July 12, 1938. A. L. CROWELL 2,123,771

HANDLE ASSEMBLY FOR BOXES AND THE LIKE

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Fig. 1.

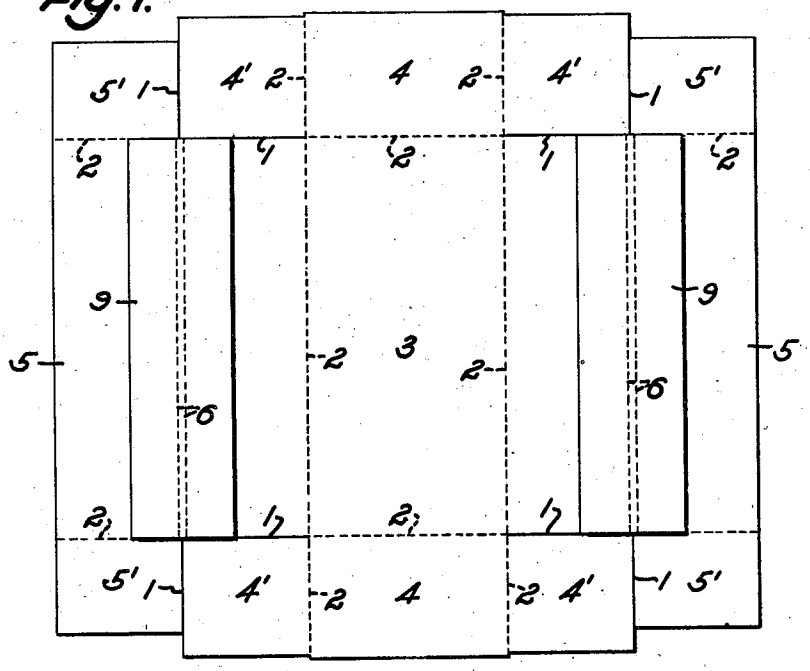
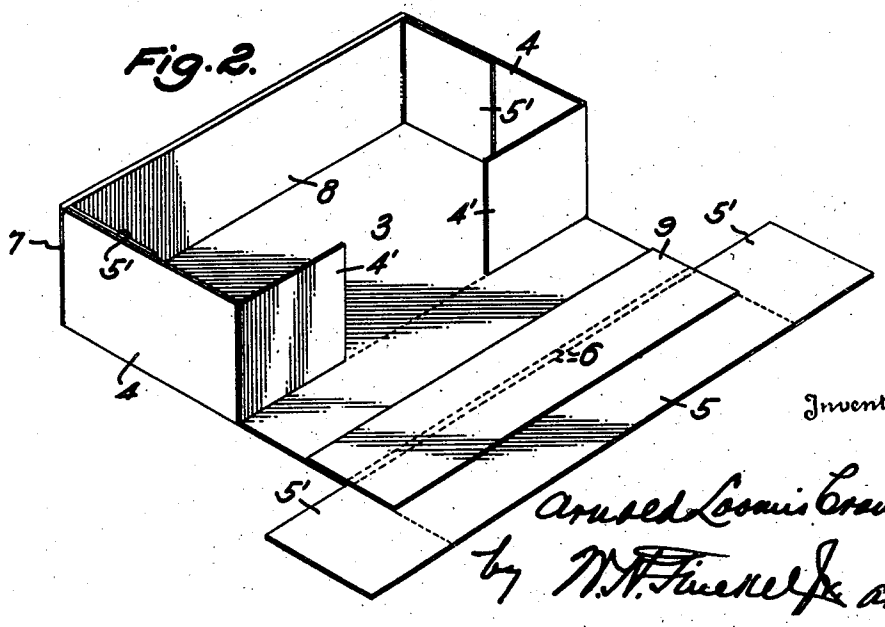


Fig. 2.



Inventor

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Fig. 3.

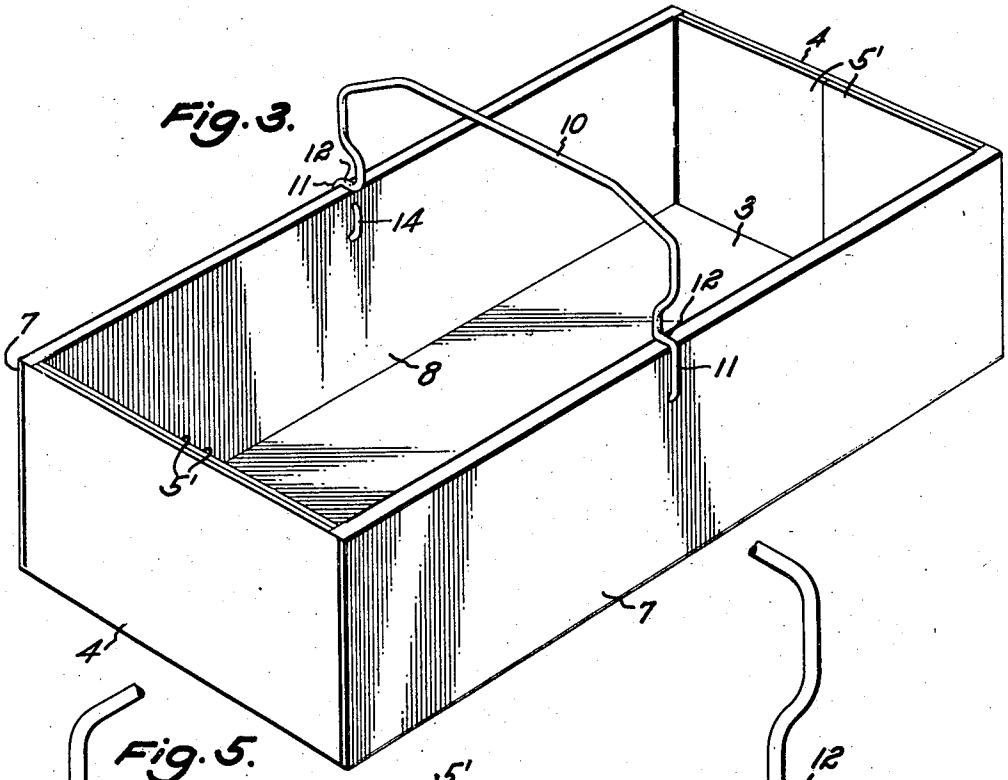


Fig. 5.

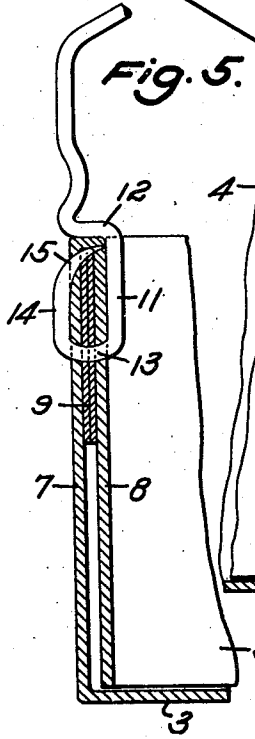
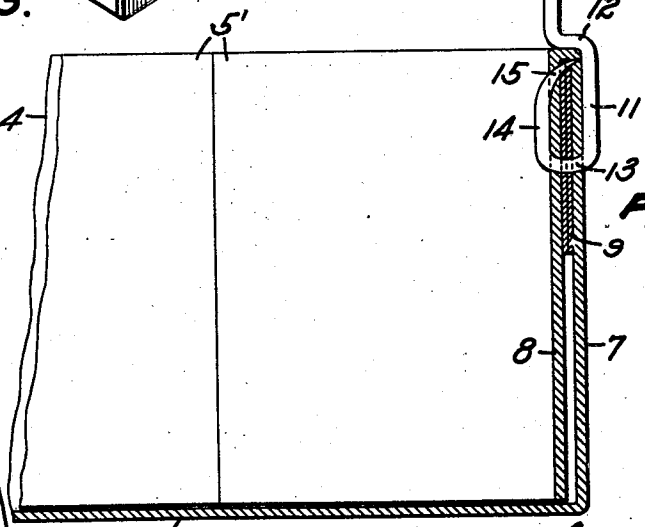


Fig. 4.



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Patented July 12, 1938

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UNITED STATES PATENT OFFICE

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HANDLE ASSEMBLY FOR BOXES AND THE LIKE

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Application December 15, 1937, Serial No. 180,041

4 Claims. (Cl. 229—34)

This invention relates to containers, and particularly to a handle assembly therefor. And it has special reference to containers of folded blank form, made of appropriate material, such as cardboard, boxboard or, preferably, corrugated board, the side walls of which comprise two thicknesses of the material so folded into juxtaposition that their folds constitute the top edges of the side walls.

A container having, in general, the characteristics of that of the present invention is the type disclosed in the patent of Sherman No. 1,931,330, dated Oct. 17, 1933, and containers of this type are now well known and in general use with handles applied to them in various ways made possible primarily by the double thickness characteristic of the side walls.

The object of the present invention is to provide an assembly with a container of this general character of an appropriately shaped metallic handle, preferably made of wire of suitable diameter and stiffness.

With this object in view, the invention contemplates a novel mode of application of the handle to the side walls of the container, and an appropriate reinforcement of such side walls, whereby the desired rigid attachment of the handle ends to the side walls is not dependent solely upon the strength characteristics of the material of the container blank itself but is enhanced by the additional strength characteristics inherent in the material of the reinforcement.

In the accompanying drawings illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a plan view of a container blank constructed in accordance with the invention.

Fig. 2 is a perspective view of the blank partially folded to container form.

Fig. 3 is an enlarged perspective view illustrating the complete container including a handle applied in accordance with the invention.

Fig. 4 is a further enlarged view in fragmentary transverse section illustrating the mode of attachment of the handle, and

Fig. 5 is a view similar to Fig. 4, but illustrating a modification.

The blank illustrated in Fig. 1 comprises a sheet of appropriate material, preferably corrugated board, properly shaped and so slit as indicated at 1, and scored as indicated at 2 as to provide a bottom portion 3, end portions 4 with appropriate tuck-in flaps 4', and side forming portions 5 carrying locking flaps 5', the portions 5 being provided with scoring 6 upon which they are folded to form double thickness sides, the thicknesses 7 and 8 of which are appropriately juxtaposed, as particularly illustrated in Figs. 4 and 5, and their folds upon the score lines 6 constituting the upper edges of the side walls.

Suitably applied to each of the side wall forming portions of the blank, as by pasting thereto, and spanning the score lines 6 thereof and extending over portions of those parts which ultimately provide the two thicknesses of the side walls, are reinforcing members 9, preferably made of some material of greater inherent structural strength than the material of the blank proper, such as fiber board, kraft board or the like, which when the side wall forming portions are folded, as illustrated in Figs. 2 to 5, will be interposed, in double thickness, between the two thicknesses 7 and 8 of the side walls and will extend partway downwardly between same and also longitudinally of the fold or upper edge of each side wall.

The handle member which, as hereinbefore indicated, is preferably formed from an appropriate length of wire of suitable diameter and stiffness, is provided with a bale or handle portion 10, and ends 11 with interposed shoulders 12 which latter, when the handle member is applied to the container, engage the upper folded edges of the side walls. The handle members are preferably so formed that the ends 11 may extend partway down the side walls of the container either exteriorly or interiorly thereof, as illustrated in Figs. 4 and 5 respectively, and they are so bent, as indicated at 13, as to pass through the two thicknesses of their respective side walls, and also through the interposed double thickness of the reinforcing members thereof, to the other sides of such side walls against which they are doubled back as indicated at 14 with their pointed extremities 15 imbedded in the material of the side walls and reinforcing members, and thus clinched thereto.

This formation, arrangement and mode of attachment of the handle, when taken in combination with the reinforced construction of the side walls provides a rigid handle construction of such a nature that uneven loading of the ends of the container will not result in disengagement or disarrangement of the handle, as the combined structural strength of the material of the side walls and their reinforcing members is sufficient to prevent relative movement of the bends 13 and clinched extremities 15 of the handle ends.

Moreover, the longitudinal reinforcement of

the folded upper edges of the side walls provided by the reinforcing members 9 imparts such strength to the side walls that they will not be distorted by the weight of the container contents when the container is supported by its handle.

It will be noted, moreover, that with a handle applied in the manner contemplated by the invention, the upper folded edges of the side walls remain intact throughout their length as distinguished from those modes of handle assembly wherein apertures are provided in such upper folded edges of the side walls for the reception of the handle ends between the thicknesses of the side walls.

Various changes and modifications are considered to be within the spirit of the invention and the scope of the following claims.

What I claim is:—

1. In a handle assembly for a container having a side wall comprising two thicknesses of material appropriately juxtaposed, a reinforcing member interposed between such thicknesses, and a handle member having an end extending below the upper edge of said wall and against one side of said wall, said end passing through both thicknesses of said wall and through the interposed reinforcing member and doubled back against the other side of the wall and having its extremity imbedded in said wall and reinforcing member remote from the point of its passage therethrough and thereby clinched.

2. In a handle assembly for a container having a side wall comprising a folded piece of material providing a double thickness and the fold of which constitutes the upper edge of the wall, a reinforcing member secured to said piece of material and extending from the line of fold between and against the juxtaposed surfaces of the two thicknesses of the wall, and a handle member having an end extending below said upper edge and against one side of the wall, said end passing through both thicknesses of said wall and through the interposed reinforcing member and doubled back against the other side of the wall and having its extremity imbedded in said wall and reinforcing member remote from the point of its passage therethrough and thereby clinched.

3. In a handle assembly for a container of folded blank form comprising a side wall composed of a part of the blank folded upon itself to provide a double thickness, the line of fold of said part and portions of the thus-constituted thicknesses thereof being provided with a reinforcing member interposed between the said thicknesses, and a handle member having an end extending below the upper edge and against one side of said wall, said end passing through both thicknesses of said wall and through the interposed reinforcing member and doubled back against the other side of the wall and having its extremity imbedded in said wall and reinforcing member and thereby clinched.

4. In a handle assembly for a container of folded blank form comprising a side wall composed of a part of the blank folded upon itself to provide a double thickness, said fold constituting the upper edge of said wall, the line of fold of said part and portions of the thus-constituted thicknesses thereof being provided with a reinforcing member interposed between the said thicknesses, and a handle member having a shoulder engaging said upper folded edge and stopped thereagainst and an end extending below the upper edge and against one side of said wall, said end passing through both thicknesses of said wall and through the interposed reinforcing member and doubled back against the other side of the wall and having its extremity imbedded in said wall and reinforcing member and thereby clinched.

ARNOLD LOOMIS CROWELL.