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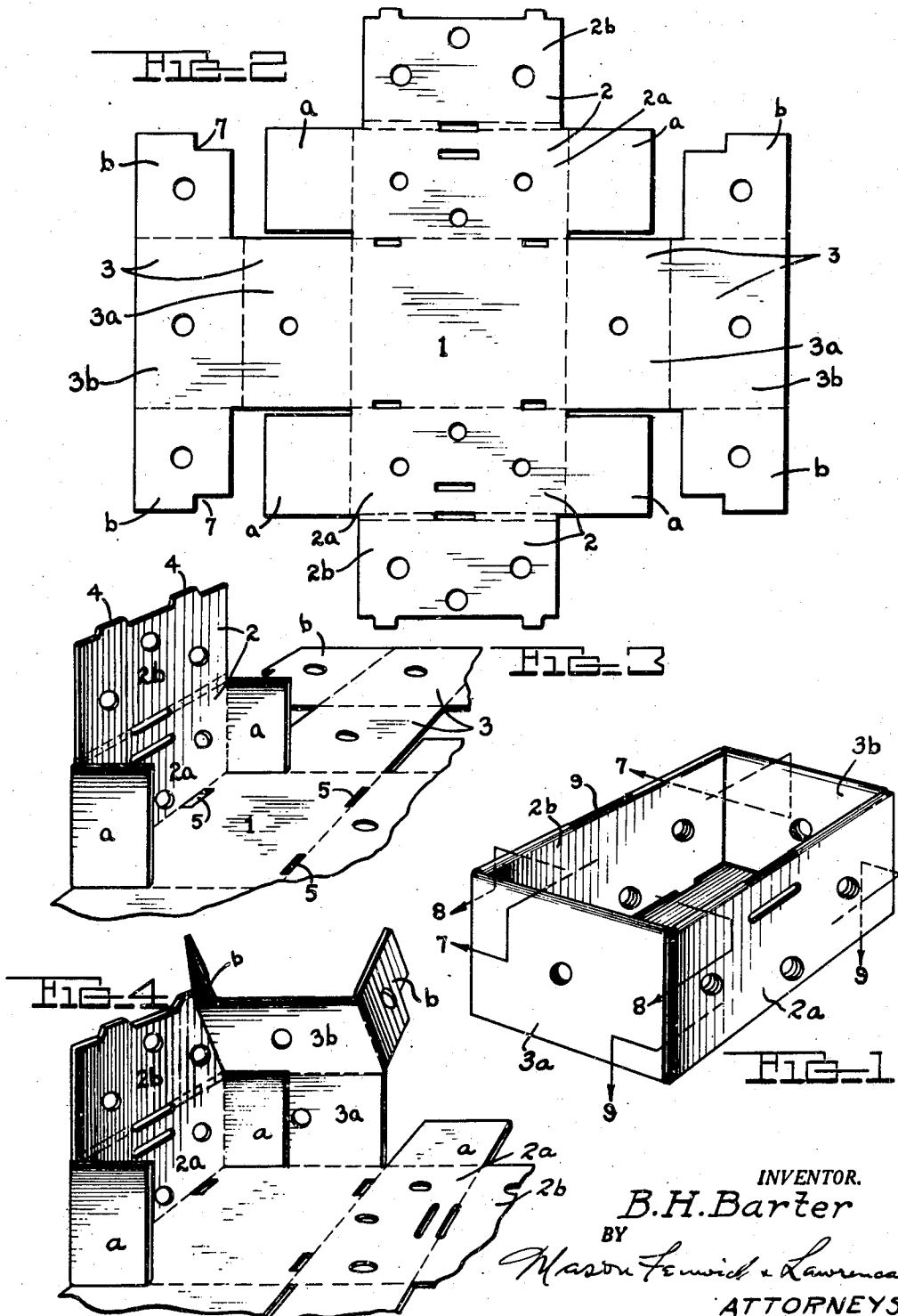
B. H. BARTER

2,468,951

FOLDED BOX

Filed Sept. 1, 1945

2 Sheets-Sheet 1



INVENTOR.

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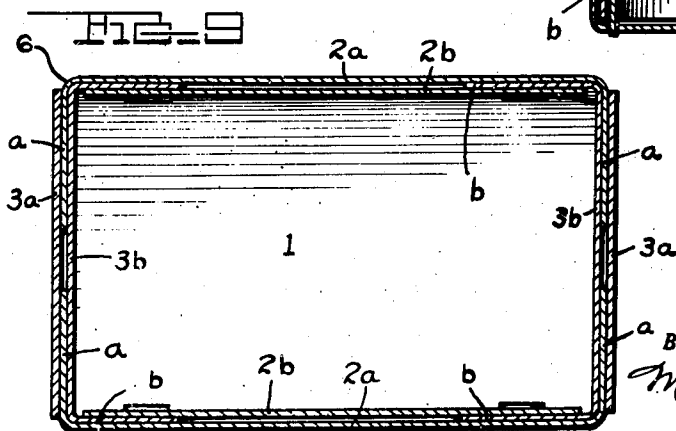
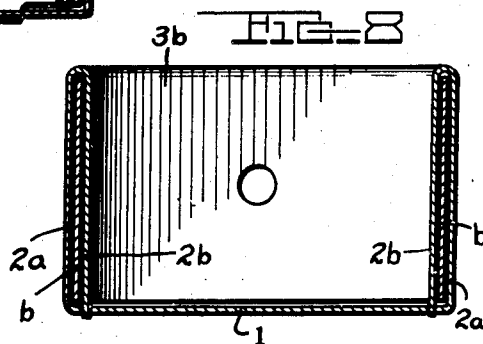
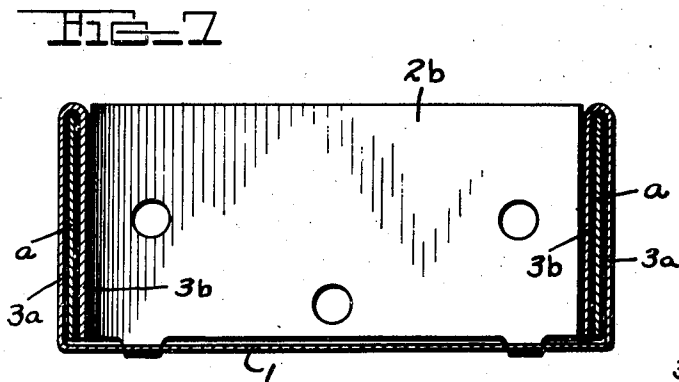
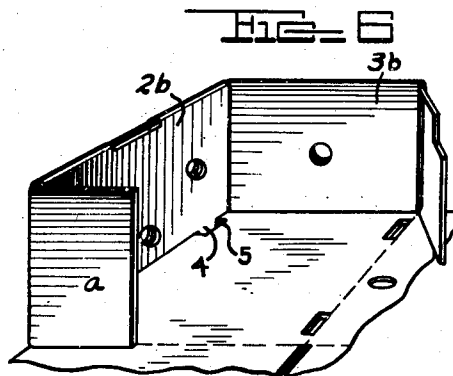
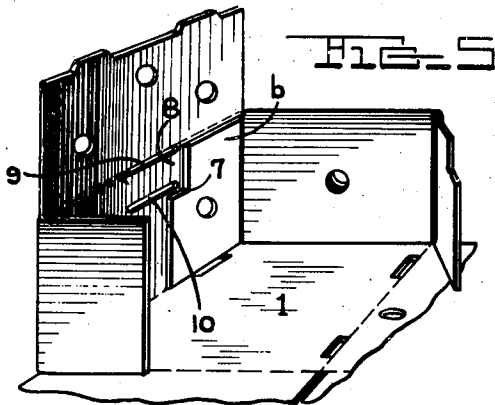
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,468,951

FOLDED BOX

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Orleans, La., a corporation of Louisiana

Application September 1, 1945, Serial No. 614,032

1 Claim. (Cl. 229—34)

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This invention relates to a box of craftboard or similar material, folded up from a one-piece blank. The invention includes both the box and the blank.

The general object of the invention is to provide a rectangular box of unusual sturdiness, deriving its strength from the fact that it is of double thickness at the corners, with sides and ends folded double along lines that define the top edges of the box, to form inner and outer side and end panel portions, the outer side panel portions having lateral flaps extending between the folds of the ends, and the inner end panel portions having lateral flaps extending between the folds of the sides, the said flaps being firmly interlocked in immovable position by the panel portions that enclose them, and in turn, supporting the sides and ends of the box in rigid upright position.

Other objects of the invention will appear as the following description of a preferred and practical embodiment thereof proceeds.

In the drawings which accompany and form a part of the following specification:

Figure 1 is a perspective view of the assembled box;

Figure 2 is a plan view of the blank;

Figure 3 is a perspective view illustrating the first step of the assembling operation;

Figure 4 is a perspective view illustrating the second step;

Figure 5 is a perspective view illustrating the third step;

Figure 6 is a perspective view illustrating the final step;

Figure 7 is a vertical section taken along the line 7—7 of Figure 1;

Figure 8 is a vertical section taken along the line 8—8 of Figure 1;

Figure 9 is a longitudinal section taken along the line 9—9 of Figure 1.

Referring now in detail to the drawings, and first adverting to the blank shown in Figure 2, it consists of a rectangular bottom panel 1, from the sides and ends of which the side panels 2 and the end panels 3 extend. The side and end panels are of substantially equal height, and divided by transverse lines of fold into outer panel portions 2a and 3a, respectively, and respective inner panel portions 2b and 3b, the outer and inner panel portions being preferably of equal height, but in any event, the height of the outer panel portions being equal. The terms "outer" and "inner" refer to the positions of the panel portions in the set-up box.

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The outer side panel portions 2a are provided with the lateral flaps a, while the inner end panel portions 3b are provided with the lateral flaps b.

The lines of fold which demark the contiguous boundaries of the panels, panel portions and flaps are indicated in broken lines in Figure 2. Referring to Figure 2, in the folding of the box, every element is folded along the lines of fold toward the observer, that is, upward from the plane of the sheet, excepting the lateral flaps b, which are folded away from the observer, that is, downward below the plane of the sheet. The back folding of the flaps b is well shown in Figure 4.

The assembled box is shown in Figure 1. The sequence of assemblage is as follows: The side panels 2 are first up-folded from the bottom panel, as shown in Figure 3, with the flaps a folded so as to lie in the planes of the ends of the box. The end panels 3 are then up-folded from the bottom panel 1, as indicated in Figure 4, so that the outer panel portions 3a rest uprightly against the outer sides of the flaps a. Then the flaps b of the inner end panels 3b are folded back, as shown in Figure 4. Next, the inner end panel portions 3b are folded inwardly and downwardly over the adjacent flaps a, until parallel with the outer end panel portions 3a, as shown in Figure 5, thus closely enfolding the flaps a, and at the same time bringing the flaps b downward against the inner sides of the outer side panel portions 2a. The inner side panel portions 2b are then folded inwardly and downwardly over the adjacent flaps b, until parallel with the outer side panel portions 2a, closely enfolding the flaps b, as shown in Figure 6. When in this position, the lateral edges of the inner side panel portions 2b bear against the inner end panel portions 3b and hold them in place. If the inner and outer side panel portions are of equal height, the bottom edges of the inner side panel portions 2b will bear frictionally against the bottom panel and hold the inner side panel portions in place. The contents of the box may also perform this function. However, it is possible that positive holding means may be desirable, such as the tongues 4 projecting from the free longitudinal edges of the inner side panel portions, which are forced into slots 5 formed in the bottom panel 1.

It will be noted from Figure 2 that since the inner and outer panel portions of the respective sides and ends straddle the flaps of the respective ends and sides, the lines of fold between the inner and outer panel portions are defined by

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double score marks slightly spaced, giving appreciable width to the line of fold. It is these lines of fold that form the top edges of the assembled box.

Figures 3, 4, 5, and 6, for the sake of clarity, indicate the sequence of operations only with respect to one side and end, the other side and end being shown flat.

The above construction results in a sturdy and non-deformable box. The lateral flaps from adjacent sides and ends lap at the corners, providing closed corners of double thickness, as shown at 6 in Figure 9, and the side and end walls are of triple thickness in all cross-sections that include the flaps, as shown in Figures 7, 8 and 9. The interfitting relation of the flaps between the close folded panel portions of the sides and ends and the fact that the top edges of the flaps fit closely against the inner angle of fold between said panel portions inhibits tilting movement of the flaps, resisting any force from within that would tend to spread the corners and thus maintains the sides and ends in rigid upright position.

It will be noted that the upper corners 7 of the flaps *b* are re-entrant, providing a cavity within the side walls of the box between the outer and inner side panel portions, part of which cavity is indicated at 8 in Figure 5, and that each side panel 2 is provided with a slot 9 in the line of fold between the side panel portions, which slot appears in the top edge of the box, as shown in Figure 1. Each of the outer side panel portions 2*a* is provided with a slot in vertical alignment with and parallel to the slot 10, both slots opening into the cavity 8, as shown in Figure 5.

Said slots and the cavity form a conduit for a strip of metal or the like, not shown, which may be associated with any type of closure, not forming part of the present invention, and therefore not shown, for securing the closure. The ends of the strip may be inserted in the slots 10, passed through the cavities 8 and out of the slots 9, and have its ends suitably secured.

While I have in the above description disclosed what I believe to be a preferred and practical embodiment of the invention, it will be understood to those skilled in the art that the specific construction and arrangement of parts is by way of example and not to be construed as limiting the scope of the invention.

What I claim as my invention is:

Box assembled from a one piece folded blank, comprising a rectangular bottom, side and end

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panels upstanding therefrom, said side and end panels each comprising an outer panel portion integrally connected to said bottom, an inner panel portion parallel to said outer panel portion and substantially congruent therewith, and a connecting portion between said outer and inner side panel portions at the top of said side panel defined by spaced parallel score lines of such width as to space said panel portions a distance equal to the thickness of the stock of said blank, said connecting portion being formed with a slot therethrough at its middle, in width equal substantially to the width of said portion lateral flaps emanating from the inner end panel portions each in length being equal substantially to one-half the length of said side panels and in height being substantially equal to the height of the space between said inner and outer side panel portions, the flaps from corresponding ends of adjacent end panels lying between the inner and outer side panel portions forming an intermediate side panel portion, the upper adjacent corners of said flaps being notched to form a cavity in conjunction with said inner and outer side panel portions and beneath said slot, said outer panel portions below said connecting portions being each provided with a slot below said first mentioned slots, communicating with said cavity, the parts of each outer side panel portion between said slots defining a bar adapted to be embraced by a securing band, said inner side panel portion being imperforate in that region which forms the inner wall of said cavity.

BERT H. BARTER.

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