

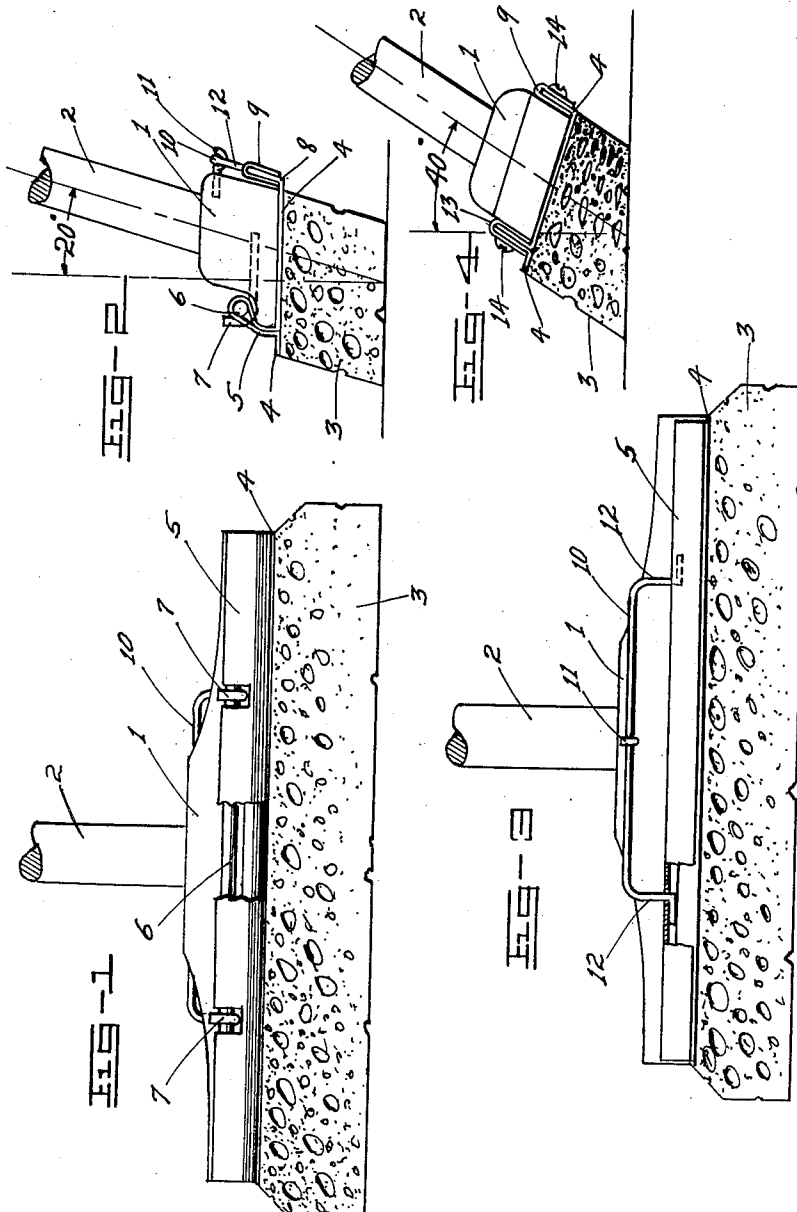
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MOP

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## UNITED STATES PATENT OFFICE

2,298,320

MOP

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7 Claims. (Cl. 15-244)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

This invention relates to cleaning devices such as sponge mops, and has for one of its objects to provide a sponge mop which is not only of simple and durable construction, but which has an attractive streamlined appearance, and so designed as to be adaptable for cleaning corners efficiently without injury to adjacent surfaces.

A further object is to provide novel means in a sponge mop whereby the sponge element is detachably secured to the mop head so that it may be readily removed for boiling or other purposes.

A further object of the invention resides in the provision of a sponge mop of such shape that the heel portion of the sponge element will be compressed more during mopping operations than the toe of the sponge, thus preventing the folding of the toe of the sponge element back under the mop head as is generally the case with the conventional forms of construction.

A further provision is a sponge mop of such shape that the water may be squeezed readily out of a wet sponge element merely by pressing straight down on the handle toward the mop head and compressing the sponge element between the mop head and a wringing screen, or a flat surface.

Other objects and advantages of the invention will be apparent from the following description when taken in connection with the accompanying drawing, in which:

Fig. 1 illustrates a front elevation of the mop partially cut away to show more in detail the construction. Fig. 2 illustrates a side elevation of the mop. Fig. 3 illustrates a back elevation of the mop cut away in part to show more in detail the construction. Fig. 4 illustrates a side elevation of a modified form of construction and showing how the heel portion of the sponge is compressed when the mop is held in operative position.

Referring to the drawing numeral 1 indicates a substantially oblong mop head to which is attached a handle 2. The sponge element of the mop comprises an elongated block of cellulose sponge 3 cut in the shape of a parallelepiped and in which the front and back sides form an acute angle with a vertical line at right angles with the top and bottom sides, so that the front bottom edge of the sponge will extend well forward of the front top edge of the sponge. The block of cellulose sponge is securely cemented to a canvas or cloth backing 4 or other suitable material. A tube 5 is formed in the cloth backing to the rear of the front top edge of the sponge and parallel therewith to receive a rod 6 which is pro-

vided to detachably secure the forward portion of the sponge to the underside of the mop head 1 by hooking the rod 6 over a plurality of hooks 7 extending forwardly from the front of the mop head.

The canvas backing extends to the rear of the block of sponge to form a flap 8 to which is securely clamped a channel shaped bead 9 which is drawn tightly against the back side of the mop head 1 by a U shaped bar spring clip 10 detachably supported at its center by a hook 11 extending from the rear of the mop head. The body portion of the spring clip lies parallel with the top of the bead 9. The downwardly extending arms 12 of the spring clip are secured to the bead 9 by passing the arms through holes formed in the top bend of the bead and bending the ends of the arms outwardly toward the ends of the bead within the U of the bead before it is clamped on the cloth flap. This form of construction prevents the block of sponge from sliding forward and holds the rear portion detachably secured to the underside of the mop head. The sponge is readily detached from the mop head by releasing the spring clip 10 from the hook 11 and swinging the sponge downwardly and forwardly to release the rod 6 from the hooks 7.

In Fig. 4 is illustrated a modified form of construction in which the tube 5 in the cloth backing is eliminated by clamping a fold of the cloth with an inverted U shaped channel bead 13 corresponding in shape and size to the channel bead which clamps the cloth flap 8. The channel bead 13 lies parallel with but to the rear of the forward edge of the sponge so that the sponge will extend well forward of the bead and prevent it from making contact with surfaces at right angles to the surfaces being cleaned. The front and rear heads may be secured to the mop head 1 by screws 14 or any other suitable means to hold the sponge securely attached to the underside of the mop head.

Heretofore, sponge and felt cleaning and polishing elements have been secured to holding members by extending the front and rear edges of a cloth backing beyond the edges of the elements to form flaps which are secured to the holding member in various ways. It has been found that this form of construction is not suitable for cellulose sponge mops where it is desired to have the sponge extend well forward of the holding member to prevent the holding member from scarring or making contact with surfaces adjacent the surface being cleaned. In this in-

vention the object is to provide a construction which will prevent the holding member from making contact with surfaces adjacent to the surfaces being cleaned, and where it is necessary to clean under low furniture the construction is such that the front face of the mop sponge may be used as the scrubbing surface by turning the mop over.

Heretofore, where sponge material has been used in mops as the mopping element it has been the general practice to cut the sponge with the sides forming right angles to each other, and the handle has been attached to the mop head at about 45 degrees to the underside thereof. When a floor is being scrubbed with a mop so constructed, the lower front edge of the sponge tends to fold back under the mop head and the mop head will extend well forward of the lower front edge of the sponge when the mop is pushed forward, and the mop head is not buffed against contact with surfaces adjacent the surface being cleaned.

In this invention the construction is such that the sponge acts as a buffer to prevent such contact. It will be noted in Fig. 2 that the handle of the mop is about 20 degrees to the rear of a vertical line at right angles to the scrubbing surface of the sponge. When the mop handle is held at the usual angle of operation for scrubbing floors the handle forms an angle about 40 degrees to the rear of a vertical line at right angles to the floor as illustrated in Fig. 4. When in this position the rear portion of the sponge is more compressed than the forward portion and the lower front edge of the sponge will extend well forward of the mop head and will not fold back under the mop head in scrubbing operations. This condition prevents the mop head from making contact with base boards and other surfaces when cleaning corners.

In accordance with the patent statutes I have illustrated and described what I believe to be the preferred forms of construction. It is understood however, that various minor changes may be made in the structural details without departing from the spirit and scope of the appended claims.

The invention described herein may be manufactured and/or used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

What I claim is:

1. A cleaning element for mops and the like, including a block of sponge material, a flexible backing adhesively secured to one side thereof, a tube formed in the flexible backing inside the marginal edge thereof near to but spaced from the forward edge thereof and parallel thereto, a rod in said tube, and means for detachably securing said rod and tube to the forward edge of a holding member.

2. A cleaning element for mops and the like, including a block of sponge material, a flexible

backing adhesively secured to one side thereof, a beaded flap formed in the flexible backing inside the marginal edge thereof near to but spaced from such edge thereof and parallel thereto, a beaded flap formed in the opposite edge, and means for detachably securing said flaps to a holding member.

3. A cleaning element for mops and the like, including a block of sponge material, a flexible backing adhesively secured to one side thereof, a tube formed in said flexible backing inside the marginal edge thereof near to but spaced from the forward edge thereof and parallel thereto, a rod in said tube, a beaded flap formed in the opposite edge, and means for detachably securing the tube and rod and beaded flap to a holding member.

4. In a mop, a head member, a handle secured thereto, a cleaning element comprising a block of sponge material, a flexible backing adhesively secured to one side of said block, a beaded flap formed in the flexible backing inside the marginal edge thereof near to but spaced from the forward edge thereof and parallel thereto, means embodied in said head member for holding the beaded flap detachably secured to the front face of said head member, a beaded flap formed in the flexible backing at the opposite edge thereof, and yielding means for detachably securing the latter beaded flap to the rear face of said head member.

5. A mop comprising a head, a handle, a cleaning element comprising a block of sponge having a flexible backing secured thereto, means for securing said cleaning element at one edge to said head adjacent one side of said head, the opposite edge of the flexible backing of the cleaning element having a tubular flexible portion near to but spaced from such edge which folds over the adjacent edge of said head, and means engaging the free edge of said flexible portion for holding the cleaning element attached to the underside of the mop head.

6. A mop comprising a head, a handle, a cleaning element comprising a block of sponge material, a flexible backing adhesively secured to the block of sponge material, a flap formed in the flexible backing inside the marginal edge thereof near to but spaced from the front edge of the block of sponge material, hook means extending from the front portion of the mop head and adapted to engage the said flap to secure the front edge of the cleaning element to the front edge of the mop head, a flap formed in the flexible backing at the rear edge of the cleaning element, and means connecting the rear flap to the rear edge of the mop head.

7. A cleaning element comprising a block of sponge, a flexible backing secured thereto, a tube formed in the flexible backing inside the marginal edge of said flexible backing, and means for securing the tubular portion of the flexible backing to a holding member.

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The above entitled patent was extended November 13, 1951, under the provisions of the act of June 30, 1950, for 5 years and 283 days from the expiration of the original term thereof.

*Commissioner of Patents.*