

June 19, 1934.

W. H. KAMMERT

1,963,272

BOX

Filed Jan. 20, 1934

2 Sheets-Sheet 1

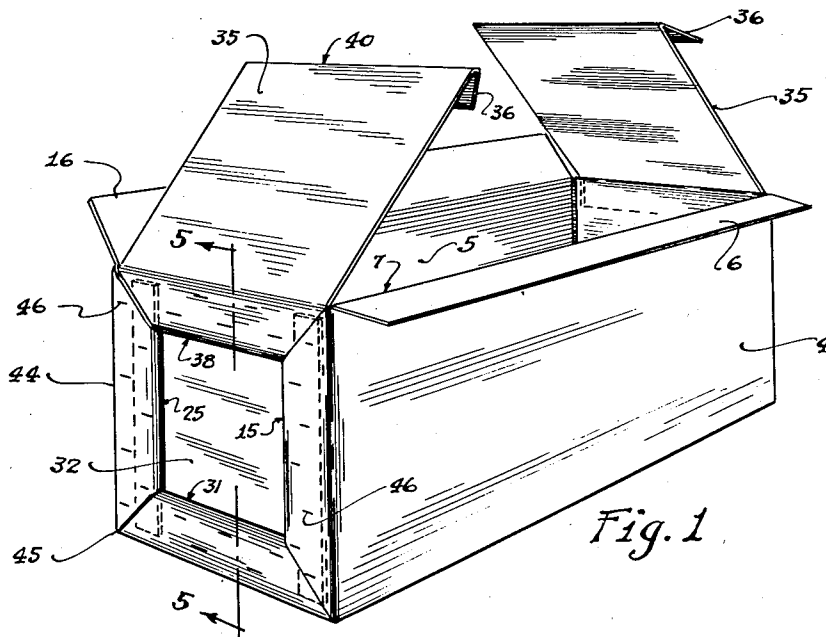


Fig. 1

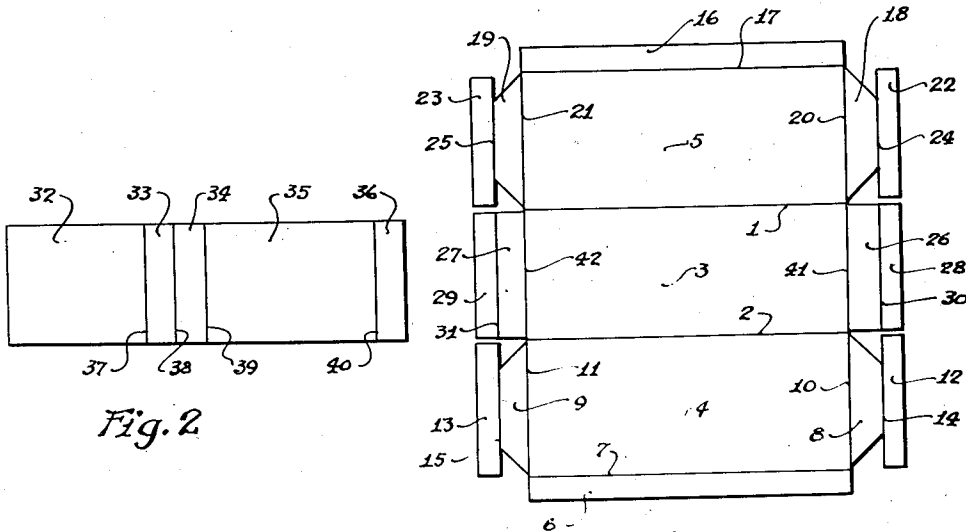


Fig. 2

Fig. 3

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WITNESS
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2 Sheets-Sheet 2

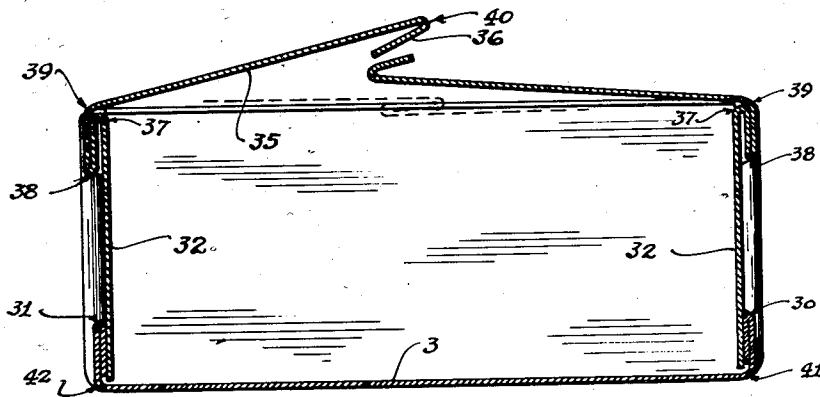


Fig. 4

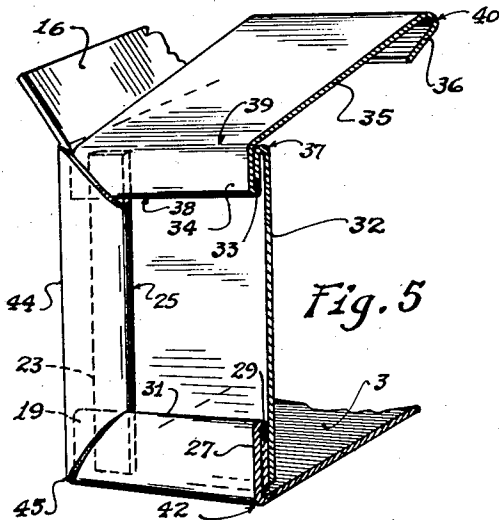


Fig. 5

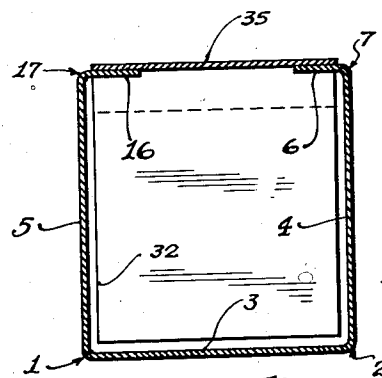


Fig. 6

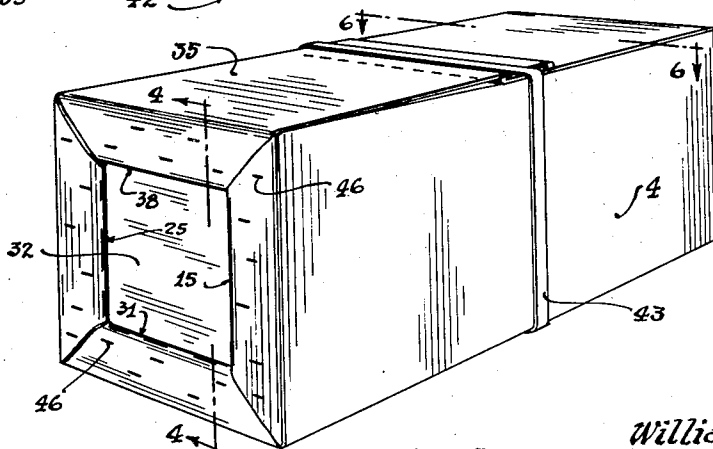


Fig. 7

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UNITED STATES PATENT OFFICE

1,963,272

BOX

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Application January 20, 1934, Serial No. 707,557

7 Claims. (Cl. 229-23)

This invention relates to shipping cases constructed of fibre board or similar material. It is one of the objects of the present invention to provide an extremely durable and strong shipping case, adapted for example, for the shipment of such products as meat and the like.

Other objects of the invention will be apparent from the description and claims which follow.

The shipping case of the present invention provides an all-fibre board construction of single thickness with the exception of those portions of the case for which greater strength is needed than can be secured from a single thickness of fibre board and at these points a plurality of thicknesses of fibre board is provided as will be hereinafter more particularly described.

In the drawings, similar reference characters identify similar parts in the several figures.

Figure 1 is a perspective view of a preferred embodiment of the invention with the top open.

Figure 2 is a plan view of an end blank.

Figure 3 is a plan view of the main body blank.

Figure 4 is a section through 4-4 of Figure 7 showing the main top panels in both the opened and the closed positions.

Figure 5 is a phantom detailed view of one end of the container partly in section, along the line 5-5 of Figure 1.

Figure 6 is a sectional view through line 6-6 of Figure 7.

Figure 7 is a perspective view of the container in the completely closed position.

As is clearly shown in the drawings, the container of the present invention is constructed from three separate pieces of fibre board, namely the main body blank, shown in Figure 3, and two end blanks of the type shown in Figure 2. The main body blank is cut and creased as shown in Figure 3, the creases 1 and 2 dividing the blank into bottom 3 and sides 4 and 5.

Side 4 is provided with flap 6 separated from side 4 by crease 7 and with flaps 8 and 9 separated respectively from side 4 by creases 10 and 11. Flaps 8 and 9 are mitered and separated from tabs 12 and 13 by creases 14 and 15 respectively. Side 5 is provided with flap 16 separated from side 5 by crease 17 and is provided with flaps 18 and 19 separated respectively from side 5 by creases 20 and 21. Flaps 18 and 19 are mitered and separated from tabs 22 and 23 by creases 24 and 25 respectively.

Bottom 3 is provided with flaps 26 and 27 separated from tabs 28 and 29 by creases 30 and 31 and from bottom 3 by creases 41 and 42 respectively.

The end blank shown in Figure 2 is formed from a single piece of fibre board and is made up of end 32, panels 33 and 34, top flap 35 and flap 36. End 32 is separated from panel 33 by crease 37. Panels 33 and 34 are separated from each other by crease 38. Panel 34 is separated from top flap 35 by crease 39. Top flap 35 is separated from flap 36 by crease 40.

It will be seen that flaps 8, 9, 18 and 19 are mitered and taper from the inside corners adjacent the sides 4 and 5 respectively to the tabs 12, 13, 22 and 23 providing free ends to the tabs, which, with the mitered edges of the flaps to which reference has just been made, form angles of sufficient depth to accommodate flaps 26 and 27 with tabs 28 and 29 folded thereover when the container is assembled.

The assembly of the box is clearly shown in Figures 1, 4, 5 and 6. In assembling the box, sides 4 and 5 are folded on creases 2 and 1 at right-angles to bottom 3. Tabs 28 and 29 are folded inwardly on creases 30 and 31 respectively, thus being brought in surface contact with flaps 26 and 27 respectively. Flaps 26 and 27 are folded at right-angles to bottom 3 on creases 41 and 42 respectively.

Similarly, tabs 22 and 23 are folded inwardly on creases 24 and 25 against flaps 18 and 19 respectively, and flaps 18 and 19 are folded at right-angles to side 5 on creases 20 and 21. In the same manner, tabs 12 and 13 are folded on creases 14 and 15 inwardly against flaps 8 and 9 which are folded at right angles to side 4 on creases 10 and 11.

The end pieces are folded on creases 37, 38, 39 and 40 in the manner clearly shown in Figure 5, whereby panels 33 and 34, form, with the adjacent portion of end 32, a triple thickness of fibre board, permitting top flap 35 to hinge at crease 39. Flaps 36 are folded on creases 40, flap 36 of one end piece being folded downwardly and flap 36 of the other end piece being folded upwardly in the manner clearly shown in Figure 1, whereby the flaps 36 may interlock in the manner clearly shown in Figure 4.

When set up the double fold of flap 27 and tab 29 is held at its ends between flap 9 and tab 13 at one end and between flap 19 and tab 23 at the other end. Similarly, the ends of the double fold formed by tab 28 and flap 26 are held between flap 18 and tab 22 on one end and between flap 8 and tab 12 on the other end.

After the end pieces have been folded in the manner which has already been described, panel 32 is placed at the end of the trough such that the

entire panel 32 is within the end of the case and such that the fold formed by panels 33 and 34 is secured at the ends between the upper portion of flap 18 and tab 22 and flap 8 and tab 12 at one end of the container and at the other end between flap 19 and tab 23 and flap 9 and tab 13. The end construction of the box is held in place by any desired means as for example, staples 46.

- 10 Flaps 6 and 16 are folded inwardly along creases 7 and 17 respectively and flaps 36 are interlocked in the manner shown in Figure 4, the cover formed by flaps 35 and the interlocking of flaps 36 being held securely in place by any desired means such, for example, as a strap 43 shown in Figure 7.

It will be seen that by this construction the ends of the container are strongly reenforced, there being at the edges of the ends in all cases at least three thicknesses and at the corners at least four thicknesses. For example, at the edge 44, we find three thicknesses made up of end panel 32, flap 19 and tab 23. At the inside of corner 45, we find five thicknesses at the thickest portion, namely flap 21, flap 27, tab 29, tab 23 and end panel 32.

The term "fibre board" as used in the claims will be understood to include straw board, paper, pulp board and similar foldable materials adapted for the manufacture of containers.

I claim:

1. A fiber board box comprising a main body blank and two end blanks, said main body blank comprising bottom and side panels, said bottom and side panels being provided at each end with integral flaps and tabs and each of said side panels being provided with a top flap, said end blanks comprising an end panel and a top panel separated from said end panel by two relatively narrow panels adapted to be folded over and adjacent to said end panels, said top panel being provided with a flap adapted to interlock with a reversely folded flap on the top panel of the other end blank.

2. A fiber board box comprising a main body blank and two end blanks, said main body blank comprising bottom and side panels, said bottom and side panels being provided at each end with integral flaps and tabs and each of said side panels being provided with a top flap, said end blanks comprising an end panel and a top panel separated from said end panel by two relatively narrow panels adapted to be folded over and adjacent to said end panels, said top panels being provided with a flap adapted to interlock with a reversely folded flap on the top panel of the other end blank, the tabs on the side panels being adapted when folded to interlock with the folded flap and tab on the bottom panel, the folded panels disposed between the end panels and the top panels being locked into position by the said tabs on the side panels.

3. A fiber board box comprising a main body blank and two end blanks, said main body blank comprising bottom and side panels, said bottom and side panels being provided at each end with integral flaps and tabs, each of said side panels being provided with a top flap, said end blanks comprising an end panel and a top panel separated from said end panel by two relatively narrow panels adapted to be folded over and adjacent to said end panels, one top panel being provided with a flap adapted to interlock with a reversely folded flap on the top panel of the other end blank, the tabs on the side panels

being adapted when folded to interlock with the folded flap and tab on the bottom panel, the folded panels disposed between the end panels and the top panels being locked into position by the said tabs on the side panels, the said top flaps on the side panels being foldable at right angles thereto and disposable beneath the said top panels, the said flaps on the said top panels being interlocked to form a closed cover.

4. In a container of the class described, the combination of a main body blank and two end blanks, said main body blank comprising two side panels and a bottom panel, said end blanks comprising an end panel and a top panel separated by two relatively narrow panels foldable over each other adjacent the end panel, said bottom panel being provided at each end with a relatively narrow flap and a relatively narrow tab integral with said bottom panel and with each other, said flaps being substantially equal in width to the hereinbefore mentioned panels separating the end panels from the top panels, said end flaps being foldable at right angles to said end panel and the tabs integral with said end flaps, being foldable inwardly adjacent said end flaps, said side panels being provided at each end with a flap and a tab, said flap being substantially equal in width to the aforesaid end flaps and said side flaps being mitered whereby said integral tabs on said side flaps are positioned at the edge of said side flaps of least length, said side flaps being foldable at right angles to said side panels and said side flap tabs being foldable inwardly adjacent said side flaps, said flaps and tabs being arranged whereby the folded end flaps and tabs are positioned at their extremities between the side flaps and tabs at the mitered portion of said side flaps adjacent said bottom panel, said panels, separating the aforesaid end panel and top panel, being folded outwardly and downwardly and positioned between the side flaps and said side tabs at the top thereof whereby said side tabs form a locking means.

5. In a container of the class described, the combination of a main body blank and two end blanks, said main body blank comprising two side panels and a bottom panel, said end blanks comprising an end panel and a top panel separated by two relatively narrow panels foldable over each other adjacent the end panel, said bottom panel being provided at each end with a relatively narrow flap and a relatively narrow tab integral with said bottom panel and with each other, said flaps being substantially equal in width to the hereinbefore mentioned panels separating the end panels from the top panels, said end flaps being foldable at right angles to said end panel and the tabs integral with said end flaps, being foldable inwardly adjacent said end flaps, said side panels being provided at each end with a flap and a tab, said flap being substantially equal in width to the aforesaid end flaps and said side flaps being mitered whereby said integral tabs on said side flaps are positioned at the edge of said side flaps of least length, said side flaps being foldable at right angles to said side panels and said side flap tabs being foldable inwardly adjacent said side flaps, said flaps and tabs being arranged whereby the folded end flaps and tabs are positioned at their extremities between the side flaps and tabs at the mitered portion of said side flaps adjacent said bottom panel, said panels, separating the aforesaid end panel and top panel, being folded outwardly and downwardly and positioned be-

tween the side flaps and said side tabs at the top thereof whereby said side tabs form a locking means, said flaps, tabs and panels being held in such position by suitable means.

- 5 6. In a container of the class described, end flaps and tabs on the side panels and bottom panel, said end flaps and tabs being folded at right angles to the respective side and bottom panels, end panels substantially of the width of
- 10 said flaps, said last mentioned panels being integral with and serving to separate the top and end panels, cooperating with said flaps and tabs to form a reenforced frame at the end of the container, said flaps, tabs and panels being se-
- 15 cured to the end panel by appropriate means.

7. In a container of the class described, the end construction which comprises integral flaps and tabs on the side panels, the flaps being mitered from a length equal to the width of the side panels adjacent thereto, to a less length ad- 80 jacent the tab, the said tab being substantially equal in length to the width of the said side panel, whereby a flap and tab integral with the bottom panel and panels integral with and separating the end and top panels, folded inwardly 85 and outwardly may be held by the said mitered flaps and the tabs integral therewith at the ends of said mitered flaps and integral tabs.

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