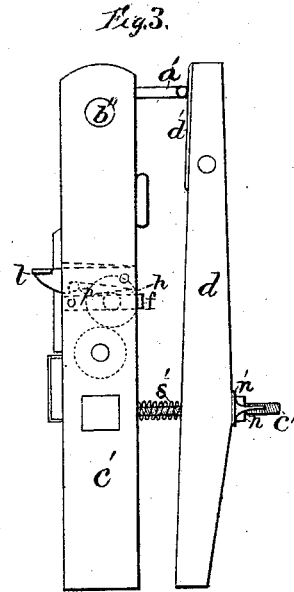
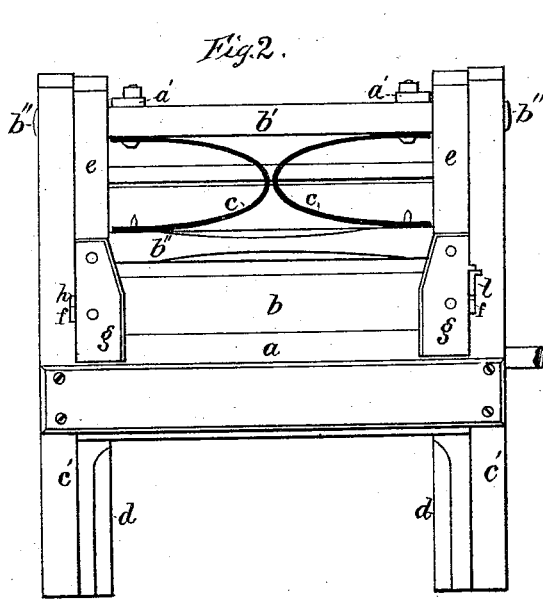
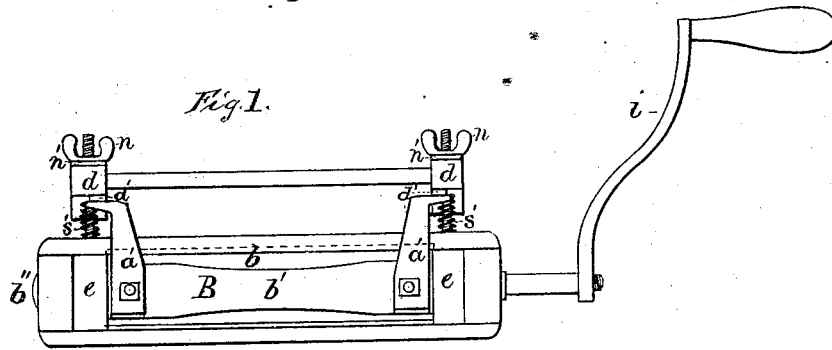


P. N. WOLISTON.
Clothes-Wringer.

No. 159,996.

Patented Feb. 16, 1875.



Attest.
Jas. Wilson
Christian Anderson

Inventor.
Philip N. Woliston,
By *B. C. Converse, Atty.*

UNITED STATES PATENT OFFICE.

PHILIP N. WOLISTON, OF SPRINGFIELD, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO B. C. CONVERSE.

IMPROVEMENT IN CLOTHES-WRINGERS.

Specification forming part of Letters Patent No. 159,996, dated February 16, 1875; application filed October 31, 1874.

To all whom it may concern:

Be it known that I, PHILIP N. WOLISTON, of the city of Springfield, county of Clarke and State of Ohio, have invented certain Improvements in Clothes-Wringers, of which the following is a specification:

My invention relates, as an improvement, to that class of clothes-wringers (though in part applicable to others) which are clamped to the tub, called "tub-wringers," to the manner of hanging the upper roll, of applying pressure upon it and releasing it, and of clamping the frame to the tub. It consists in a main frame, in which the lower roll is journaled, and an inside swinging frame, pivoted by its upper cross-piece to the tops of the uprights of the main frame, in the lower end of which the upper roll is hung. The frame has a second cross-piece above the roll. Between these two are bolted two C-shaped or half-ellipse springs, their curves approximating in the middle of the frame, and two short arms extending backward from the top of the upper (or pivoted cross-bar) operate as eccentrics against the upper ends of a clamping-frame in the rear, (which is attached to the lower part of the main frame by fulcrum-bolts,) causing it to act as levers in clamping the machine to the tub automatically when it is swung down into position for work. Oblong slots in the upper ends of the side bars through which the top cross-piece extends, allow the frame to rise and lower when the springs are compressed in operating. On the inside of the main uprights are pivoted long metal stops. These are let into gains cut across the uprights to receive them and accommodate their movements. When the inside frame is pressed upward these stops move with it, taking the friction off the main uprights. The upper roll, when its frame is closed down, passes a little beyond the center of the lower one, thus locking it sufficiently to prevent its swinging out while the machine is in operation, and securely clamping the wringer to the tub at the same time.

To operate the wringer, the crank is turned to the right. To release the pressure on the rolls, it is only necessary to give the crank a backward motion. The frame with its upper roll then swings out and releases the clamp

from the tub by the same movement. A latch is provided for locking it more effectually, if desired, although it can be used without it. The clamping-frame is narrower than the main one, and is connected with the lower cross-piece of the latter (inside the uprights) by bolts with nuts and washers, spiral springs intervening to keep the clamp-frame out to the proper distance. Rubber washers or collars are used under the metal ones, to give elasticity to the clamp. The bearings of the crank-roll are exposed when the upper roll and its frame is raised, so that they can be readily oiled.

Two sheets of drawings accompany this specification, No. 1 with Figures 1, 2, 3, and No. 2 with Figs. 4, 5, 6.

Fig. 1 is a plan view of a clothes-wringer with my improvements. Fig. 2 is a side elevation. Fig. 3 is an end view of the same. Fig. 4 is a side elevation of the inside frame, with the upper roll, springs, &c. Fig. 5 is a view of the machine, with the inside pivoted frame partly raised. Fig. 6 is a section of the left upright of the main frame, with its pivoted stop *f* attached.

The main frame is constructed with a single cross-bar, mortised through the uprights *c'*, below the lower roll *a*. Bolts *c''* pass through this cross-bar, and the lower parts of the uprights *d* of the clamp-frame in the rear. A spiral spring, *s'*, intervenes between them around the bolt, and rubber washers *n'* are introduced under nuts *n*, to give sufficient elasticity to the clamp, to prevent its injuring the staves of the tub. Roll *a* has its bearings *j* exposed when frame B is raised, so that they can be oiled. The rolls can also be cleaned. Uprights *c'* are provided with stops *f*, to ease the operation of the frame B in rising and lowering when wringing, and to hold the upper roll at the proper place over the lower one. These stops are pivoted at their front ends, (see Fig. 6,) gains *h* being cut across the inside of uprights *c'*, to receive them and give room for their movements. A latch, *l*, is pivoted to one of the uprights, Figs. 2, 3, 5, which catches over pin *p*, Figs. 3, 5, when frame B is closed down to secure it, if desired. It will, however, remain in its position for the opera-

tion of the rolls without being fastened, as the upper roll *b* passes over beyond the center of the lower one for this purpose. Frame B has two cross-pieces, *b'* and *b''*, between which are the curved springs (of half-ellipse shape) *c*, their bent parts toward the middle of the frame, their ends outward, and bolted, respectively, to bars *b'* and *b''*. The same bolt passes through their upper ends and secures the eccentric arms *a'*, on each side, to the top bar *b'*. (See Fig. 4, which has a section broken out of the upper left corner.) This bar has the part extending through slots *s* in side bars *e* square, ends *b'* (which extend through the top of uprights *c'*) being rounded, to form the pivots upon which it is swung.

Fig. 5 shows the manner of raising frame B, to release the pressure from the rolls, and free the wringer from the tub, to oil the bearing and cleanse the rolls.

Figs. 1, 2, 3, show the wringer in position for operation, the frame B closed down, and the eccentric arms *a'* brought up to a right angle against the upper ends of uprights *d* of the clamp-frame, thereby acting as levers to tighten the jaw-ends below fulcrum-bolts *c''*, against the staves of a tub placed between them and the lower ends of *c'*. *d'* are metal strips, put on the inside of the upper ends of uprights *d*, as friction-plates, to allow the ends of arms *a'* to move on them more easily. *g g*

are guards or fenders, attached to the lower ends of side bars *e* of frame B, to prevent the clothes from running off the ends of the rolls while wringing.

It will be noticed that pressure is not applied upon the upper roll at all, except when clothes are inserted between the rolls, and that this pressure is transmitted through frame B moving the latter upward, compressing springs *c* between the moving bar *b''* (with its frame) and the pivot-bar *b'* above, which latter is the point of resistance.

I am aware that springs are common in clothes-wringers; but the manner in which they are arranged in my improvement, and by which pressure is applied to them through a movable, pivoted, swinging frame, I believe to be new.

I claim—

1. In a clothes-wringer, the frame B, having the springs *c*, the roll *b*, guards *g*, latch *l*, pin *p*, and the arms *a'*, in combination with the uprights *c'* and roll *a*, as described.

2. The uprights *d*, in combination with the uprights *c'* and screw-bolts *c''*, and arms *a'*, substantially as described.

PHILIP N. WOLISTON.

Witnesses:

CHRISTIAN ANDERSON,
B. C. CONVERSE.