

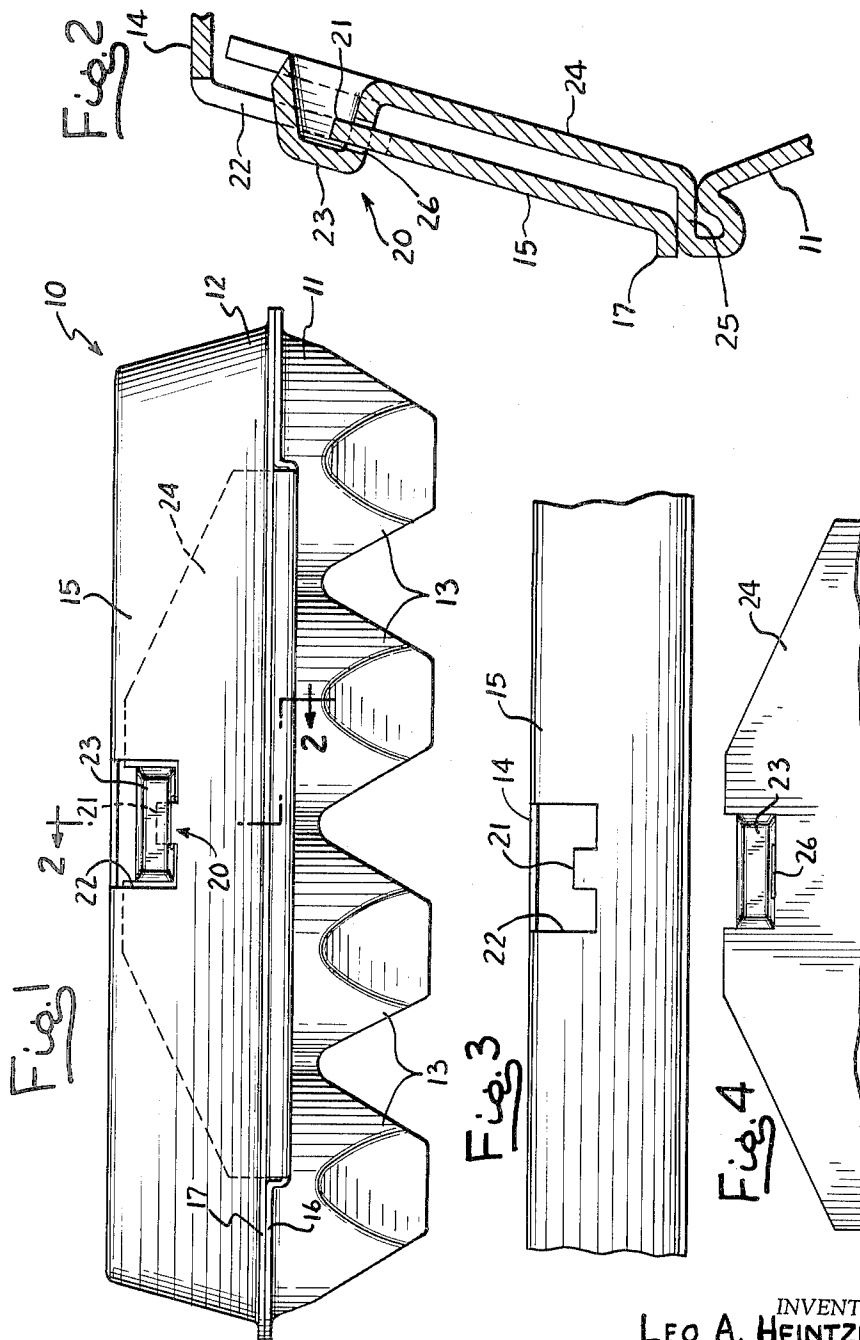
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CARTON LATCH

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1

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CARTON LATCH

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2 Claims. (Cl. 229—2.5)

This invention relates generally to egg cartons, and more particularly, to an improved latching device for egg cartons formed of molded pulp fiber.

It is a primary object of the present invention to provide a simple and positive device for latching the hinged cover of an egg carton to its cellular base portion.

It is a more particular object to provide such a latching device in which the mating parts may be formed integrally and contemporaneously with the formation of the carton.

Another object is to provide a latching device of the above type which will not accidentally unlock when the carton is lifted by its cover, but rather, the latch will become more firmly engaged under such circumstances.

It is also an object to provide a latching device as described above which may be conveniently snapped into engagement and which may be readily disengaged at a later time by a simple squeezing action which may be performed with one hand by the operator.

Other objects and advantages of the invention will become apparent upon reading the following detailed description and upon reference to the drawings in which:

FIGURE 1 is a front elevation of a typical 3 x 4 style egg carton incorporating the latching device of the present invention;

FIG. 2 is an enlarged partial section taken along the line 2—2 in FIG. 1 showing the cross section of the latching mechanism;

FIG. 3 is a fragmentary front elevation of the carton cover showing the latching opening; and

FIG. 4 is a fragmentary front elevation of the inner flap and latching device.

While the invention will be described in connection with a preferred embodiment, it will be understood that I do not intend to limit the invention to that embodiment. On the contrary, I intend to cover all alternatives, modifications and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims.

Turning now to the drawings there is shown a molded pulp fiber egg carton indicated generally at 10 having a body portion 11 and a cover portion 12. The body portion 11 is formed, in this instance, in the customary 3 x 4 style having three rows of four individual pockets or cells 13 into which the eggs may be placed and protected from one another. The cover portion 12 is preferably formed with a non-cellular or open tray-like construction with a rectangular top portion 14 which merges into four depending wall members shaped similarly to a front wall 15 as shown in FIG. 1.

The body portion 11 and cover portion 12 are each formed with respective flanges 16 and 17 which extend laterally from the open edges of the respective portions 11, 12. The flanges 16, 17 thus serve to provide substantial seating or bearing surfaces for the cover 12 upon the body 11 when the carton 10 is closed. It will also be appreciated that the flanges 16, 17 may be interconnected or formed integrally with one another along one edge of the carton so as to provide a hinge between the cover 12 and the body 11 of the carton 10.

In accordance with the present invention, a two part latching device 20 is formed integrally with the respective body portion 11 and cover portion 12 of the carton to provide a positive lock when the carton is closed. In the

2

preferred embodiment, the latching member 20 includes an upstanding tang or locking tab 21 which is formed contiguously with the front wall 15 and which projects upwardly into a latch opening 22 in the front wall. A mating latch 23 is carried by and projects from an inner flap 24 hinged to the front edge of the body portion 11. The flap 24 is provided with an offset flange construction 25 adjacent the hinged connection to the body portion 11 in such a way that the flange 17 of the cover portion 12 will rest against it when the cover is closed. The flap member 23 projects upwardly inside the front wall 15 in face-to-face relationship therewith (see FIG. 2). The projecting catch 23 is located on the flap 24 so that it will register with the latch opening 22 when the cover 11 is closed. A slot 26 is formed in a lower projecting surface of the catch 23 substantially the same length as the width of the tab 21.

As the cover 12 is closed the wall 15 is telescoped downwardly over the inner flap 24. When the cover flange 17 engages the offset flange 25, the flap is sprung outwardly tending to urge the projecting catch through the latching opening 22. However, since the locking tab 21 projects upwardly into the opening 22, the catch 23 may not enter the opening until additional pressure is applied to the top 14 of the cover 12. The additional pressure applied to the cover 12 allows the catch 23 to spring outwardly and upwardly through the opening 22 and as the pressure is released, the slot 26 engages the locking tab 21.

To disengage the latching mechanism 20, it is only necessary for the operator to grasp the lower portion 27 of the catch 23 and the top 14 of the cover 12 between his finger and thumb and squeeze these parts together. This lifts the catch 23 over the locking tab 21 and the normal rearward pressure exerted by the squeezing action urges the catch 23 inwardly of the opening 22.

It may also be appreciated that the construction of the latching device 20 prevents accidental opening of the carton 10 when it is lifted by its cover portion 12. Thus, it will be seen that lifting the cover portion 12 serves to carry the locking tab 21 upwardly thereby seating it more firmly within the slot 26. Therefore, while it is not desirable to lift such cartons by grasping only the top portion, it will be seen that the present latching mechanism 20 prevents the carton from springing open and thereby spilling its contents.

The construction employed in the preferred embodiment of the latching device 20 also allows the carton 10 to be formed in a one-step operation. Thus, since the locking tab 21 is formed contiguously with the front wall 15 of the cover 12 and the projecting catch 23 is integrally formed on the flap 24, it is possible to mold the carton with a single set of dies. In this way, a latching device which is both positive in locking the carton and yet simple to engage and disengage may be formed very economically with little or no additional cost over that of the carton itself.

I claim as my invention:

1. A molded pulp fiber egg carton comprising a pocketed body section for holding a plurality of eggs, and an overlying tray-like cover section, flanges formed on each of said sections adjacent the edges thereof, said flanges being interconnected along the rear edges of said sections forming a hinge therebetween, an inner flap member hinged at its lower portion to the front edge of said body section and projecting upwardly therefrom in face-to-face relationship with a front wall of said cover section when the cover is closed over said body section, said front wall having an opening therein and having a contiguously formed upstanding locking tab projecting partially into said opening, said inner flap having an outwardly projecting catch member adapted to register with

3

and insertable laterally into said opening without distortion when said cover section is closed, and a slot in the lower portion of said catch member to receive said locking tab when said catch member is inserted into said opening and after movement thereof downwardly in said opening into latching position to prevent movement of said catch member laterally of said opening. 5

2. A molded pulp fiber egg carton as defined in claim 1 wherein said locking tab projects into the opening in said front wall medially of the width of the opening and said 10

4

slot is disposed medially of the ends of said outwardly projecting catch member.

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