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COMPRESSIBLE MOP AND WRINGER

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Fig. 1

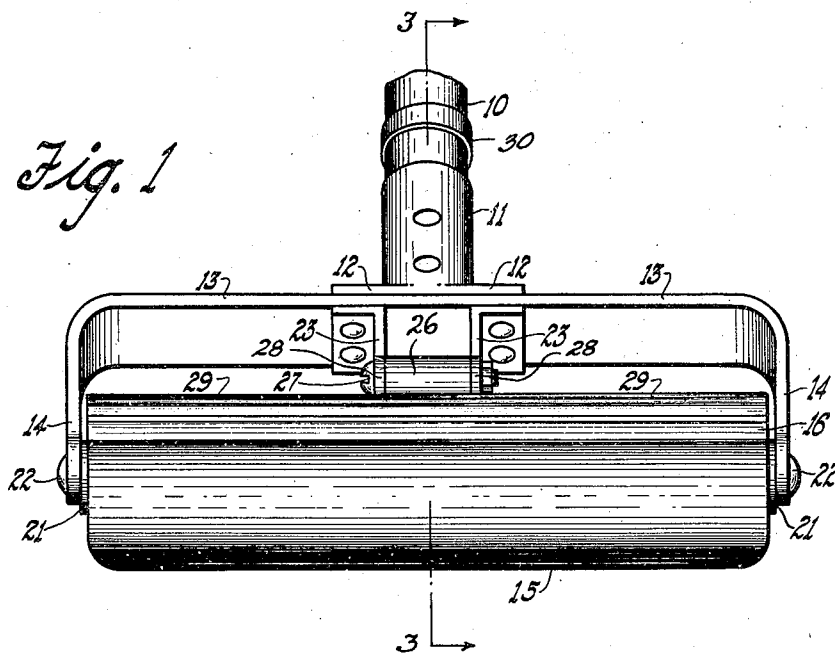


Fig. 2

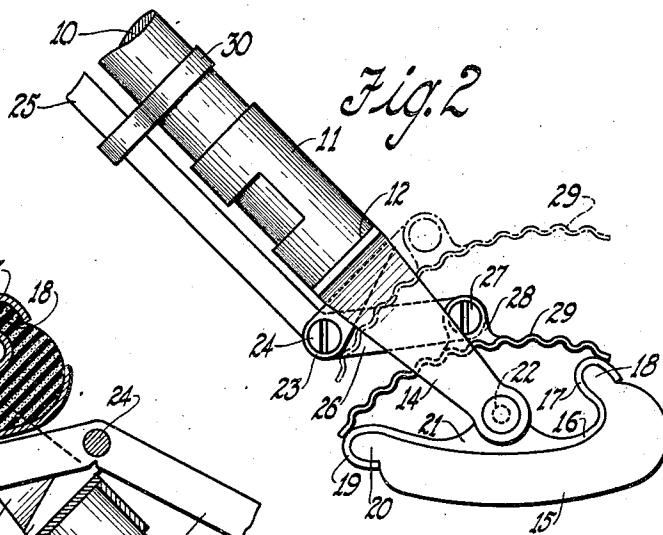
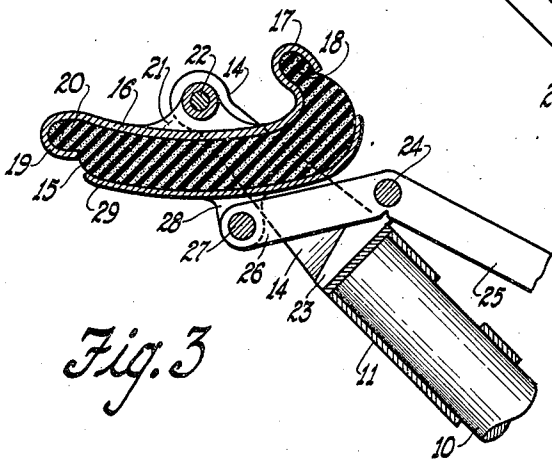


Fig. 3



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COMPRESSIBLE MOP AND WRINGER

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Substituted for application Serial No. 338,855,
June 5, 1940. This application October 2, 1944,
Serial No. 556,727

7 Claims. (Cl. 15-119)

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This invention relates to a cleaning device. More particularly, the invention relates to that type of cleaning device which may be used either as a wet cleaning mop or as a dry cleaner, and which utilizes a cleaning element, such as a rubber sponge, which is compressible and normally maintains an expanded preformed shape.

The primary object of the invention is to provide a device of this character which is novel, simple, inexpensive and easy to operate.

A further object is to provide a device of this character having a handle and a cleaning element pivoted to the handle, together with means serving normally to maintain the cleaning element in desired position relative to the handle, and also actuable to compress the cleaning element as desired.

A further object is to provide a device of this character with novel means for mounting a sponge cleaning element.

A further object is to provide a device of this character with a cleaning element having a large area thereof effective for use in cleaning.

A further object is to provide a device of this character wherein the cleaning element is so arranged and positioned with respect to the parts which mount the same, that said cleaning element effectively constitutes a bumper or guard to prevent marring of furniture during use thereof.

Other objects will be apparent from the description and appended claims.

In the drawing:

Fig. 1 is a view of the device in front elevation with parts broken away.

Fig. 2 is a fragmentary view of the device in side elevation, with the inoperative position of parts of the device illustrated in dotted lines.

Fig. 3 is a fragmentary longitudinal sectional view taken on line 3-3 of Fig. 1, and illustrating the parts in sponge compressing position.

Referring to the drawing, the numeral 10 designates a handle which is preferably elongated and of substantially the same length as the handle of a conventional mop. A ferrule 11 is mounted on the end of the handle, and laterally projecting flanges 12 extend from the lower end of said ferrule. A rigid U-shaped frame has its base 13 centrally secured to the flanges 12, and has its ends 14 extending perpendicularly outwardly from base 13 in substantially parallel relation.

A cleaning element 15, preferably formed of a block of sponge rubber of a length substantially equal to the length of base 13 of the frame, and of substantial width but comparatively thin, is

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mounted in a suitable carrier 16. The carrier 16 is preferably formed of sheet metal and has one end thereof bent reversibly at 17 in S-shaped or gooseneck form. This reversibly bent portion 17 extends upwardly with respect to the main body of carrier 16, and serves to clamp or grip one longitudinal edge of the cleaning element to the carrier at 18. The main portion of the carrier 16 is substantially concavo-convex in form, and the rear portion thereof is bent downwardly and forwardly in U-shape at 19 to clamp or grip the rear edge 20 of the cleaning element 15. Centrally of the carrier 16 at each end thereof is provided a lug or ear 21, and an elongated rod 22 serves to pivotally connect said ears to the arms 14 of the mounting frame 13.

A pair of brackets 23 are rigidly secured to the frame 13 in equi-spaced relation to the center thereof, and mount a bolt 24 by means of which a lever 25 is pivoted to the handle. Lever 25 has an end portion 26 bent angularly therefrom and mounts a bolt 27 to which there are pivotally connected ears 28 of a curved pressure plate 29. The pressure plate 29 is transversely curved in substantial conformity to the curvature of the face of the cleaning element. A spring clip 30 is carried by the handle adjacent the ferrule 11 and serves to normally hold the lever 25 adjacent and substantially parallel to said handle.

If desired, as best illustrated in Fig. 2, the pressure plate 29 may be provided with a series of corrugations, said corrugations serving to strengthen said plate and also to provide channels through which water may readily pass while the plate is compressing a water laden sponge.

The operative position of the parts is best illustrated in Fig. 2, wherein the lever 25 is shown as retained by the clamp 30 adjacent the handle 10. When in this position, the lever 25 serves to urge the pressure plate 29 downwardly so that its forward and rear ends press against the portions 17 and 19 of the sponge carrier. In this way the pressure plate serves to hold the sponge carrier 16 against tilting on its pivot axis 22.

When it is desired to compress the cleaning element, the lever 25 is pivoted to shift the pressure plate 29 to inoperative position as illustrated in dotted lines in Fig. 2. Thereupon the handle of the mop may be turned and tilted so that the cleaning element 15 and its carrier 16 will pivot about axis 22 and assume a position with cleaning element 15 juxtaposed to the pressure plate 29, as best illustrated in Fig. 3. For this purpose the dimensions of the cleaning element 15 and carrier 16 must be such with respect to the part of travel

of the pressure plate 29 that said cleaning element may shift 180 degrees without interference from the pressure plate 29. It will readily be seen that the lever 25 can thereupon be operated to press the plate 29 against the sponge 15 to extract water therefrom. Thereupon the lever 25 can be released, the position of the mop changed to permit the cleaning element to swing to operative position and the lever 25 again returned to a position adjacent the handle and clamped at 30 for the purpose of urging plate 29 into operative relation to the carrier 16.

It will be apparent from the above that this device is exceedingly simple in construction and operation; that it requires no wringing rollers or the like; that a large effective area of cleaning element surface is exposed for use; that the cleaning element is solidly anchored to its carrier; and that the portion of the cleaning element which is not accessible for use is exceedingly small. The upwardly and rearwardly directed S-bend 17 of the carrier 16 assures that a substantial portion of the cleaning element 25 will project forwardly from the carrier 16 to serve as a bumper or guard, so that the danger of marring furniture is reduced to a minimum. This application is a substitute for my earlier patent application, Serial No. 338,855, filed June 4, 1940.

I claim:

1. A cleaning device comprising a handle, a frame carried by said handle, a carrier pivoted to said frame, a compressible cleaning element mounted on said carrier and normally positioned outwardly of said carrier, a lever pivoted to said handle, a pressure plate pivoted to said lever, and means for normally positioning said plate to bear against the inner portion of said carrier to maintain said carrier and cleaning element in operative relation to said handle, said plate being shiftable by said lever to a position clear of said carrier to accommodate pivoting of said carrier to a position with said cleaning element facing said plate.

2. A cleaning device comprising a handle, a cleaning element, a carrier for said cleaning element pivoted to said handle, an element-compressing member normally engaging the back of said carrier to operatively position the same, and means carried by said handle for mounting said member, said means being shiftable to a position clear of said carrier to accommodate pivotal movement of said carrier to a position with said cleaning element facing said member.

3. A cleaning device comprising a handle, a cleaning element, a curved carrier for said cleaning element pivoted to said handle, a plate curved in substantial conformity with the curvature of said carrier, a lever pivoted to said handle, said plate being pivotally mounted on said lever and normally bearing against the back of said carrier to hold said carrier stationary on said handle, said lever being shiftable to position said plate clear of said carrier whereby said carrier may rotate to position said cleaning element in facing relation to said plate.

4. A cleaning device comprising a cleaning unit including a cleaning element and a carrier therefore, a presser plate of a shape complementary to the exposed face of said cleaning element, a handle unit shiftable mounting said cleaning unit and plate for independent movement of each, said cleaning unit being normally positioned with said cleaning element remote from said plate and being shiftable to a position with said clean-

ing element facing said plate to be compressed thereby, and means associated with said handle unit for releasably latching said plate in a position at the end of its path of travel in the direction of and in engagement with the back of said carrier.

5. A cleaning device comprising a handle, a cleaning element, a carrier for said cleaning element pivoted intermediate opposed margins thereof to said handle, an element-compressing member normally engaging the back of said carrier on opposite sides of its pivot axis to normally position the same, and means carried by said handle for mounting said member, said means being shiftable to a position clear of said carrier to accommodate pivotal movement of said carrier to a position with said cleaning element facing said member.

6. A cleaning device comprising a handle, a cleaning element, a carrier for said cleaning element pivoted intermediate opposed margins thereof to said handle, an element-compressing member normally engaging the back of said carrier on opposite sides of its pivot axis to normally position the same, and means carried by said handle and pivotally mounting said compressing member intermediate the carrier-engaging portions thereof, said means being shiftable to position said member clear of said carrier to accommodate pivotal movement of said carrier to a position with said cleaning element facing said member.

7. A cleaning device comprising a handle, a cleaning element, a carrier for said cleaning element pivoted to said handle, an element-compressing member normally engaging the back of said carrier to operatively position the same, and means carried by said handle for mounting said member, said compressing member being pivoted to said last named means intermediate the engaging portions thereof about an axis substantially parallel to the pivot axis of said carrier, said means being shiftable to position said member clear of said carrier to accommodate pivotal movement of said carrier to a position with said cleaning element facing said member and interposed between said pivot axes.

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