Aug. 20, 1929. S. SCHULMAN 1,725,213

MOP WRINGER

Filed Jan. 31, 1928

FIGURE 1

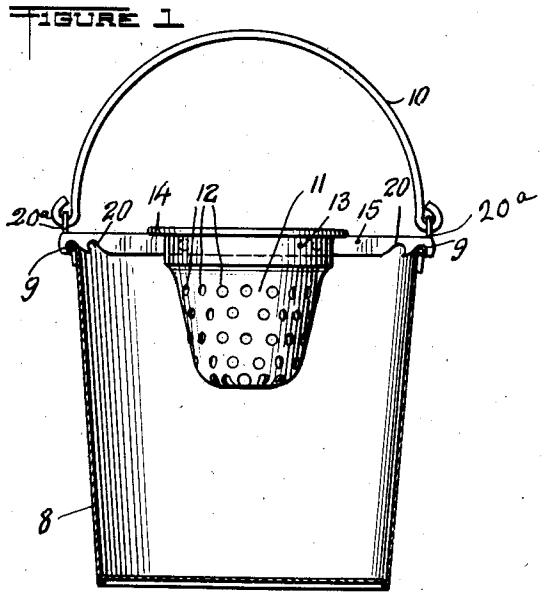


FIGURE 2

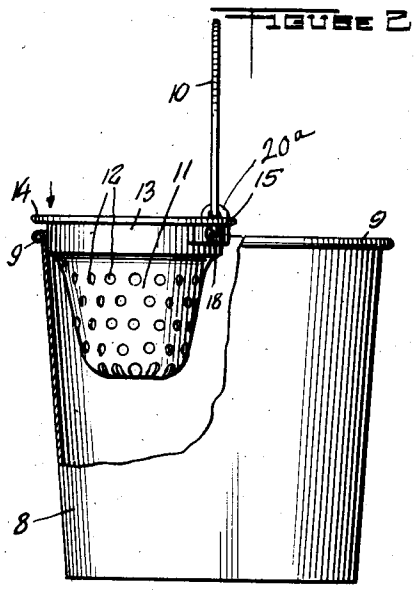


FIGURE 3

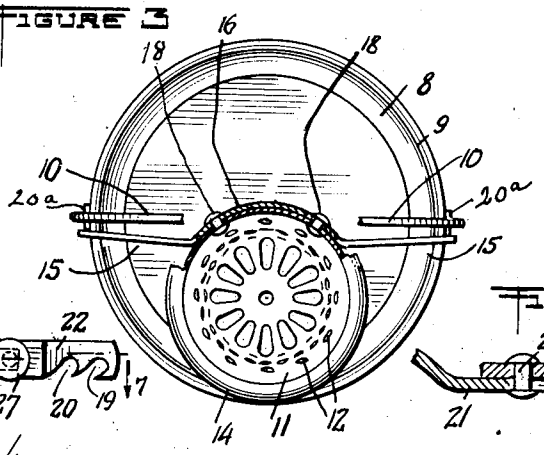


FIGURE 5

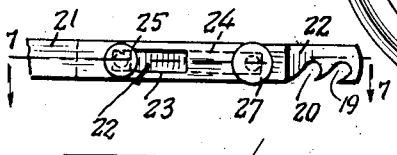


FIGURE 7

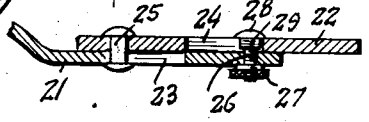


FIGURE 4

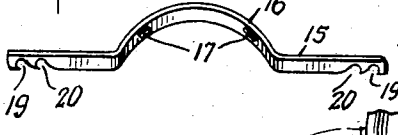
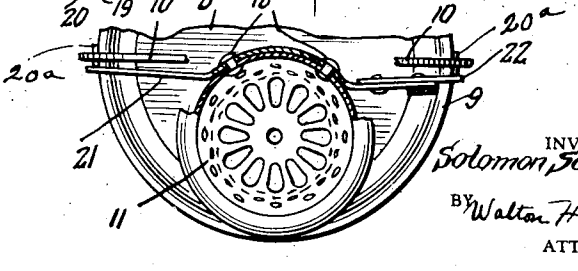


FIGURE 6



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UNITED STATES PATENT OFFICE.

SOLOMON SCHULMAN, OF NEW YORK, N. Y.

MOP WRINGER.

Application filed January 31, 1928. Serial No. 250,782.

My invention relates to mop wringers of the 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 used for detachably connecting the drain cup with the pail.

My invention further contemplates an improved supporting bar, for adapting a particular drain cup, or a drain cup of given size, upon pails of different sizes.

My invention also comprehends a number of minor improvements upon mop wringers of the general type here contemplated, for improving the efficiency thereof.

Reference is made to the accompanying 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 section through one form of my invention.

Figure 2 is a view of the mechanism shown in Figure 1, but partly in section and partly broken away; this view also indicating how the drain cup is sprung into position.

Figure 3 is a view partly a plan and partly a section, of the mechanism shown in Figure 1.

Figure 4 is a perspective of the form of supporting bar shown in Figure 1.

Figure 5 is a fragmentary view, partly a plan and partly a section, showing another form of my invention.

Figure 6 is a fragmentary elevation of the supporting bar shown in Figure 5.

Figure 7 is a section on the line 7—7 of Figure 5, looking in the direction indicated by the arrows.

I will first describe the form of my invention shown in Figures 1 to 4 inclusive.

A pail 8, made preferably of galvanized sheet steel, is provided with an annular bead 9 and with a bail 10, these parts being of the usual or any desired construction.

A drain cup is shown at 11, and is made of sheet material, preferably galvanized steel.

The drain cup is provided with drain holes 12, having suitable form to facilitate the discharge of excess water from the mop to be wrung.

The drain cup 11 is provided with a rim 13 of annular form as shown, this rim being smooth and rounded, and provided with an annular flange 14 extending outwardly.

A supporting bar is shown at 15 and is made of metal, preferably steel. The supporting bar 15 is provided with a portion 16 integral with it and of arcuate form, as illustrated particularly in Figure 4.

This arcuate portion of the supporting bar is provided with two holes 17, 17; and two rivets 18, 18 extend through this hole and through similar holes in the rim 13 of the drain cup.

The supporting bar 15 is provided adjacent its ends with notches 19, 19 and 20, 20 and thus, at each of its ends, practically fashioned into a double hook. The ends of the supporting bar are adapted to lodge against the ears 20^a, of the pail.

The purpose of the notches 19, 19 and 20, 20 is to adapt the drain cup and supporting bar for use upon pails of different sizes.

In order to mount the drain cup in a pail, the notches 19, 19 or the notches 20, 20 as the case may be, are slipped over the rim 9, the drain cup 11 extending down into the pail. Then the outermost portion of the flange 14 is forced downwardly, as indicated by the arrow in Figure 2, and brought to rest upon the bead 9, thus forcing the ends of the supporting bar against the ears of the pail.

The supporting bar 15 has a certain amount of spring, and is caused to flex a little as the rim 13 of the drain cup is forced into position. Thus the drain cup is supported by aid of a little spring pressure.

By giving the supporting bar 15 a small amount of spring, another useful purpose is brought about. When the drain cup is pressed downwardly into position, so that the ends of the supporting bar are forced tightly against the ears 20^a, 20^a, there must be a yielding of either the pail or the supporting bar; and unless the supporting bar has a slight amount of spring, the pail must do all of the yielding, and this tends to distort the pail. Hence by giving the supporting bar 15 a slight amount of spring, the shape of the pail is maintained to better advantage.

As the supporting bar is pressed sidewise by the drain cup, it might have a tendency to ride upwardly and thus become displaced

relatively to the rim 9, except for the form of the hooks 19, 20. As the hooks extend slightly under the rim they prevent the supporting bar from becoming misplaced, and practically guide the ends of the bar into proper engagement with the ears of the pail.

Then the drain cup is forced down to the limit of its travel, the flange 14 of the drain cup lodges directly upon the top of the rim, thus giving a firm support to the drain cup.

In Figures 6 and 7 I show another form of supporting bar, the same being adapted for use in the form of my invention appearing in Figure 5.

The main or body portion of this form of supporting bar is shown at 21, and detachably connected with it is an extension piece 22. The portion 21 is provided with a slot 23, and the extension piece 22 is provided with a slot 24.

A rivet 25 extends through the extension piece 22 and also through slot 23. This rivet makes a snug fit between the portion 21 and the extension piece 22, so as to allow these parts to easily slide relative to each other, but without coming apart.

A screw 26, carrying a thumb nut 27, extends through the adjacent portion 21 and through the slot 24. The screw is provided with a head 28, and with a square neck portion 29, this square neck portion fitting snugly into the slot 24.

The operator, by loosening the thumb nut 27 and sliding the extension piece 22 relatively to the part 21, can vary the length of the supporting rod as a whole. By so doing, he can adapt the supporting rod for use with the drain cup 13, upon pails of other sizes than those for which the supporting bar shown in Figure 4 are adapted.

The manner in which a mop wringer of this general kind is used is too well known to need any detailed description. The mop is forced into the drain cup and turned by hand, so as to cause excess of water to flow through the drain holes and collect in the bottom of the pail.

As may be noted from the foregoing description either form of my invention may be used for adapting a particular drain cup, or a drain cup of a particular size, to be used with pails of different sizes.

This increases the adaptability of the mop wringer, enabling it to be sold and used in a variety of relations in which it could not otherwise be employed to advantage.

I do not limit myself to the precise mechanism here shown and described, as variations may be made therein 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, comprising a pail, a drain cup mounted within said pail, and a supporting bar connected with said drain cup and provided with recessed portions for detachably engaging different portions of the rim of said pail, said supporting bar having a length between its recessed portions slightly less than the diameter of the top of the pail with the drain cup wedged in between said supporting bar and that portion of the rim within the smaller arc of the circle subtended by the supporting bar.

2. The combination of a pail provided with ears and a drain cup, said drain cup having a supporting bar connected therewith, said supporting bar being long enough to reach from one of said ears to the other and adapted to rest against the sides of said ears which face the same direction, with the drain cup wedged in between said supporting bar and that portion of the rim of the pail within the smaller arc of the circle subtended by the supporting bar with the bar forced against the ears, the rim of said drain cup resting on the top of said pail.

3. A mop wringer comprising a pail provided with an annular bead and with ears, and a drain cup, said drain cup having a supporting bar connected therewith, said supporting bar being long enough to reach from one of said ears to the other and adapted to rest against the sides of said ears which face the same direction, said supporting bar being provided with hooks extending underneath the outer portions of said annular bead, the ears of said pail serving as limiting stops for said supporting bar with the drain cup wedged in between the supporting bar and that portion of the annular bead of the pail within the smaller arc of the circle subtended by the supporting bar, with the bar forced against the ears, and with the rim of said drain cup resting upon said annular bead of the pail.

Signed at New York city, in the county of New York and State of New York.

SOLOMON SCHULMAN.