No. 693,113. Patented Feb. 11, 1902.

J. M. COOK.

WRINGER.

(Application filed Feb. 7, 1900.)

(No Model.)

FIG 1

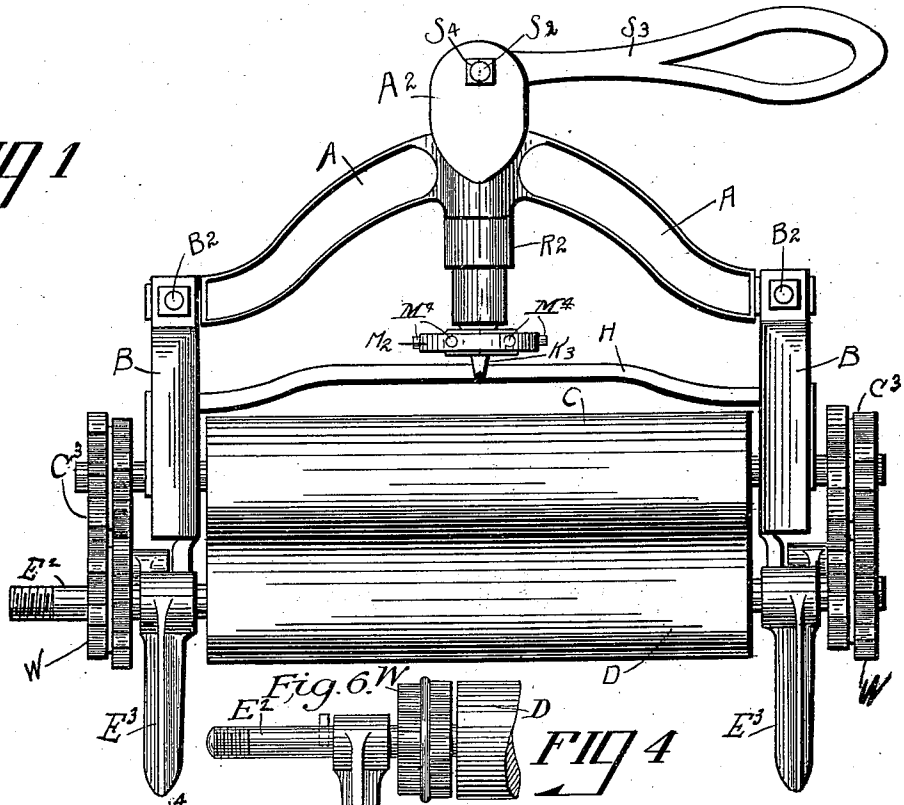


Fig. 6.

FIG 4

FIG 2

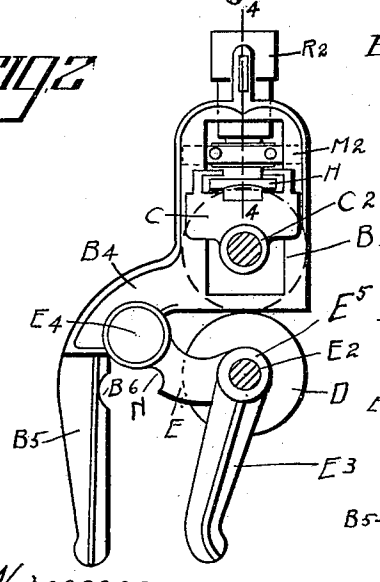
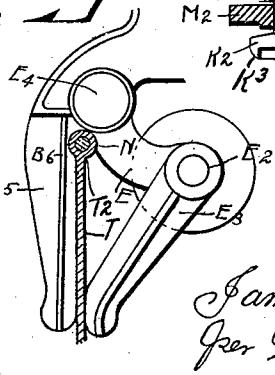


FIG 3



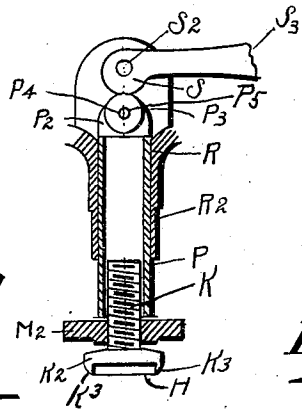
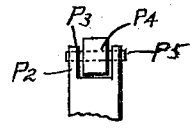


FIG 5



Witnesses
Charles G. Spiegel
A. Smith

Inventor
James M. Cook
Per Wm. Hubbell Fisher,
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES M. COOK, OF CINCINNATI, OHIO.

WRINGER.

SPECIFICATION forming part of Letters Patent No. 693,113, dated February 11, 1902.

Application filed February 7, 1900. Serial No. 4,355. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. COOK, a citizen of the United States, and a resident of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Wringers, of which the following is a specification.

The several features of my invention and the various advantages resulting from their use, conjointly or otherwise, will be apparent from the following description and claim.

Among the features of my invention is one which has for its object to facilitate depression of the upper rolls upon the lower.

Another has for its object means for enabling the wringer to engage the upper edge of the tub to which it is applied.

Another object is the production of means whereby the depression of the rolls will operate to cause the means for engagement to efficiently grasp the edge of the tub.

In the accompanying drawings, making a part of this application, Figure 1 is an elevation of one side of my invention. Fig. 2 is an elevation of that end of the machine which faces toward the left hand in Fig. 1. The actuating cog-wheels are omitted from this elevation. The other end of the wringer is substantially like the one herein shown. The jaws of the wringer are shown in an open position. Fig. 3 is a view similar to Fig. 2, but showing the jaws of the wringer engaging the top of the wall of a tub. Fig. 4 represents a vertical central section of the upper devices for depressing the rolls. The section is a transverse one taken from front to rear in the plane of the dotted line 4 4 of Fig. 2, part of the mechanism being left in elevation, as shown, and that face of the section seen which faces toward the right in Fig. 2. Fig. 5 is an end elevation of the upper end of the sleeve and wheel therein, the view being taken at right angles to the view in Fig. 4. Fig. 6 is a view of a modification of a detail of my invention.

A indicates the upper cross-piece of the frame. B B respectively indicate the vertical end uprights of the same frame. When made in pieces separate from the cross-piece A, they are suitably secured thereto—in the present illustrative instance by bolts B^2 B^2. Each of the uprights has a vertical slot or recess B^3, and in each of these recesses one of the bearings C^2 of the upper roll C moves down or up as the rolls are depressed or elevated, as hereinafter mentioned. The upper roll C is located between the vertical uprights B B, substantially as indicated. From the bottom of each upright there springs an arm B^4, extending out and down in a vertical extension B^5. A clamping-arm E is pivoted at E^4 to the arm B^4, and the intermediate portion of the arm E pivotally supports at E^5 the end of the shaft E^2 of the lower roller D. The journals of the lower roller, respectively, preferably extend through their adjacent arm E and each of their projected ends carries a gear-wheel W. In case the gear-wheel is between the arm and the roller, as shown in Fig. 6, then a pin or the like is located in the shaft E^2 to prevent the displacement of the journal and to hold the arm in place. The roller D is capable of oscillation with the arms E. The gear-wheels C^3, fixed on shaft of roller C, respectively engage gear-wheels W of the lower roller.

E^3 indicates a downward portion of the arm E. This latter portion is angulated with reference to the other portion of this arm and is rigid therewith.

An important feature is now to be described. The arm is provided with a notch N, preferably of a curved concave form, and this notch is located on the under side of the arm near its upper end and facing the vertical extension B^5. I also provide a concave or recess B^6 in the vertical extension B^5. The construction aforementioned is the same at each end of the wringer. These notches are for the purpose of engaging the upper edge or rim of a sheet-metal tub. The operation of this part of my invention is exceedingly efficient, to wit: When the wringer is to be used, it is placed on the upper edge of the upright part or wall T of the tub, the vertical extension being placed against the wall of the tub either within or without the latter, preferably on the outer side of the latter, as indicated in Fig. 3. It is to be observed that only the upper edge of a tub is shown in the drawings, the remainder of such a receptacle being omitted because of the limited space afforded on the sheet of drawings and also because the construction of tubs is well under-

stood. When the tub is of sheet metal, the upper edge usually has a rim T^2. The latter customarily consists of a rod around which the upper edge of the sheet metal of the tub is rolled. The wringer being located on the edge of the tub, as mentioned, the rolls are depressed forcibly. Such operation causes the portion E^3 of the arm to descend and move toward the lower end of the vertical extension B^5. As this movement continues the rim T^2 is received into the recess N of the arm and is pressed into the recess B^6 of the extension and forcibly gripped there between the arm and extension. At the same time the lower (free) end portion of the arm E^3 presses lower down against the inside of the tub-wall, while the lower end of the arm B^5 presses against the outer side of the tub-wall opposite where the arm E^3 impinges on the inside of the tub-wall. This double grasp of the wringer upon the tub not only holds the wringer securely to the tub, but imparts steadiness to the wringer, so that the latter will not wiggle or sway, both obvious advantages. These clamps as described are applicable to other kinds of tubs, wooden or metal, to which the wringer may be applied, and will effectually hold the wringer thereto.

I will now describe my improved device for effectually and easily depressing the rolls.

A bar H is present and one end bears upon the journal box or bearing of the upper roll at one end of the latter and the other end of the bar rests upon the journal box or bearing of the roll at the other end thereof. Usually, as in the present illustrative instance, the ends of this bar do not bear directly on the journals of the roll, but respectively upon its bearings in which the journals rotate. The center of the bar is preferably elevated, as shown, quite a little above its ends, and the bar is made of spring metal and tempered, so as to be elastic. This bar, its shape, its mode of support, and its elastic character are old and well known. Upon this bar H rests the foot K^2 of the screw-rod K. As this screw-rod is not to rotate I provide means for keeping it stationary. An effective kind of such means consists of the detents or lugs K^3 K^3. The foot K^2 and these lugs respectively embrace the top and respective edges of the bar H. It is to be noted that in Fig. 4 the foot and bar are turned at right angles to the lever S^3 and the wheel P^4, so as to the better exhibit them in the same view, Fig. 4, as the rest of the mechanism of that figure. In practice the length of the foot will be parallel to the axis of the pivot-bolt S^2 and the length of the bar H will be parallel to the length of the cross-piece A of the frame. A nut M^2 has an interior screw-thread, which engages the screw-thread of the rod K. By rotating this nut M^2 in one direction it is raised, and by reversing the direction of its rotation it is depressed relatively to the screw K. For enabling this nut to be readily operated it is made of a large diameter and its peripheral portion is provided with studs or projections M^4, affording a convenient hold for the hand. Upon this nut rests a sleeve or hollow cylinder P, which latter embraces that upper portion of the rod K which is above the nut M^2 and also extends upward and through a passage R in the upper cross-piece A of the frame of the wringer. For the purpose of steadying the sleeve P and screw K, I extend the wall of the passage R, forming a sleeve R^2, which latter embraces a large portion of the sleeve P. The upper end of the sleeve is rigidly connected to a head P^2, and in this head is a vertical slot P^3, in which is located a wheel P^4, pivoted at P^5 in the sleeve-head. The upper peripheral surface of this wheel is ever above the top of the head P^2.

In the central upper portion of the cross-piece A, or in an upward extension A^2 thereof, there is located an eccentric S, pivoted at S^2 to the frame-piece or its extension A^2, as the case may be, and worked by a lever S^3.

In order to save making the cross-piece A everywhere of great depth, I prefer to provide the extension A^2 thereof.

The lever S^3 may be of any suitable conformation; but I prefer to make it of the shape shown, so that when depressed it will fit and hug the top curve of the cross-piece A on that portion of the latter where it is depressed and so that the largest degree of convenient motion be permitted to the lever. The pivot S^2 is prevented from slipping lengthwise from the extension A^2 by means of nut S^4, as shown, on the end of the pivot-bolt or by other well-known means. The mode in which this feature of my improvement operates is as follows: The lever S^3 is elevated to a vertical position, or it may be moved so as to lie on the opposite side of the cross-piece from that shown in Figs. 1 and 4. The wringer being located in the position desired on the vessel or thing to which it is to be attached, the rolls are allowed relatively to the frame to descend as far as they will, bringing the clamping-jaws toward each other as far as their weight can do this. The bar H has also descended with them, thereby allowing the screw K and sleeve P, with its wheel or roller P^4, to descend. Thus the wheel will leave the eccentric S. The operator now turns the nut M^2, screwing it upward on the rod K and raising the sleeve P until the wheel P^4 impinges against the under side of the eccentric S. The lever S^3 is now depressed in the direction shown in Fig. 4, thereby bringing the most projecting part of the eccentric into use and forcing down the sleeve P, and with it the nut M^2, in turn depressing the rod K. The latter presses down the bar H, and the latter depresses the upper roller C, and the latter presses down the lower roller D and presses against it. Thus where the jaws are operated by the depression of the rolls the jaws are caused to firmly grasp the tub or other supporting-piece located between the jaws. The spring-bar H, after hav-

ing depressed the rolls so far as they will yield, then for the rest of the distance it is depressed by the eccentric elastically yields to that extent, and thus keeps the rollers depressed under a spring-pressure, thus preventing them, or the jaws, from working loose and compelling them to keep their desired positions. With the addition of the wheel as placed in conjunction with the coöperating portions of the mechanism the lever S^3 is operated with a very slight exertion. This advantage is obviously a very positive and marked one.

A minor advantage of the extended foot K^2 is that the foot prevents the nut from unscrewing and slipping off.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

In a wringer, two rolls, an upper and a lower one, each capable of being depressed, a frame provided with uprights having guideways for the upper roll, an arm B^4 springing from each upright and a vertical extension B^5 therefrom provided with a recess B^6, an arm E pivoted to each arm B^4, and carrying at E^5 the shaft E^2 of the lower roll, and having the recess N on its under forward side, adjoining the pivot E^4, said recess N being located opposite the recess B^6, in the extension B^5, and said arm E having the downward extension E^3, substantially as and for the purposes specified.

JAMES M. COOK.

Attest:
WM. H. PUGH,
K. SMITH.