

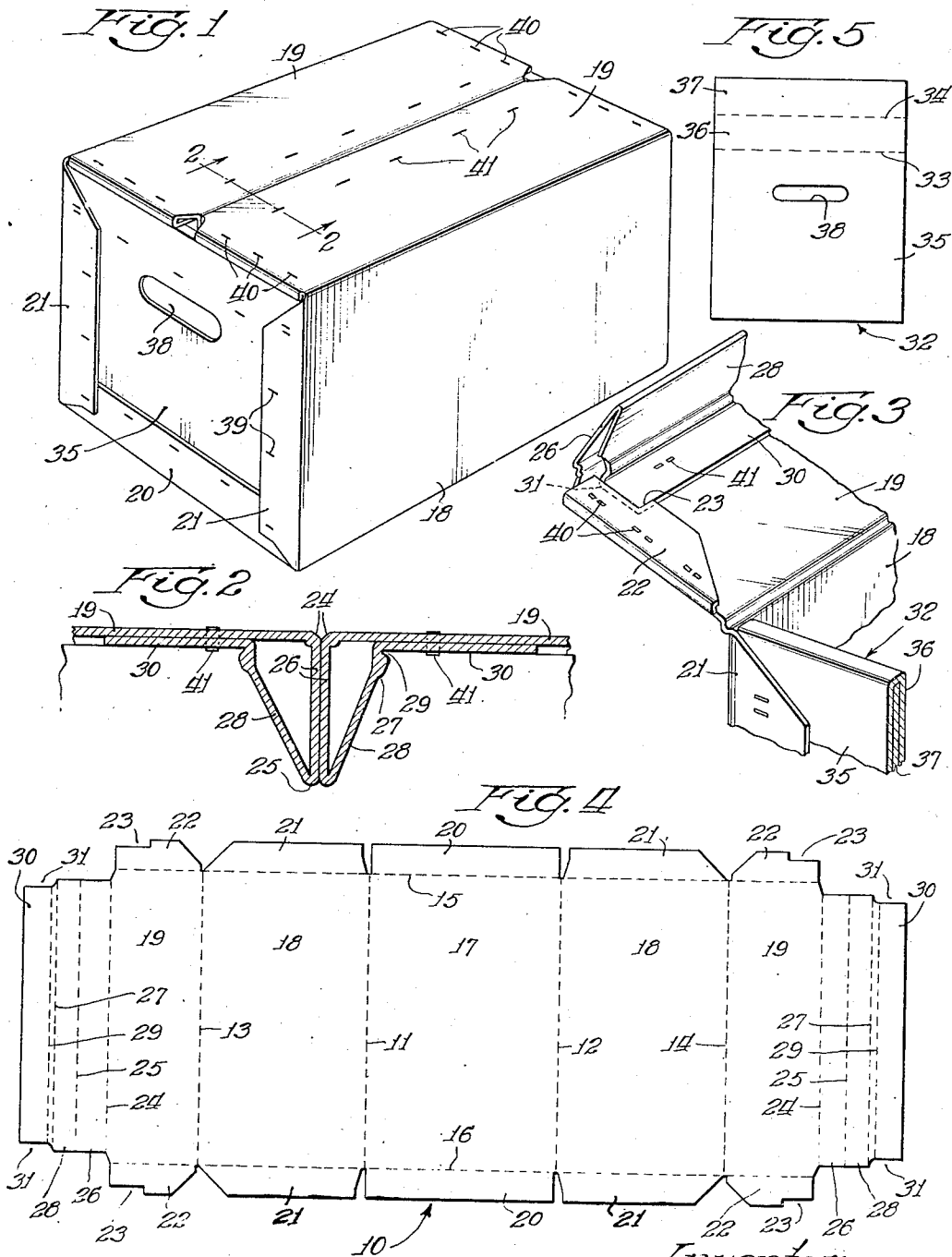
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CONTAINER

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CONTAINER

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The present invention relates to containers and particularly to containers formed from sheet material such as paperboard or the like. The containers of the present invention when made of solid fiberboard are particularly suitable as packing and shipping cases for holding and transporting commodities, such as bottled products which are handled under refrigerated conditions and require the use of containers capable of retaining their strength and rigidity under such conditions.

It is an object of the present invention to provide an improved container that can be quickly and easily formed and assembled.

Another object of the invention is to provide a container formed from sheet material and which is reinforced to provide a sturdy and rigid construction.

A more specific object of the invention is to provide a container having reinforced top or cover panels, the reinforcements furnishing means to facilitate the assembly or forming of the containers particularly the positioning of flanges on the top panels of the container.

Other objects and advantages of the invention will be apparent from the following description when considered in conjunction with the accompanying drawing.

In the drawing;

Fig. 1 is a perspective view of the container of the present invention.

Fig. 2 is an enlarged fragmentary cross-sectional view along the line 2-2 of Fig. 1 illustrating particularly the construction of the flanges on the top panels of the container.

Fig. 3 is an enlarged fragmentary perspective view of an upper corner of the container showing a portion of the under side of one cover panel in open position.

Fig. 4 is a plan view of a blank suitable for forming the bottom, sides, and top of the container shown in Fig. 1.

Fig. 5 is a plan view of a blank suitable for forming one of the end panels of the container shown in Fig. 1.

Referring to the drawing, the novel container of the invention, as shown in perspective in Fig. 1, has its bottom, sides, and top formed from a blank such as illustrated in Fig. 4 and preferably has its ends formed from blanks such as that illustrated in Fig. 5. The blank 10 shown in Fig. 4 is provided with fold or score lines 11, 12, 13, 14, 15 and 16 to define a bottom wall or panel 17, side walls or panels 18 and cover or top panels 19, the side walls or panels being con-

nected flexibly at the fold lines 11 and 12 the bottom wall or panel 17 and at the fold lines 13 and 14 to the top or cover panels 19.

The bottom panel 17 has at each end a flap 20, and the side panels 18 also have at their opposite ends flaps 21, all of the end flaps being bendable about the fold lines 15 and 16. The top or cover panels 19 likewise are provided with flanges or flaps 22 also defined by the fold or score lines 15 and 16 and for a purpose hereinafter to be described. These flaps or flanges 22 are notched at 23 to aid in assembling the container, as will be hereinafter more fully described.

Fold lines 24 and 25 which are parallel to score lines 13 and 14 define narrow panels 26 hingedly connected to cover panels 19 and the score lines 25 and another pair of score or fold lines 27 define another pair of narrow panels 28 hingedly connected to the panels 26 and adapted to extend back to the main body of the top panels 19 at an acute angle with respect to the panels 26, as clearly shown in Figs. 2 and 3, to form flanges on the top or cover panels 19 which extends inwardly when they are in closed position. It will be noted that each of the cover panels extends substantially half-way across the top of the container and that the flanges thereon together with a portion of the cover panel associated therewith are right triangular in cross-section. Another fold line 29, parallel to and slightly spaced from fold line 27, defines a flange-securing flap 30 connected to panel 28 which is adapted to be secured in face engagement with the underside of the main body of top panel 19 by staples or other suitable means. The flaps 26 and 28 are of such length that they can enter the set-up container between the end walls and the flap 30 is made slightly shorter than flaps 26 and 28 by forming a notch 31 in each end corner of the top panels 19, so that the outer corner portions thereof are adapted to cooperate with the notches 23 on the flaps 22, as will be hereinafter more fully described.

One of the blanks 32 for the end walls is shown in Fig. 5. Each blank 32 is provided with fold or score lines 33 and 34 to define an end panel 35 and reinforcing flaps 36 and 37 at the upper end thereof. The flap 37 is folded down along the score 34 so that it is in face engagement with flap 36 and then the two flaps are folded along score 33 so that the fold line 34 extends along the upper edge of a hand hole 38. This provides reinforcement for the end panel above the hand

hole and also provides a better and broader grip for one who handles the container.

In assembling the container, the end flaps or flanges 22 on each top panel 19 are folded along the fold lines 15 and 16 and secured to the normal underside of the top panel 19 by any suitable means, such as staples 40. The panel 28 on each top panel 19 is then folded along the score line 25 at an acute angle to the panel 26, and the flange-securing flap 30 is folded in the opposite direction along the score lines 27 and 29. The free corner portions of the flange-securing flap 30 are placed in the notches 23 in the flaps 22 and then the flange-securing flaps 30 are secured to the top panel 19 in face to face relation by any suitable means, such as staples 41. It will be observed the end flaps 22 not only serve as reinforcing means for the edges of each top or cover panel 19, but the notches 23 therein also serve to facilitate the positioning in place of each flange-securing flap 30 in the assembly of the container. The notches 23 accurately determine the position of each flap 30 and thus save the time the workman otherwise would have to expend in determining the exact position in which to secure or staple the flap 30 to the cover panel.

The panels 26 and 28 and the flap 30 of each cover panel are so dimensioned and the notches 23 are so arranged that when the free corner portions of the flap 30 are positioned in the notches 23 the panel 26 is at the desired angle with respect to the main body of the cover panel 19, that is, at substantially right angles thereto. The flange formed by the panels 26 and 28 is very rigid since it is of triangular cross-section as shown in Figures 2 and 3.

The blank 10 is then folded along the fold lines 11 and 12 so that the side panels 18 and top panels 19 extend upwardly substantially at right angles to the bottom panel 17. The top or cover panels 19 are then folded along fold lines 13 and 14 so that the top panels 19 extend outwardly at an angle to the adjacent side panels 18. The end flaps 20 and 21 on the bottom panel 17 and side panels 18 are bent inwardly along the score or fold lines 15 and 16 as shown in Fig. 1 and the end wall panels 35 are positioned against and fastened to the inner surfaces of end flaps 20 and 21 by any suitable means, such as for example staples 39.

The cover panels 19 are then placed in closed position so that the flanges extend into the container between the end wall panels 35 and the reinforcing flaps 22 on the cover panels rest on the top edge portions of the end wall panels. As shown in Figure 4, the panels 26 and 28 are shorter in length than is the main body of the cover panels 19 in order that the flange formed by the panels 26 and 28 will clear the end wall panels 35 including the reinforcing flaps thereon when the cover is closed. Because of the resiliency of and abutment between the flanges on each cover panel the latter are retained in closed position without further fastening or locking means.

Although in the foregoing description and in the drawing there is described and illustrated cover or top panels of equal dimensions, if desired, one cover panel may be shorter than the other, in which case the other cover panel is of correspondingly greater length. Also, a single cover panel extending across the entire top of the container and having a flange as described may be employed instead of two cover panels as

illustrated, and many of the advantages of the invention will be retained. Furthermore, the end wall panels may be formed integrally with the bottom panel or with the side panels instead of being formed as separate blanks as illustrated.

While containers according to the invention may be formed from any suitable sheet material having the strength and rigidity as well as the flexibility required for the manufacture and use of the container, for most purposes it is preferred to use paperboard of the type known as solid fiber.

Although the invention has been described and illustrated in connection with specific embodiments thereof, it is to be understood that various changes may be made without departing from the spirit thereof and it is therefore desired to be limited only by the scope of the appended claims.

I claim:

1. In a container formed from paperboard or the like including bottom, side and end walls, cover panels extending from the top edges of said side walls, each of said cover panels being adapted to extend toward each other substantially half-way across the top of said container and a downwardly extending flange along the free edge of each cover panel having a triangular cross-section comprising two integral angularly disposed panels and a flange-securing flap secured to said cover panel, the improvement which comprises reinforcing flanges hingedly joined to the lateral edges of said cover panels and folded and secured to underlie said cover panels and to strengthen said lateral edges, said reinforcing flanges having notches therein adapted to receive the extremities of said flange-securing flaps so arranged that said notches and extremities are in cooperating relationship only when said angularly disposed panels are in the desired positions, whereby proper construction of said downwardly extending flanges is facilitated.

2. The improvement as defined in claim 1 wherein said cover panels when in closed position rest upon the upper edges of said end walls and said downwardly extending flanges are adapted to enter said container and to extend substantially from one end wall to the other.

3. An improved container for bottled beverages and the like made of paperboard comprising a bottom, side and end walls, cover panels extending from the top edges of said side walls so that in closed position their free ends are in adjacent and aligned position substantially midway between said top edges, said cover panels being of sufficient width to rest upon the upper edges of said end walls and having reinforcing flanges on their lateral edges folded and secured to the underside thereof, a flange-forming panel integrally joined to each of said cover panels along said free edge extending downwardly therefrom in substantially face-to-face relation when said cover panels are closed, a supporting panel integrally joined to each of said flange-forming panels extending obliquely therefrom to said cover panels, a securing panel integrally joined to each of said supporting panels secured to the underside of said cover panels, said flange-forming and supporting panels being arranged to enter said container between said end walls and to cause said cover panels to tend to remain in closed position, and a notch in each of said reinforcing flanges adapted to receive and position said securing panels, whereby proper positioning

of said flange-forming and supporting panels during manufacture is assured.

4. An improved container according to claim 3 wherein said bottom, side walls, and cover panels and their associated parts are formed from one blank and each of said end walls is formed from a separate blank, and wherein each of said end wall blanks includes at its upper end a plurality of flanges adapted to be folded inwardly and upon each other and to be secured to said end wall, whereby the rigidity of said container is enhanced.

5. A container formed from paperboard or the like, including bottom, side and end panels, a cover panel extending from the top edge of each of the side panels, each cover panel having a flange adjacent its free edge, said flange being integral with the cover panel and having a flange-securing flap secured to the cover panel, and reinforcing flaps integral with the lateral edges of each cover panel and bent under each cover panel and secured thereto to strengthen said lateral edges, said reinforcing flaps having notches

therein for receiving the ends of the flange securing flap on each cover panel to accurately position said flange securing flap with respect to the cover panel whereby the flange associated therewith also is disposed in the desired position.

6. A container formed from paperboard or the like, including bottom, side and end panels, a cover panel extending from the top edge of at least one of the side panels, said cover panel having at its free edge a flange formed integral therewith, said flange having two panels forming with a portion of the cover panel a triangular cross-section and having a flap secured to the cover panel, a reinforcing flap on each edge of the cover panel, each reinforcing flap being folded and secured to the underside of the cover panel, and a notch in each reinforcing flap for receiving and positioning the flange-securing flap accurately in position whereby the desired positioning of the flange is assured during the assembly of the container.

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