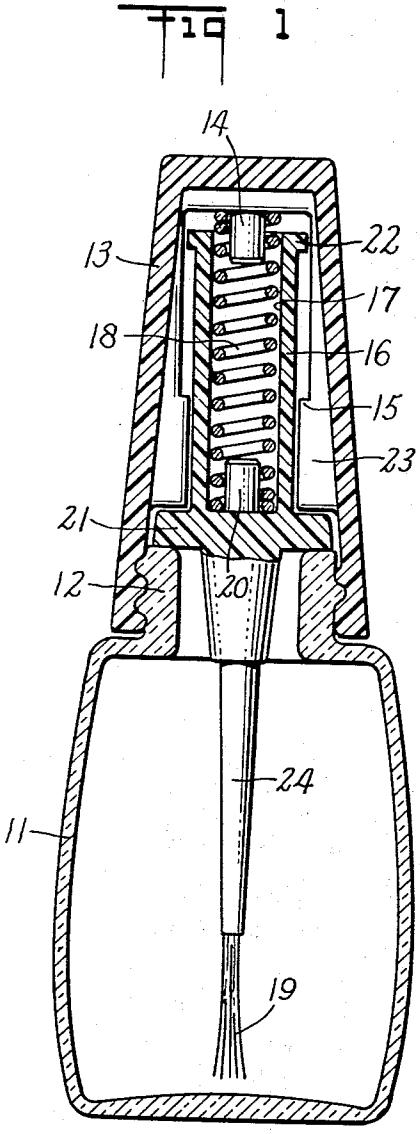
Aug. 29, 1967 E. I. SCHEFER ETAL 3,337,901

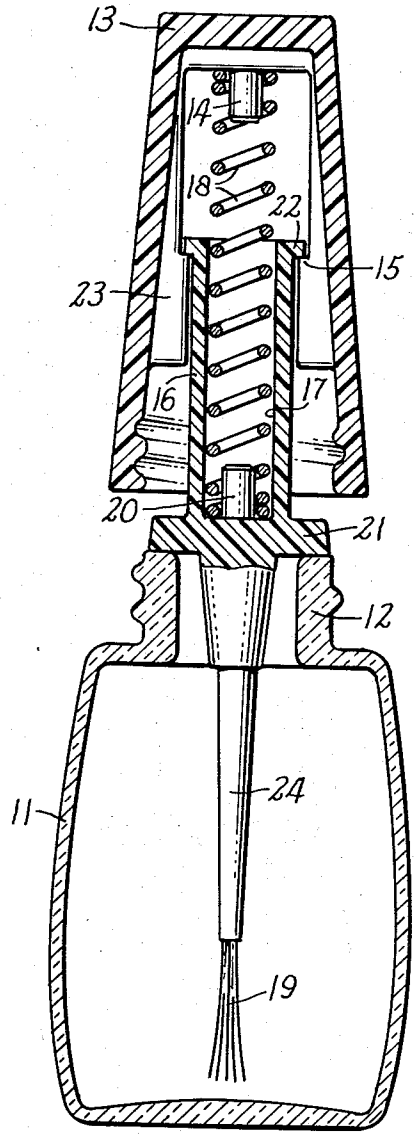
CONTAINER HAVING CLOSURE ATTACHED APPLICATOR

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Fig 2

Fig 1





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CONTAINER HAVING CLOSURE ATTACHED APPLICATOR

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ABSTRACT OF THE DISCLOSURE

A necked container for fluid including a closure cap and a spring-loaded brush-applicator having a hollow barrel, retractably extending into the closure cap, in which barrel a compressible spring is mounted. The applicator extends across and seals the top of the container neck and has a ferrule and brush reaching to the container bottom whether or not the closure cap is affixed.

This invention relates to dispensing containers for fingernail enamel and the like, and particularly relates to such dispensing containers having closure means, including attached brush means, which enable maximum utilization of the enamel content of the dispensing container by the consumer.

In conventional dispensing containers for fingernail enamel, brush means for applying the enamel to the fingernail are conventionally attached to screw-type closure means. In such containers, the brush applicator is securely affixed to the closure means and extends to its maximum depth into the container and into the fingernail enamel therein when the closure means are in fully closed position. Conversely, when the closure means are in open position so that the brush applicator can be removed for polish application, the brush extends to its minimum depth into the container and its enamel content. Thus when the brush is in use as an applicator for the enamel, it has minimum access to the full depth of enamel in the container.

As a result, conventional dispensing containers for fingernail enamel do not permit maximum utilization of the container contents. Rather, a considerable amount of fingernail enamel is left in the container when the brush means attached to the closure no longer reach the enamel remaining in the container. To extract further amounts of enamel, the closure must either be screwed into fully closed position and again unscrewed each time more polish is to be picked up by the brush, or the container must be tipped. Both these alternatives are inconvenient and time consuming.

According to the present invention, dispensing containers are provided having applicator-equipped closure means of a type wherein the dip-level of the applicator into the contents of the dispensing container is the same whether the closure is in the open or closed position. The dispensing containers of the present invention permit maximum utilization of their contents, as will be clear hereinafter.

The dispensing containers of the invention have closure means provided with spring-loaded applicator means movably mounted in said closure means. With the closure means in closed position on the dispensing container, portions of the applicator means retract into the closure, while other portions extend to a convenient depth in the contents of the dispensing container. On opening of the closure means, closure means and applicator means move relative to one another to permit full disengagement of the closure means and the container while maintaining the same depth of projection of the applicator means into the dispensing container.

A better understanding of the invention and of its many

advantages may be had by referring to the accompanying drawing, in which:

FIG. 1 is a side sectional view of a dispensing container according to the present invention showing the closure means and associated applicator means in closed position on the dispensing container; and

FIG. 2 is a side sectional view showing the same container with the closure means in open position.

Referring now in detail to FIGS. 1 and 2, and employing the same reference characters for the same parts of these figures, the figures show a dispensing container for fingernail enamel or the like comprising container means **11**, such as a glass bottle, for receiving and holding fingernail enamel. Container **11** has threaded neck portion **12** to which closure means such as threaded screw cap **13**, suitably of plastic or the like, is removably affixed.

Interior portions of cap **13** are provided with spring retaining means such as nipple **14**, and shoulder means **15**. Movably mounted within interior portions of cap **13** is piston member **16** having central cavity **17** for reception of helical spring **18** and fitted in that terminal portion extending into container means **11**, with applicator means shown as brush **19** and ferrule **24**. For assistance in retaining helical spring **18**, piston member **16** may be provided in central cavity **17** with second spring retaining means such as nipple **20**. Flared portion **21** of piston member **16** extends across threaded neck portion **12** of container means **11** and seals container means **11** with the cap in either open or closed position.

As is evident from FIG. 1, with screw cap **13** in closed position on container means **11**, spring **18** is compressed between first and second spring retaining means **14** and **20** so that piston member **16** is retracted within interior portions of cap **13**. Brush **19** extends substantially to the bottom of container **11**. With cap **13** in open position, as shown in FIG. 2, helical spring **18** assumes an uncompressed position and forces screw cap **13** upward relative to piston member **16**. Brush **19** thus extends to the same depth in container means **11** as with cap **13** in closed position. The relative movement of piston member **16** and cap **13** is governed by engagement of ledge portions **22** of member **16** with shoulder means **15** within cap **13**.

For purposes of manufacture, the interior features of cap **13**, such as first spring retaining means **14** and shoulder means **15**, may be formed as one piece with screw cap **13**. Spring **18** and piston member and application assembly **16**, **19** are then separately formed and inserted into cap **13**. Conveniently, member **16** is made of polyethylene or a like compressible material which can easily be force fitted into interior portions of cap **13** by temporary distortion of ledge portions **22**.

Alternatively, cap **13** may be formed in interior portions to be of clean cross-section. In this case, separate insert **23** is fitted into interior portions of cap **13** to provide features such as first spring retaining means **14** and shoulder means **15**. When interior portions of cap **13** are formed as separate insert **23**, it may be convenient to preassemble insert **23** with spring **18** and piston member **16** and to insert the resultant unit as a whole into separately formed cap **13**.

What is claimed is:

1. In dispensing apparatus for fingernail enamel and the like, said apparatus comprising a container for holding said enamel and having a neck portion with an open top, and closure means for said container cooperatively engageable with the neck portion thereof, the combination which comprises applicator means having a flared portion extending across the open top of said neck portion to seal said container, ferrule and brush means below said flared portion extending substantially to the bottom of said container, and a hollow barrel above said flared portion,

said barrel being movably disposed within said closure means, a helical spring in said hollow barrel which is compressed within said barrel when said closure means are engaged with the neck portion of said container, and cooperative means in said closure means and on said barrel for retaining said barrel within said closure means on decompression of said helical spring by disengagement of said closure means and the neck portion of said container.

2. Apparatus as in claim 1 wherein said hollow barrel includes a flared terminal portion within said closure means, and said closure means include an inward constriction cooperating with said flared terminal portion to retain said barrel within said closure means.

References Cited

UNITED STATES PATENTS

1,676,812 7/1928 Astley ---------- 15—581

FOREIGN PATENTS

101,022 3/1941 Sweden.

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