

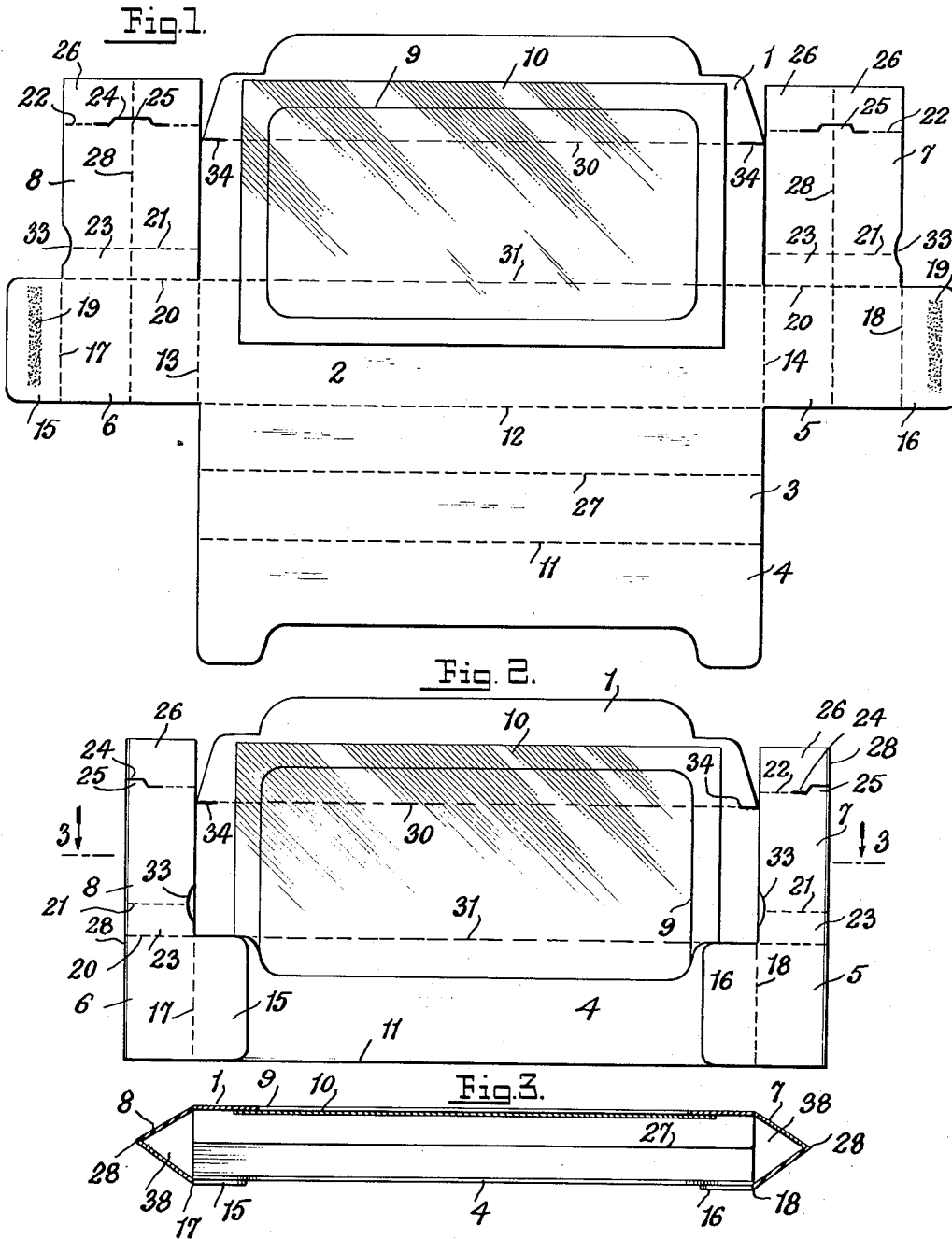
Nov. 1, 1955

D. LEVKOFF
BOXES OR CARTONS

2,722,362

Filed May 25, 1951

2 Sheets-Sheet 1



INVENTOR.

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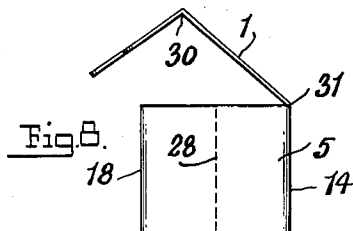
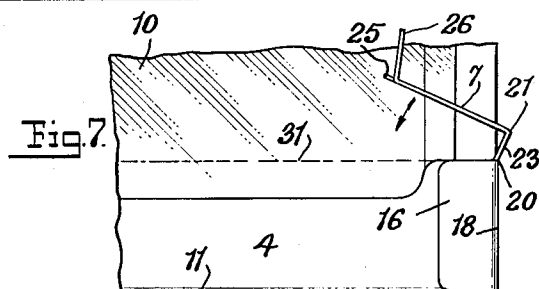
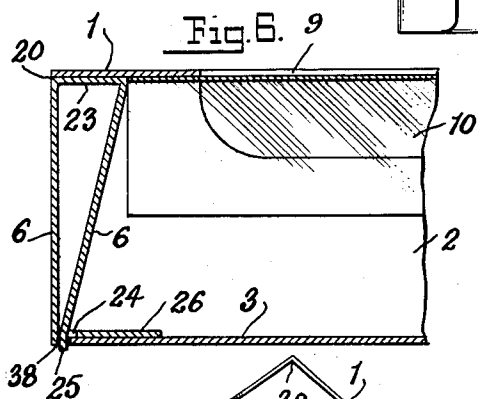
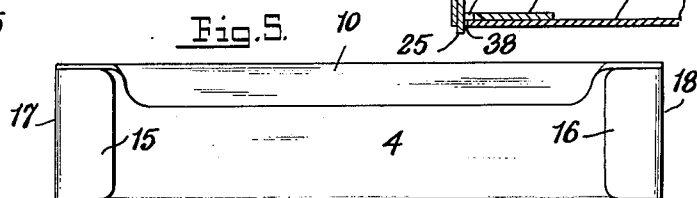
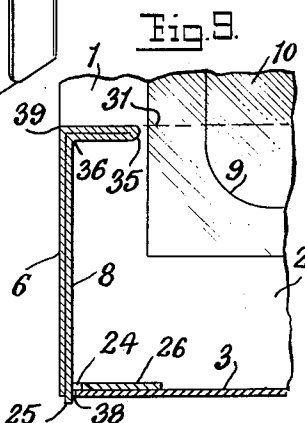
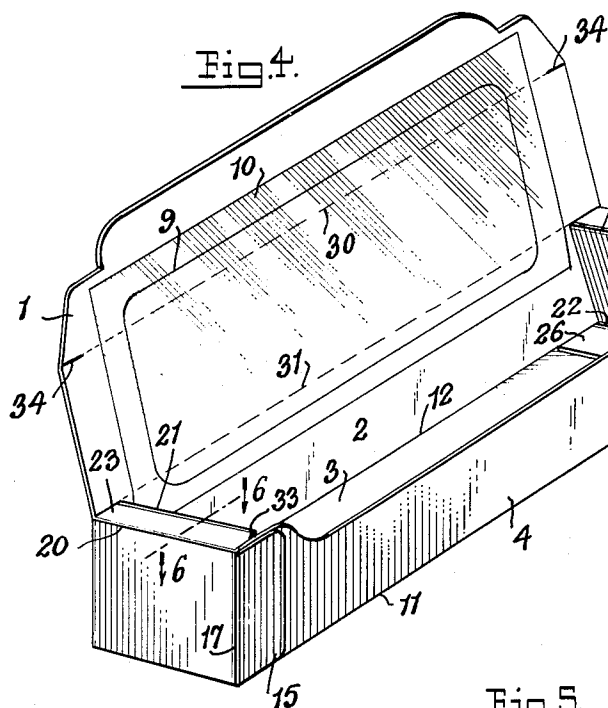
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BOXES OR CARTONS

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2 Claims. (Cl. 229—16)

This invention relates to boxes or cartons, and particularly to those of relatively shallow, tray-like form especially adapted for containing such articles as tomatoes, other vegetables, fruits, cakes and numerous other articles.

It is an object of the invention to provide a carton of this character which can be inexpensively fabricated from a single piece of cardboard; which can be collapsed flatly for storage and shipment; which will require a minimum of gluing operations, and which, when set up, will be rigid and strong to most effectively protect its contents.

It is another object of the invention to provide a carton of the above-described character having strongly-reinforced end walls, not only serving to stiffen the carton at these important locations, but also serving to provide ledges or rests for the down-folded cover of the carton.

It is another object of the invention to provide a carton in which the setting-up operation, transforming the flattened carton to one ready for the reception of the goods, can be instantaneously performed either by hand or by machine operation so that the filling of the carton with the goods will be greatly facilitated.

More particularly, the invention contemplates, among other things, the provision of a carton having side walls, end walls and a bottom, with the end walls formed as lateral extensions of one of the side walls and glued to the other side wall, and with locking flaps formed at the top of the end walls and downfolded into the interior of the box in position to overlie the inner faces of the end walls and stiffen and strengthen the ends of the box as well as to provide cover supporting ledges.

With these objects and other objects to be herein-after disclosed, in view, I have devised the particular arrangement of parts to be set forth in detail and more specifically pointed out in the claims appended hereto.

In the accompanying drawings, wherein an illustrative embodiment of the invention is disclosed, Fig. 1 is a face view of the blank from which the improved carton is formed;

Fig. 2 is a front elevational view of the carton in its flattened or collapsed condition;

Fig. 3 is a sectional view, taken on the line 3—3 of Fig. 2, showing the carton in a partly collapsed condition;

Fig. 4 is a perspective view of the set-up carton with the cover flap in raised or open position;

Fig. 5 is a front elevational view of the closed carton;

Fig. 6 is a sectional view taken on the line 6—6 of Fig. 4, but showing the cover closed;

Fig. 7 is a front elevational view of one end of the carton, with one of the locking flaps in a raised position;

Fig. 8 is an end view of the carton with its cover flap in a partly open position; and

Fig. 9 is a sectional view, similar to Fig. 6, but showing a modified construction.

Referring to the drawings and particularly to Fig. 1

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thereof, wherein is shown the blank from which the carton is made, 1 indicates the foldable cover flap. The same constitutes an integral upward extension of the back wall indicated at 2. The bottom of the carton is indicated at 3, and the front wall is indicated at 4. The rear wall 2 is formed with integral lateral extensions indicated respectively at 5 and 6, such extensions constituting the end walls of the carton. Extending integrally upward from the top of each of these end walls are the locking flaps indicated respectively at 7 and 8. A window opening 9 is formed partly in the cover flap 1 and partly in the rear wall 2, and said window opening, if used in the carton, may be covered by a sheet of cellophane 10 or other suitable material, which may be of a transparent nature if it is desired that the contents of the carton be exposed to view.

The blank is provided at 11 and 12 with spaced, longitudinally extending score lines and when the blank is folded on the line 11, the front wall 4 is brought to upstanding position. Similarly, when the blank is folded on the line 12, the rear wall 2, as well as the cover flap 1 attached thereto, will be also brought to upstanding position.

At the opposite ends of the rear wall 2 are score lines 13 and 14, and when the blank is folded on these lines, the end walls 5 and 6 will then be extended forwardly toward the then upright front wall 4. At the ends of the end walls 5 and 6 are attaching-tabs 15 and 16, and when the end walls are respectively folded on the score lines 17 and 18, these tabs will be disposed on the outer side of the front wall 4 to be adhesively attached thereto by means of the adhesive or glue spots 19 previously placed on these tabs. As an alternative, the tabs 15 and 16 might be attached to the inside face of the front wall 4 rather than to the outer face if such an arrangement is found more desirable.

When the blank is folded as above described and has had the tabs 15 and 16 secured to the front wall, the only further step required to complete the setting up or erection of the carton is to have the locking flaps 7 and 8 folded down into locking position. It will be noted that each of the locking flaps is provided with three transverse score lines indicated respectively at 20, 21 and 22. The two parallel score lines 20 and 21 define a strip 23 between them, which, when the locking flap is folded down, extends inwardly and horizontally from the top edge of the end wall to which it is attached, as shown in Figs. 4 and 6 and thus forms a ledge for supporting an end portion of the cover flap 1 when said cover flap is folded down to its closed position.

After the locking flap is folded on the lines 20 and 21, it is next swung downwardly into the carton, as indicated by the arrow in Fig. 7 so that it will overlie the end wall of which it forms a part. A slit 24 is formed on the line of the scoring 22, said slit resulting in the formation of a tongue 25 which is utilized to hold the locking flap in its downfolded position by entering into the slit opening 38 located between the lower portion of the end wall and the adjacent edge of the bottom of the carton, as shown in Fig. 6. As an alternative for this tongue and slit arrangement, the downfolded locking flaps 7 and 8 may be retained in such locked position by a frictional engagement of their side edges with the front and rear walls of the carton, or by some other known locking means.

When each of the locking flaps is in its downfolded and locked position, as above described, it will be observed that each of the ends of the carton is strongly reinforced and stiffened by a triangular reinforcement consisting of the end wall proper, the ledge portion 23 extending inwardly therefrom, and the downwardly and angularly extending portion of the locking flap terminating at the

bottom in the tongue 25 from which the lateral tab 26 projects and lies flatly against the bottom of the carton.

To enable the carton to be stored or shipped in a collapsed or flat condition, I provide the same with certain scorings on which the carton may be folded to permit the desired collapsing action. One of these scorings consists of the central, longitudinal score line 27 provided in the bottom 3 between the score lines 11 and 12. Provided in the end walls 5 and 6 and locking flaps 7 and 8 are central score lines 28 which align with the score line 27 when the walls of the carton are connected by the attachment of the tabs 15 and 16 to the front wall 4. By folding the carton on the lines 27 and 28, it will be obvious that it can be flattened, as partially indicated in Fig. 3.

The set-up or erected carton is shown in Fig. 4, wherein the locking flaps are shown as having been folded into their locked positions in the manner previously described, and the carton is ready to receive its contents. When the goods are placed in the carton, the cover flap is folded on the lines 30 and 31, and the front portion 32 of the cover is then tucked in place behind the front wall 4. It will be noted that each of the locking flaps 7 and 8 is provided in one of its edges with a notch 33, and as the cover flap is tucked in place as above described, an engagement takes place between these notches 33 and slits 34 in the opposite ends of the cover on the fold line 30, forming a lock to hold the cover closed.

In connection with the structure shown in Figs. 1 to 8 inclusive, I have indicated that the cover-supporting ledge 23 will be formed by folding the locking flap on parallel lines 20 and 21 to provide a triangulated end reinforcement. As an alternative, the locking flaps might be folded on three transverse parallel score lines, indicated at 35, 36 and 39 in Fig. 9. This will also result in a cover-supporting ledge and will bring the body portion of the flap that extends downwardly from the ledge flatly against and into close contact with the inner face of the adjacent end wall.

The carton is simply constructed from a single section of cardboard; the glue spots shown at 19 constitute the only gluing required to hold the carton together and the end reinforcements and cover-supporting ledges at the opposite ends of the carton lend stiffness and strength to the box. These features, coupled with the fact that the entire carton can be flattened for storage and shipment, result in a practical, economically-made carton.

What I claim is:

1. A carton having a bottom, side walls and end walls, each end wall consisting of a lateral integral extension of

one of the side walls, each end wall having a tab at its end attached to the opposite side wall, each end wall being unattached for the entire length of its lower end to the adjacent end of the bottom, a locking flap formed at the top of each end wall, each locking flap being folded on spaced parallel lines to form a ledge located at the top of the end wall, said locking flaps each having a portion folded downwardly at an angle from said ledge into the box to overlie the inner side of an end wall, said downwardly-folded portion extending at an angle from the outer end of the ledge to the junction of the bottom with the end wall, the locking flap having a tongue fitting between the end wall and the end of the bottom to thereby hold the locking flap in its down-folded position, said locking flap being provided with a foot portion extending at an angle from the tongue and lying flatly against the bottom, the end wall, ledge and downwardly-folded portion co-operating in the formation of a double-thickness end on the carton of triangular cross-sectional shape.

2. In a box or carton having a bottom, side walls and end walls, the lower edge of each of the end walls being unconnected for its entire length to the bottom, a locking flap formed at the top of each end wall, each locking flap being folded on parallel lines to provide a horizontal ledge disposed at the top of the end wall on which the locking flap is formed, each of said locking flaps having a supporting portion extending downwardly at an angle from the inner termination of the ledge to the junction between the bottom and end wall, said supporting portion having a tongue fitting between the end of the bottom and the lower end of the end wall, the locking flap having a tab portion extending inwardly from the tongue and lying flatly against the inner face of the bottom, the end wall, ledge and supporting portion co-operating in the formation of a double-thickness end on the carton of triangular cross-sectional shape.

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