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P. P. RUNNELS  
CLEANING APPLICATOR  
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1,949,976

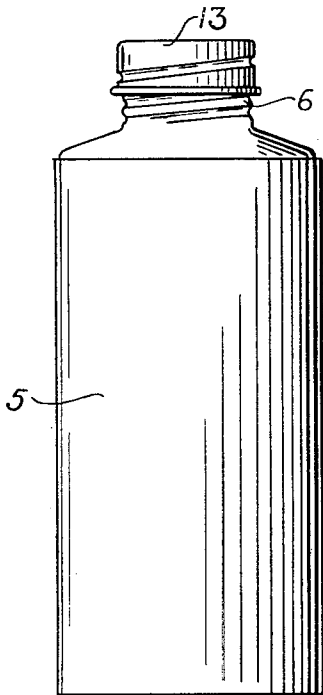


Fig. 1.

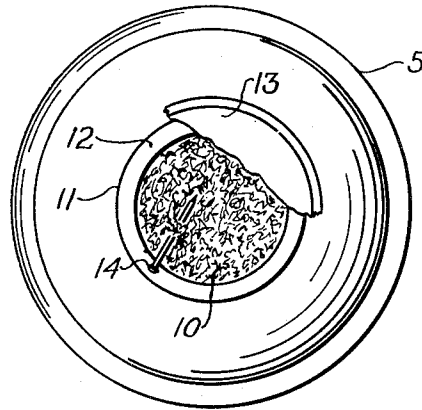


Fig. 2.

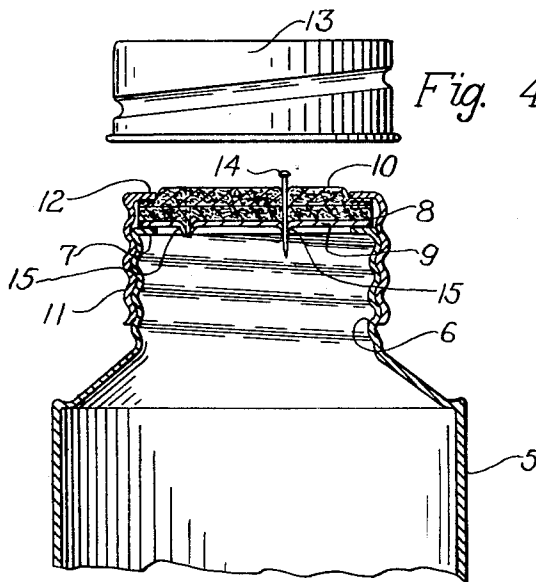


Fig. 3.

Fig. 4.

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## UNITED STATES PATENT OFFICE

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## CLEANING APPLICATOR

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Application December 29, 1932, Serial No. 649,258

4 Claims. (Cl. 15—134)

This invention is a continuation in part of my application for liquid containers, filed April 17, 1930, Serial No. 444,956, Patent No. 1,918,215, issued July 11, 1933.

5 The object of this invention is to provide a container for cleaning fluids in which the fluid will be sealed by a thin metal closure until wanted for use and which will be discharged through the closure to a layer of porous material and a liquid  
10 applying pad, through one or more pin pricks made at the time of use by the user.

One object is to provide a dispensing device in which the quantity of cleaning fluid discharged may be controlled by the user by varying the  
15 size or/and the number of pin pricks made in the closure.

A further object is to provide a closure with an inwardly projecting bur around the discharge opening to impart a regulatory wick-action to the liquid discharge therethrough when the container is inverted in use and means for changing  
20 the size of the pin holes.

The object also is to simplify and reduce the cost of construction of a cleaning-fluid container and to reduce the waste of fluid to a minimum.

I accomplish the above and other objects which will hereinafter appear, by the means illustrated in the accompanying drawing, in which

Fig. 1 is a view in side elevation of my improved  
30 container in closed condition;

Fig. 2 is a top plan view on a larger scale of the device shown in Fig. 1, with a portion of the cap removed to show the liquid applying pad and pin to be used in punching the pad;

Fig. 3 is a vertical central section of the device on the scale shown in Fig. 2, showing the cap removed and the pin thrust through the closure and before removal, and

Fig. 4 is a side elevation of the cap removed  
40 from the container below.

Like characters of reference indicate like parts in the several views of the drawing.

The container 5 is of sheet metal having a neck 6 provided with screw-threads and the upper end of the neck is bent inwardly to form  
45 an annular flange 7 on which the liquid-applying or cleaning pad and flow-controlling means are supported. The flow-controlling means comprises a layer of porous material 8 which is kept from absorbing the cleansing fluid contained in the receptacle by the interposition of a sheet of tin-  
50 foil or other thin metal 9. The sheet 9 extends over upon the flange 7 far enough to make a good seal and is supported by said flange.

55 A liquid-applying or cleaning pad 10 comprises

a layer of felt, cloth, or other tenacious absorbent material through which the cleansing fluid will pass outwardly and which will not disintegrate by friction when rubbed over a fabric surface to be cleaned.

The tinfoil 9, porous disc 8 and cleaning pad  
60 10, assembled as shown on the flange 7, are there retained in the assembly by a screw-threaded collar 11, screwed on the container 5 and having an inwardly formed flange 12 overlying the  
65 edges of the pad 10.

Before the device has been used and afterwards when it is not in use the pad 10 may be protected by a cover 13 which is screw threaded and is screwed upon the collar 11.

When first opened for use by the removal of the cover 13, a discharge opening is formed through the tinfoil 9 by passing a pin 14 down through pad 10, disc 8 and said tinfoil, in the order named. The bur 15 formed from the metal displaced by the pin, being thin, bends under the pressure of the fluid when the container is inverted in use, and acts as a valve to check the too free escape of the fluid through the pin prick, and should the discharge through one  
70 pin-hole be insufficient for any particular operation one or more additional perforations may be made; and should a perforation allow the fluid to pass too freely the collar 11 can be unscrewed and access had to the bur 15, and the hole closed  
75 partially or completely by pressing the projections back into original position, after which a new opening may be made with a smaller pin. This is made possible by the projection of the bur inwardly of the container.

For convenience, a pin 14, of a size usually required, is inserted in the pad 10 by the manufacturer.

The operation of my device is as follows: After forming a perforation with a pin, the pin is  
80 withdrawn and the container turned upside down. The cleaning fluid passes through the perforation (or perforations if there is more than one) and is distributed by capillary action through the porous disc 8 in a manner to dampen the  
85 pad 10. The pad 10, thus supplied, is rubbed over the surface to be cleaned.

Having thus described my invention, what I claim as new and wish to secure by Letters Patent, is—

1. In a cleaning applicator, a container having a screwthreaded opening with inturned top flange, a sheet of thin metal covering the opening and supported by the flange, a layer of porous material upon the metal sheet, a liquid-  
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applying pad upon the porous material and a threaded collar screwed on the container, said pad porous layer and metal sheet being all of the same diameter and all having one or more pin holes in direct alignment therethrough.

2. In a cleaning applicator, a container having a screwthreaded opening with inturned top flange, a sheet of thin metal covering the opening and supported by the flange, a layer of porous material upon the metal sheet, a liquid-applying pad upon the porous material and a threaded collar screwed on the container, said pad porous layer and metal sheet being all of the same diameter and all having one or more pin holes therethrough, terminating with burs which project inwardly of the receptacle from the sheet.

3. In a cleaning applicator, a container having a screwthreaded opening with inturned top flange, a sheet of thin metal covering the opening and supported by the flange, a layer of porous material upon the metal sheet, a liquid-

applying pad upon the porous material and a threaded collar screwed on the container, said pad porous layer and metal sheet being all of the same diameter and all having one or more pin holes therethrough surrounded by burs projecting inwardly of the receptacle, and a pin removably secured to the pad for manually forming said holes.

4. In a cleaning applicator, a container having a screwthreaded opening with inturned top flange, a sheet of thin metal covering the opening and supported by the flange, a layer of porous material upon the metal sheet, a liquid-applying pad upon the porous material and a threaded collar screwed on the container, said pad porous layer and metal sheet being all of the same diameter and all having one or more pin holes therethrough surrounded by burs projecting inwardly of the receptacle, and a cover for the pad screwed on the outside of the threaded collar.

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