March 30, 1937. C. B. KILMER 2,075,618

CONTAINER

Filed Aug. 3, 1936

Fig. 1

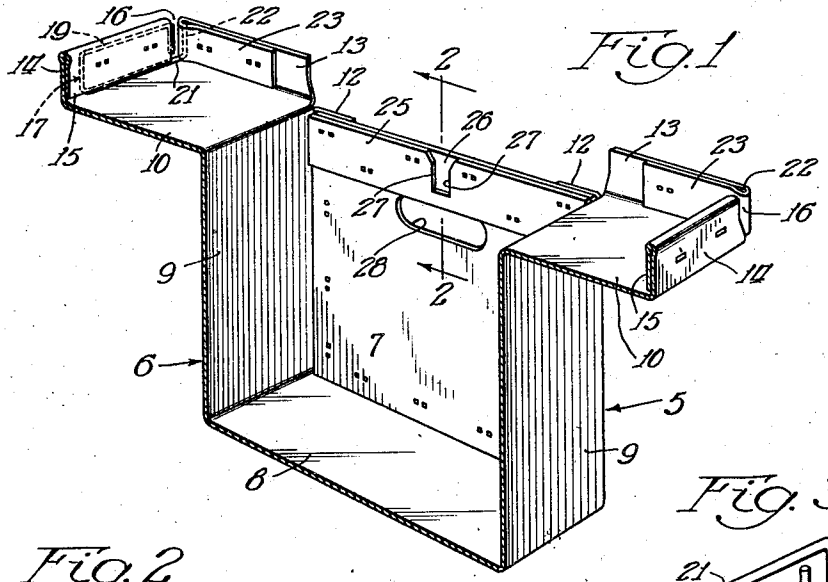


Fig. 2

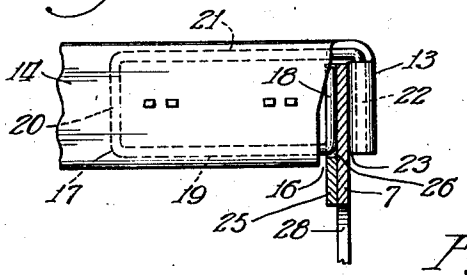


Fig. 3

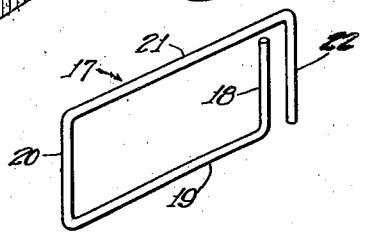
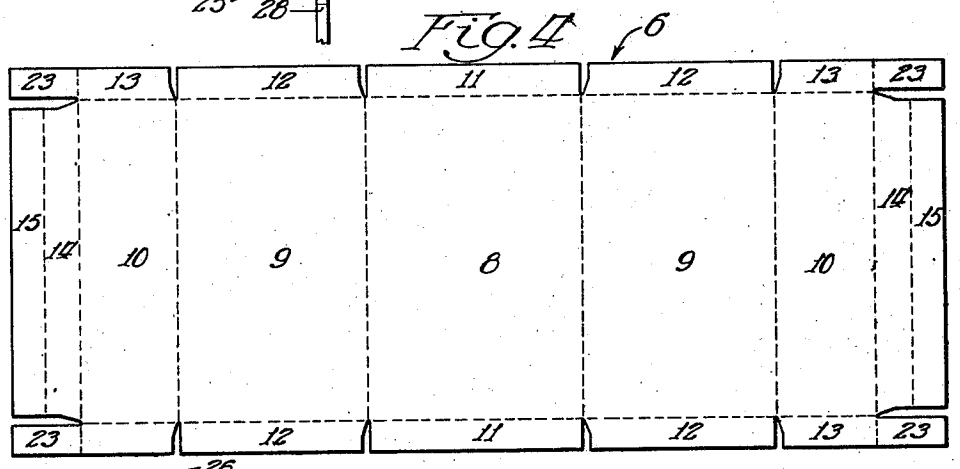


Fig. 4



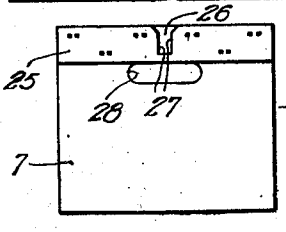


Fig. 5

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UNITED STATES PATENT OFFICE

2,075,618

CONTAINER

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Application August 3, 1936, Serial No. 94,050

6 Claims. (Cl. 229—43)

The present invention relates to shipping containers and more particularly to a returnable type of container for the transportation of bottled goods and the like.

One object of the invention is to provide a double-cover, reinforced container of a simple, sturdy form adapted to withstand the relatively hard usage imposed thereon by the handling of bottled beverages so as to enable the container to be re-used a large number of times.

Another object of the invention is to provide retaining means for the closure members to prevent separation thereof regardless of the manner in which the container is lifted.

A further object of the invention is to provide a strong end wall construction having a reinforcement as a part thereof which is formed so as to provide means for assisting in maintaining the closure panels in place on the container.

Other objects of the invention will be made apparent as the description proceeds.

In the drawing:

Fig. 1 is a fragmentary perspective view, illustrating one end of a container made in accordance with the present invention, the other end not shown being identical;

Fig. 2 is a fragmentary detail sectional view taken along line 2—2 of Fig. 1 with the cover in closed position;

Fig. 3 is a detail view of the flange connecting member;

Fig. 4 is a view of the main body blank; and

Fig. 5 is a view of the end wall blank with a reinforcing member secured thereon.

The present invention, as herein disclosed, provides a double-cover, returnable container with end walls provided with hand openings for convenience of carrying the container, the end walls being preferably reinforced by a construction which also serves to assist in retaining the closure members in proper position on the container.

Referring to drawing, the container as a whole is indicated at 5, the blanks for which are illustrated in Figs. 4 and 5. In the present instance the container is formed of three blanks, namely, a body blank 6 and two end blanks 7. The material of the blanks is preferably solid fibre board.

The body blank 6 comprises a bottom panel 8, side panels 9, 9, and cover panels 10, 10. The end blanks 7 are preferably secured to the body blanks by providing attaching flaps 11, 11 on the ends of the bottom panel and flaps 12, 12 on the ends of the side panels 9, 9.

The cover panels 10, 10 are provided with downturned flanges and for this purpose, flaps 13, 13 are formed at each end respectively of the cover panels, and flaps 14, 14 are formed along the longitudinal edges of each cover panel. The flap 14 carries an extension 15 which may be folded back and secured to the rear face of the flap 14 to provide a reinforced flange on the closure panels along the meeting edges thereof.

In order to accommodate the end walls, the flange 14 and flap 15 on each cover panel 10 are cut to such a length as to fit within the confines of the end walls. When the end flanges 13, 13 and longitudinal flange 14 on the cover panels are in a position at right-angles to the plane of the cover a space, indicated at 16, will be left between the end of the flange 14 and flange 13, this space being preferably of such a size as to closely receive the end wall when the cover is in closed position.

For the purpose of retaining the end flanges and longitudinal flanges in right-angular relationship to the cover panels there is provided at each corner of the cover panels a retaining member 17 which, in the present instance, comprises an open wire frame having a rectangular portion formed by legs 18, 19, 20 and 21, and an extended portion 22 parallel with the leg 18 formed on the end of leg 21 which is somewhat longer than the leg 17. The rectangular portion of the frame 17 is secured to the flange 14 by folding the extension 15 over and inserting the frame 17 between the folds thus formed. The flange extension 14 is then secured to the flange 15 by securing means such as staples, this serving to firmly engage the frame 17 with the flange 14. It is to be noted that the leg 21 of the frame 17 is disposed against the inner surface of the cover panel 10.

The leg 22 of the frame 17 is secured to the flange 13 in the present instance by providing an extension 23 on the flange 13 which is assembled around the leg 22 by folding the flap back upon the flange 13 and securing it in place by means of staples or similar securing means. The flap 23 also serves to reinforce the flange 13.

With the flanges 13 and 14 secured in the manner just described it is to be noted that there is a space between the flange 13 and the end of flange 14, this space being sufficient to accommodate the end wall of the container. The space between the legs 22 and 18 is preferably such that after the flap extension is brought around the leg 22 the space between the surface of this flap extension and the leg 18 is substantially equal to the thickness of the material of the end wall. Thus it is not in all cases necessary for the flange 14 itself to extend into firm

contact with the end wall of the box. It is desirable, however, for the leg portion 18 to contact the end wall. When the frame 17 is in place between the flange 14 and its flap 15 the leg 18 will, in effect, be a part of the flange and reference to the flange when made herein is to be understood to include as a part thereof the exposed portion of leg 18 in the event the parts 14 and 15 do not extend to or beyond the leg 18.

Means are preferably provided on the inner surface of the end walls of the container for retaining the cover members from lateral shifting with respect to the body portion. For this purpose abutments are provided on the end wall which engage laterally against the longitudinal flanges formed by the flange portion 14 and the extension 15 thereon. In the event these longitudinal flange portions do not extend into contact with the inner surface of the end walls the abutments will bear laterally against the exposed legs 18, 18 of the securing member 17. In order to conveniently provide these abutments there is preferably secured to the end wall a reinforcing member 25 having a centrally disposed slot or cut-out portion 26 formed therein the sides of which form abutments 27, 27 which, as previously stated, engage laterally against the end portions of the longitudinal flanges or the exposed ends of the legs 18 which, as previously stated, are to be considered as part of the longitudinal flanges.

The end wall is in the present instance provided with a hand opening 28 for convenience in carrying the container. When this hand opening is employed, it is preferred to have the reinforcing member 25 of such a width as to come into substantial registration with the upper edge of the opening, thus providing an extra thickness of material at this point to afford a lifting surface more comfortable to the hands.

In the operation of forming the container, a preferred method is to first attach the end walls to the body blank by stapling the attaching flaps 11 and 12 to the marginal edges of the end walls, as indicated in Fig. 1. The staples adjacent the upper edge of the end walls may be left out until the reinforcing strip is in place.

The next step in the operation of forming the container is to fold back the flaps 23 around the leg portions 22 of the flange-connecting members 17 and then staple the flaps 23 to the respective flanges 13. The next step is to fold upwardly the flange portions 14 to a right-angular relationship to the cover 10 and then fold the flap 15 down against the flange portion 14, at the same time enclosing the main portion of frame 17 between the portions 14 and 15. The flap 15 is then stapled to the flange portion 14, care being taken to pass certain of the staples through the frame member 17, as indicated in the upper left hand corner of Fig. 1. The frame 17 will then be securely held in place and will serve effectively to retain the longitudinal flanges and end flanges of the cover in substantially right-angular relationship with respect thereto.

When the cover sections are in closed position the ends of the longitudinal cover flanges will bear against the abutment surfaces 27, 27 to prevent outward spreading of the cover sections and to maintain the longitudinal flanges of the cover sections in contact with each other.

While the present description sets forth a preferred embodiment of the invention, certain changes may be made in the construction without departing from the spirit of the invention, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. A shipping container comprising a bottom, side walls, and end walls, cover panels hinged to the side walls and having their longitudinal free edges substantially meeting centrally of the container, flanges at the ends and along the longitudinal edge of each cover panel, said flanges being spaced from each other at the meeting corners of the cover panels whereby the end flanges, with the cover sections closed, are disposed on the outside of the container and the longitudinal flanges lie within the container, a relatively rigid connecting member for joining the longitudinal flanges and end flanges at the corners of each cover member, said connecting members being in the form of an open frame having a member projecting therefrom arranged to be secured to the end flange of the cover, means for securing said part of the frame to the end flange, means for securing another part of the frame to the longitudinal flange, said frame having a part arranged at the end of the longitudinal flange so as to be positioned adjacent the inner surface of the end wall, a reinforcing member secured on the inner surface of the end wall at each end of the container, said reinforcing member being provided with a notch disposed centrally of the container end walls, said last-mentioned part of the frame which contacts the inner surfaces of the end walls being adapted to enter the respective notches in said reinforcing members to retain the longitudinal flanges of the cover member in closely abutted relation and thereby prevent spreading of the side walls of the container.

2. A shipping container comprising a bottom, side walls and end walls, cover panels hinged to the side walls and having their longitudinal free edges substantially meeting centrally of the container, flanges at the ends and along the longitudinal edge of each cover panel, said flanges being spaced from each other at the meeting corners of the cover panels whereby slots are provided into which the end walls are adapted to fit, a relatively rigid frame-like connecting member at the corner of each cover panel adapted to connect the end flanges with the adjacent longitudinal flange to retain said flanges in right-angular relationship with the cover panel, means on each end flange for securing said frame-like connecting member thereto, one portion of the connecting member being disposed to lie along the inside surface of the end wall, a reinforcing member disposed centrally on the inside surface of the end wall, said reinforcing member having a notch formed centrally therein, said notch being adapted to receive the projecting ends of the frame-like connecting member and retain same against outward movement whereby the cover panels are maintained in fixed position on the container.

3. A shipping container comprising a bottom, side walls and end walls, cover panels hinged to the side walls and substantially meeting centrally of the container, flanges along the ends and longitudinal edges of the cover panels, the ends of the longitudinal flanges terminating to lie within the confines of the end walls and the end flanges being adapted to lie on the outside of the end walls whereby a space between the flanges at the

corners of the cover will be provided to receive the end wall, means for maintaining the flanges in substantially right-angular relationship to the plane of their respective cover panels, whereby the end walls of the container will be firmly gripped by the cover flanges at the corners of the cover panels.

4. A shipping container comprising a bottom, side walls and end walls, cover panels hinged to the side walls and substantially meeting centrally of the container, flanges along the ends and longitudinal edges of the cover panels, the ends of the longitudinal flanges terminating to lie within the confines of the end walls and the end flanges being adapted to lie on the outside of the end walls whereby a space between the flanges at the corners of the cover will be provided to receive the end wall, means for maintaining the flanges in substantially right-angular relationship to the plane of their respective cover panels, abutment members on the inner faces of the end walls adapted to bear laterally against the adjacent ends of the longitudinal flanges and cause said flanges to be maintained in firm contact when the cover panels are closed whereby spreading apart of the cover panels with a consequent spreading of the side walls will be prevented.

5. A shipping container comprising a bottom, side walls, and end walls, cover panels hinged to the side walls and having their longitudinal free edges substantially meeting centrally of the container, flanges at the ends and along the longitudinal edge of each cover panel, said flanges being spaced from each other at the meeting corners of the cover panels whereby slots are provided into which the end walls are adapted to be received, means for retaining the end flanges and the longitudinal flanges in right-angular relationship with the plane of the cover panel, a reinforcing member disposed centrally on the inside surface of the end wall, said reinforcing member having vertical abutments thereon adapted to contact laterally the ends of the adjacent longitudinal cover flanges and retain them from outward movement to thereby maintain the cover panels in fixed position on the container.

6. A shipping container comprising a bottom, side walls, and end walls, cover panels hinged to the side walls and having their longitudinal free edges substantially meeting centrally of the container, flanges at the ends and along the longitudinal edge of each cover panel, said flanges being spaced from each other at the meeting corners of the cover panels whereby slots are provided into which the end walls are adapted to be received, means for retaining the end flanges and the longitudinal flanges in right-angular relationship with the plane of the cover panel, a reinforcing member disposed centrally on the inside surface of the end wall, said reinforcing member having vertical abutments thereon adapted to contact laterally the ends of the adjacent longitudinal cover flanges and retain them from outward movement to thereby maintain the cover panels in fixed position on the container, the end walls being formed with a finger opening spaced from the top of the end walls, and said reinforcing member being so proportioned that its lower edge registers with the upper edge of the finger opening whereby a relatively broad lifting surface will be provided.

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