

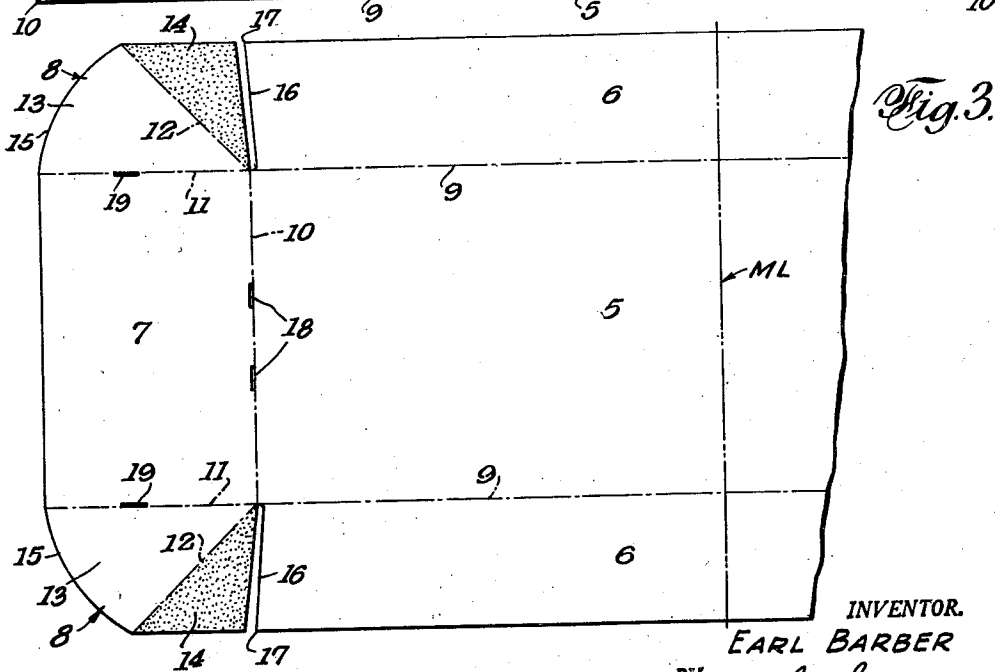
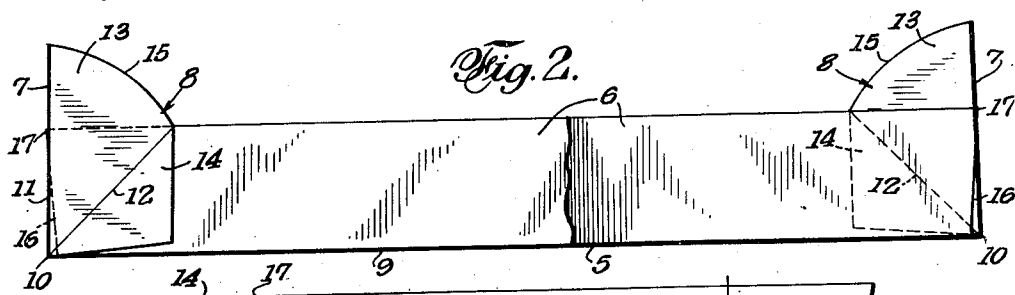
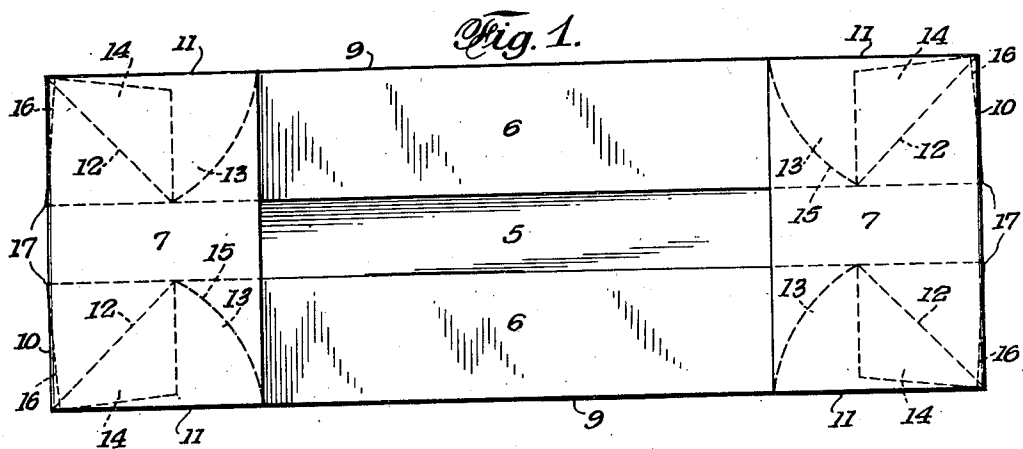
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FOLDING BOX

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FOLDING BOX

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5 Claims. (Cl. 229-41)

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This invention relates to folding boxes and deals more particularly with an open-topped folding carton.

Prior cartons of the type referred to had one or more score or fold lines in the sides thereof and, consequently, tended to fold or collapse along said lines. Further, unless completely filled with articles, such prior cartons, having no means seeking to hold them in open condition, frequently wholly or at least partially, collapsed.

An important object of the present invention, therefore, is to provide a folding carton formed with means which holds said carton flat when folded and fully open when unfolded.

Another object of the invention is to provide a folding carton which is readily opened or unfolded and in which the sides and ends are unscored to render them rigid and whereby they resist forces tending to collapse them.

Another object of the invention is to provide a carton of the character indicated embodying detent means which lock the carton into the condition in which it is placed whether folded or open.

My invention also has for its objects to provide such means that are positive in operation, convenient in use, easily installed in a working position and easily disconnected therefrom, economical of manufacture, relatively simple, and of general superiority and serviceability.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description. However, the drawings merely show and the following description merely describes one embodiment of the present invention, which is given by way of illustration or example only.

In the drawings, like reference characters designate similar parts in the several views.

Fig. 1 is a top plan view of a carton embodying this invention and shown in folded condition.

Fig. 2 is side elevational view, partly in longitudinal section of said carton in open condition.

Fig. 3 is a view of the blank from which the carton is formed, one-half of the blank being shown, the remaining portion being symmetrical on the medial line ML.

The present carton is made of a single sheet of cardboard or like material, the blank being formed with a rectangular bottom 5, sides 6, ends 7, and tabs 8. Longitudinal score lines 9 are provided between the bottom 5, and transverse score lines 10 are provided between the bottom and the ends 7. By means of the score

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lines 9 and 10, the sides 6 and the ends 7 are adapted to be folded over on the bottom 5.

The tabs 8 are formed as lateral extensions of the ends 7 with score lines 11 therebetween so that said tabs 8 are foldable over their respective ends. An angular score line 12 extending from each junction of the score lines 10 and 11 to the outer edge of each tab 8 divides each tab into generally triangular portions 13 and 14. Each portion 13 is defined by the score lines 11 and 12 and by a convexly curved outer edge 15.

The end 16 of each side 6 is formed to be at an oblique angle with respect to the score lines 9, the angle being outward toward the outer edge of the sides 6 to provide somewhat acute corners 17 at the ends of said outer edge. When the sides 6 are folded over on the bottom 5, said corners 17 will fall outward of the score lines 10. Accordingly, slits or openings 18 are formed along said score lines 10 into which said corners enter. Slits or openings 19 are formed along the score line 11 into which the corners 17 enter when the box is opened or unfolded.

The tab portions 14, or such portions of the sides 6 that are engaged therewith, are provided with adhesive as shown.

The carton blank above described is made up in the following simple manner. The sides 6 are folded over the bottom 5 and the tabs 8 are folded over the ends 7. The tab portions 14 are then folded back along score lines 12 to overlie the tab portions 13 and expose the adhesive on tab portions 14. The adhesive is moistened and the ends 7 are then folded over as shown in Fig. 1, so that the tab portions 14 become affixed to the sides 6. The carton is now completed in its folded condition and will retain its flat condition because the corners 17 are engaged in their respective slits 18.

By grasping either the outer edges of the sides 6 or the ends 7, and raising said sides or ends, the carton is opened. The corners 17 will be drawn outwardly from the slits 18 and will drag along or press against the sides 7 until said corners find the slits 19 into which they will enter and thereby lock the carton against collapsing. To insure firm entry of the corners 17 into slits 19, by suitably obliquely angling the score lines 12, it can be arranged to have the ends 7, when the carton is open, inwardly inclined toward each other as shown best in Fig. 2.

Inasmuch as the sides 6 and ends 7 are unscored and, therefore, generally rigid and, further, because of the lock effected by the corners

17. the open box will retain its open condition without tending to collapse.

While I have illustrated and described what I now regard as the preferred embodiment of my invention, the construction is, of course, subject to modifications without departing from the spirit and scope of my invention. I, therefore, do not wish to restrict myself to the particular form of construction illustrated and described, but desire to avail myself of all modifications that may fall within the scope of the appended claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A folding carton comprising a sheet formed with a bottom, integral foldable sides and ends, and integral foldable tabs on the side edges of the ends, means connecting the tabs and adjacent portions of the sides to permit movement of the sides and ends from open to folded position, and means on each end of each side normally projecting into locking engagement with openings provided in the fold lines between the bottom and the ends and between the ends and the tabs when the tabs are in either open or closed position.

2. A folding carton having a bottom and foldable sides and ends each of which is unscored whereby they are rendered substantially rigid, lateral foldable tabs on each end, and means on each side having detent engagement with slitted openings in the folds between the bottom and the ends and in the folds between the ends and the tabs for maintaining the carton in its folded and open conditions, selectively.

3. A blank for a foldable carton comprising a bottom, sides and ends integrally connected to the bottom along fold lines, a tab integrally connected to each side of each end, adhesive means for connecting each tab to a related portion of the sides, and slits formed in the fold lines between the bottom and the ends and between the ends and the tabs thereon, the end outer corners of each side being so formed as to enter the mentioned slits, selectively, during both folded and unfolded condition of a carton formed from said blank.

4. A blank for a foldable carton comprising a bottom, sides and ends integrally connected to the bottom along fold lines, a tab integrally connected to each side of each end, an oblique fold in each tab adapting the tabs to be double folded and dividing each tab in triangular portions, adhesive means on one triangular portion of each tab for connection to a related portion of the sides, and slits formed in the fold lines between the bottom and the ends and between the ends and the tabs thereon, the end outer corners of each side projecting in an angular direction toward each end to extend beyond the fold line defining the end and bottom to normally extend into the slits in said last named fold line when the parts are folded to lock the parts together.

5. A blank for a foldable carton comprising a bottom, sides and ends integrally connected to the bottom along fold lines, a tab integrally connected to each side of each end, an oblique fold in each tab adapting the tabs to be double folded and dividing each tab in triangular portions, adhesive means on one triangular portion of each tab for connection to a related portion of the sides, and slits formed in the fold lines between the bottom and the ends and between the ends and the tabs thereon, the end outer corners of each side projecting in an angular direction toward each end to extend beyond the fold line defining the end and bottom to normally extend into the slits to lock the carton in both folded and unfolded condition.

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