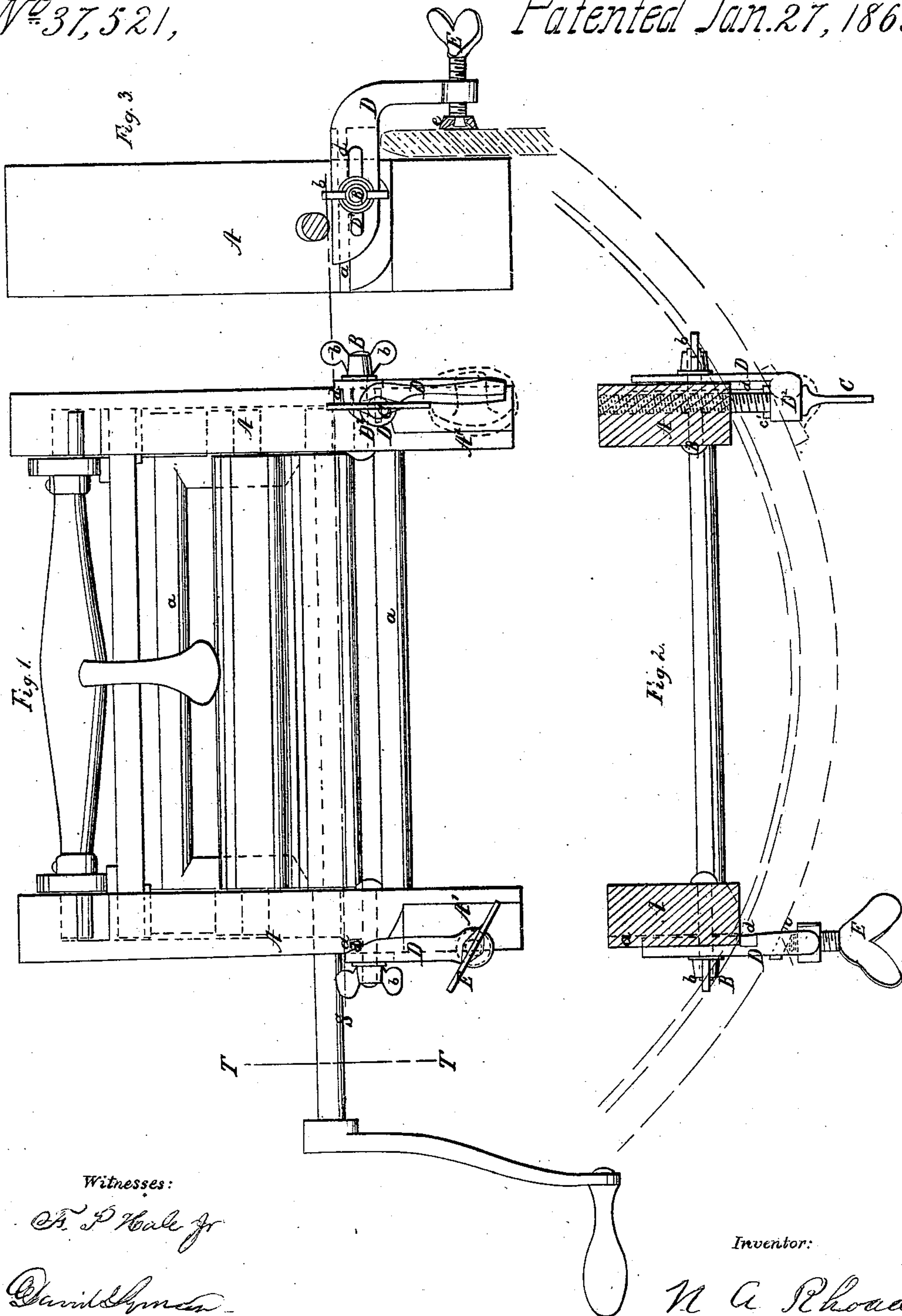


*N. A. Rhoads,*

*Wringer,*

*N<sup>o</sup> 37,521,*

*Patented Jan. 27, 1863.*



Witnesses:

*C. P. Hale Jr*

*David Lyman*

Inventor:

*N. A. Rhoads*

# UNITED STATES PATENT OFFICE.

N. A. RHOADS, OF WATERBURY, VERMONT.

## IMPROVED CLOTHES-WRINGER.

Specification forming part of Letters Patent No. **37,521**, dated January 27, 1863.

*To all whom it may concern:*

Be it known that I, N. A. RHOADS, of Waterbury, in the county of Washington and State of Vermont, have invented certain new and useful Improvements in Clothes-Wringers; and the following specification, taken in connection with the accompanying drawings, which form a part of the same, I hereby declare to be a full and exact description thereof.

My invention relates entirely to the means of attaching the structure to the edge of the tub, washing-machine, or box, or the like, and the other parts of the machine may be dismissed with the simple remark that the crank and rollers, with the several springs and bearing-boxes and other parts, may be made in any approved name, and of any desired material to adapt the machine to efficiently and conveniently express the water from clothing which is passed between the rolls.

It is found desirable for the sake of a proper support for the machine, and of accommodating its action upon the clothing, to adapt the machine to be readily secured upon the upper edge of a common wash-tub and to be as readily detached. It is also desirable to adapt the machine to fit securely and firmly upon wash-tubs of different diameters, and also to be readily removed from a tub of any diameter to a washing-machine or other box-shaped vessel, having either curved or plane sides.

My invention is intended to fulfill these conditions with less labor in preparing and adjusting than any wringer before known; and to enable others properly skilled, who are familiar with the devices hitherto used and proposed for this purpose to make and use my invention, I will proceed to describe its construction and operation by the aid of the drawings, and of the letters of reference marked thereon.

Figure 1 is a side view of my invention as applied in two different forms to the two posts of a clothes-wringing machine. Fig. 2 is a horizontal section of the same on the line S S in Fig. 1, and shows also the two distinct forms of the device. Fig. 3 is an edge view of the machine, or a section on the line T T in Fig. 1; but it shows only one of the forms of my invention—that is to say, Fig. 3 shows

only that form which is seen on the left post of the machine shown in Figs. 1 and 2.

Similar letters of reference indicate corresponding parts in all the figures.

A A are the upright posts, which form the sides of the framing of the machine. The edges A' A' are rounded to apply to the interior of ordinary tubs of small diameter; but this fact does not prevent the same from applying well to plane surfaces, or sufficiently well to allow a firm contact therewith. I produce in the outer face of each upright A a groove, *a*, running transversely across as represented. Near this groove I insert into A the two stout bolts B and C, formed as represented. B is provided with a thumb-nut, *b*.

D is an angular casting adapted to apply to the exterior of A, and provided with a straight rib, *d*, of a section corresponding to the groove *a*, so that it may slide smoothly and tightly therein.

D' is a slot in the horizontal portion of D, adapted to receive the body of the screw B. D extends down parallel to A, in the manner represented, to a point nearly opposite to the extreme lower end of A. The function of the screw B is to keep the casting D in contact with or very near the post A at all times, and also whenever it is screwed in tightly to hold the casting D rigidly and prevent its sliding in the groove *a*. The bearing of D upon the tub being entirely below the point at which it is secured to the frame A, the strain is not in a direct line with the groove *a*, but is diagonally across the same. This diagonal strain, by the effort of the casting D to turn within the groove *a* and the firm bearing thus produced against the sides of the latter, tends to hold the former firmly in place, requiring but a moderate pressure of the screw B to hold it very firmly.

So far as now described, the two forms of my invention—to wit, that on the right post of Figs. 1 and 2, and that on the left post of each—agree perfectly, but in certain other features they differ, and will be described separately.

I will first describe that form of the device seen on the right-hand side, or on that post of the machine which is presented nearest the right side of the sheet in these figures. In



this form of the device,  $D^2$  is a boss or ear cast on D, adapted to receive the screw C, as represented. The screw C is secured therein by the aid of the shoulder  $c$ , and transverse pin  $c'$ , so that it is free to turn but not to move endwise therein. The portion of D in this form of the device which extends down parallel to A is rounded in section, and is adapted to apply itself directly to the exterior of a tub or other vessel, so as to inclose the upper edge of the tub between itself and A. By reason of the parallel position of this part of D to the edge  $A'$  of the upright A, the parts  $A'$  and D are adapted to make a long and fair bearing on the outer and inner faces of the tub, the bearing extending from the extreme upper edge down several inches, both on the outside and inside of the vessel; and by reason of the ability of the casting D to slide outward and inward, or toward and from the upright A, when the screw B is slacked and the screw C turned in the proper direction, the parts are adapted to apply to tubs or other vessels of different thicknesses, the respective parts always maintaining the parallelism of the surfaces intended to apply to the tub, whatever may be thickness of the tub.

The mode of operating with this form of the device is very simple. It consists merely in unscrewing C to release the machine from a tub or box, and screwing the said screw in again to secure it upon another, turning the screw in each instance until a firm bearing is effected, whatever may be the thickness of the mass interposed. The pinching-nut  $b$  may be also slacked and tightened at each operation, and in such case the movements of the casting D and the firmness of its final position will be somewhat facilitated; but I do not always find it necessary in practice to start  $b$ , after the machine has been used a little, and the nut  $b$  has been properly adjusted with a moderate pressure or tightness.

I will now describe the other form of my device—to wit, that shown nearest the left side of the sheet in Figs. 1 and 2, and shown also in Fig. 3. In this the screw C is not employed, and the diagonal strain or pressure of the rib  $d$  within the groove  $a$  and the pressure of the pinching-nut  $b$  are alone relied upon to hold the casting D in place and prevent its slipping along the groove  $a$ . To increase the tightness of the hold of this form of the device upon the tub, I usually provide a screw, E, which is tapped through the descending portion of the casting D at the point represented, and provided with a shoe,  $e$ , acting like a kind of universal joint to give it a fair and easy bearing on vessels of all forms.

To operate this form of my invention, the screw E may be used alone within the limits of its moderate range, but if any considerable difference is found in the thickness of the part upon which the machine is clasped the casting D must be moved out or in by sliding

in the groove  $a$ , the force for this purpose being applied by the hand, either by a direct pressure or by striking it slightly with the hand, or with some convenient object. The nut  $b$  may in such case be operated or not, precisely as in the other form of the device.

In either form of my invention the casting D may be made with two branches to take hold of both sides of A; or it may be made to play in a mortise in the body of A, or instead of the groove in A and the corresponding rib,  $d$ , the casting D may be slotted and a rib or screws or other bearings may be attached to A to act in such slots and retain the outer arm of D in its parallel position with posts A; or a groove may be cut in A to receive the entire horizontal portion of the casting D, and the effect will be the same; but I prefer the construction represented.

In the first form of my invention described I can, if desired, mount on the descending portion of the casting D a swiveling part which shall be of such height as to cover the whole or any desired portion of the bearing part of D, and this swiveling part may present as broad a bearing as may be desired to the tub or box. The effect of this expedient is to increase or widen the bearing of the casting D upon the outside of the tub or box, and to allow it to apply equally or nearly equally to all forms of tubs, boxes, barrels, or washing-machines. This swiveling piece is shown in red lines in the drawings; but I do not consider such expedient necessary to the success of my invention, because that portion of the casting itself, if properly rounded, is well enough adapted for the purpose.

The advantages due to my invention, or some features thereof, may be separately enumerated as follows:

First. In consequence of the uniformly parallel position of the descending part of the casting D to the bearing-edge  $A'$ , my device is adapted by a single movement to apply and fit perfectly to all thicknesses of tubs and other vessels, and make a long and fair bearing thereon. The separate adjustability of the parts on the two posts allows me to tighten each post independently of the other, but I do not claim this feature as new in itself.

Second. The skewing strain, due to the manner in which the forces apply to the parts, by causing the rib  $d$  to bind itself fast in the groove  $a$ , and to hold more tightly in proportion as the strain is increased, by avoiding the necessity for other fastenings, or by diminishing the strain thereon if they are employed, performs a useful function in the machine, and in being rendered available in this manner, constitutes a novelty of a very useful character.

Having now fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is as follows:

1. The combination of the sliding jaw D and



its clamp-screw B with the screw C, or the equivalent thereof, as applied to the said part D, substantially as and for the purpose hereinbefore specified.

2. The combination of the sliding jaw D and its clamp-screw B with the screw E, or the equivalent thereof, as applied to the said part D, substantially as and for the purpose hereinbefore specified.

3. The combination of the rib *d* and groove *a*, or the mechanical equivalent thereof, with the sliding jaw D, its clamp-screw B, and the screw C, as applied to the part D, substantially as and for the purpose specified.

4. The combination of the rib *d* and groove

*a*, or the mechanical equivalent thereof, with the sliding jaw D, its clamp-screw B, and the screw E, as applied to the part D, substantially as and for the purpose specified.

5. The adjustable bearing or swivel-pad, in combination with the sliding jaw and screw, substantially as shown, and for the purpose described.

In testimony whereof I have hereunto set my signature.

N. A. RHOADS.

Witnesses:

F. P. HALE, Jr.,  
WM. O. HASKELL.