United States Patent

Seidler

[15] **3,694,096**

[45] **Sept. 26, 1972**

[54] **POWDER OR CREAM DISPENSER WITH SELF-CONTAINED APPLICATOR**

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[73] Assignee: **Menley & James Laboratories,** Philadelphia, Pa.

[22] Filed: **Sept. 23, 1970**

[21] Appl. No.: **74,596**

[52] **U.S. Cl.** **401/127,** 132/79

[51] **Int. Cl.** **A45d 33/00**

[58] **Field of Search** ..... 401/127; 132/79 R

[56] **References Cited**

UNITED STATES PATENTS

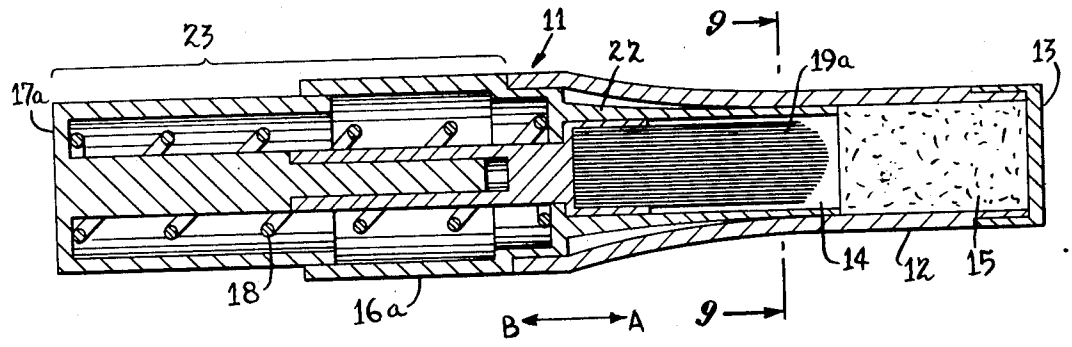
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Primary Examiner—Lawrence Charles
Attorney—Ernest F. Marmorek

[57] **ABSTRACT**

A powder or cream dispenser with a self-contained applicator is comprised of a casing having a reservoir adapted to receive a dispensable material, a holder movably mounted on the casing and including a reciprocably movable plunger attached to the holder; an applicator disposed at one end of the plunger is movable therewith when the holder is mounted on the casing. The applicator as well as the plunger are movable in opposite directions between a projected position wherein the applicator projects into the reservoir and thereby makes contact with the dispensable material and, respectively, a retracted position in which the applicator is clear of the reservoir.

4 Claims, 9 Drawing Figures



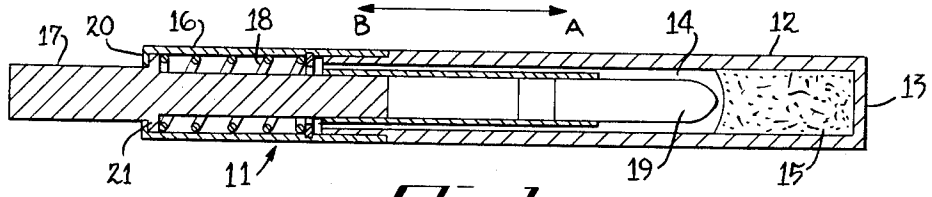


Fig 1

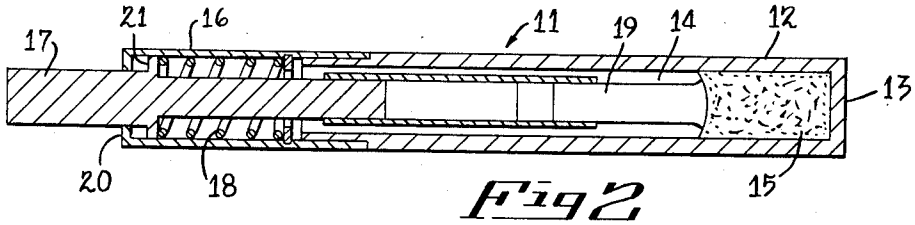


Fig 2

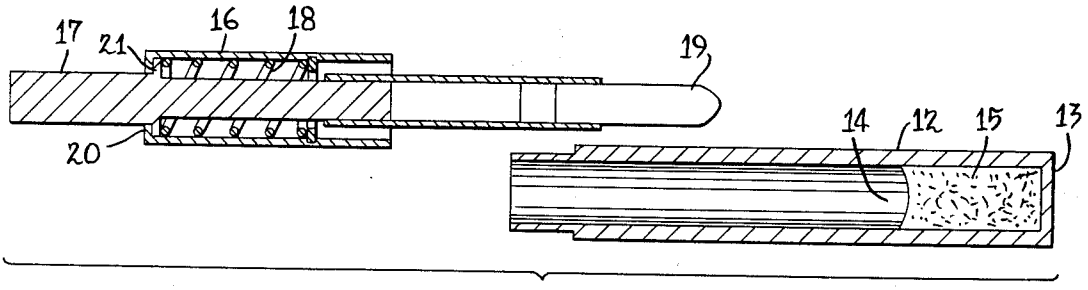


Fig 3

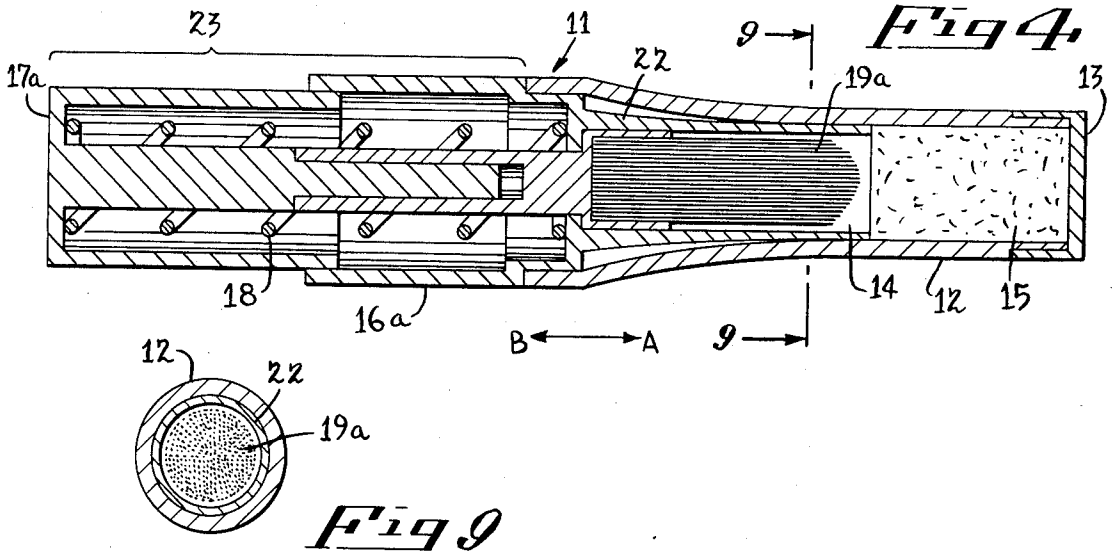


Fig 4

Fig 9

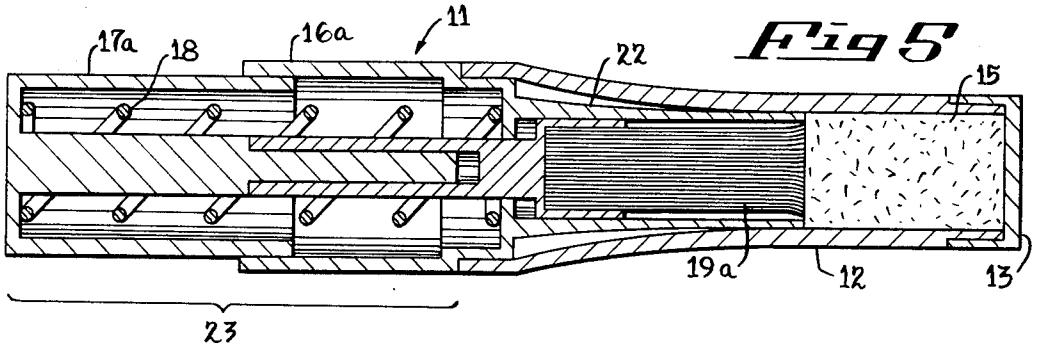


Fig 5

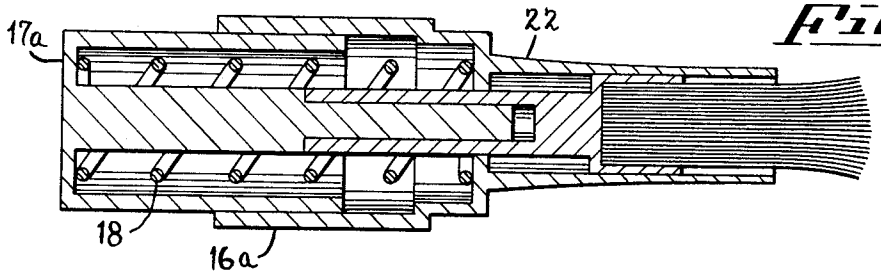
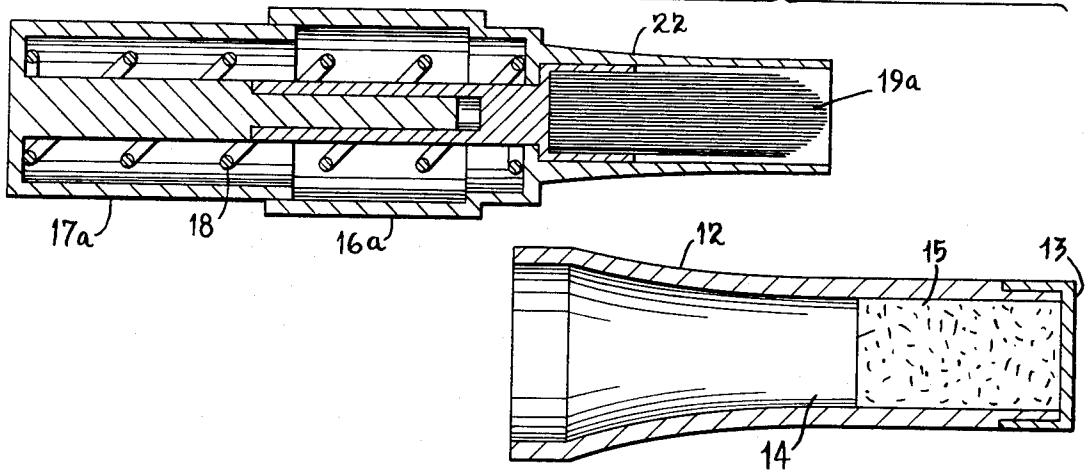


Fig 6

Fig 7



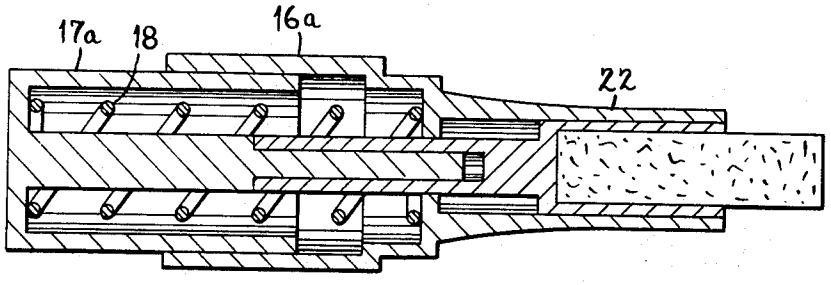


Fig 8

POWDER OR CREAM DISPENSER WITH SELF-CONTAINED APPLICATOR

The invention relates to dispensers, and relates more particularly to dispensers for dispensing onto a surface flowable material; still more particularly, the invention relates to a dispenser for applying a powder or a cream to various surfaces by using s self-contained applicator in the dispenser. The material may primarily be applied to surfaces such as the eyelids, the face, the cheeks, or other skin parts of a person, but may also be used for art work.

Desirable features for such dispensers include reliability of dispensing, and rapidity in handling, and these features generally are provided by cosmetic dispensers previously disclosed. For instance, it has been known to construct cosmetic devices wherein a spring is continuously pressing the applicator toward the material It is also known to place a spring behind the material to be applied, hereby biasing the material towards the applicator. This also, however, always keeps the material and applicator in contact. These features are shown in U.S. Pat. No. Re. 21,757.

On the other hand, it is also known to omit using spring means and in the alternative to provide for an applicator which follows the decrease in dispensable material by continuously moving downward, mechanically, in the direction of decrease. The foregoing ensures that the applicator will always be in contact with the material. This feature is shown in U.S. Pat. No. 2,245,906.

These cosmetic dispensers, however, are deficient in that they do not generally provide for automatic dispensing, one-hand operation of the device, or the saving of the material therein. Furthermore, they are not adapted to prevent the applicator from constantly being in contact with the material to be applied.

SUMMARY OF THE INVENTION

It is accordingly among the principal objects of the instant invention to avoid the drawbacks of the prior art.

It is another object of the invention to provide a device which has but a few parts and is inexpensive to make and use.

It is a further object of the invention to provide a dispenser for powder or a creamy material that is relatively uncomplicated, reliable, simple to operate and is constructed so as to almost eliminate waste and overapplication.

Further objects and advantages of the invention will be set forth in part in the following specification and in part will be obvious therefrom without being specifically referred to, the same being realized and attained as pointed out in the claims hereof.

The instant invention provides for a dispenser with a self-contained applicator which is prevented from making contact, on its own, with the material to be dispensed. The operator is able to control the contact between the applicator and the material and hence the amount of material thereon. In other words, when the device is in use, it will have a controllable amount of material thereon, which amount is controlled by the applicator, thereby obviating waste, unnecessary expense and the trouble of applying the material too thickly.

The foregoing is enhanced by the fact that the applicator is always kept free of contacting the dispensable material except when the operator wishes contact to be made. The operator is able to control same by merely depressing a portion of the device to which the applicator is contacted, the depression thereof causing a spring means which ordinarily urge the applicator away from the dispensable material, to yield under pressure.

With the above and other objects of the invention in view, the invention consists in a novel construction, arrangement and combination of various devices, elements and parts, as set forth in the claims hereof, certain embodiment of same being illustrated in the accompanying drawings and described in the specification.

BRIEF DESCRIPTION OF THE DRAWINGS

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description, taken in connection with the accompanying drawings, in which:

FIG. **1** is a fragmentary vertical sectional view of an embodiment of a powder or cream dispenser with a self-contained applicator showing the holder positioned in the casing, at rest, free from contact with the material;

FIG. **2** is a fragmentary vertical sectional view similar to FIG. **1** but showing the applicator in the projected position making contact with the dispensable material;

FIG. **3** is a fragmentary vertical sectional view similar to FIG. **1** but showing the casing removed;

FIG. **4** is a fragmentary sectional view similar to FIG. **1** but showing a modification;

FIG. **5** is a vertical sectional view similar to FIG. **4**, but showing the applicator in the projected position with the tip thereof touching the dispensable material;

FIG. **6** is a fragmentary sectional view similar to FIG. **4** but showing the casing removed from the applicator and the plunger depressed;

FIG. **7** is a fragmentary vertical sectional view similar to FIG. **4**, but showing the applicator in the projected position with the casing removed and the plunger retracted;

FIG. **8** is a fragmentary vertical sectional view similar to FIG. **5** but showing a further modification; and

FIG. **9** is a sectional view taken along the line **9—9** of FIG. **4**.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In carrying the invention into effect in the embodiments which have been selected for illustration in the accompanying drawings and for description in the specification, there is provided a powder or cream dispenser with a self-contained applicator generally indicated at **11**. It includes a housing or casing structure **12** having a bottom wall **13**, which in a preferred embodiment may be removable. The casing **12** defines a reservoir **14** for a powder, creamy material or cake-like material **15** to be dispensed. In a preferred embodiment the dispensable material **15** will be a powder.

A holder **16** is removably, for instance telescopically frictionally, mounted on the casing **12** and operable to be removed therefrom by merely separating the casing

12 from the holder 16. The holder 16 further comprises a plunger 17, which is movable in opposite directions A and B, respectively, between a projected and a retracted position. Resilient means, such as a spring, are provided in the holder 16 for biasing the plunger 17 in the direction B towards the retracted position.

The holder 16, the plunger 17, and the resilient means 18 form part of moving means for the propulsion in the direction B, and retraction in the direction A, of an applicator 19.

The applicator 19 may be constituted by a brush, or by an applicator tip disposed at one end of the plunger 17 and connected thereto. The applicator tip may be composed of a fiber material, a foam material, rubber, a bristle-type material, or a composition from the olefin or polyolefin family.

The movement of the plunger 17 and the applicator 19 disposed thereon in the direction A will bring the applicator 19 into a projected position , in which the applicator 19 projects into the reservoir 14. In that position the applicator 19 makes contact with the dispensable material 15 and receives some of said dispensable material 15. The foregoing is ensured by making the maximum stroke of the plunger 17 with respect to the casing 12 larger than the depth of the reservoir 14.

The instant device admits of kinetic reversion in that the dispensable material 15 can be affixed, for instance if in cake form, to the plunger 17 instead of the tip, and the applicator 19 be placed in the casing 12 from which it can be removed to be applied to a surface.

The movement of the plunger 17 in the direction B is limited by stop means formed by shoulder means 20 disposed at one end of the casing 16 and mating shoulder means 21 disposed at one end of the plunger 17.

OPERATION

The operation of the heretofore described powder or cream dispenser with a self-contained applicator is as follows: The operator merely depresses the plunger 17 thereby causing the applicator 19 attached thereto to move into the casing 12, down through the reservoir 14 and ultimately towards the dispensable material 15, so as to contact same. The operator then releases the plunger 17 thereby allowing the plunger 17 to retract and in so doing the applicator 19 is brought free of contact from the material 15. The operator then disengages the holder 16 from the casing 12 so as to be able to apply thereafter the material 15 which has adhered to the applicator 19. Subsequent applications merely involve re-engaging the housing 23 and the casing 12, and once again depressing the plunger 17.

In the modification shown in FIGS. 5–7, there is provided sheath means 22 disposed at one end of the housing 23 and having an external width smaller than the internal width of said casing 12 and thereby operably to fit therein when the holder 16a is mounted on the casing 12.

An expansible applicator means, such as a brush 19*a*, is disposed at one end of the plunger 17*a* and is operative to move towards and project into the reservoir 14 when the plunger 17*a* is depressed. Depressing the plunger 17*a* will unsheath the brush 19*a* and thereby allow it to make contact with at least a portion of some of the dispensable material 15 in the reservoir 14. The brush 19*a* when in the projected position beyond the end of the sheath 22 will have its bristles flare outward. In that position the width of the free brush end is larger than the internal width of the sheath means 22. Retraction of the brush 19*a* into the sheath means 22 constricts the width of the brush 19*a* sufficiently so that the brush 19*a* can be inserted into the casing 12.

The operation of the above described modification shown in FIGS. 5–7 in similar to that described for the embodiment shown in FIGS. 1–4, except as follows: When the operator depresses the plunger 17*a*, an exposable applicator means such as a brush 19*a*, disposed at one end of the plunger 17*a*, emerges from the sheath means 22 and is thereby unsheathed. The brush 19*a* is then operative to make contact with the dispensable material 15 in the reservoir 14. The operator thereafter releases the plunger 17*a* and the same is operative to return to the retracted position in the direction B. The return thereof causes the applicator 19*a* to return into the confines of the sheath means 22. The operator then disengages the holder 23 from the casing 12 so as to be ready thereafter to apply the material 15 which has adhered to the applicator 19a. Application is renewed by again depressing the plunger 17*a* sufficiently so that the applicator 19*a* again emerges from the sheath means 22 sufficiently for application of the material.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

Having thus described the invention, what I claim as new and desire to be secured by Letters Patent, is as follows:

1. A dispensing device,
comprising in combination,
a tubular casing defining a reservoir for receiving and holding dispensable material,
a holder removably mounted on said casing and including a housing and a plunger reciprocably movable with said holder and relative to said housing connected to and projecting from said housing,
sheath means projecting from said housing and having an external width smaller than the internal width of said casing and telescopingly fitting thereinto when said holder is mounted on said casing,
and radially expansible applicator means disposed at one end of said plunger within said sheath means and operative to move towards and project into said reservoir when said plunger is depressed, said depressing unsheathing said expansible applicator means, and said casing maintaining said applicator means substantially compressed so that the applicator means will make contact with the entire open surface portion of said dispensable material in the reservoir.

2. A device, as claimed in claim 1, and resilient means urging said plunger and therewith said applicator into a retracted position wherein said applicator is clear of said reservoir.

3. A device, as claimed in claim 1, wherein said expansible applicator means is a brush.

4. A device, as claimed in claim 3, wherein said expansible applicator means includes a foam material.

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