

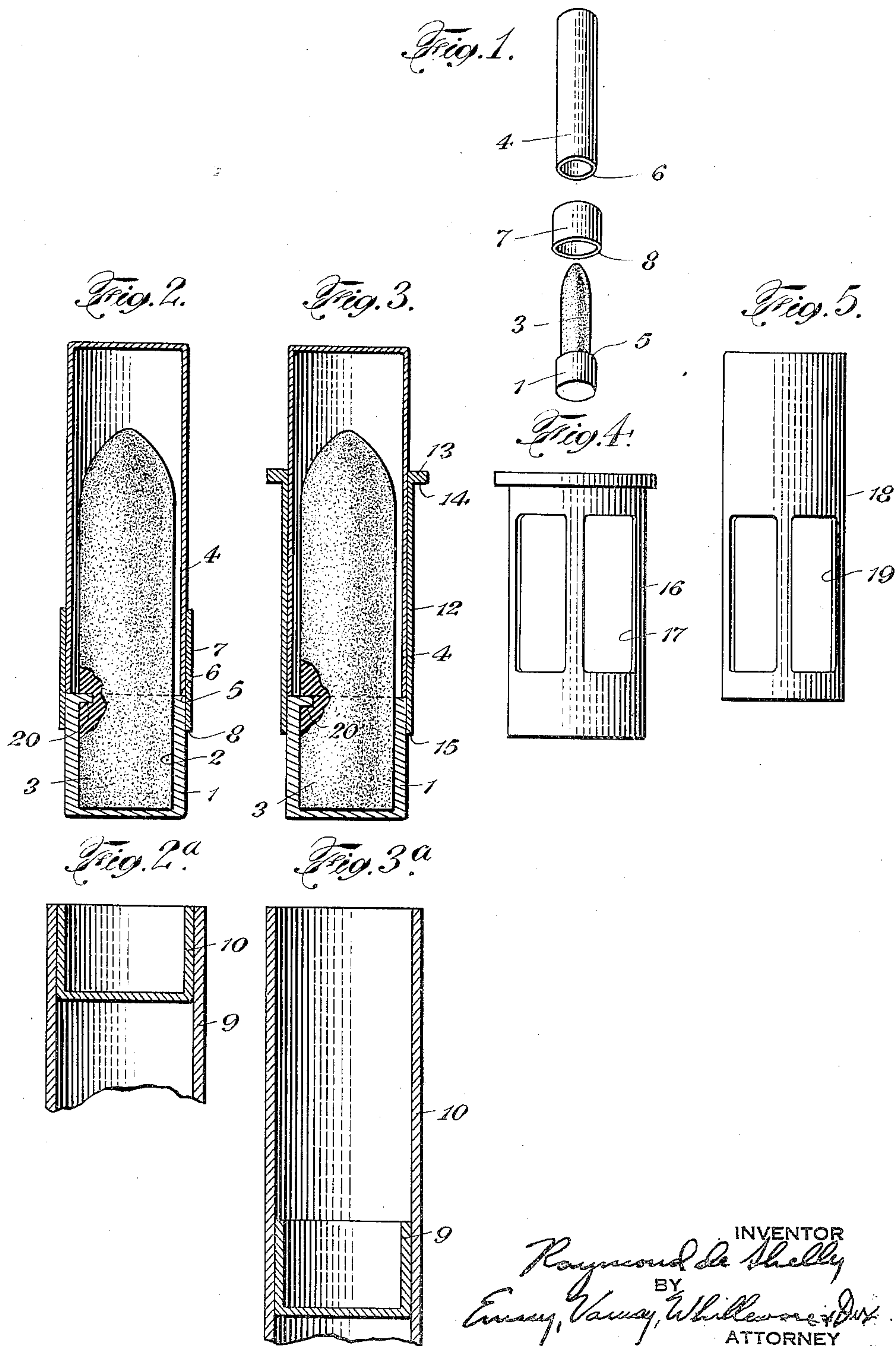
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REFILL CARTRIDGE

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REFILL CARTRIDGE

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5 Claims. (Cl. 206—56)

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This invention relates to refill cartridges for ejecting a refill into a receptacle of a holder. The invention is particularly useful as a refill cartridge for ejecting a lipstick refill into the lipstick receptacle of a lipstick holder and will be particularly described with reference thereto.

It is an object of the invention to provide a cheap cartridge which surrounds and protects the refill until it is desired to use the same, and from which the refill may be easily and quickly ejected into a holder when needed.

Other objects and advantages of the invention will appear hereinafter.

A preferred embodiment of the invention selected for purposes of illustration is shown in the accompanying drawings, in which,

Figure 1 is a perspective view showing the three disassembled elements of the cartridge.

Figure 2 is a vertical section through the cartridge.

Figure 2a is a vertical section through a portion of a conventional holder, showing the receptacle thereof in advanced position.

Figure 3 is a vertical section through a modified form of cartridge.

Figure 3a is a vertical section through a portion of a conventional holder, showing the receptacle thereof in retracted position.

Figure 4 is a front elevation of a modified form of sleeve.

Figure 5 is a front elevation of a modified form of cap.

According to the present invention, the cartridge comprises a base having a recess for the reception of one end of a refill, the other end of which protrudes from said recess. The said base is of a size and shape to fit the receptacle of a holder in which the refill is to be used. The cartridge also comprises a cap having a recess adapted to receive the protruding end of the refill. Said cap is of a size and shape such that the walls of said recess are spaced from the outside surfaces of said refill. The base and cap are provided with abutting end surfaces so that thrust may be transmitted from one part to the other. The cartridge also comprises a sleeve surrounding said base and cap, which said sleeve has a snug, sliding fit with the outside walls of the base and cap, respectively. Prior to ejection of the refill, said sleeve bridges the joint between the base and cap and serves to hold the cartridge together. The sleeve has a laterally extending surface adapted to seat against an end surface of the holder into which the refill is to be inserted.

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There are various types of holders in common use which are characterized by the provision of a receptacle, usually cylindrical, for the reception of a refill. Such receptacle is usually mounted within a casing, also cylindrical, and means are provided to advance or retract the receptacle in the casing. Said receptacle and casing have one or more end surfaces or edges against which the laterally extending surface of the sleeve of the cartridge may seat. When it is desired to eject a refill, the base end of the cartridge is partially inserted into the holder until the laterally extending surface of the sleeve is seated against one of said end surfaces. Then, holding the cartridge and holder together, the cap end of the cartridge is pushed to cause it to slide with respect to the sleeve. This motion ejects the base from the sleeve and thrusts it toward and into the receptacle of the holder.

Referring to the drawings, Figures 1 and 2 illustrate a cartridge consisting of a base 1 having a recess 2 for the reception of refill material 3, here shown in the form of a lipstick which protrudes from the recess. Cap 4 has a recess adapted to receive the protruding end of the refill, the inside diameter of the recess being somewhat greater than the diameter of the refill so that there is a space therebetween. The base and cap are provided with abutting end surfaces 5 and 6, and the length of the cap recess is sufficient to accommodate the refill material 4 when the surfaces 5 and 6 are in abutting engagement. Sleeve 7 surrounds the base and cap engaging the same with a snug, sliding fit. The sleeve has a laterally extending end surface 8 adapted to seat against an end surface of a holder.

Figure 2a illustrates the open end of a conventional holder comprising casing 9 and a retractable receptacle 10. When it is desired to eject a refill, the base 1 is partially inserted into the holder until the end surface 8 seats against one of the end surfaces of the parts 9 or 10. The cap 4 is then pushed to eject the base from the sleeve and to move it into the receptacle 10 of the holder.

In Figure 2a, the receptacle is shown in its fully advanced position at the open end of the casing of the holder, and the cartridge shown in Figures 1 and 2 is best adapted for use with the receptacle in this position. By lengthening the sleeve, however, and making it sufficiently thin to enter the casing 9, the cartridge of Figure 1 may be used to eject a refill even when the receptacle is in retracted position as shown in

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Figure 3a. In this case the end surface 8 seats against the end surface of the receptacle.

For such use, however, the cartridge shown in Figure 3 is preferred. In this form, the base 1 and cap 4 are as previously described, but the elongated sleeve 12 is provided with a flange 13 having a laterally extending surface 14, the sleeve 12 being sufficiently thin to enter the casing 9. If the receptacle is fully retracted, as shown in Figure 3a, the surface 14 of the sleeve seats against the end surface of the casing 9, but if the receptacle is only partially retracted the laterally extending end surface 15 seats against the end surface of the receptacle 10. Thus in this form of the invention, the sleeve is provided with two laterally extending surfaces, either one of which may be operative depending on the position of the receptacle in the casing of the holder.

The base, cap and sleeve of the cartridge may be made of any suitable materials, but plastic materials and metals such as aluminum or brass are preferred. Transparent colorless plastic materials such as those made from acrylic resins are especially to be preferred in order that the color of the refill may be visible without opening the cartridge. However, it is sometimes difficult to obtain a snug, sliding fit between plastic materials, and for this reason it may be preferable to form the base and cap of plastic material, using a metal sleeve, or to form the base and cap of metal, using a plastic sleeve. In such cases, it may be desirable to form apertures in the metal parts, in order that the refill may be visible. Thus, in Figure 4, the metal sleeve 16 is provided with apertures 17, so that if the cap is made of colorless, transparent plastic the refill will be visible. Or as shown in Figure 5, the metal cap 18 is provided with apertures 19, and if the sleeve is made of colorless transparent plastic, the refill will be visible. In the latter case, the sleeve is of a length sufficient to cover and close the apertures 18.

In order to provide a convenient means for removal of a base from the receptacle of the holder prior to inserting a new refill, the rim of the base may be provided with a small lug 20 to be engaged by any convenient tool.

It will be understood that the invention may be variously modified and embodied within the scope of the subjoined claims.

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I claim as my invention:

1. A refill cartridge for ejecting a cosmetic stick refill into a receptacle of a holder, comprising, a base having a recess therein, a cosmetic stick refill, one end of which projects into and is supported within said recess and the other end of which protrudes from said recess, a cap having a recess therein receiving the protruding end of said refill, said base and cap having abutting end surfaces, and a sleeve surrounding said base and cap having a snug, sliding fit with the outside walls thereof, said sleeve being shorter than the combined length of the base and cap and having a laterally extending surface adapted to seat against an end surface of the holder into which said refill is to be inserted.
2. A refill cartridge as claimed in claim 1 in which said sleeve is provided with a flange forming an additional laterally extending surface adapted to seat against an end surface of the holder into which said refill is to be inserted.
3. A refill cartridge as claimed in claim 1 in which said cap is made of colorless, transparent material, and said sleeve is provided with apertures through which the refill is visible.
4. A refill cartridge as claimed in claim 1 in which said sleeve is made of colorless, transparent material, and said cap is provided with apertures through which the refill is visible, said apertures being covered and closed by said sleeve.
5. A refill cartridge as claimed in claim 1 in which said base and cap have cylindrical outer walls of equal and uniform diameter throughout their lengths, and in which said sleeve has a cylindrical inner wall of uniform diameter throughout its length.

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