

May 8, 1951

F. L. RUSHING ET AL
CONTAINER

2,551,814

Filed Dec. 13, 1945

2 Sheets-Sheet 1

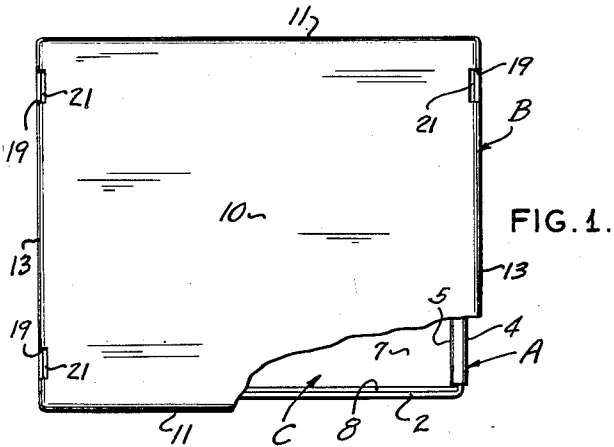


FIG. 1.

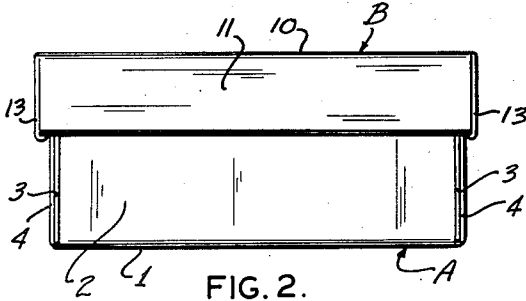


FIG. 2.

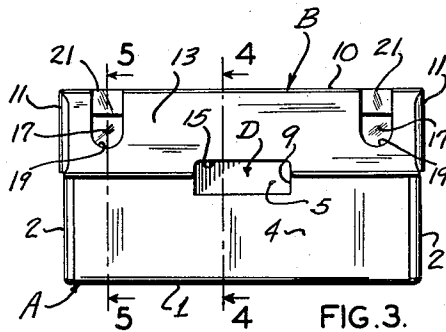


FIG. 3.

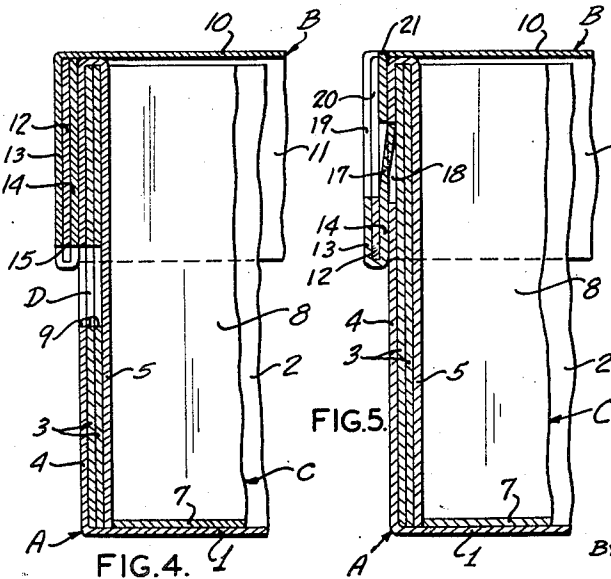


FIG. 4.

FIG. 5.

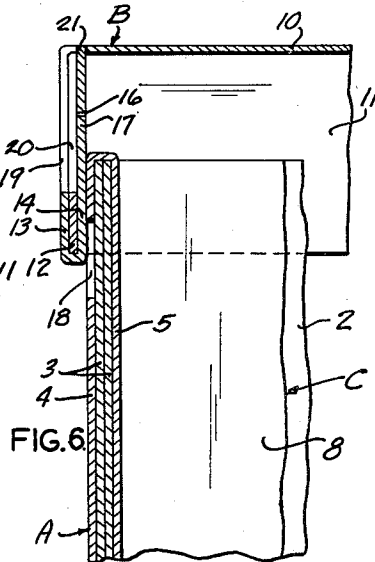


FIG. 6.

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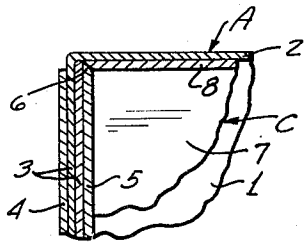


FIG. 9.

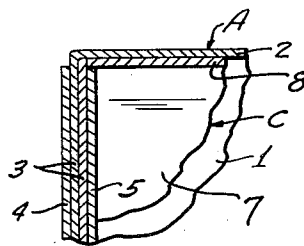


FIG. 8.

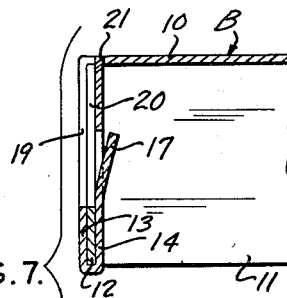


FIG. 7.

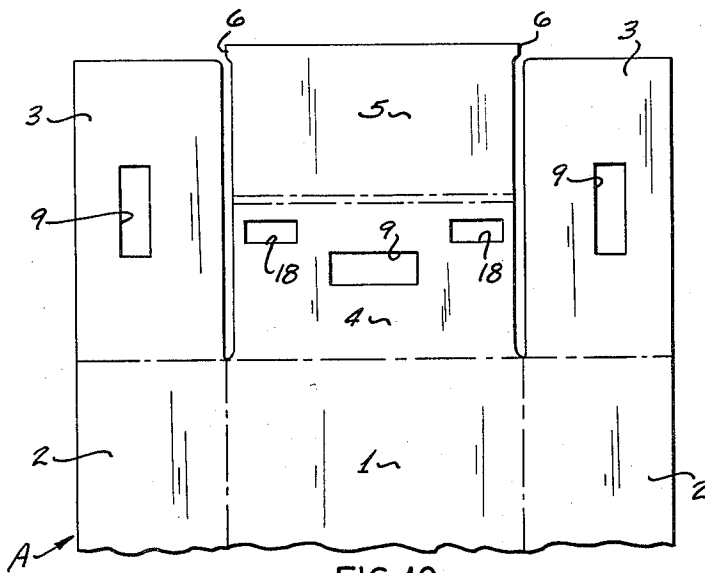


FIG. 10.

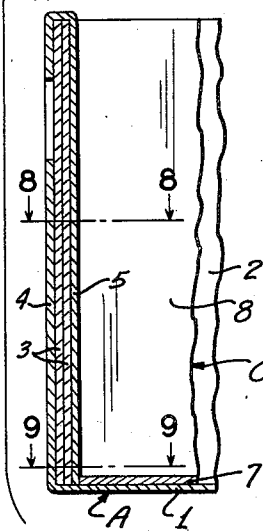
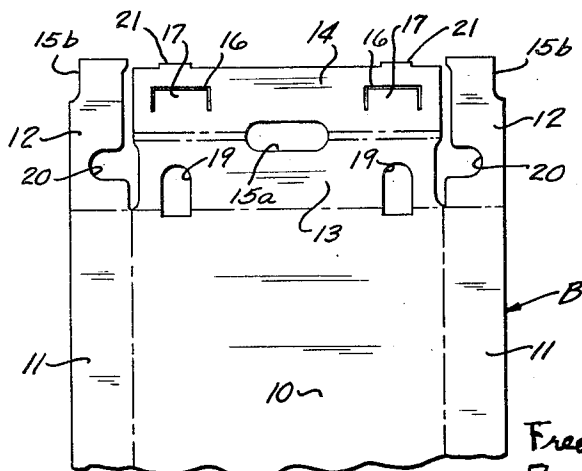


FIG. 11.

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UNITED STATES PATENT OFFICE

2,551,814

CONTAINER

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Application December 13, 1945, Serial No. 634,776

3 Claims. (Cl. 229—45)

1

This invention relates to containers, particularly folded-blank fruit and vegetable shipping cartons of the kind having a body with a slip cover and hand holes to facilitate handling. The principal object of the present invention is to provide readily releasable means for automatically locking the cover to the body adjacent to the upper corners thereof; to separate the cover locking means from the hand holes in the body and thus relieve the cover locking means of lifting strains when the carton is lifted by means of said hand holes; to provide access to the locking means for manually operating the same in the event that it fails to function automatically; to increase the depth of the purchase or bearing area for the fingers at the upper edges of said hand holes; and to increase the strength and rigidity of the carton. The invention consists in the carton and in the construction, combinations and arrangements of parts hereinafter described and claimed.

In the accompanying drawings, which form part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is a plan view of a carton embodying our invention,

Fig. 2 is a side elevational view of said carton,

Fig. 3 is an end elevational view thereof,

Fig. 4 is an enlarged fragmentary vertical sectional view on the line 4—4 in Fig. 3,

Fig. 5 is an enlarged fragmentary vertical sectional view on the line 5—5 in Fig. 3,

Fig. 6 is a view similar to Fig. 5, showing the cover before it is fully seated on the body,

Fig. 7 is a view similar to Fig. 6, showing the cover detached from the body,

Figs. 8 and 9 are fragmentary horizontal sectional views through one vertical corner portion of the body on the lines 8—8 and 9—9, respectively, in Fig. 7,

Fig. 10 is a plan view of one end portion of the blank from which the body is formed; and

Fig. 11 is a plan view of one end portion of the blank from which the cover is made.

In the accompanying drawings, our invention is shown embodied in a fruit or vegetable shipping carton comprising a body A and a slip cover B therefor, both made of folded blanks of corrugated board, fiberboard or other bendable material. The body A of the carton comprises a bottom panel 1 having upstanding side wall panels 2 with overlapped end flaps 3 extending from side wall panel to side wall panel, and upstanding end wall panels 4 that lie against the outside faces of the outermost end flaps and have upper marginal flaps 5 that are bent over the upper edges of the overlapped end flaps and downwardly against the inside faces of the innermost end flaps and seat on said bottom panel. As shown in the drawings, the downturned upper marginal flaps 5 of the end wall panels 4 are frictionally

2

held in place by means of outstanding lugs or tabs 6 that are located at the ends of said flaps at the lower corners thereof and bear endwise against the inside faces of the side wall panels 2.

The body A is provided with a liner member C comprising a bottom panel 7, which seats on the bottom panel 1 in edgewise abutting relation to the inside faces of the end wall panel flaps 5, and upstanding side panels 8 that lie against the inside faces of the side wall panels 2. The end portions of the side panels 8 of the liner C fit within the spaces located between the side wall panels 2 and the downturned end wall panel flaps 5 above the frictional locking tabs 6 at the lower corners of said flaps.

The overlapped end flaps 3 of the side wall panels 2 and the end wall panels 4 and their downturned upper marginal flaps 5 form four-ply end walls; and the overlapped end flaps 3 and end wall panels 4 have registering rectangular openings 9 therethrough midway of the ends thereof that cooperate to form in the three outermost plies of said end walls hand holes D that are covered by the downturned upper marginal flaps 5 of said end wall panels.

The slip cover B preferably comprises a top panel 10 having a rim including depending side flanges 11 with inwardly bent endwise abutting end flaps 12, and depending end flanges 13 that lie against the outside faces of said end flaps and have upturned lower marginal flaps 14 that lie against the inside faces thereof. The rim flanges of the cover B extend below the level of the upper edges of the hand holes D in the end walls of the body A except at said hand holes wherein the lower edge of the end flanges of said rim are notched, as at 15, to bring said edges flush with said hand holes along the upper edges. As shown in the drawings, the notches 15 are formed by openings 15a in adjacent portions of the end flanges 13 and in the marginal flaps 14 thereof and by notches 15b in the lower edges of the inturned end flaps 12 of the side flanges 11 of the cover.

The upturned lower marginal flaps 14 of the end flanges 13 of the cover are slit or cut, as at 16, adjacent to the ends thereof to provide partly detached upstanding locking tongues or tabs 17 on said upturned marginal flaps. The locking tongues 17 are sprung out of the plane of the upturned flaps 14 of the end flanges 13 into an upwardly and inwardly inclined position when said flaps are bent upwardly around the lower edges of the end flaps 12 of the side flanges 11. The end wall panels 4 of the body have rectangular openings 18 therein, near the upper corners thereof that are covered on the inside faces of said panels by the portions of the end flaps 3 lying thereagainst. These openings are located so that when the slip cover B is telescoped over the body, the inwardly and upwardly inclined lock-

3

ing flaps 17 on the inner faces of the upturned rim flaps 13 snap into the openings 18 in the end walls with the upper margins of said locking flaps abutting edgewise against the upper edges of said openings, thus automatically locking the cover to the body adjacent to the four corners of the carton.

The end rim flanges 13 of the cover B have finger openings 19 therein opposite the locking tongues 17 and the inturned end flaps 12 of the side rim flanges 11 of said cover have notches 20 in their upper edges that register with said openings, whereby access may be had to said locking tongues through said registering openings and notches. The openings 19 in the end flanges 13 of the cover extend to and for a short distance along the top panel 10 thereof; and the upturned flaps 14 of said end flanges have upstanding locking lugs 21 at their upper edges that fit within the portions of the openings 19 located in the top panel 10 and seat against the adjacent ends of said openings so as to firmly lock said flaps against the inner faces of the inturned end flaps 12 of the side flanges 11 of the cover.

By the arrangement described, when the slip cover B is telescoped over the body A, the inwardly and upwardly inclined locking tongues 17 on the upturned lower marginal flaps 14 of the end flanges 13 of the rim of the cover slide downwardly along the outer faces of the end wall panels 4 of the body and then snap into the openings 18 provided therefor in the upper corner portions of said end wall panels and thus automatically lock said cover to said body. In the seated position of the cover, the locking tongues 17 extend into the openings 18 in the end wall panels 4 of the body with their upper edges in abutting relation to the upper edges of said openings, thus preventing removal of the cover from the body, the inturned end flaps 3 of the side wall panels 2 of the body covering said openings and preventing the locking tongues from sliding upwardly between said flaps and end wall panels.

If, for any reason, the locking tabs 17 fail to snap into the openings 18 in the end wall panels 4 of the body, said locking flaps may be quickly and easily engaged with said openings by inserting the fingers through the access openings 19 in the cover and pushing inwardly against said locking tabs. Ample purchase area for the fingers is provided along the upper edges of the hand holes by the three outermost plies of said end walls; and the carton may be lifted without transmitting any of the lifting strains to the spring locking tongues 17. The downturned flaps 5 of the end wall panels 4 of the body A serve to prevent entry of light into the carton and also prevent the contents of the carton from being bruised or damaged when the fingers are inserted in the hand holes to handle or lift the carton.

The carton has strong and rigid four ply end walls; and the liner member C serves to strengthen and cushion the bottom panel 1 and side wall panels 2 of the body A and protect these panels from moisture from the fruits or vegetables packed therein. The bottom panel 7 of the liner member C also serves to firmly lock the downturned flaps 5 of the end wall panels 4 in position, while the side panels 8 of said liner abut endwise against end walls of the body and resist inward movement thereof. When it is desired to remove the cover to inspect or remove the contents of the carton, the locking tongues 17 of the cover may be disengaged from the open-

4

ings 18 in the body by slipping a flat tool or implement (not shown) upwardly between the end rim flanges of the cover and the end walls of the body so as to force said locking tongues outwardly clear of said openings, thereby permitting the cover to be lifted off the body.

Obviously, the hereinbefore described carton admits of considerable modification without departing from the invention. Therefore, we do not wish to be limited to the precise construction shown and described.

What we claim is:

1. A carton comprising a body and a slip cover therefor, said body including a bottom panel, side wall panels with inturned end flaps that are overlapped and extend from side wall panel to side wall panel, and end wall panels having upper marginal flaps that are bent over the upper edges of said overlapped end flaps and downwardly against the innermost overlapped end flaps with their lower edges seating against said bottom panel, said end wall panel and said overlapped end flaps of said side wall panels having registering openings therethrough forming hand holes that are covered at their inner ends by the downturned marginal flaps of said end wall panels and said end wall panels having openings therethrough that are separate from said hand holes and are also covered by the outermost overlapping end flaps of said side wall panels, said cover including a depending rim portion having spring locking tongues on the inner side thereof adapted to snap into said openings when said cover is fully closed.

2. The combination set forth in claim 1 wherein said rim portion includes depending end flanges having lower marginal flaps that are turned upwardly inside said cover and are slit to provide said locking tongues and said depending end flanges of said rim portion have openings formed therein opposite said locking tongues to afford access thereto.

3. The combination set forth in claim 1 wherein said downturned flaps have end tabs at the lower corners thereof that bear against the inner sides of said side wall panels and provide spaces between said side panels and said downturned flaps above said tabs and said carton is provided with a liner member comprising a bottom panel seated on the bottom panel of said body in endwise abutting relation to the lower margins of said downturned flaps, and side panels that lie against said side wall panels with their ends disposed in the spaces between said side wall panels and the ends of said downturned flaps and in endwise abutting relation to said tabs and to the inner faces of the innermost overlapped end flaps.

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