J. P. MARKERT.

CARTON.

APPLICATION FILED JUNE 28, 1919.

1,352,759. Patented Sept. 14, 1920.

Fig. 1.

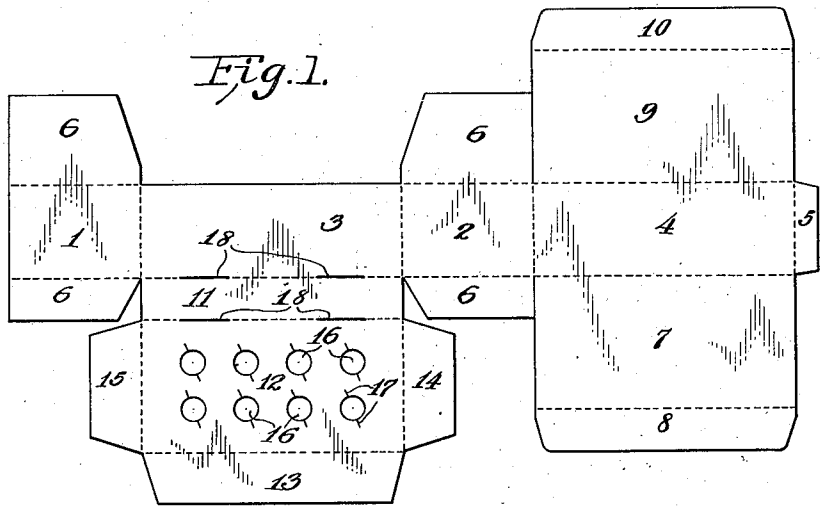


Fig. 2.

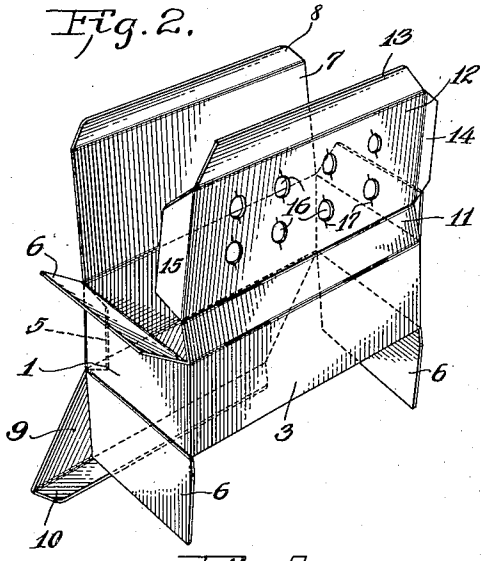


Fig. 3.

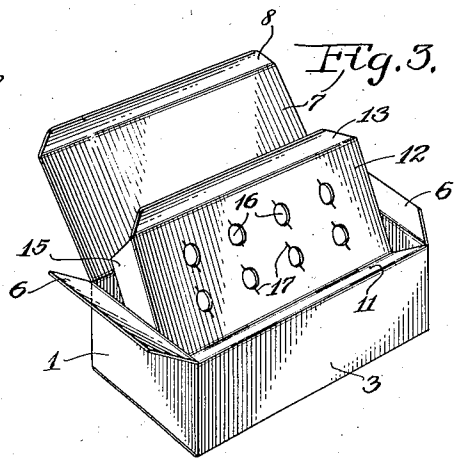


Fig. 4.

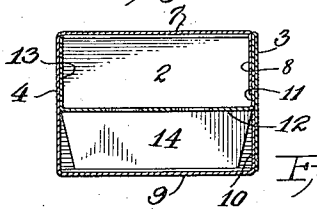


Fig. 5.

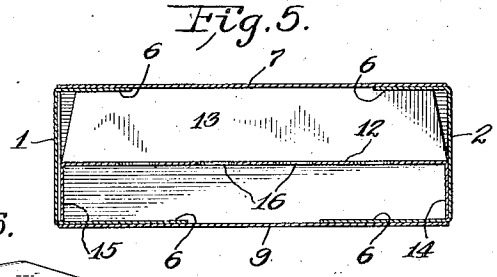
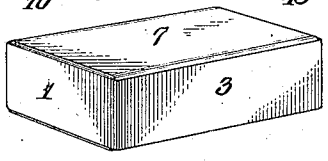


Fig. 6.



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CARTON.

1,352,759. Specification of Letters Patent. Patented Sept. 14, 1920.

Application filed June 28, 1919. Serial No. 307,279.

To all whom it may concern:

Be it known that I, JOHN P. MARKERT, a citizen of the United States, residing at New York city, in the county of Kings and State of New York, have invented new and useful Improvements in Cartons, of which the following is a specification.

My invention relates to cartons and particularly to cartons for packing perishable articles held out of contact with each other.

An object of my invention is to provide a carton having a transverse shelf positively held against movement and adapted to hold a plurality of fragile or perishable articles out of contact with each other and to prevent them from moving in the carton during shipment.

A further object is to provide a carton made of a single sheet and having a transverse shelf positively held in position when the carton is closed.

I also provide a carton made of one piece and having a transverse shelf, which can be readily knocked down and shipped in flat condition and which at the same time can be very easily and rapidly folded into position to receive articles therein.

My container also dispenses entirely with tongue and slot connections for its parts but is substantial and strong when in folded position and not liable to be deranged or collapsed.

Cartons formerly produced for a similar purpose have commonly been composed of a plurality of parts making assembling more difficult and involving a danger of loss of parts. Others have been complicated in structure, requiring numerous folding processes, the time consumed in assembling them, making their use expensive in actual practice. Others are so constructed that upon opening them they practically collapse losing their box-like structure.

I have made the invention herein disclosed with the object of avoiding these difficulties and of producing a carton that will be cheap to manufacture and assemble, easy to ship and strong in use, one illustration of which is set forth in the following specification and disclosed in the accompanying drawings in which:

Figure 1, is a plan view of the blank before folding,

Fig. 2, is a perspective view of the carton ready for folding,

Fig. 3, is a similar view with the carton partly folded,

Fig. 4, is a transverse cross section,

Fig. 5, is a longitudinal cross section, and

Fig. 6, is a perspective view of the folded carton.

The carton is composed of ends, 1 and 2, and sides 3 and 4, lap 5 being attached to one end of side 4 and serving as means for permanently connecting the end of side 4 to end 1 by gluing. Ends 1 and 2 each have upper and lower flaps 6 for folding inwardly in the usual manner. Extending from one edge of side 4 is cover 7 having tucking flap 8; and extending from the other said side 4 is bottom 9 having similar tucking flap 10. Extending from the upper edge of side 3 (the lower edge in the blank shown in Fig. 1) is the suspending flap 11 continuous therewith, which is extended to form shelf 12, having at its farther edge flap 13 and at its side edges flaps 14 and 15. Shelf 12 may be apertured in suitable manner to accommodate the articles intended to be carried by the carton. In the illustrated example it is pierced by a series of circular apertures 16 each having radial slots 17 adapted to receive the stem of an electric light bulb. If desired the fold lines between side 3 and flap 11, and between flap 11 and shelf 12, may be slitted, as at 18, to facilitate folding along said lines.

In practice the box is first assembled by gluing lap 5 to end 1, shaping the box as shown in Fig. 2. In this form the box may be collapsed by diagonally flattening it and is shipped in this form, there being no parts to lose and no portions likely to be broken off, as is the case where there are several parts to a carton or where tongues are used. When received by the purchaser it is folded into shape. This is preferably done by inserting the lower edge of side 3 (the carton being in the form shown in Fig. 2) in a kerf in a block of wood slightly shorter than the box, the depth of the kerf being approximately equal to the distance of the shelf above the bottom of the carton. The operator then folds flaps 14 and 15 inward and flap 13 outward with one movement. While the box is held in this position the shelf is forced downwardly into the body of the carton to the position shown in Fig. 3, (the bottom of the carton however being

still open), and is then rocked backwardly and downward into the carton, the shelf being pressed into position resting on the top of the block. This folding process can be done in practically one motion and is very rapid. The carton is picked up from the block and bottom flaps 6 and bottom 9 are quickly bent into position and flap 10 engaged, thus closing the bottom of the box. Obviously other methods of folding may be used but this method is the preferred one.

It is to be noted that flaps 14 and 15 are exactly equal in depth to the distance between shelf 12 and the bottom of the carton while flaps 11 and 13 are exactly equal in depth to the distance of said shelf from the top of the carton. When the carton is in closed position these flaps will butt against the top and bottom of the carton respectively and the shelf will not only be supported along all its sides but will be positively prevented from moving either upwardly or downwardly. By varying the depth of said shelf flaps, the distance of the shelf from the top and bottom of the carton can be varied and its angle in relation thereto can also be determined if it be considered desirable to have the shelf tilted rather than parallel to the top and bottom.

While I have described the shelf as integral with the rest of the carton it may be separate therefrom and either permanently attached thereto or entirely free and separate.

While I have described the preferred form of my invention it is obvious that many changes in details may be made without departing from the spirit of my invention as covered in the following claims.

It will be apparent, for instance, that flaps 14 and 15 may, with equal facility, be upward and flap 13 downward, as the shelf will be positively supported by this arrangement as well as in the form above described. Furthermore, while I have described one part as the top and another as the bottom, it will be apparent that either may be used as the top.

What I claim is:

1. A carton including side walls formed from a single continuous strip of material and having their upper edges on substantially the same plane, a bottom, a top, an intermediate shelf adapted to lie transversely of the carton between said top and bottom when in closed position, means for hingedly connecting one edge of the shelf to one side of the carton with said edge located against said side and below the upper wall edge thereof, an integral flap carried by said shelf and extending downwardly into engagement with the carton bottom, and an integral flap carried by said shelf and extending upwardly into engagement with the carton top the construction being such that said shelf is held positively against both upward and downward movement by the engagement of said extensions with the top and bottom of the carton, when closed, and the carton may be collapsed diagonally by folding said shelf outwardly about said hinged connection.

2. A carton made from a single sheet of material, including side walls formed from a single continuous strip and having their upper edges on substantially the same plane, a bottom, a top, an intermediate shelf adapted to lie transversely of the carton between said top and bottom when in closed position, a hinge strip connecting the upper edge of a side wall with the adjacent edge of the shelf located against the wall below said wall edge when in closed position, an integral flap carried by said shelf and extending downwardly into engagement with the carton bottom, and an integral flap carried by said shelf and extending upwardly into engagement with the carton top, the construction being such that said shelf is held positively against both upward and downward movement by the engagement of said extensions with the top and bottom of the carton, when closed, and the carton may be collapsed diagonally by folding said shelf outwardly about said hinged connection.

3. A carton made from a single sheet of material and including side walls formed from a single continuous strip, having their upper edges on substantially the same plane, a bottom element hingedly connected to a side wall, a top element hinged to a side wall, an intermediate shelf adapted to lie transversely of the carton between said top and bottom elements when in closed position, a hinge strip connecting the upper edge of a side wall with the adjacent edge of the shelf located against the wall below said wall edge when in closed position, flaps carried by the edges of the shelf adjacent the hinged edge thereof and extending along the sides of the carton in the same direction into engagement with one of said elements, and a flap carried by the edge of the shelf opposite to the hinged edge and extending along the adjacent side of the carton in the opposite direction into engagement with the other element, the construction being such that said flaps and hinge strip maintain the shelf against vertical movement when the carton is closed, and said carton may be collapsed diagonally by extending said shelf, hinge strip and flaps in continuation of the side to which they are connected.

In testimony whereof I have hereunto set my hand.

JOHN P. MARKERT.