# April 21, 1970

M. J. CORAMINAS BUCKET DEVICE AND WRINGER Filed June 21, 1968 3,506,997

FIG. 1.



Berman, Davidson & ATTORNEYS.

**United States Patent Office** 

5

10

3,506,997 Patented Apr. 21, 1970

1

3,506,997 BUCKET DEVICE AND WRINGER Manuel Jalon Coraminas, % Manufacturas Rodex S.A., Carretera de Logrono, Km. 1, Zaragoza, Spain Filed June 21, 1968, Ser. No. 738,906 Int. Cl. A471 13/58 U.S. Cl. 15—262 4 Claims

## ABSTRACT OF THE DISCLOSURE

Apparatus comprising a container for holding a cleaning fluid therein with a recess in the lower portion thereof, and a cross bar extending across said recess, and upwardly on opposite sides of the container and pivotally connected to two-L-shaped members disposed in opposite directions <sup>15</sup> and pivotally secured to the sides of said container, and having wringer members secured to the upper ends of said L-shaped members so that depressing of the cross bar extending through the recess in the container will cause the wringer members to move toward each other and to extract water or cleansing fluid from a mop that is disposed between said wringer members.

The present invention relates to an improved bucket for  $^{25}$  use in cleaning operations, and more particularly for use in conjunction with a mop wherein the mop is wrung out from time to time.

One important object of the present invention is to  $_{30}$  provide the combination of a bucket and wringer that can be made in an economical and simple manner.

Another object of the present invention is to provide a simple container that can be mass produced and can be made of a lightweight material, such as plastic and the like, and which is provided with a recess in the lower portion thereof that communicates with slot means so that a transverse bar member having its opposite ends extending upwardly on opposite sides of the bucket can be fastened to linkage means which cause wringer members to be moved toward each other when the transverse bar member is depressed to extract liquid from a mop disposed therebetween.

It is yet another object of the present invention to provide a combination bucket and wringer for cleaning purposes that can be used by anyone by visual observation and which does not need any specific instructions with it in order to enable a person to use it to clean a floor and the like.

Another object of the present invention is to provide 50a bucket with a wringer attachment secured thereto in which the wringer attachment is disposed thereon so that when it is used, it will not upset the bucket as happens in many conventional type wringers attached to buckets used heretofore. 55

Yet another object of the present invention is to provide a bucket with a wringer arrangement thereon in which the wringer is actuated to extract water from a mop by depressing a transversely extending cross bar disposed in a recess in the lower portion of the bucket so that the 60 foot, when utilized to depress the transverse member, will cause a steadying action on the bucket and will exert a force that will prevent the bucket from being accidentally tipped over when the wringer is in use.

Another object of the present invention is to provide 65 a bucket with a wringer arrangement in which oppositely disposed roller members are on L-shaped means pivotally secured to the bucket and to a single bar means which is depressed by the foot of the user in order to actuate the roller members. 70

Various other objects and advantages of the present invention will be readily apparent from the following de2

tailed description when considered in connection with the accompanying drawings, and forming a part thereof, and in which:

FIGURE 1 is a perspective view of the combination bucket and wringer device embodying the present invention;

FIGURE 2 is a section taken along the lines 2-2 of FIGURE 1, but enlarged, illustrating in detail the wringer device embodied in the present invention; and

FIGURE 3 is a fragmentary detail taken along the lines 3-3 of FIGURE 2 on an enlarged scale, illustrating the wringer and L-shaped members embodied therein as seen from the end thereof.

Referring to the drawings, reference number 10 generally designates a bucket or container for holding cleansing fluid such as water, with a detergent therein, or any other suitable cleansing fluid or liquid. The bucket is preferably made of plastic material and is provided with side walls 12 and end walls 14, and generally has a larger cross-sectional area 16 adjacent its upper end than at its lower end. The lower end of the bucket is provided with a bottom 18, as best seen in FIGURE 2, and has curved downwardly extending legs or feet 20 at the corners thereof. It will be noted that the legs or feet 20 which extend below the bottom 18 cause the bottom 18 to be disposed in spaced relationship with the floor or surface upon which the bucket is disposed. One end wall of the bucket, as best seen in FIGURE 1, is provided with an arcuate recess 22 therein. The recess 22 extends substantially above the bottom 18 of the bucket, as is readily apparent from the view shown in FIGURE 2, and is of such a configuration so that the foot of a person can be inserted therein. A transverse bar 24 extends across the recess 22 and through and beyond two vertical slots 26 extending through the feet 20 adjacent the arcuate recess 22, and the wall portion 30, forming the recess. The opposite ends of the transverse bar 24 are bent upwardly and form upwardly inclined bars 32 extending along the side walls 12 of the bucket.

The upper edge of the bucket is provided with a downturned lip or rim 34 extending around the complete upper edge thereof. The rim 34 is further provided with a downwardly depending skirt 36 adjacent the side walls thereof closest to the recess 22. The skirts 36 are reinforced at their opposite ends by downwardly extending portions 38, as best seen in FIGURE 2. Vertical, solid ribs 42 extend outwardly of the side wall 12 and inwardly of the downwardly extending portions 38. An axle or headed bar or screw member having a threaded portion 44 extends through the skirt 36 and the rib 42 and acts as a pivot member, as hereinafter described.

The pivot members 44 nearest the recess 22 have pivotally disposed thereon an L-shaped member 46, having a vertical leg 48 and a horizontal leg 50. The vertical leg 48 and the horizontatl leg 50 are disposed at approximately 90 degrees or at a right angle with one another. The outer end of the leg 50 has an opening therein in which is disposed a bar or pivot member 52.

The pivot members 44 disposed farther away from the recess 22 have an L-shaped member 54 pivotally connected thereto, comprising a vertical leg 56 and a horizontal leg 58. The vertical and horizontal legs are disposed at substantially 90 degrees or at right angles with respect to each other, and the leg 56 is slightly curved or arcuate, while the leg 58 is provided with a longitudinally extending slot 60 therein. The pivot member 52 extends through the slot 60 of the leg 58 and the L-shape 54 is disposed outwardly of the L-shaped member 46, as best seen in FIGURE 3. The L-shaped member 54. Adjacent the horizontal legs 50 and 58, the upper end of the bar members 32 are provided with an opening therein through which

5

the pivot member 52 extends, as best seen in FIGURE 3. The L-shaped member 46 is provided with a substantially horizontal extending roller member 62 connected by pins 64 to the legs 48, while the L-shaped member 54 is provided with a roller member 66 connected by pins 68 to the upper end of the legs 56.

The bucket is further provided with a bar type handle member 70 having its opposite ends secured to ribs 72 disposed in the end walls 14 of the bucket. A spring or biasing member 74 is wrapped around the pivot members 10 44 nearest the recess 22 and are normally biased to keep the L-shaped members 46 in an upright position, as shown in solid lines in FIGURE 2.

Referring to FIGURE 2, the wringer device is normally disposed in the position shown in solid lines therein, where-15in the roller members 62 and 66 are disposed in spaced relationship in a position where they are farthest apart from each other. When it is desired to wring out or extract water from a mop that has been soiled, the mop head is inserted between the spaced roller members 62 and 66 and 20 the bar 24 is depressed with the bottom of the operator's foot so that the transverse bar 24 moves downwardly in the slots 26. This will cause the upright bar members 32 to be pulled downwardly so as to pull the pivot members 52 downwardly and further cause the horizontal leg 50 25 of the L-shaped member 46 and the horizontal leg 58 of the L-shaped member 54 to be depressed or to be pulled downwardly into the dotted position shown in FIGURE 2. During this time, the pivot members 52 will slide downwardly in the longitudinal slots 60 of the horizontal leg 3() 58. This movement of the bars 32 and the horizontal legs will cause the upper legs 48 and 56 of the respective Lshaped members to move toward one another so that the roller members 62 and 66 carried thereby will also move toward one another and into the position shown in dotted 35 lines in FIGURE 2, so that the roller members will squeeze against the mop head inserted between the rollers and as the mop head is pulled out between the rollers, the water will be extracted therefrom and fall down into the container.

When it is desired to stop the wringer action of the roller members, it is only necessary to remove the foot from the treadle or cross bar 24 and the springs 74 will bias the pivot members 52 upwardly and the L-shaped members will be caused to be returned to their solid line 45 position in spaced apart relationship, as best seen in FIG-URE 2.

From the foregoing description, it is apparent that the foregoing invention provides a novel, lightweight, plastic container or bucket with a simple treadle action and 50 wringer device which causes wringer rollers to be moved toward one another. It will further not that the bucket is provided with a recess therein in the lower portion thereof for inserting the foot therein so that the bottom of the operator's foot will cause a cross bar to be moved down- 55 wardly so as to give a steadying force when the wringer action is in operation so that the bucket will not inadvertently be tipped over during cleaning of the mop.

What is claimed is:

1. A foot-actuated bucket and wringer combination 60 comprising:

- (A) a bucket with a wringer mechanism attached thereto;
- (B) a compact enclusure possessing a relatively small periphery relative to the adjacent wall member and 65 WALTER A. SCHEEL, Primary Examiner externally positioned immediately below the upper

edge of the bucket extending downwardly for a short distance from said upper edge, said enclosure including

- (1) a skirt member disposed is a substantially parallel orientation to the adjacent bucket wall being spaced apart therefrom to form an opening accessible throughout the length thereof from the bottom of said skirt.
- (2) a skirt reinforcing member securing said skirt to said wall,

(C) a wringer mechanism including,

- (1) a pair of foot-actuated movable rollers in substantially parallel alignment with each other disposed in a plane overlying the top edge of said bucket and adapted for releasable contact for expelling water from a wet cleaning implement placed therebetween,
- (2) first lever means, the upper end being rotatably secured at the end of one roller, and pivotally connected to said skirt at its intermediate portion.
- (3) second lever means having its upper end rotatably secured to the other roller and pivotally connected to said skirt at its intermediate portion.
- (4) said first and second lever means being substantially positioned within said enclosure and pivotally connected to each other and to an actuator bar, said actuator bar extending downwardly to a foot treadle traversing a recess in and bottom portion of said bucket.

2. The combination in accordance with claim 1, wherein said intermediate portion of said lever means is pivotally secured to a rib member formed in said closure, said first lever means further including substantially Lshaped members having vertical and horizontal leg portions, said horizontal leg of one member inclined upwardly toward the other member in an overlapping relationship, one of said horizontal legs having a longitudinal slot formed therein for receiving a pin about which both horizontal legs pivot.

3. The combination in accordance with claim 2, wherein a biasing spring is provided about a pin removably positioned in said rib, one end of said biasing spring being held by the horizontal leg of one of said lever means, the other end of said spring compressingly retained by said skirt reinforcing member whereby said spring acts directly on said lever to keep the rollers apart when the device is not in use.

4. The combination in accordance with claim 3, wherein the upper edge of said enclosure includes a transverse section secured to the upper edge of said bucket wall and provided with a narrow guide slot whereby the vertical portion of said lever means project through said slot for rotatable attachment to said rollers.

# **References Cited**

### UNITED STATES PATENTS

1/1963 Spier \_\_\_\_\_ 15-262 3,074,097

#### FOREIGN PATENTS

#### 987.512 4/1951 France.

L. G. MACHLIN, Assistant Examiner