July 8, 1930. H. R. BLISS 1,770,348

SHIPPING CASE AND METHOD OF FABRICATING THE SAME

Filed Dec. 30, 1927 4 Sheets-Sheet 1

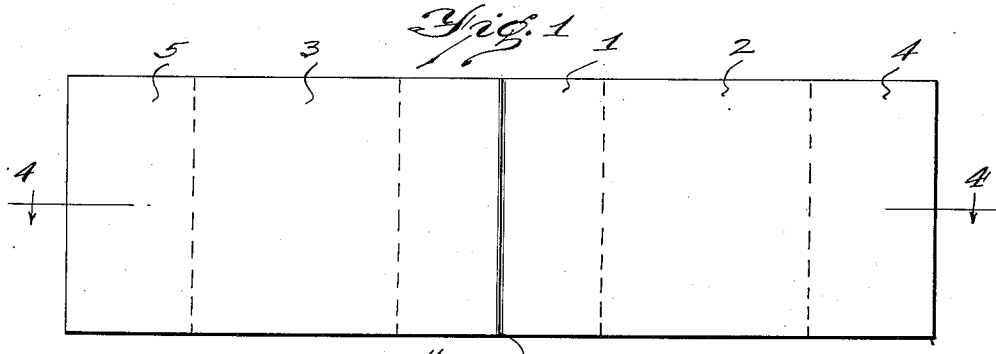


Fig. 1

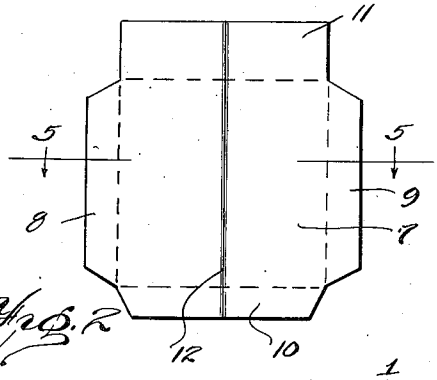


Fig. 2

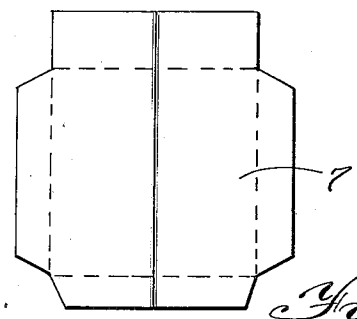


Fig. 3

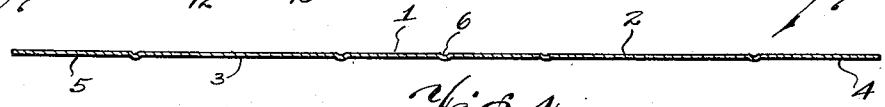


Fig. 4



Fig. 5

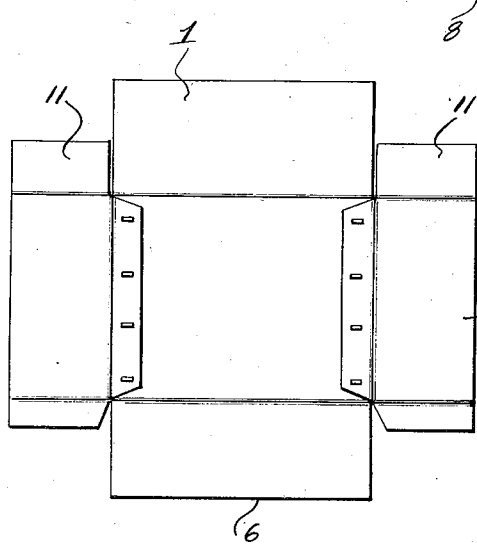


Fig. 10

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SHIPPING CASE AND METHOD OF FABRICATING THE SAME

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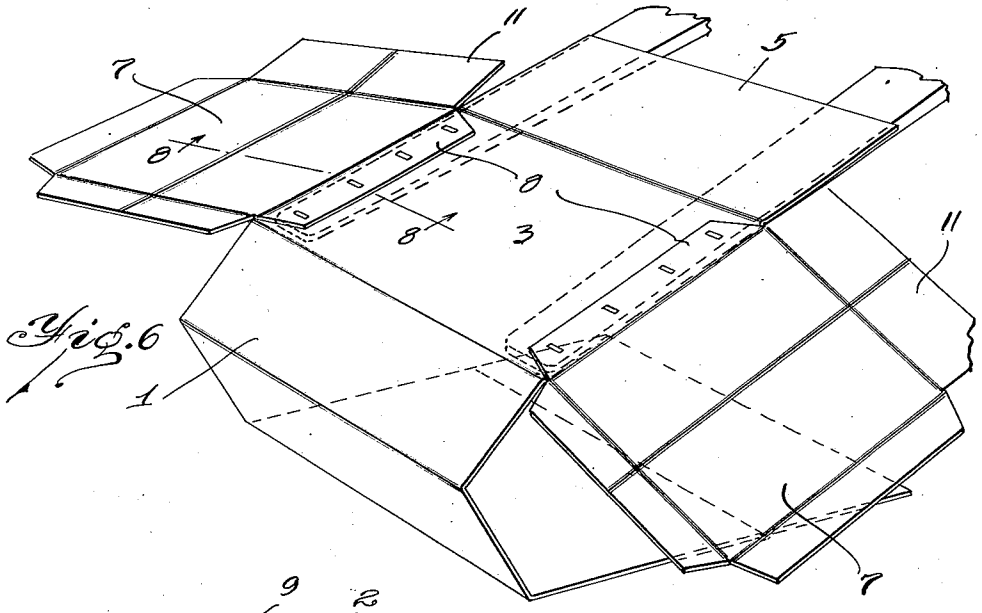


Fig. 6

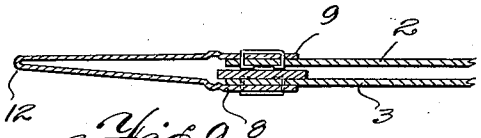


Fig. 9

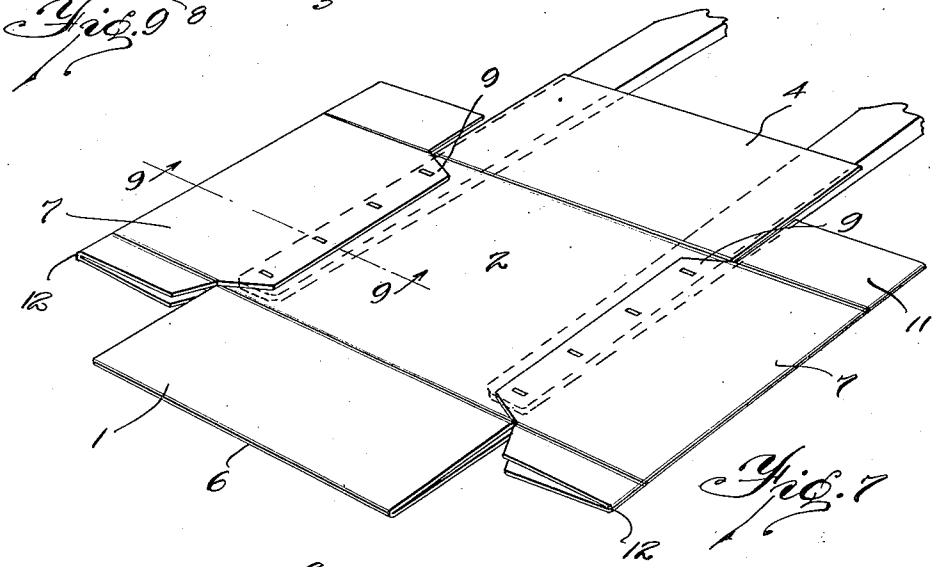


Fig. 7



Fig. 8

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SHIPPING CASE AND METHOD OF FABRICATING THE SAME

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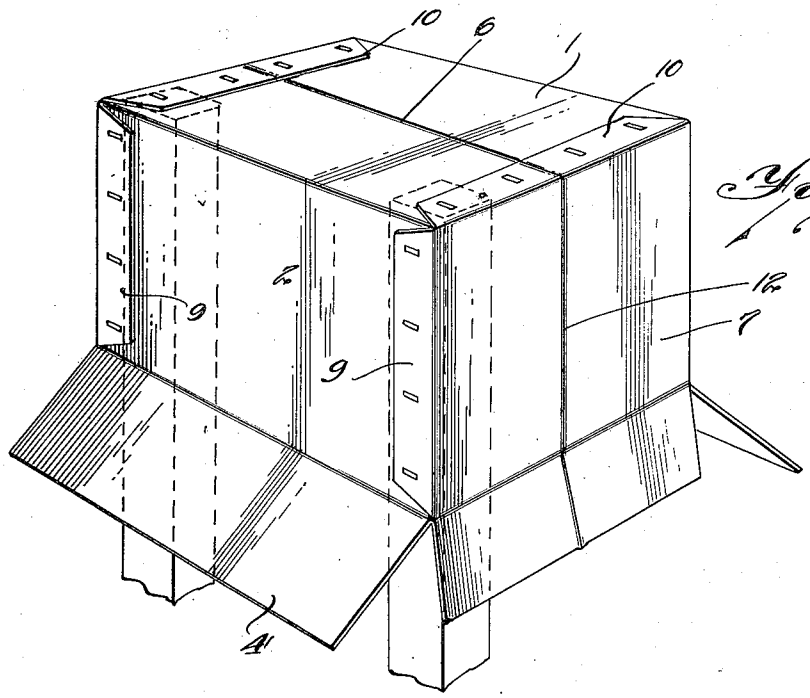


Fig. 11

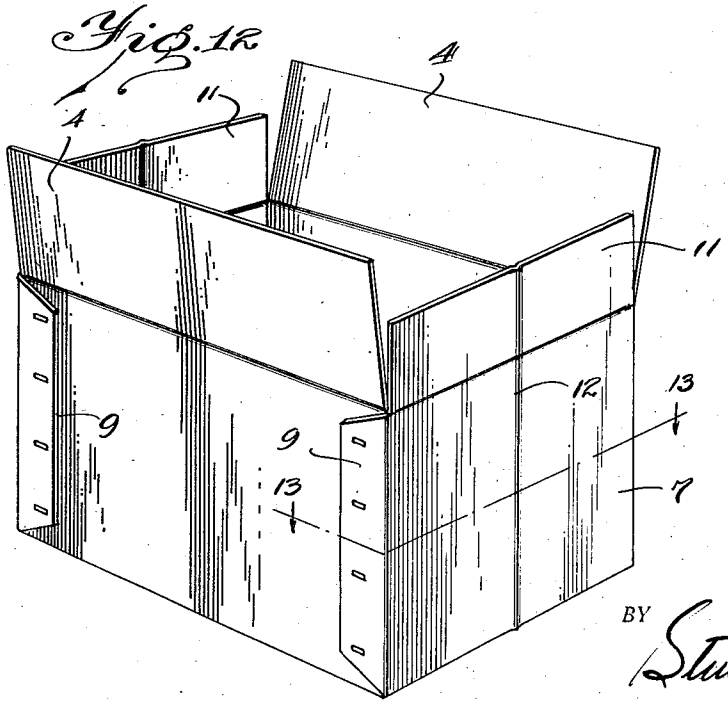


Fig. 12

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SHIPPING CASE AND METHOD OF FABRICATING THE SAME

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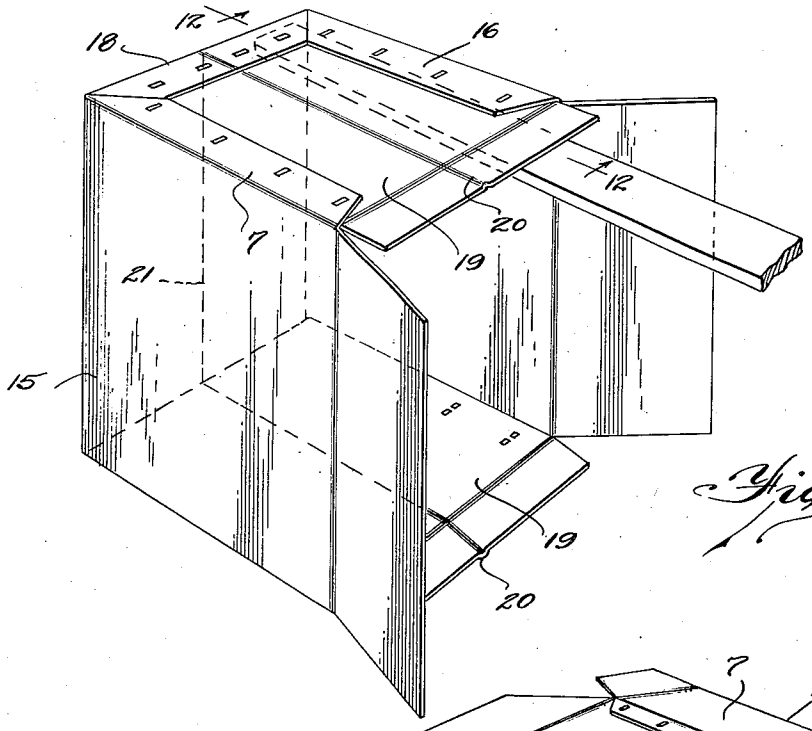


Fig. 14

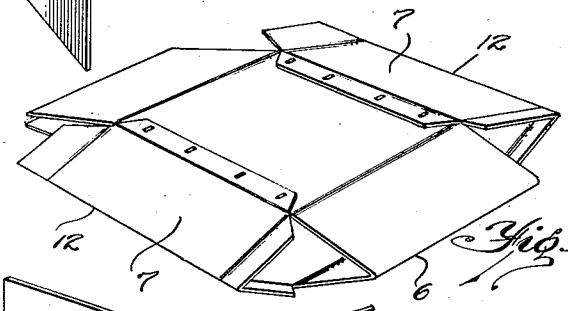


Fig. 13

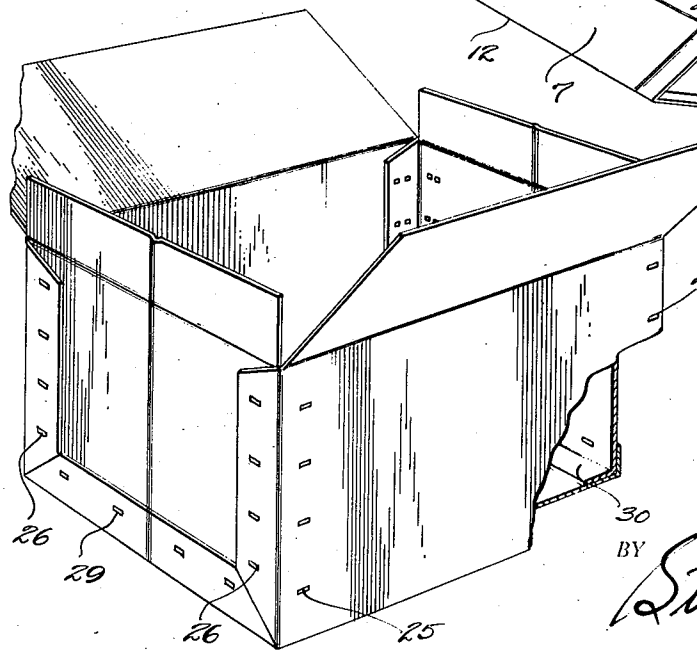


Fig. 15

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Patented July 8, 1930 1,770,348

UNITED STATES PATENT OFFICE

HERBERT R. BLISS, OF NIAGARA FALLS, NEW YORK, ASSIGNOR TO H. R. BLISS COMPANY, INC., OF NIAGARA FALLS, NEW YORK, A CORPORATION OF NEW YORK

SHIPPING CASE AND METHOD OF FABRICATING THE SAME

Application filed December 30, 1927. Serial No. 243,491.

This invention relates to a shipping case and method of fabricating the same.

More particularly, the invention is directed toward the provision of a shipping case which can be partially assembled for the manufacturer so that the amount of work required of the user in completing the assembly, and the equipment or machinery which the user is required to have for this purpose, is reduced to a minimum. The invention is particularly adaptable to cases of the three-blank type, which cases are made up by a body blank which forms a bottom wall and two side walls, and two blanks each forming an end wall.

According to the invention the manufacturer of the case partially assembles the same by securing the end blanks to the body blank at some of the corners, whereupon this partially assembled case can be collapsed into substantially flat form for shippage to the user. The user is required only to shape the case from its collapsed form to its open form and then complete the assembly by securing the remaining corners, which can be accomplished quickly and with equipment relatively cheap as compared to equipment which a manufacturer would ordinarily use.

I am aware of the fact that the so-called collapsible tube type of case, ordinarily constructed of a single blank, has heretofore been shipped in flat form to the user and then set up by the user. However, the three-blank type of case represents considerable saving of material over the collapsible tube type and is desirable for this reason. The present invention provides for quick and economical final assembly by the user, of a shipping case which utilizes a minimum amount of material.

Fig. 1 shows one form of body blank.

Figs. 2 and 3 show end blanks for use with this body blank.

Figs. 4 and 5 are sectional views taken on lines 4—4 and 5—5 of Figs. 1 and 2 respectively.

Fig. 6 is a perspective view showing the step in the partial assembly of the case by the manufacturer.

Fig. 7 is a perspective view of the second step of partial assembly by the manufacturer.

Fig. 8 is a sectional view taken on line 8—8 of Fig. 6 showing how the flap on the end blank is secured to the body blank.

Fig. 9 is a sectional view taken on line 9—9 of Fig. 7 showing how another cover flap is secured to the body blank.

Fig. 10 is a plan view of the case in substantially flat form after the manufacturer has completed partial assembly thereof.

Fig. 11 is a perspective view showing the completion of the assembly of the case.

Fig. 12 is a perspective view of the completely assembled case.

Fig. 13 is a perspective view showing the case in approximately half collapsed condition and indicating how a collapsed case is opened up.

Fig. 14 is a perspective view showing the invention applied to a different form of case and also showing one of the final steps in assembling the case.

Fig. 15 is a perspective view of still another form of case which embodies the invention.

Referring to the drawings:

Figs. 1 to 10 inclusive depict a three-blank flush end case commonly referred to in the trade as a Bliss #2. The body blank is creased to form the bottom wall 1 and side walls 2 and 3, and cover flaps 4 and 5. The bottom wall 1 is creased across the width of the body blank and substantially on the center line of the bottom wall, as shown at 6.

The end blanks for the case are the same, and include each a body portion 7 with corner flaps 8, 9, and 10, and cover wing 11. Each end blank is creased substantially on its center line, as at 12, with the creases extending through the cover wing and the opposite corner flap.

In the partial assemblage of this case, which is preferably done by the manufacturer, certain of the corner flaps of the end blanks are secured to the body blank. This is shown in Figs. 6 and 7. In Figs. 6 and 8 the corner flaps 8 are secured to the side wall 3 by stitches taken through the flaps and wall. This is preferably accomplished by utilizing a double head stitcher employing each an anvil so that the two rows of stitches can be taken simultaneously. After these stitches

are taken the case is reversed on the anvils, as shown in Fig. 7, and the flaps 9 of the end blanks are stitched to the side wall 2. In order to perform the stitching of the flaps 9 to the side wall 2 the end blanks are folded at their point of creasing 12, (Fig. 9) and the bottom blank is folded along its crease 6. While, as shown in Fig. 7, the case is substantially in collapsed position during the stitching of the flaps 9 to the side wall, it is not necessary that the case be so fully collapsed at this time. However, following these stitching operations the partially assembled case is removed and is then in the collapsed form shown in Fig. 10. The cases in this flat and collapsed form can be packed in a minimum amount of space and shipped to the user.

In order to complete the assembly of this case the user need only straighten out the bottom and end walls so that the case assumes its fully opened position whereupon the bottom flaps 10 are turned over the bottom wall 1 and secured thereto preferably by stitching. The case as it appears in an intermediate condition, that is, between collapsed and open conditions is shown in Fig. 13. This may be accomplished on a stitching machine equipped with a post anvil, in which case first one of the flaps 10 will be stitched to the bottom, then the other. Also this can be done on a double head stitching machine employing two properly spaced post anvils after the manner depicted in Fig. 11. This completes the assembling of the case, a perspective view of which is shown in Fig. 12. After the case is loaded with its contents the cover wings are closed and sealed in any desirable manner, either by stitching or silicating, although stitching is preferred. For this purpose the cover wings on both the body blank and end blanks may be varied in size without in any way interfering with the invention.

In Fig. 14 a different type of case is shown which is commonly known as the Bliss #4. In this type of case the corner flaps are on the body blank as distinguished from the type above described wherein the corner flaps are on the end blanks. The case shown in Fig. 14 has a body blank 15 which makes up the bottom walls and side walls, and which is provided with corner flaps 16, 17, and 18, at each end for fitting over the end blanks 19. The manufacturer partially assemblies this case by stitching the flaps 16 and 17 to each end blank in a manner similar to that shown in Figs. 6 and 7, the only difference being that the corner flap is on the main body blank. This form of case is shipped flat to the user, being folded on creases 20 in the end blanks, and 21 in the bottom wall. The user straightens out these walls and completes the assembly of the case by taking the stitches through the corner flap 18 and adjacent end wall. This may be done by the use of a single or double head box machine, or by the use of a single blade anvil machine, as shown in Fig. 14.

The case shown in Fig. 15 is one which embodies reinforced corners wherein both the body blank and end blanks are provided with corner flaps, and such a case is commonly known as a Bliss #4—2. The manufacturer in partially assembling the case takes two vertical seams 25 and 26 at each corner of the case. The case is collapsed along the creases of the end blanks and the bottom wall. This leaves for the user a seam 29 for the purpose of stitching the bottom flap on the body blank to an end blank, and a seam 30 for stitching the corner flap on the end blank to the bottom wall. The seam 29 can be taken after the manner shown in Fig. 14 by the use of a blade anvil or a projecting arm anvil, both of which are commonly known, whereas the seam 30 requires a post anvil, as shown in Fig. 11. The difference, however, between the seam 30 and the seam taken through the flap 10 in Fig. 11 is that the flap is on the inside of the case rather than on the outside.

The sealing of the case shown in Figs. 14 and 15 may be accomplished in any desired or preferred manner, and for this purpose, like the case shown in Fig. 12, the flaps may be varied as desired, there being no departure from the invention in doing this. It will be seen therefore that the invention facilitates the use of a three-blank container wherein the container can be partially assembled by the manufacturer and shipped in flat, compact form to the user, and that the user can complete the assembly of the case without the necessity of having relatively elaborate and expensive equipment such as a double head stitching machine. This is especially desirable for small users because a single head stitcher with a blade or post anvil, or both, are all that is necessary in the way of stitching equipment. It is equally desirable, of course, for large users, and when the user so desires, a stitching machine employing double stitching heads corresponding anvils can be used.

What I claim is:

A three-blank flush end stitched shipping case of fibre board or the like, comprising a body blank forming side walls and an intervening bottom wall, separate blanks forming end walls, corner flaps on some of said walls located at the vertical corners of the case, wire stitches securing each of said corner flaps to an adjacent wall, bottom flaps at the lower horizontal corners of the case formed by the meeting of the bottom wall and end walls, said bottom flaps being integral with some of said walls, and wire stitches securely fastening each of said bottom flaps to the adjacent wall, said end walls being creased substantially on their vertical center line, and

said bottom wall being creased substantially on its center line with said crease in the bottom wall substantially connecting the creases in the end walls whereby all of said creased walls may be folded on their creased lines prior to the stitching of said bottom flaps to the said adjacent wall, the said wire stitching of said bottom flaps to the said adjacent wall serving to maintain both the said end walls and bottom wall substantially straightened out with the parts on opposite sides of the creases of their respective walls lying substantially in the same plane.

In testimony whereof I affix my signature.

HERBERT R. BLISS.