May 25, 1954 R. A. DELMAS 2,679,067

WRINGER ATTACHMENT FOR RECEPTACLES

Filed Aug. 9, 1948

Fig. 1.

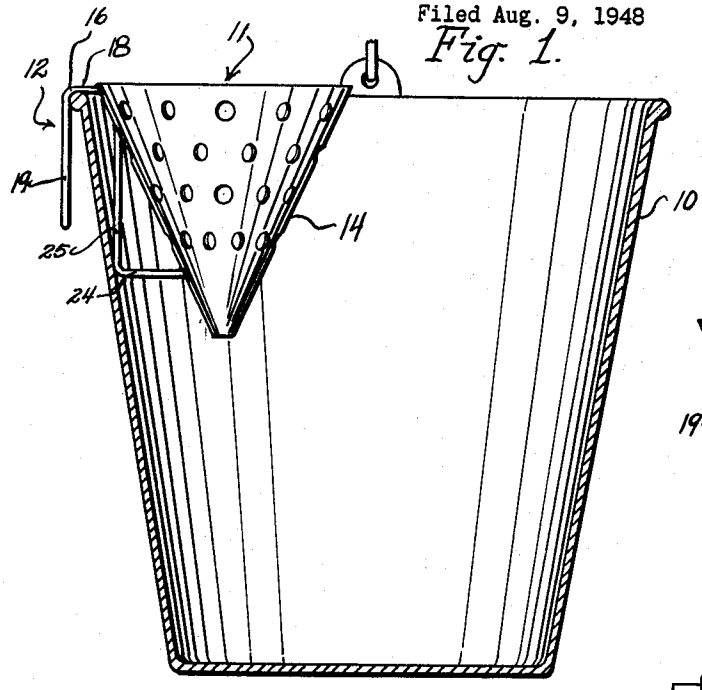


Fig. 3.

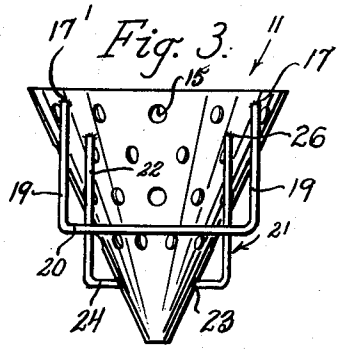


Fig. 2.

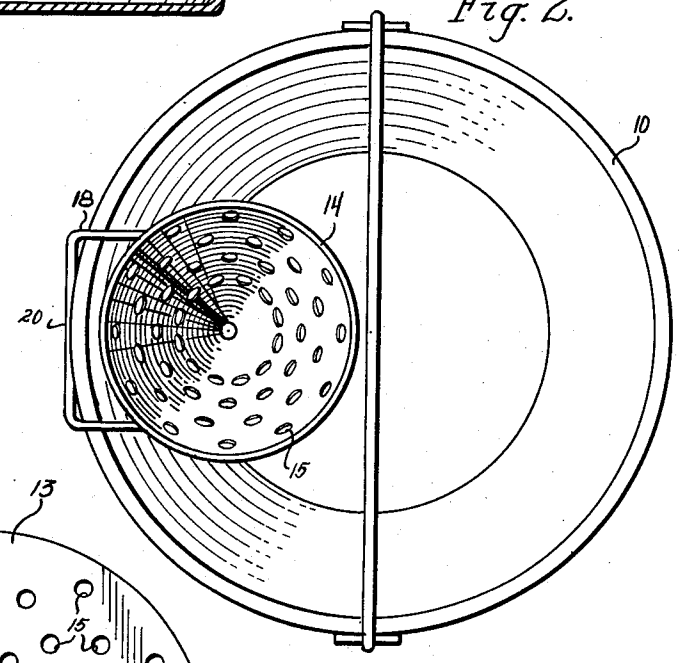
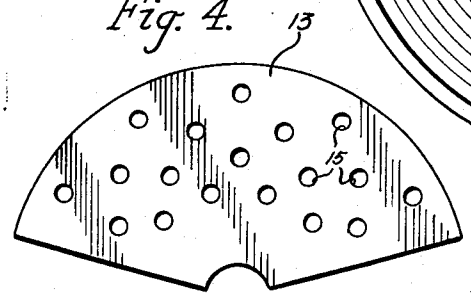


Fig. 4.



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WRINGER ATTACHMENT FOR RECEPTACLES

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1 Claim. (Cl. 15—263)

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The present invention in its broadest scope relates to a household appliance, and in its more limited aspect has reference to a wringer device for mops and the like which may be readily and easily attached to or detached from a pail, bucket or similar receptacle for holding a liquid solution.

It is well known that a mopping process requires that the mop head be frequently subjected to a wringing step to remove the unclean solution therefrom and in most instances, this has been accomplished by the use of the hands. The main objections to this procedure is the harmful effect of the hot cleaning solution on the hands, such as, the possibility of fungus infection and also because the mop cannot be properly dried. Another bad feature is that the manual wringing requires bending or stooping and, of course, this is very tiring physically.

Attempts have been made to provide wringer assemblies for buckets which will overcome the defects of the hand wringing method and in the main, these assemblies have been rather satisfactory. However, most of the devices currently in use form an integral part of the bucket or pail which renders the bucket not usable for other purposes. In addition, this type of construction raises a problem in connection with replacement and repair of the wringer assembly.

Accordingly, an important object of my invention is to provide a wringer assembly for use with receptacles which will overcome the objectionable features now present in the art.

Another object of the present invention is to provide a wringer assembly having incorporated therewith novel means whereby the assembly may be easily and quickly secured to any type of receptacle and which will maintain the assembly in the proper position on the receptacle during use.

Yet a further object of this invention is to provide a wringer assembly wherein the means for attaching the assembly to the bucket in proper position is simple in structural detail and which forms an integral part of the assembly.

And still another object of this invention is to provide a mop wringer assembly of the character described which includes few essential parts, which is positive and efficient in operation and which can be cheaply and readily manufactured.

With the foregoing and other objects in view, the invention consists in the details of construction, and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

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In describing the invention in detail, reference will be had to the accompanying drawings forming part of this application, wherein like numerals denote corresponding parts in the several views, and in which:

Figure 1 is a view in side elevation showing the wringer assembly attached to the upper end of a bucket, the bucket being in section.

Figure 2 is a top plan view of the assembly shown in Figure 1.

Figure 3 is an elevational view of the wringer assembly showing the means for attaching the assembly to the bucket.

Figure 4 is a plan view of the blank forming the wringer assembly.

With reference to the drawings and more particularly Figure 1, I have shown a bucket 10, a wringer 11 and securing means 12 whereby the wringer is attached to the upper open end of the bucket.

The wringer 11 comprises a blank 13 preferably of steel, which when assembled, provides an inverted conical unit 14. The unit 14 is formed with a plurality of rows of circumferentially aligned apertures 15 of equal diameter. In assembling the unit 14, the free edges of the blank may be welded, brazed or otherwise conveniently secured.

I have ascertained for ideal operation, the unit 14 should have a 5½ inch diameter at the upper end, a ⅜ inch diameter at the lower end and the overall length should be 6 inches. This affords a very compact assembly and permits its use with the majority of conventional buckets and mops. Of course, I realize that the dimensions are subject to changes depending upon the particular situation encountered but in most instances, it is felt that a wringer so constructed will give the best results.

The securing means 12 includes a rod 16 which is attached to the unit 14 adjacent the upper end thereof. As best depicted in Figures 1 and 3, the rod 16 is substantially U-shaped and each free end 17 is welded, brazed or soldered to the unit 14 on each side of the center line as shown at 17'. The rod 16 projects horizontally from the unit 14 as shown at 18 and is then bent downwardly at right angles to the portion 18 as indicated at 19. The arrangement is such that the portions 18 will rest on the upper edge of the bucket and the portions 19 together with web 20 will be exterior of the bucket.

The securing means 12, in addition to the rod construction 16 comprises a stabilizing member 21 which coacts with the rod 16 to attach and maintain the unit on the upper end of the bucket.

The member 21 consists of a pair of rod-like elements 22 suitably affixed to the unit 14 and since each element is similar in structural detail, the description will be confined to but a single element for simplicity purposes. The element 22 is connected at its lower extremity to the conical unit 14 near the open bottom as illustrated at 23 by welding or brazing and extends outwardly horizontally as indicated by the numeral 24. The rod-like element 22 is then bent at a 90° angle with respect to the horizontal portion 24 as at 25 and the free end is welded or otherwise fixed to the unit 14 as at 26.

As will be seen from Figures 2 and 3, the distance between the secured ends of rod 16 is about equal to 90 degrees of the circumferential length of the conical body member 14. Since member 16 is of U-shape contour, the laterally extending supporting zones 18 and the vertical legs of the rod formation have the same distance spacing, the length of the zones 18 being such that when the wringer is in the mounted position, the portion 14 becomes actually spaced inward of the receptacle, as presently explained.

Members 22 (Figures 1 and 3) are of L-shape contour, with the longer legs extending vertically and substantially parallel to the axis of the body portion 14, as do the legs of the element 16. The position of the members 22 relative to the element 16 is such as to locate both members 22 as lying intermediate the positions of the vertical legs 19 of the element 16, being substantially symmetrical thereto, so that the distance spacing between the vertical legs is somewhat less than the spacing distance of the legs of element 16.

Since the length of the laterally extending portions 18 is greater than the thickness of the bucket walls, when the wringer is placed in position, its weight will cause the body portion to pass to the position shown in Figure 1, in which the bucket rim engages the bend junction between 18 and 19, doing this with respect to both legs 19, as indicated in Figure 3. As the members 22 are secured to the body portion a sufficient distance below the top to define the inward spacing shown in Figure 1, the contact between members 22 and the bucket will be limited to the zone of the bend between the legs of the member as shown in Figure 1. While the taper form of the bucket would tend to accentuate this condition, if the bucket diameter were uniform instead of tapered as shown, the same type of contact would be present.

From this it will be understood that while the wringer is completely and firmly supported for complete service, the actual contact between wringer and receptacle is limited to the contact between the contacting portions 18 and the receptacle top wall, and the contact of the angle junction portion of the members 22. Since both 16 and 22 are of rod form, the contacts will be more or less of a spot type and will be unaffected by actual service, since pressure applied on the upper surface of the wringer would simply increase the pressure being applied at such contact points and provide no disturbance thereof.

In other words, the supporting and positioning relationships between the wringer and the receptacle are established by and limited to the pair of angularly spaced contacts at the top of the bucket (18), and to the pair of spot contacts internal of the bucket below and remote from the top of the bucket being the angle juncture of the members 22, the latter contacts being spaced a less distance apart than the contacts

18 and disposed symmetrically with respect thereto. This is true whether the bucket is of taper form or of uniform diameter. If the diameter is uniform, the axis would incline slightly toward the right in the upward direction, without, however, disturbing the efficiency of the wringer for service.

Hence, whether the bucket be tapered or of uniform diameter, the structure will be operative under maximum efficiency conditions. The limitation as to the contact areas possible, due to the rod form and the particular arrangement of the members 16 and 22 not only permitting the assembly to operate with either type of bucket but also providing the assembly to be cheaply made, simple to position and to remove from the bucket.

It can be seen that when the unit 14 is placed on the upper end of the bucket, the horizontal portions 18 of the rod 16 will lie on the rim of the bucket, and the portion 25 of each rod-like element 22 will engage the inner surface of the wall of the bucket thereby cooperating with the rod 16 to clamp the unit to the bucket and at the same time space the wringer inwardly a small distance from the wall of the bucket. Hence, the wringer may be quickly clamped to any type of receptacle and will remain in the desired location during use.

By virtue of my invention, it is manifest that the wringer is quite simple in constructural detail and yet sturdy enough to stand the strains imposed thereon during use. The mode of attachment of the securing devices to the conical body provides a substantially integral assembly thus reducing to a minimum the possibility of the securing means becoming detached from the body.

As hereinabove pointed out, the wringer 11 is of steel and I have ascertained that the best results are accomplished when the blank is either stainless steel or galvanized steel.

I claim:

A removable wringer attachment for open top liquid receptacles of circular contour, said attachment comprising a conical foraminous body and having its axis extending substantially vertical with its top presenting its major diameter, the outer face of said body having a U-shaped supporting element of relatively small circular cross-section secured at its ends to such outer face adjacent the top margin of such body, each leg of the element including an outwardly extending zone adjacent the secured end with the intermediate portion of the element extending angularly downward relative to the plane of such zone and parallel with the axis of such body, the exterior of said body additionally having a pair of members of relatively small circular cross-section and of L-shaped contour secured at their ends to such exterior with the upper ends positioned on a plane below the securing plane of the element ends and with the longer leg of the member also extending parallel to the body axis, the span distance between the legs of the element being substantially equal to a 90 degree arc of the body periphery, the span distance between the longer legs of the additional members being less than the element span distance, the member positions being intermediate the positions of the element legs and symmetrically disposed relative to said element legs to thereby provide a supporting and positioning relationship between the receptacle and the wringer established by and limited to a pair of angularly spaced contacts on the top of the receptacle and a pair of angularly

spaced spot contacts internal of the receptacle and remotely below the top of the receptacle with the spot contacts disposed symmetrically intermediate the positions of the top contacts.

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