July 7, 1959 J. H. WEAVER ET AL 2,893,035

MOP FRAMES

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Fig. 1.

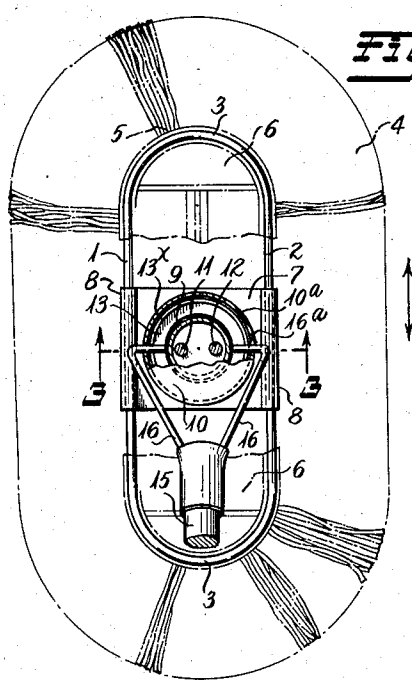


Fig. 2.

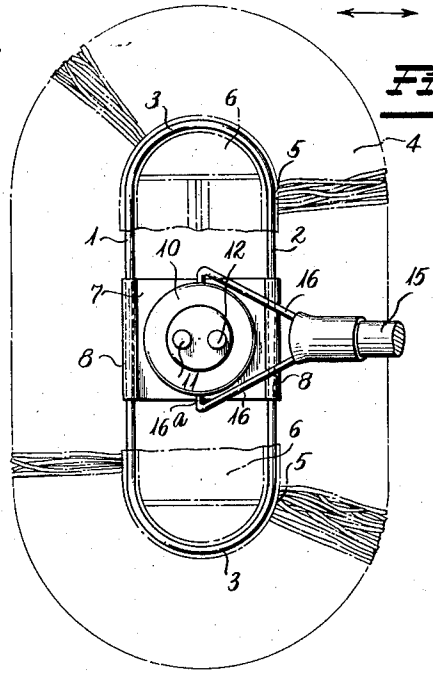


Fig. 3.

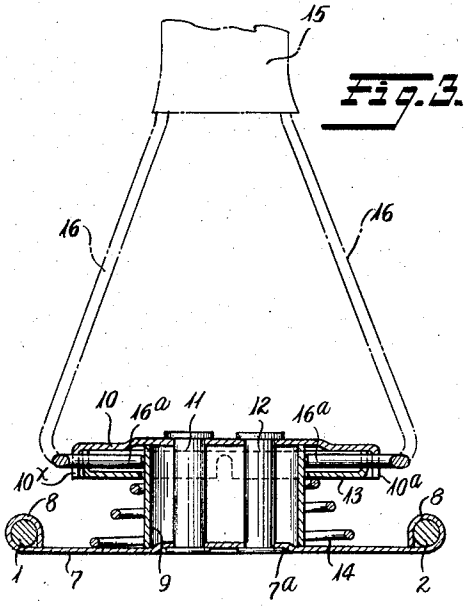
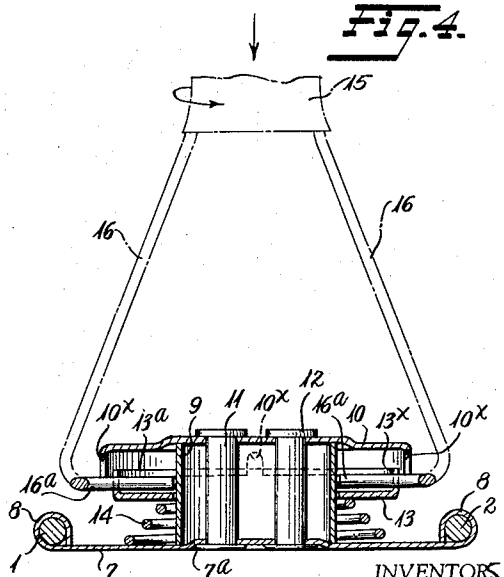


Fig. 4.



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MOP FRAMES

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11 Claims. (Cl. 15—147)

Our invention is a novel improvement in mop frames for household or industrial use, and the principal object thereof is to provide a mop in which the mop head of elongated shape may be readily adjusted throughout an angle of 360 degrees with respect to the axis of the handle, so as to enable the head to be used for mopping wide areas, narrow crowded areas, under low furniture or radiators, in a simple and efficient manner, the mop frame being designed to turn a full 360 degrees for wide or narrow use, and the head positively, or frictionally, locking in any adjusted angularity.

Another object of our invention is to provide a mop frame of the above type having no parts which are subject to excessive wear, thus giving long service to the mop under hard use.

Other minor objects of the invention will be hereinafter set forth.

We will explain the invention with reference to the accompanying drawing, which illustrates one practical embodiment thereof, to enable others familiar with the art to adopt and use the same; and will summarize in the claims, the novel features of construction, and novel combinations of parts, for which protection is desired.

In said drawing:

Fig. 1 is a plan view, partly in section, of our mop frame with dusting head attached thereto, showing the frame disposed with respect to the axis of the handle for mopping areas of small width.

Fig. 2 is a view similar to Fig. 1, but showing the mop frame adjusted through an angle of 180 degrees with respect to the axis of the handle.

Fig. 3 is an enlarged vertical section on the line 3—3, Fig. 1.

Fig. 4 is a view similar to Fig. 3, but showing the handle pressed downwardly towards the mop frame preparatory to rotating the handle into a different angularity with respect to the longitudinal axis of the mop frame.

As shown, our mop frame preferably comprises a stiff open frame of wire or the like and of elongated shape, the same consisting of parallel sides **1** and **2** connected at each end by a semi-circular portion **3**, upon which elongated frame **1—3** the dusting head **4** is adapted to be mounted. The dusting head is preferably made of yarn such as six-ply yarn, for dusting efficiency, the yarn being double-stitched as at **5** to heavy pre-shrunk denim cloth **6** of substantially the same shape as the mop frame **1—3**, as in Fig. 2, the mop head being adapted to be removed from the frame for washing, or secured by tie strings or the like in position upon the mop frame **1—3**, the particular manner of removably securing the dusting head **4** to the mop frame **1—3** forming no part of our present invention.

At approximately the center of the mop frame **1—3** is a metallic plate **7** of relatively narrow width having its ends rolled as at **8** over the wire members **1** and **2**, as shown in the drawing, the plate being fixed against axial movement on the frame **1—3** in any desired manner.

At the center of plate **7** is a vertically disposed cylindrical member **9** which may be secured by spotwelding or the like to the plate **7** to prevent lateral movement of the cylinder on the plate; or such movement may be prevented in any other desired manner, such as joggling the center of the plate **7**, as at **7a** (Figs. 3 and 4), to suit the inner diameter of the cylindrical member **9**.

Upon the top of the cylinder **9** is an inverted cup-shaped member **10** having a downwardly extending peripheral flange **10a** of substantially greater diameter than that of cylinder **9**; and member **10** is secured in position upon cylinder **9** by rivets **11—12** (Figs. 3 and 4) passing through perforations in member **10** and plate **7** and passing through the cylinder **9**, said rivets having heads at their extremities engaging the top of member **10** and the bottom of plate **7** to securely lock the parts in position.

As shown, the depending flange **10a** of member **10** is provided with pairs of diametrically disposed notches **10x**, the pairs being preferably equally spaced apart, for the purpose hereinafter described.

Vertically slidably mounted on the cylinder **9** between member **10** and plate **7** is a second cup-shaped member **13** having an upstanding peripheral flange **13a** provided with a pair of diametrically opposed notches **13x** for the purpose hereinafter described, the flange **13a** of cup-shaped member **13** being of smaller diameter than flange **10a** of member **10** so as to fit within the same under normal conditions.

The cup-shaped member **13** is normally urged upwardly within the inverted cup-shaped member **10** by means of a coiled spring **14** or the like disposed around cylinder **9** between plate **7** and the bottom of cup-shaped member **13**.

A mop handle is provided, same consisting of a handle member **15** from the lower end of which extends a pair of divergent arms **16** of stiff wire or the like, the lower ends of which arms **16** are inturned as at **16a**, the same being diametrically opposed and extending substantially to the cylinder **9**, the inturned ends **16a** passing under the flange **10a** of member **10** and being seated in the opposed notches **13x** of cup-shaped member **13**, thereby hingedly connecting the handle **15** to the mop frame **1—3**, the spring **14** normally urging the inturned ends **16a** upwardly into contact with the lower edge of the downwardly turned flange **10a** of member **10**. One pair of notches **10x** in member **10** are so disposed that when the inturned ends **16a** are engaged therein the axis of handle **15** will be positively locked at right angles to the longer axis of mop frame **1—3**, whereas another pair of notches **10x** are so disposed that when the inturned ends **16a** are engaged therein the axis of handle **15** will be disposed in alignment with the longer axis of the mop frame **1—3**, as in Fig. 1. The thrust of spring **14** would normally be sufficient to frictionally bind the inturned ends **16a** of the handle against the lower edge of flange **10a** of the member **10** in intermediate adjusted positions.

In order to adjust the angularity of the frame **1—3** with respect to the handle, with the mop frame contacting the floor or other surface, the operator would merely

raise the handle **15** into vertical position and exert a slight downward pressure on the handle sufficiently to compress the spring **14** so as to free the inturned ends **16***a* from the notches **10***x* or flange **10***a* of member **10**. The operator would then simultaneously rotate the handle throughout any desired amount, the same being freely rotatable through an angle of 360 degrees, and thereby bring the axis of the handle into any desired angularity with respect to the longer axis of the mop frame **1—3**. The operator would then release the downward pressure on the handle, whereupon the spring **14** will urge the inturned ends **16***a* upwardly against the lower edge of flange **10***a* of member **10**, either engaging a pair of notches **10***x* or merely frictionally engaging the said lower edge of flange **10***a*, whereupon the mop head **1—3** would normally retain the adjusted angularity with respect to the axis of handle **15**, the same being either positively locked in the adjusted position by the notches **10***x*, or frictionally locked in position by engagement of the ends **16***a* against the lower edge of flange **10***a*. Thus our mop may be used for large areas, small crowded areas under low furniture or radiators, and will efficiently dust or clean the desired surfaces.

The dusting head **4—6** may be readily removed or detached from the frame and may be washed over-and-over again.

We do not limit our invention to the exact form shown in the drawing, for obviously changes may be made therein within the scope of the claims.

We claim:

1. A mop frame, comprising a head, and a handle pivotally connected thereto and rotatably adjustable throughout an angle of 360 degrees with respect thereto; said head comprising an elongated frame; a member fixedly mounted adjacent the center of said frame; an inverted cup-shaped member secured to the upper end of said member having a downwardly extending peripheral flange; a second cup-shaped member vertically movable on and rotatable about said first member below and of smaller diameter than the first cup-shaped member having an upstanding peripheral flange provided with a pair of diametrically opposed downwardly extending notches in its peripheral flange; a coiled spring around said first member interposed between said frame and said second cup-shaped member; and said mop handle having a pair of divergent arms at its lower end provided with diametrically opposed inturned lower ends terminating adjacent said first member, said inturned ends having portions pivotally seating in the pair of notches of the second cup-shaped member and having portions normally contacting the lower edge of the flange of the first cup-shaped member.

2. In a mop frame as set forth in claim 1, rivet means extending through said first mentioned cup-shaped member, said frame and said first member, for securing the first cup-shaped member to said frame.

3. A mop frame comprising a head and a handle pivotally connected thereto and rotatably adjustable throughout an angle of 360 degrees with respect to said head; said head comprising an elongated frame; a member fixedly mounted adjacent the center of said frame; an inverted cup-shaped member secured to the upper end of said member having a downwardly extending peripheral flange; said cup-shaped member having pairs of upwardly extending diametrically opposed notches in its peripheral flange; a second cup-shaped member vertically movable and rotatable about said first member below and of smaller diameter than the first cup-shaped member having an upstanding peripheral flange provided with a pair of diametrically opposed downwardly extending notches in its peripheral flange; a coiled spring around said first member interposed between said frame and said second cup-shaped member; and said mop handle having a pair of divergent arms at its lower end provided with diametrically opposed inturned lower ends terminating adjacent said first member, said inturned ends having portions pivotally seating in the pair of notches of the second cup-shaped member and having portions normally contacting the lower edge of the flange of the first cup-shaped member.

4. In a mop frame as set forth in claim 3, rivet means extending through said first mentioned cup-shaped member, said frame and said first member, for securing the first cup-shaped member to said frame.

5. In a mop frame as set forth in claim 3, one pair of notches in the first mentioned cup-shaped member receiving the inturned ends of the divergent arms when the longer axis of the frame is aligned with the axis of the handle, and another pair receiving the said ends when the longer axis of the frame is normal to the axis of the handle.

6. A mop frame comprising a head, and a handle pivotally connected thereto and rotatably adjustable throughout an angle of 360 degrees with respect to said head; said head comprising an open frame of elongated shape; a plate fixedly mounted on the frame adjacent the center thereof; a member fixedly mounted adjacent the center of said plate; an inverted cup-shaped member secured to the upper end of said member having a downwardly extending peripheral flange; said cup-shaped member having pairs of upwardly extending diametrically opposed notches in its peripheral flange, said pairs being disposed equi-distances apart; a second cup-shaped member vertically movable and rotatable about said first member below and of smaller diameter than the first cup-shaped member having an upstanding peripheral flange provided with a pair of diametrically opposed downwardly extending notches in its peripheral flange; a coiled spring around said first member interposed between said plate and said second cup-shaped member; and said mop handle having a pair of divergent arms at its lower end provided with diametrically opposed inturned lower ends terminating adjacent said first member, said inturned ends having portions pivotally seating in the pair of notches of the second cup-shaped member and having portions normally contacting the lower edge of the flange of the first cup-shaped member.

7. In a mop frame as set forth in claim 6, rivet means extending through said first mentioned cup-shaped member, said plate and said first member, for securing the cup-shaped member to said plate.

8. In a mop frame as set forth in claim 6, one pair of notches in the first mentioned cup-shaped member receiving the inturned ends of the divergent arms when the longer axis of the frame is aligned with the axis of the handle, and another pair receiving the said ends when the longer axis of the frame is normal to the axis of the handle.

9. A mop frame comprising a head of elongated shape, and a handle pivotally connected thereto and rotatably adjustable throughout an angle of 360 degrees with respect to said head; said head comprising an open frame of relatively stiff wire; a plate fixedly mounted on the frame adjacent the center thereof; a cylindrical member fixedly mounted adjacent the center of said plate; an inverted cup-shaped member secured to the upper end of said cylindrical member having a downwardly extending peripheral flange; said cup-shaped member having pairs of upwardly extending diametrically opposed notches in its peripheral flange, said pairs being disposed equi-distances apart; a second cup-shaped member vertically movable and rotatable about said first member below and of smaller diameter than the first cup-shaped member having an upstanding peripheral flange provided with a pair of diametrically opposed downwardly extending notches in its peripheral flange; a coiled spring around said cylindrical member interposed between said plate and said second cup-shaped member; and said mop handle having a pair of divergent arms at its lower end provided with diametrically opposed inturned lower ends terminating adjacent said cylindrical member, said inturned

ends having portions pivotally seating in the pair of notches of the second cup-shaped member and having portions normally contacting the lower edge of the flange of the first cup-shaped member.

10. In a mop frame as set forth in claim 9, rivet means extending through said first mentioned cup-shaped member, said plate and said cylindrical member, for securing the cup-shaped member to said plate.

11. In a mop frame as set forth in claim 9, one pair of notches in the first mentioned cup-shaped member receiving the inturned ends of the divergent arms when

the longer axis of the frame is aligned with the axis of the frame is aligned with the axis of the handle, and another pair receiving the said ends when the longer axis of the frame is normal to the axis of the handle.

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