

July 20, 1943.

F. G. CHAMBLISS

2,324,905

DELIVERY CASE

Filed Dec. 1, 1938

3 Sheets-Sheet 2

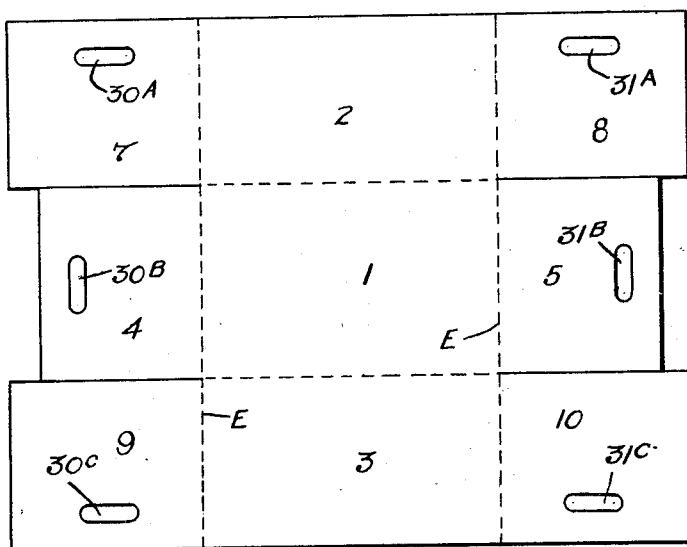


Fig. 5

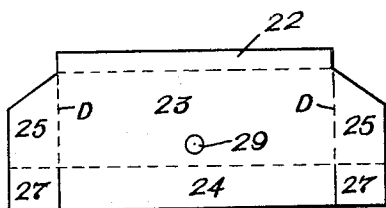


Fig. 7

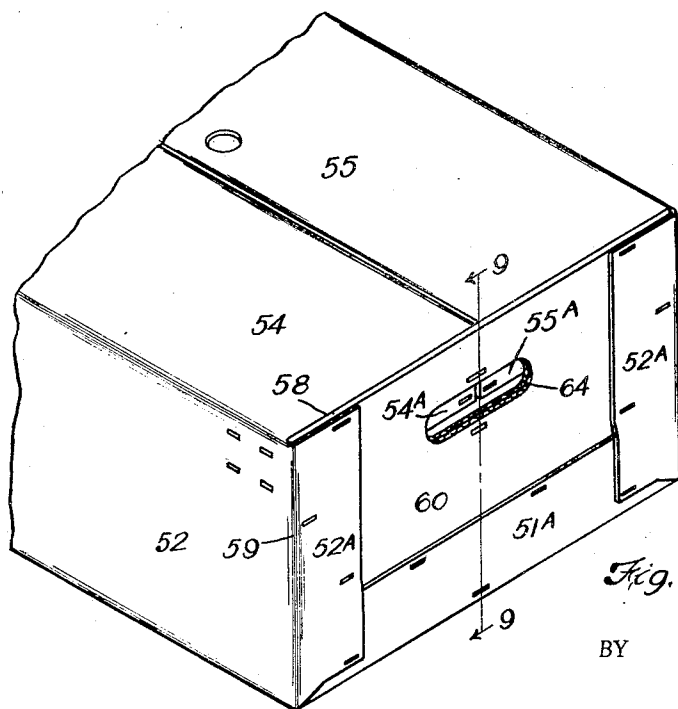


Fig. 8

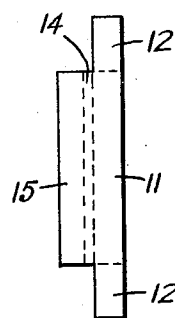


Fig. 6

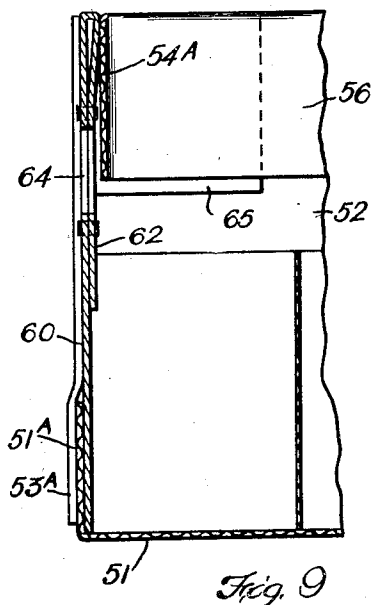


Fig. 9

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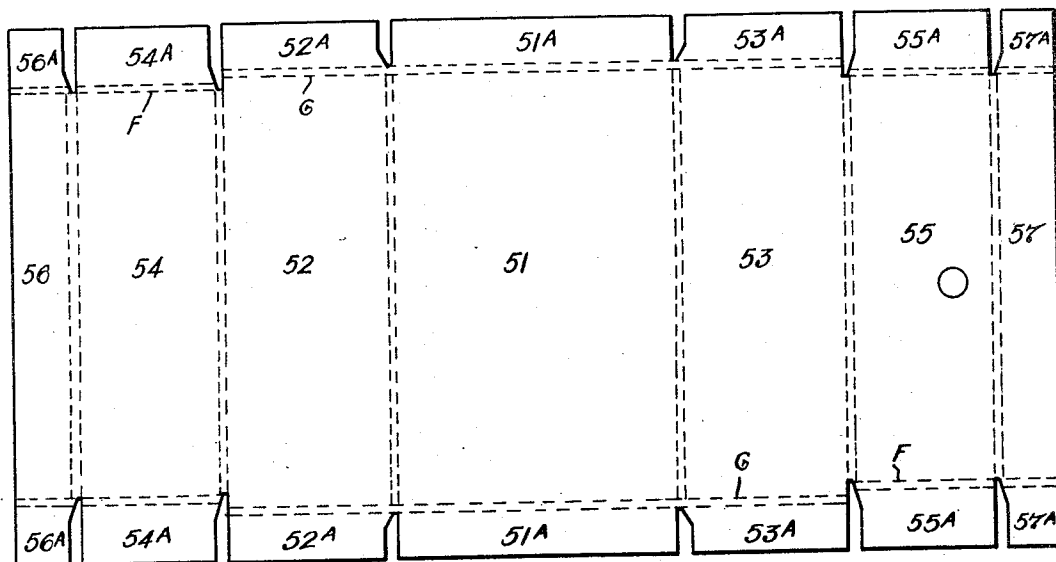


Fig. 11

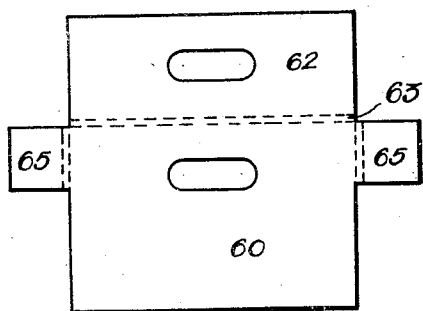


Fig. 12

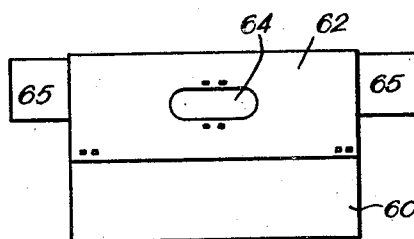


Fig. 13

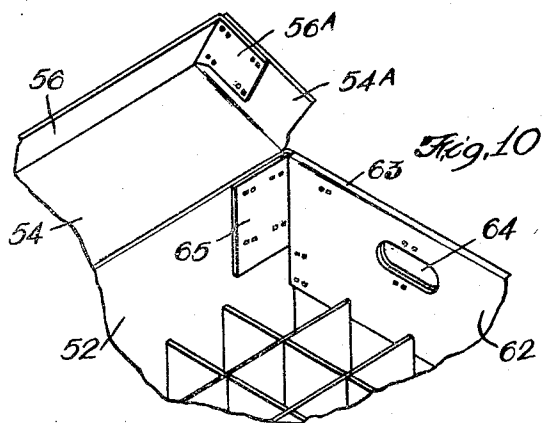


Fig. 10

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2,324,905

DELIVERY CASE

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Application December 1, 1938, Serial No. 243,387
In Canada December 2, 1937

3 Claims. (Cl. 229—49)

This invention relates to a carrying case for beer bottles and the like in sizes on the order of 24-bottle capacity, and made of suitable paper material, that is, heavy paper board of one sort or another.

Although boxes made of paper board are known for the purpose, for the most part they either require some wood reinforcement, or are not strong enough to hold together under rough handling, or are unsuitable for repeated use due to softening of the stock by liquid or due to the case assuming an unsightly appearance, again usually by liquid brought in contact therewith.

My invention aims to overcome these disadvantages and to provide a case which will not tear apart if roughly handled when loaded, will compare favorably with wood as to preservation of its strength and appearance even when subjected to repeated wetting, and which will not require wood strengthening or addition at any part.

A further purpose of my invention is the formation of a case of the character described having a top which can be closed and will stay closed without the use of any sort of fastening, but which can readily be opened, and which is strong enough to permit piling of cases.

Among further purposes of the invention are the relation of parts to produce a combined effect of fastening and of reinforcement at critical spots, an arrangement of parts adaptable for partially assembled knocked-down shipment, and economical utilization of material.

To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointer out in the claims.

The annexed drawings and the following description set forth in detail certain structure embodying the invention, such disclosed means constituting, however, but one of various structural forms in which the principle of the invention may be used.

In the accompanying drawings—

Fig. 1 is a perspective view of a case of my improved construction, with the lid open;

Fig. 2 is a transverse vertical section with the lid closed;

Fig. 3 is an enlarged handle and side detail on the plane 3—3 of Fig. 1, taken in the direction of the arrows;

Fig. 4 is a horizontal corner section on the plane 4—4 of Fig. 1;

Fig. 5 illustrates the principal blank for the form shown in Fig. 1;

Fig. 6 illustrates the blank for the end reinforcement of the same form;

Fig. 7 illustrates a blank for either half of the lid;

Fig. 8 is an end view in perspective of a modified form of case;

Fig. 9 is a section through the case of Fig. 8 on the plane 9—9;

Fig. 10 is a perspective showing an inside corner detail of the case of Fig. 8;

Fig. 11 is the principal blank from which the case of Fig. 8 is made;

Fig. 12 is the blank for the end of the case of Fig. 8; and

Fig. 13 shows the blank of Fig. 12 partly ready to be assembled with the blank of Fig. 11.

In all illustrations of unfolded blanks broken lines are used to show creases and solid lines to show cuts, but it will be understood that the tabs 65 are still integral with the panel 60 in Figs. 10 and 13.

My improved case comprises a bottom 1, sides 2 and 3, integral with the bottom, and additional end panels 7, 8 and 9, 10 respectively integral with the sides 2 and 3. The blank for the main body of the case is shown in Fig. 5 and the proportions there indicated are those for a case to hold a dozen standard size beer bottles. It will be noted from that figure that the blank is rectangular in outline except for the slight recessing of the outer edges of panels 4 and 5. There is thus almost no waste of material. This basic rectangular shape will be maintained if the blank is made for cases of other proportions, but the relative depth of 4 and 5 as compared with the other end panels will vary according to the height and width of the case, always with all cut edges close to a rectangular outline.

In the preferred form of case illustrated in Fig. 1, top edge reinforcing channels are used to complete the end construction, each reinforcement consisting of a long inner strip 11 with integral end tabs 12, a folding section 14 which is at one side of 11 in the blank and covers the top edge of the completed end, and an outer strip 15, all applied as shown in Figs. 1 and 3. The lid comprises two halves generally designated as 20 and 21, and each consisting in detail of a fastening strip 22, top panel 23, inner flange 24, end flanges 25, and connecting laps 27. One of both of the lid halves may be perforated with a finger hole 29.

The end panels of the blank of Fig. 5 are perforated with hand openings designated as 30A, 30B and 30C on one end of the blank and 31A,

31B and 31C on the other end, adapted to register in the assembled carton to form hand holes 30 and 31. In assembling the box the sides 2 and 3 are turned up to vertical, the panels 7, 9 and 8, 10 are turned inward on their crease lines to right-angles with their respective sides and to overlap one another, after which the outer end walls 4 and 5 are turned up to form outer end faces of the completed case. When so assembled the various hand hole cuts in each end register to form the openings 30 and 31, as mentioned. The reinforcements are applied to the top edges of the case ends, each with the strip 15 outside, the folding section 14 forming a roof over the top edges of the end plies, the strip 11 and tabs 12 inside, and everything fastened by suitable fasteners, such as staples as shown. The tabs 12 folded on the dotted lines of Fig. 6 to overlap the inner sides a substantial distance, making a strong reinforcing angle at the corners, well secured to the sides by fastening means such as the staples 40. The blanks of Fig. 7 are folded along the dotted hinge lines of that figure into the relative positions shown in Fig. 1 and stapled in such relationship to form and maintain deep flanges 24, 25 to depend at right-angles from the main lid panel 20 or 21 and thus form two complementary half lids. These formed halves are fastened to the sides of the case by end strips 22. It will be observed in Figs. 1 and 4 that the staples 40 which fasten the corner reinforcements 12 extend through the sides 2 and also through the strips 22.

The lid flanges are relatively deep, and their end elements 25 are defined by fold lines D—D, which are spaced apart a distance somewhat less than the corresponding fold lines E—E of Fig. 5. This difference in spacing is sufficient to allow for the thickness of the material in the completed end of the case and nevertheless bring the flanges 25 into frictional engagement with the strips 11 when the lid halves are folded down. These end flanges 25 are kept spread by the middle flanges 24, and such middle flanges bear against one another by their natural resiliency when both halves of the top are in the closed position. On account of their depth both of the flanges 24 distort one another somewhat in intermediate positions on the way to being fully closed, but when fully closed each tends to hold the other in place. The finger opening 29 permits a grasp for lifting the lid, and the side flanges 25 of the lid, when closed, can also be reached through the hand holes 30 and 31, as apparent in Fig. 2.

The end reinforcements, a blank for one of which is shown in Fig. 6, not only hold the ends together and stiffen them at the top, but also, by means of the tabs 12, directly transmit the lifting stresses to the sides and thus prevent breakage at the corners. Further functions of the top end strips are to give additional bearing surface at the upper edges of the hand holes 30 and 31 and to form a roof, at 14, over the tops of the end plies 4, 3, 7, thus keeping liquid from reaching the cut edges of the end plies.

A modification of this case is illustrated in Figs. 8 to 13 inclusive, which modification embodies the principles of a rectangular blank, lid halves with frictionally-fitting end flanges obtained by a narrowing of the fold line spacing as compared with the fold lined spacing of the main body elements, a liquid-shedding arrangement along the upper edge of the ends, and transmission of the lifting stresses from the ends to the sides by corner reinforcements. In the modification there

are certain differences in the blank, whereby the top and the main part of the body are formed from a single blank and the ends are separate.

In this modified case the panels of the blank are preferably defined and connected by double creases (sometimes known in the industry as hinge creases) so that if necessary to fold the blank for shipping, parts of it may be bent upon each other either inwards or outwards without injury to the material. The central panels of the blank are respectively bottom 51, sides 52, 53 and tops 54, 55, and inner lid flanges 56, 57. Each of these central panels has a portion connected along the crease at each edge, designated in the drawings by its own reference character with the exponent A, and adapted to be turned at right-angles, upward from the position of the blank as shown in Fig. 11 to form flanges for purposes hereafter described. These various flange panels are also separated from one another by notches which are wide enough to prevent interfering contact of material in the completed case. The creases F at the edges of panels 54—56 and 55—57 are offset inwardly from the creases G for the panels 52—51—53 in order that the tops will be narrow enough to bring their edge flanges 55A inside the ends of the completed case.

Each end comprises a principal area 60 and an inner reinforcing member 62, defined and connected by double crease lines 63 and perforated by openings which form a hand hole 64 when the member 62 is folded upon 60 about the crease 63. When so folded the crease 63 forms a water-shed corresponding to the section 14 of Figs. 1 and 3. The elements 60 also have tabs 65 at their upper outer corners integral therewith and defined by creases, such tabs corresponding to the tabs 12 of the form shown in Fig. 1.

To partially assemble this case for shipping knocked-down, the portion 62 is folded over upon 60 as mentioned, and stapled or otherwise permanently secured in such position. If the blank of Fig. 11 is too long for convenient shipment it is shortened by folding upon itself along one of the transverse crease lines.

To assemble the carton, Figs. 8 and 9, the sides 52 and 53 are turned up with respect to the bottom 51, the ends as shown in Fig. 13 are put in place, and the flanges 51A, 52A and 53A are turned inward and stapled thereto. The tabs 65 are folded inside and stapled against the upper parts of the sides 52 or 53 as the case may be, making the corner reinforcement as shown in Fig. 10. The flanges of the tops are also folded as shown with the elements 56A lapping inside 54A and stapled thereto, thus completing the flanges of the top halves.

From the foregoing it will be seen that I have invented a container for bottled beverages which compares favorably in strength and stiffness with wooden containers of the same sort, but is much lighter in weight; which permits the maker to use material which has some inherent characteristics impairing its natural adaptability for this use by using it in such a way as to overcome these objections. For example, the material is not absolutely water-proof but is employed in such a way as to be water-resistant to a high degree; the material is thin and tends to have sharp edges not advantageous for handling with heavy loads, but the method of employment overcomes these by placing additional thickness at the places for lifting and at the same time utilizes such additional thickness for reinforcing purposes in the otherwise weak tops and upper corners of the

ends. My improved case is made principally of blanks which are entirely or almost entirely rectangular in outline, thus avoiding waste of material; it includes a lid structure which by its physical properties and the relative positions of its parts tend to remain closed, but which can be opened without difficulty and without unfastening anything.

Other modes of applying the principle of the invention may be employed, change being made as regards the details described, provided the features stated in any of the following claims, or the equivalent of such, be employed.

I therefore particularly point out and distinctly claim as my invention:

1. In a fiber board container, in combination, a body including bottom, sides, ends, and permanently attached hinged top elements, said container having a perimetral reinforcement around its top edge, said reinforcement comprising a strip attached to each end and a strip attached to each side, said side strips also constituting the attaching means for said top elements; said end strips being folded over the top edges of said ends and including terminal portions carried around the container corners and so overlapping the terminal portions of the adjacent side strips, the overlapping portions being within and without the sides of the body, and with fastenings

through the container body and through said overlapping portions.

2. A fiber board container comprising a body including integrally connected bottom, side, and end walls, and a longitudinally folded reinforcing strip of the body material covering the top edge of each end wall and having portions fastened to the inner and outer faces of the end wall, each strip having end tabs bent laterally and fastened to the side walls of the container, said end walls having hand holes the upper margins of which are thickened by the inner and outer portions of said reinforcing strip.

3. A fiber board container comprising a body including integrally connected bottom, side, and end walls, a longitudinally folded reinforcing strip of the body material covering the top edge of each end wall and having portions engaging the inner and outer faces of the end wall, cover members having hinge strips secured to the side walls along their upper edges, the portion of each strip engaging the interior of the end wall having tabs at the ends thereof bent laterally and engaging the interior faces of the side walls along their upper edges, and fastening means securing said strips to said walls including fasteners extending through a hinge strip, a side wall and one of said tabs adjacent each corner of the container.

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