April 1, 1952 R. O. SPALDING 2,591,629

DUPLEX DIVISIBLE CARTON

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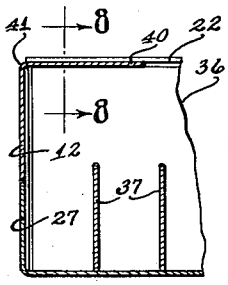


Fig. 7.

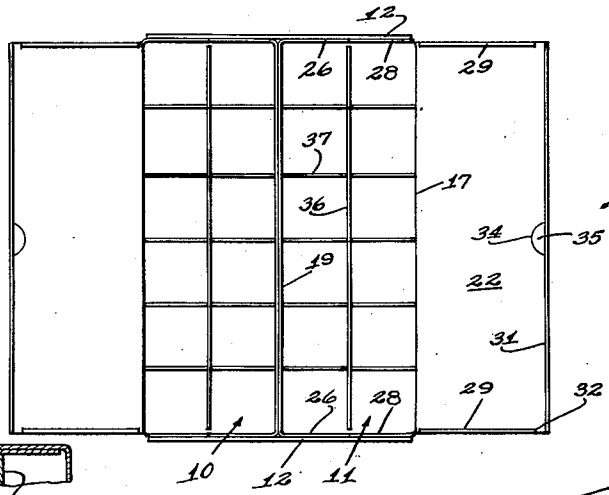


Fig. 1.

Fig. 2.

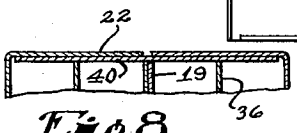
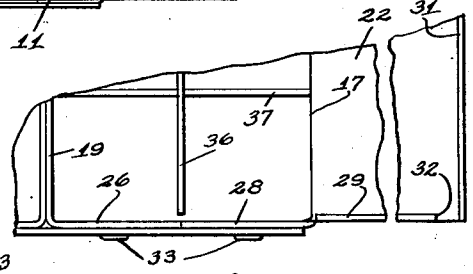


Fig. 8.



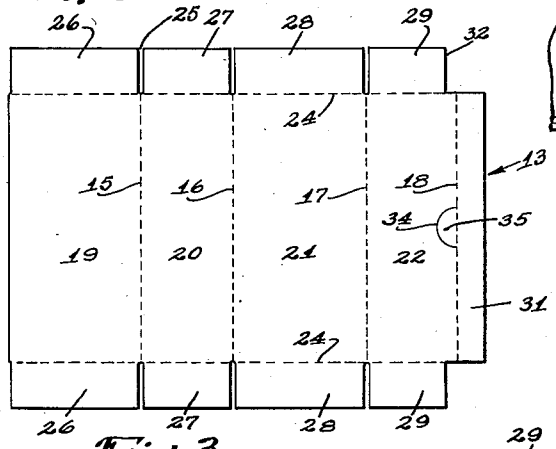


Fig. 3.

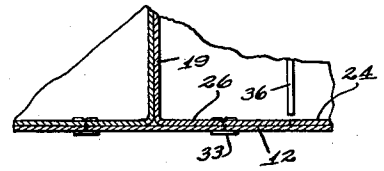


Fig. 5.

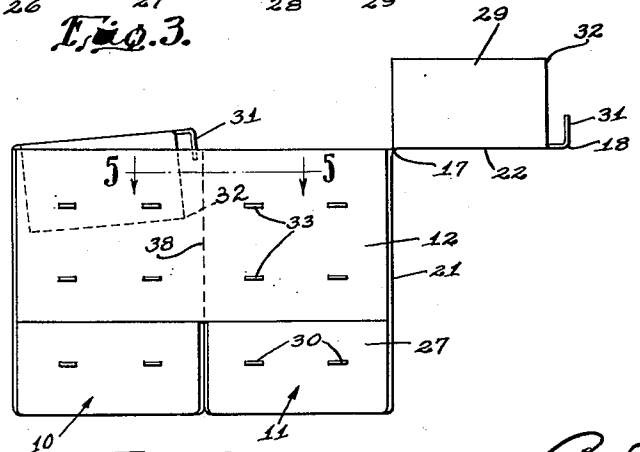


Fig. 4.

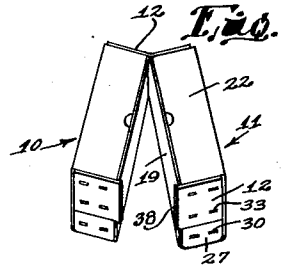


Fig. 6.

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DUPLEX DIVISIBLE CARTON

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7 Claims. (Cl. 229—15)

1

My invention relates to cartons which may be used for packing, storing and shipping various articles, including bottled beverages such as beer, soft drinks and the like. The invention provides a duplex carton comprising a pair of individual, complementary cartons or units integrally united or attached together in the form of a single carton and which may be readily separated to provide separate single cartons.

The duplex carton comprising two units, each adapted to hold for example, a dozen bottles, can be used to great advantage over single cartons, in a brewery or plant in which bottles are packed. After the goods are shipped to retailers, the duplex cartons are readily divided, thereby providing individual cartons adapted for the retail trade, and each of a size a customer may conveniently carry.

Referring to the accompanying drawings in which Figs. 1 to 6 illustrate one form of my invention:

Fig. 1 is a plan view of a duplex carton with the top covers or lids in open position.

Fig. 2 is a fragmentary view similar to a portion of Fig. 1, on a larger scale.

Fig. 3 is a plan view of a blank from which one of the carton units is formed.

Fig. 4 is an end elevation of the duplex carton, one of the covers being shown in open position and the other cover raised a short distance.

Fig. 5 is a section at the line 5—5 on Fig. 4.

Fig. 6 is a perspective view of the duplex cartons showing one of the attaching strips severed and the two units swung apart.

Figs. 7 and 8 illustrate a modified form of the end sheets by which the carton units are secured together.

Fig. 7 is a fragmentary sectional elevational view of an end portion of the carton and connecting sheet, the section extending lengthwise of the carton.

Fig. 8 is a section at the line 8—8 on Fig. 7.

The duplex carton comprises a pair of complementary, individual cartons or units 10 and 11 positioned side-by-side and secured together by end pieces 12 of sheet material. Each unit is made from a blank 13 (Fig. 3) of foldable sheet material such as corrugated paperboard, cardboard or the like. The blank is formed with fold lines shown by broken lines, at which the blank is made flexible adapting it to be bent or folded for forming the carton. The fold lines include parallel lines 15, 16, 17 and 18 which divide the blank into panels 19, 20, 21 and 22. When the blank is folded at the score lines, the

2

panel 19 forms the inner vertical side wall of the carton; the panel 20, the bottom wall; the panel 21, the outside vertical side wall; and the panel 22, the top cover. Parallel fold lines 24 define the end edges of said panels. Slits 25 in line with the fold lines 15, 16 and 17 extend outwardly from the fold lines 24 to the edges of the blank thereby providing end-forming strips or flaps 26, 27, 28, 29.

When the blank is folded to form the carton, the end strips 26 and 28 are folded inwardly at right angles to the side panels 19, 21 respectively, and may be of such a width that their free edges meet. The flaps 27 extending outwardly from the bottom panel 20 are then folded upwardly against the outside surfaces of the panels 26 and 28. The end flaps 26, 27 and 28 are secured in their setup position by fastening means such as staples 30. The top panel 22 hinges at the fold line 17. The flaps 29 at the ends of the top panel are turned or bent at the fold lines 24 to a position at right angles to the top panel. A narrow strip or flap 31 extends along the outer side of the top panel and is folded or turned inwardly at the fold line 18 as shown in Fig. 4. The end flaps 29 are shortened or cut back a short distance inwardly from the fold line 18 so that when the cover is being swung to a closed position, the outer corner 32 of the flap will clear the inner side wall of the carton.

When two of the single cartons or units of identical construction have been formed as above described, they are placed side-by-side, one being turned end-for-end with respect to the other, to bring the covers to the outer edges of the pair. They are then secured together by the connecting strips or sheets 12 which may be made of the same material as the carton. The length of the strips 12 is preferably substantially equal to the width of the duplex carton and said connecting strips are fastened to the end panels 26 and 28 by means of staples 33, thus rigidly uniting the two units to form the duplex carton. The strips 12 are placed directly above and in abutting relation to the end-forming strips 27. The connecting strips, made with corrugated paper or other stiff material, give added strength and rigidity to the carton. They cover the major portion of the end areas of the carton.

After the two units are secured together, the tops or covers 22 can be folded inwardly with the end flaps 29 on the inner sides of the flaps 26 and 28 and with the edge strips 31 on the inner sides of and lying against the side panels

19. The top panels 22 are formed with slits 34 along their outer edges or at the fold line 18 thereby providing tabs 35 which when bent downwardly against the inner side walls of the carton sections, provide means for lifting the covers. The thumb and finger holes also provide a convenient holding means for carrying the duplex carton.

Longitudinal and transverse partition strips 36 and 37 divide the cartons into individual cells. As shown, a dozen cells are provided in each carton unit. After a duplex carton has been packed and shipped to a retailer, he may separate the cartons by cutting the end strips 12 along the vertical lines 38 at each end of the carton. Fig. 6 illustrates the duplex carton with one of the strips severed along the line 37 and the carton units swung apart. When the duplex carton has been divided to form separate units, each such unit forms a complete carton convenient for a customer to carry with the bottles contained therein.

Referring to Figs. 7 and 8, the end-attaching strips or sheets 12 are formed with integral extensions or flaps 40 hinged thereto at the fold lines 41 which extend along the upper end edges of the carton units. The extension flaps 40 are folded downwardly to horizontal position and underlie the cover panels 22 which may be glued or otherwise attached to the flaps 40. With this form of the invention the strips 31 and the end flaps 29 of the cover panel may be omitted. The lines of severance 38 evidently will be extended through the flaps 40.

Modifications may be resorted to within the spirit and scope of my invention.

I claim:

1. A duplex divisible carton comprising a pair of units positioned side-by-side, each said unit consisting of a single carton having vertical sides and ends, a cover hinged to one said side along the upper edge thereof, a bottom and bottom end flaps extending upwardly therefrom and overlying a portion of the outer end faces of the carton, and means for integrally uniting said units, said uniting means comprising sheets of material overlying the outer end faces of the carton and positioned above and extending downwardly into abutting relation with the bottom end flaps, and means for rigidly securing said sheets to the end walls of the carton, said sheets being severable along vertical lines in the plane of the adjoining side faces of the said units, thereby dividing the duplex carton into separate single cartons.

2. The duplex carton defined in claim 1, wherein said covers are hinged along the outer side edges of the carton, said covers having flaps formed at their free edges and bent at right angles thereto to extend downwardly into the carton when the covers are in closed position.

3. A divisible duplex carton comprising a pair of units consisting of individual single cartons of substantially identical construction and positioned side-by-side with one carton turned end-for-end with respect to the other, the end walls of each said unit lying in the same vertical planes as the end walls of the other unit, each said unit comprising a cover hinged to the outer side of the unit and folded inwardly to a horizontal position, means for rigidly connecting said units to form the duplex carton, said connecting means consisting of flat sheets of stiff material lying against the outer faces of the said end walls, and means for attaching said connecting sheets to the end walls, said sheets having flap extensions hinged thereto along their upper edges and turned inwardly to horizontal position and underlying and secured to the said covers, said connecting sheets and their flap extensions being severable along lines in the vertical plane of the meeting faces of said units for dividing the duplex carton and thereby forming single separate cartons.

4. A divisible duplex carton comprising a pair of units consisting of individual single cartons of identical construction and positioned side-by-side with one carton turned end-for-end with respect to the other, each said unit comprising vertical end walls lying in the same vertical planes as the end walls of the other unit, said carton having a bottom and bottom end flaps extending upwardly therefrom and overlying portions of the outer faces of said end walls, and means for rigidly connecting said units to form the duplex carton, said connecting means consisting of flat sheets of stiff material lying against the outer faces of said end walls above and in abutting relation with said bottom end flaps, staples securing said sheets and bottom end flaps to the end walls thereby reinforcing said walls, said sheets being severable along vertical lines in the plane of the meeting faces of said units for dividing the duplex carton and forming single cartons.

5. A duplex carton comprising a pair of carton units of substantially identical construction, each said unit being in the form of a single carton having a horizontal bottom panel, vertical, parallel side panels and a top cover panel hinged to the upper edge of one side panel, and flaps forming extensions of said panels and including bottom flaps turned upwardly from the bottom panel, side flaps turned inwardly from the side panels and lying against the inner faces of the upturned bottom flaps, top cover flaps extended downwardly from the top panels and lying against the inner faces of the side flaps when the top panels are in closed position, strips extending along and bent downwardly from the free edges of the cover panels and lying against the inner faces of the inner side walls of the carton units, the cover panels being slitted to form tabs bent downwardly along the adjoining lines between the cover panels and said strips, said tabs bearing against the inner wall surfaces of said side panels, thereby providing means for lifting the cover panels to open position and also providing thumb and finger openings for gripping and carrying the closed dupex carton, said units being positioned side-by-side with their adjoining outer side faces together in the same vertical plane, and connecting means comprising flat sheets of stiff material positioned above and in abutting relation to the upturned bottom end flaps and rigidly secured to the side flaps and covering substantially the entire end surface portions of the cartons above said bottom flaps, the vertical dimensions of said bottom flaps being substantially less than those of the carton ends.

6. A duplex carton comprising a pair of carton units of substantially identical construction, each said unit being in the form of a single carton having a horizontal bottom panel, vertical, parallel side panels and a top cover panel hinged to the upper edge of one side panel, and flaps forming extensions of said panels and including bottom flaps turned upwardly from the bottom panel, side flaps turned inwardly from the side panels and lying against the inner faces of the upturned bottom flaps, top cover flaps extended downwardly from the top panels and lying against the inner faces of the side flaps when the top panels

are in closed position, strips extending along and bent downwardly from the free edges of the cover panels and lying against the inner faces of the inner side walls of the carton units, the cover panels being slitted to form tabs bent downwardly along the adjoining lines between the cover panels and said strips, said tabs bearing against the inner wall surfaces of said side panels, thereby providing means for lifting the cover panels to open position and also providing thumb and finger openings for gripping and carrying the closed duplex carton, the said top cover flaps being cut back or shortened with respect to the outer or free edge of the cover panel and thereby permitting said cover flaps to clear the inner walls of the carton units when the covers are swung inwardly and downwardly to closed position.

7. A duplex divisible carton comprising a pair of units positioned side-by-side, each said unit consisting of a single carton having vertical sides and ends, a cover hinged to one said side along the upper edge thereof, a bottom and bottom end flaps extending upwardly therefrom and overlying a portion of the outer end faces of the carton, and means for integrally uniting said units, said uniting means comprising sheets of material overlying the outer end faces of the carton and

positioned above and extending downwardly into abutting relation with the bottom end flaps, and means for rigidly securing said sheets to the end walls of the carton, said sheets being severable along vertical lines in the plane of the adjoining side faces of the said units, thereby dividing the duplex carton into separate single cartons, the said uniting sheets being formed with flaps extending from their upper edges and folded downwardly to horizontal position and underlying and attached to said covers.

RICHARD O. SPALDING.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
954,414	Block	Apr. 12, 1910
1,509,383	Walter	Sept. 23, 1924
2,047,033	Ringler	July 7, 1936
2,206,304	Ringler	July 2, 1940
2,297,982	Potts	Oct. 6, 1942
2,327,529	Kieckhefer	Aug. 24, 1943
2,456,059	Grupe	Dec. 14, 1948
2,474,751	Morand	June 28, 1949