July 18, 1933. S. SCHULMAN 1,918,986

MOP WRINGER

Filed Nov. 23, 1929

FIGURE 1

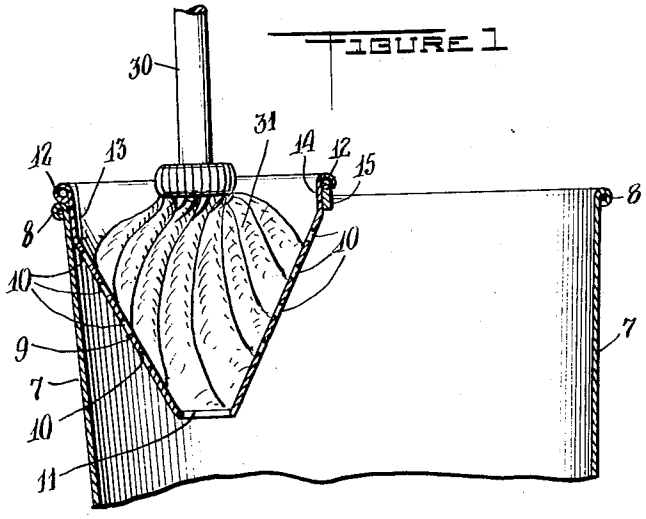


FIGURE 2

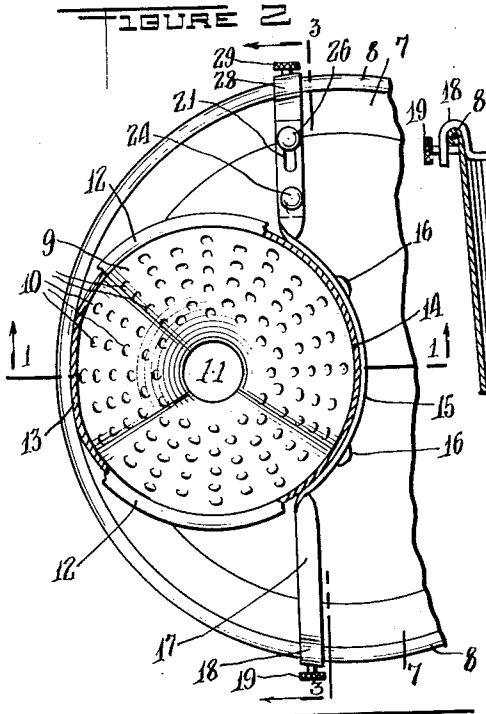


FIGURE 3

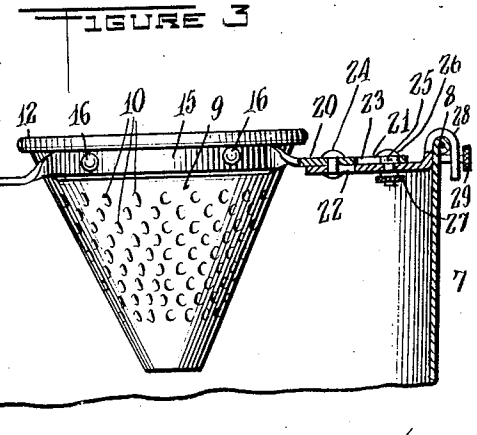


FIGURE 4

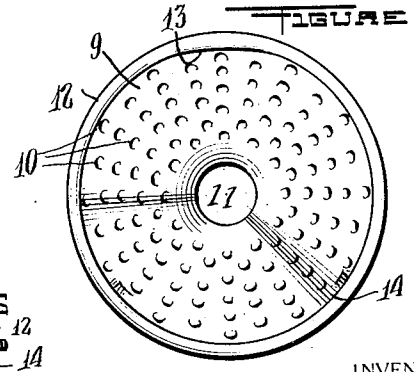


FIGURE 5

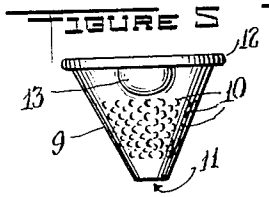
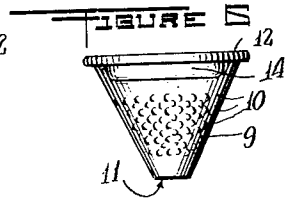


FIGURE 6



INVENTOR
Solomon Schulman
BY Walton Harrison
ATTORNEY

Patented July 18, 1933 1,918,986

UNITED STATES PATENT OFFICE

SOLOMON SCHULMAN, OF NEW YORK, N. Y.

MOP WRINGER

Application filed November 23, 1929. Serial No. 409,199.

My invention relates to mop wringers of the general type in which a drain cup is mounted within a pail, and used in connection therewith and with a mop, for removing excess of water from the mop.

More particularly stated, my invention comprehends a mop wringer of the general type just mentioned, in which I provide an improved supporting bar, connected with the drain cup and so formed and arranged as to enable it to be placed upon the rim of the pail and there clamped firmly in position, independently of the ears of the pail or any equivalent therefor.

My improved mop wringer is somewhat similar to the mop wringer illustrated and described in my Patent No. 1,725,213, of August 23, 1929, and differs therefrom chiefly in the form of the drain cup and supporting bar, and the manner in which the supporting bar, with the drain cup secured thereto, is detachably mounted upon the rim of the pail.

Reference is made to the drawing forming a part of this specification, and in which like reference characters indicate like parts throughout all of the figures.

Figure 1 is a substantially central vertical section through my improved mop wringer, and is taken upon the line 1—1 of Figure 2, looking in the direction indicated by the arrows.

Figure 2 is a fragmentary view, partly a plan and partly a horizontal section, of the mechanism shown in Figure 1.

Figure 3 is a section on the line 3—3 of Figure 2, looking in the direction indicated by the arrows.

Figure 4 is an inverted plan or bottom view of the drain cup.

Figure 5 is an elevation of the drain cup, and shows one side thereof.

Figure 6 is another elevation of the drain cup, and shows the side thereof opposite the one shown in Figure 5.

A pail is shown at 7, and is provided with an annular bead 8, serving as a rim.

A drain cup appears at 9, and is provided with a number of drain holes 10, and with a bottom opening 11.

The drain cup has a general frusto-conical form, and has an annular bead 12, integral with it and serving as a rim.

The drain cup is further provided with a swell 13, so that a spot of substantial size upon its outer surface is adapted to fit neatly against the inner surface of the pail, as may be understood from Figures 1 and 2.

In some instances the drain cup is provided with a swell 14, whereby a portion of its wall, for a distance of about one-third of its circumference, is rendered perpendicular to the vertical axis of the drain cup.

By means of rivets 16 the swell 14 of the drain cup is secured firmly to a curved portion 15 of a supporting bar. This supporting bar is provided with a flat portion 17 and with a U-bend 18, these parts being of the form indicated more particularly at the left of Figure 3.

The U-bend 18 carries a screw 19, which extends through a hole in the outer portion of the U-bend, and may be inserted beneath the bead 8, so as to engage and press a small portion of the pail body directly against an adjacent portion of the U-bend, which is quite rigid and does not spring. When the parts are in the position indicated at the left of Figure 3 and the screw 19 is tightened, the screw presses against the pail at a point substantially in alinement with the supporting bar, and thus grips the U-bend 18 firmly in position upon the pail rim. The net result is that the end portion of the supporting bar has an intense localized grip on the pail rim, and the supporting bar as a whole neither pulls nor pushes upon the pail rim, except as the supporting bar may be pressed sidewise. Hence the supporting bar acts as a stiff brace extending from one portion of the pail rim to another. This locks the pail rim, prevents it from springing to any appreciable extent, and virtually renders it stronger. If, now, the drain cup, secured to the supporting bar as elsewhere described, be forced down so that the outer portion of the drain cup rim rests firmly upon the adjacent portion of pail rim, it is obvious that the drain cup is held in a very firm and strong setting.

The supporting bar is further provided with another flat portion 20, this portion hav-

ing a slot 21 extending through it, as indicated at the right of Figure 3.

An end piece appears at 22, and is provided with a slot 23. A double headed rivet extends through a hole in the flat portion 20 of the supporting bar, and through the slot 23 of the end piece 22.

Another bolt 25 is provided with a square stem 26 which extends through the slot 21, and with a portion extending through a hole in the end piece 22, and carrying a nut 27.

The operator by loosening the nut 27 can slide the end piece 22 slightly endwise by hand, thus virtually lengthening or shortening the supporting bar; and then by tightening the nut 27 he can clamp the end piece firmly in the position into which it is thus adjusted. By this arrangement the supporting bar can be readily and quickly fitted to pails of different sizes.

The end piece 22 is further provided with a U-bend 28, substantially like the U-bend 18 above described. The U-bend 28 carries a screw 29 like the screw 19 above described, and which can be used in clamping the end piece 22 firmly upon the pail, the screw 19 extending beneath the bead 8, as shown at the right of Figure 3.

By this arrangement the supporting bar as a whole can be firmly clamped in position upon pails of different sizes, and in such manner as to be entirely independent of any ears or their equivalent, used upon the pail for any purpose.

A mop handle is shown at 30, and a mop head at 31, these parts constituting a form of mop generally employed in connection with a device of this kind.

The manner of using the mop, by grasping the handle and thrusting the mop head into the drain cup, and turning the handle in order to wring or drain the mop head, is too well known in this art to require any further description.

As may be understood from the foregoing, the drain cup is permanently connected with the supporting bar; and the same drain cup may be used upon pails of different sizes.

The clamping of the ends of the supporting bar upon the pail is accomplished entirely by means of the screws 19 and 29 and U-bends 8 and 28. Since these parts anchor the ends of the supporting bar directly upon the upper portion of the pail, it is not necessary for the supporting bar or any part thereof to be lodged against any ears of equivalent members with which the pail may perchance be provided.

In order to mount my device in position upon the pail, the supporting bar is first adjusted as to length, and then the U-bends are clamped firmly in position relative to the bead 8, all as above described; then the drain cup is forced down hard, so as to bring the bead 12 thereof down firmly upon the bead 8 of the pail, thus forcing the swell 13 of the drain cup tightly against the adjacent inner surface of the pail.

Every pail has a little resiliency or spring, so that in forcing the drain cup downwardly as just described, the swell 13 readily accommodates itself to pails of different circumference, and will thus make a tight fit, especially in view of the fact that there is a little resilience in the supporting bar and also in the drain cup.

By virtue of the facts just stated, a given drain cup and its supporting bar can be used with pails differing considerably in size.

I find that by forming and arranging the supporting bar and the swell 14 of the drain cup as above described, there is a considerable saving in the amount of metal required for the supporting bar, and some reduction in the weight thereof. This is due to the fact that the strains conferred by the drainage cup upon the supporting bar are edgewise of the bar, except as to the curved portion 15 thereof, and that this curved portion, which receives the downthrust of the mop, is disposed edgewise relative to the strains thus produced.

I find also that with the parts thus arranged, the forcing of the drain cup down into position, so that the bead 12 of the drain cup is brought to rest directly upon the adjacent portion of the bead 8 of the pail, does not cause the supporting bar to buckle or to pucker, or otherwise become distorted; the net result being that the drain cup is thus mounted very firmly in position.

I do not limit myself to the precise mechanism shown as variations may be made without departing from my invention, the scope of which is commensurate with my claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is as follows:—

1. A mop wringer, adapted for use with a pail, comprising a drain cup located within said pail and provided with a swelled portion formed of deformable metal so as to fit the inner surface of said pail when pressed tightly against the same, and a supporting bar secured to said drain cup and provided with end portions for engaging the rim of the pail, each end portion carrying a member movable relatively to it for clamping it securely upon any portion of said rim independently of the other end portion, in order to enable each of said end portions to hold firmly upon said rim when said drain cup is forced into position.

2. A mop wringer adapted for use with a pail, said mop wringer being intended to be positioned within said pail and having a swelled portion formed of deformable metal adapted to fit to the contour of the inner surface of the pail when pressed tightly against said surface, and a supporting bar secured to said drain cup of a character to engage the

pail and thereby hold the drain cup with the swelled portion thereof pressed tightly against the pail.

3. As an article of manufacture, a mop wringer adapted for use with a pail, said mop wringer including a drain cup intended to be positioned within the pail and being relatively flexible and having a portion of itself adapted to engage against the pail wall, and means to engage between the pail and the drain cup of a character to hold the drain cup connected with the pail with said mentioned portion of the drain cup engaging the pail wall and with the drain cup flexed to hold said mentioned portion in tight frictional connection with the pail wall.

SOLOMON SCHULMAN.