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H. A. WILSON

3,380,632

COLLAPSIBLE CONTAINER

Filed June 15, 1966

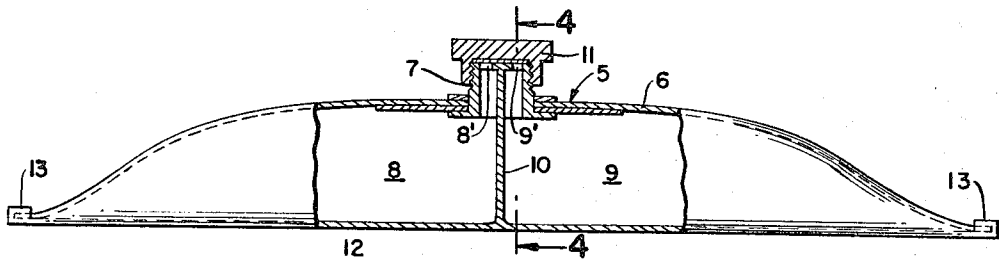


FIG. 1.

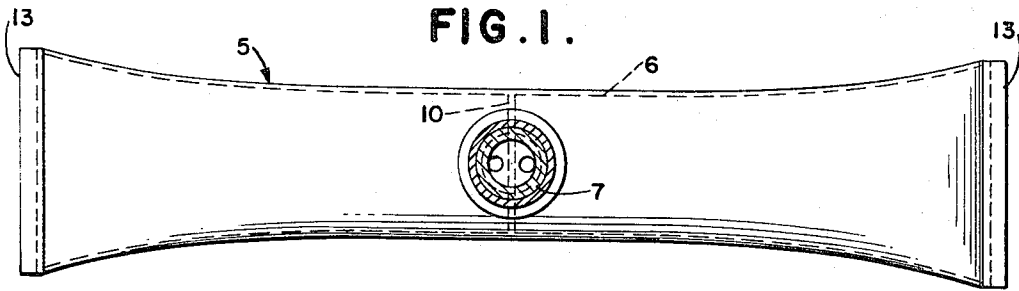


FIG. 2.

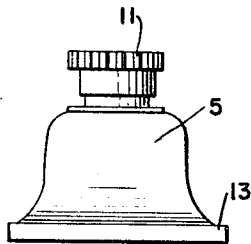


FIG. 3.

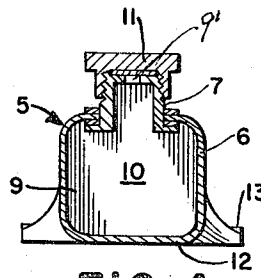


FIG. 4.

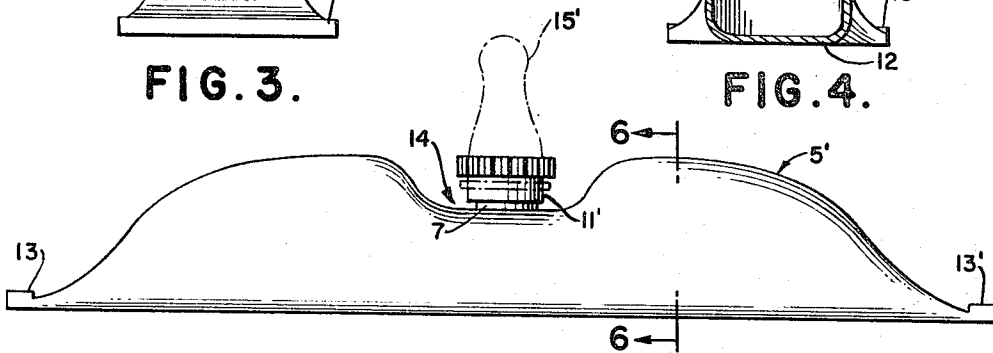


FIG. 5.

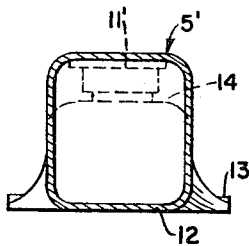


FIG. 6.

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3,380,632  
**COLLAPSIBLE CONTAINER**  
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**ABSTRACT OF THE DISCLOSURE**

A collapsible container of tubular shape having a discharge nozzle located between the ends of the tube. A dividing wall is formed laterally of the tube to define separate compartments for packaging and use of different materials. In one form of the invention the nozzle is recessed within the longitudinal profile of the tube to protect it from injury. The bottom of the tube is flat to prevent rolling.

This invention relates to a disposable dispensing container and more particularly to a collapsible container for dispensing medicine, food, chemicals, etc.

Collapsible dispensing containers are not new but are not convenient to use in multiple and are not usually constructed for containing more than a single product so that in cases where it is necessary or desirable to use more than a single product at a time it is necessary to use more than a single such dispenser. In cases where medicine must be mixed in certain proportions however or used in a certain order there is always the possibility for error. It is therefore an object of this invention to provide a container which is suitable for mixing its contents such as medicines in prescribed proportions.

It is a further object of this invention to provide a container which is suitable for use in dispensing medicines in certain order and limit the chance for error due to forgetfulness as to which medicine to take.

Foods have also been dispensed from collapsible containers but the usual package contains a single food.

It is an object of this invention to provide a collapsible container which can be used to package more than a single food whereby a balanced diet can be maintained by the sick, or by sportsmen such as hunters who are in the wilds or other out-of-the-way places, such as an aviator, or can be used to dispense an additive such as mustard, catsup, for example, with foods.

Chemicals have also been packaged in separate collapsible containers but different chemicals could not be merely mixed in predetermined proportions without troublesome measuring procedures from such plural and separate containers. It is therefore a further object of this invention to provide in a single container definite proportions of chemicals as in the use of epoxy resin adhesive to thereby eliminate measuring the ingredients from the separate containers at the time of use.

These and other objects of the invention will become manifest upon reading the following description in conjunction with the accompanying drawings wherein:

FIG. 1 shows a side view in elevation and partly in section of one form of the invention;

FIG. 2 is a plan view of FIG. 1;

FIG. 3 is an end view of FIG. 1;

FIG. 4 is a view taken on the line 4—4 of FIG. 1;

FIG. 5 is a view in elevation of another form of the invention; and

FIG. 6 is a sectional view of FIG. 5, taken on line 6—6.

In order to carry out the objects of the invention the dispenser designated by the numeral 5 is constructed of relatively thin plastic material 6, and formed in the shape of a tube which is provided with a discharge nozzle having a screw-threaded neck 7 located between the closed

ends of the tube. For containment of plural substances or mixed uses the container is divided into two compartments 8 and 9 as shown having the adjacent exit passages or orifices 8' and 9' for joint dispensing of the contents. The compartments 8 and 9 may be selected to have a predetermined volumetric relationship with each other.

With reference more specifically to FIGS. 1-4 there is shown a disposable collapsible dispensing container comprising a tubular body 5 made of relatively light flexible material 6 such as polyvinyl chloride or any other suitable plastic. The tube is shown provided with a centrally located neck portion 7 which is preferably screw-threaded and may be integral with the tube body or affixed thereto in any suitable manner. A transverse partition wall 10 which may be integral with the tube divides the tube into the separate compartments 8 and 9 which extend into the centrally arranged neck portion to keep the contents in each compartment from contact with each other except when desired. Passages or orifices 8' and 9' are thus provided at the screw cap closure 11 through which the contents of the separate compartments may be expelled by removing the cap and squeezing the opposite ends of the tube body as is customary in using any collapsible tubes. The neck and orifices thus define a dispensing nozzle. In order to prevent the tube from rolling there is provided a flat bottom side portion 12 that is substantially in the plane of the sealed end 13.

The compartments are filled with the desired contents through the open tubular ends which are then sealed as at 13 in a manner well known in the art. While the tube 5 has been described as formed of plastic material it will be understood that the tube may also be formed of extruded metal such as alloys of lead or aluminum.

In use the cap 11 is screwthreaded and removable and the contents extruded in the usual manner. In the form of the invention shown in FIG. 5, which is in most respects a modified form of the invention the neck 7' and screw cap 11' are shown recessed into the center of the tube at 14. While the use of pressure alone has heretofore been disclosed, as the method for expelling the contents of the tube portions it is contemplated that vacuum and vacuum and pressure means may also be used; for example by providing a feeding nipple or nozzle in place of the cap 11' as indicated in dotted lines at 15' in FIG. 5 which is secured on the neck 7 and the vacuum is thus created by sucking on the nipple which will serve to collapse the tube portions and expel the contents. This same method can be followed in using both forms of the invention shown. Further the cubic contents can be made just sufficient for a single dose, if for medicine, or large enough for a meal, if for food. Obviously the cubic contents is determined by the use to which the contained material is to be put.

I claim:

1. A dispensing container comprising an elongated flexible tubular body permanently closed at opposite ends and a dispensing projecting spout between the closed ends of the tube communicating with the interior of said tube, means partitioning the interior of the body into separate compartments, and a passageway communicating each compartment with the exterior of the body through said spout, said partitioning means comprising a wall extending transverse to the longitudinal axis of the tube and extending into the spout and having sufficient rigidity to prevent the transfer of pressure from one compartment to the other whereby to permit selective dispensing of the contents from either compartment.

2. A container as defined in claim 1, wherein the tubular body is provided with a flattened wall portion opposite said spout to prevent the tube from rolling.

3. A container as defined in claim 5, wherein the neck is recessed into the body to protect it from injury.

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4. A container as defined in claim 1 wherein the tube wall is centrally depressed for a distance substantially the length of said neck and means closing the outer end of said neck within the depressed wall portion of said tube.

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