

Aug. 17, 1937.

C. L. CLAFF

2,090,343

BOX

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Fig. 1.

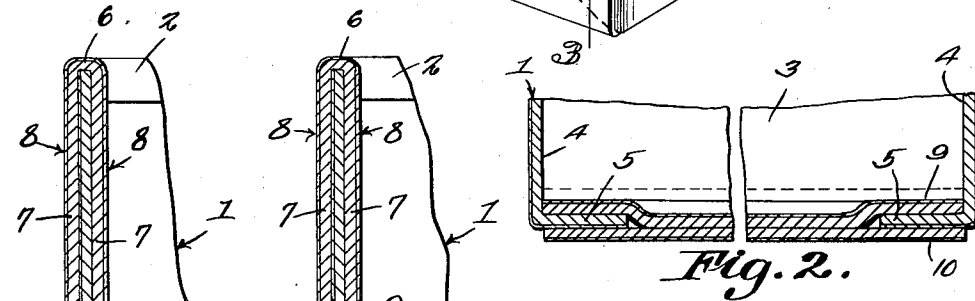
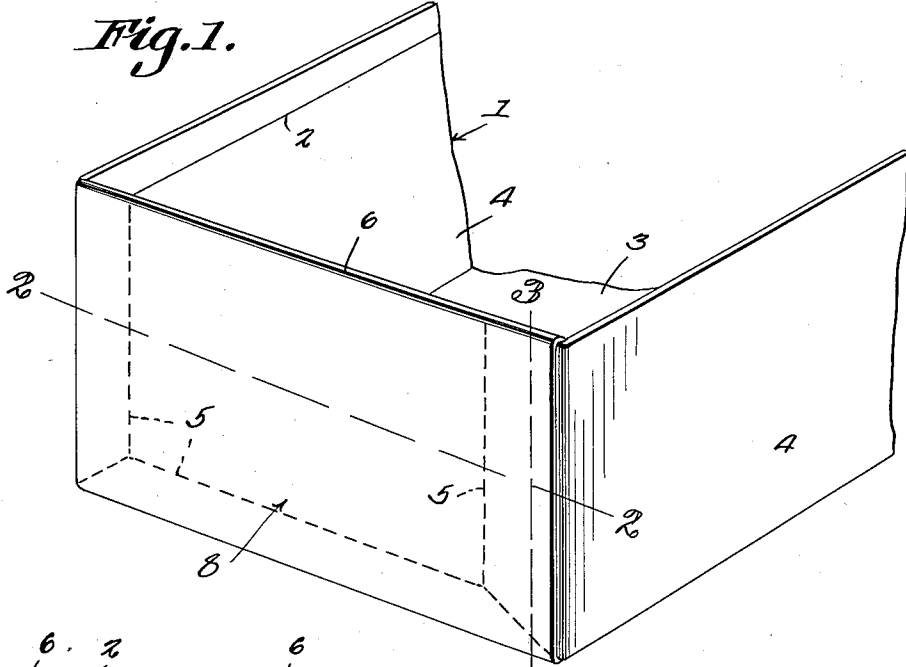


Fig. 2.

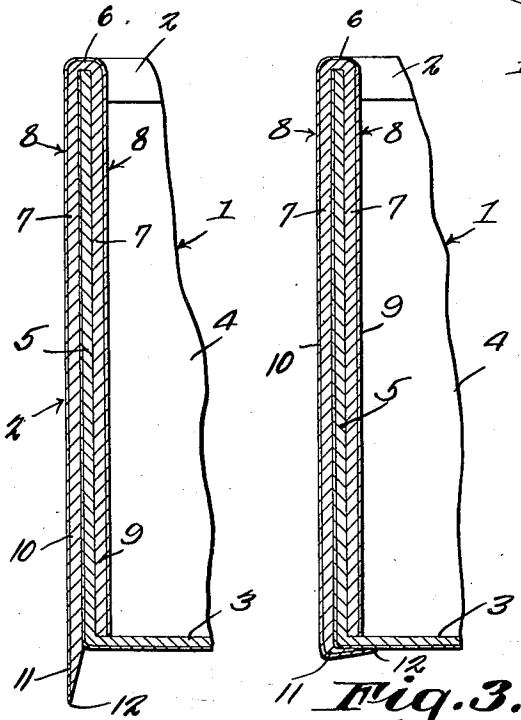
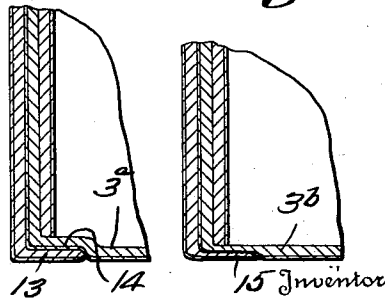


Fig. 3.

Fig. 4.

Fig. 5. Fig. 6.



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UNITED STATES PATENT OFFICE

2,090,343

BOX

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Application November 26, 1935, Serial No. 51,724

4 Claims. (Cl. 229—23)

This invention relates to paper boxes formed of paper board and is designed more especially as an improvement upon the patent to Claff, No. 1,579,646, dated April 6, 1926.

In the patented structure an end fold is placed astride and affixed to wings extending from the sides and bottom of the box. The lower raw edge of the outer thickness of the end fold has been concealed by a sheet of covering or finishing paper the bottom edge of which has been extended beyond the raw bottom edge of the end fold and affixed to the box. This construction has not been suited to later methods of quantity production wherein it is desirable to cut the blanks without leaving extending portions of covering paper likely to become torn or improperly folded during handling. It is also desirable to apply the covering or coating paper to the box board material before the blanks are cut.

An object of the present invention is to produce a box from blanks cut from coated box board material and without extended portions of the coating paper, but to so proportion, shape and assemble the blanks that no raw edge will be exposed at the bottom of the outer side of the end fold but, instead, a rounded well finished surface will be presented without the application of a covering label or the use of an extension or apron of the coating paper.

With the foregoing and other objects in view which will appear as the description proceeds the invention resides in certain novel steps in the method of producing a box and in the construction of the box produced as the result thereof, which will be described hereinafter, it being understood that changes may be made in the invention without departing from the spirit thereof as claimed.

In the accompanying drawing the preferred form of the invention has been illustrated.

In said drawing:

Figure 1 is a perspective view of one end of a box constructed in accordance with the present invention.

Figure 2 is a section on line 2—2, Figure 1.

Figure 3 is a section on line 3—3, Figure 1.

Figure 4 is a view similar to Figure 3 showing an intermediate step in the method of manufacture.

Figure 5 is a section showing a slightly modified construction.

Figure 6 is a section illustrating another modification.

Referring to the figures by characters of reference, 1 designates a blank of box board mate-

rial one surface of which is partly or entirely covered with paper 2 or other coating material. This blank is cut and folded to form a bottom portion 3, sides 4, and end wings 5.

Each end of the box is formed of an end fold 6 cut from a web of box board material 7 having a coating 8 of paper or the like on one side and coextensive therewith. The blank of the end fold is of a length slightly greater than twice the depth of the box and of a width equal to the inside width of the box. This blank 6 is folded along a transverse line to form an inner side 9 of a length substantially equal to the depth of the box and an outer side 10 of a length greater than the height of the box. Thus when the end fold is placed astride and affixed to the wings 5 it will have an extended flap portion 11 projecting below the bottom of the box. As shown in Figures 3 and 4, this flap portion 11 can be beveled by cutting or grinding away the box board material to a feather edge 12 formed by the coating paper. This operation may be performed either when the end fold is cut from the web or when the end fold and the body blank are brought together in the "setting up" or gluing machine. Following the application of the end fold to the wings 5, the flap 11 is bent back under the bottom 3 and affixed thereto under pressure to form the structure shown in Figure 3. Consequently there will be no exposed raw edge at the bottom and no thin label of paper or the like for covering the edge and likely to tear or break and expose the edge. Furthermore the beveled edge portion will not produce an objectionable protuberance on the bottom and, therefore, will not catch on surfaces when the box is slid thereon.

As a slight modification of the invention the flap of the end fold need not be beveled. Instead this flap, as shown at 13 in Figure 5, can be pressed back into a depression 14 formed by offsetting the bottom 3a of the box. If preferred, however, the box bottom need not at all times be formed with an offset, especially if it is formed of a thick, soft material. In that event the flap 15 can be pressed back under the box bottom 3b and both the bottom and the flap subjected to heavy compression which will cause the flap to seat within the bottom as in Figure 6. In every case a suitable adhesive is provided between the parts to hold them assembled.

What is claimed is:

1. A paper box including affixed layers of paper board and covering material cut to provide side walls and a bottom having end wings, an end fold astride and affixed to the wings, and a bottom

flap of paper board and covering material on and extending through the width of the end fold and projecting under and affixed to the bottom to conceal the raw transverse edge of the paper board beneath the bottom of the box.

5 2. A paper box including side walls and a bottom having end wings, an end fold of box board material having a coextensive covering material providing an exposed surface, said fold being
10 astride and affixed to the wings and having a bottom flap extended throughout the width of the end fold and projecting under and affixed to the bottom to conceal the transverse raw edge of the box board beneath the bottom of the box.

15 3. A paper box including side walls and a bottom having end wings, an end fold of box board material having a coextensive covering material providing an exposed surface, said fold be-

ing astride and affixed to the wings and having an end flap extended under and affixed to the bottom, said box board flap being tapered in thickness beneath the box to provide a feather edge formed by the covering material and concealing
5 the transverse edge of the box board material beneath the bottom of the box.

4. A paper box including side walls and a bottom having end wings, an end fold of box board material having a coextensive covering material
10 providing an exposed surface, said fold being astride and affixed to the wings and having an end flap of covered box board extended under and affixed to the bottom, there being a transverse
15 offset in the bottom of the box constituting a seat for the flap of covered box board to conceal the raw edge thereof.

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