Aug. 5, 1924. 1,503,516

W. A. V. PORTER

COLLAPSIBLE CARTON

Filed May 18, 1920

Fig. 1.

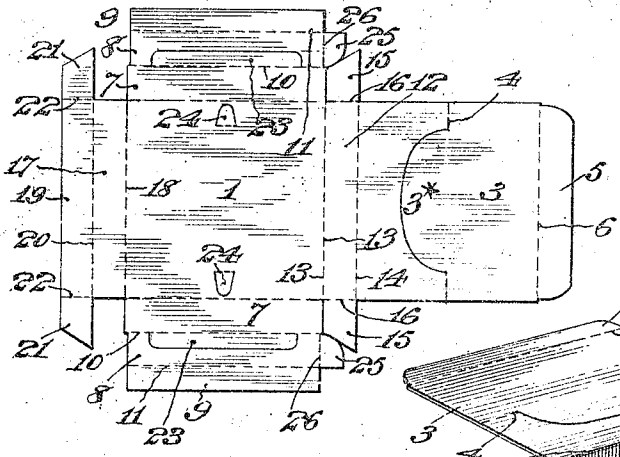


Fig. 2.

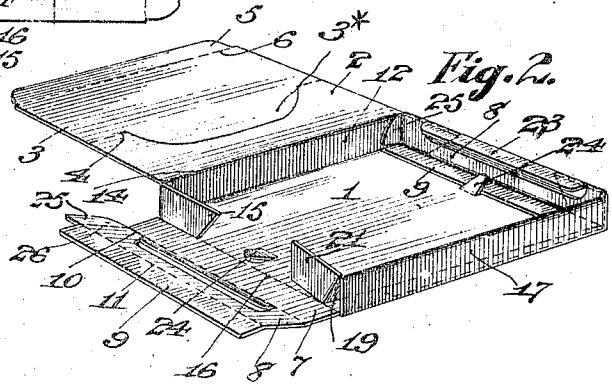


Fig. 3.

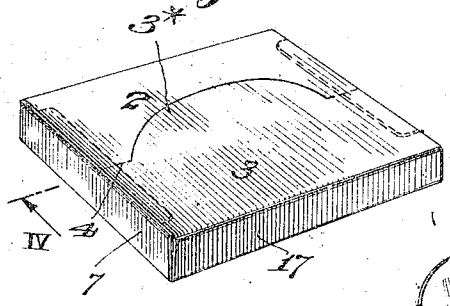


Fig. 5

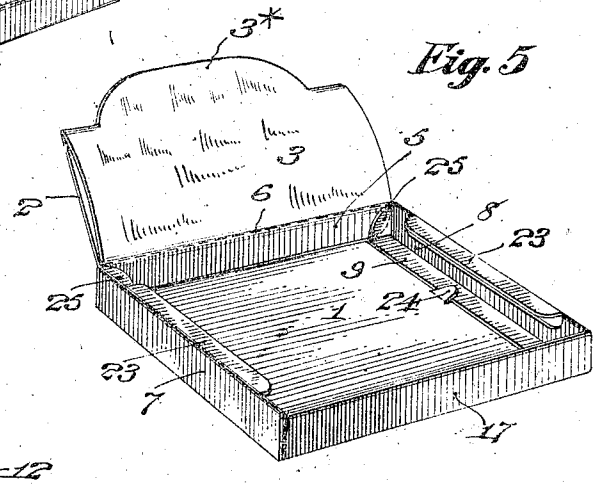
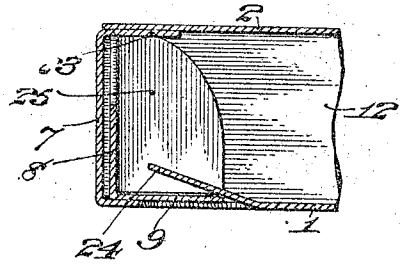


Fig. 4.



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Patented Aug. 5, 1924. 1,503,516

UNITED STATES PATENT OFFICE.

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COLLAPSIBLE CARTON.

Application filed May 18, 1920. Serial No. 382,430.

To all whom it may concern:

Be it known that I, WILLIAM A. V. PORTER, a citizen of the United States, and resident of the borough of Manhattan, in the city and State of New York, have invented a new and useful Improvement in Collapsible Cartons, of which the following is a specification.

This invention relates to an improvement in collapsible cartons and has for an object to provide such an article which includes means for exposing part of the outer surface of its cover toward the front for purposes of display, and holding the cover in said position.

Another object consists in providing such an article in which the front and sides are very sturdy and in which means is provided for preventing the cover from being pressed down between the sides when the carton is in closed condition.

Another object consists in providing such an article which includes improved means for holding the carton in box formation and simultaneously reinforcing various portions thereof.

Another object consists in providing certain improvements in the form, construction and arrangement of the several parts whereby the above named and other objects may be effectively attained.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Fig. 1 represents a plan view of the blank from which the carton is formed.

Fig. 2 represents a perspective view of the carton partly folded.

Fig. 3 represents a perspective view of the carton completely folded into shipping condition.

Fig. 4 represents an enlarged detail section taken in the plane of the line IV of Fig. 3, looking in the direction of the arrow.

Fig. 5 represents a perspective view of the carton folded into display position.

The carton may be formed, as usual, from a blank of sheet material and provided with suitable creases for assisting the folding thereof.

The blank includes a bottom panel denoted by 1 and a top panel composed of two halves marked 2 and 3, the said halves of the top portion being divided by a crease line 4, and the half 3 being provided with a flap 5 also separated from the part 3, by a crease line 6, and with a display portion 3*, which is struck out from the half 2 and connected with the half 3 along the line 4.

Side panels are directly connected to the bottom panel 1 and each side panel includes an inner member 7, a central member 8, and an outer flap 9; the inner member being separated from the central member by a crease line 10, and the central member being separated from the outer flap by a crease line 11.

A rear panel 12 intervenes between the bottom panel 1 and the half 2 of the top panel, and is separated from the said bottom and top panels by crease lines 13 and 14. This rear panel 12 has laterally projecting ears 15, which are separated therefrom by crease lines 16.

A front panel 17 is separated from the bottom panel 1 by a crease line 18 and has an outer member 19, which is separated from it by a crease line 20. This outer member 19 has laterally extending ears 21, which are similar to the ears 15 and are separated from the member 19 by the lines 22.

Tongues 23 are stamped out from the central members 8 of the side panels, which tongues are connected to the inner member 7 at the crease lines 10. Tongues 24 are struck out from the bottom panel 1, each of said tongues being adjacent the side panels. Tongues 25 are arranged at one end of each central member 8 of the side panels, and are separated from said central members by crease lines 26.

It will be understood that the blank as described with its struck out portions and crease lines, is formed from the sheet material at a single operation and that it may be printed on one side with suitable inscriptions or representations or both.

The blank is folded into box formation as follows:

The outer member 19 of the front panel is folded over on the line 20 until it lies flat on the member 17. The members 17 and 19 are then folded on the line 18 until they stand at right angles to the bottom 1. The rear panel 12 is folded on the line 13 until it stands at right angles with the bottom 1. The ears 15 on the rear panel 12 and the ears 21 on the front member 19 are then

folded inwardly on the lines 16 and 22, respectively, until they stand at right angles to the panel 12 and member 19. Next the inner members 7 of the side panels are folded on the lines 16, which extend inwardly from the rear panel 12, until the side panels are at right angles with the bottom panel 1 and lie in contact and parallel with the ears 15 and 21. Next the tongues 25 are folded on the lines 26 until they stand at right angles to the central members 8 of the side panels. Then the central members 8 of the side panels are folded on the lines 10 until they lie down flat, parallel with the members 7 and abut the ears 15 and 21 on the sides opposite from the members 7. This position of the members 7 and 8 serves to embrace the ears 15 and 21, thereby tending to hold the front panel, rear panel and side panels at right angles to the bottom panel 1 or, in other words, in box formation. In the operation of folding the central members 8 against the ears 15 and 21, and in parallelism with the members 7, the flaps 9 of the side panels are folded on the lines 11 so as to extend at right angles to the members 8 and hence lie flat on the bottom panel 1. In approaching this position, the flaps 9 are slid under the tongues 24, thus locking the side panels in the position described, and thereby firmly holding the carton in box formation.

In the folding of the members 8 and 9, the tongues 23 are folded on the lines 10 only so far as to bring them into a position projecting inwardly toward each other and lying at right angles to the members 7.

The box is now completely formed and ready to be filled with its contents and arranged either for shipment or for display. For purposes of shipment, the top panel, consisting of the portions 2, 3, 5, is folded over on the line 13 until it lies flat upon the inwardly projecting tongues 23 and upper edges of the folded side panels and front panel. Then the flap 5 is folded on the line 6 so as to lie down against the outside of the front panel. The carton may now be suitably packed for shipment; and it will be observed that the structure described includes very rigid side and front members, while the tongues 23 strongly resist any force tending to depress the top downwardly against the contents.

When the carton has been received by the retailer and it is desired to arrange it for display purposes, the top is folded away from the side and front panels and the half 3 of the top panel is folded forwardly on the line 4 until it lies flat against the half 2. Then the flap 5 is inserted between the rear panel 12 and the adjacent tongues 25 to hold the top panel in this folded position, in which the outside of the half 3 is exposed forwardly. This enables the printed matter stamped on the outside of the blank from which the carton is folded to be exposed on the top panel as well as on the side and front panels. If the top panel were not arranged to be folded in this manner, it would either be devoid of printed matter exposed forwardly or else it would be necessary to print on both sides of the blank from which the carton is formed, which would increase the expense of production. When the top is folded into this position, the display portion 3* will stand up in line with the half 3, and thus afford an additional surface containing suitable inscriptions or declarations. The presence of the tongues 25 serves to hold the top panel in this folded display position, irrespective of the partial removal of the contents from the carton, since the contents are not relied upon to perform this function.

It will be understood that various changes may be resorted to in the form, construction and arrangement of the several parts, without departing from the spirit and scope of my invention, and hence I do not intend to be limited to the details herein shown and described, except as they may be included in the claims.

What I claim is:

1. A collapsible carton comprising, a bottom panel, side panels, a rear panel, a top panel, said top panel being adapted to act as a complete and substantially flat cover for the carton when in box formation and being also foldable forwardly against the front of the rear panel to expose part of its outer surface forwardly for display purposes, and tongues carried by the side panels adjacent the rear panel for securing said top panel against the front of the rear panel in said folded position.

2. A collapsible carton comprising a bottom panel, side panels, a front panel, a back panel, a top panel, said front panel and side panels being composed of a plurality of layers of material, ears carried by the inner layer of the front panel adapted to enter between the layers of the side panels when the parts are in box formation, flaps carried by the inner layer of the side panels, tongues carried by the bottom panel and adapted to overlie said flaps for holding the parts in box formation, said top panel being adapted to act as a complete cover for the carton when in box formation, tongues struck from the inner layer of the side panels for preventing the top panel from being pressed downwardly between the side panels when the carton is in completely folded condition, said top panel being also foldable to expose part of its outer surface forwardly for display purposes, tongues carried by an inner layer of the side panels adjacent the back panel, and a flap carried by the top panel and adapted to enter be-

tween said last named tongues and the back panel, for holding the top panel in said folded display position.

3. A carton comprising a bottom panel, side panels, a rear panel, a top panel, said top panel being adapted to act as a complete cover for the carton when in box formation and being also foldable against the rear panel to expose part of its outer surface forwardly for display purposes, and means including a member folded down along the top edge of one side panel parallel therewith for securing said top panel against the rear panel in said folded position.

4. A carton comprising a bottom panel, side panels, a rear panel, a top panel, said top panel being adapted to act as a complete cover for the carton when in box formation and being also foldable against the rear panel to expose part of its outer surface forwardly for display purposes, and bendable tongues integral with the side panels for securing said top panel against the rear panel in said folded position.

In testimony, that I claim the foregoing as my invention, I have signed my name this 27th day of April, 1920.

WILLIAM A. V. PORTER.