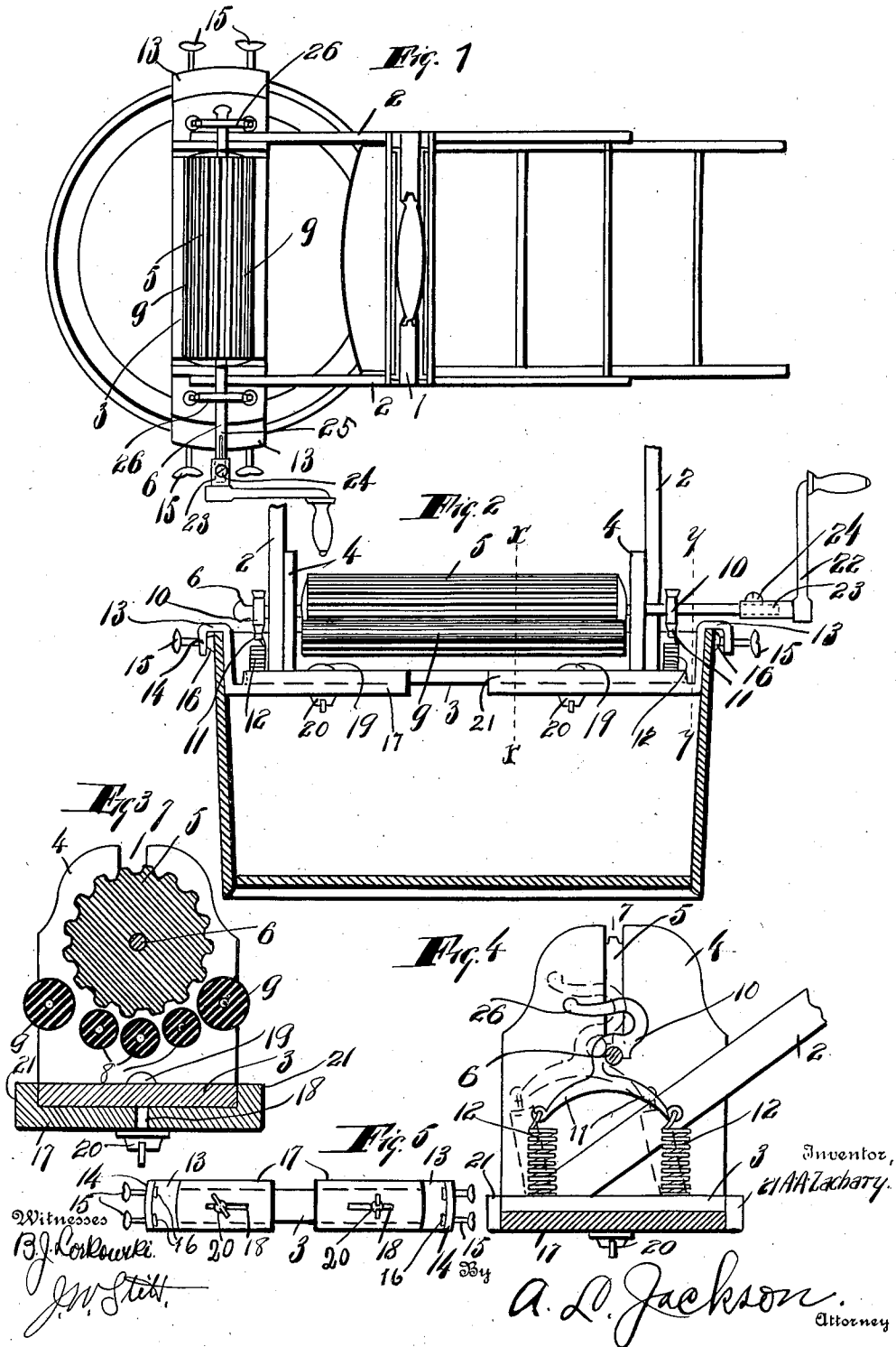


A. A. ZACHARY.
 WASHING MACHINE.
 APPLICATION FILED APR. 27, 1909.

937,734.

Patented Oct. 19, 1909.



UNITED STATES PATENT OFFICE.

ARCHIE A. ZACHARY, OF FORT WORTH, TEXAS, ASSIGNOR OF ONE-HALF TO W. E. FLOOD,
OF FORT WORTH, TEXAS.

WASHING-MACHINE.

937,734.

Specification of Letters Patent.

Patented Oct. 19, 1909.

Application filed April 27, 1909. Serial No. 492,528.

To all whom it may concern:

Be it known that I, ARCHIE A. ZACHARY, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to washing machines and more particularly to certain rubbing devices and the means for adjusting the same to any size tub or tank, and the object is to provide a washing machine which may be adjusted and braced on any tub or tank of ordinary construction and which also braces the tub or tank. The latter feature is important where sheet metal tubs or tanks are in use.

Another object is to provide a machine with rubbing devices which will cleanse the articles to be laundried thoroughly without injuring or tearing the same.

Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application and specification.

Figure 1 is a plan view of the machine. Fig. 2 is a side elevation of the same mounted on a tub which is shown in section. Fig. 3 is a vertical section of the same, taken along the line $x-x$ of Fig. 2. Fig. 4 is a vertical section in part, taken along the line $y-y$ of Fig. 2. Fig. 5 is a bottom view of the base of the machine and the adjusting and bracing devices.

Similar characters of reference are used to indicate the same parts throughout the several views.

This machine is provided with a suitable frame 1 (not described herein) and this frame is provided with arms 2 for supporting the rubbing devices when being adjusted to a tub or tank. The rubbing devices are provided with a base 3 which is provided with standards 4. The main rubbing roller 5 is fluted or corrugated and journaled in the bearing standards 4 by means of a shaft 6. The standards 4 have slots 7 for the vertical movement of the rubbing roller 5. The roller 5 is yieldingly mounted relative to the feed rollers and the auxiliary rubbing rollers. Feed rollers 9 and auxiliary

rubbing rollers 8 are journaled in the standards 4. The roller 5 is movable vertically in the slots 7 in the standards. The shaft 6 is held downwardly by hooks 10 which are provided with diverging arms 11 and springs 12 are attached to the arms 11 and to the base 3. The springs 12 permit upward motion of the roller 5 to prevent choking of the rubbing rollers. This arrangement will prevent the tearing of articles which are being laundried. The feed rollers 9 and the rubbing rollers 8 consist of cylinders of rubber provided with a shaft. The rubber will not tear clothing or break buttons against the roller 5. The advantage of the diverging arms 11 to the hooks 10 is that the arms with the springs have a balancing effect and tend to prevent friction of the shaft against the walls of the slots 7 and also hold the roller 5 in a proper relation to the auxiliary rollers 8 and 9. The feed rollers and the auxiliary rollers are arranged concentrically relative to the main rubbing roller.

Means are provided for adjusting the machine to any size tank or tub. Hangers 13 engage the upper part of a tub or tank by resting on the top or upper parts. Lips 14 which are formed integral with the hangers extend downwardly on the outside of the tub and thumb screw bolts 15 operate in the lips 14 to bind the hangers to the tub. The bolts 15 are provided with bearing surfaces 16 to engage the tub without mutilating the sides thereof. In order to hold the base 3 rigidly in place, the hangers are extended under each end of the base 3 and the extensions 17 are provided with slots 18 so that the extensions 17 may be attached to the base 3 at different adjustments. By reason of this construction the washing machine can be adjusted to tubs or tanks of different sizes. The extensions are attached to the base 3 by means of bolts 19 and nuts 20 for the bolts. In order that the base 3 shall be held rigidly against movement, the extensions 17 have upstanding flanges 21 which are flush with the sides of the base 3. These flanges prevent lateral motion of the base 3 on the extensions. Thus the machine is fixed rigidly to the hangers which are adjustable to tubs or tanks of different size and the hangers are attached rigidly to the tub, and in the case of sheet metal tubs or tanks the hangers will hold the sides of the tubs rigidly to the machine. The machine

is provided with a handle or crank 22 for turning the shaft 6 and the handle is adjustable on the shaft 6 by reason of the sleeve 23 and set screw 24 which engages a groove 25 in the shaft 6.

At times it may be necessary to lift the roller 5 to unchoke the machine or to remove the roller. The hook 10 is provided with finger levers 26. The hands may be placed on the tops of the standards 4 and the roller raised by catching the fingers under the levers 26. The hooks can thus be lifted off of the shaft 6.

The operation is simple. The articles to be laundered are placed in the tub with suitable water and cleansing agents. The articles may be run through the rubbing rollers as often as desirable as the crank 22 is turned.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is,—

In a washing machine, the combination of a tub and rubbing mechanism composed of a base having slotted standards rigid

therewith, a fluted rubbing roller journaled in said slots, feed and rubbing rollers journaled in said standards and concentrically arranged relative to said fluted roller, means holding said fluted roller yieldingly in close proximity to said feed and rubbing rollers consisting of hooks engaging the shaft of said fluted roller and having diverging arms and spiral springs attached to said arms and to said base, and bracing supports for said base consisting of hangers engaging the upper edge of the tub, set screws attaching said hangers rigidly to the tub, slotted extensions engaging and supporting said base and having upstanding flanges flush with the edges of said base, and bolts operating in the slots in said extensions and binding said extensions to said base.

In testimony whereof, I set my hand in the presence of two witnesses, this 22nd day of April 1909.

ARCHIE A. ZACHARY.

Witnesses:

A. L. JACKSON,
J. W. STITT.