June 9, 1942. E. L. ARNESON 2,285,399

BOTTLE HOLDER

Filed Nov. 16, 1938

Fig. 1.

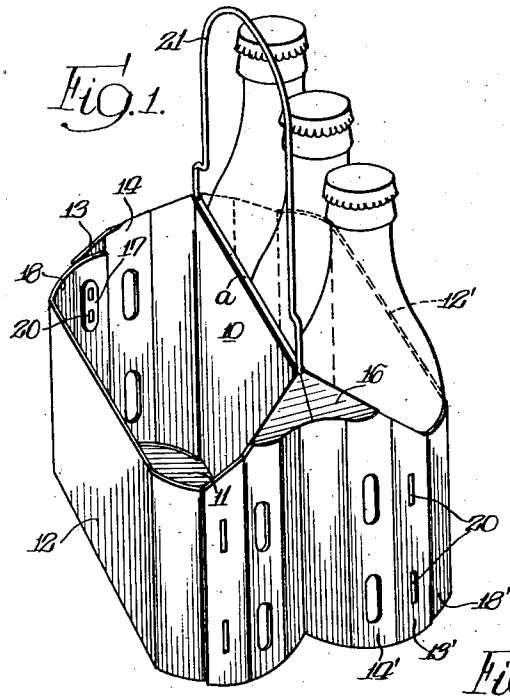


Fig. 4.

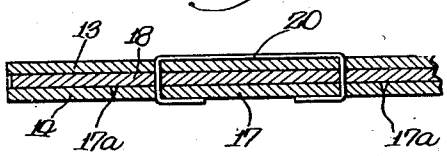


Fig. 5.

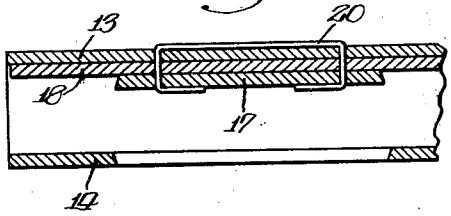


Fig. 2.

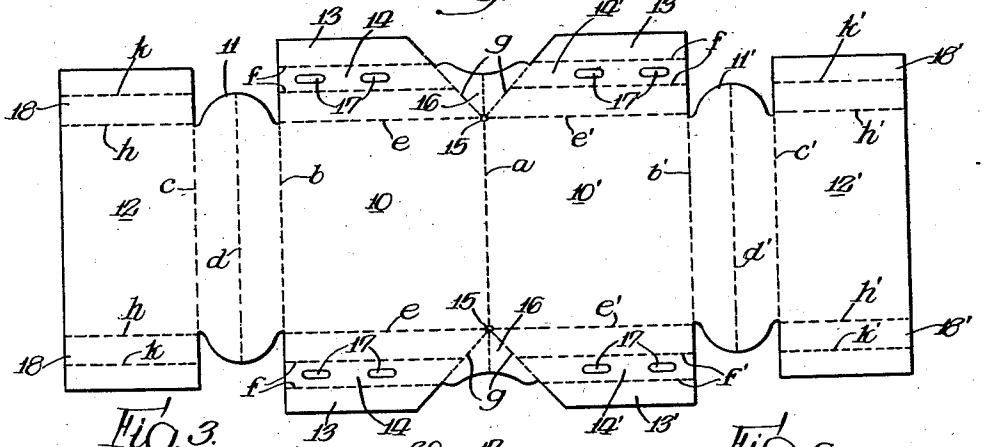


Fig. 3.

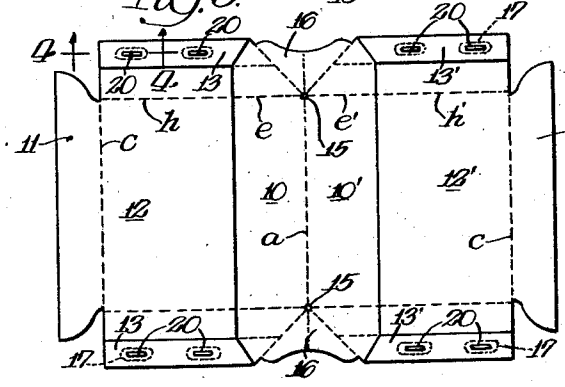
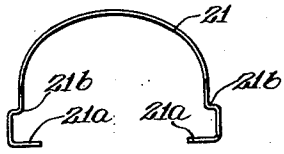


Fig. 6.



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BOTTLE HOLDER

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Application November 16, 1938, Serial No. 240,621

8 Claims. (Cl. 229—52)

This invention relates to containers, made of paper board or other suitable material, for the packaging of a plurality of articles such as bottles.

The general purpose of the invention is the provision of such a device which may be manufactured very economically from sheet stock, such as paper board, in a collapsed or knocked-down condition, such that it will occupy but little space and may be conveniently stacked and packaged for storage and shipment, and which may be set up by the user, at the place where its intended contents are to be packaged in it, quickly and easily without requiring any special apparatus or additional fastenings in so doing; furthermore, that when so set up the container will be suitably strong, and will maintain its set-up form in such fashion as to permit the contents to be placed in it quickly and easily, yet will retain the intended articles securely in a compact package which may be carried with convenience.

Another object is the provision of such a container which permits one or more or all of the contained articles, such as bottles, to be removed as desired, without involving any dismantling or mutilation of the container, thus leaving it in condition such that it may function satisfactorily for re-use, as for return of the empty bottles.

Yet another object of the invention is the provision of such a container which may be manufactured complete in a collapsed or knocked-down condition, and may be set up in condition for reception of articles without requiring any fastening or interlocking of any of its parts.

Another object is the provision of a new form of construction and a method of constructing containers or the like from paper board, whereby parts may be fastened together by staples or other mechanical fastenings in such fashion that they are very securely and permanently connected, the construction and procedure being of a character such that said fastenings may be applied very quickly and very rapidly in the course of manufacture and without requiring any complicated handling or unfolding of parts incident thereto.

Other and further objects of the invention will be pointed out or indicated hereinafter or will be apparent to one skilled in the art upon an understanding of the present specification or upon actual use of the invention.

For purpose of aiding in an explanation of the invention, I show in the accompanying drawing forming a part of this specification, and hereinafter describe, certain forms in which it may be embodied and practiced. It is to be understood, however, that these are presented merely for purpose of illustration, and are not to be construed in any fashion for the purpose of limiting the appended claims short of the true and most comprehensive scope of the invention in the art.

In said drawing:

Fig. 1 represents a perspective view of a bottle holder embodying the present invention, showing the same in its set-up condition and with half of its intended contents of bottles in position in it;

Fig. 2 is a plan view of a blank, cut from sheet material, in suitable form for fabrication of the receptacle shown in Fig. 1;

Fig. 3 is a plan view of the receptacle formed from the blank illustrated in Fig. 2, showing the fabricated receptacle in its flat or collapsed condition;

Fig. 4 is a detail, on an enlarged scale, illustrating a novel feature and method of construction for fastening, by means of staples, articles fabricated in flat or collapsed condition from sheet material, the illustration being in the nature of a section on approximately line 4—4 of Fig. 3;

Fig. 5 is a similar section showing the relationship of the parts pursuant to partial opening up or distention of the device from its flat or collapsed condition; and

Fig. 6 is an elevational view of a wire handle of a type appropriate for use in a container of the type illustrated in Fig. 1.

It is a somewhat difficult or inconvenient matter to package such articles as bottles in groups of a half dozen in a manner such that they may be carried conveniently and with security. Moreover, in the fabrication of special receptacles or carriers for such purpose from paper board or similar inexpensive material, it is not always safe to use glue or other adhesives for fastening together portions of the material which are subjected to considerable stresses, and particularly if the character of the material to be packaged, and the manner or places in which the packaging is done, or the conditions to which the packages are subsequently subjected, are such as to expose the fastened portions to wetting. Consequently, in the absence of other provisions for safeguarding such adhesively secured portions against separation, it is desirable to use mechanical fastenings, rather than an adhesive, for fastening the parts together.

The matter of cost is a primary factor in determining whether a special packaging receptacle, such as a container for the carrying of bottles,

has practical or commercial utility, and if mechanical fastenings are to be employed in the fabrication of such articles, the design of the receptacle itself and the procedure to be followed in fabricating it must be such that the parts may be fastened together when the device is in the flat condition, as distinguished from a partially opened condition, in order that the manufacturing procedure may be carried on at such a speed and with such simplicity as to keep the operating cost per unit very low.

The subject matter of the present invention provides a form and method of construction whereby these desirable results may be attained very effectively, it being understood that the procedure is adaptable to the fabrication of a great variety of articles from paper board or other suitable sheet material.

The nature of the invention can be explained most quickly by detailed description of the constructions and procedures illustrated in the drawing, which are as follows.

In each instance the container is designed for bottles, or other articles, of specified dimensions, the embodiment here illustrated being designed for the packaging of six bottles of approximately uniform size. A blank of the form shown in Fig. 2 is cut from an appropriate material, such as paper board, having the necessary strength and stiffness, said blank being subdivided by crease lines into a pair of inner panels 10, 10', which are conjoined along a top crease line *a*, a pair of bottom panels 11 and 11', which are conjoined respectively to the inner panels along crease lines *b* and *b'* and to outer panels 12 and 12' along crease lines *c* and *c'*, all of said crease lines being parallel and the panels of respective pairs being alike. The bottom panels are formed with median crease lines *d* and *d'* and said panels are of a width approximately equal to the overall diameter or width of the articles for which the container is designed. At the ends of the inner panels 10 and 10' are crease lines *e* and *e'* which extend at right-angles to the crease line *a*, to mark off end sections, which end sections are further apportioned by crease lines *f* and *f'* parallel to the crease lines *e* and *e'*, into flap portions 13 and 13' and mid-portions 14 and 14'. At the intersection of the crease lines *a* and *e*, the blank is punched with handle apertures 15, and from these extend diagonal crease lines *g* to mark off gussets 16 from the adjacent ends of the end sections.

At symmetrically disposed locations in the mid-portions 14 and 14', small punch sections 17 are partially blanked out of the material, as by cutting it completely through along their more extensive sides and deeply scoring, or cutting it almost through, at their narrow ends or corners, as illustrated for example at 17*a* in Fig. 4.

At the ends of the outer panels 12 and 12', are end sections 18 and 18*a* conjoined thereto along crease lines *h* and *h'* and subdivided by crease lines *k* and *k'*, said crease lines *h* and *h'* aligning with the lines *e* and *e'* and the crease lines *k* and *k'* aligning with the inner lines *f* and *f'*.

The blank, formed and scored with crease lines as above described, is folded along the lines *d* and *d'*, so that the symmetrical halves of the bottom panels are laid flat on one another and the outer panels 12 and 12' upon portions of the inner panels 10 and 10'. This brings the outer portions of the end sections 18 and 18' onto portions of the mid-portions 14 and 14' so that the former cover the punch sections 17. The terminal flaps 13 and 13' are then folded over on top of the outer portions of the sections 18 and 18', so that the article has the form shown in Fig. 3. Then, in this flat folded condition, it is fed to a stapling machine and staples 20 are driven through the overlapped portions of the terminal flaps 13, end sections 18 and mid-portions 14, and terminal flaps 13', end sections 18' and mid-portions 14', through the punch sections 17, against the under sides of which the staples are clenched, as seen in Fig. 4. This stapling definitely fastens and secures the receptacle in its flat collapsed condition as illustrated in Fig. 3.

It will be understood, as pointed out above, that the width of the bottom panels is such as to accommodate the width of the articles for which the receptacle is designed, and likewise that the height of the outer panels 12 and 12' represents a substantial proportion of the height of such articles.

To facilitate its being carried, the receptacle is provided with a handle 21 which may be in the form shown in Fig. 6. Such handle has a bail portion terminating at aligned journal portions 21*a*, which extend toward each other from opposite ends of the bail portion, the distance between the outer, or more distant, ends of the journal portions being approximately equal to the distance between the handle apertures 15 of the receptacle. This handle is made of very stiff wire, so that it will not flex under the weight of the loaded container, and to attach it to the receptacle shown in Fig. 3, said receptacle is flexed laterally, into an arched form, until the handle apertures 15 are brought close enough to each other to permit the journal portions 21*a* to be introduced, first one and then the other, through said apertures. Thereupon the receptacle is released, so that it will spring back to its flat form, thus bringing the apertures 15 out to the ends of the bail portion and definitely locking the handle to the receptacle.

After the handle has thus been attached to the receptacle, the container is set up simply by drawing the outer panels 12 and 12' away from the inner panels 10 and 10', and at the same time swinging the said inner panels toward each other by flexing along the crease line A. When the outer panels 12, 12' are thus forced away from the inner panels 10, 10', the end sections 18 and 18' are at the same time drawn away from the mid-portions 14, 14' so that the narrow remaining connections of the punch sections 17 in said mid-portions are broken, and the punch sections are completely detached from and drawn out of said mid-portions 14. At the same time, bottom panels 11, 11' are flattened out, and the gussets 16, 16' bent down to a sloping position, so that the parts assume the relationships illustrated in Fig. 1. It will be observed that as so set up, the container affords two collaterally disposed compartments, separated from each other by the inner panels 10, 10', and having respectively outer walls formed by the panels 12, 12' and end walls formed by the conjoined end sections. The gussets 16 constitute positioning stays for these end walls, as well as stays or retainers cooperating with the handle to prevent its being flexed outwardly so as to disengage the journal portions 21*a*, and said gussets also function as rein-

forcing members to prevent the tearing apart of the inner panels 10 and 10' along the crease line *a*. Due to the presence of the creases *e*, *f*, *h* and *k*, the end walls take a rounded form, whereas the outer panels 12 and 12' bear parallel relationship to the inner panels 10, 10'. The punch sections 17 remain securely retained by the staples, so that they form, in effect, part of the fastening means, and aid in maintaining the security of the connection.

The bottles are placed in the collaterally disposed compartments by sliding them downwardly thereinto, so that they are seated securely therein, the containers shown in Fig. 1 being designed for accommodation of three bottles in each of the compartments. With the receptacle so loaded, the package may be carried conveniently by means of the handle 21, the bail of which extends upwardly above the tops of the bottle sufficiently to accommodate the fingers comfortably. For purpose of permitting stacking of such packages one upon another, the bail may be of such form as to permit its sliding downwardly through the apertures 15 to an extent such that its upper portion may be positioned below the tops of the bottles. Thus the bottles of one package may form a rest upon which another package may be placed. The legs of the bail may be provided with shoulders or jutting portions 21*b* to limit the extent to which it may slide downwardly in the apertures 15.

From the foregoing it will be appreciated that the receptacle may be completely fabricated at the factory, in the form illustrated in Fig. 3, in which collapsed form it may be stacked and packaged for shipment to the user. It will be understood also that from this flat collapsed form the user may set it up very quickly and without any special equipment, simply by inserting the handle as above described, and opening up the compartments as above explained. When so set up, the container holds its proper form with suitable stability, so that after the contents have been removed from it, as may be done without any distortion or mutilation of it, it still remains in condition to receive them again, as for return of them to the dealer.

It will be observed, furthermore, that this container provides a package which has no materially greater extent in any direction than the corresponding dimensions of its contents. Hence, such packages are particularly adapted for use in the standard size cases, trays or cartons in which the articles normally are packaged in one dozen or two dozen lots for shipment or handling.

I claim:

1. A container for the packaging of bottles and the like comprising a piece of sheet material shaped and creased to form a pair of inner panels which are conjoined at their upper margins, and outer panels, bottom panels and end walls, all arranged and connected to form collaterally disposed compartments at the outer sides of the inner panels, together with gussets extending between and connecting the adjacent end walls, the inner panels being provided at their upper portions with a handle whereby the container may be carried pendulously.

2. A container as specified in claim 1 and wherein the handle is connected to the inner panels between the gussets.

3. A container as specified in claim 3 and wherein the inner panels are provided with handle apertures on their line of connection and the gussets connect the end walls outwardly beyond said handle apertures.

4. A container as specified in claim 1 and wherein the end walls extend laterally beyond the lateral limits of the inner and outer panels when the device is set up.

5. A container as specified in claim 1 and wherein the end walls are creased to take an arcuate form between the inner and outer panels.

6. A container made in collapsed form from a sheet of paper board and formed with a pair of inner panels integrally connected to each other at their upper ends and a pair of outer panels each integrally connected with a respective inner panel by an intervening bottom portion at its lower margin, each of said bottom portions being provided with a crease on which the sheet is folded to place the adjacent outer panel flat against the adjacent inner panel, the abutted panels being formed with end wall sections extending from their lateral ends and arranged so that those of one panel lie flat on those of the other when the sheet is folded, terminal portions of some of said end wall sections being folded over onto the outer surfaces of others so as to form a three-ply arrangement when the panels are against each other, and fastenings extending through and fixed in the three plies adjacent the outer margins of the folded end sections so as to connect the end sections of one panel to the end sections of the other and form end walls joining said panels, portions of the end wall sections in which said fastenings are seated farthest from the terminal margins thereof being substantially surrounded by scorings, so that said portions may be readily detached and pulled out of the sheet in the operation of separating the panels to set up the container.

7. A container as specified in claim 6 and wherein the end walls are wider than the bottom portions and the ends of the bottom portions extend beyond the lateral ends of the inner panels.

8. A container as specified in claim 6 and wherein the end walls extend laterally beyond the lateral limits of the inner and outer panels when the device is set up.

EDWIN L. ARNESON.

CERTIFICATE OF CORRECTION.

Patent No. 2,285,399. June 9, 1942.

EDWIN LEWIS ARNESON.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 3, second column, line 11, for the claim reference numeral "3" read --1--; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 18th day of August, A. D. 1942.

(Seal)

Henry Van Arsdale,
Acting Commissioner of Patents.