

Jan. 18, 1944.

S. ALMAN
CONTAINER

2,339,665

Filed March 17, 1941

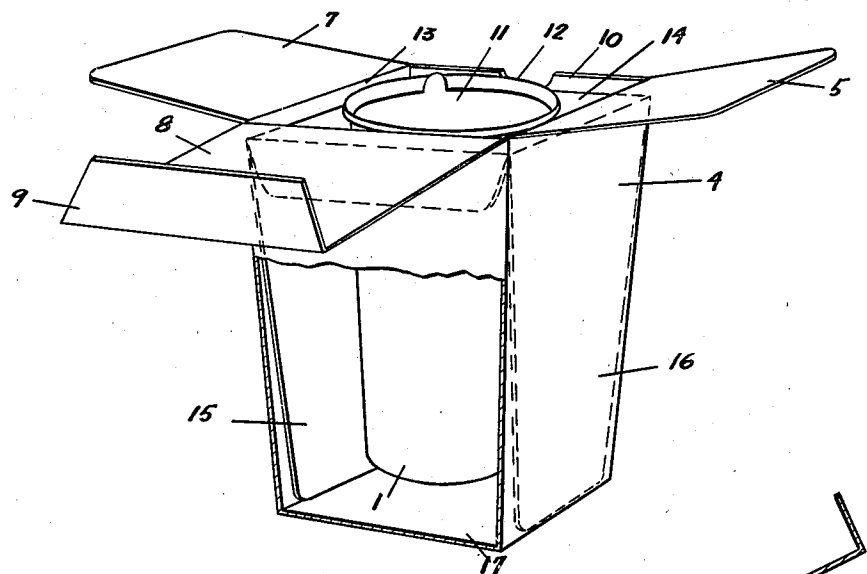


Fig. 1

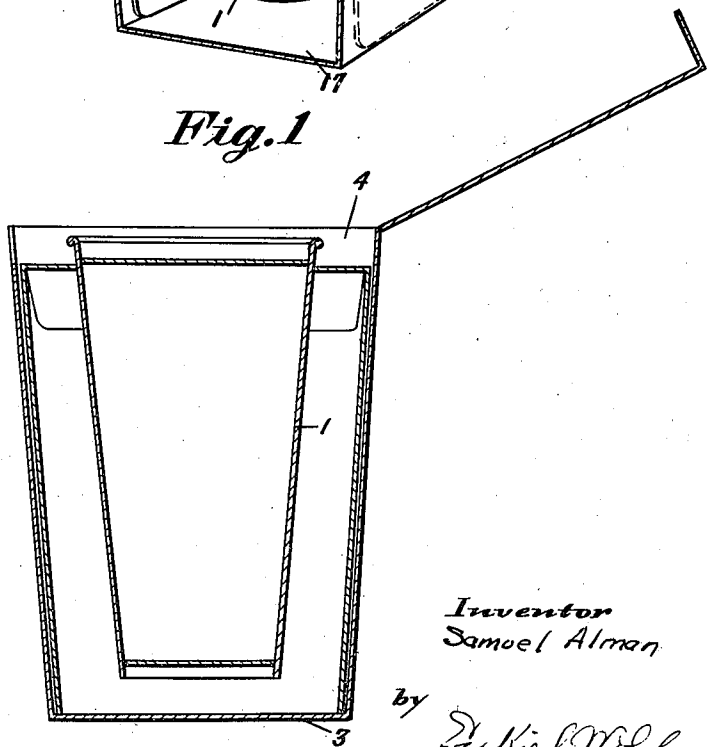


Fig. 2

Inventor
Samuel Alman

by
Ed. Kiel M. W.
Attorney

UNITED STATES PATENT OFFICE

2,339,665

CONTAINER

Samuel Alman, Brookline, Mass., assignor to
Eastern Paper Box Company Inc., Boston,
Mass., a corporation of Massachusetts

Application March 17, 1941, Serial No. 383,807

1 Claim. (Cl. 229—14)

The present invention relates to a means and method of preserving materials, particularly foods, and keeping them substantially near the temperature when first packed.

It is common practice when packing ice cream, for instance, to put the ice cream in a stiff cardboard container and then put the container in a heat insulating box. Various other articles of a similar nature are frequently dispensed in a similar way. In addition, it is common practice to surround the container with a cooling medium where the article is to be kept cold, as for instance dry ice in the case of ice cream.

The present invention is more particularly applicable to preserving liquids in a cold or hot state, particularly beverages which are usually dispensed in a paper container simply with a cap which is forced down in the top of the container to prevent the liquid from spilling out. Containers commonly used for this purpose are cylindrical or conical in shape or rather in the shape of a frustrum of a cone in which the sides have only a slight taper. When liquids are packed in this type of container they usually cool quite rapidly if the liquid is hot when put into the container. In fact a cup of hot coffee so packed will hardly be more than luke warm fifteen minutes later.

The present invention has for its purpose improvements in packaging and dispensing liquids particularly of this type and provides means whereby liquids can retain their heat for a long period of time, in the neighborhood of an hour or two.

While paper cardboard containers have good insulating qualities, nevertheless since the liquid is in contact with the inside of the container, the outside of the container rapidly becomes warm and dissipates the heat transmitted through it from the liquid within.

In the present invention the dissipation of heat in this manner is avoided in a simple and efficient way. Further the container is additionally protected and it is not possible for the liquid to spill out and wet other things which may perhaps be put in the same bag with the liquid.

The advantages and merits of the present invention will be more fully understood from the description in the specification below when taken in connection with the drawing which shows an embodiment of the invention, in which:

Figure 1 shows a perspective view of the invention with a portion in fragmentary section, and,

Figure 2 shows a section through the center of the means shown in Figure 1.

Referring to the drawing, the liquid container for coffee, ice cream, cold beverages or the like, is indicated by 1 and shown as having tapered sides although non-tapered containers may be used in which case the cardboard base support 2 indicated by dotted lines in Figure 2 may be used to support the container in the desired position raised from the base. If however it is desired, the container 1 may rest upon the base 3 of the enclosing casing or external container 4, in which case the member 2 may be omitted. For maximum insulation however, it is desirable to suspend the container 1 away from the walls of the external container 4 and this in itself in a more limited sense forms a feature of the present invention.

The container 4 may be a plane sided container which may be made in any known fashion. It is preferable to have the edges sealed all around the sides and the base so as to confine the air space within the container to produce more efficient results. The container preferably is tapered in shape as indicated in the drawing and is provided with tightly fitting cover members 5, 7 and 8. The cover member 8 may be provided with an edge flap 9 which may come down on the inside of the opposite side 10 and press against the sides so that the top will be held firmly in place. The container 1 has a cover 11 fitting within its walls a short distance below the top edge 12 of the container which may be flat or rolled if desired. The edge 12 of the container is preferably level with the top edge 13 of the external container so that when the covers 5, 7 and 8 are brought down over the container, they fit snugly on the top edge 12 and form a good seal to prevent the circulation of air from the outside the enclosed space within the top of the container 1.

The container 1 is positioned within the external container 4 in such a manner that it is free from the side edges and the base. For this purpose a supporting plate of paper or other suitable material is provided. This plate 14 fits snugly in the top of the container a short distance down from the top edge and has a perforation of such a size to accommodate the container 1 and position it in the desired position explained just above. The plate 14 may be supported in position by side supporting elements 15 and 16 which may extend down to the base 17 of the external container 4. The plate 14 fills the entire top of the external container

and thereby partitions off the space between the plate 14 and the covers of the external container and prevent the circulation of air in the container itself.

After the liquid is put in the container and the container is closed, the tendency will be for the air space between the internal and external containers to approach the temperature of the liquid within the internal container, but since the air space is a dead air space, and since it is partitioned off between the top and bottom, circulation of air will be very slight and the air itself will act as an insulating medium between the internal container and the outside atmosphere.

The same principles and same construction may be applied to an external container for holding more than one internal container. For this purpose all that is necessary is to make the external container larger and to provide the plate 14 with more than one perforation. If desired the plate 14 might be provided with a plurality of vertical partitions fitting snugly to the side walls of the container thereby sectioning off the air space one for each internal cup or container. The external container may be made of paper or other materials and may be glued together

from a stamped out blank folded in the proper fashion or the external container may be molded if desired.

Having now described my invention, I claim:

- 5 Means for packaging liquid and the like to preserve initial temperature conditions, comprising in combination an external container of paper material having folding top flaps covering the top of the container, an internal supporting
- 10 cardboard partition extending across a whole section of the container parallel to the top but spaced from it and having supporting side extensions lying against opposite walls of the external container and extending to the bottom
- 15 thereof, said supporting partition having a perforation centrally located, an internal container completely filling the perforation and supported by the partition, said internal container having a
- 20 taper such that it may be inserted from the open top of the container with a section thereof extending upwards beyond the partition in the vicinity of the region over which the flaps extend when closed, said internal container being
- 25 otherwise spaced from the inside of the external container on all sides.

SAMUEL ALMAN.