

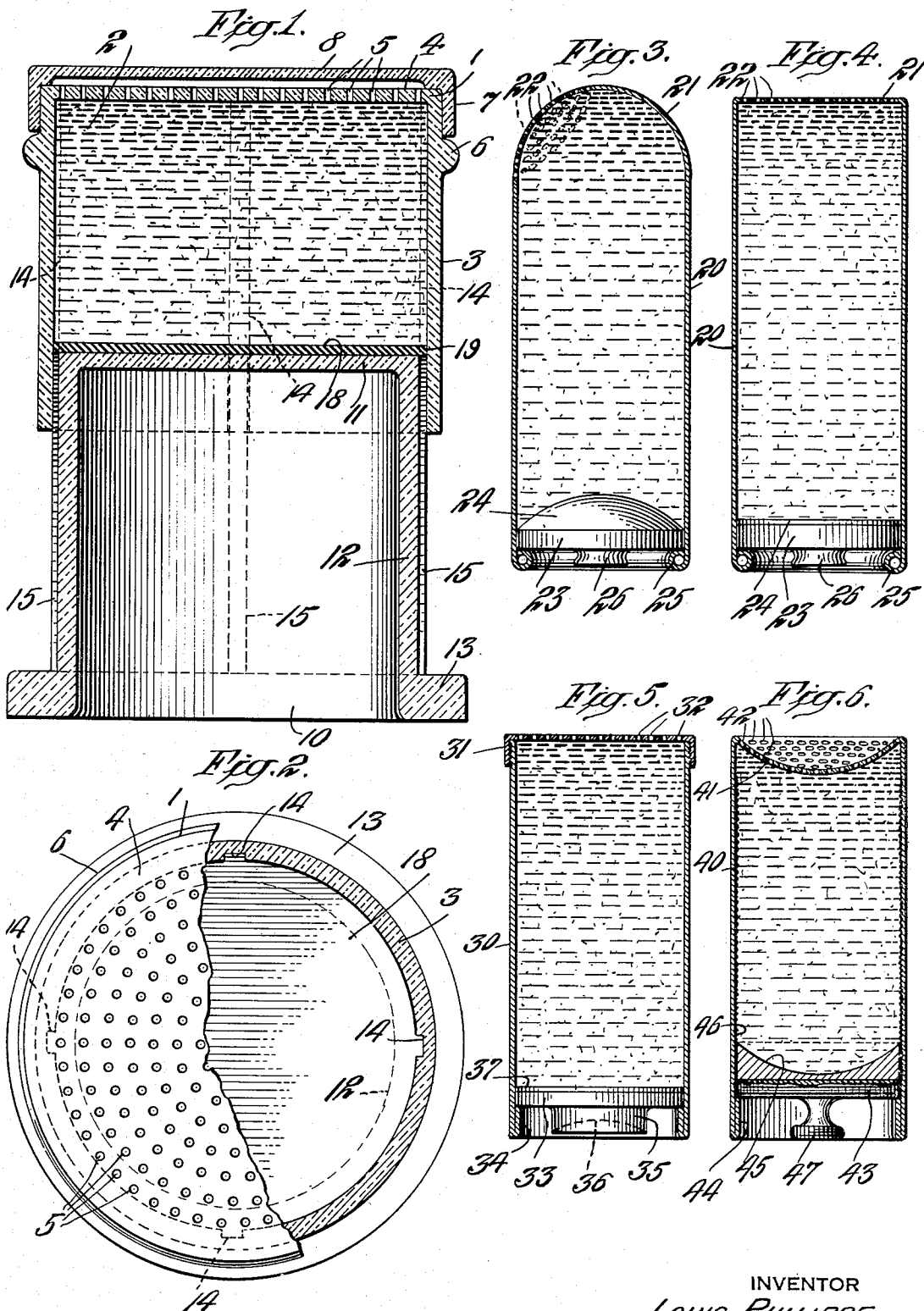
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DISPENSING CONTAINER FOR POWDERS, PASTES, CREAMS, AND THE LIKE

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DISPENSING CONTAINER FOR POWDERS,
PASTES, CREAMS, AND THE LIKE

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This invention relates to dispensing containers for powders, pastes, creams and the like and particularly to jars and tubes for cosmetics, toilet preparations, cleaning materials, polishes, etc.

Materials of this type are usually packed in jars having removable tops providing access to the interior and the contents are usually scooped out with the finger or by dipping or rubbing a cloth in the material. Such procedure is inconvenient and unsanitary, particularly when more than one person uses the container as is frequently the case with theatrical make-up materials as well as in the home. It is also wasteful of material as there is no way to gauge or measure the quantity thus removed.

An object of the present invention is to provide a dispensing container for materials of the above type, which is convenient and sanitary to use and from which controlled quantities of material can be extracted without contacting with the bulk of the material in the container. Another object is to provide an economical, attractive and dependable device of the type referred to.

These objects, and others which will be apparent as the nature of the invention is more fully disclosed, are accomplished by forming a container with a perforated top and with a movable bottom member which may be forced upwardly in the container for extruding controlled quantities of material through the perforations in the top. In one the bottom member is mounted on a rigid base over which the jar is caused to telescope by pressing down on the perforated top or on a rim which is provided for that purpose. In another embodiment the container has a bottom member which is pressed upwardly by the finger while holding the container in the hand. The perforated top may be flat, concave or convex, depending upon the purpose for which the container is to be used.

Various other features will be apparent as the nature of the invention is more fully disclosed. Certain preferred embodiments are set forth in the following description and in the accompanying drawing for purposes of illustration only.

In the drawing:

Fig. 1 is a vertical section through a container illustrating one embodiment of my invention;

Fig. 2 is a top plan view thereof, partly broken away to show details of construction; and

Figs. 3 to 6 inclusive are sectional views similar to Fig. 1 but illustrating different embodiments of the invention.

In the following description and in the claims certain specific terms are used for convenience in referring to various details of the invention. It is to be understood, however, that these terms are to be given as broad an interpretation as the state of the art will permit.

Referring to the drawing more in detail, the container is shown in Figs. 1 and 2 as comprising a jar or holder 1, which may be made of any suitable rigid material such as porcelain, glass or metal, and which holds the material 2, to be dispensed. The holder 1 has a side wall 3, preferably cylindrical, and a top 4 having plurality of perforations 5 therein through which the material 2 may be extruded. A rim 6 may be formed on the side wall 3 near the top thereof to provide a convenient abutment to be engaged by the fingers for depressing the holder and to form a stop or seat to engage the side flange 7 of a cover 8. The holder 1 is preferably made in one piece and is designed to present a neat and pleasing appearance.

The holder 1 is open at the bottom to receive and telescope over a base 10 having a top 11, side wall 12 and supporting flange 13. The top 11 of the base 10 constitutes the bottom of the holder 1 and serves to force or extrude measured quantities of the paste or other material 2 through the perforations 5 when the holder 1 is pressed downwardly by a force applied either to the top 4 or to the rim 6. The side wall 3 of the holder 1 may have a plurality of grooves 14 formed therein to receive ridges 15 formed on the side wall 12 of the base 10 to guide the members and to ensure a smooth, uniform sliding movement thereof.

A disc 18 of cork, rubber or other soft material may be positioned on the top 11 of the base 10 to provide a tight seal with the side wall 3 of the holder 1. This disc 18 may have projections 19 entering and sliding in the grooves 14 for this purpose. The base 10 may also be made in one piece, of the same material as the holder 1, or of any other suitable material. The cover 8 may be of the slip-on type or may be threaded to the upper part of the holder 1 if desired.

In using the above-described container, the holder 1 is filled with the material to be dispensed, such as a powder, cream, paste or the like and is telescoped over the base 10 until the material has been compacted, but not sufficiently to cause the material to extrude through the perforations 5. When it is desired to extract some of the material for use, the cover 8 is re-

moved and the holder 1 is pressed downwardly over the base 10 by exerting a pressure on the top 4 of the holder or on the rim 6. This pressure causes a certain quantity of the material to be extruded through the perforations 5 so that it is accessible at the top of the holder and may be removed by rubbing a finger or cloth over the same. It is to be noted that when the material is removed in this manner the finger or cloth does not come in contact with the bulk of the material in the holder 1. The container accordingly keeps the material in sanitary condition. Furthermore the quantity of material removed can be definitely controlled by the pressure applied to the holder. Only enough pressure is applied to extrude the quantity of material which is to be used. In this way waste of material is avoided and the device always presents a neat appearance. Obviously the top 4 may be made of any suitable material and is preferably made of a material which is easily cleaned by rubbing a cloth or the like thereover.

The embodiment described above is particularly useful for comparatively large containers such, for example, as cosmetic jars or the like which may be kept on the top of a dressing table. The container may also be used for materials like shoe polish, in which case the container may be centrally located so that it is readily accessible to a plurality of users. The shoe polish may be removed as desired by applying a brush to the top of the container and exerting the necessary downward pressure thereon. The desired quantity of polish may thus be removed from the container without exposing or wasting the bulk of the contents.

When desired the invention may be embodied in containers of smaller sizes such as tubes, which are adapted to be held in the hand. Examples of such embodiments of the invention are illustrated in Figs. 3 to 6.

Referring to Fig. 3, the container comprises an elongated cylinder or tube 20 which may be formed of any rigid material such as metal, celluloid, hard rubber or the like, and of a size such that it may be readily held in the hand. This tube is shown as provided with a rounded or convex top section 21 having a plurality of perforations 22 formed therein. The perforations 22 may cover substantially the entire top section 21 or they may be concentrated over a given part thereof. The tube 20 is provided with a movable bottom member 23 which constitutes a piston for extruding the contents through the perforations 22. A disc 24 of soft pliable material such as rubber, cork or the like, may be positioned on the bottom member 23 and may have an upper surface with a contour corresponding to that of the top section 21, so that substantially the entire contents of the tube can be removed by forcing the bottom member upwardly until it engages the top section 21. The lower end of the walls of the tube 20 may be crimped or rolled as at 25 to form a stop to prevent the bottom member 23 from being removed from the tube. The bottom member 23 may also be provided with a knob or handle 26 to form a convenient grip for the hand.

This embodiment of the invention is particularly useful for toilet preparations such as shaving cream. When used with materials of this type the tube 20 may be held in the hand and the bottom member 23 forced upwardly by exerting pressure upon the knob 26 so as to extrude a

small quantity of the material through the perforations 22. The material may then be removed by rubbing a finger or brush over the perforated top section 21 or, in the case of certain brushless shaving preparations, the perforated end of the tube 20 may be rubbed directly over the face for applying the preparation thereto. It is obvious that the top section 21 may be made in any convenient shape and that the perforations may be formed over the entire top section or only on a portion thereof as desired. Furthermore, the top section may be made integral with the tube or, if desired, may be made as a separate element and attached thereto in any suitable manner.

The tube illustrated in Fig. 4 is generally similar in construction to that illustrated in Fig. 3 and has been given the same reference characters. In the embodiment of Fig. 4, however, the top section 21 is flat as distinguished from the convex top section 21 of Fig. 3. This type of container may be preferred in some instances as for example when the material is to be removed by rubbing a finger or cloth directly over the top surface. In both of these embodiments, if an excess of material is extruded through the perforations 22, it is possible to return the same to a certain extent by retracting the bottom member or plunger 23. The handle 26 is so shaped as to provide a grip for this purpose.

In the embodiment of the invention illustrated in Fig. 5 the tube 30 is similar to the tube 20 illustrated in Figs. 3 and 4. It is provided, however, with a separable top 31 which is threaded onto the end of the tube 30. The top 31 is provided with perforations 32 for the purpose above mentioned. In this embodiment a bottom member 33 or plunger is slidably held within the tube 30 by means of a locking ring 34 which is frictionally held within the tube and provides a shoulder to prevent the bottom member 33 from being entirely removed from the tube. The bottom member 33 is provided with a boss 35 having a concave recess 36 formed therein which is adapted to provide a convenient surface against which the finger or thumb may be pressed for causing axial movement of the bottom member 33. A disc 37 of soft, pliable material, similar to the disc 24 above mentioned, may be positioned on the bottom member 33 for providing a more effective seal and improving the operation of the device. In this embodiment the tube 30 may be refilled if desired by unscrewing and removing the top 31.

In the embodiment shown in Fig. 6 a tube 40 is shown which is similar in construction to the tube 20 of Figs. 3 and 4. In this embodiment, however, the tube 40 is provided with a concave top section 41 having perforations 42 through which the material may be extruded. The bottom member 43 is held in the tube 40 by a crimped or rolled section 44 and is provided with a pliable disc 45 similar to the discs 24 and 37 described above and having an upper surface corresponding to the concave top section 41. The bottom member 43 may be threaded to the inner surface of the tube 40 as by threads 46 and may be provided with a handle 47 by which it is turned. In this embodiment the material within the tube 40 is extruded by grasping handle 47 and screwing the bottom member 43 upwardly in the tube 40 until the desired amount of material has been extruded. In this way small measured quantities of material can be readily removed inasmuch as the movement of the bottom member may be readily

controlled. Any slight excess of material can be returned by screwing the bottom 43 in the reverse direction. The threads 46 may be omitted if desired, in which case the bottom 43 is slidably movable in the manner illustrated in Figs. 3 to 5. This embodiment is particularly useful for dry materials such as powder, since the extruded powder is held within the concave 41 until it is removed in the manner above mentioned. The top may be spherically concave or cylindrically concave according to its intended use.

It is to be understood that a suitable cap or cover similar to the cover 8 of Fig. 1 may be used with any and all of the embodiments described above. Furthermore, the size and distribution of the perforations may be varied to suit the characteristics of the material which is to be extruded therethrough. In some instances it may be desirable to close the container by a rigid bottom, separate from the movable bottom member, which then constitutes an internal plunger for the purpose described, suitable means being provided to engage and operate the plunger.

Although certain preferred embodiments of the invention have been shown for purposes of illustration, it is to be understood that various changes and modifications may be made therein as will appear to a person skilled in the art. The invention is only to be limited in accordance with

the following claims when interpreted in view of the prior art.

The invention claimed is:

1. A dispensing container of the class described comprising a rigid side wall and a perforated top, said container having a member slidable axially thereof for causing the contents of the container to be extruded through the top perforations, said side wall and said slidable member having a cooperating axial flange of substantial extent provided with a groove to guide the member as it slides axially within the container, and a pliable disc on said member to provide a seal with said wall for preventing the material from passing between said member and said wall.

2. A dispensing container of the class described comprising a rigid side wall and a top through which the contents is to be dispensed, said container having a member slidable axially thereof for causing the contents of the container to be dispensed through said top, said side wall and said slidable member having a cooperating axial flange of substantial extent provided with a groove to guide the member as it slides axially within the container, whereby the member is caused to slide without angular displacement for the purpose set forth.

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