

July 28, 1936.

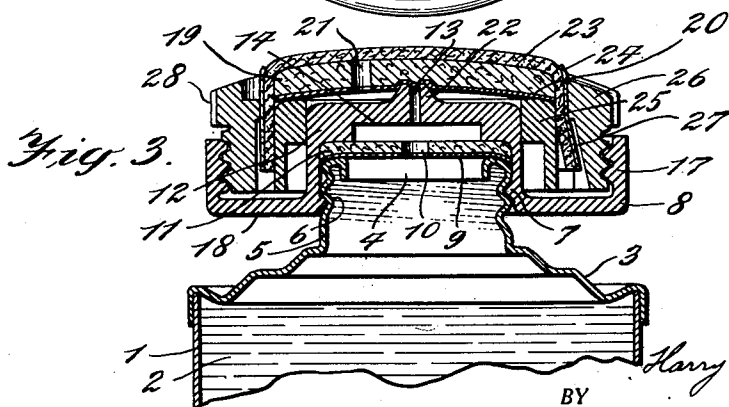
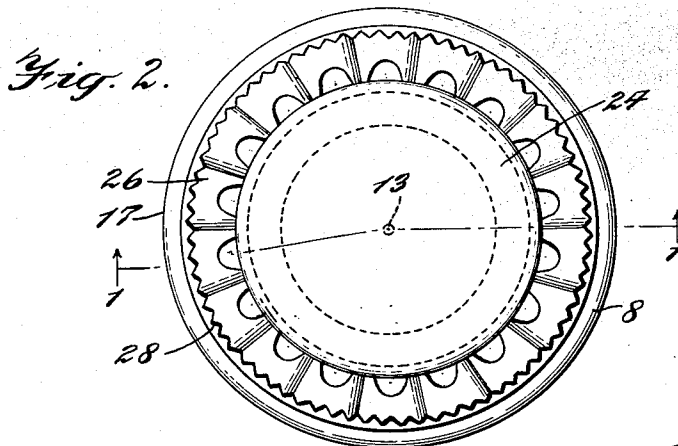
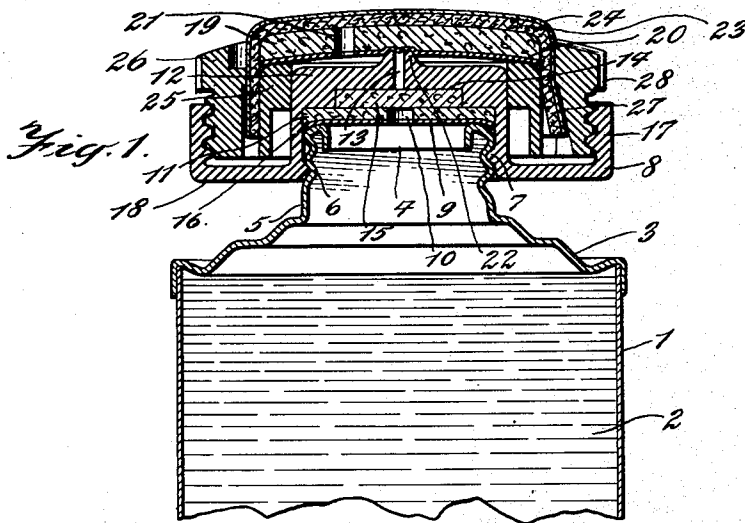
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2,048,689

CLEANING DEVICE

Filed June 22, 1934

2 Sheets-Sheet 1



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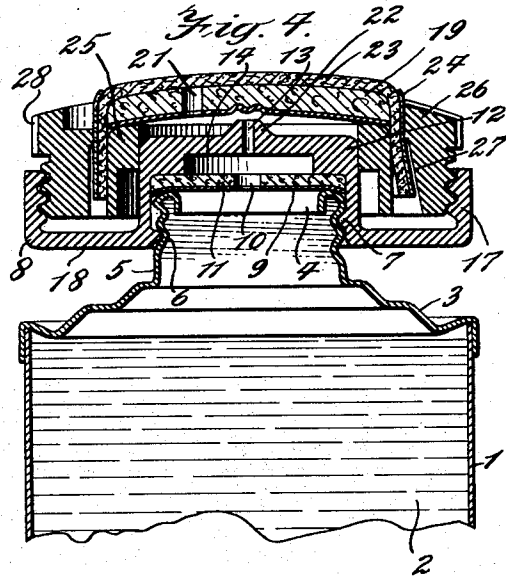
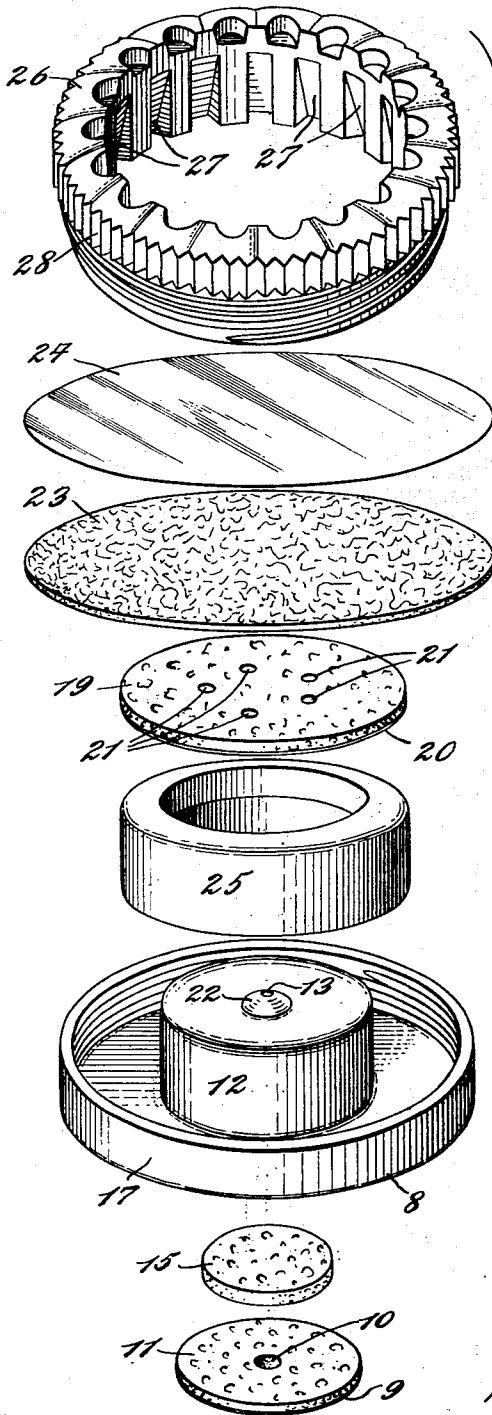


Fig. 5.

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UNITED STATES PATENT OFFICE

2,048,689

CLEANING DEVICE

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Application June 22, 1934, Serial No. 731,824

5 Claims. (Cl. 15—138)

This invention relates to a novel and improved form of cleaning device, the novel features of which will be best understood from the following description and the annexed drawings, in which I have shown a selected embodiment of the invention and in which:

Fig. 1 is a view in vertical section through the upper part of a can having my device applied thereto and with the device in inoperative condition, this view being taken approximately on the line 1—1 of Fig. 2;

Fig. 2 is a top view of the structure appearing in Fig. 1;

Fig. 3 is a view similar to Fig. 1 but showing the device in condition where it may easily be rendered operative;

Fig. 4 is a view similar to Figs. 1 and 3 but showing the device in completely operative condition;

Fig. 5 is an exploded view showing in perspective the various elements appearing in Figs. 1, 3, and 4.

In the embodiment which I have shown for the purpose of illustration, the numeral 1 indicates a can or other suitable container for a cleaning fluid 2. Normally, this fluid will be of some material suitable for cleaning clothes or other material formed of fabric. The can is shown as having a top 3 of known construction and which has an opening 4 therein through which fluid is normally discharged. The neck 5 of the top is provided with threads 6 on its exterior adapted to engage corresponding threads 7 on a cap 8.

I shall first describe the cap and the parts associated therewith as they appear in Figs. 1, 2, and 5, and then proceed to describe the operation of the device in connection with those figures and the other figures.

Extending across the opening 4 is shown a thin metallic sheet 9 resting upon the edges of the opening 4 and having a small hole 10 there-through disposed centrally of that opening, in the form illustrated. This sheet 9 is a facing for a sealing member 11 through which the hole 10 also extends and which may conveniently be formed of cork so that, when the cap 8 is screwed down tightly upon the can top, a tight seal will be provided around the edges of the opening 4.

The cap 8 is provided with a body 12 extending across the opening 4 and having a hole 13 in a line with the hole 10 in the sealing member. Preferably, the body is provided with a recess 14 to receive a removable supplemental sealing member 15 closing both the holes 10 and 13 so that, when the can is being shipped or when for any

reason the parts of the device are apt to be disturbed, nevertheless the contents of the can cannot escape.

The threads 7 are formed upon a skirt 16 depending from the body 12 of the cap, and spaced from the inner skirt 16 is an outer skirt 17, the two skirts being connected by an outwardly extending bottom 18. The outer skirt 17 forms means which may be grasped by the hand of the operator when screwing the cap on or off from the container.

Extending over the body of the cap is a valve member 19 which may have a metal plate 20 on its under side and which is adapted to close the hole 13. The member 19, as best shown in Fig. 5, may have a plurality of holes 21 through which fluid may flow. The body 12 is provided with an upwardly extending projection 22 surrounding the hole 13 and forming a seat for the valve 19.

Extending over the valve member is an applicator 23, which may be of felt or soft material of any suitable kind adapted to be applied to fabrics or other material to be cleaned and which is adapted to soak up the fluid which may pass through the holes 21. In Fig. 1, I have shown as covering the applicator, a sheet of protective material, such as that commercially known as "cellophane", and indicated at 24. The two sheets of material 23 and 24 extend downwardly over the edges of the member 19 and are received between an inner clamping ring 25 and an outer clamping ring 26. The inner ring closely fits the outer surface of the skirt 16, and the two rings are close enough together so that the sheets 23 and 24 are tightly clamped therebetween. To aid in this clamping action, the outer ring may have in its inner surface a plurality of recesses 27 into which the sheets may be forced, as plainly shown at the right of Figs. 1, 3, and 4. These recesses tend to prevent accidental movement of the applicator when in use, particularly in a direction circumferentially of the can. The ring 26 may likewise be knurled as indicated at 28, to form a convenient hand grip.

In operation, the first step is to remove the cellophane and the seal 15 when the parts will appear as in Fig. 3. It will be seen that now the only thing which would prevent escape of the fluid from the can to the applicator upon tipping of the can is the fact that the valve is in contact with its seat on the projection 22. Nevertheless, the only escape for fluid is through this valve, and therefore, so long as this valve is closed, escape is prevented. Now when it is desired to use the device, the user grasps the

knurled edge 28 of the outer clamping ring and turns it with respect to the cap 8. Because of the tight engagement of the parts, and also because of the locking recesses 27, this movement of the outer clamping ring will carry with it, not only the applicator, but also the valve and the inner clamping ring, until the parts reach some such position as indicated in Fig. 4, in which it will be seen that the valve is open.

Now the applicator may be used in the ordinary way, pressure being exerted, if necessary, on the bottom of the can to force the liquid in the can outward through the hole 13 when it will flow through the holes 21 and be soaked up by the applicator. The applicator may then be applied to the fabric or other material which is being cleaned.

While I have shown the invention as embodied in a specific form, it is to be understood that various changes in details may be made without departing from the scope of the invention, and I therefore do not intend to limit myself except by the appended claims.

I claim:

1. In combination, a container for a cleaning fluid and having an opening in the top thereof, a cap having means for detachably securing it to said top of said container and having a hole through which fluid may pass from the container, an applicator extending across said hole, two clamping rings both movable with respect to the container and between which the edges of said applicator are clamped, one of which has threaded engagement with said cap, means for detachably holding said rings together with the applicator edges therebetween, a valve member between said applicator and said hole and adapted to be brought into position to close or open the hole upon turning of said ring in threaded engagement with the cap, and means to conduct fluid from said hole to said applicator.

2. In combination, a container for a cleaning fluid and having an opening in the top thereof, a cap having a body extending across said opening in said top, said body having a hole therein through which fluid may flow from said opening, a skirt depending from said body and having threaded engagement with said top, a second skirt spaced outwardly from said first-

named skirt, a valve member extending across said hole, and means supporting said valve member and having threaded engagement with one of said skirts, said valve member being adapted to open or close said hole upon turning of said supporting means.

3. In combination, a container for a cleaning fluid and having an opening in the top thereof, a cap having means for detachably securing it to said top of said container and having a hole through which fluid may pass from the container, an applicator extending across said hole and adapted to receive fluid flowing therethrough, two clamping rings both movable with respect to the container and between which the edge portions of said applicator are frictionally held, and means to detachably secure said rings together and to said cap.

4. In combination, a container for a cleaning fluid and having an opening in the top thereof, a cap having means for detachably securing it to said top of said container and having a hole through which fluid may pass from the container, an applicator extending across said hole and adapted to receive fluid flowing there-through, and two clamping rings between which the edge portions of said applicator are frictionally held, one of said rings having a plurality of recesses therein to receive said edge portions of the applicator and to lock it in place.

5. In combination, a container cap having means for detachably securing it to the top of the container and having a hole through which fluid may pass from the container, manually engageable means on said cap to operate said securing means, a valve member extending over said hole in said cap, a support to which said valve member is secured, said support having threaded engagement with said cap, means on said support manually engageable independently of said means on said cap, whereby said support may be turned on said cap whereby said turning will move said valve member towards said hole to cover it or away from said hole to open it, an applicator secured to said valve member, and means to conduct fluid from said hole to said applicator.

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