Feb. 3, 1942. E. S. MUNROE 2,271,602

POWDER DISTRIBUTOR

Filed April 24, 1941

Fig. 2.

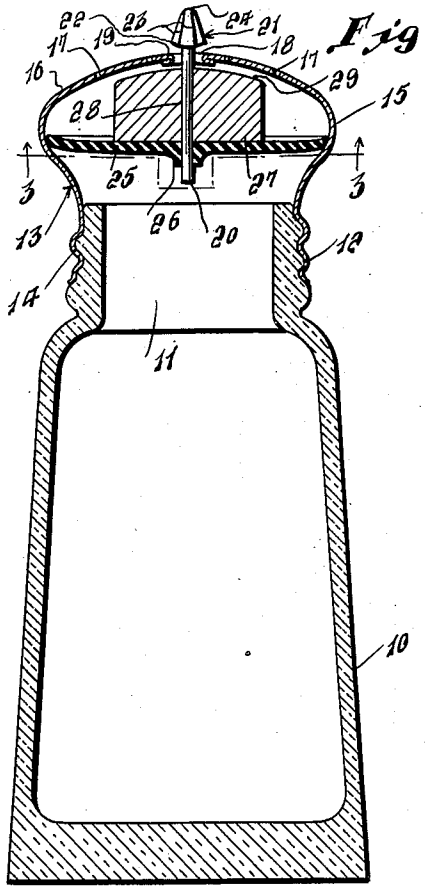


Fig. 1.

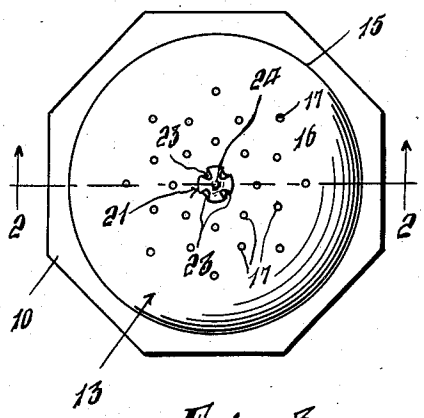


Fig. 3.

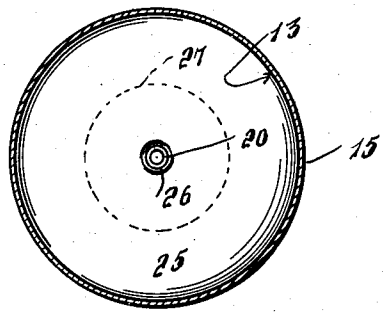
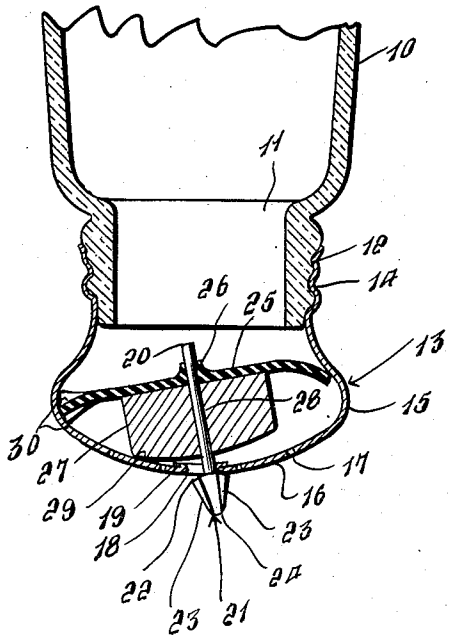


Fig. 4.



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2,271,602

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2,271,602

POWDER DISTRIBUTOR

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Application April 24, 1941, Serial No. 390,207

3 Claims. (Cl. 119—159)

This invention relates to a novel powder dispenser or distributor and more particularly to a dispenser adapted for use in applying powder to the fur of animals.

More particularly, it is an aim of the invention to provide a dispenser or distributor which is adapted to be attached to the open neck of a powder container and by means of which the powder can be dispensed in limited quantities by rocking the container while in an inverted position.

More particularly, it is an aim of the invention to provide a pliable valve member disposed within the cap or cover of the powder container and to which is connected weighted means for agitating the pliable member when the container is rocked to permit a limited amount of powder to pass between the periphery of the pliable member and the wall of the cover.

Still another aim of the invention is to provide a central opening through which the powder is adapted to be primarily dispensed and through which extends a rod, which is attached to the weighted member and pliable member and which is loosely disposed in said opening, said rod being provided with a tapered head at its outer end for distributing the powder passing through said opening and for spreading the hair of the animal so that the powder can readily reach the skin.

Other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, which illustrates a preferred embodiment thereof, and wherein:

Figure 1 is a top plan view of the distributor,

Figure 2 is a longitudinal vertical sectional view taken substantially along the plane of the line 2—2 of Figure 1,

Figure 3 is a cross sectional view taken substantially along the plane of the line 3—3 of Figure 2, and

Figure 4 is a fragmentary longitudinal sectional view, similar to Figure 2, showing the parts in an inverted position and with the movable parts in one of the positions they will assume when the container is rocked.

Referring more particularly to the drawing, wherein like reference characters designate like or corresponding parts throughout the different views, 10 designates generally a vessel or container of any suitable material, as for example glass which is adapted to contain powder, not shown. The container 10 is provided with a restricted open neck 11, at its upper end, through which the powder is adapted to be dispensed and which is externally threaded as seen at 12 to receive a threaded cap or cover, designated generally 13. It is to be understood that the invention, which will hereinafter be described, may be employed with other types of containers than the container 10 which is shown merely for the purpose of illustrating the application of the invention.

The cap or cover 13, as illustrated, is of conventional shape including a restricted threaded end 14 for detachably engaging the externally disposed threads 12. The cap 13, above its threaded end 14 is flared outwardly to form an annular portion 15 which is outwardly bowed in cross section. The outer portion of the cap, as seen at 16, is convex and is provided with a plurality of small apertures 17 disposed around an enlarged centrally disposed opening 18. The cap 13 is provided with a bead on its inner and outer sides, as seen at 19, and which is disposed around the opening 18, for a purpose which will hereinafter become apparent.

A rod 20 extends loosely through the opening 18, said rod, as best seen in Figures 2 and 4, being of a diameter substantially less that that of the opening 18. The rod 20 is provided with a head or knob 21 on its outer end. The head or knob 21 has a convex underside 22 and is tapered longitudinally from its inner to its outer end, said tapered portion being generally conical shaped and being provided with a plurality of longitudinally disposed grooves 23 which diminish in depth toward the outer end 24 of the head 21, as best seen in Figure 1. The end 24 is rounded, as best seen in Figures 2 and 4, for a purpose which will hereinafter become apparent.

A pliable disk 25 is disposed in the cover or cap 13 and is provided with a central opening 26 through which the inner end of the rod 20 extends for connecting the disk 25 to the rod 20. A weight member 27 is attached to the rod 20, by means of a central opening 28 therein through which the rod 20 extends, and is disposed between the pliable disk 25 and the opening 18. The member 27 is provided with an outer convex side or face 29 which substantially conforms to the curvature of the convex portion 16. The disk 25, which is preferably formed of rubber, is of substantially the same diameter as the interior diameter of the largest part of the portion 15 so that the periphery thereof will engage the inner side of the portion 15. The rod 20 extends substantially beyond the convex face 29 so that the head 21 can be substantially spaced from the opening 18.

Assuming that the container 10 is filled with a powder, not shown, to be dispensed and that the dispensing cap or cover 13, and the parts carried thereby, is attached to the neck 11, the weight of the member 27 will normally cause the disk 25 to sag slightly when the container 10 is resting in an upright position, as seen in Figure 2.

By inverting the container 10, as seen in Figure 4, the weight 27 will rest on the interior bead 19 to close the opening 18 and the head 21 will be spaced outwardly from said opening. When thus positioned, the disk 25 will be substantially flat. With the disk substantially flat it will be readily apparent that it will form a valve to prevent the powder from passing from the inner to the outer end of the cap 13. By rocking the inverted container 10, the weight 27 will be rocked on the interior bead 19 as a pivot to cause different portions of the edge or periphery of the disk 25 to be flexed or vibrated, as seen at 30 so that a limited amount of the powder can pass the disk 25 and into the outer or lower end of the cap 13 where a portion of this powder will be dispensed through the apertures 17, partly by the pressure of the member 27 as it swings toward said apertures. The major portion of the powder will be dispensed through the opening 18, around the rod 20 and will be forced therefrom by the convex face 29 and will be agitated while passing through the opening 18 by the portion of the rod 20 which is disposed in said opening. The powder which is dispensed through the opening 18 will strike the rounded inner end 22 of the head 21 and be broadcast thereby onto the surface on which the powder is to be applied and over which the container 10 is disposed. Some of the powder will pass through the grooves 23 and be thereby dispensed in substantially a straight line from the opening 18. The rounded outer end 24 of the head 21 is also intended to be used for spreading the hair, not shown, on an animal on which the powder is to be applied to allow the powder to reach the skin and the end 24 is therefore rounded so that it will not scratch the skin. It will also be readily apparent that by the end 24 engaging the skin of the animal the rod 20 will be more effectively agitated as the container 10 is rocked.

It is to be understood that the invention is equally as well adapted for dispensing powder for other purposes than for treating animals and may obviously be used in conjunction with any type of container.

Various modifications and changes are contemplated and may obviously be resorted to as only a preferred embodiment of the invention has been disclosed.

I claim as my invention:

1. A distributor comprising a cover adapted to be connected to a vessel containing powder, said cover being provided with an enlarged central opening, a rod loosely extending therethrough, a weight member disposed in the cover and through which said rod extends, and a disk of pliable material mounted on the inner end of said rod, the periphery of said disk engaging the inner side of the cover to restrict the movement of powder, to be dispensed through said opening, through the cover, said container being adapted to be rocked when in an inverted position to cause said weight member to rock relatively to the cover for flexing a portion of the periphery of the pliable disk to permit the powder to pass between the periphery of the pliable disk and the inner side of the cover.

2. A distributor as in claim 1, said cover having a convex top portion, the outer side of said weight member being convex to substantially conform to the curvature of the convex portion of the cover, and said cover being provided with a bead on its inner side and around said opening to provide a pivot on which the weight member will rest and rock when the cover is inverted.

3. A powder dispenser comprising a container cover provided with an opening, a rod extending loosely through said opening, and a disk of pliable material attached to the inner end of said rod and disposed within the cover, the periphery of said disk engaging the inner side of the cover for restricting the flow of powder therethrough, the outer end of said rod being adapted to be rocked by engagement with a surface onto which the powder is to be distributed to cause portions of the periphery of the disk to be vibrated or flexed to allow powder to pass between said portions and the wall of the cover, and said opening forming a dispensing opening for the powder.

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