May 1, 1962 S. HERMAN ETAL 3,031,705

SELF WRINGING SPONGE MOP HAVING SLIDE-ON HOLDER

Filed Aug. 8, 1960 2 Sheets-Sheet 1

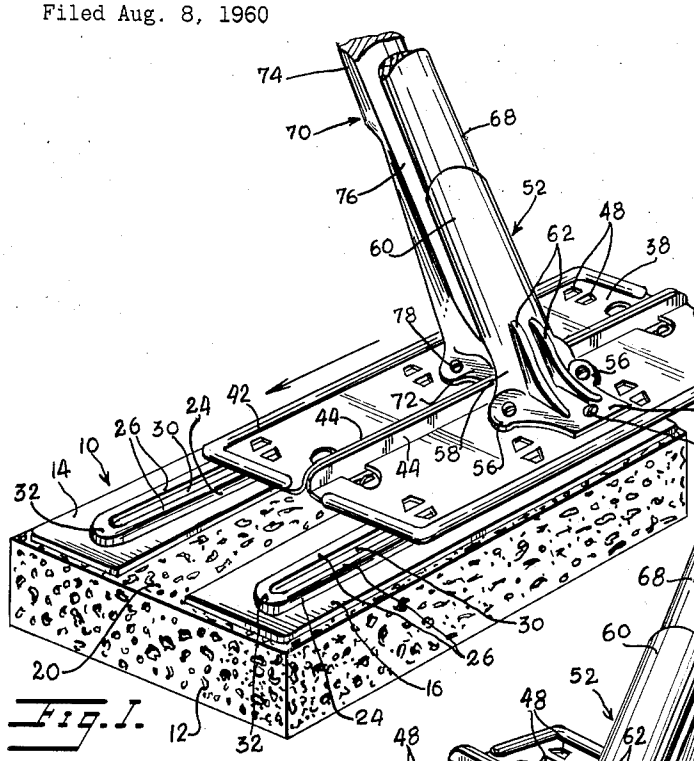


Fig. 1.

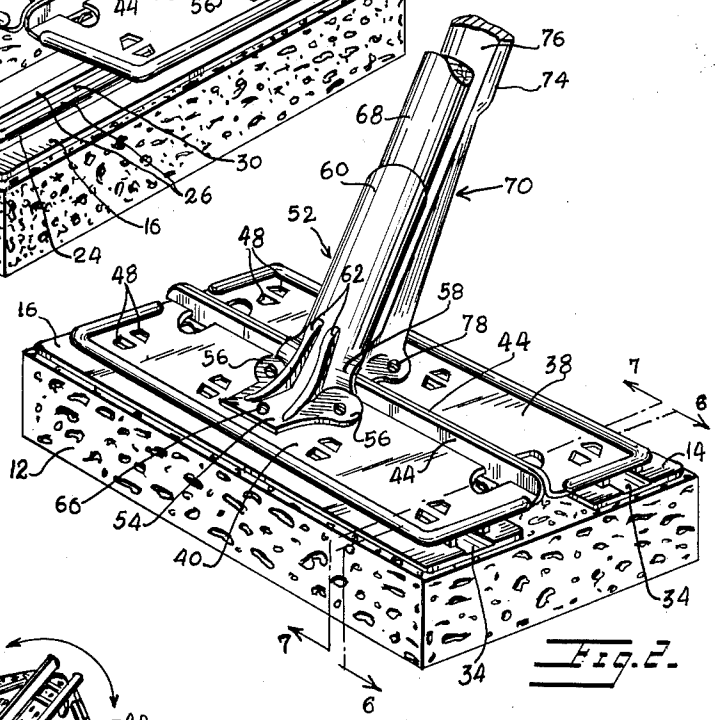


Fig. 2.

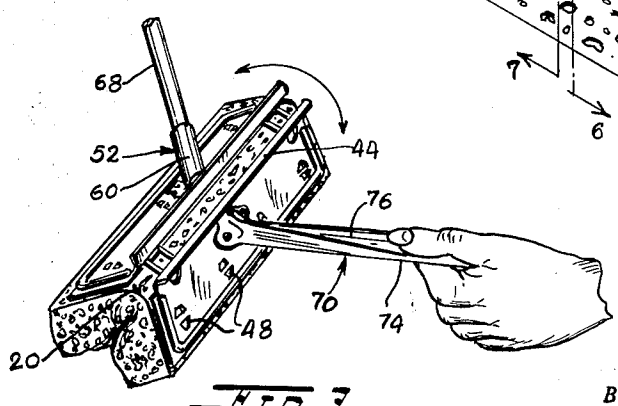


Fig. 3.

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SELF WRINGING SPONGE MOP HAVING SLIDE-ON HOLDER

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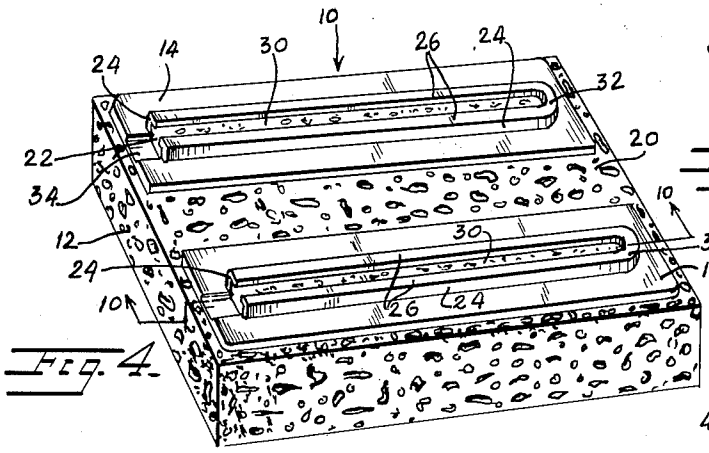


Fig. 4.

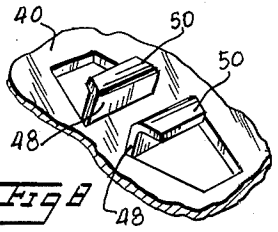


Fig. 8

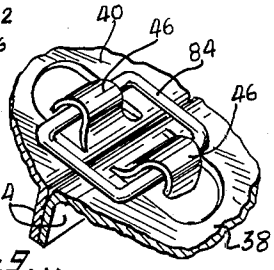


Fig. 9.

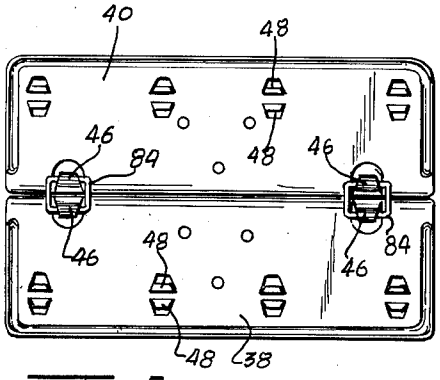


Fig. 5.

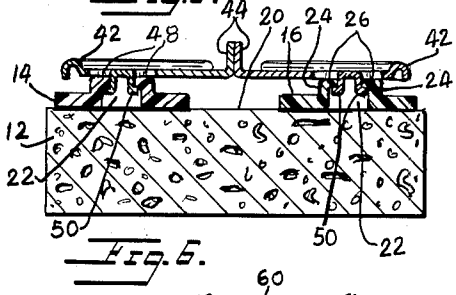


Fig. 6.

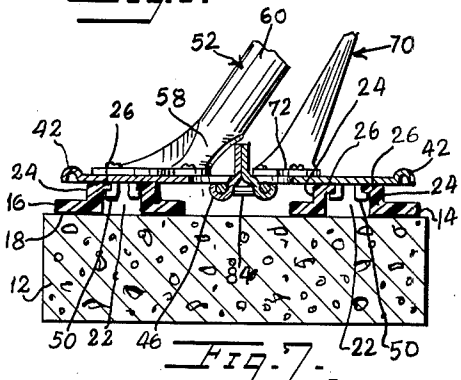


Fig. 7.

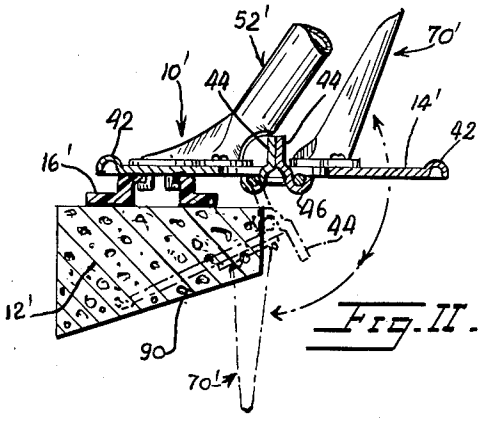


Fig. 11.

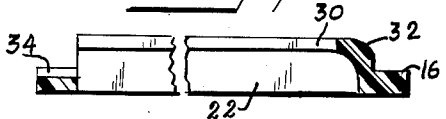


Fig. 10.

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SELF WRINGING SPONGE MOP HAVING SLIDE-ON HOLDER

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Filed Aug. 8, 1960, Ser. No. 48,221
3 Claims. (Cl. 15—119)

This invention relates to household cleansing utensils and more particularly to new and useful improvements in a wet mop.

A principal object of the present invention is to provide a wet mop with a cellulose sponge body that is readily squeezed to expel the water therefrom, without the necessity of getting the hands of the user wet.

Another object of the invention is to provide a wet mop with a cellulose sponge body having a handle to manipulate the mop and a lever device to squeeze the water from the sponge body.

A further object is to provide a wet mop with a cellulose sponge body having a handle for manipulating the mop and a lever device for expelling the water therefrom, said handle and lever device adapted readily to be attached to and detached from the sponge body as a unit.

It is also proposed to provide a wet mop with a cellulose sponge body on which a lever operated plate is hingedly mounted for squeezing the water from the sponge body.

A specific object is to provide a wet mop with a cellulose sponge body on which a plate is fixedly mounted for mounting a handle to manipulate the mop and on which a plate is hingedly mounted for mounting a lever device to actuate said latter plate for expelling water from the sponge body, the sponge body overlapping the plates to protect the baseboard and furniture.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

FIG. 1 is a top perspective view looking from one end of a wet mop embodying the preferred form of the invention, the handle and squeezing lever unit being shown only partly assembled, parts being shown broken away.

FIG. 2 is a similar view from the other end showing the handle and squeezing lever unit in assembled position.

FIG. 3 is a reduced top perspective view of the wet mop shown partly squeezed.

FIG. 4 is a top perspective view of the cellulose sponge body of the mop.

FIG. 5 is a bottom plan view of the plates constituting the handle and squeezing lever supports.

FIG. 6 is a cross-sectional view taken on the line 6—6 of FIG. 2.

FIG. 7 is a cross-sectional view taken on the line 7—7 of FIG. 2.

FIG. 8 is a detail perspective view showing a pair of guide lugs.

FIG. 9 is a detail perspective view showing a connection between the handle and squeezing lever mounting plates.

FIG. 10 is a sectional view taken on the line 10—10 of FIG. 4, parts being broken away.

FIG. 11 is a sectional view similar to FIG. 7 but showing a modification, and showing the parts in moved condition in dot-dash lines.

Referring now to the drawings in detail, a wet mop embodying one form of the invention is shown in FIG. 1 and designated generally by the reference numeral 10. The mop includes a body 12 rectangular in configuration and in cross section. The body is composed of cellulose sponge material.

A pair of elongated plastic plates 14 and 16 are placed on the top surface of the sponge body as viewed in FIG. 1 and secured thereto by adhesive 18 or the like. The plates are placed slightly remote from the long side edges of the sponge body and are spaced from each other leaving an uncovered area 20 of the top surface of the sponge body. The plates terminate short of the ends of the sponge body leaving sponge material therebeyond. The plates serve as backing plates providing rigidity to the sponge body. Each plate is rectangular in shape and is formed with a central slot 22 terminating short of the ends of the plate. Along the long edges of the slot, the plate is formed with upstanding flanges 24 which terminate at the outer free end in inwardly directed flanges 26, the flanges 24 and 26 constituting hook structures. The flanges 26 are in opposed relation leaving a space 30 therebetween which space is closed by a flange 32 at one end and is open at the opposite end. The top surface of the material of each of the plates 14 and 16 is cut away as indicated at 34, at the end adjacent the open end of the space 30.

In accordance with the invention, another pair of plates 38 and 40 is slidably and removably mounted as a unit on the plates 14 and 16, respectively. These plates are shown in detail in FIG. 5 and each consists of a rectangular-shaped metal body molded with a bead 42 along the ends and one long edge thereof for reinforcing the body and for enhancing the appearance thereof. Along the other long edge, the plate is formed with an upstanding flange 44 as viewed in FIG. 1 and adjacent each end of this long edge the material of the plate is outstruck forming a curved bearing lug 46. Adjacent the other long edge of the plate, the material of the plate is also outstruck to provide closely spaced pairs of flanged lugs constituting hooks 48. The pairs of lugs are disposed in alignment along the plate, with the flanges 50 of each pair directed away from each other.

A handle assembly 52 is fixed on the top surface of plate 40 at its center. This assembly comprises a substantially rectangular metal plate 54 formed with curved perforated ears 56 at one end thereof and with an upstanding slightly curved flange 58 at said end terminating in an elongated tubular socket bearing 60 disposed at an angle to the vertical as viewed in FIG. 1. A pair of ribs 62 disposed across the juncture between the plate and flange 58 braces the socket bearing. A screw threaded hole is formed in the other end of the plate at its center which with the perforations in the ears 56 receive screws 66 for fastening the bearing socket to the plate. An elongated round wooden handle 68 is secured at one end in the socket bearing. Only a portion of the handle is shown but the handle is of uniform diameter throughout.

A lever device 70 is fastened to the plate 38 at its center adjacent its flanged long edge. This lever device consists of a mounting plate portion 72 and a thick handle

bar portion 74 extending at an oblique angle from one end of the plate portion. The handle bar portion 74 is dished out longitudinally and centrally as indicated at 76 with the dished out portion intersecting the outer free end thereof. Screws 78 in holes in the plate portion 72 fasten the lever device to the plate.

The plates 38 and 40 are adapted to be positioned side by side with their flanges 44 in abutting relation as seen in FIG. 1. When in this position, the outstruck curved bearing members 46 are positioned close to each other and in alignment with their free ends directed away from each other as seen in FIG. 5. An endless loop or ring 84 slipped under the free ends of the bearings 46, as shown in FIG. 9, fastens the plates 38 and 40 to each other, whereby the handle assembly and the lever device become a unitary structure as seen in FIG. 1.

In assembling the mop, the plates 38 and 40 with the handle assembly and lever device mounted thereon are placed side by side with their flanges 44 in abutting relation. The rings 84 are slipped over the bearings 46 and the plates thus fastened to each other to form a unitary structure. The unitary structure is positioned at the end of the sponge body 12, whereat the open ends of the spaces 30 are positioned, in order to align the pairs of flanged lugs 48 with said spaces whereupon the lugs are moved inwardly over the cut away portions 34 and underneath the flanges 26 whereby the lugs engage the inner surface of the flanges 26 and are guided inwardly through the spaces 30 by the flanges 24 and 26. The unitary structure is held against displacement by the friction of the lugs against the flanges 26. When the unitary structure is thus interlocked to the sponge body, the body may be readily dipped into a container containing soapy water or detergent and because of the oblique angle at which the handle is disposed, the saturated sponge body may readily be moved over the surface to be cleaned with a smooth movement by persons of varying heights.

In order to squeeze the water out of the sponge body, the lever handle 74 is grasped with one hand and the handle 68 with the other and the lever handle then swung away from the handle 68, clockwise in the direction of the bottom arrow in FIG. 3, whereby the material of the sponge body is bent along the area 20 between the plates 14 and 16 and the half of the body underneath plate 14 is pressed against the other half underneath plate 16 and continued swinging movement will squeeze both halves of the sponge body and expel the water out of the material thereof. The loose connection between the bearings 46 and rings 84 permits this swinging movement.

When the squeezing pressure is released, the sponge body may be restored to its original condition by swinging the lever handle 74 in the opposite direction as shown by the top arrow in FIG. 3.

Referring now to the modified form of wet mop 10' shown in FIG. 11, this form differs from the form of FIG. 1 in that the sponge body 12' is only approximately one-half as wide and is thicker at the rear than at the front thereby providing a slanting bottom surface 90. A single plate 16' is mounted on the top surface of the body and the handle assembly 52' is mounted on plate 16' similarly to the mounting of the handle assembly 52 so that the plate 14' and lever device 70' carried thereby overhang the sponge body, with the juncture between the plates 16' and 14' slightly beyond the rear or right-hand side of the sponge body as viewed in FIG. 11. The plate 14' is held in any set position, by frictional engagement between the bearings 46 and the supporting rings 84. By reason of this arrangement, the plate 14' and lever device may be swung clockwise as viewed in FIG. 11 in the direction of the bottom arrow to the position shown in dot-dash lines whereby the material of the sponge body 12' is pressed and squeezed, expelling the water therefrom, and the lever device may then be swung in the opposite direction, in the direction of the top arrow, to restore the sponge body to original condition.

While we have illustrated and described the preferred embodiments of our invention, it is to be understood that we do not limit ourselves to the precise constructions herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claims.

Having thus described our invention, what we claim as new, and desire to secure by United States Letters Patent is:

1. A wet mop having a rectangular cellulose sponge body with a pair of spaced rectangular backing plates along the long edges thereof, said plates having central elongated slots with flanges therealong, a pair of rectangular mounting plates interlocked to each other adjacent long edges and constituting a unitary structure, a tubular socket bearing fastened to one of said interlocked plates and opening outwardly, an elongated handle mounted in the open end of said socket bearing for manipulating the mop, a lever device on the other mounting plate for bending the material of the sponge body along the space between the backing plates and for squeezing the material of the sponge body to expel water from the body, said device including a plate fixed to said other mounting plate and an elongated bar integral with one end of the fixed plate, and means on said interlocked mounting plates for slidably and removably interlocking same with the flanges of the central slots in the backing plates, said means including spaced pairs of outstruck flanged lugs on the mounting plates in alignment movable in the slots between the flanges and having portions interlocking with said flanges.

2. A wet mop having a rectangular cellulose sponge body with a pair of spaced rectangular backing plates along the long edges thereof, said plates having central elongated slots with flanges therealong, a pair of rectangular mounting plates on top of said backing plates, upstanding flanges along one long edge of said mounting plates, a tubular socket bearing fastened to one of said mounting plates and opening outwardly, an elongated handle mounted in the open end of said socket bearing for manipulating the mop, a lever device on the other mounting plate for bending the material of the sponge body along the space between the backing plates and for squeezing the material of the sponge body to expel water from the body, said device including a plate fixed to said other mounting plate and an elongated bar integral with one end of the fixed plate, and means on said mounting plates for slidably and removably interlocking same with the flanges of the central slots in the backing plates, said means including spaced pairs of outstruck flanged lugs on the mounting plates in alignment and movable in the slots between the flanges and having portions interlocking with said flanges, and means for loosely interlocking the flanged edges of said mounting plates so as to provide a unitary structure.

3. A wet mop having a rectangular cellulose sponge body with a pair of spaced rectangular backing plates along the long edges thereof, said plates having central elongated slots with flanges therealong, a pair of rectangular mounting plates on top of said backing plates, upstanding flanges along one long edge of said mounting plates, a tubular socket bearing fastened to one of said mounting plates and opening outwardly, an elongated handle mounted in the open end of said socket bearing for manipulating the mop, a lever device on the other mounting plate for bending the material of the sponge body along the space between the backing plates and for squeezing the material of the sponge body to expel water from the body, said device including a plate fixed to said other mounting plate and an elongated bar integral with one end of the fixed plate, and means on said mounting plates for slidably and removably interlocking same with the flanges of the central slots in the backing plates, said means including spaced pairs of outstruck

flanged lugs on the mounting plates in alignment and movable in the slots between the flanges and having portions interlocking with said flanges, and means for loosely interlocking the flanged edges of said mounting plates so as to provide a unitary structure, said latter means including a pair of opposed curved lugs at each end of the mounting plates adjacent the upstanding flanges thereon and a ring looped loosely around each pair of curved lugs.

References Cited in the file of this patent

UNITED STATES PATENTS

2,044,075	Jelenfy	June 16, 1936
2,666,939	Greenleaf et al.	Jan. 26, 1954
2,670,487	O'Connor	Mar. 2, 1954
2,677,837	Channel	May 11, 1954

FOREIGN PATENTS

708,239	Great Britain	Apr. 28, 1954