Feb. 5, 1963 W. B. SORRELLS 3,076,202

MOP SINK

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Fig. 1.

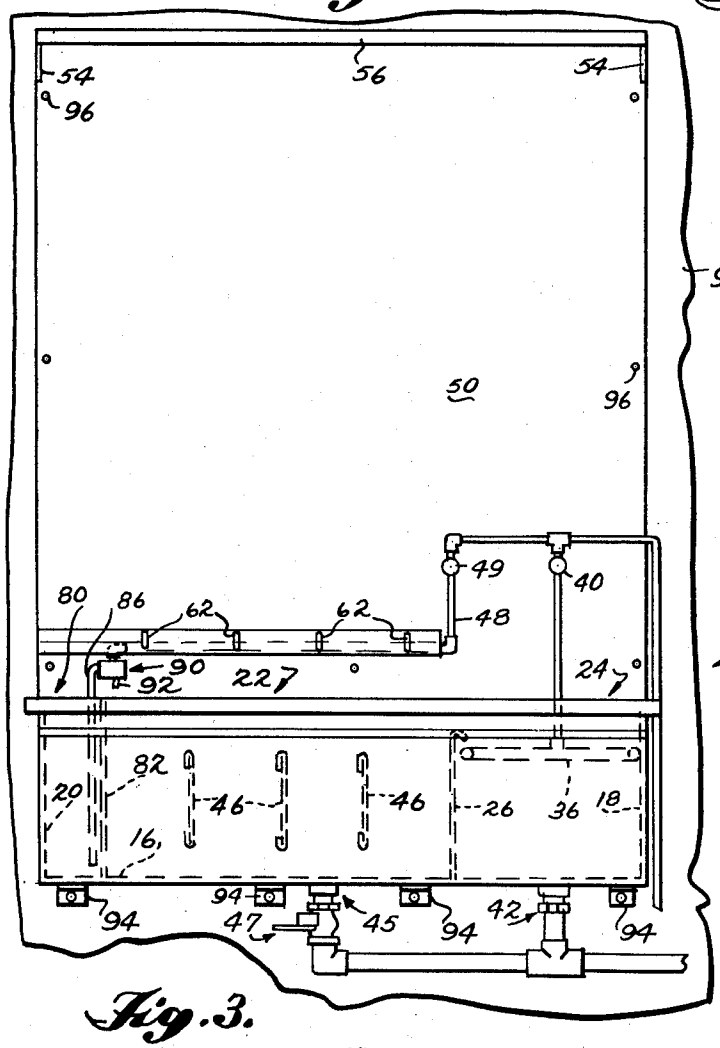

Fig. 2.

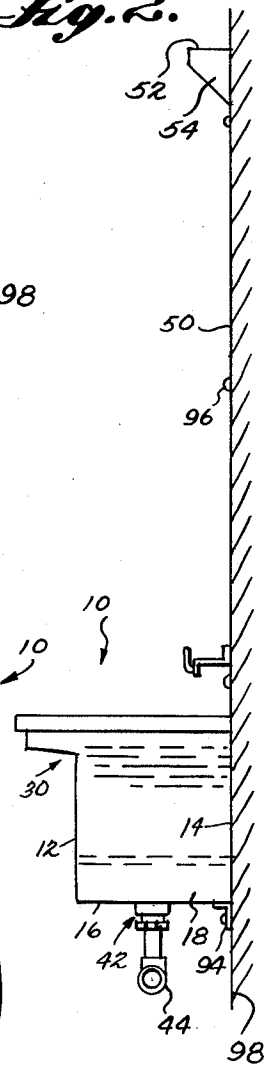

Fig. 3.

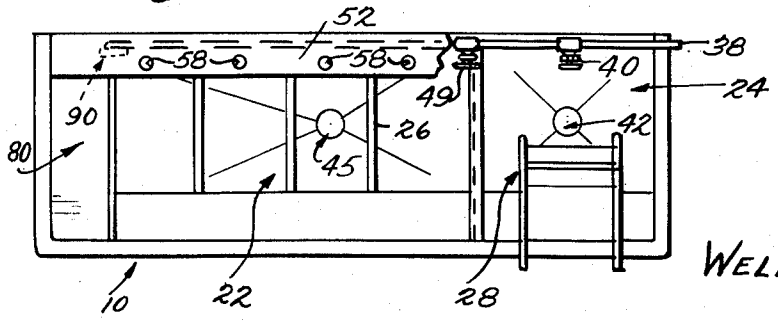

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Fig. 4.

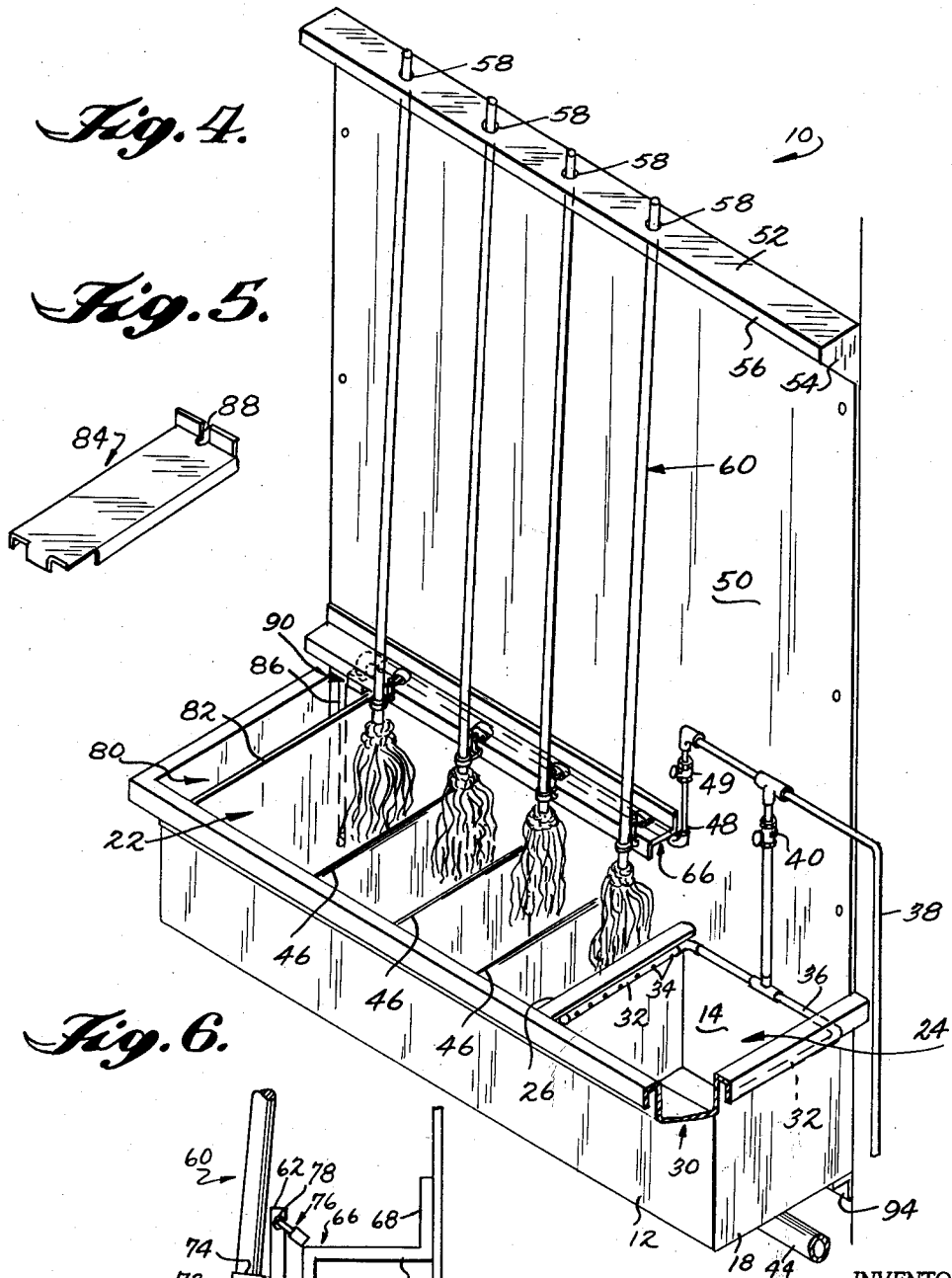
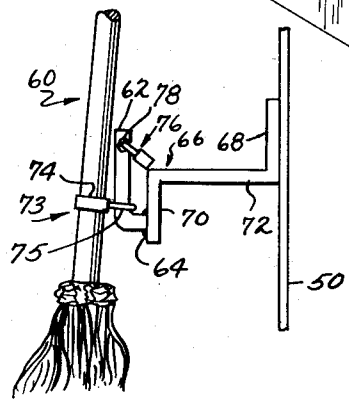


Fig. 5.

Fig. 6.



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MOP SINK

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6 Claims. (Cl. 4—189)

This invention relates to sink constructions and in particular to an improved sink for washing and storing mops.

In institutions, office buildings and restaurants it is a common practice to provide a number of mops for use in cleaning floors. Various types of portable cleaning equipment such as buckets and wheeled tanks provided with wringers are used in combination with the mops at the locations where cleaning is performed. When the cleaning job has been completed, the mops and containers are usually returned to a closet or other area set aside for the purpose and remain there until they are needed again. A conventional deep sink or tub is usually provided in this area for disposing of the dirty water and rinsing the mops. Ordinarily, the rinsed mops are then stored by standing them against a wall or in the containers or in the sink.

The above-described conventional procedure for rinsing and storing mops has several disadvantages, particularly when more than one mop is provided and when more than one person uses the facilities. Firstly, the person returning a soiled mop may fail to rinse it, and as a result the next person needing a mop will either unknowingly take a soiled mop or must rinse it before use. Secondly, the storing of a number of mops either in a conventional sink or standing in buckets or against the wall is awkward and unsightly. Obviously, mops stored in this manner are easily dislodged from their resting place and are apt to fall to the floor or, at best, to stand askew. Thirdly, and most importantly, rinsing and storage of mops in this manner does not assure that a clean, sweet mop will always be available. It is seldom possible merely by rinsing to clean a soiled mop to such a degree that it will not turn sour with mildew and other bacteria when stored damp and, obviously it is awkward and time consuming to plug the sink drain and thoroughly wash a mop after each use. Obviously, also, if the mops are stored in the sink each soiled mop will contaminate the others as well as making the rinsing or washing operation difficult.

Accordingly, it is the primary object of the present invention to provide a sink which is constructed so as to always present one or more neatly stored clean mops yet have an uncluttered mop-rinsing and mop-wringing compartment.

It is a still further object to provide a sink of the above type with a third compartment for containing detergent which may be added as desired to the storage compartment.

These and other objects and advantages will be apparent from the following detailed description taken in conjunction with the drawings in which:

FIGURE 1 is a front elevational view of a mop sink constructed in accordance with the principles of the present invention;

FIGURE 2 is a side elevational view of the mop sink of FIGURE 1;

FIGURE 3 is a top plan view of the mop sink;

FIGURE 4 is a perspective view of the mop sink;

FIGURE 5 is a perspective view of a cover for the detergent chamber; and

FIGURE 6 is a fragmentary view of the means for locking the mops in the storage compartment.

Referring to FIGURES 1–5 there is shown therein a mop sink **10** which embodies the principles of the present invention. The particular sink illustrated is of elongated, generally rectangular construction adapted to hold four

mops ready for use, but it will be understood that the size and shape of the sink may be varied as desired.

In its preferred form the sink **10** is constructed integrally of stainless steel sheet suitably formed and welded into an open-topped tank having a front wall **12**, a back wall **14**, a bottom wall **16** and a pair of end walls **18** and **20**. According to one aspect of the invention the tank is divided into a storage compartment **22** and an adjacent rinsing and wringing compartment **24**, as by means of a vertical partition **26** which is sealed as by welding to the bottom, front and rear walls. If desired, the tank may be constructed of other materials, such as cast iron or galvanized sheet metal and it need not necessarily be constructed as an integral unit. However, from the standpoint of ease and cost of installation and maintenance the integral stainless steel construction is preferred.

The mop rinsing and wringing compartment **24** is constructed so as to receive a conventional wringer which is illustrated schematically at **28** in FIGURE 3. As shown, the upper part of the front wall **12** of the sink **10** is provided with a forwardly extending tray-like projection **30** to which the wringer **28** may be attached in a conventional manner. While the tray-like projection **30** is not required in the region of the storage compartment, the construction of the sink is simplified if the front wall **12** is provided with the same contour throughout its length. If this is done, the front wall **12**, the bottom wall **16** and the back wall **14** may be constructed of a single sheet of metal as seen in FIGURE 4.

The rinsing compartment **24** is also provided with means for spraying water onto a mop placed therein. As shown, the spray assembly includes a length of pipe **32** secured to each of the opposed sides of the end wall **18** and the partition **26** and provided with inwardly facing apertures **34**. A pipe T **36** connects with the ends of the spray pipes **32** and is connected to a water supply pipe **38** through conventional valve **40**. A drain **42** in the bottom of the rinsing compartment **24** connects in a conventional manner with a drain pipe **44**.

The storage compartment **22** is preferably constructed with a plurality of vertical spaced partitions **46** which are secured to the front and back walls **12** and **14** above the bottom wall **16**. The partitions define separate interconnecting chambers for the stored mops and in addition provide rigidity for the sink which, if constructed of light gauge sheet, will tend to be deformed by the weight of the water. The storage compartment **22** is also provided with a conventional drain **45** which connects with the drain pipe **44**. Means, such as a lever handle waste valve **47** is provided in the drain **45** for opening and closing the same. A water pipe **48** connecting with the water supply pipe **38** and containing a conventional valve **49** is disposed above the compartment **22** for discharging water thereinto preferably at the end remote from the rinsing compartment **24**. The pipe **48** is shown as being secured to the extended portion **50** of the back wall **14** but it is apparent that its location may be varied if desired.

In the preferred construction of the mop sink **10** the partition **26** which divides the storage compartment **22** from the rinsing compartment **24** extends to a point below the upper edges of the front and end walls **12**, **18** and **20**. This construction permits liquid in the storage compartment **22** to overflow into the rinsing compartment **24** rather than onto the floor in the event that the storage compartment is over filled. The construction also permits the user to establish a flow of water through the storage compartment **22** if desired.

According to another aspect of the invention the sink **10** is constructed to support mops not in use within the storage compartment **22** so as to remain in a clean, fresh condition and be readily accessible for use. Ac-

cordingly, means are provided, preferably integral with the remainder of the sink, for supporting a mop in such a position that the mop head hangs freely in the storage compartment **24** substantially completely above the bottom wall **16**. As shown this feature is accomplished by extending the back wall **14** upwardly beyond the front and end walls at least in the region of the storage compartment and securing the mop supports to this extended portion **50** of the back wall **14**. A preferred mop support construction includes as an upper support a horizontal plate **52** at the upper end of the extended back wall, which may be formed, if desired, by bending the top of the extended portion **50** forwardly. For increasing the rigidity of the plate **52**, a pair of end plates **54** and a downwardly extending flange **56** may be provided if desired. As seen in FIGURES 3 and 4 the uppermost plate **52** is provided with four longitudinally spaced holes **58** for loosely receiving the upper ends of the handles of four mops **60**.

A lower mop support is also provided which, as best seen in FIGURES 4 and 6, includes four vertical pins **62** which are mounted in any convenient manner a short distance above the open top of the storage compartment **22** and more or less in line with the holes **58** in the upper support plate **52**. As shown, the lower ends of the pins **62** are bent rearwardly and are secured, as by welds **64**, to an elongated, horizontal bracket **66** which in turn is secured to the upper portion **50** of the back wall **14**. Conveniently, the bracket **66** may be constructed from a strip of stainless steel sheet by bending one edge **68** upwardly and the opposite edge **70** downwardly, the center portion **72** serving as a spacer to properly locate the pins **62**.

In the illustrated embodiment the mops are supported on the pins **62** by means of a fitting **73** secured to the mop handle adjacent the head of the mop. Conveniently the fitting **73** may consist of a sleeve portion **74** attached to the mop handle in any suitable manner and a ring portion **75** which loosely fits over a pin **62** as best seen in FIGURE 6. In one type of conventional mop which is readily obtainable on the market, a fitting very similar to the fitting **73** forms part of the connection between the handle and the mop head, and thus the pins **62** will support this type of mop without requiring any modification of the mop handle. Where, as in large facilities, it is desirable to prevent unauthorized removal of mops **60** from their assigned locations they may be retained on the pins **62** by means of pad locks **76** (FIGURE 6) inserted through holes **78** drilled transversely through the upper ends of the pins.

According to another feature of the invention a soap or detergent compartment **80** is provided adjacent the storage compartment **22** as by installing a vertical portion **82** near the end of the tank remote from the rinsing compartment **24**. A suitable cover **84**, such as that illustrated in FIGURE 5, may be provided for the detergent compartment **80** to prevent foreign material from entering. In the preferred construction detergent in the compartment **80** is delivered to the storage compartment **22** through a vertical tube **86** which extends from the bottom of the compartment **80** through a slot **88** in the cover **84** to a conventional liquid proportioning device **90** associated with the discharge end of the water pipe **48**. The proportioner **90** has a discharge outlet **92** located above the storage compartment **22** so as to provide a suitable mixture of water and detergent thereto when the valve **49** is opened. As is known, conventional liquid proportioning devices operate by suction produced by the flow of the main liquid stream through a construction. The liquid to be mixed with the main stream is drawn in through a tube attached to the proportioner at the downstream or suction side of the construction. The proportioning function may be eliminated when desired merely by closing a valve in the tube.

In its preferred form the mop sink **10** is designed to be attached to and supported solely by a wall. As shown, the light-weight stainless steel construction is supported by four spaced angle clips **94** secured to the bottom wall **16** and to a wall **98** and by three bolts **96** passing through each lateral edge of the extended portion **50** of the back wall **14**. Obviously the sink may be supported by other means, although it is desirable from the standpoint of ease of maintenance and cost to avoid the use of a support extending to the floor.

The sink **10** is intended to be used in the following manner. A person returning a soiled mop to the sink first places it in the rinsing compartment **24**, the drain of which is normally open, and thoroughly rinses it by means of the spray pipes **32**. The mop is then wrung dry with the wringer **28** and is placed in its appointed position within the normally water-filled storage compartment **22** by passing the end of the mop handle upwardly through one of the holes **58** in the support plate **52** and then lowering the mop so as to hook the ring **75** over the pin **62** which is in line with the hole **58**. When it is desired to re-use the mop, it is removed from its pin **62**, rinsed again if necessary and wrung dry in the rinsing compartment **24**.

According to the invention the mops **60** are maintained in a clean condition by maintaining the storage compartment **22** full of water, preferably mixed with soap or detergent. This is easily accomplished by closing the drain valve **47**, opening the valve **49** and adjusting the proportioner **90** to give the desired detergent-water mixture. As noted before, overflow from the compartment **22** will pass over the top of the partition **26** into the rinsing compartment **24**. If desired, the proportioner **90** may be deactivated and a continuous stream of water passed through the storage compartment **22** and over the partition **26**. In either case the heads of the mops **60** hang freely in a cleansing medium and cannot possibly turn sour from bacteria growth. Additionally, even if a dirty mop is stored, the dirt does not set in the mop head.

Thus it will be appreciated that the present invention provides a compact, economical mop sink which is capable of neatly storing a plurality of mops, maintaining them in a clean condition and providing a mop rinsing and wringing compartment which is free of stored mops. While a preferred embodiment has been described in detail, it is apparent that many modifications may be made without departing from the principles of the invention and it is not intended that the described details be limiting except as they appear in the appended claims.

What is claimed is:

1. A sink construction for cleaning and storing mops comprising: a first open-topped compartment; spraying means associated with said first compartment for spraying water thereinto; drain means for draining liquid from said first compartment; a second open-topped compartment immediately adjacent said first compartment; means associated with said second compartment for delivering water thereto; closable drain means for draining liquid from said second compartment; means located above and associated with said second compartment for engaging and supporting the handle of a mop placed upright in said second compartment so as to support the mop in a position in which its head is substantially completely above the bottom of said second chamber.

2. A sink construction as in claim 1 wherein said mop holding means includes a generally horizontal plate having an aperture vertically therethrough adapted to receive the top of a mop handle and further includes means positioned below said plate for engaging the handle of the mop near its lower end.

3. A mop sink as in claim 1 wherein said water spraying means includes a conduit within said first compartment having a plurality of longitudinally spaced apertures therein.

4. A mop sink as in claim 1 further comprising: a third compartment adjacent said second compartment;

and means for withdrawing liquid from said third compartment and for delivering the withdrawn liquid to said second compartment.

5. A mop sink as in claim 1 in which said first and second compartments are separated by a partition which extends upwardly from the bottom of said sink construction to a point below the upper edges of the walls which form said first and second chambers whereby liquid in said second compartment may flow into said first compartment.

6. A sink construction for cleaning and storing mops comprising: an open-topped tank having front, back, end and bottom walls, a generally vertical partition sealed to said walls and dividing said tank into a first and a second compartment, at least a portion of said back wall extending upwardly in the region of said second compartment to above said front and end walls; spraying means

associated with said first compartment for spraying water thereinto; drain means for draining liquid from said first compartment; means associated with said second compartment for delivering water thereto; closable drain means for draining liquid from said second compartment; means associated with said portion of said back wall for engaging and supporting of a mop placed upright in said second compartment so as to support the mop in a position in which its head is substantially completely above said bottom wall.

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