Dec. 19, 1939. H. E. WARR ET AL 2,183,662

NAIL POLISH REMOVER DISPENSER

Filed Dec. 14, 1938

Fig-2

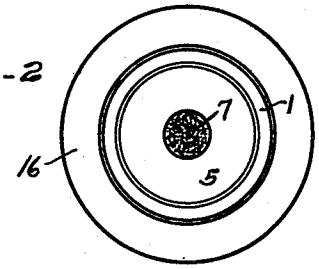


Fig-4

Fig-3

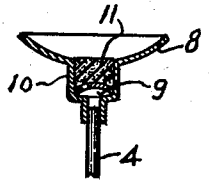


Fig-1

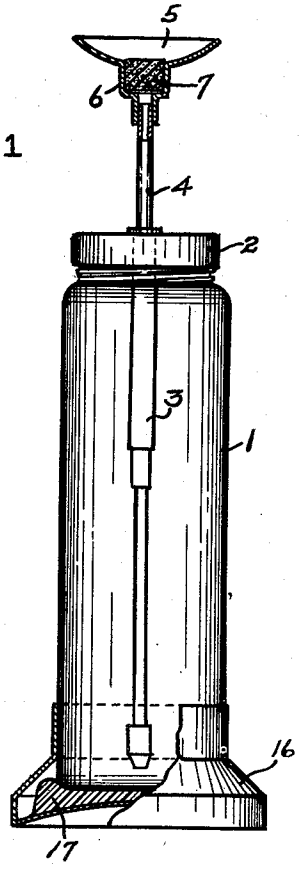
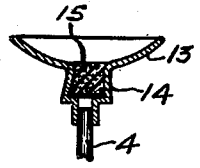


Fig-5



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NAIL-POLISH REMOVER DISPENSER

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3 Claims. (Cl. 221—85)

This invention relates to a dispenser, and while primarily designed and intended as a beauty parlor appliance for dispensing nail-polish remover in liquid form, it will be obvious that the device may successfully be employed for dispensing fluids for any other purposes wherein it is found to be applicable.

Important objects and advantages of the invention are to provide a fluid dispensing device of the character described, which includes a novel receiving element embodying a fluid absorber for holding a small quantity of fluid for use, which is conveniently operable by the use of one hand, which is simple in its construction and arrangement, durable, compact, attractive in appearance, positive in its action, and economical in its manufacture and use.

To the accomplishment of these and such other objects as may hereinafter appear, the invention consists of the novel construction, combination and arrangement of parts herein specifically described and illustrated in the accompany drawing, but it is to be understood that changes in the form, proportions and details of construction may be resorted to that come within the scope of the claims hereunto appended.

In the drawing wherein like numerals of reference designate corresponding parts throughout the several views:

Figure 1 is a side elevational view, partly in cross section, of a fluid dispenser constructed in accordance with the invention.

Figure 2 is a top plan view thereof.

Figure 3 is a sectional view in modified form of fluid receiver, and Figure 4 is a top plan view of the fluid distributor embodied in the latter.

Figure 5 is a sectional view of still another modified form of fluid receiver.

Referring in detail to the drawing 1 denotes a fluid container or bottle of any conventional glass construction, and provided with a suitable lid 2 having a screw thread connection with the top thereof in the usual manner.

The lid 2 carries a fixed, vertically disposed pump mechanism 3, which depends into the container 1 and into the fluid contents of the latter, when the lid is secured in position to the container. The pump mechanism includes a tubular plunger rod 4 projecting through and beyond the top of the lid. The pump mechanism is of any standard conventional type and construction now in common use, and operable for ejecting the fluid from the top of the tubular plunger rod when the latter is depressed into the pump mechanism.

The feature of the invention resides in the provision, construction and arrangement of a comparatively small, shallow, substantially dish-shaped fluid receiver 5. The latter is preferably circular in contour and includes a depending fluid pocket 6, which latter is disposed in the diametric center of the receiver and has its bottom communicably secured to the projecting upper end of the tubular plunger rod 4, as clearly illustrated in Figure 1.

A fluid absorber 7 is mounted in the receiver pocket 6. The absorber comprises a small plug-like wad of sponge rubber or of any other suitable material capable of absorbing a relatively large quantity of fluid and of maintaining a saturated condition until naturally dehydrated by the process of evaporation. The absorber may be secured in the receiver pocket by cementing or otherwise securing same to the pocket wall, or may be replaceably held in the pocket by its inherent tendency to expand if forcibly constricted when engaged in the receiver pocket.

In the modified form of the device, shown in Figures 3 and 4, the receiver 8 carries a small distributing dome 9 mounted in the pocket 10, and disposed between the bottom of the latter and the absorber 11 mounted in said pocket.

The fluid distributing dome 9 has a plurality of small apertures 12, and the purpose thereof in the pocket 10 is to diffuse the distribution of the fluid to the absorber 11 when said fluid is ejected from the upper end of the tubular plunger rod 4 by the operation of the pump mechanism 3.

The modified embodiment of receiver 13, disclosed in Figure 5, differs from the preferred form of receiver 5, hereinbefore described, only in that a tapered pocket 14 is provided to gradually enlarge the latter from its upper end toward its bottom. Such tapering construction of the pocket 14 serves to maintain the embodied absorber 15 in position in said pocket.

In the operation of the pump mechanism 3, the embodied plunger rod 4 is automatically returned and normally maintained in the projected, elevated position, as shown in Figure 1. The improved dispenser is primarily intended to be operated by the use of one hand only and while the device is positioned on a supporting structure.

The improved dispenser is particularly adapted for dispensing nail-polish remover, and in the use thereof, the operator depresses the tubular plunger rod 4 by exerting downward pressure upon the receiver 5. Each time the plunger rod is so depressed to operate the pump mechanism 3, a small quantity of fluid is forced from the con-

tainer 1 and forcibly ejected, in a squirting action, from the top of the plunger rod. Such ejected fluid will be forced into and absorbed by the absorber 6, and the latter is thereby saturated by the fluid. The manicurist picks-up the fluid from the absorber by any suitable applicator employed, namely, a small wad of cotton, sponge, fingers, brush, orange stick, etc. As more fluid is required it is only necessary to repeat the pumping operation to resaturate the absorber to capacity. The dished receiver prevents the fluid from leaving same and directs said fluid toward the absorber in the event more fluid is ejected than can be absorbed by the absorber.

As the dispenser is intended to be operated with one hand while the former is in the upright position on some suitable supporting structure, the container 1 is preferably provided with an enlarged base 16. The latter may be constructed from sheet metal, or any other suitable material, and has a frictionally fitted engagement with the container. The base serves to stabilize the upright position of the device by preventing the latter from toppling over during the fluid dispensing operations.

A cushioning element 17, constructed of soft rubber, sponge rubber, cork, or like materials, may be mounted in the base 16, between the bottom of the latter and the bottom of the container. The cushioning element facilitates the operation of the dispenser, and will prevent breakage of the container in the event that the device is inadvertently dropped, or otherwise handled in an untoward manner.

The present invention provides a most efficient device of its kind, which may be conveniently operated to intermittently dispense a small quantity of fluid to be absorbed by an absorber and reabsorbed from the latter with cotton, fingers, brush, swab, or any other type of applicator, as set forth. The device is specially adaptable for use in beauty parlors, medicinal applications, painting, and in many classes of arts and trades requiring the free use of one hand, while the other hand is operating the device to dispense a small quantity of fluid from the latter. It will be apparent that the receiver 5 may be used without the absorber 7 if desired, whereby the surplus fluid is stored in the pocket 6, from which latter it may be dipped by the applicator as used. However the use of the absorber, as set forth is preferable as said absorber confines the fluid to the receiver and may be fully saturated or even immersed by the fluid depending on whether the plunger rod is partially or fully depressed in effecting the ejection of the fluid by the pump mechanism.

What we claim is:

1. In a pump-operated fluid dispenser including a tubular plunger rod, a dished receiver attached to the discharge end of said rod and being formed with a pocket to receive the fluid ejected from said rod by the operation of the pump, and an absorbent element mounted in said pocket for confining the ejected fluid to said receiver.

2. In a pump-operated fluid dispenser including a tubular plunger rod, a receiver formed with a depending pocket having its bottom communicably joined with the discharge end of said rod, and an absorbent element carried in said pocket.

3. In a pump-operated fluid dispenser including a tubular plunger rod, a dished receiver, a pocket depending from said receiver and having its bottom communicably joined with the discharge end of the plunger rod to receive the fluid ejected from the latter, and an absorbent element mounted in said pocket for confining the ejected fluid to said receiver.

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