July 18, 1939. P. K. BECKER 2,166,619

CONTAINER CONSTRUCTION

Filed May 1, 1937

Fig. 1

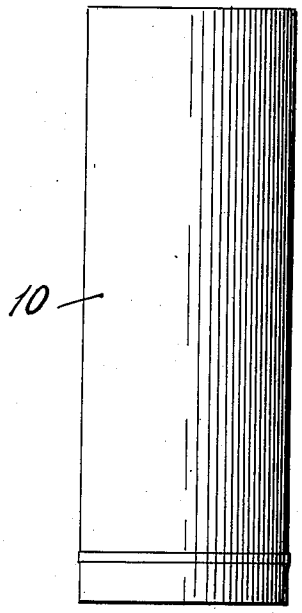


Fig. 2

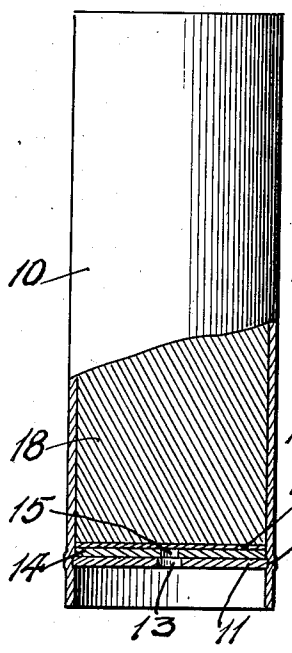


Fig. 3

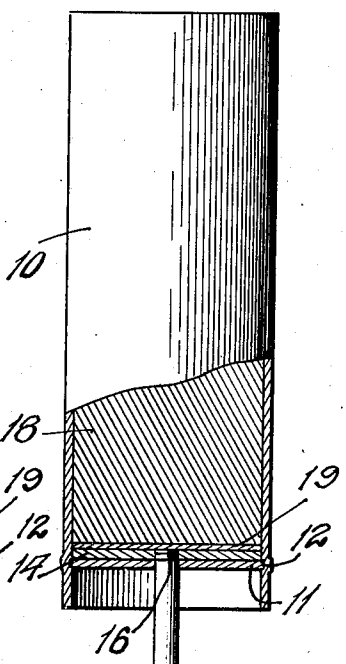


Fig. 4

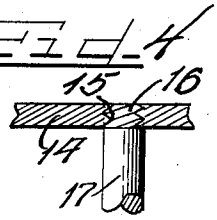


Fig. 5

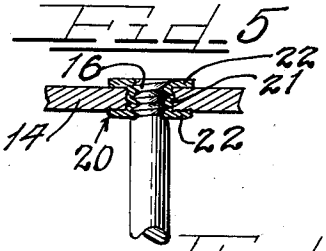


Fig. 6

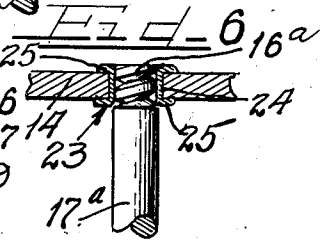


Fig. 7

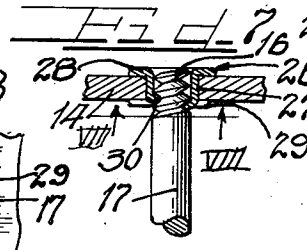
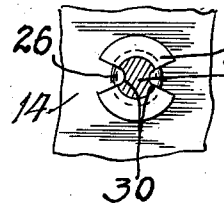


Fig. 8



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2,166,619

CONTAINER CONSTRUCTION

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Application May 1, 1937, Serial No. 140,101

3 Claims. (Cl. 220—56)

This invention relates to containers of the push-out type. More specifically, the invention relates to push-out plunger and stick constructions for containers of the type wherein a confection is extruded from a tube as it is eaten.

In containers of the type including a plunger member for pushing out confection material packaged in the container, great difficulty has been experienced in providing an inexpensive connection between a stick for operating the plunger and the plunger disk. Another difficulty encountered is the provision of a push-out type container that can be conveniently packaged for shipping. Heretofore the sticks for operating the plunger in these containers have been attached to the plunger disk at the plant manufacturing the container. When the container is filled with a confection or other edible material, the stick extends from the bottom of the container a considerable distance and presents a serious packing problem.

According to this invention, the sticks for operating the plunger disks of push-out type containers are furnished separately from the filled containers and are not secured to the plunger disk until the article is vended. The invention provides such an easy method of securing the stick to the plunger disk that the dealer or vender can merely hand the container and the stick to even a young child at the time of sale and permit the child to assemble the two units.

It is then an object of this invention to provide push-out type containers having plunger disks adapted to receive operating sticks in fixed relation thereto with a simple manual manipulation.

Another object of this invention is to provide push-out type containers filled with an edible material, such as a frozen confection, and to provide sticks, for operating the containers to extrude the confection therefrom, separately from the containers.

A further object of this invention is to provide plunger disks for push-out type containers having central apertures adapted to receive in threaded relation thereto the ends of operating sticks.

Another object of this invention is to provide a seal for the bottom of push-out type containers having apertured closure disks to prevent leakage of material through the apertures of said disks.

A further object of this invention is to provide plunger and stick constructions for push-out type containers wherein the stick is fixedly united to the plunger by a simple twisting movement.

Other and further objects of this invention will become apparent to those skilled in the art from the following detailed description of the annexed sheet of drawings which discloses preferred embodiments of the invention.

On the drawing:

Figure 1 is a side elevational view of a push-out type container.

Figure 2 is a side elevational view of the container shown in Figure 1 with a part thereof broken away and shown in vertical cross section.

Figure 3 is a side elevational view similar to Figure 1 with a part thereof broken away and shown in vertical cross section, and also showing a stick for operating the plunger disk in the container.

Figure 4 is a fragmentary vertical cross sectional view of a paper plunger disk having a central aperture receiving the threaded end of a stick shown in elevation.

Figure 5 is a fragmentary vertical cross sectional view of a plunger disk for push-out type containers having an eyelet secured through the central portion thereof receiving in threaded relation thereto the threaded end of a stick shown in elevation.

Figure 6 is a fragmentary vertical cross sectional view of a plunger disk according to this invention showing another construction for securing the threaded end of the stick to the plunger.

Figure 7 is a fragmentary vertical cross sectional view of a plunger disk according to this invention showing another construction for securing the threaded end of the stick to the plunger.

Figure 8 is a view taken along the line VIII—VIII of Figure 7.

As shown on the drawing:

In Figures 1 to 3, inclusive, the reference numeral 10 designates a cylindrical tube of paper, cardboard, or other packaging material. The tube 10 is open at the top and bottom thereof. A paper closure disk 11 is secured in the tube and in spaced relation from the bottom thereof in an annular recess 12 provided in the tube. The sealing disk 11 has an aperture 13 through the central portion thereof.

A paper plunger disk 14 is disposed on top of the closure disk 11 and is adapted to slide in the container 10 along the walls thereof. The plunger disk 14 has a central aperture 15 for receiving the threaded end 16 of a stick 17. The

stick 17 is slidable through the aperture 13 in the closure disk 11 and is conveniently affixed to the plunger disk 14 by a simple twisting operation causing the threads of the end 16 of the stick 17 to form threads in the walls of the aperture 15.

A confection or other edible material 18 is packaged in the tube 10. Since the stick 17 is intended to be affixed to the plunger disk 14 only at the time of sale of the packaged material 18, a paper seal 19 is disposed over the plunger disk 14 in the tube 10 to prevent leakage of material 18 through the aperture 15 of the plunger disk 14 and the aperture 13 of the closure member 11. This paper seal 19 is readily broken by pushing the stick 17 into the tube 10 for moving the plunger 14 forwardly in the container.

In this container construction the packaged material 18, as shown in Figure 2, can be readily shipped to points of distribution for sale, because the operating stick 17 for the container is not affixed to the plunger disk in the container until the time of sale. At the same time, however, the material 18 is sealed in the container tube. The open top of the container can be closed by any suitable wrapping or cover.

The threaded connection formed between the plunger disk 14 and the stick 17 permits movement of the plunger disk by the stick in both directions in the tube 10.

The entire construction of the container, with the exception of the stick 17, is paper, cardboard, or other inexpensive packaging material.

In the modification shown in Figure 4, the aperture 15 of the paper disk 14 may be threaded to receive the threaded end 16 of the stick 17. The stick 17 is thus conveniently secured in the threaded aperture 15 of the plunger 14 by a partial turning of the stick.

In the modification shown in Figure 5, the plunger disk 14 receives through the central portion thereof a metal eyelet 20 having a cylindrical shank portion 21 provided with internal threads and outturned flanges 22 for engaging the faces of the disk 14. The eyelet 20 is thus fixedly secured to the disk, and the threaded end 16 of the stick 17 can be placed in threaded engagement with the threads in the shank portion 21 of the eyelet by a rotation of the stick.

In the modification shown in Figure 6, the plunger disk 14 receives through the central portion thereof a metal eyelet 23 of the type used for securing pages of paper and comprising a cylindrical shank portion 24 extending through the disk 14 and outturned flanges 25 engaging the faces of the disk for securing the eyelet in the disk. The stick 17*a* can have wide threads 16*a* on the end thereof. The outside diameter of the threads 16*a* is slightly larger than the inside diameter of the shank portion 24 of the eyelet 23, so that when the stick is rotated into the eyelet, the threads 16*a* thereon become damaged by contact with the shank 24 of the eyelet and serve to wedge the end of the stick into the eyelet. In this construction, therefore, the eyelet is not threaded as in the construction shown in Figure 5, and the wedging action obtained by rotating the stick into the eyelet secures the stick and plunger together.

In the modification shown in Figures 7 and 8, the plunger disk 14 receives through the central portion thereof a metal eyelet 26 having a cylindrical shank portion 27 for extending through the disk, an annular outturned flange 28 for abutting one face of the disk, and an annular flange 29 for abutting the opposite face of the disk. The flange 29, however, has inturned tabs 30 on opposite sides thereof, as best shown in Figure 8. The tabs 30 may be offset as shown in Figure 7 so as to receive the threaded end 16 of the stick 17 in threaded relation therewith.

In the construction shown in Figures 7 and 8, therefore, the metal eyelet 26 is not threaded as shown in Figure 5, but is merely provided with inturned tabs which take the place of the threads in the construction shown in Figure 5.

From the above descriptions, it should be understood that this invention provides a convenient method for securing together plungers and sticks for push-out type containers.

I am aware that many changes may be made and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I, therefore, do not purpose limiting the patent granted hereon otherwise than necessitated by the prior art.

I claim as my invention:

1. A plunger for push-out type containers comprising a paper disk having an aperture through the central portion thereof, a metal eyelet having a cylindrical shank portion seated in said aperture and an outturned annular flange for engaging one face of the disk, said eyelet having an outturned flange for engaging the other face of the disk, and inturned tabs disposed on opposite sides of said flange for receiving in threaded relation therewith the threaded end of a stick.

2. A tubular package having a sealed bottom provided with a guiding aperture adapted to receive a reciprocating rod therein, a plunger element in the tube above and on the bottom with an aperture no larger than the bottom aperture and aligned with the bottom aperture, said aperture of the plunger element being defined by a metal eyelet reinforcing and gripping the plunger element, and a paper seal above the plunger element closing the opening into the package provided by said apertures whereby an operating rod can be inserted through the bottom in slidable relation thereto and guided thereby and fixedly engaged in the eyelet to reciprocate the plunger element in the tube.

3. A package having a sealed bottom, said bottom provided with an aperture therethrough to receive a reciprocating stick therein, a plunger element in the package above the bottom thereof and having an aperture no larger than the bottom aperture, said aperture of the plunger element being defined by a reinforcing means gripping the plunger element to resist enlargement of the plunger element aperture and a seal closing the opening into the package defined by the said apertures in the plunger element and bottom whereby an operating stick can be inserted through the bottom aperture in slidable relation to the bottom and fixedly secured in the reinforced aperture of the plunger element to reciprocate the plunger element in the package.

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