

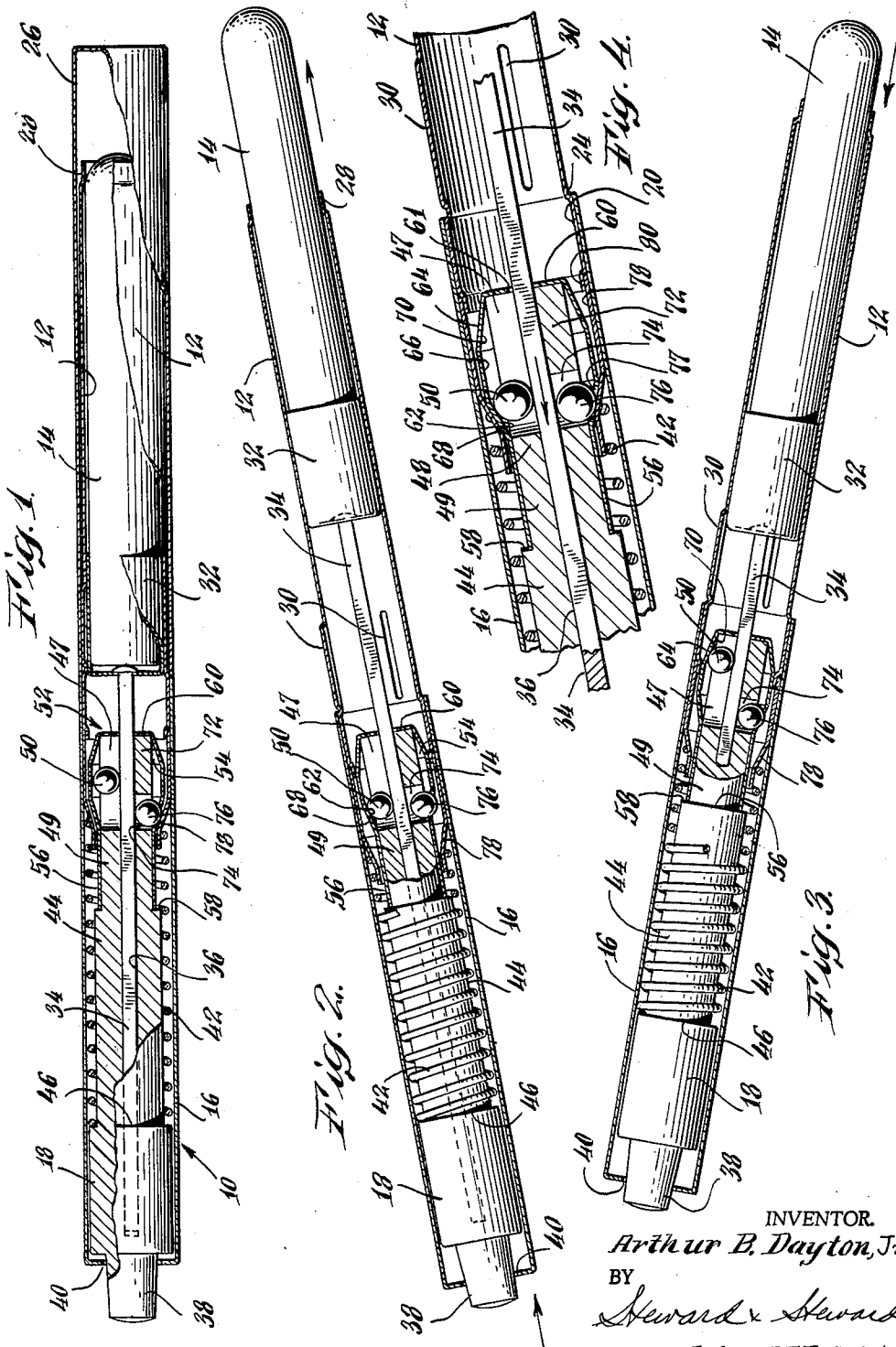
Oct. 29, 1963

A. B. DAYTON, JR  
COSMETIC CONTAINER

3,108,687

Filed Feb. 7, 1962

2 Sheets-Sheet 1



INVENTOR.  
Arthur B. Dayton, Jr  
BY  
Steward & Steward  
his ATTORNEYS

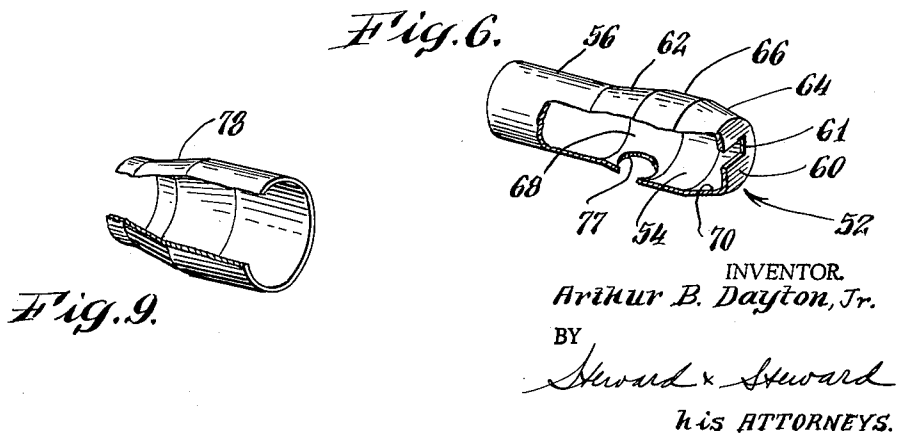
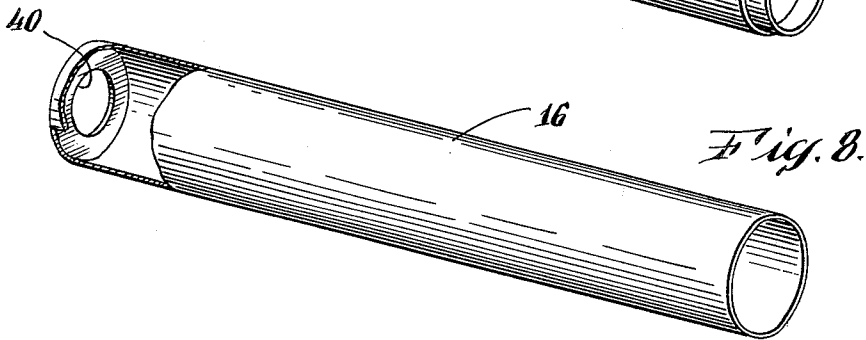
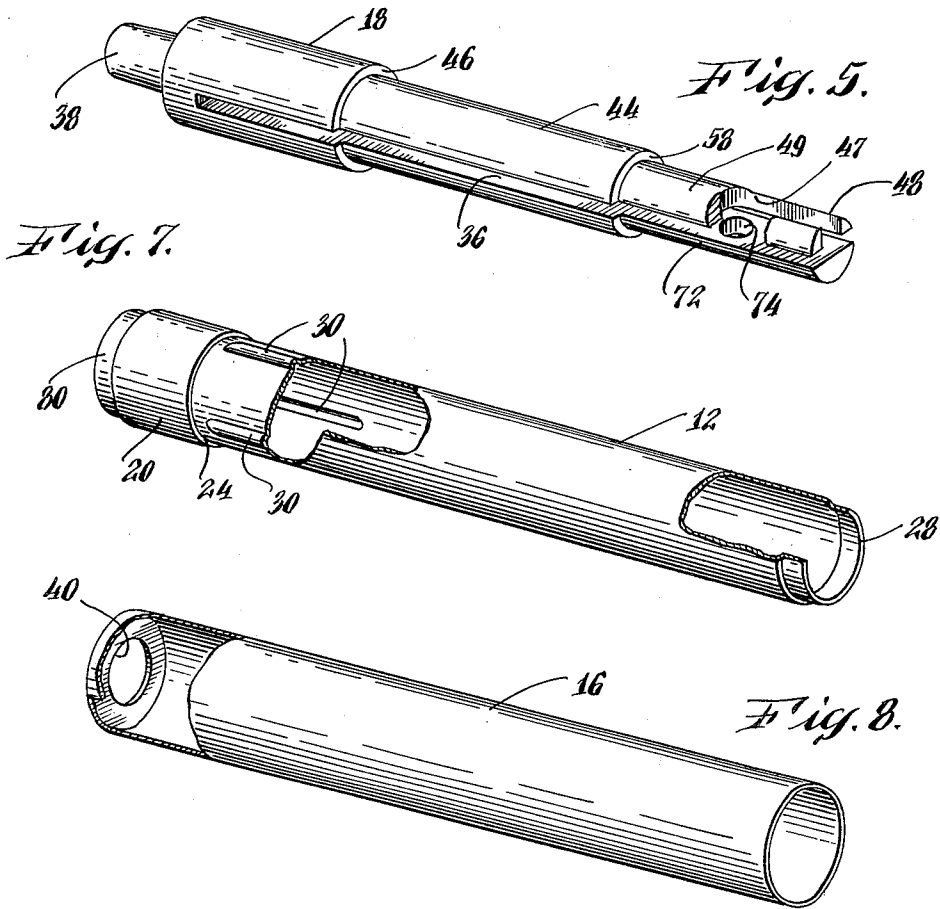
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INVENTOR.  
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BY  
*Stward x Stward*  
his ATTORNEYS.

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## COSMETIC CONTAINER

Arthur B. Dayton, Jr., Middlebury, Conn., assignor to The Riston Manufacturing Company, Naugatuck, Conn., a corporation of Connecticut

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7 Claims. (Cl. 206-56)

The invention relates generally to containers for long, thin stick-like materials such as pencil leads and the like and, especially to containers in which a cosmetic in stick form, such as a lipstick or eyebrow pencil, is adapted to be advanced and retracted.

One object of the invention is the provision of novel and inexpensive actuating means for advancing and retracting a stick-like material relative to the container therefor. Another object of the invention is to provide actuating means that will advance the material quickly and easily.

Briefly, and in general, the invention comprises a container having an outer protective tubular shell that is open at one end. The stick-like material, which may be a pencil lead, cosmetic stick or other similarly shaped material or article, is located within the tubular shell in an article holder and is adapted to be advanced and retracted through the open end of the shell. An extension is provided for the article holder, preferably in the form of a long, thin blade that extends longitudinally away from the open end of the shell. The extension is received in an opening formed in a reciprocable plunger positioned in the shell at the end opposite the open end and gravity actuated clutch means are provided on the plunger for selectively coupling the plunger to the blade-like extension on either the inward or outward stroke of the plunger. When the plunger is coupled to the blade on the inward stroke, the holder is advanced and when the plunger is coupled to the blade on the outward stroke the holder is retracted.

In preferred form the clutch means comprise a ball positioned within a ball retainer housing mounted on the plunger. The ball retainer housing has oppositely inclined surfaces for wedging the ball against the blade either on the inward or outward stroke of the plunger. Selection is made by tilting the forward end of the container downwardly if coupling is desired on the return, or outward, stroke or by tilting the forward end of the container upwardly if coupling is desired on the inward stroke of the plunger.

A presently preferred embodiment of the invention is illustrated in the accompanying drawings and this form of the invention will be described in detail hereinafter. However, it is to be understood that this disclosure is by way of example only and that the invention may take other specific forms as well.

In the drawings:

FIG. 1 is a longitudinal sectional view through a lipstick container made in accordance with the teachings of the invention showing the positions of the parts when the container is not tilted;

FIG. 2 is a longitudinal sectional view through the lipstick container of FIG. 1 showing the container tilted upwardly and the plunger partially depressed inwardly after several prior actuations;

FIG. 3 is a longitudinal sectional view through the lipstick container showing the container tilted downwardly and the plunger on its rearward, or outward stroke;

FIG. 4 is a partial, sectional view showing the locking action of the lower ball;

FIG. 5 is a plan view of the plunger;

FIG. 6 is a bottom view of the ball retainer housing;

FIG. 7 is a side view, partly in section, of the forward section of the outer shell;

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FIG. 8 is a side view, partly in section, of the rearward section of the outer shell; and

FIG. 9 is a side view, partly in section, of the tubular piece that fits on the inner end of the forward section of the outer shell.

The lipstick container shown in the drawings has an outer protective tubular shell 10 that serves as a housing for the lipstick pomade and the actuating means that advance and retract the pomade inwardly and outwardly of the outer shell. The shell 10 is formed of two parts, a forward section 12 which serves as the casing for the lipstick pomade 14 and a rearward section 16 which encloses an operating plunger 18 for the pomade.

As is best seen by reference to FIG. 7, the forward section 12, or A shell as it is known, is a tubular shell that is open at both ends. Adjacent its rearward end the A shell has a portion of increased diameter that forms a circumferential bulge 20 on the shell. The diameter of this bulge 20 is such as to be a press fit when inserted into the open end 22 of the rearward section 16 of the outer shell 10. This frictional engagement of the A shell 12 with rearward section 16, or D shell as it is known, disposes the front edge of the D shell at the front edge of the bulge 20 on the A shell. The change in diameter at the front edge of the bulge results in a shoulder 24 that serves as a stop for a cover cap 26 that fits over the open end 28 of the container 10 and encloses the A shell 12. Three nibs 30, 30 are located on the A shell 12 just forward of the bulge 20 to provide a removable friction fit between the cover cap 28 and the A shell.

One end of the lipstick pomade 14 is fitted into a carrier cup, or holder, 32 that is disposed within the A shell 12. Sufficient clearance is provided between the carrier 32 and the A shell 12 to enable the carrier cup to freely move longitudinally of the A shell. A long blade-like extension 34 is secured to the center of the bottom wall of the carrier cup 32 and extends longitudinally of the container in a direction away from the opening at the forward end 28 of the outer shell 10.

The extension 34 on the carrier cup 32 is received in a central opening, or recess, formed in the manually actuated plunger 18 located in the D shell 16. In the container shown, the plunger 18 has a longitudinal slot 36 running for almost its entire length along the centerline and the slot 36 serves as the opening for the extension 34. The plunger 18 is located within the D shell 16 and has a finger portion 38 at one end that extends through an aperture 40 in the end of the shell. A coil spring 42 positioned between the plunger 18 and the rear of the A shell 12 continuously urges the plunger rearwardly against the end of the shell 16 and the finger portion 38 outwardly beyond the end of the shell 16. To provide sufficient space between the plunger 18 and the D shell 16 for the spring 42, the diameter of the plunger is reduced at its central portion 44 and the shoulder 46 formed by the change in diameter serves as a bearing surface for one end of the spring 42.

Gravity actuated clutch means are provided for selectively coupling the plunger 18 to the extension 34 or either the inward or outward stroke of the plunger. These clutch means are preferably located at the inner end of the plunger.

In the form of the invention shown in the drawings the plunger 18 has a short longitudinal slot 47 formed in the upper part 48 of the inner end 49 of the plunger 18. The slot 47 intercepts the long slot 36 formed along the centerline of the plunger. A ball 50 is placed in the short slot 47 and is free to roll along the upper surface of the blade-like extension 34.

The ball 50 is retained within the slot 47 by a ball retainer housing 52. The housing 52 comprises an ovoid

chamber 54 with a cylindrical skirt 56 that is open at its free end so that the housing may be mounted on the plunger 18. Mounting of the housing 52 on the plunger is effected by inserting the housing onto the inner end 49 of the plunger. The diameter of the inner end 49 of the plunger is less than that of the central portion 44 and the shoulder 58 formed by the change in diameters acts as a stop for the end of the skirt 56. In the normal position of the housing 52 the plunger 18 extends all the way into the cavity of the chamber 54 and butts against the end wall 60 of the chamber. A slot 61 is provided in the end wall 60 of housing 52 to accommodate the extension 34.

The chamber 54 constitutes an enlargement at the end of the cylindrical skirt 56 and is formed by two truncated conical sections 62, 64 that are each joined to a central cylindrical section 66. The diameter of the cylindrical section 66 is great enough to accommodate the ball 50 with enough clearance to permit the ball to roll freely in the slot 47. However, the two truncated conical sections 62, 64 present oppositely disposed inclined surfaces 68, 70 that slope inwardly to limit the rolling movement of the ball 50. As a result, movement of the ball 50 into either of the sections 62, 64 will wedge the ball inwardly against the blade-like extension 34.

While the upper half 48 of the inner edge 49 of the plunger 18 has a longitudinal slot 47 formed therein, the lower half 72 of the inner edge of the plunger simply has an opening 74. A second ball 76 is located within the opening 74 inside the ball retainer housing 52, insertion of the ball 76 in the housing 52 being effected through an opening 77 in the bottom of the chamber 54. The ball retainer housing 52 fits within an open ended tubular piece 78 which is press fitted onto the back end 80 of the A shell 12. The open end of the tubular piece 78 turns radially inwardly to closely overlie the first truncated conical section 62 of the ball retainer housing 52 and the opening 77 when the plunger 18 is in its rearmost position. In this position of the plunger, the ball 76 is retained within the opening 74 by the tubular piece 78.

In the operation of the device the cap 26 is first removed to expose the open end 28 of the outer shell 10. The container is then tilted upwardly so that the forward end is higher than the rear end. Tilting the container into this position causes the ball 50 in the slot 47 to roll rearwardly until it is wedged between the first truncated conical section 62 and the blade-like extension 34. In this way the plunger 18 is coupled to the extension 34.

With the container 10 in the tilted position, the plunger 18 is then repeatedly pressed inwardly. On each inward stroke of the plunger 18, the blade-like extension 34 and the carrier 32 for the pomade 14 are advanced toward the open end 28 of the container because of the ball 50 that is wedged between the inclined surface 68 and the blade 34. However, on each rearward, or return, stroke of the plunger 18 the ball 50 is rolled forward relative to the ball retainer housing 52 and out of its wedged position with the extension 34. The coupling of the plunger 18 to the extension 34 is thus broken during the return stroke and no retraction of the blade occurs. Once the pomade 14 has been advanced beyond the end 28 of the container to the desired extent, it can be applied to the user's lips. In applying it against the lips a rearward pressure is developed on the pomade which tends to push the pomade back into the container. Any rearward movement of the blade 34, however, is checked by the ball 76 in the opening 74 because rearward movement of the blade 34 will wedge the ball 76 between the blade 34 and the intumed end of the tubular piece 78 and prevent all but the slightest inward movement of the pomade 14.

To retract the pomade 14 after use, the container is tilted downwardly, that is, the forward end of the container is disposed below the rearward end. This tilting of the container 10 rolls the ball 50 to the inner end of the ball retainer housing 52 and the ball becomes wedged be-

tween the inclined surface 70 on the second truncated conical section 64 and the blade 34. The plunger 18 is thereby coupled to the blade during its rearward stroke and the blade 34 and pomade 14 are retracted inwardly on each rearward movement of the plunger 18 until the pomade is again inside the outer shell 10.

What is claimed is:

1. A container for housing a stick-like article, said container comprising

(a) an outer protective tubular shell open at one end, (b) an article holder positioned in the outer shell and having a longitudinal extension secured thereto, said extension extending away from the open end of the outer shell,

(c) a longitudinally reciprocable plunger within the outer shell adjacent the end opposite said open end, said plunger extending partly beyond the outer shell and surrounding the extension on the article holder, and

(d) gravity actuated clutch means secured to the plunger for selectively coupling the plunger to the extension on either the inward or outward stroke of the plunger to advance or retract the article holder relative to the outer shell.

2. A container for housing a stick-like article, said container comprising

(a) an outer protective tubular shell open at one end and closed at the other, said closed end having an aperture,

(b) an article holder positioned in the outer shell and having a longitudinal extension secured thereto extending in the direction of the closed end of the outer shell,

(c) a longitudinally reciprocable plunger within the outer shell adjacent said closed end, said plunger extending partly beyond the outer shell through the aperture in the closed end and having an internal recess to receive the extension on the article holder, and

(d) gravity actuated clutch means secured to the plunger for selectively coupling the plunger to the extension on either the inward or outward stroke of the plunger to advance or retract the article holder relative to the outer shell.

3. A container for housing a cosmetic in stick form, said container comprising

(a) an outer protective tubular shell open at one end and closed at the other, said closed end having an aperture therein,

(b) a cosmetic holder located within the outer shell and provided with a blade-like extension in the direction of the closed end of said shell,

(c) a longitudinally reciprocable plunger in the outer shell adjacent said closed end, said plunger extending partly beyond the outer shell through the aperture in the closed end and having an opening provided therein into which said blade-like extension extends, and

(d) gravity actuated clutch means at the inner end of the plunger for selectively coupling the plunger to the extension on either the inward or the outward stroke of the plunger to advance or retract the cosmetic holder relative to the outer shell.

4. A container for housing a stick-like article, said container comprising

(a) an outer protective tubular shell open at one end,

(b) an article holder located within the outer shell and provided with a longitudinal extension extending in a direction opposite the open end of the outer shell,

(c) a longitudinally reciprocable plunger in the outer shell adjacent the end opposite the open end, said plunger extending partly beyond the outer shell and having an opening to receive the extension on the article holder, and

(d) gravity actuated clutch means in the form of a ball and a housing for the ball on the plunger said

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housing having oppositely inclined surfaces for wedging the ball against the extension on the article holder whereby said plunger may be selectively coupled to the extension either on the inward or outward stroke of the plunger.

5. A container for housing a cosmetic in stick form, said container comprising
- (a) an outer protective tubular shell open at one end and closed at the other, said closed end having an aperture therein,
  - (b) a cosmetic holder located within the outer shell and provided with a long blade-like extension in the direction of the closed end of the outer shell,
  - (c) a spring biased reciprocable plunger in the outer shell adjacent the closed end, said plunger extending partly beyond the outer shell through the aperture in the closed end and having a central opening into which extends the blade-like extension on the cosmetic holder, and
  - (d) gravity actuated clutch means in the form of a ball and a housing for the ball on the inner end of

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the plunger, said housing having oppositely inclined surfaces for wedging the ball against the blade-like extension on the article holder whereby said plunger may be selectively coupled to the extension either on the inward or outward stroke of the plunger.

6. A cosmetic container as set forth in claim 5 wherein said plunger is provided with means for preventing unwanted rearward movement of the extension.
7. A cosmetic container as set forth in claim 6 wherein said means comprise a ball positioned in an opening in the plunger and an inclined surface for wedging the ball against the extension upon rearward movement thereof.

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