April 12, 1938. S. K. LUI 2,113,848

PERFUME DISPENSER

Filed Oct. 24, 1935

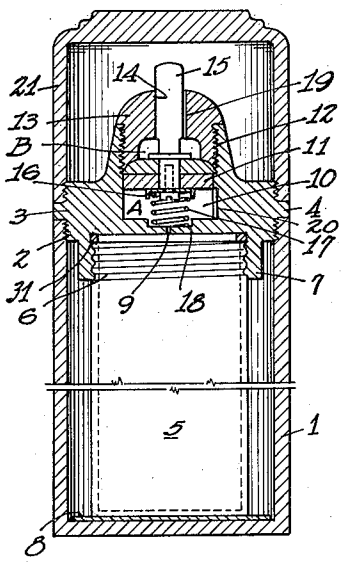


Fig. 1.

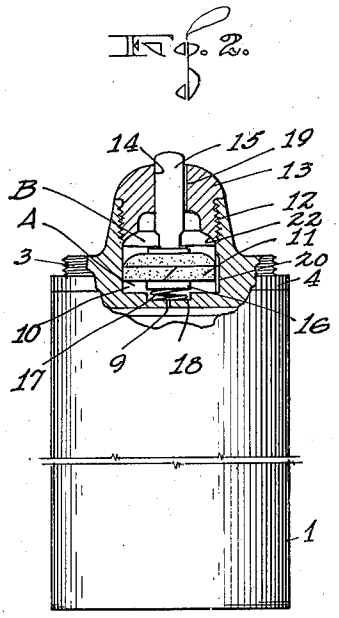


Fig. 2.

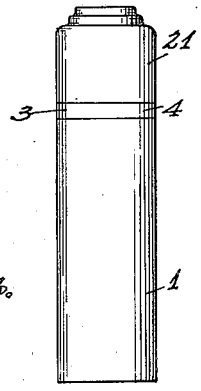


Fig. 3.

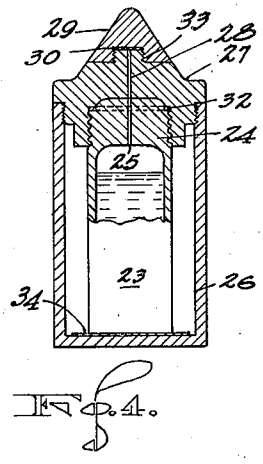


Fig. 4.

INVENTOR.

SIK KONG LUI.

BY Munn, Anderson & Liddy.

ATTORNEYS.

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PERFUME DISPENSER

Sik Kong Lui, San Francisco, Calif.

Application October 24, 1935, Serial No. 46,580

1 Claim. (Cl. 215—73)

My invention relates to improvements in perfume dispensers and it consists of the combinations, constructions and arrangements hereinafter described and claimed.

An object of my invention is to provide a perfume dispenser in which the cover closing the container also closes the vial carrying the perfume. The cover has an opening therein communicating with the vial through which the perfume passes. A cap is designed to be secured to the cover and to close the opening therein.

I show two types of dispensers. In one of the types I make use of a pump mechanism for withdrawing the perfume from the vial, and in the other type the perfume is forced from the vial by merely shaking the container.

The device is extremely simple in construction and is durable and efficient for the purpose intended. Although the drawing shows the device greatly enlarged for purposes of clarity, in actual practice the entire device is made small enough to be carried very easily in a woman's pocket book.

Other objects and advantages will appear in the following specification, and the novel features of the device will be particularly pointed out in the appended claim.

My invention is illustrated in the accompanying drawing forming a part of this application, in which

Figure 1 is a vertical section through the device;

Figure 2 is a side elevation of the device with the cap removed, and the cover shown in cross section to illustrate a different position of the pump piston;

Figure 3 is a side elevation of the entire device; and

Figure 4 is a sectional view through a modified form of the invention.

In carrying out my invention I provide a container 1 which is threaded at 2 to receive a cover 3. The cover has a flange 4 designed to abut the top of the container 1 when the cover is screwed in place. A vial 5 is mounted within the container 1 and has a threaded top 6 designed to be received in the threaded portion 7 of the cover. A disc 8 of any desired substance may be placed between the bottom of the vial 5 and the closed end of the container.

The cover 3 has a small opening 9 communicating with the vial. The opening leads into a compartment 10 and this compartment slidably receives a piston 11. The upper end of the compartment 10 is threaded at 12 and receives a closure 13. The closure has an opening 14 therein for slidably receiving a plunger 15. The plunger is connected to the piston 11 and carries a flanged member 16 that receives the upper end of a coil spring 17. The lower end of the spring is seated in a depression 18 in the bottom of the compartment 10.

Figure 1 shows a groove 19 in the wall of the opening 14 for conveying the fluid along the side of the plunger. The wall of the compartment 10 also has a groove 20 therein that extends from the bottom of the compartment up to the bottom of the piston 11 when the latter is in normal position. The closure 13 has a hollowed out portion that forms the upper end of the compartment 10. For a clearer understanding of the device I will designate that portion of the compartment 10 below the piston as the temporary or auxiliary reservoir A and that portion disposed above the piston as the exit chamber B.

From the foregoing description of the various parts of the device the operation thereof may be readily understood. A cap 21 normally encloses the cover 3 and its operating mechanism. The device when carried in a pocket book assumes a horizontal position. This permits the fluid in the vial 5 to bleed through the small opening 9 and to fill the auxiliary reservoir A. The spring 17 holds the top of the piston against the seat 22, see Figure 2, and the piston in this instance acts as a valve to prevent the fluid from passing into the exit chamber or compartment B.

In use, the cap 21 is first removed. Then the plunger 15 is manually depressed. This will drive the piston 11 downwardly in the compartment 10 and will force the fluid from the reservoir A through the by-pass 20 and into the exit chamber B. The by-pass 20 is larger than the opening 9 and this will prevent the pump piston 11 from forcing the fluid back into the vial 5. Moreover, the vial has no outlet apart from the opening 9, whereas, the reservoir or chamber B has an outlet, and the difference in pressure will cause the fluid to flow into the reservoir B instead of the vial 5.

The plunger 15 is now freed, and the spring 17 will now return the piston back to normal position. The piston will first close the by-pass 20 and continued movement will force the fluid from the reservoir B and out through the groove 19. The remainder of the fluid in the reservoir B will drain out through the groove 19.

In the modified form shown in Figure 4, a vial 23 is shown and this vial is provided with a thick top end 24, which has a small passageway 25

therein. This long and narrow passageway prevents the vial from being refilled.

The vial **23** is placed in a container **26** and this container is closed by a cover **27**. The cover has a threaded recess that receives the vial and has a small passageway **28** that aligns with the passageway **25**. A cap **29** closes the passageway **28** and a washer **30** may be disposed in the cap and will cover the open end of the cover **27**. A washer **31** is also preferably disposed between the vial **5** and the cover **3**, see Figure 1, and in like manner a washer **32** is disposed between the vial **23** and the cover **27** in the device shown in Figure 4. The threaded recess in the cover **27** has a depression extending above the washer **32** and this depression receives a rounded projection on the vial end **24** that extends above the washer **32**. This depression in the top of the threaded recess has rounded sides and when an open top vial such as that shown at **5** in Figure 1 is threaded into the cover **27**, then the rounded side wall of the depression will act as a guide for the fluid for directing it into the passageway **28**.

In the operation of this form of the device, the cap **29** is removed and then the container **26** is rapidly shaken. This will drive out some of the vial fluid through the aligned passageways **25** and **28**. After use the cap **29** can then be screwed onto the cover **27** as shown at **33**. A shock absorbing pad **34** is placed between the bottom of the vial **23** and the bottom of the container **26**. Should the open top vial **5** be connected to the cover **27** in place of the vial **23**, then the depression in the top of the threaded recess will guide the fluid into the passageway **28** as already stated.

While I have shown only the preferred forms of my invention it should be understood that various changes or modifications may be made within the scope of the appended claim without departing from the spirit of the invention.

I claim:

A perfume dispenser comprising a vial provided with a closed top having a small opening therein, a cover secured to the vial and having a small opening aligned with the vial opening, a container enclosing the vial and being secured to the cover, and a cap for closing the cover opening.

SIK KONG LUI.