

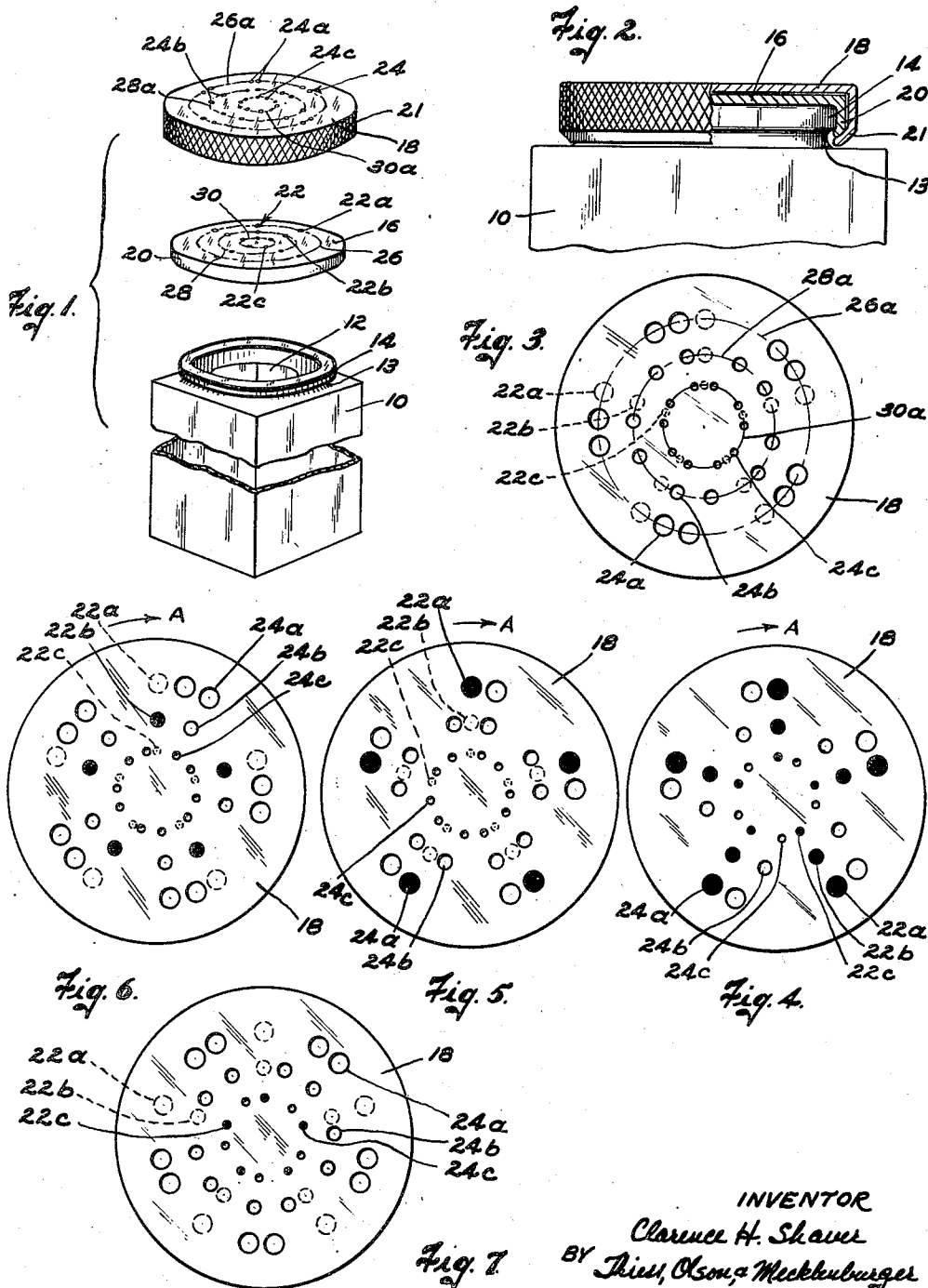
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POWER CONTAINER SIFTER TOP

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POWDER CONTAINER SIFTER TOP

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5 Claims. (Cl. 222—480)

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This invention relates to containers for dusting powder or for other similar type materials, and more particularly to a sifter top for such a container.

Untidiness, wastefulness, and inefficient and ineffective use of powder have always been associated with dusting operations, particularly when attempting to dust a small confined portion of the body. Various sifter tops have heretofore been proposed which dispense the powder from a limited area regardless of the positioning of the top, thus materially reducing the dusting effect of the powder when larger portions of the body are to be dusted. On the other hand, some tops allow only a limited number of relatively large, closely spaced streams of powder to be dispensed from the container thus causing large amounts of the powder to be wasted because of the failure of the fine particles of powder to be sifted and thus adhere more easily to the body surface. It is the object of this invention to provide a sifter top which will allow a limited amount of powder to be dispensed from a confined area of the top in one position, or larger amounts of powder to be dispensed from broader areas of the top at other positions, causing progressively greater dusting effects on the body.

It is a further object of this invention to provide a sifter top which is simple in design, inexpensive to produce, and effective in operation. Further and additional objects will appear from the following description, accompanying drawings, and appended claims.

In accordance with one embodiment of this invention a sifter top for a container adapted for dispensing dusting powder is provided, comprising two perforated covers, one enclosed within the other, and both adapted for fitting over the discharge opening of the container. The outer cover is rotatably mounted, so that in certain relative positions of the two covers, various sets of perforations of the covers are caused to register thereby enabling the size of the dispensing area, the size of the holes, the multiplicity of holes, and the amount of powder dispensed to be controlled.

For a more complete understanding of this invention, reference will now be had to the drawings, wherein—

Fig. 1 is an exploded, fragmentary, perspective view of the container and sifter top;

Fig. 2 is a fragmentary side-elevational view of the sifter top and the upper end portion of the container, with a portion of the top cut away in order to show the manner in which the top is assembled over the opening of the container;

Fig. 3 is a diagrammatic plan view of the top showing all of the perforations completely out of registration;

Fig. 4 is like Fig. 3, showing a plurality of the

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perforations arranged in concentric circles about the center of the top in registration, while the remaining perforations are completely out of registration;

Fig. 5 is like Fig. 3, showing a plurality of the perforations arranged about the outer concentric circle in registration, while all the remaining perforations are completely out of registration;

Fig. 6 is like Fig. 3, showing a plurality of the perforations arranged about a concentric circle intermediate the inner and outer concentric circles in registration, while all the remaining perforations are completely out of registration; and

Fig. 7 is like Fig. 3, showing a plurality of the perforations arranged about the inner concentric circle in registration while all the remaining perforations are completely out of registration.

Referring now to the drawings, a container 10, suitable for dispensing dusting powder or other similar types of granulated materials is provided, having a discharge opening 12. Said discharge opening in this instance is of the type shown in Fig. 1 having a necked portion 13 with the outer edge of said opening flared out slightly in order to provide a lip 14 for retaining both the inner cover 16 and outer cover 18. Said inner cover 16 is cup-like in design and is adapted to tightly fit over the discharge opening 12, and after it is in place, its downwardly protruding portion 20 is tightly crimped about the lip 14 and thus prevented from any rotary movement. The outer cover 18, also cuplike in design, is adapted to fit over both the discharge opening 12 and the inner cover 16 as shown in Fig. 2, and after assembly, the downwardly extending portion 21 of the cover 18 is turned inwardly under lip 14 and crimped portion 20 of cover 16 so as to prevent the outer cover from becoming disassembled. However, said cover 18 is so mounted that it is free to be manually rotated on said cover 16, although it will be frictionally held in any position to which it may be rotatably adjusted.

Said covers 16 and 18 are provided with pluralities of perforations 22 and 24, respectively. Said perforations 22 of cover 16 are arranged in circles which are concentric with the center of the cover, and the perforations in each circle are spaced uniformly apart, that is, they are symmetrically disposed about the center of the cover. Said perforations 22 are of varying size. The perforations 22a, arranged about an outer concentric circle 26, are of the largest size; the perforations 22b, arranged about an intermediate concentric circle 28, are slightly smaller than perforations 22a; and perforations 22c, arranged about an inner concentric circle 30, are of the smallest size, as shown in Fig. 1.

Perforations 24a, 24b, and 24c of cover 18 are of the correspondingly same size as perforations 22a, 22b, and 22c and are arranged about similar concentric circles 26a, 28a, and 30a as those of cover 16. The perforations 24 are so arranged that in certain positions of cover 18 relative to cover 16, as shown in Figs. 4, 5, 6, and 7, certain sets of perforations are caused to register. For instance, as shown in Fig. 4, a plurality of perforations 24a, 24b, and 24c, arranged concentrically about the center of cover 18, are brought in registration with the perforations 22a, 22b, and 22c, of cover 16, thus enabling a great amount of powder to be dispensed from a large dispensing area so as to produce a maximum dusting effect, and all other perforations of cover 18 are completely out of registration. As shown in Fig. 5, if the outer cover 18 is rotated slightly in a clockwise direction, as indicated by the arrow A, a plurality of perforations 24a arranged about an outer concentric circle 26a are brought in registration with perforations 22a of cover 16, and all other perforations of covers 16 and 18 are completely out of registration. This permits a lesser amount of powder to be dispensed than was dispensed in the position shown in Fig. 4, yet there is still provided a large dispensing area. As shown in Fig. 6, a further clockwise rotation of cover 18, indicated by the arrow A, causes a plurality of perforations 24b to register with perforations 22b of covers 18 and 16 respectively, arranged about an intermediate concentric circle 28 and 28a, while all other perforations of both covers 16 and 18 are completely out of registration.

As shown in Fig. 7, a further clockwise rotation of cover 18 causes a plurality of perforations 24c of cover 18, arranged about the concentric circle 30a, to register with perforations 22c arranged about concentric circle 30 of cover 16, while all remaining perforations of both covers are completely out of registration. A further clockwise rotation of the cover 18 causes all perforations of both covers to be completely out of registration, thereby preventing any powder from being dispensed.

Cover 18 has a knurled outer rim, as shown in Figs. 1 and 2, to afford a more effective grip in manually rotating said cover 18 relative to cover 16.

From the foregoing it will be seen that a container top has been provided whereby one may control the amount of powder dispensed, the size of the area and the number and size of the perforations from which it is dispensed, depending on which portions of the body are to be dusted.

By positioning the sifter perforations symmetrically about the axis of rotation of the movable cover member in concentric circles of gradually increasing diameter, or at varying distances from the axis of rotation of the movable cover, the area from which sifting takes place may be restricted or widened to take in substantially the entire cover, yet in any sifting position of the movable cover member, the powder will leave the container in a plurality of relatively small streams to produce a true "dusting" effect.

A sifter top has also been provided which is simple in design, inexpensive to construct, of increased efficiency in operation, one possessing great flexibility in adjustment for use, and which will reduce waste and untidiness caused from dusting to a minimum. It will be obvious that certain modifications of this specific embodiment shown may be made without departing from the

spirit and scope of this invention. For example, a greater number of perforations could be provided as well as greater variety in the size of perforations. Also in certain containers it may be more desirable to have disc-shaped covers instead of the cuplike type described. Also it might be desirable in certain instances to interchange the covers so as to have the one with the fewer number of perforations on top. The use of the device also is not restricted to dusting powder, but may, of course, be used with other powdered or granulated materials such as salt, sugar, borax, etc.

While a particular embodiment of this invention is disclosed herein, it will be understood, of course, that the invention is not to be limited thereto, since many modifications may be made, and it is contemplated, therefore, by the appended claims to cover such modifications as fall within the true spirit and scope of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A closure for the discharge opening of a container of the class described comprising two covers mounted in close contact for relative concentric movement, one cover having a plurality of openings arranged in a series of concentric circles at varying distances from the center of rotation, the second cover having at least twice the number of openings located in similar concentric circles which are at the same distances from the center of rotation, the central angle subtended by the space between any two adjacent openings in a given circle of the second cover being different than that of the central angle subtended by the space between any two adjacent openings in another circle of said second cover, whereby, by suitable rotation of the covers relative to each other, all of the openings in the first cover may be simultaneously either open or closed, or any of the openings of any one of the circles of the first cover may be open while all the openings in the other circles thereof are closed.

2. A closure as defined in claim 1 in which the size of the openings in the respective circles is different.

3. A closure as defined in claim 1 in which the size of the openings in the circles more distant from the center is larger than that of the circle nearest the center.

4. A closure as defined in claim 1 in which the size of the openings in the respective circles is greater as the circumference of the respective circle is greater.

5. A closure as defined in claim 1 in which the cover with the lower number of openings is stationary and the other is concentrically movable relative thereto.

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