March 15, 1966 D. WEINSTEIN 3,240,331

PACKAGE FOR FRAGILE ARTICLES

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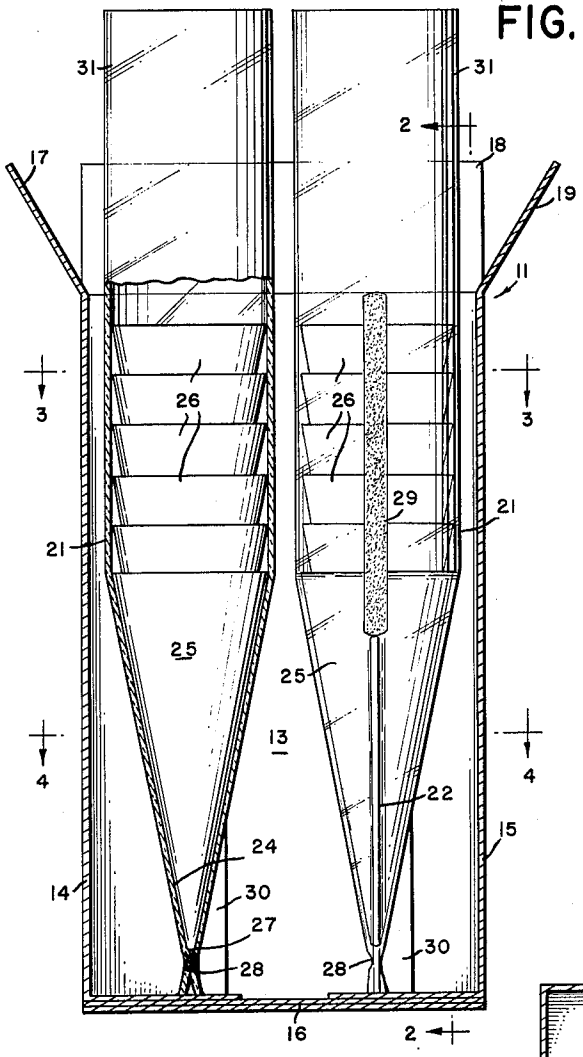
FIG. 1.



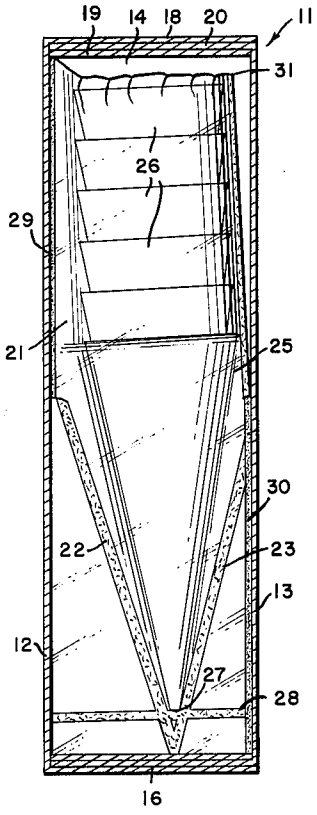


FIG. 2.

FIG. 4.

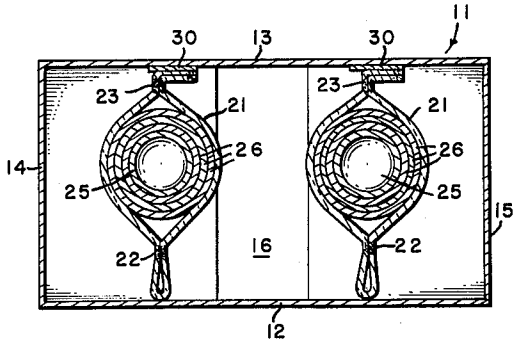


FIG. 3.

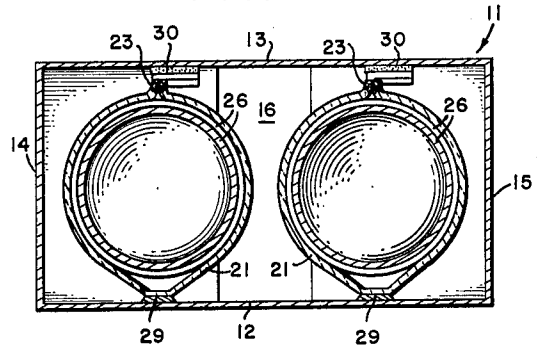


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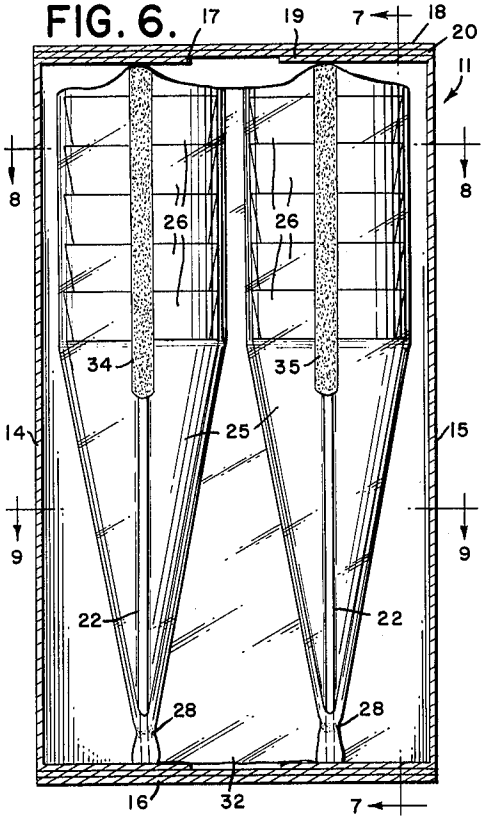
FIG. 6.



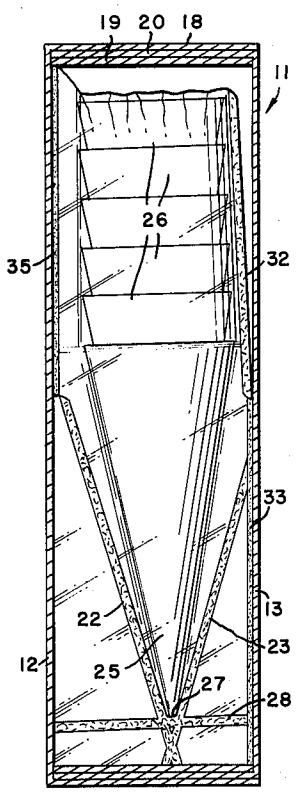


FIG. 7.

FIG. 5.

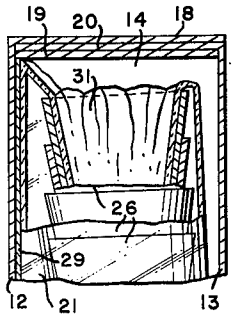
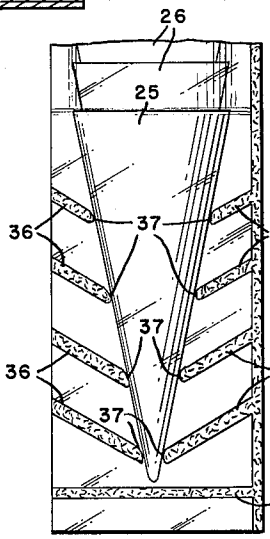


FIG. 10.



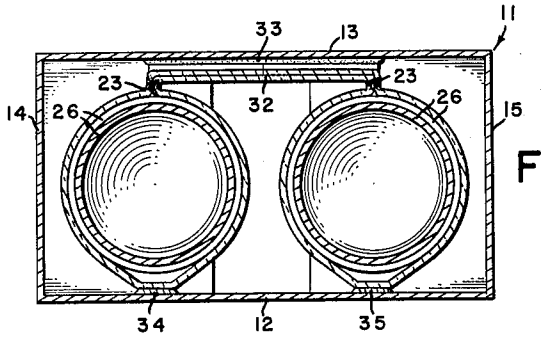


FIG. 8.

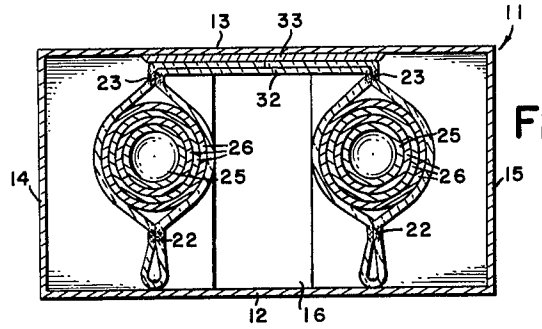


FIG. 9.

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3,240,331

PACKAGE FOR FRAGILE ARTICLES

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Filed Feb. 1, 1965, Ser. No. 429,470
4 Claims. (Cl. 206—65)

This invention relates to packaging and it is more particularly concerned with the packaging of fragile articles.

Among the objects of the invention are the provision of means for packaging fragile articles

(1) to minimize breakage, particularly under conditions of handling and transportation

(2) especially adapted to ice cream cones

(3) which is relatively inexpensive, convenient to use, and which can be used with conventional boxes, and

(4) whereby the articles packaged are maintained in a suspended position relative to a container to attenuate impact forces reecived by the container under conditions of storage and transportation.

In the drawing:

FIG. 1 is a vertical sectional view partly in elevation of an embodiment of the invention in the open position.

FIG. 2 is a vertical sectional view along the line 2—2 of FIG. 1, but with the embodiment in closed position.

FIG. 3 is a cross sectional view along the line 3—3 of FIG. 1.

FIG. 4 is a cross sectional view along the line 4—4 of FIG. 1.

FIG. 5 is a view of the upper portion of FIG. 2 with additional parts in section to illustrate the closure flaps in operative position.

FIG. 6 is a vertical sectional view of a variation of the invention.

FIG. 7 is a vertical sectional view along the line 7—7 of FIG. 6.

FIG. 8 is a cross sectional view along the line 8—8 of FIG. 6.

FIG. 9 is a cross sectional view along the line 9—9 of FIG. 6.

FIG. 10 is a fragmentary view of a portion of the inner wrapper of a further variation of the invention.

The embodiment illustrated in FIGS. 1 to 5 comprises a conventional cardboard box **11** having a front panel **12**, a rear panel **13**, and side panels **14** and **15**. The box also has the conventional flaps secured together forming a closed bottom panel **16** and corresponding flaps **17**, **18**, **19**, and **20** forming a top panel which can be opened and closed.

On the interior of the box, there is disposed one or more elongated tubular bags **21** of a heat fusible film sheet material, such as the conventional polyvinyl chloride sheets or other suitable equivalents. These bags **21** are each disposed in the box, the bottom thereof being closed by heat sealing along lines **22** and **23** that form a pocket **24** of the general shape of the article to be carried. For ice cream cones for example, the lines **22** and **23** converge downwardly as a V to conform to the shape of a cone and thereby support the lowermost cone **25** of a stack of cones **26** along a substantial area. In ordinary packages, the stack of cones is supported at the point or apex **27** of the bottommost cone of the stack which is relatively fragile. Thus supported, the fragile point is subjected to considerable pressure and impact forces.

Along the bottom of the bag, a transverse sealing line **28** may be provided as an added safety measure to insure against opening of the pocket.

Each bag **21** is glued or otherwise secured to the box

panels **12** and **13**, such as along glue lines **29** and **30**, respectively, one line being at the top part of one panel and the other at the bottom part of the other panel. This staggered arrangement tends to prevent the bags from becoming unglued under forces that distort the box out of its normal shape.

The upper ends **31** of the bags extend above the stack of cones and are each folded down into the respective uppermost cone before the flaps **17**, **18**, **19** and **20** are closed. See FIGS. 2 and 5.

The embodiment of FIGS. 6 to 9 is substantially the same as the embodiment of FIGS. 1 to 5, differing therefrom in that the bags are formed of a single continuous sheet of material and are connected by a web poriton **32**. This web portion is glued to one of the box panels at the top along an area **33**, while flaps on the opposite sides of the bags are secured to the opposite panel along lines **34** and **35**, respectively, along the bottom.

Instead of forming the pockets with continuous sealing lines **22** and **23**, an alternative variation comprises the use of spaced lines **36** as shown in FIG. 10. These lines slope downwardly and inwardly termining at points **37** which define the locus of a pocket for the reception of a cone. By the lines being sloped in this way, the positioning of the cones in the pocket is facilitated. These separate lines also minimize opening of the pocket by a "run."

I claim:

1. A package comprising a relatively stiff box having panels forming an enclosure for the contents, a bag within the box of a flexible sheet material said bag having flaps extended therefrom on opposite sides, said flaps being each secured directly to an adjacent panel of the box to support the bag in suspended relation, said flaps being secured to the panels by glue along lines vertically offset on opposite sides of the box.

2. A package as defined by claim **1** in which a pair of bags are provided within a single box in side by side relation, said bags being connected by a web of sheet material, said web being glued to an adjacent panel of the box along a substantial area.

3. A package for ice cream cones comprising a relatively stiff box having panels forming an enclosure, a bag within the box of a flexible heat sealable sheet material, means securing the bag directly to the box panels in suspended relation. said bag being formed by heat-sealing portions of the sheet material together along downwardly convergent lines forming a pocket to receive and hold a stack of nested ice cream cones.

4. A package as defined by claim **3** in which the pocket is formed by heat sealing along a plurality of spaced diagonal lines extending downwardly and inwardly to points defining the locus of a V-shaped pocket.

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