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J. D. BATES

2,014,488

MOP

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Fig. 1.

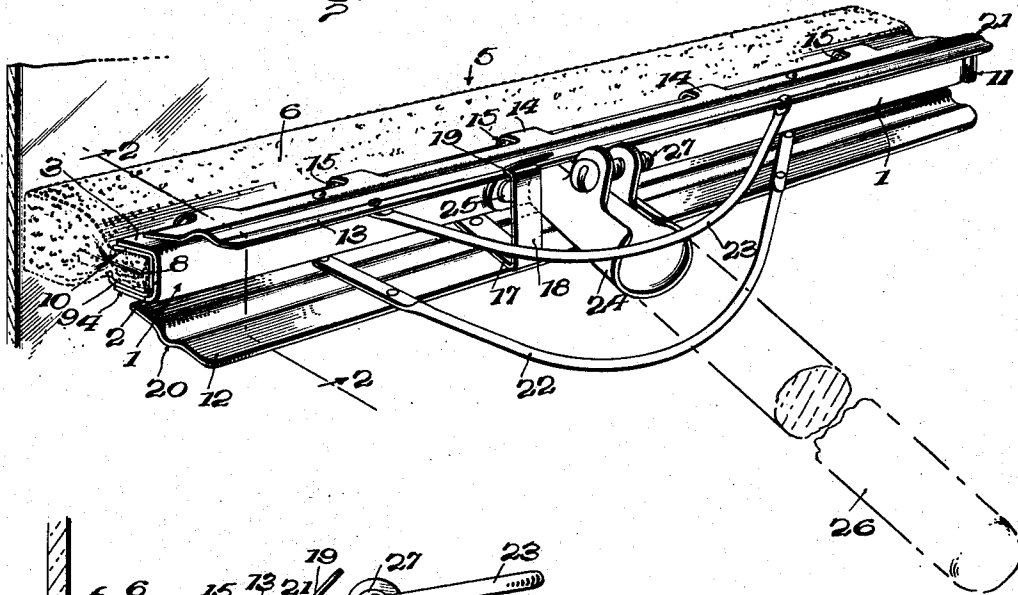


Fig. 2.

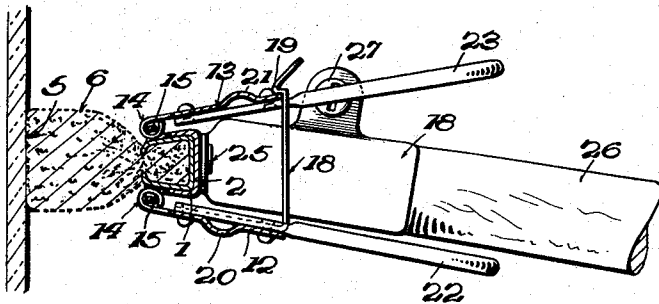


Fig. 3.

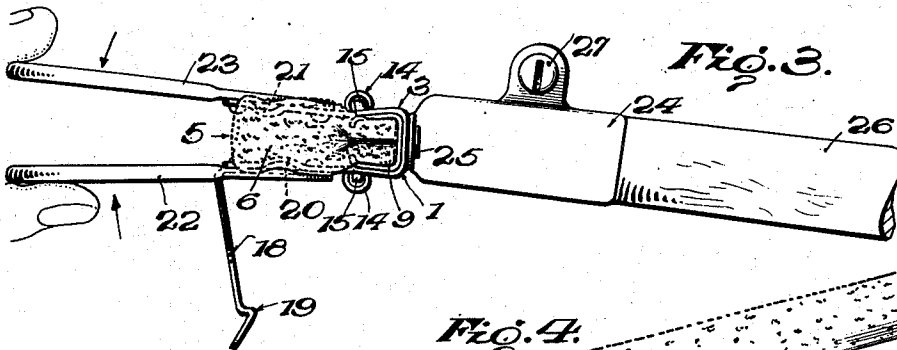
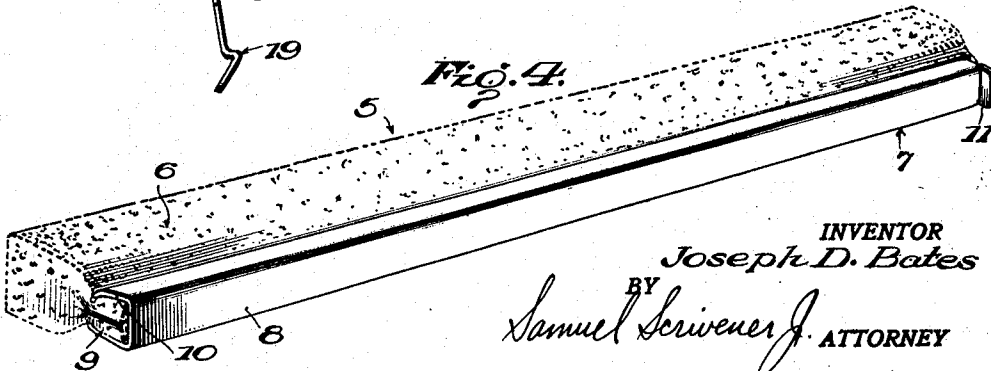


Fig. 4.



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MOP

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14 Claims. (Cl. 15—119)

The present invention relates to mops and, more particularly, to mops of the type having fluid-removing or squeezing means associated therewith.

5 It is a primary object of the present invention to provide a mopping device which shall be provided with devices, carried by or adjacent to that part of the mop which supports the mopping element, which will be movable into positions at opposite sides of the mopping element for squeezing the mopping element therebetween. It is also intended by the present invention that such squeezing devices shall be movable to an inoperative position in the rear of the mopping element where they may be fastened in such a position that they cannot interfere with manipulation of the mop.

10 It is also an object of the invention to provide means carried by such squeezing members which, when the squeezing members are moved to inoperative position, may be grasped easily by the hand in order to employ the mop as a hand wiper or mop.

15 A further object of the invention is to provide means for latching and maintaining the squeezing members in a position to the rear of the mopping element.

20 Other objects and features of novelty will be apparent from the following description and the annexed drawing, it being expressly understood, however, that the invention is in no way limited by such description and drawings, or otherwise than by the appended claims.

25 Referring to the drawing, in which similar reference numerals refer to like parts.

Fig. 1 is a perspective view of the mop according to the present invention;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1;

30 Fig. 3 is an end view of the mop device, showing the squeezing members in operative position, and

Fig. 4 is a perspective view of the mop element detached from the body of the mop.

35 The embodiment of the present invention illustrated in the drawing comprises a mop having a body portion or mop-holding member 1 which may be formed of any suitable material, such as sheet metal and which consists in an elongated member which is so constructed that it is generally U-shaped in cross-section. Such member comprises the bottom portion 2 and the sides 3, 4, which are preferably integrally formed and which are so arranged that the sides 3, 4 converge

slightly at their free longitudinal edges for a purpose which will appear hereinafter.

A mop element 5 is also provided by the invention and is adapted to be attached to the body portion 1 of the mop device, and such element 5 comprises an elongated strip 6 of mopping or cleaning material and an elongated, U-shaped mop-retaining member 7 comprising the bottom portion 8 and the sides 9, 10, the same being preferably integrally formed, all as illustrated clearly in Fig. 4. One of the longitudinal sides of the mopping element 6, which may be formed from sponge rubber or other suitable material, is securely clamped between the sides 9, 10 of the mop-retaining member 7, and such sides may be inwardly deformed, as illustrated, in order to insure a secure clamping engagement. The mop-retaining member is preferably formed of sheet metal and has such outside dimensions that it may be slidably but tightly received within the body member 1.

It will be apparent that the mop element 5 may be securely attached to the body portion 1 of the mop device by sliding the U-shaped mop-retaining member 7 longitudinally of and within the U-shaped body portion 1, the parts being so proportioned that a sliding but tight fit will be provided. It will also be seen that, due to the inward deformation of the sides 3, 4 of the body portion 1, the sides of the mop-retaining member 7 will be resiliently and securely held between the sides, 3, 4, while the bottom portion 8 of member 7 will snugly fit against and within the bottom portion 2 of member 1, whereby the mop element will be securely and rigidly, but detachably secured to the mop body 1. As is clearly illustrated, one end of the bottom portion 8 of mop-retaining member 7 may be turned outwardly as at 11 in order to provide a finger grip whereby the mop element 5 and mop-retaining member 7 may be conveniently inserted in and pulled out of the body member 1.

Means are provided by the present invention for squeezing water or other cleaning fluid out of the mop element 6 when desired, and such means comprise the squeezing plates 12, 13 which, as clearly illustrated, comprise elongated, generally flat members which may be formed of any suitable material such as sheet metal. Adjacent one edge of each of these squeezing members are formed a plurality of ears 14, the same being turned over and passing through eyes 15 which are struck up from the sides 3, 4 of the body member 1, thereby forming hinged connections between the sides 3, 4 and the plates 12, 13. The

described squeezing members 12, 13 may be held in inoperative position rearwardly of the body member 1, as shown in Figs. 1 and 2, by means of a latch device, the same comprising a portion 17 which is rigidly and permanently attached to the squeezing plate 12, and a portion 18 extending at approximately a right angle to portion 17 and terminating in a catch member 19 which is adapted to engage over the free edge of plate 13 when the two squeezing plates are in inoperative position, all as clearly illustrated in Figs. 1 and 2. For the purpose of providing strength and a better squeezing action, the plates 12, 13 may be provided with the longitudinal ridges 20, 21 which are preferably struck up from the metal of the plates and which are so disposed that when the plates are in operative or squeezing position the ridges substantially oppose each other as illustrated in Fig. 3. It will be apparent that, when the squeezing plates are operated to squeeze the mopping element therebetween, the ridges will extend into the mopping element and, by reducing the volume included between the two plates, will provide an increased squeezing action.

Means are provided whereby the squeezing plates may be manipulated by the hands, and such means comprise the handle members 22, 23. The ends of each of said handle members are rigidly attached to one of the plates 12, 13 by any suitable means, and between such ends, the handle members are preferably semi-circular in shape in order that a convenient hand-grip may be afforded. It will be apparent that the handles 22, 23 may be employed for manipulating the squeezing plates or, if desired, for manipulating the mop in a cleaning operation when it is not desired to employ the usual long handle.

The device according to the present invention is also provided with means whereby it may be operated in the usual manner by a handle. Such means comprise a split socket 24 of the usual type, which may be attached by rivets 25, or otherwise, to the bottom 2 of the body member 1, and which projects rearwardly from the mop body as illustrated in Fig. 1. A handle 26 is adapted to be received in the socket 24 and to be held therein by means of the clamping means 27.

In the operation of the above described mop, it is first necessary to attach the mop element to the body or frame of the mop. This may be done by inserting the mop-retaining member 7, in which the cleaning member 6 is securely clamped, into the U-shaped body member 1 of the mop. The mop element 5 and mop-retaining member 7 will now be securely clamped to the body member 1. The squeezing plates may now be moved to inoperative position rearwardly of the mop assembly, as illustrated in Fig. 1, and may be held in such position by engaging the catch 19 over the free edge of plate 13, whereby the two plates will be securely held in inoperative position. If desired, a handle may be secured in the socket 24, and the mop may now be used either dry, for wiping purposes or may be dampened for cleaning and scrubbing purposes.

If it is now desired to squeeze the water or other cleaning fluid out of the mop element 5, the latch 19 is first disengaged from the free edge of plate 13, and the squeezing plates 12, 13 are moved about their pivotal connections with the sides 3, 4 of body member 1 until they abut the opposite sides of the mop element 5. Further movement of the squeezing plates toward each

other as illustrated in Fig. 3, will cause the mop element to be effectively and thoroughly squeezed between the plates. It will be apparent that the squeezing plates may be so proportioned that each will substantially cover one side of the mop element, and that if such plates are operated by means of the handles 22, 23, considerable pressure may be exerted on the mop element whereby the same will be completely freed of water or other cleaning fluid.

The squeezing plates may now be returned to inoperative position and maintained therein by means of latch member 19, in order that the wiping or mopping operation may be resumed.

While I have illustrated and described one embodiment of my invention, it will be apparent that other modifications and constructions may be employed without departing in any way from the spirit or scope of the invention. For example, the body member 1 may be so arranged and constructed that the mop-retaining member 7 may be inserted therein through the longitudinal open side of such body member, in which case the sides 3, 4 of the body member may be formed of resilient material whereby the member 7 will be clamped in position within the body member. Other modifications will be apparent to those skilled in the art and reference must be had to the appended claims for a definition of the limits of the invention.

It is also to be expressly understood that the term "mop" as employed in the appended claims is intended to cover all mopping, cleaning or wiping devices, and is not to be restricted in meaning to any particular type or character of device in any way.

What is claimed is:

1. A mop comprising a channel-shaped mop-holding member, a mopping element carried by said mop-holding member, a plurality of squeezing members pivotally mounted with respect to and adjacent the side members of said mop-holding member and movable from inoperative positions into positions at opposite sides of said mopping element to squeeze said mopping element therebetween.

2. A mop comprising a channel-shaped mop-holding member, a mopping element having a portion thereof mounted within said channel-shaped member, and plate members pivotally mounted on opposite sides of said channel-shaped mop-holding member and movable to squeeze said mopping element therebetween.

3. A mop comprising a handle, a channel-shaped mop-holding member secured to said handle, a mopping element having a portion thereof mounted within said holding member, and a plurality of plate members pivotally mounted on said channel-shaped mop-holding member and movable into engagement with opposite sides of said mopping element for squeezing the same therebetween.

4. A mop comprising in combination, a mop-holding member having spaced side portions, a mopping element having a marginal edge portion disposed between and held by said side portions of the mop-holding member and a main body portion extending outwardly from the marginal edges of said side portions, and a pair of squeezing members hinged to said mop-holding member adjacent said side portions and arranged for relative swinging movements between a squeezing position at opposite sides of the main body of the mopping element and extending forwardly of the said side portions and a non-

squeezing position away therefrom, and adapted to squeeze the main body portion of the mopping element between them when in said squeezing position.

5 5. A mop comprising in combination, a mop-
holding member having spaced side portions, a
mopping element having a marginal edge por-
tion disposed between and held by said side por-
10 tions of the mop-holding member and a main
body portion extending outwardly from the mar-
ginal edges of said side portions, and a pair of
squeezing members hinged to said side portions
15 of the mop-holding member and arranged for
relative swinging movements between a squeezing
position at opposite sides of the main body of the
mopping element and extending forwardly of
the said side portions and a non-squeezing po-
20 sition away therefrom, and adapted to squeeze
the main body portion of the mopping element
when in said squeezing position.

6. A mop comprising in combination, a mop-
holding member having spaced side portions, a
mopping element having a marginal edge por-
25 tion disposed between and held by said side
portions of the mop-holding member and a main
body portion extending outwardly from the mar-
ginal edges of said side portions, a pair of
squeezing members hinged to said mop-holding
30 member and arranged for relative swinging
movements between a squeezing position at op-
posite sides of the main body of the mopping ele-
ment and extending forwardly of the said side
portions and a non-squeezing position away
35 therefrom, and adapted to squeeze the main
body portion of the mopping element therebe-
tween when in said squeezing position, and means
to releasably retain said squeezing members in
non-squeezing position.

7. A mop comprising in combination, a mop-
40 holding member having spaced side portions, a
mopping element having a marginal edge portion
disposed between and held by said side portions
of the mop-holding member and a main body
portion extending outwardly from the marginal
45 edges of said side portions, a pair of squeezing
members hinged to said side portions of the mop-
holding member and arranged for relative swing-
ing movements between a squeezing position at
opposite sides of the main body of the mopping
50 element and extending forwardly of the said
side portions and a non-squeezing position away
therefrom, and adapted to squeeze the main body
portion of the mopping element when in said
squeezing position, and means to releasably re-
55 tain said squeezing members in non-squeezing
position.

8. A mop comprising a mop-holding member,
a mopping element carried by said mop-holding
60 member and having a portion extending there-
from, a plurality of squeezing plates pivotally
mounted with respect to and adjacent said mop-
holding member and movable into engagement
with opposite sides of said mopping element to
squeeze the same therebetween, each of said
65 plates being provided with a portion extending
out of the plane thereof and engageable with
and extending into said mopping element when
the said plates are in squeezing position.

9. A mop comprising a mop-holding member,

a mopping element carried by said mop-holding
member and having a portion extending there-
from, a plurality of squeezing plates pivotally
mounted on said mop-holding member and mov-
able into engagement with opposite sides of said
5 mopping element, each of said plates being pro-
vided with a ridge engageable with and extending
into said mopping element when said plates are
in squeezing position.

10. A mop comprising a channel-shaped mop-
10 holding member, a mopping element having a
portion thereof mounted within said holding
member, a plurality of plates pivotally mounted
on the sides of said channel-shaped mop-holding
15 member and movable from an inoperative po-
sition into engagement with said mopping ele-
ment to squeeze the same therebetween, and latch
means for releasably maintaining said plates in
inoperative position behind said mopping ele-
20 ment.

11. A mop comprising a channel-shaped mop-
holding member, a mopping element having a
portion thereof mounted within said holding
member, a plurality of squeezing devices piv-
25 otally mounted on opposite sides of said holding
member and movable from an inoperative po-
sition into positions at opposite sides of said mop-
ping element, and means carried by one of said
squeezing devices and engageable with another
thereof for releasably maintaining said squeez-
30 ing devices in inoperative position.

12. A mop comprising a mop-holding member,
a mopping element carried by said mop-holding
member, a plurality of plates pivotally mounted
on said mop holding member and movable from
35 inoperative positions to positions at opposite
sides of said mopping element to squeeze the same
therebetween, and a latch member having a por-
tion rigidly connected at substantially right
angles to one of said plates and engageable with
40 the free edge of another of said plates when said
plates are in inoperative position.

13. A mop comprising a channel-shaped mop-
holding member, a mopping element having a
portion attached within said channel-shaped
45 member, a plurality of squeezing members piv-
otally connected to said mop-holding member
and movable from inoperative position into po-
sitions at opposite sides of said mopping element
for squeezing the same therebetween, means for
50 latching said squeezing members in inoperative
position, and handles connected to said squeez-
ing members and so disposed with respect to said
squeezing members that when said squeezing
members are latched in inoperative position said
55 handles are brought substantially together.

14. A mop comprising a mop-holding member,
a mopping element carried by said mop-holding
60 member, a plurality of plates pivotally mounted
on said mop-holding member and movable from
inoperative positions into positions at opposite
sides of said mopping element to squeeze said
mopping element therebetween, and an arcuate
rod handle connected at each end thereof to each
65 of the said plates adjacent the free edge thereof
and disposed substantially in the plane of said
plate.

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CERTIFICATE OF CORRECTION.

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September 17, 193

JOSEPH D. BATES.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 1, first column, after line 27, insert the following:

A further object is to provide a mopping device having squeezing means mounted thereon, which squeezing means will include portions effective to provide an additional or further squeezing action when the squeezing means are operated to squeeze the mopping element.

A still further object of the invention is to provide a mop, having a squeezing device associated therewith which will include only a minimum number of parts and which may be easily and cheaply manufactured, but which will be strong and rugged in construction.

And that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 7th day of April, A. D. 1936.

(Seal)

Leslie Frazer
Acting Commissioner of Patents.