

W. MONAHAN.
MOP WRINGER.

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960,371.

Patented June 7, 1910.

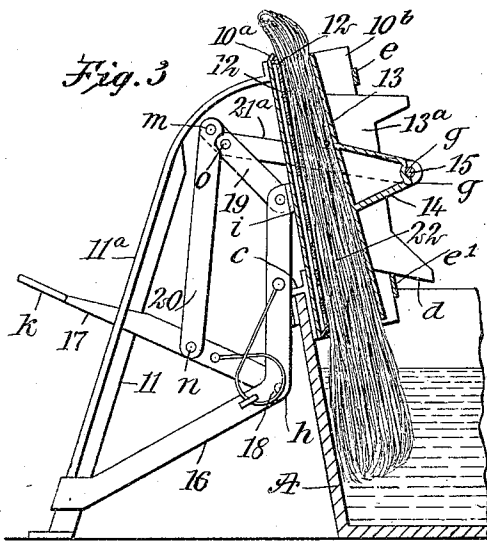
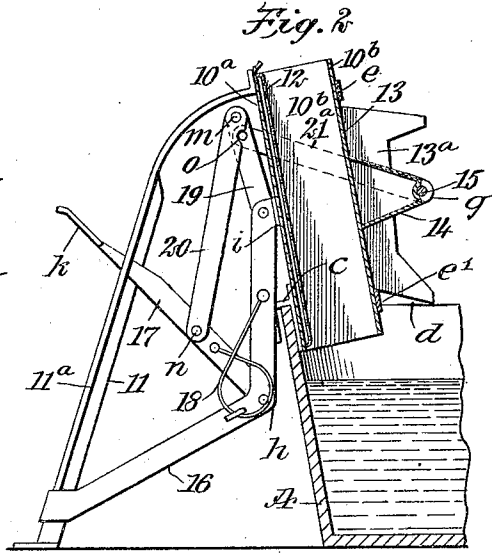
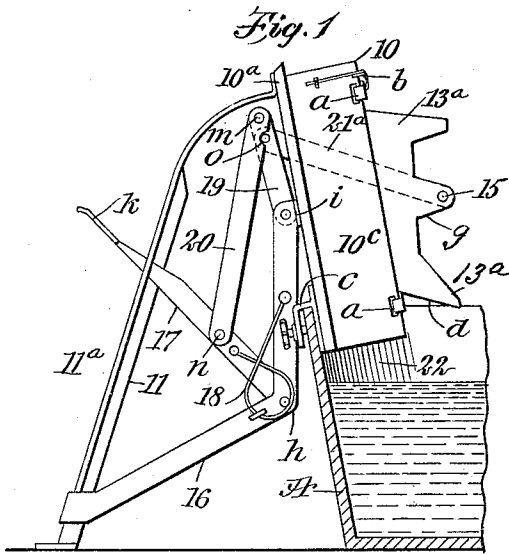
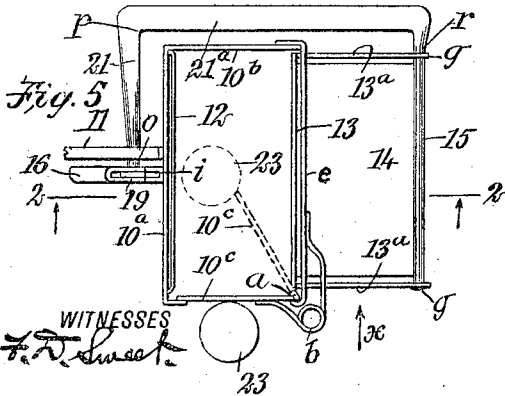
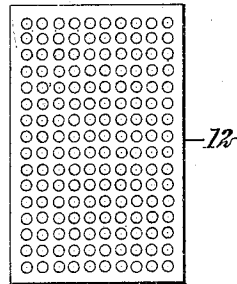
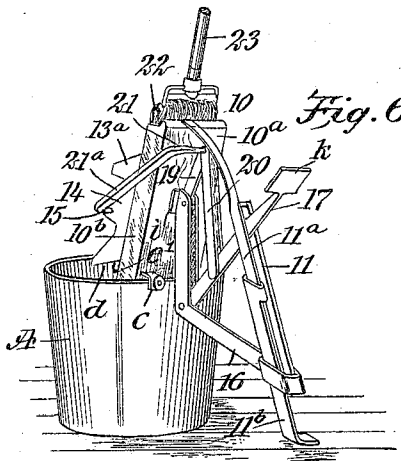


Fig. 4



WITNESSES
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MOP-WRINGER.

960,371.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM MONAHAN, a citizen of the United States, and a resident of Duluth, in the county of St. Louis and State of Minnesota, have invented a new and Improved Mop-Wringer, of which the following is a full, clear, and exact description.

The purpose of my invention is to provide novel details of construction for a mop wringer, that are very simple, inexpensive and durable, that adapt the device for easy connection with the edge portion of a pail or the like, afford reliable support for the wringer from the floor adjacent to the pail, so that lateral strain on the side of the pail is obviated, and further, enable the easy, perfect compression of the fibrous mop material, thus removing water from the mop into the pail.

The invention consists in the novel construction and combination of parts, as is hereinafter described and defined in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevational view of the improved wringer in position for use on a pail, shown in section, the device being seen in the direction of the arrow *x* in Fig. 5; Fig. 2 is a partly sectional side view of the device, and of a pail whereon the wringer is mounted, the section being taken substantially on the line 2—2 in Fig. 5; Fig. 3 is a partly sectional side view of the wringer, a sectional side view in part of a pail whereon the wringer is mounted, and the fibrous body of a mop held in the wringer and partly compressed for removal of water therefrom; Fig. 4 is a detached side view of a foraminated diaphragm plate that is a detail of the improvement; Fig. 5 is a plan view of the wringer, parts thereof being removed; and Fig. 6 is a perspective view of the improved wringer mounted upon a pail, and of a mop head engaged therewith.

In the drawing, the mop wringer 10 comprises a back wall 10^a, side walls 10^b and 10^c, one of which 10^b is connected with the back wall. The side wall 10^c is provided with slots near one edge as shown in Fig. 1, and the slots are engaged by rings *a* in the ends of cross bars *e*, *e'*, which extend across from the side wall 10^b, in substantial parallelism

with the back wall 10^a, and spaced apart therefrom. The side wall 10^c is free to swing on the rings *a* as indicated by dotted lines in Fig. 5. The cross bars *e*, *e'* are rigidly secured to the side wall 10^b, forming a firm support upon which the side wall 10^c may swing. A coil spring *b* is provided for retaining the side wall 10^c in the position shown in full lines in Fig. 5, and on the back wall 10^a near the lower end thereof two keeper hooks *c* are arranged, the hooks being of equal size, and being adapted to engage with the upper edge of a pail A, to support the box 10 thereon.

A prop leg is secured by one end on the rear side and upper end of the back plate 10^a and thence curves rearward and downward, seating upon the floor whereon the pail is placed, said prop leg being positioned near the transverse center of the back plate. The prop leg is longitudinally slotted, providing two members 11, 11^a, therefor, and upon one member 11^a an extensible lower portion 11^b is loosely mounted, which enables the adjustment of the leg to compensate for the different heights that may be had by the pail A employed as a receptacle for water.

In the holder, hereinbefore described, a foraminated diaphragm plate 12 is seated, having contact at the upper and lower ends thereof with the back plate 10^a, said ends each having a flange bent thereon that seats upon the back plate, and together space the flat body of the pressure plate therefrom, thus permitting the water that passes through the plate 12 to freely escape at the lower end thereof.

A pressure plate 13, that is flat and not perforated, is loosely held in the holder box 10, said plate being adapted for movement from and toward the diaphragm plate 12 by means which will be described. On the pressure plate 13, an equal distance from its transverse center, two wings 13^a are formed or secured, which are parallel with each other and fit loosely between the side walls 10^b, 10^c of the holder box 10. The forward upright edges of the wings 13^a are notched similarly, and the lower edges of said wings are sloped forward and downward, as shown in Figs. 1 and 2 at *d*. On the front edges of the sides 10^b, 10^c of the holder box 10, two cross bars *e*, *e'*, are secured as hereinbefore described, which respectively have a loose engagement with the upper and

lower edges of the wings 13^a, guiding and supporting these members of the pressure plate 13. A bracket box 14, preferably formed of plate metal, projects from the front side of the pressure plate 13, said box loosely receiving the body of a round-bodied cross bar 15 that is engaged at its ends with ears *g* that are formed on the wings 13^a near their vertical centers. It will be seen that the cross bar serves as a journal support for the pressure plate 13, which may rock on the ears *g* sliding at the lower edges *d* of the wings 13^a upon the lower cross bar *e*'.

A bracket arm 16, bent at *h* into obtuse angular form, is secured at its upper end on ears *i* that project rearward from the back plate 10^a of the holder box 10 near the center of said back plate. The lower member of the bracket arm 16 is secured upon the prop leg that braces at its upper end the upper end of the holder box 10, this arm 16 serving to give stability to the supports of the holder box and pressure plate it carries. At the angle *h* of the bracket arm 16, one end of a treadle lever 17 is pivoted on said arm, and thence projects rearwardly between the members 11, 11^a of the prop leg before mentioned, said lever having a pedal *k* on its free end.

A bow spring 18, formed of resilient wire, is connected at its ends respectively with the upper portion of the bracket arm 16, and the treadle lever 17, the tension of said spring serving to return the treadle lever to its normal position after it has been depressed and pressure is removed from the free end thereof. On the ears *i*, one end of a link plate 19 is pivoted, said link inclining rearward and upward, the rear end of the link being pivoted upon the upper end of a connecting bar 20, which is pivoted at its lower end upon the treadle lever 17 between the prop leg and the bracket arm 16, as shown at *n*. Near the pivot connection *m* between the link plate 19 and the upper end of the connecting bar 20, one end *o* of a bent lever is pivoted.

As shown in Fig. 5, the bent lever is formed with two members 21, 21^a, joined together at a right angle *p*, the member 21 projecting laterally from the link plate 19, having the end *o* thereof firmly secured upon said link plate. From the angular junction *p*, the lever member 21 is extended forwardly parallel with the fixed wall 10^b of the holder box and adjacent thereto, the forward end of said lever member being connected to a projecting end of the cylindrical cross bar 15, as indicated at *r* in Fig. 5.

In service a suitable quantity of clean water is placed in the pail A and the improved mop wringer is connected with the edge of the pail, as shown and described. The normal adjustment of the treadle lever 17 raises the connecting bar 20 and elevates the link

plate 19, as shown in Figs. 1 and 2, which will push the bent lever, so as to project its member 21^a forwardly. The forward adjustment of the lever member 21^a moves the pressure plate 13 forwardly and opens the holder box by this movement, the parts then being in the position shown in Fig. 2. The mop head 22, of fibrous material that is secured on a handle 23, may now be washed in the pail, and to extract the wash water therefrom the mop head is pressed laterally against the hinged side 10^c of the holder box, which will yield and permit the mop head to pass into said box, as is indicated by dotted lines that show the upper end of the handle 23 in Fig. 5. Foot pressure is now applied upon the pedal *k* which will depress the treadle lever, pull on the connecting bar 20 and depress the upper end of the link plate 19, which will pull the member 21^a of the bent lever that is connected to the cross bar 15, so as to draw said pressure plate into engagement with the mop head.

The combination of levers employed gives forcible pressure on the mop head, they having toggle jointed engagement, so that the water with which the mop head is saturated will be pressed out of it and pass through the foraminated plate 12, from which the water will pass down into the pail A. When pressure is applied as explained, the plate 13 will rest at its lower edge on the cross bar *e*', and as this plate is drawn toward the mop head, the pressure will be somewhat greater at the upper portion of said mop head, but as the inclined lower edges *d* of the wings 13^a slide on the cross bar *e*', pressure is increased toward the lower end of the holder box.

It will be noted that the rockable engagement of the bracket box 14 with the rounded cross bar 15, permits the pressure plate 13 to adjust itself automatically, and compensate for any irregularities in thickness of the mop head.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. The combination with a holder box having a fixed side wall, and a spring-pressed opposite side wall that will yield inwardly, of a pressure plate having lateral wings and slidable with the pressure plate in the holder box, a bracket box on the pressure plate, and means engaging the bracket box, embodying a treadle lever which by depression draws the pressure plate into the holder box.

2. The combination with a holder box, and a foraminated diaphragm plate seated in the holder box and spaced from the back wall thereof, of a pressure plate having lateral wings thereon, a bracket box projected forward from the pressure plate between the wings, a cross bar secured on the wings and

engaging the bracket box, a bent lever connected to an end of said cross bar, a prop leg extended from the upper portion of the holder box down to a stable foundation, a
5 bracket arm bent between its ends that are respectively secured on the holder box and on the lower portion of the prop leg, a treadle lever pivoted by one end on the bracket arm and thence extending into slid-
10 able engagement with the prop leg, and toggle links connected with the treadle lever and one end of the bent lever.

3. A holder box comprising an open ended casing provided with means whereby it may
15 be supported upon a pail, said holder box

having one of its sides hinged and mounted to swing into the box to permit the passage of the mop, a spring normally retaining the said hinged side in normal position, the front wall of the holder being movable to- 20 ward and from the back wall for the purpose specified, and means for moving the said front wall.

In testimony whereof I have signed my name to this specification in the presence of 25 two subscribing witnesses.

WILLIAM MONAHAN.

Witnesses:

RAY PITTSLEY,

J. C. MONAHAN.