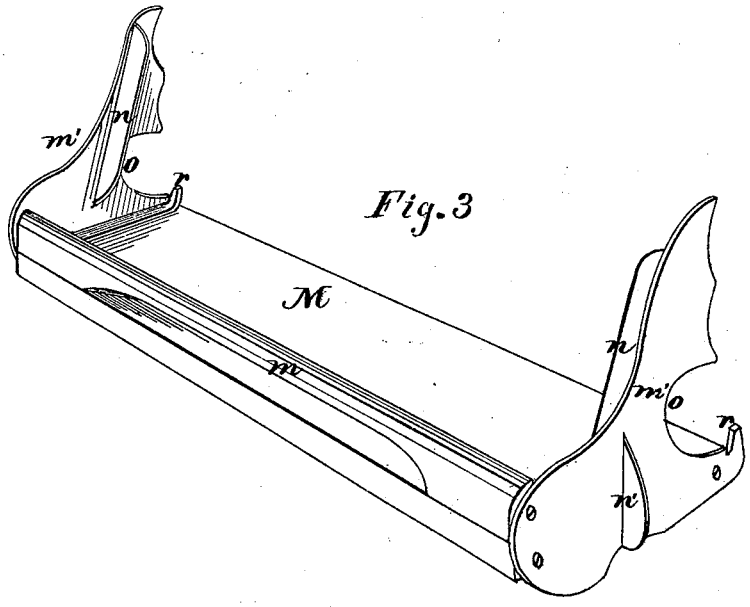
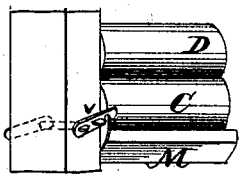


Fig. 3

Fig. 4



WITNESSES

Granville Lewis.

By

INVENTORS

Daniel W. Norris

Newell E. Woods

By Burt & Ellsworth

Attorneys

UNITED STATES PATENT OFFICE.

DANIEL W. NORRIS AND NEWELL E. WOODS, OF ELGIN, ILLINOIS; SAID NORRIS ASSIGNOR TO FRANK WOODS, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN WRINGERS.

Specification forming part of Letters Patent No. **167,015**, dated August 24, 1875; application filed February 6, 1875.

To all whom it may concern:

Be it known that we, DANIEL W. NORRIS and NEWELL E. WOODS, of Elgin, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Clothes-Wringers; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a perspective view of the entire machine; Fig. 2, a vertical cross-section; Fig. 3, a perspective view of the removable and reversible drip-board; Fig. 4, a partial view, showing the manner of securing the drip-board.

Similar letters of reference in the drawings indicate the same parts.

The object of this invention is, first, to improve the means for applying pressure at will to the rolls, and, secondly, to improve the construction and mode of application of the drip-board. To these ends the invention consists, first, in the combination of levers and spring for applying pressure at will to the rolls, and in the construction and arrangement of the parts connected therewith; and it consists, secondly, in the construction and mode of supporting and securing the drip-board, all substantially as we will now proceed to describe.

In the drawings, A A′ represent the frame which we prefer to employ, having one end, A′, capable of folding up against the vertical roll-standards B B, for the purpose of economizing space when the apparatus is not at work, or capable of being disconnected and removed, so as to admit of using the machine in connection with a box-washing machine. C is the lower or fixed roll, turned by a crank, C′; D, the upper or pressure roll, the journals of which are connected by straps or rods *d d* to a cross-bar, *d′*, near the lower end of the standards; and E, a stout spring inclosed in a boxing, E′, and connected to the cross-bar *d′* by a strap or link, *e*, and to the lever F by a similar strap or link, *e′*, the lever F being operated by a treadle and cord, G. The drip-board is shown in Fig. 3, and consists of an inclined wooden bottom piece, M, provided with an arched front piece, *m*, and metallic end pieces *m′*. Each end piece is constructed with an inside flange, *n*, which prevents the clothes from running over the ends of the rolls, and, preferably, with an outside flange, *n′*, which fits against the face of the standard, and assists in holding the drip-board firmly in place. The metallic end pieces are made quite thin, so as to fit between the ends of the rubber rolls and the inner sides of the standards, and are hooked or provided with a recess, *o*, or recesses, which hook over the roll shaft or shafts, and thus support the drip-board. The plates *m′* project beyond the front faces of the standards, for the double purpose of holding the board in proper position, as shown in Fig. 1, and of preventing the water or suds from being thrown out onto and running down the standards, and one or more projections of the plates extend out beyond the rear faces of the standards, and are provided with holes, or, in lieu thereof, with a notch or notches, *r*, as shown in Figs. 3 and 4, into which keys or buttons *v* project, for the purpose of securing or locking the board so that it cannot slip or work out of position. The board is thus supported by the roll-shafts, kept in place longitudinally by the standards, between which it closely fits, and held from sliding out of place by the notches *r*, and the keys or buttons, which lock into the notches.

The connection between the straps or rods *d d* and cross-bar *d′* is yielding or flexible, and is formed by inserting the ends of the cross-bar into loops in the ends of the rods, in which loops the cross-bar works loosely, or by other means which will render the connection flexible. One end of either roll may thus be raised without necessarily raising the other. When the clothes are thicker at one end of the rolls than at the other that end of the upper roll will rise over them without disturbing the other end, the pressure at both ends continuing without interruption. The cross-bar *d′* is curved downward at the center, or otherwise adapted to hold the link *e* from slipping when one end of the roll and the cross-bar is raised higher than the other end.

Having thus described our invention, we claim—

1. The lever or levers F G, combined with the boxed spring E, the links *e e'*, the bar *d'*, the rods *d d*, and the rolls C D, substantially as and for the purposes set forth.

2. The removable drip-board adapted to be attached in front or rear of the rolls at will, combined with the keys or buttons *v*, and the roll shafts and standards, substantially as and for the purposes set forth.

DANIEL W. NORRIS.
NEWELL E. WOODS.

Witnesses:
W. H. WILCOX,
JOHN G. KRIBS.

1,000 words.