Nov. 4, 1969 A. EISENBERG 3,476,306

PACKAGING AND SHIPPING CONTAINER FOR EGGS AND THE LIKE

Original Filed March 2, 1967 2 Sheets-Sheet 1

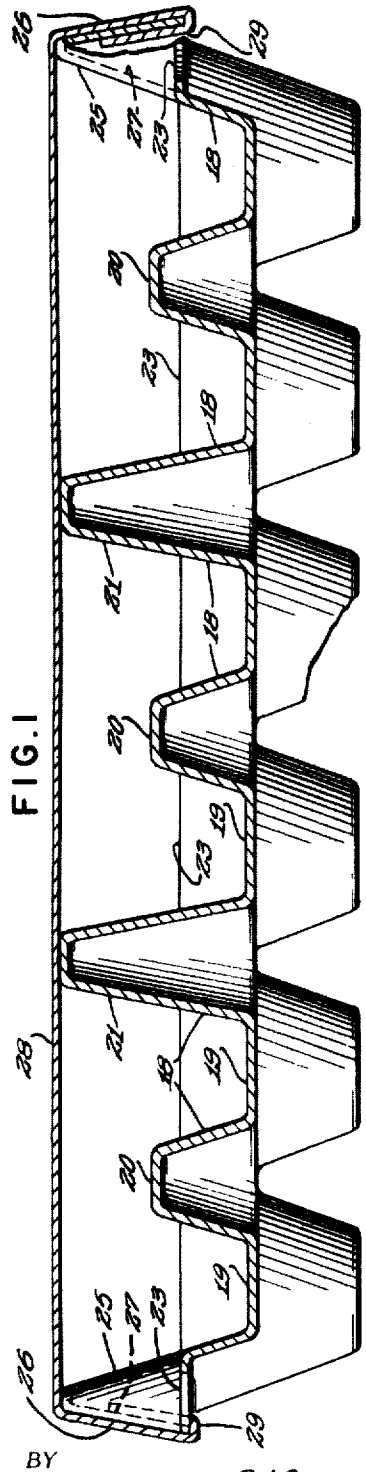

FIG. 1

INVENTOR.

BY Alfred Eisenberg

Hill, Sherman, Meroni, Gross & Simpson ATTORNEYS

Nov. 4, 1969 A. EISENBERG 3,476,306

PACKAGING AND SHIPPING CONTAINER FOR EGGS AND THE LIKE

Original Filed March 2, 1967 2 Sheets-Sheet 2

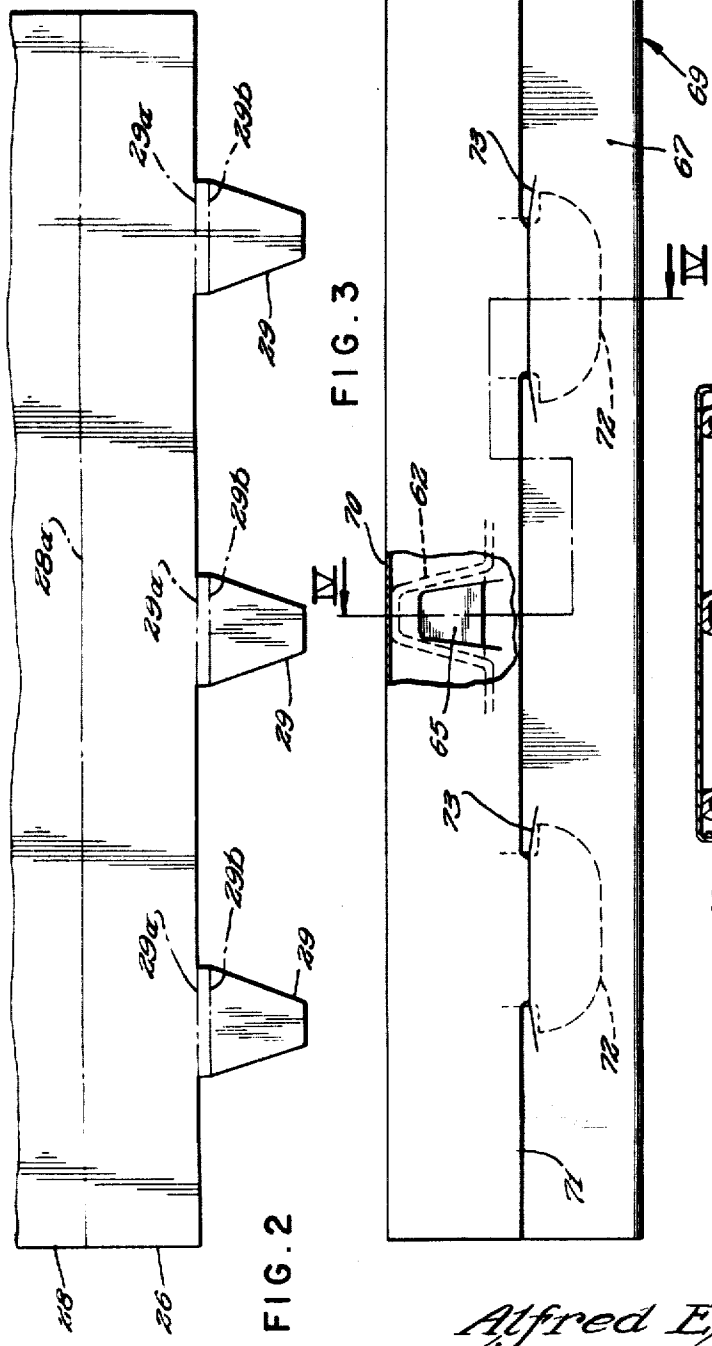

FIG. 2

FIG. 3

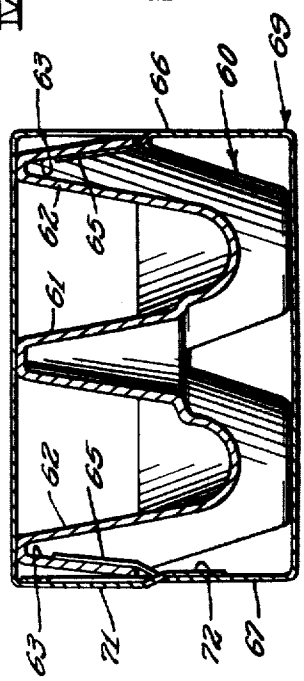

FIG. 4

INVENTOR.

Alfred Eisenberg

Hill, Sherman, Meroni, Gross & Simpson ATTORNEYS

United States Patent Office 3,476,306 Patented Nov. 4, 1969

3,476,306

PACKAGING AND SHIPPING CONTAINER FOR EGGS AND THE LIKE

Alfred Eisenberg, 200 Hibbard Road, Wilmette, Ill. 60091

Original application Mar. 2, 1967, Ser. No. 620,127. Divided and this application July 25, 1968, Ser. No. 755,488

Int. Cl. B65d *1/24, 85/32*

U.S. Cl. 229—40 5 Claims

ABSTRACT OF THE DISCLOSURE

Molded cellular egg tray and closure therefor providing a flat surface for stacking the trays for storage, display or shipment. The egg tray has clusters of egg pockets having hollow molded protective posts extending above the margins of the tray between the egg pockets. Certain of these protective posts extend along the margins of the tray and open to the ground. A closure means is provided for the tray, providing a flat stackable top for the tray, which may be in the form of a flat cover extending along the tops of the protective posts and having opposite depending sides, or which may be in the form of a sleeve having a flat top cover slipped along the tray and having opposite sides. These sides of the cover extend downwardly along opposite sides of the tray and each have at least one locking tab bent to extend inwardly along the inner side of the tray and having locking engagement with the hollow interior portions of the protective posts opening toward the ground to lockingly hold the cover to the tray.

This application is a division of my application Ser. No. 620,127, filed Mar. 2, 1967.

CROSS REFERENCES TO RELATED APPLICATIONS

A prior application Ser. No. 473,744 filed by me on July 21, 1965, now Patent No. 3,352,477 is directed to a cellular egg tray enclosed in a sleeve and having center posts extending along the center of the tray, engaging the undersurface of the sleeve and protecting the eggs during display and transportation.

My present invention, however, differs from that of my prior Patent No. 3,352,477 in that the protective tray is particularly adapted for containing more than a dozen eggs, and the center posts alternate between high and low center posts, to facilitate the removal of the top tray of a stack of nested trays, when it is desired to load the trays with eggs. Another distinction over my prior application is that the posts extend upwardly from at least two opposite edges of the tray to protect the eggs therein and facilitate the placing of a cover about the tray, and the securing of the cover to the hollow interior portions of the posts.

A further improvement is that the package for the loaded egg trays is in the form of a rectangular corrugated board carton having a top hood with locking tabs extending from the side walls of the hood and engageable with slots opening along the side walls of a next adjacent lower hood, to accommodate interlocking of the cartons with each other and hold the cartons in aligned relation with respect to each other during transportation.

SUMMARY OF THE INVENTION AND OBJECTS

In carrying out the present invention, I provide a protective molded tray particularly adapted for eggs generally having ovate cells or pockets and protective posts extending upwardly of the cells. The posts alternate between high and low center posts extending upwardly of the

junctions of clusters of cells, to protect the eggs and to facilitate nesting of the empty trays, and the removal of the nested trays for shipment. I further provide a simple interlocking cover for the trays having interlocking engagement with certain posts, extending along the sides of the tray.

An object of the invention is to improve upon the molded egg trays heretofore in use, by providing upwardly extending center posts at the juncture of each cluster of egg receiving pockets of the tray and by alternating the heights of the center posts between low and high center posts, to facilitate the stacking of the empty trays and the removal of the stacked trays for use, in which center posts extend along at least two sides of the tray and have hollow interior portions opening downwardly toward the bottom of the tray to facilitate the interlocking of a cover to the hollow interior portions of the center posts extending along the sides of the tray.

Another object of the invention is to provide an improved form of molded egg tray and protective cover therefore, wherein the tray has hollow posts extending along at least two opposite sides of the tray in which the cover is in the form of the sleeve having tabs having interlocking engagement with the hollow interior portions of the posts.

These and other objects of the invention will appear from time to time as the following specification proceeds and with reference to the accompanying drawings.

DESCRIPTION OF THE DRAWINGS

FIGURE 1 is a vertical longitudinal sectional view taken through an egg tray constructed in accordance with the principles of the present invention showing a cover locked to the top of the tray.

FIGURE 2 is a fragmentary plan view of blank forming a cover for the tray.

FIGURE 3 is a side view of a modified form in which invention may be embodied in which the cover is in the form of a sleeve extending along the top and downwardly along the sides of an egg tray, and locked in position by engagement with the interior of a hollow protective post with certain parts broken away and certain other parts shown in longitudinal section in order to illustrate the lock for the cover to the egg tray.

FIGURE 4 is a transverse sectional view taken along line IV—IV of FIGURE 3.

An egg tray **11** is shown in FIGURE 1 as being a molded cellular tray which may be molded from wood pulp or any other suitable material, in a conventional manner. The tray **11** has a plurality of rows of integrally formed cells or egg containing pockets **16** having side walls **18, 18** sloping upwarly from the bottoms thereof, at relatively step angles, to provide generally ovate egg pockets substantially conforming to the lower halves of the eggs contained within the pockets. The side walls **18** between the pockets terminate into ledges **19** separating the individual pockets, while the side walls at the junctures of each cluster of four pockets terminate into hollow protective posts **20** and **21**. The protective posts **20** extend slightly above said and end walls **23** of the tray and the protective posts **21** extend a substantial distance above said side walls to a height greater than the height of the eggs to be contained within the tray, to form a protection for the eggs. Posts **25, 25** having hollow interior portions **27, 27** are also molded to extend upwardly of the side and end walls **23** of the tray between each two pockets of each cluster of pockets. The hollow posts **25, 25** extend for the height of the posts **21**, and while the posts **25, 25** are shown in FIGURE 1 as extending about the sides and ends of the tray, in certain instances they need only extend along opposite sides of the tray.

In storing the trays for use, the trays may be nested

one on top of the other, with the high posts nested within each other. The low posts **20**, however, while serving to protect the eggs, enter into the large diameter portions of the next adjacent upper posts. This provides clearance between the short posts and their next adjacent posts, within which the short posts are nested with a resultant reduced number of posts in relatively close nested engagement with each other, facilitating the separation of the trays for use but not sacrificing the protection afforded by the posts.

The end posts **25**, besides protecting the eggs, serve as interlocking supports for closure means for the egg tray, shown as being in the form of a cover **28**, which may be placed over the tray (FIGURE 1) and may have tabs **29** engaged with the hollow interior portions of the end posts, as by the tabs **29**, extending upwardly along the inner and outer sides of the end posts **25** from the bottoms thereof, into the hollow interior portions **27** thereof.

The cover **28** may be formed from a flat piece of cardboard which may be corrugated board with opposite sloping sides **26** bent along score lines **28a** (FIGURE 2) to conform to the sloping sides of the end posts **25**. The tabs **29** may then be bent along score lines **29a** and **29b**, to extend upwardly within the hollow interior portions **27** of the end protective posts **25** and thereby lock the cover in position over the eggs in the tray.

The cardboard from which the cover **28** is made preferably should be of a material in which the tabs when once bent inwardly will acquire a more or less permanent set. One set of tabs **29** may thus initially be bent inwardly and engaged within the hollow interior portions of the posts **25**. The cover may then be hinged about the score line **28a** downwardly into engagement with the tops of the posts **25** and **21**. The tabs **29** at the opposite side of the tray may then be tucked within the hollow interior portions **27** of the posts **25** into engagement with the walls of the posts to lock the cover in position as shown in FIGURE 2.

This provides a semi-permanent lock, and while it can be released by placing a finger within each hollow interior portion of the end ports **25** and grasping the individual tab by the finger, a tear strip (not shown) may be provided in the cover, to enable the cover to readily be released for the removal of eggs from the tray.

FIGURES 3 and 4 illustrate a modified form of closure means for egg trays constructed in accordance with the principles of the present invention. In this form of the invention the closure means is in the form of an open ended sleeve **69** which may be slipped along a tray **60**. The tray **60**, like the tray **11**, is shown as having high protective hollow posts **61** extending along the center thereof and as having hollow end posts **62** extending along the sides thereof and opening downwardly. The end posts **62** provide hollow interior wall portions **63**, to be interlockingly engaged by locking tabs **65**, pressed inwardly of side walls **66** and **67** of the sleeve **69**. The sleeve **69** is herein shown as being rectangular in cross section although it may be formed to conform to the sides of the egg trays.

The rectangular sleeve may, of course, be widened to contain more than one tray **60** or to contain a tray like the tray **11**, in which case the locking tabs **65** will have locking engagement with the hollow interior portions **27** of the end posts **25**.

As shown in FIGURES 3 and 4, the sleeve **69** includes a cover **70** bent to be hinged downwardly from the top of the side wall **66** to rest on the tops of the end posts **62** and the center posts **61**. A flap **71** extends along the opposite side of said cover and is bent to extend downwardly along the side wall **67** and form a part of said side wall. The flap **71** has spaced locking tabs **72** depending therefrom for engagement within slits **73** formed in the side wall **67**.

When the tray **60** is filled with eggs it may be placed in the sleeve **69** from the top thereof. When placing the tray in the sleeve, the locking tabs **65** are first pressed inwardly to engage within the hollow interior wall portions **63** as the tray is placed within the sleeve. The cover **70** is then hinged over the top of the protective posts **61** and **62**, and the locking tabs **72** are lockingly engaged within the slits **73**, locking the sleeve in closed position and positively locking the tray within the sleeve.

This forms a positive locking means for the tray, which may only be released by tearing the tabs **72**. Where it may be dseired to afford ready access to the tray, a conventional tear strip (not shown) may extend along the cover **70**.

While I have herein shown and described several forms in which the invention may be embodied, it should be understood that various variations and modifications in the invention may be attained without departing from the spirit and scope of the novel concepts thereof.

I claim as my invention:

1. In a packaging device for eggs and the like, a cellular molded trap having a plurality of clustered egg pockets molded therein generally ovate in form, and having steeply inclined side walls and a marginal edge portion extending about said carton, said side walls at the juncture of each cluster of egg pockets extending upwardly above said marginal edge portion and being joined to form hollow protective posts, certain of said posts extending along the marginal edge portion of said tray and having hollow downwardly opening interior portions accessible from beneath the marginal edge portion of the tray, closure means for said tray resting on the tops of said protective posts and having opposite depending wall portions extending downwardly along certain of said marginal protective posts to positions adjacent the downwardly opening end portions thereof, said depending wall portions each having at least one locking tab bent inwardly to be lockingly engaged with the open ends of the adjacent posts and extend upwardly along the hollow interior portions thereof, to thereby lock the closure means to cooperate with the tray and form a closure therefor.

2. The packaging device in accordance with claim **1**, wherein the depending wall portions depend along opposite ends of the tray and the locking tabs depend therefrom to extend inwardly therefrom and lockingly engaged within the hollow interior portions of said marginal posts.

3. The packaging device in accordance with claim **1**, wherein the depending wall portions extend along the outer sides of the marginal posts extending along opposite sides of the tray and each have at least one locking tab bent to be lockingly engaged within the hollow interior portions of the protective posts extending along opposite sides of the tray to lockingly hold the closure means to the tray.

4. The packaging device for eggs in accordance with claim **1**, wherein the closure means is in the form of an open-ended sleeve and the depending wall portions form side walls for the sleeve and have inwardly pressed locking tabs adapted to extend upwardly within and have locking engagement with the insides of certain of the hollow protective posts extending along the marginal edge portions of the tray.

5. The packaging device of claim **1**, wherein the sleeve is rectangular in form, having a top, a parallel bottom and side walls connecting said top and bottom together, wherein one of the depending wall portions forms one of said parallel side walls and the other of said depending wall portions is the form of a flap extending downwardly along said opposite parallel side wall and is adapted to have locking engagement therewith, and wherein at least one locking tab is provided in at least one of said depending wall portions and is bent inwardly to be pressed upwardly along the inner sides of an associated hollow interior portion of a marginal post to have locking engagement therewith.

(References on following page)

5

References Cited

UNITED STATES PATENTS

2,082,564	6/1937	Benoit	229—29
2,788,627	6/1945	Grant	217—26.5
3,163,345	12/1964	Schwertfeger	229—29

6

3,224,618	12/1965	Vigue	217—26.5
3,352,477	11/1967	Eisenberg	229—40

DAVIS T. MOORHEAD, Primary Examiner

U.S. Cl. X.R.

217—26.5; 229—2.5, 29, 45

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,476,306 Dated November 4, 1969

Inventor(s) Alfred Eisenberg

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 2, line 21, "therefore" should be --therefor--.
Column 2, line 35, after "of" insert --a--.
Column 2, line 52, "upwarly" should be --upwardly--.
Column 2, line 53, "step" should be --steep--.
Column 2, line 60, "said" should be --side--.

Column 3, line 66, after "top" insert --portion--.
Column 4, line 10, "dseired" should be --desired--.
Column 4, line 20, "trap" should be --trav--.

Signed and sealed this 9th day of May 1970.

(SEAL)
Attest:

EDWARD M.FLETCHER,JR.
Attesting Officer

WILLIAM E. SCHUYLER, JR.
Commissioner of Patents

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,476,306 Dated November 4, 1969

Inventor(s) Alfred Eisenberg

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 2, line 21, "therefore" should be -- therefor --.
Column 2, line 35, after "of" insert -- a --.
Column 2, line 52, "upwarly" should be -- upwardly --.
Column 2, line 53, "step" should be -- steep --.
Column 2, line 60, "said" should be -- side --.
Column 3, line 66, "after "top" insert -- portion --.
Column 4, line 10, "dseired" should be -- desired --.
Column 4, line 20, "trap" should be -- tray --.

This certificate supersedes Certificate of Correction issued May 9, 1970.

Signed and sealed this 14th day of July 1970.

(SEAL)
Attest:

EDWARD M.FLETCHER,JR.
Attesting Officer

WILLIAM E. SCHUYLER, JR.
Commissioner of Patents