United States Patent

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[54] **CONTAINERS**
9 Claims, 2 Drawing Figs.

[52] **U.S. Cl.** **229/44,** 229/45, 229/25
[51] **Int. Cl.** **B65d 3/24,** B65d 5/64
[50] **Field of Search** 229/44, 45, 2.5

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ABSTRACT: An egg box comprises a base section, a cover section and a locking flap, the cover section being hinged to the base section along one side, the locking flap being hinged to the base section along the opposite side and having a recess or projection which cooperates with a corresponding projection or recess on the exterior of the cover section when the cover section is in the closed position. Preferably the cover section has a recess close to the edge. Two flaps may be provided, each at a distance one-third or two-thirds of the distance along one side.

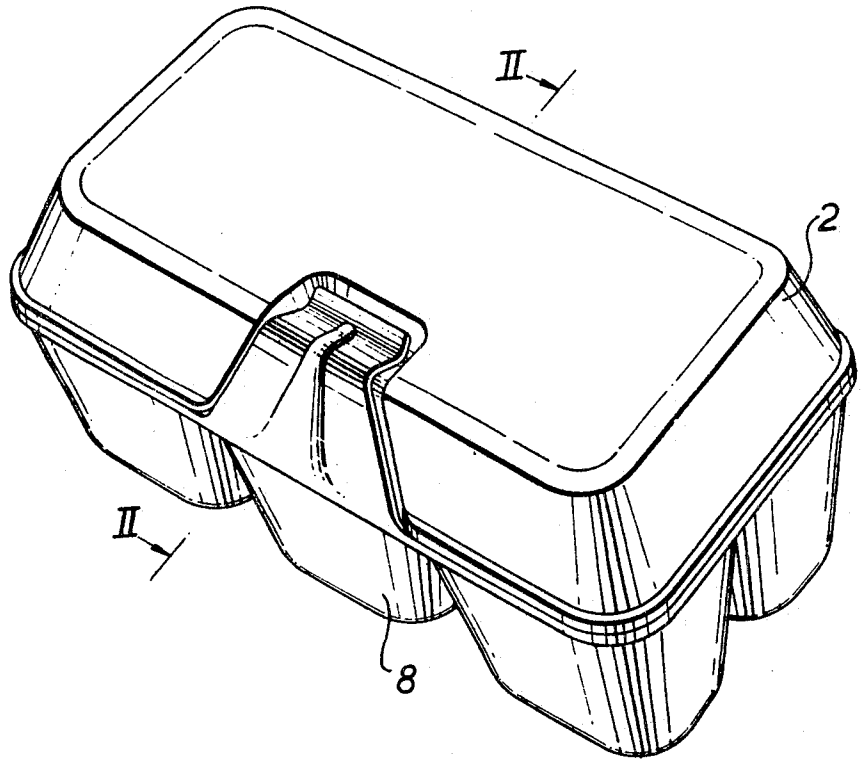


FIG. 1.

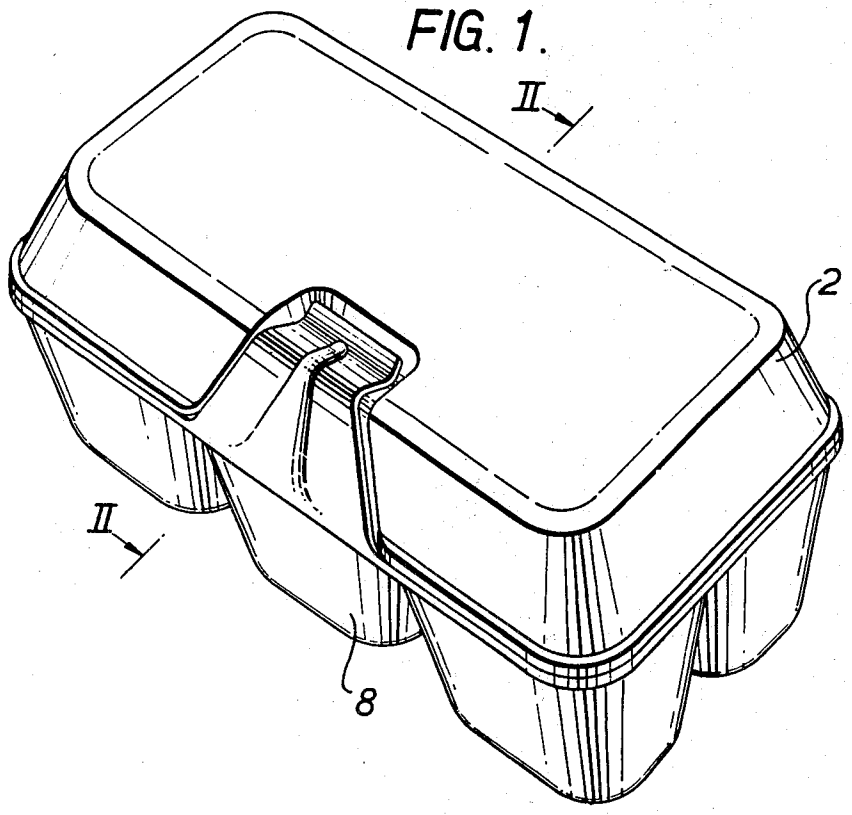
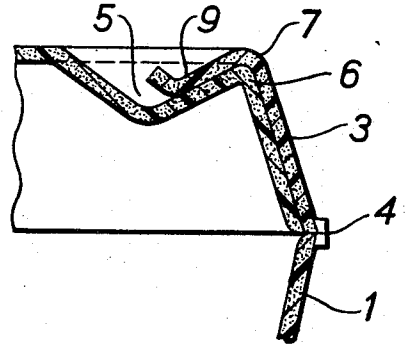


FIG. 2.



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CONTAINERS

This invention relates to containers, and particularly although not exclusively, to containers for eggs.

For many years, eggs have been transported and sold in disposable egg boxes. These boxes are generally manufactured in moulded pulp and consist of an integral unit comprising a base section, a lid section and a locking flap. The base section is often moulded to provide round or roughly semiovoidal depressions in to which the eggs can nest, the depressions being separated by ribs which prevent the eggs from contacting one another and also give strength to the base. The cover is generally plain in construction or may be provided with indentations and/or cut outs or may be similar to the base. Sometimes the sides and top are contoured. The lid is hinged to the base and it is necessary to provide a locking device which holds the lid firmly in position when it is folded over onto the base, yet which may be released quickly and easily when desired. The locking device is generally a flap hinged to the base on the opposite side of the base from the lid and coacting in some fashion with the lid when the latter is in the closed position. Many locking devices of this type have been proposed.

It is an object of the present invention to provide a container comprising a new and improved locking device.

Thus according to the present invention there is provided a container comprising a base section, a cover section and a locking flap, the cover section being hinged to the base section along at least part of one side, the locking flap being hinged to the base section along at least part of the opposite side and having a recess or projection which cooperates with a corresponding projection or recess on the exterior of the cover section when the cover section is in the closed position.

Preferably the recess or projection on the cover section is on the top of the cover section, and close to the edge. The effect of having a recess near the edge of the cover section is to make the edge act as a projection and a preferred arrangement is obtained when the flap is bent in such a shape that it provides a recess which cooperates with the edge of the cover section, and a projection which cooperates with the recess in the cover section.

More than one locking flap may be provided and it is suitable to have two flaps equally spaced along the longer side of the base of the container, the hinge being on the opposite side.

The base of the container may be divided into a number of pockets or cells suitable for holding eggs, the eggs being prevented from touching each other by means of relatively high ribs. Usually the base is divided into six pockets although any other number may be provided by modifying the dimensions of the container. In the case of a six pocket container the arrangement is as two rows of three thus providing a container whose plan view is approximately rectangular. With this arrangement a single locking flap may be provided which may be attached either to one of the shorter or longer sides. When only one flap is provided it is preferably attached to the middle of one of the shorter sides, or to one of the longer sides at a point one-third or two-thirds of the distance along that side. If the flap is attached to the centre of the longer side, the recess in the lid with which it cooperates may perhaps be obstructed by the egg in the centre pocket. To overcome this difficulty the flap may straddle the position occupied by the central egg, the flap having two projections each of which cooperates with a recess on either side of the central pocket. Alternatively two

locking flaps may be provided attached to points one-third and two-thirds of the distance along the longer side of the base opposite the hinge.

Suitable materials for the construction of the containers are thermoplastic resins, especially foamed thermoplastic resins *e.g.*, foamed polystyrene sheet.

Containers according to the present invention are suitable for use in the storage of eggs, fruit and other fragile or soft commodities.

The invention is illustrated by the accompanying drawings in which FIG. 1 is an isometric view of the egg box and FIG. 2 is a section through the box about the line II–II.

With reference to the drawings the egg box comprises a base 1, a cover section 2 and locking flaps 3. The cover section 2 is connected to the base through a hinge (not shown) which is integral with the base 1 and cover section 2. Similarly the flap 3 is connected to the base 1 through a hinge 4 which is integral with the base 1 and flap 3. The locking flap 3 is shaped so as to form a recess 7 which cooperates with projection 6, and a projection 9 cooperating with recess 5.

The base 1 includes 6 egg cells 8 arranged in rows of three and the cells 8 are separated from each other, for example by means of relatively high ribs. The flap 3 is shown attached to the centre of one of the longer sides of the base.

I claim:

1. A container comprising a base section, a cover section and a locking flap external to the cover section, the cover section being hinged to the base section along at least part of one side and having a locking recess in its top surface disposed adjacent to and along at least part of the edge of said top surface at the opposite side, the locking flap being hinged to the base section along at least part of said opposite side and bent in such a shape that it provides a locking recess which cooperates with said part of said edge of the cover section and also provides a locking projection which cooperates with said locking recess in said top surface, when the cover section is in the closed position.

2. A container according to claim 1 wherein the container is provided with two flaps equally spaced along the longer side of the base of the container, the hinge being on the opposite side.

3. A container according to claim 1 wherein the base of the container is divided into a number of pockets or cells suitable for holding eggs, the eggs being prevented from touching each other by means of relatively high ribs.

4. A container according to claim 3 wherein the base of the container is divided into six pockets arranged in two rows of three.

5. A container according to claim 1 wherein only one flap is provided which is attached to the middle of one of the shorter sides.

6. A container according to claim 1 wherein only one flap is provided which is attached to one of the longer sides at a point one-third or two-thirds of the distance along that side.

7. A container according to claim 3 wherein only one flap is provided which is attached to the centre of one of the longer sides and straddles the position occupied by the central egg, the flap having two projections each of which cooperates with a recess on either side of the central pocket.

8. A container according to claim 1 wherein the container is made from a thermoplastic resin.

9. A container according to claim 8 wherein the thermoplastic resin is foamed polystyrene sheet.