

No. 627,377.

Patented June 20, 1899.

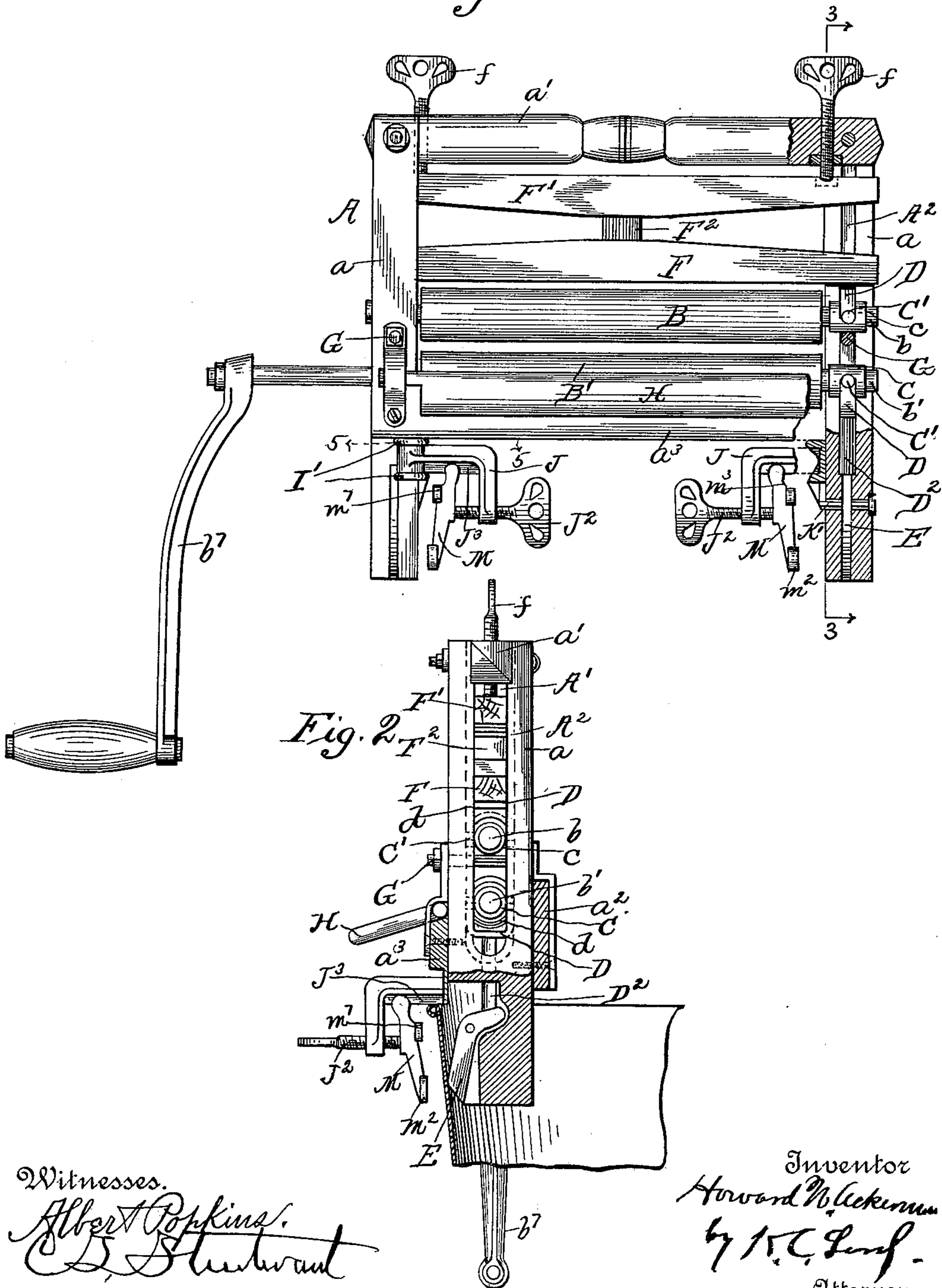
H. U. ACKERMAN.  
CLOTHES WRINGER.

(Application filed May 6, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



Witnesses.  
Albert Popkins.  
E. Stewart

Inventor  
Howard W. Ackerman  
by H. C. Lusk.  
Attorney

No. 627,377.

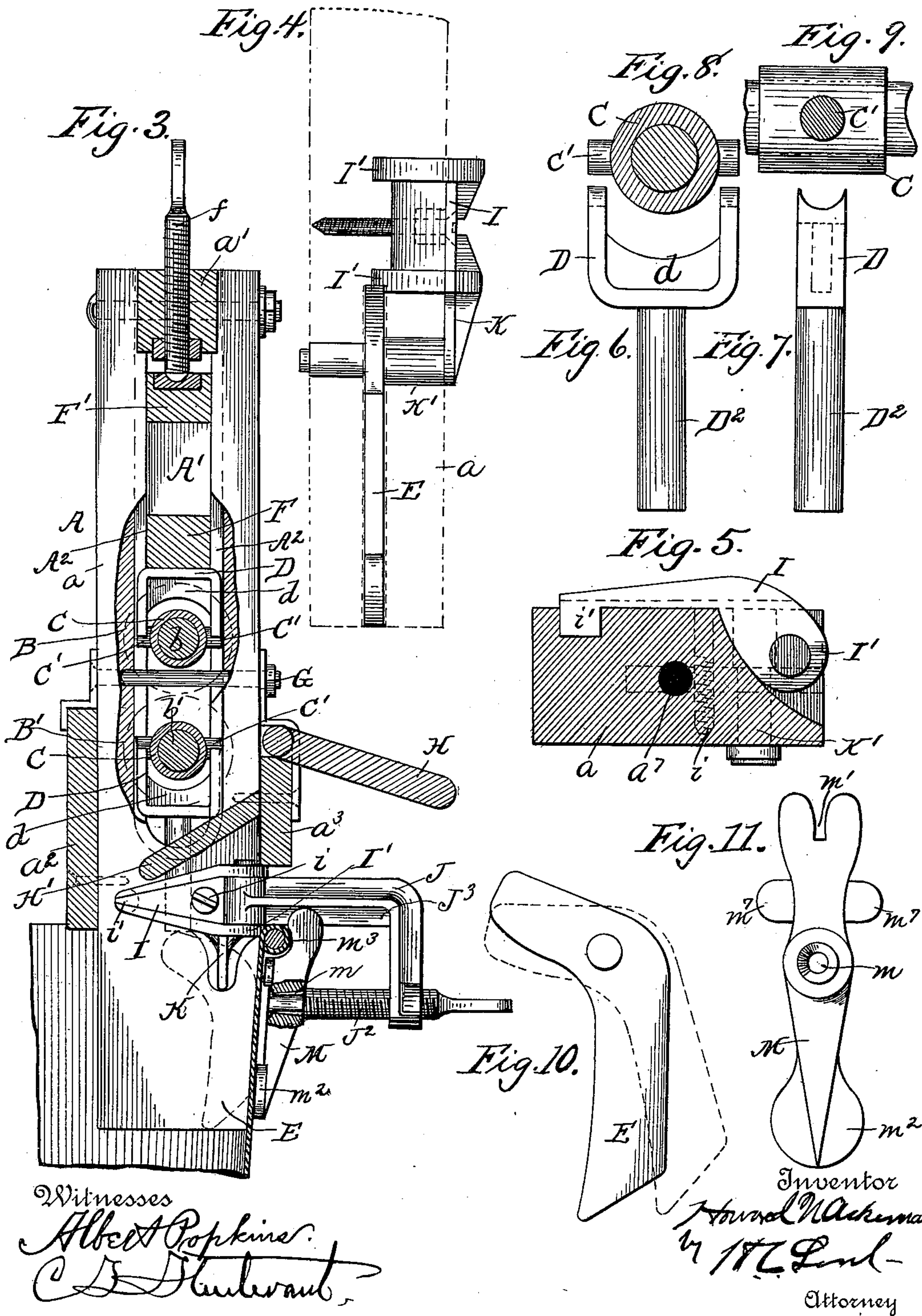
Patented June 20, 1899.

H. U. ACKERMAN.  
CLOTHES WRINGER.

(Application filed May 6, 1899.)

(No Model.)

2 Sheets—Sheet 2.





# UNITED STATES PATENT OFFICE.

HOWARD U. ACKERMAN, OF INDIANAPOLIS, INDIANA.

## CLOTHES-WRINGER.

SPECIFICATION forming part of Letters Patent No. 627,377, dated June 20, 1899.

Application filed May 6, 1899. Serial No. 715,853. (No model.)

*To all whom it may concern:*

Be it known that I, HOWARD U. ACKERMAN, a citizen of the United States, residing at Indianapolis, in the county of Marion, State of Indiana, have invented certain new and useful Improvements in Clothes-Wringers, of which the following is a description, reference being had to the accompanying drawings and to the letters of reference marked thereon.

10 The object of this invention is to provide a simple and durable support for the rollers of a clothes-wringer, which will allow ample freedom of movement without binding or cramping and the creation of undue friction.

15 A further object is to provide means whereby the rollers will be removed from contact with each other on the removal of the wringer from the tub to which it is fastened when in use.

20 The object also is to provide a clamp whereby the wringer can be fastened to sheet-metal tubs with thin sides, and, further, as an additional improvement to provide a clamp with which a wringer may with equal readiness be  
25 fastened to sheet-metal tubs and to wooden or fiber tubs, as well as to provide details of construction, as described.

I accomplish the object of the invention by the various constructions and combinations  
30 of parts hereinafter set forth and claimed.

Referring to the accompanying drawings, in which like parts are represented by similar letters of reference, Figure 1 is a view in side elevation and partially in section of a  
35 wringer embodying my invention, the parts being shown in a normal inoperative position. Fig. 2 is an end elevation of the same resting on the rim of a sheet-metal tub, but not clamped thereto, the rollers of the wringer  
40 in consequence not being in contact or operative position with each other. The lower end of the post is shown in section. Fig. 3 is a vertical section on the line 3 3 of Fig. 1, looking in the direction of the arrow, except  
45 that the wringer is shown clamped to the tub. The post is broken away in part to show the roller-supports and the grooved track for the same. Fig. 4 is a detail in side elevation of the metal casting for hinging the clamp to  
50 the wringer-post and for pivoting the lever which elevates the lower roller. The lever is shown attached to the pivot, and the post is shown in dotted lines. Fig. 5 is a cross-section of the wringer-post on the line 5 5 of Fig.

1, looking down and showing one of the hinge- 55  
irons on the post. Figs. 6 and 7 are views in elevation of the support for the lower roller. Figs. 8 and 9 are end and side views, respectively, of the collar and trunnions on the ends of the wringer-shafts. Fig. 10 is a detail view 60  
of the lever which elevates the lower roller. The full lines show the lever in position assumed when the roller is in its elevated position, and the dotted lines show the position of the lever when the roller is lowered. Fig. 65  
11 is a view in elevation of the bearing-bar on the end of the clamp-screw.

In the said drawings, A represents the main frame of the wringer, which consists, essentially, of the two end posts *a*, which stand 70  
normally vertical and which are connected at the top by a cross-bar *a'* and below the center by the rear cross-board *a<sup>2</sup>* and the front cross-bar *a<sup>3</sup>*.

B and B' are the rollers, which are formed 75  
each with a central shaft *b* and *b'* and an outer covering of rubber or other flexible material in the usual manner. The shafts *b* and *b'* are extended to form suitable journals for their rollers, and the shaft *b'* is extended suf- 80  
ficiently to receive the crank *b<sup>2</sup>*, by means of which motion is imparted to the rollers.

C are sleeves at each end of both of the rollers, mounted on the projecting ends of their shafts *b* and *b'*. The sleeves have the lateral 85  
diametrically opposite trunnions C'.

D are yokes, the stems of which are notched at the ends to fit the contour of the trunnions C' and into which the sleeves are inserted far enough to cause the trunnions to rest in the 90  
notches.

The manner of mounting the yokes in the frame of the wringer is as follows: The posts *a* are slotted centrally from the upper end for a suitable distance below the normal position 95  
of the lower roller, as shown at A', and the inner sides of the slots are grooved longitudinally, as shown at A<sup>2</sup>. The slots are wide enough to receive the sleeves which are projected into them, and the grooves are wide 100  
enough to form guides or runs for the sides of the yokes, as clearly shown in Fig. 3, whereby a longitudinal movement of the yokes is permitted. By the construction as here shown and described the yokes hold the sleeves from 105  
rotating, but permit a tilted adjustment on the roller, as becomes necessary when the clothes passing through the wringer happen



to be bunched at one end; but the wringer-shafts at all times are free to revolve in the sleeves. The yokes are strengthened by the webs  $d$ , connecting the two stems, as shown, 5 and the lower yokes are provided with an integral bolt extension  $D^2$ , which passes down through a suitably-bored opening  $a^7$  (see Fig. 5) into contact with the lever  $E$ , which projects beyond the limits of the post to which 10 it is pivoted when the wringer is in its inoperative position, but when forced in by the operation of clamping elevates the lower yoke and its roller.

Resting on the upper yokes is the bar  $F$ , and 15 above it is the bar  $F'$ . The ends of the bars extend into the slots in the posts  $a$ . Between the two bars is a spring  $F^2$ , here shown as a piece of rubber. The top bar is adjustable in position by means of the set-screws  $f f$ ; 20 but the action of the spring  $F^2$  is to force down the bar  $F$ , and also the upper roller, through the connection of the roller with the bar by means of the yokes and trunnioned sleeves. The maximum downward move- 25 ment of the roller is determined by the bolts  $G$ , which extend transversely of the posts in the path of the sleeves. When the wringer is removed from the tub, the spring  $F^2$  forces the upper roller down until the sleeves are 30 arrested by the bolts  $G$ , where it stops. The unclamping of the wringer releases the levers  $E$ , thereby permitting the lower yokes and the lower roller supported by them to drop down, bringing the lower roller out of contact with 35 the upper roller.

$H$  is an apron, which is hinged to the side of the wringer, whereby it can be folded up against the frame when not in use and dropped 40 down, as shown in the drawings, to guide the articles passing through the wringer.

$II'$  is a draining-board secured between the posts at an angle to drain the water wrung from the clothes into the tub.

I will now describe the clamp for securing 45 the wringer to tubs of any thickness.

$I$  is a metal plate, preferably of cast-iron, which is preferably fastened to the inner side of the frame-posts by means of the screw  $i$  and the lug  $i'$  at its inner end, which latter is 50 seated in an opening in the surface of the post. The outer edge of the plate is provided with the parallel ears  $I' I'$ , between which the end of a clamp-arm  $J$  is hinged, and these ears are made to project laterally 55 from the plate toward the middle of the edge of the post. This is because the post will form one member of the clamp, and it is desired to hinge the arm  $J$  squarely opposite the post to secure a direct bearing against it 60 when the clamp is tightened up. The post will preferably be notched in the manner as shown in Fig. 5 to accommodate the hinge-plate. Cast integrally with the plate  $I$  is the downward extension  $K$ , which terminates 65 with inside spindle  $K'$ , which is projected through an opening in the post and forms the pin on which the lever  $E$  is fulcrumed. A

shoulder is formed by reducing the outer portion of the spindle, and the lever fits against this shoulder. The extreme outer end of the 70 pin is reduced to provide another shoulder to retain a washer which is applied and held by riveting the end of the pin around and onto it.

The outer end of the clamp-arm  $J$  is bent 75 down at right angles and terminates with a threaded opening through which the thumb-screw  $J^2$  is inserted. The horizontal member of the arm has the underside flange  $J^3$ . The screw  $J^2$  has a reduced inner end, upon which 80 the bearing-bar  $M$  is fastened by projecting the reduced end of the screw through an opening in the bar. This opening  $m$  in the bar is conical, as clearly shown in Fig. 3, to permit a change in the angular position of the bar 85 with relation to its screw which is made necessary by the angular differences in the different tubs to which the wringer may be applied. The upper end of the bar is provided with the notch  $m'$ , into which the flange  $J^3$  90 enters, whereby the bar is maintained in a constantly vertical position. The lower end of the bar may, if the part above is too narrow, be expanded, as shown at  $m^2$ , to increase the bearing-surface, and the upper in- 95 ner side is provided with the concave notch or outturn  $m^3$  to engage the wire-bound rim of sheet-metal tubs. When the wringer is applied to such tubs, the bar will have bearing-contact at two places  $m^2$  and  $m^3$ . Imme- 100 diately below the notch or outturn  $m^3$  is a plate-like formation  $m^7$ , which does not contact with the tub, or at least does not so contact with the sheet-metal tub as to prevent the engagement of the upper end of the bar 105 with the turned edge of the tub when the wringer is applied to sheet-metal tubs, but forms the upper contacting surface when the wringer is fastened to a wooden tub. A broad bearing at the bottom at least is neces- 110 sary to prevent injury to the walls of the tub.

It will be noted that the clamp-bar is so shaped that when the lower bearing-surface is in contact with the tub the notch at the upper end gives to the bar a sufficient out- 115 turn or outward extension to allow a perfect contact longitudinally of the bearing-surface at the lower end of the bar when the upper outwardly-extending end of the bar is in engagement with the turned edge of the tub, 120 and as the engagement of the clamp with the upper turned edge of the tub so supports the clamp as to prevent largely the vibration of the sides of the tub when the wringer is under strain this arrangement insures a suffi- 125 ciently large contact-surface at the lower end of the bar to prevent the cutting or tearing out of the metal by the action of the clamp upon it.

Having thus fully described my invention, 130 what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. In a clamp for clothes-wringers, the combination with the wringer-frame; of a clamp-



arm extending from said frame; a pressure-bar arranged in the proper relation to said arm to contact the tub when the wringer is in place, said bar having its upper end extending outwardly to engage the turned edge of a metal tub, and a broad bearing on its lower part adapted to engage the side of a metal tub; and means for exerting pressure from the arm upon said bar, said means being arranged to press the upper end and broad bearing of said bar into engagement with the turned edge and side of the tub respectively.

2. In a clamp for clothes-wringers, the combination with a wringer-frame; of a clamp-arm extending from said frame; a pressure-bar arranged in proper relation to said arm to contact the tub when the wringer is in place, said bar having a transverse notch in its upper part adapted to engage the turned edge of a metal tub, and a broad bearing on its lower part adapted to engage the side of the tub, and a bearing adjacent to the said notch for the purposes described; and means for exerting pressure from the arm upon said bar between said transverse notch and upper bearing, and the bearing on the lower part of said bar.

3. In a clamp for clothes-wringers, the vertical wringer-post; an arm having a horizontal body portion secured to the post at one end and having its other end bent down approximately at right angles to the horizontal portion, said horizontal portion having an under side longitudinal flange; a set-screw working in a threaded opening in the outer end of the arm and a pressure-bar mounted on the inner end of the screw and having its upper end bifurcated and engaging the under side flange on the arm, and having a concave notch on the inner side of its upper end and an expanded lower end below the point of attachment of the bar to the screw, all substantially as described and specified.

4. In a clamp for clothes-wringers, the vertical wringer-post; an arm having a horizontal body portion secured to the post at one end and having its other end bent down approximately at right angles to the horizontal portion, said horizontal portion having an under side longitudinal flange; a set-screw working in a threaded opening in the outer end of the arm and a pressure-bar mounted on the inner end of the screw and having its upper end bifurcated and engaging the under side flange on the arm and having a concave notch on the inner side of its upper end; an expanded portion forming a wide bearing above the point of attachment of the bar to the screw when the clamp is applied to a wooden tub; and an expanded lower end below the point of attachment of the bar to the screw; all substantially as described and specified.

5. The combination with the post of a

clothes-wringer of an arm hinged thereto to swing horizontally, said arm having a horizontal body portion with an under side longitudinal flange, and an outer downwardly-bent portion; a screw working through the outer end of the arm having its inner end reduced in diameter; a bar with a transverse conical opening approximately midway of its length whereby the bar is adjustably secured to the screw, said bar having its upper end bifurcated to engage the flange on the arm, and having a concave notch on its inner side near the bifurcated end and expanded bearing portions at the lower end of the bar and above its pivotal point, said bearings being projected from the bar in the direction of the wringer-post, all substantially as described and for the purposes specified.

6. The combination in a wringer and with the rollers thereof; boxes with trunnions in which the rollers are mounted; means for limiting the downward movement of the upper roller; longitudinal moving vertical bolts with expanded upper ends working in grooves in the wringer-frame and supporting the trunnions on the boxes of the lower roller; vertical posts forming part of the wringer-frame and part of the clamps for fastening the wringer to the tub; bent arms with set-screws secured to the posts and forming the remaining members of the clamps; bent levers pivoted to the posts and projecting beyond the tub-contacting side of the latter when the wringer is in its inoperative position, the said vertical bolts resting on the levers whereby when the lower ends of the levers are pushed in even with the post by the operation of clamping the wringer to the tub the lower roller will be elevated into contact with the upper roller; all substantially as described and for the purpose specified.

7. In a clothes-wringer, vertical posts forming part of the wringer-frame and parts of the clamps for securing the wringer to the tub, said posts having their upper ends slotted as described, and having the sides of the slots grooved longitudinally; a pair of rollers; shafts on which the rollers are mounted projecting beyond the ends of the rollers; sleeves each having a pair of radial diametrically-placed trunnions, said sleeves being mounted on the projected ends of both shafts; yokes sliding in the grooved slots and engaging the trunnions of the sleeves as and for the purposes specified; means for limiting the downward movement of the upper roller and for supporting the yokes of the lower roller, all substantially as described and specified.

In testimony whereof I affix my signature in presence of two witnesses.

HOWARD U. ACKERMAN.

Witnesses:

JOSEPH A. MINTURN,  
J. S. BARTH.