June 10, 1924.

1,497,519

F. B. LEWIS

FOLDING DISPLAY BOX

Filed June 9, 1921

3 Sheets-Sheet 1

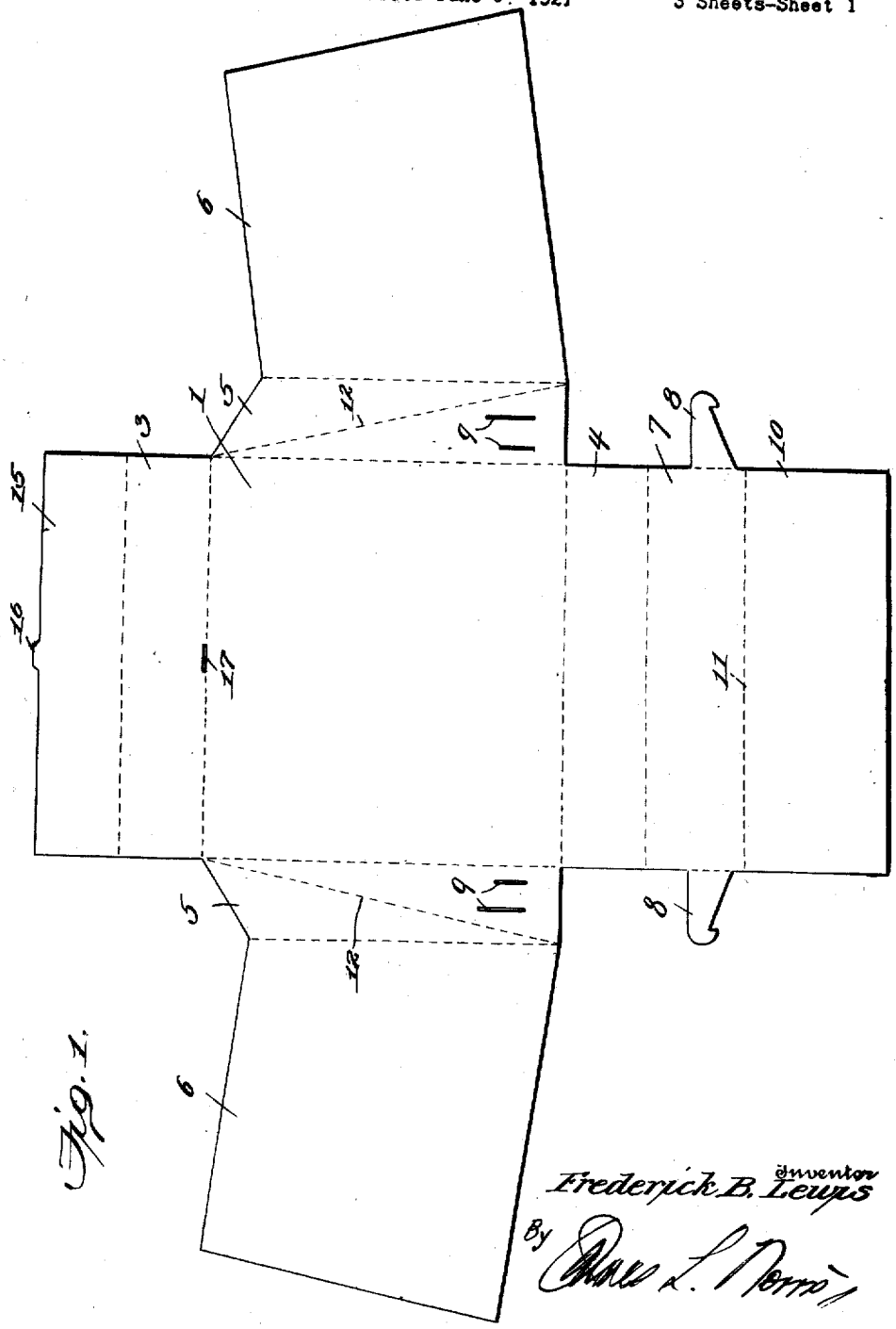


Fig. 1.

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3 Sheets-Sheet 2

Fig. 2.

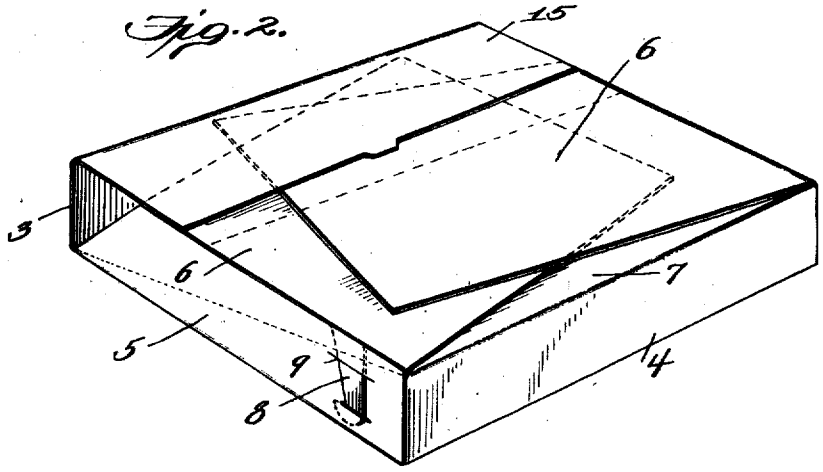
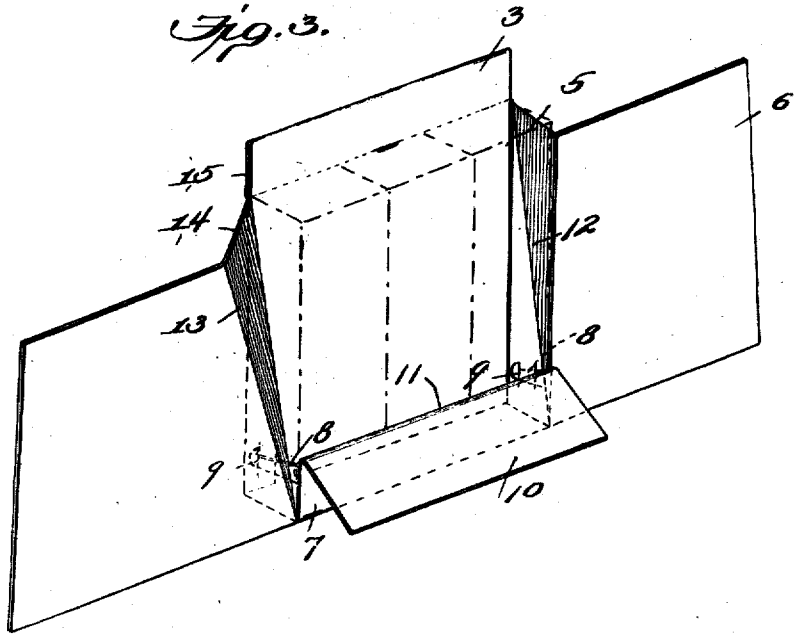


Fig. 3.



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3 Sheets-Sheet 3

Fig. 4.

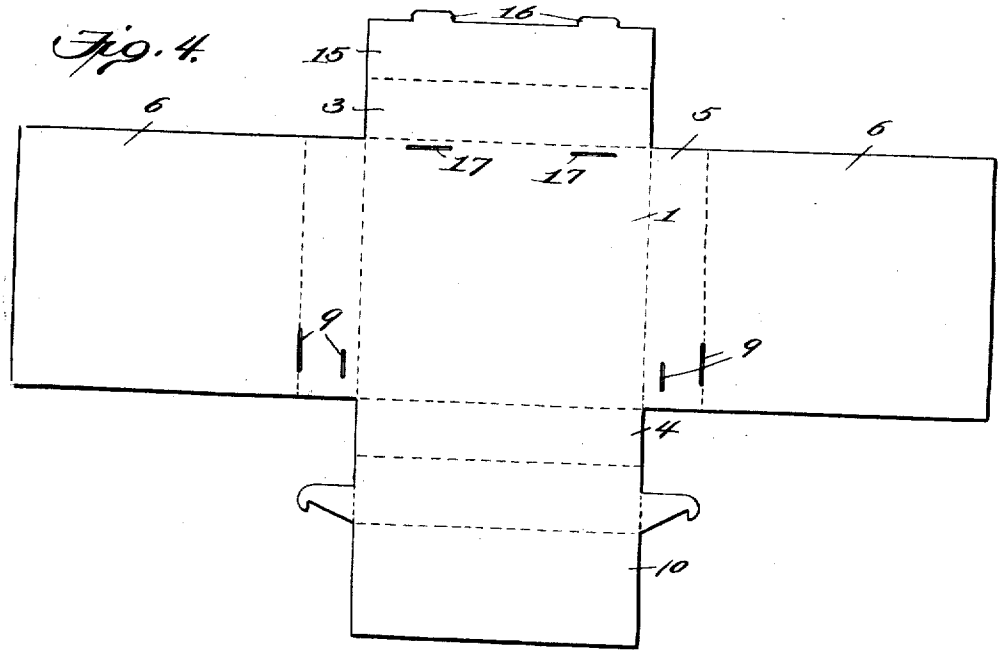
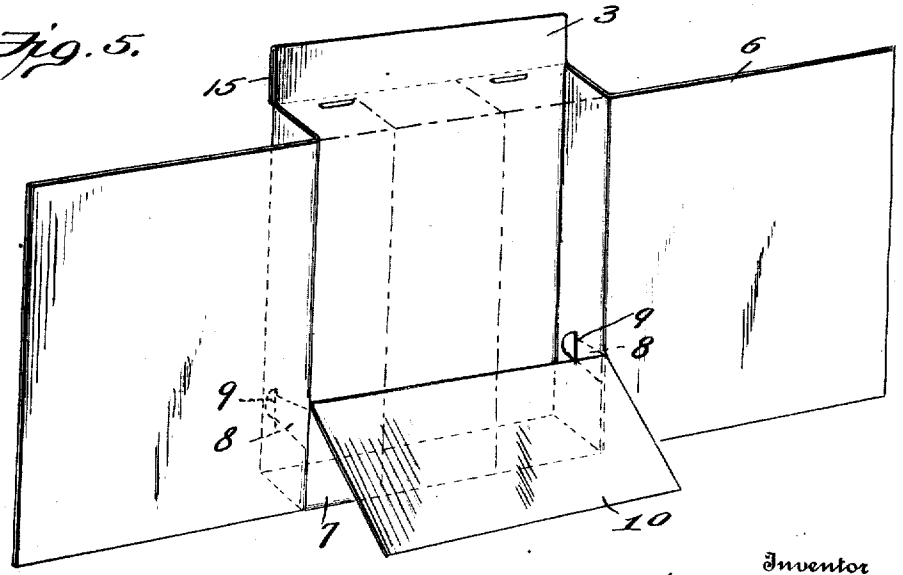


Fig. 5.



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Patented June 10, 1924. 1,497,519

UNITED STATES PATENT OFFICE.

FREDERICK B. LEWIS, OF MILFORD, DELAWARE, ASSIGNOR TO L. D. CAULK COMPANY, OF MILFORD, DELAWARE, A CORPORATION OF DELAWARE.

FOLDING DISPLAY BOX.

Application filed June 9, 1921. Serial No. 476,312.

To all whom it may concern:

Be it known that I, FREDERICK B. LEWIS, a citizen of the United States, residing at Milford, in the county of Kent and State of Delaware, have invented new and useful Improvements in Folding Display Boxes, of which the following is a specification.

This invention relates to folding cartons and has for its object the provision of a carton blank having differentiated portions which are foldable inwardly to form a closed container and convertible by folding said portions outwardly into an open container having display portions, certain of which assist in affording means of support for said container.

Another object of the invention is to provide a folding container which forms a substantially closed receptacle suitable for mailing or shipping articles and which may in part be folded into extended display portions forming a counter-display receptacle.

For the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts generally shown in the accompanying drawings and described in the specification, but more particularly pointed out in the appended claims.

Figure 1 is a plan view of the blank sheet from which the preferred form of my invention is folded.

Figure 2 is a perspective view of the preferred form of my invention in folded or shipping position.

Figure 3 is a perspective view of the same embodiment in expanded or counter-display position.

Figure 4 is a blank form from which a modified form of my invention is folded.

Figure 5 is a perspective view of a modified form of my invention in expanded position.

In the drawings, refering first to the embodiment of the invention shown in Figures 1, 2 and 3, the back panel 1 of the box is shown as having flexibly connected thereto the top panel 3, bottom 4 and side panels 5. The flexible connections between the parts are preferably score marks made in an integral sheet although other means are within the spirit of the invention.

Foldably connected to the outer edges of the side members 5 are the wings 6 which are constructed to be folded together inwardly over the front of the box as shown in Figure 2, or folded outwardly in a breadth direction as in Figure 3 affording display space for advertising.

The bottom panel 4 has foldably attached thereto a portion 7 carrying tabs 8. When the box is folded into shape the portion 7 becomes the front of the box and the tabs 8 secure it to the side panels by engaging with the slots 9 in the side panels. The free portion 10 of the front 7 is foldable outwardly in a depth direction along the scored joint 11 and when in display position is normally bent downward until its free edge touches the plane surface which supports the box. In this position the wings 6 are bent forwardly of the plane of the front of the box or rearwardly of the plane of the back of the box with their edges in contact with the plane of the bottom of the box so as to afford additional support to prevent the box upsetting to the front or the rear. If the box should happen to be otherwise sufficiently supported the wings may be bent to a parallel position relative to the plane of the front of the box if desired in which case they will serve as display surfaces only.

In the preferred form the lower edges of the wings are cut away at an acute angle to the horizontal which permits the box to be tilted slightly backward when in display position, thus adding to its stability.

Side panels 5 are scored diagonally at 12 from the upper rear corner to the lower front corner thereof and are foldable outwardly along this line. It will be obvious that this construction permits the top point of the edge 13 of the wing to swing in a circle having the depth of the box, represented by the edge 14, as a radius, but that the bottom point of the edge 13 is fixed in the vertical edge of the box. This causes an inclination of the edge 13 outward and backward as the wing is folded out giving the wings and box a relative universal movement while the lower edge of the wing is maintained in the plane of the bottom of the box. In other words no matter what the inclination of the wing relative to the box it will not be necessary to tip the box on one edge of its bottom panel to keep the wing in contact with the surface upon which it is supported.

The top panel 3 is scored across inter-

mediate its height and the free flap 15 is foldable in both directions on said scored joint. When the box is in closed position, the flap 15 folds down from the front of the box cooperating with the portion 10 to form a closure. When in display position, the top panel 3 is raised in a height direction and the flap 15 folded back against the top panel 3 to form a reinforcement therefor. When in this position the tab 16 on the flap 15 engages the slot 17 in the joint between the back and top panels and holds the flap 15 in reinforcing position.

It will be observed from Figure 3 which shows three small packages in the container that advertising matter may advantageously be displayed on the surfaces 3, 5, 6 and 10 and on the surface 1, concealed by the three small packages. Comparing this with the blank shown in Figure 1 it is seen that the display surfaces are all on the same side of the blank sheet so that all printing may be done at one time and without turning the blank.

As shown in Figure 2 the front panels 7 and 10 meet the flap 15 of the top and are superposed by the folded wings 6. This materially adds to the stability of the box as a shipping container.

The structure of the modification shown in Figures 4 and 5 is the same in all respects as that of the preferred form except that the lower edges of the wings are not cut at an angle to the horizontal and that the side panels 5 are not diagonally foldable. Therefore the box and wings always stand in a vertical position.

Having described my invention what I claim as new and desire to secure by Letters Patent, is:—

1. A box having side and bottom panels and a front comprising parts folded inwardly from said side panels and from said bottom panel in superposed relation, certain of said parts being foldable outwardly in a breadth direction and another of said parts foldable outwardly intermediate its height in a depth direction.

2. A box having a wing foldable inwardly thereof and foldable outwardly about a shifting axis one point of which is fixed, through a range of positions the limits of which are outside of the space bounded by the planes of the front and back surfaces of the box.

3. A box having side panels, a bottom panel and a front, said front comprising portions folded inwardly from said side panels and bottom panel in superposed relation, certain of said portions being foldable outwardly in a breadth direction and another portion foldable outwardly in a depth direction along a horizontal edge intermediate its height.

4. A box having front and side panels, a wing foldable inwardly from a side panel along a normally vertical edge thereof into superposed relation to the front of the box and foldable outwardly along said edge to form a support for said box and means permitting inclination of said vertical edge whereby the bottom of said wing may be placed in contact with a plane surface coincident with the bottom of the box throughout the angular range within which the wing may be folded.

5. A box having front and side panels, a wing foldable inwardly from the side of the box along a normally vertical edge thereof into superposed relation to the front of the box and foldable outwardly along said edge to form a support for said box and means comprising an outwardly foldable joint extending along the side of said box from the upper rear to the lower front portion thereof, permitting inclination of said vertical edge whereby the bottom of said wing may be placed into contact with a plane surface coincident with the bottom of the box throughout the angular range within which the wing may be folded.

6. A convertible folding box having vertical back, side and front panels, tabs on the lower part of the front panel secured into slots into the side panels, the front panel being reinforced by inwardly folded wings attached to the side panels, said wings being foldable outwardly in a breadth direction to form supporting elements for said box and said front being foldable outwardy in a depth direction.

7. A box having front, side and top panels, a wing foldable inwardly from the side of the box along a normally vertical edge thereof into superposed relation to the front of the box, and foldable outwardly along said edge to form a support for said box and means comprising an outwardly foldable joint extending along the side of said box from the upper rear to the lower front portion thereof, permitting inclination of said vertical edge whereby the bottom of said wing may be placed into contact with the plane of the bottom of the box throughout the angular range within which the wing may be folded, means for securing said front panel to said side panels, an outwardly foldable joint extending across said front panel above said securing means, the portion of said front panel above said joint being foldable outwardly and downwardly to the plane of the bottom of the box, the top panel of said box being foldable outwardly and having a foldable joint extending across it, the portion of said top panel above said joint being foldable inwardly when the top panel is down to cooperate with the front of the box in forming a closure and foldable outwardly when the top panel is raised to form a reinforcement therefor.

8. A blank for making a convertible folding box which comprises a flat sheet differentiated into a back panel, having top, side and bottom panels flexibly connected thereto, wings connected to the side panels and foldable in both directions, a front panel flexibly connected to the bottom panel, the front panel being foldable intermediate its height, tabs on the sides of that part of the front panel adjacent the bottom panel, slots for said tabs in the side panels, the top panel being foldable both ways intermediate its height, the outer portion being provided with a tab, a slot in the connection between the back panel and the top panel adapted to register with the tab, said side panels being foldable in a diagonal line running from the upper rear portions to the lower front portions thereof.

9. A blank for making a convertible folding box which comprises a flat sheet differentiated into a back panel having top, side and bottom panels flexibly connected thereto, a wing connected to a side panel and foldable in both directions, said side panel being foldable in a diagonal line running from the upper rear portion to the lower front portion thereof.

10. A box having front, side and bottom panels, a wing joined to said side panel lying normally in the plane of the front panel, the portions of said side panel adjacent said wing being constructed to permit relative displacement of said box and wing while maintaining the lower edge of said wing in the plane of the bottom of the box.

11. A display container member having a main back wall, a side wall, and a base, said side wall having a score line extending obliquely toward and terminating substantially at the top edge of said back wall, said score line constituting a hinge.

12. A display container member having a main back wall, side walls, and a base, said side walls having score lines extending obliquely toward and terminating substantially at the top edge of said back wall, said score lines constituting hinges.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses:

FREDERICK B. LEWIS.

Witnesses:
PAUL POETSCHKE,
EMMA C. POSTLES.