

United States Patent

[15] 3,706,394

Merz

[45] Dec. 19, 1972

[54] ONE-AT-A-TIME DISPENSER

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[22] Filed: Sept. 16, 1970

[21] Appl. No.: 72,681

[52] U.S. Cl.221/75, 206/56 AC

[51] Int. Cl.G07f 11/00

[58] Field of Search.....221/75, 312, 289, 210;
222/390; 206/56 R, 56 AC

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[57] ABSTRACT

A one-at-a-time dispenser which has an outer wall in the shape of a sidewall having a continuous screw thread. The top is rotatable and has two or more pins mounted in it, and extending through the objects to be dispensed. The bottom is removable and snaps onto a ring around the bottom of the dispenser.

6 Claims, 4 Drawing Figures

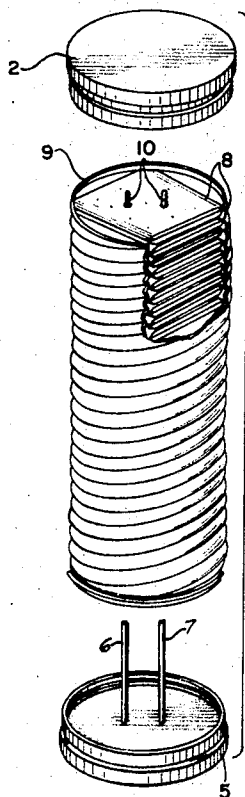


FIG. 1

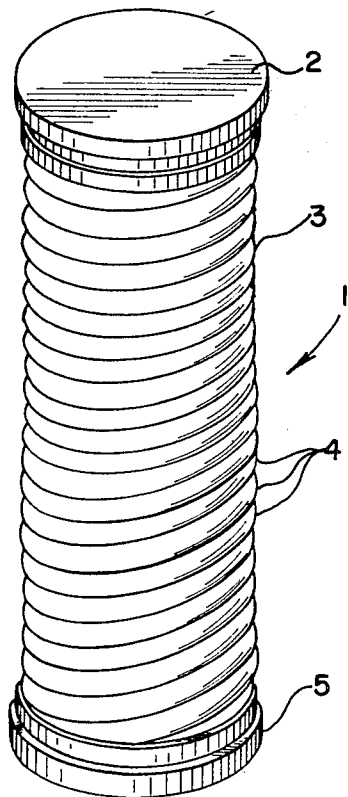
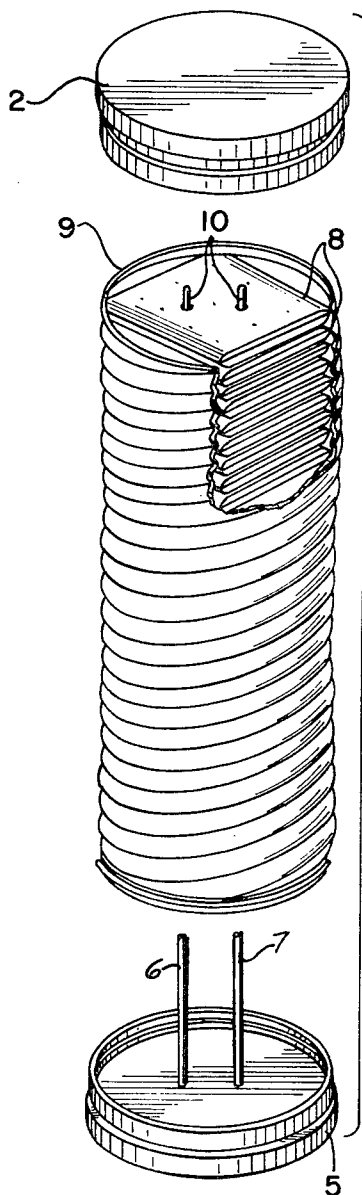


FIG. 3

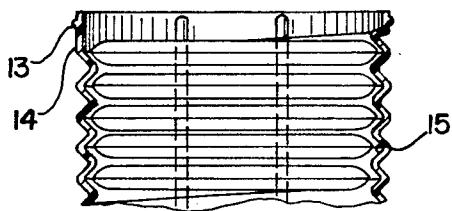


FIG. 2

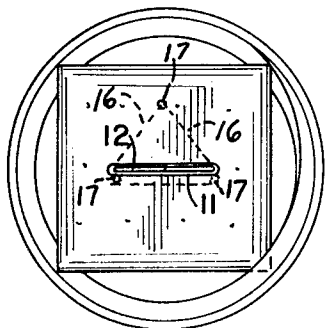


FIG. 4

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ONE-AT-A-TIME DISPENSER

My invention relates to the container art and particularly to a dispenser for the dispensing of relatively flat objects such as crackers having holes in them.

It is an object of my invention to provide a dispenser which allows flat objects to fall out of the dispensing container one at a time.

It is an object of my invention to provide a container for shipping, handling and sale of the packaged materials and the container.

It is another object of my invention to provide a simple, practical and neatly constructed dispensing container.

It is another object of my invention to provide a dispensing container which may be sold including the contents of the container.

The item is a package and a dispenser.

FIG. 1 shows a perspective view of a closed container ready for shipping.

FIG. 2 shows an exploded view with the top and bottom closures removed.

FIG. 3 shows a sectional view of one end of the body of the container.

FIG. 4 shows a top view of another embodiment with a longitudinally slotted cracker.

The dispensing container of my invention is shown in FIG. 1 in its filled and finished condition. In this condition the container 1 may be shipped or carried by hand as a package.

This dispenser 1 presents an appearance similar to the perspective view shown in FIG. 1. The top cover 2 is a snap-on cover. The cover may be made of paper or some easily molded plastic. The body of the dispenser is a tube or sleeve 3 having a large screw thread 4 running along its extent. The screw thread 4 forms the major part of the body wall and engages the crackers to prevent them from sliding except upon rotation of the pins. This body is designed to be relatively rigid so that it does not collapse under normal handling. The cover 5 mounted on the bottom is rotatable and has means to hold it to the body. Mounted on this cover are two long pins or rods 6, 7 (FIG. 2), extending vertically and parallel to each other in the container 1. These pins make up a guide along which the crackers 8 slide. Other planar objects may be dispensed. As the bottom cover 5 is rotated, each pin 6 is moved in a circle and the crackers slide along the pins to finally fall out of the container at one end 9. The guide stops the crackers from rotating except as the bottom cover and the guide are rotated.

An exploded view of my apparatus is shown in FIG. 2. The snap-on cover 2 is shown lifted off the container. The snap-on bottom 5 is shown detached from and below the rest of the container. The guide pins 6 are mounted in the snap-on bottom 5 and are shown in section. When the bottom 5 is snapped into position the pins 6 extend just the length of the container.

Instead of having two holes 10 in the crackers as shown in FIG. 2, the opening 11 may be elongated (FIG. 4) with two spaced pins or one flat tongue 12. If three pins are used the cracker opening may be triangular with each of the pins in a corner.

In the event that the crackers are rectangular the pins may be spaced apart and extend along the edges of the crackers. The crackers are then rotated in the sleeve by the pressure of the pins against their edges.

The pins in all the embodiments extend from one end of the dispensing container to the other end as shown in FIG. 3. A bead 13 is formed around the top 14 of the sleeve 3. In this case the cover 2 has a recess around its edge to cooperate with the bead 13 and form a snap-on-fitting. Bottom cover 5 has similar structure for retention of the cover to the sleeve and allowing relative rotation. The large screw thread 4 is shown in cross-section with a cracker 8 riding on the internal thread.

In order to fill the package or container, the load of crackers 8 is inserted over the pins 10 and slid against cover 5. The assembly is then screwed into the sleeve with the removable top cover snapped onto the sleeve. To dispense crackers, the top cover 2 is removed, the bottom or bottom cover is rotated, and the crackers proceed to move out of the package one-at-a-time. Crackers 8 may be square, round or polygonal; the screw thread bearing surface of the dispenser fits the edge of the cracker fairly tightly and may stack the crackers somewhat loosely. The materials of construction of the dispenser may be organic, inorganic or metallic. The crackers 8 which are to be dispensed may be any edible or inedible planar object whose ratio of surface area to thickness is greater than unity.

The crackers have two holes 10 shown to give leverage. Similarly a slot 11 (FIG. 4), or a triangle 16 (shown in phantom lines) may be in the center of the crackers. In that event, the pins are located in different configurations, perhaps one flat tongue 12 or three smaller pins 17. The hole may be of any configuration with the guide keyed to the hole.

The advantages of my one-at-a-time dispenser are that it provides a hermetically sealed dispensing unit to keep the crackers fresh. It provides a container for shipping, handling and sale of crackers. The pins and sleeve give longitudinal rigidity to the container and the removable ends provide lateral rigidity so that the container is able to withstand normal usage.

The foregoing is a description of an illustrative embodiment of the invention, and it is applicant's intention in the appended claims to cover all forms which fall within the scope of this invention.

What is claimed is:

1. A one-at-a-time dispenser for a stack of apertured objects located in the dispenser having at least one aperture in each object comprising:

an intermediate body having screw threads integral with the body running along the body, and first and second retention means on the first and second end of said body,

a first cover having third retention means adapted to fit with the first retention means of said body and being rotatable as to said body,

a second cover having a fourth retention means adapted to fit with said second retention means on the second end of said body and being rotatable as to said body, and

guide means mounted on said second cover and extending through said stack of objects to the upper end of said intermediate body whereby when said second cover is turned said objects turn and thread themselves out of said body to be dispensed one-at-a-time.

2. A one-at-a-time dispenser for a plurality of crackers stacked one adjacent the other and having an opening in the center of each comprising:

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a first cover having first means for retention and rotation of said cover,

a second cover having second means for retention and rotation of said cover,

an intermediate sleeve having a large screw thread 5
forming the wall of the sleeve and having third and fourth retention and rotation means at each end of said sleeve, whereby a plurality of crackers may be stacked one on the other inside said sleeve with their edges touching the wall of said sleeve and 10
said covers may be attached to said sleeve and may be rotated relative to said sleeve, and

guide means mounted on said second cover and extending parallel to the wall of said sleeve and through an opening in the center of each cracker 15
whereby the crackers are rotated and urged toward the first cover when said second cover is rotated.

3. A one-at-a-time dispenser for a plurality of crackers stacked one adjacent the other and having an opening in the center of each as set forth in claim 2 in which said guide means comprises: 20

pins mounted at the ends of the long axis of the opening in said planar objects.

4. A one-at-a-time dispenser for a plurality of crackers stacked one adjacent the other and having an opening in the center of each as set forth in claim 2 in which said guide means comprises: 25

elongated means having a cross-section with bearing surfaces defining the apices of a triangle. 30

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5. A one-at-a-time dispenser for a plurality of crackers stacked one adjacent the other and having an opening in the center of each as set forth in claim 2 in which said guide means comprises:

tongue means having a rectangular cross-section.

6. A one-at-a-time dispenser for a plurality of planar objects stacked one adjacent the other and having a rectangular shape comprising:

an intermediate sleeve having screw threads forming the wall of said sleeve and fitting over the corners of each said planar object and having a first and a second end,

first and second retention fittings mounted on said first and second ends respectively,

a first cover having a cooperating retention fitting adapted to rotatably fit on the first retention fitting of said intermediate sleeve,

a second cover having a cooperating retention fitting adapted to rotatably fit on the second end of said intermediate sleeve, and

elongate guide means spaced apart and extending from said second cover toward said first cover and adapted to press against the sides of each said rectangular planar object whereby said guide means rotates each said planar object with its corners fitting into said screw threads when said second cover is rotated and said planar objects advance toward said first retention fitting and out of said dispenser.

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