May 22, 1962 B. WATTLES 3,035,300

LIQUID APPLICATOR PACKAGE

Filed Jan. 23, 1961

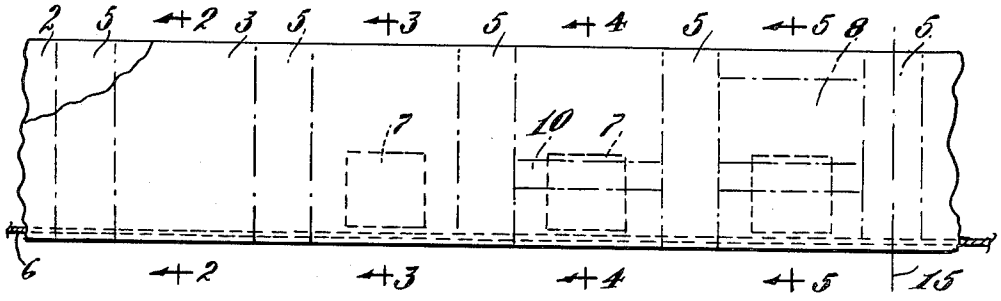

Fig. 1

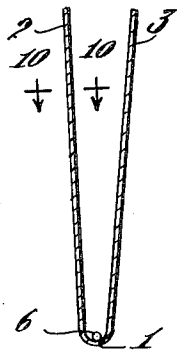

Fig. 2

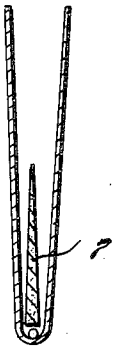

Fig. 3

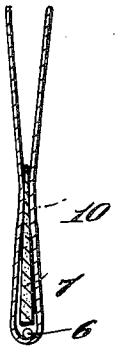

Fig. 4

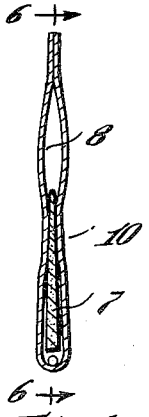

Fig. 5

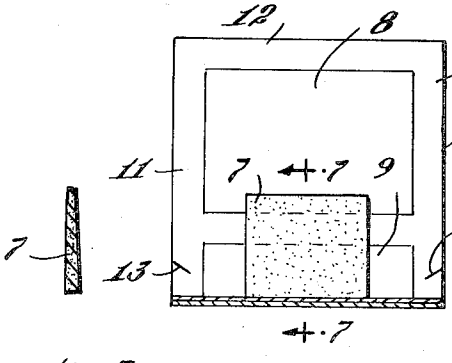

Fig. 7

Fig. 6

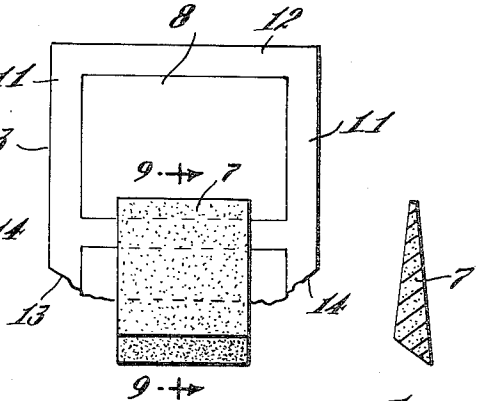

Fig. 8

Fig. 9

Fig. 10

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LIQUID APPLICATOR PACKAGE

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10 Claims. (Cl. 15—563)

While this invention relates particularly to disposable shoe polish applicators it is useful in spreading any kind of liquid.

Objects of the invention are to provide an applicator which is simple and compact, which can be produced rapidly and economically with standard machinery, which is substantially leakproof, which can be opened easily and quickly, which does not drip when opened, which fits the hand in use and which spreads polish or other liquid quickly and uniformly.

According to this invention the applicator comprises two superposed layers of non-absorbent material such as aluminum foil interconnected around their peripheries with adhesive to form a closed container, in combination with a flat swab and liquid in the container, the aforesaid material being tearable across the swab portion to expose one edge of the swab, the swab being sealed to the container adjacent its opposite edge, being compressed transversely of the aforesaid sides and being expansible by the aforesaid liquid, and the amount of the liquid being less than the swab can absorb when expanded so that the swab does not drip in use. The swab is compressed either transversely of the aforesaid layers or transversely of the aforesaid edges or both. The aforesaid layers are preferably interconnected at a fold along the edge of the container through which the swab protrudes in use and a tear filament is disposed in the fold to facilitate opening the package. The swab preferably tapers away from its protruding edge so that the package fits the hand in use while providing an applicating surface of substantial width.

In a more specific aspect the liquid is disposed in one portion of the container and the swab is located in another portion, the thin edge of the tapered sponge projecting into the liquid portion so that it can absorb the liquid when the package is opened to make the decompressed swab free to expand.

For the purpose of illustration a typical embodiment of the invention is shown in the accompanying drawings in which:

FIG. 1 is a side view of a strip of packages showing the preferred method of production;

FIGS. 2, 3, 4 and 5 are sections on the corresponding lines of FIG. 1;

FIG. 6 is a section on line **6—6** of FIG. 5;

FIG. 7 is a section of the swab taken on lines **7—7** of FIG. 6;

FIG. 8 is a view like FIG. 7 after the package has been opened and the swab has expanded to normal size;

FIG. 9 is a section of the expanded swab taken on the line **9—9** of FIG. 8; and

FIG. 10 is a section on line **10—10** of FIG. 2.

In the illustration the packages are made from a ribbon folded at **1** to form two superposed layers **2** and **3**. As shown in FIG. 10 the ribbon preferably comprises an outer sheet **4** of aluminum foil and an inner coating **5** of polyethylene or other heat-seal material. Disposed in the fold **1** is a filament **6** of nylon, Dacron or the like, preferably untwisted so as better to seal with the polyethylene. Disposed in the bottom of each package is a swab **7** consisting of a cellulose sponge which is preferably compressed transversely of its sides (horizontally in the figures) and also transversely of the fold **1** (vertically in the figures). By using a cellulose sponge the swab will remain compressed until it absorbs liquid and it will adhere well to the polyethylene coating **5**.

The shoe polish or other liquid is placed in the compartment **8** which is sealed off from the swab compartment **9** along the zone **10**. The two layers **2** and **3** are also heat sealed together along the side margins **11** and the end margin **12**. The swab **7** is sealed to the layers **2** and **3** along the zone **10** so that it does not fall out accidentally after the package is opened. As shown in FIGS. 3, 4, 5 and 7 the compressed sponge is tapered toward the end which projects into the liquid compartment. Thus the part which is sealed between the two layers **2** and **3** at **10** is relatively thin. The layers **2** and **3** preferably have cuts **13** and **14** adjacent the fold line so that in opening the package the corners are torn off when the filament **6** is torn out. After the package is opened the sponge **7** is free to expand from the size and shape shown in FIG. 7 to that shown in FIG. 9 and it then protrudes from the package as shown in FIG. 8. Some or all of the liquid may be absorbed by the sponge before the package is opened, depending upon the amount of liquid employed, but in no event should enough liquid be used to saturate the sponge when expanded because that might cause the sponge to drip.

The preferred method of forming the packages is illustrated in FIGS. 1 to 5. Referring to FIG. 1 the ribbon **2—3** is fed intermittently from left to right, the filament **6** being laid in the fold as the two layers **2** and **3** are folded together. After folding the two layers are heat sealed together along the zones **5**. At the next station a sponge **7** is placed in each pocket. At the next station the two layers are sealed together and to opposite sides of the sponge **7** along the zone **10**. At the next station the liquid is poured into the compartment **8**. At the same station or the next station the edges of the folded ribbon are sealed together at **12** and the packages are cut apart along the lines **15** which bisect the zones **5**.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

I claim:

1. An applicator comprising two superposed layers of non-absorbent material interconnected around their peripheries to form a closed container, a flat swab and liquid in the container, said material being tearable across the swab portion to expose one edge of the swab, the swab being sealed to the container adjacent its opposite edge, said swab being compressed transversely of said layers and being expansible by said liquid, and the amount of said liquid being less than swab can absorb when expanded.

2. An applicator comprising two superposed layers of non-absorbent material interconnected around their peripheries to form a closed container, a swab and liquid in the container, said material being tearable across the swab portion to expose one edge of the swab, the swab being sealed to the container adjacent its opposite edge, and the swab being compressed transversely of said edges and being expansible by said liquid so that said edge protrudes when the material is torn.

3. An applicator according to claim 1 further characterized in that the swab is also compressed transversely of said edge so that the edge protrudes when the material is torn as aforesaid.

4. An applicator according to claim 1 further characterized in that said layers are integrally connected at a fold along one edge of the container, a tear filament is disposed in the fold, and said edge of the swab is disposed at said fold.

5. An applicator according to claim 1 further characterized in that the swab is tapered toward its opposite edge.

6. An applicator comprising two superposed layers of

non-absorbent material interconnected around their peripheries to form a closed container, liquid in one portion of the container, and a flat swab in another portion of the container, a part of the swab being disposed in said one portion of the container so that the swab can absorb said liquid, said material being tearable across the swab portion to expose one edge of the swab, the swab being sealed to the container adjacent said liquid portion to hold the swab when the container is torn as aforesaid, said swab being compressed transversely of said layers and being expansible by said liquid.

7. An applicator according to claim 6 further characterized in that the swab is also compressed transversely of said edge so that the edge protrudes when the material is torn as aforesaid.

8. An applicator according to claim 6 further characterized in that the swab is tapered in thickness toward said liquid portion.

9. An applicator according to claim 6 further chararterized in that the amount of said liquid is less than the swab can absorb when expanded.

10. An applicator comprising two superposed layers of non-absorbent material interconnected around their peripheries to form a closed container, liquid in one portion of the container, and a swab in another portion of the container, a part of the swab being disposed in said one portion of the container so that the swab can absorb said liquid, said material being tearable across the swab portion to expose one edge of the swab, the swab being sealed to the container adjacent said liquid portion to hold the swab when the container is torn as aforesaid, said swab being compressed transversely of said edge and being expansible by said liquid so that said edge protrudes when the material is torn.

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