March 31, 1942. R. A. NAGLE 2,278,359

BOX

Filed Dec. 21, 1939

Fig. 2

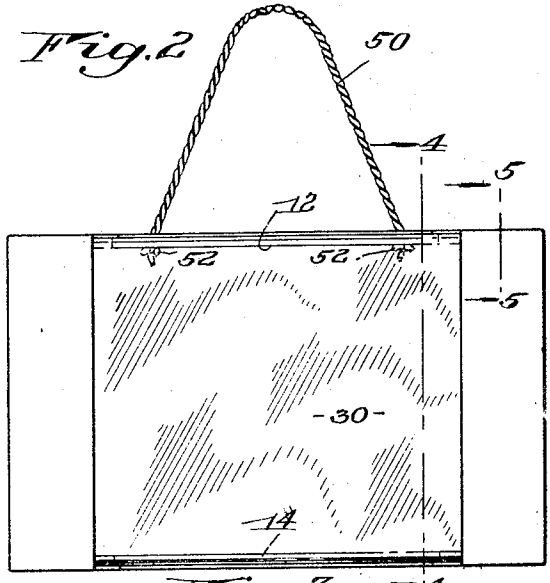


Fig. 1

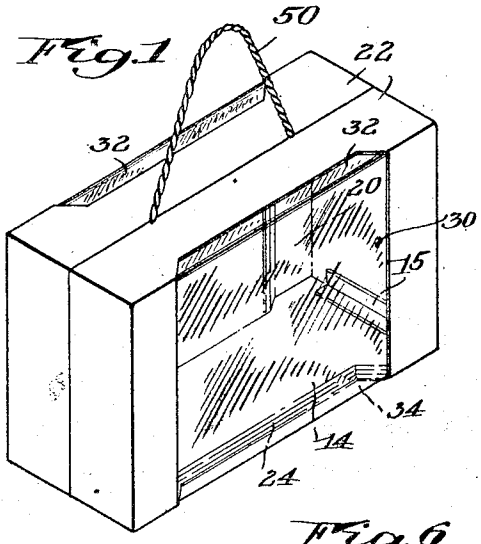


Fig. 3

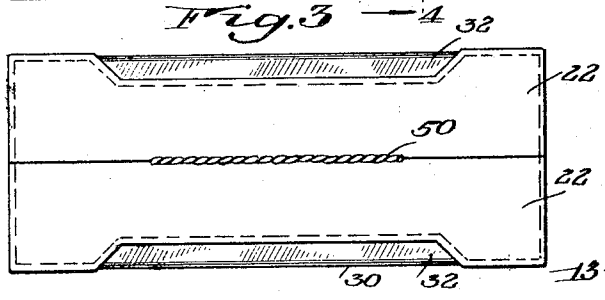


Fig. 6

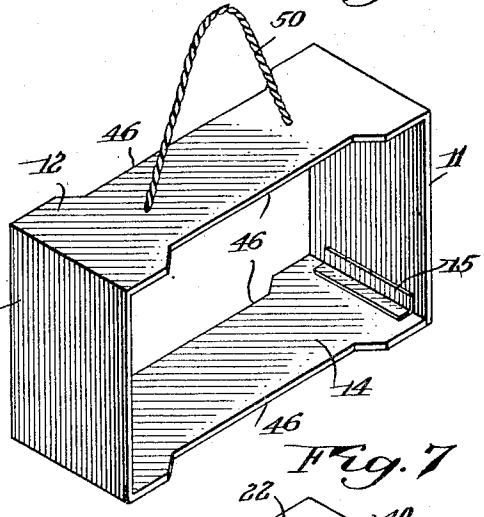


Fig. 4

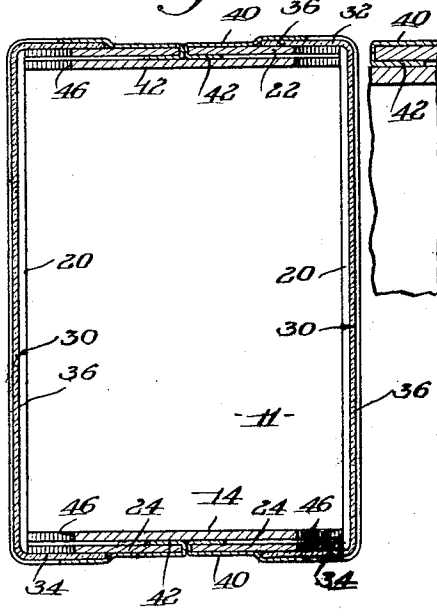


Fig. 5

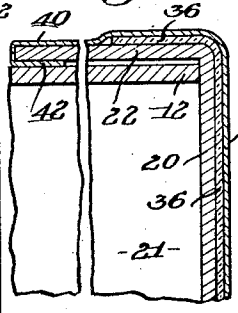
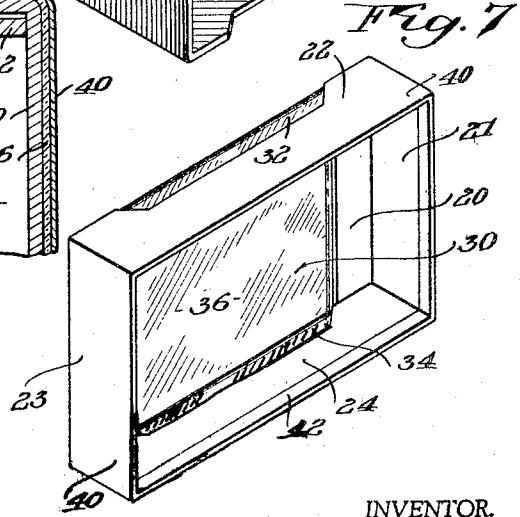


Fig. 7



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Patented Mar. 31, 1942 2,278,359

UNITED STATES PATENT OFFICE

2,278,359

BOX

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Application December 21, 1939, Serial No. 310,326

10 Claims. (Cl. 206—44)

This invention relates to boxes for packing various articles of merchandise, and has for its principal object the provision of a simple, inexpensive, and sturdy box of novel, pleasing and arresting appearance so as to attract attention thereto.

Another object of the invention is the provision of such a box having display windows for showing the merchandise within the box.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawing:

Fig. 1 is a perspective view of a box constructed in accordance with a preferred example of the invention;

Fig. 2 is a side elevation thereof;

Fig. 3 is a plan thereof;

Fig. 4 is a cross section through the box taken substantially on the line 4—4 of Fig. 2;

Fig. 5 is a fragmentary cross section on the line 5—5 of Fig. 2;

Fig. 6 is a perspective view of the frame portion of the box, and

Fig. 7 is a perspective view of one of the cover or closure sections of the box removed from the frame portion.

The same reference numerals throughout the several views indicate the same parts.

The box in its preferred form comprises a frame made of fiber board of any suitable grade or kind, such as chip board or cardboard or box board, including a plurality of walls joined together into polygonal shape. Preferably the polygon is of rectangular shape, composed of four walls 11, 12, 13, and 14, as shown in Fig. 6, all joined to each other at the corners of the polygon. The walls may be formed from a single piece of fiber board, scored at the hinge lines along all but one corner of the box, the free ends being secured to each other by the usual staying strip 15, at the remaining corner of the polygon, here shown at the joint between the walls 11 and 14.

The polygon thus formed is open at both ends, as seen in Fig. 6. To this polygonal frame are applied two closure members, each of the form shown in Fig. 7, including a closure panel 20 for extending across the open end of the polygonal frame, and marginal flanges 21, 22, 23, and 24, secured to the edges of the closure panel 20 and preferably held permanently in rigid position with respect to the closure panel and to each other. The walls 20 to 24, inclusive, preferably are formed partly from a single sheet of fiber board cut and scored so as to fold up to the desired form, the marginal flanges 21 to 24 being stayed to each other in the manner well known in the set-up box art, by means of adhesive staying strips at the corners between adjacent marginal flanges similar to the staying strip 15 used on the main interior frame.

The closure member shown in Fig. 7 is of such dimensions relative to the interior frame shown in Fig. 6, that when the closure member is applied to one of the open ends of the polygonal frame, the marginal flanges on the closure member fit snugly over the outer surfaces of the frame so that the closure member is telescoped onto the frame and is snugly and frictionally retained thereon. One such closure member is telescoped on each open end of the polygonal frame, so that the two closure members together close both of the open ends. The width of the marginal flanges 21 to 24 of each closure member is substantially one-half the width, in the same direction, of the walls of the frame member, so that when the two closure members are applied in normal closed position on the frame member, as shown in Fig. 1, the marginal flanges of one closure member substantially meet and substantially abut against the marginal flanges of the other closure member, completely covering and enclosing the outer surfaces of the frame member.

In the preferred construction, each closure member is provided with a relatively large window extending through the major part of the area of the closure panel 20, and also preferably extending into adjacent parts of two opposite marginal flanges, such as the top and bottom flanges 22 and 24, respectively. The window portion in the main closure panel 20 is indicated at 30 in Fig. 1, while the window portions in the top flanges 22 and 24 are indicated at 32 and 34, respectively. The window portions 32 and 34 are contiguous with and merge into the main window portion 30, as shown.

The window in each cover section is glazed or covered by a sheet of transparent material 36, such as cellulose acetate, "Cellophane," or similar material, a single sheet preferably extending across the entire window 30, 32, and 34, the dimensions of the sheet being larger than the size of the window opening so that the marginal edges of the sheet overlap the outer surfaces of the walls of the fiber boad body, as shown in Fig. 4.

A wrapper sheet 40, which may be of colored or

otherwise decorated paper, and which has a window cut therein corresponding substantially to the window formed in the fiber board body of the closure member, is placed over and preferably adhesively secured to the outer surface of such fiber board body, covering all of the outer surface of the fiber board body and being wrapped around the marginal edges and extending a short distance along the inner surface of each marginal flange as indicated at 42. This wrapper sheet overlies the marginal edges of the transparent window sheet 36, as shown in Fig. 4, and is preferably adhesively secured to the fiber board body and also to the portion of the window sheet 36 which it overlies. Thus the marginal edges of the window sheet are embraced between the fiber board body of the closure member and the overlying wrapper sheet 40, and held in position thereby. The size of the window opening in the wrapper sheet is preferably slightly smaller than the opening in the fiber board body so that the edges of the wrapper sheet around the window opening project a little beyond and thus serve to hide the raw edges of the fiber board around the opening, as also seen in Fig. 4.

When the windows in the closure member extend partly into the marginal flanges thereof, as in the preferred construction, then the corresponding side walls of the frame member are correspondingly cut away, as indicated at 46 in Fig. 6, so that the walls of the frame member will not interfere with vision through those portions of the windows which are in the marginal flanges of the closure members.

A handle may be provided preferably in the form of a flexible member such as a wire, chain, or cord 50, forming a loop or bight, the ends of the flexible member being secured to one wall of the frame member, such as the wall 12, approximately along the line where the marginal flanges of the two closure members meet each other. The handle may be conveniently secured by having the ends of the flexible member extend through holes in the wall 12, knots 52 being provided in each end of the flexible member below the wall 12. When the two closure members are applied to the frame member in normal closed position as in Figs. 1 and 3, with the edges of the marginal flanges substantially meeting each other, the handle extends out through the crack between the adjacent edges of the closure members, as seen in Fig. 1. The handle may be sufficiently stiff to stand up by itself, as illustrated in the drawing, or may be of a sufficiently flexible cord so that it will normally lie loose and flat on the top of the box, until it is grasped and pulled upwardly.

From the foregoing description it is seen that a box of striking appearance is provided, which is simple and inexpensive to construct, and which displays the merchandise packed therein through relatively large windows on two opposite sides of the box, enabling a good view of the merchandise. The external appearance of the completed, closed box will depend upon the color or decoration used on the wrapper sheets 40, and on the color and character of the transparent window sheets 36, independently of the appearance of the outer surface of the frame walls 11 to 14, which can thus be made of relatively inexpensive, undecorated material. Since the two closure members are preferably duplicates of each other, they can be made relatively inexpensively by mass production methods, and can be quickly assembled in telescopic relation on the inexpensive frame member, to make the completed box.

While one embodiment of the invention has been disclosed, it is to be understood that the inventive idea may be carried out in a number of ways. This application is therefore not to be limited to the precise details described, but is intended to cover all variations and modifications thereof falling within the spirit of the invention or the scope of the appended claims.

I claim:

1. A box comprising a rectangular tubular frame of fiber board open at two opposite ends, and a closure member applied to said frame over each of the open ends thereof, each closure member including a rectangular closure panel for extending across and closing one open end of the frame and four marginal flanges extending approximately perpendicular to the closure panel along the four edges thereof and permanently secured in fixed relation to the closure panel and to each other, said flanges telescoping snugly over the outer surface of said frame and being of such width in relation to the dimensions of the frame that when the two closure members are applied in normal closed position on the two ends of the frame, the marginal flanges on one closure substantially meet the marginal flanges on the other closure member so that the marginal flanges substantially completely cover and hide the exterior surface of said frame, and a handle secured to said frame substantially at the line where a marginal flange on one closure member meets the adjacent marginal flange on the other closure member, said handle being relatively thin in a direction transverse to said meeting line of said marginal flanges and extending outwardly through the crack between such marginal flanges without requiring substantial separation of said flange.

2. A box comprising a rectangular tubular frame of fiber board open at two opposite ends, two opposite walls of said frame being notched out at one end, and a closure member applied to said frame over each of the open ends thereof, each closure member including a rectangular closure panel for extending across and closing one open end of the frame and four marginal flanges extending approximately perpendicular to the closure panel along the four edges thereof and permanently secured in fixed relation to the closure panel and to each other, said flanges telescoping snugly over the outer surface of said frame and being of such width in relation to the dimensions of the frame that when the two closure members are applied in normal closed position on the two ends of the frame, the marginal flanges on one closure substantially meet the marginal flanges on the other closure member so that the marginal flanges substantially completely cover and hide the exterior surface of said frame, one of said closure members having a transparent window extending across one dimension of said closure panel and partly across two opposite marginal flanges in approximate registry with the notched out portions at one end of said tubular frame.

3. A box comprising a rectangular tubular frame of fiber board open at two opposite ends, and a closure member applied to said frame over each of the open ends thereof, each closure member being in the form of a relatively shallow tray including a rectangular closure panel for extending across and closing one open end of the frame and four marginal flanges of material-

ly less width than the width of said closure panel and extending approximately perpendicular to the closure panel along the four edges thereof and permanently secured in fixed relation to the closure panel and to each other, said flanges telescoping snugly over the outer surface of said frame and being of such width in relation to the dimensions of the frame that when the two closure members are applied in normal closed position on the two ends of the frame, the marginal flanges on one closure and substantially meet the marginal flanges on the other closure member so that the marginal flanges substantially completely cover and hide the exterior surface of said frame, each of said closure members having a transparent window occupying the major part of the area of the closure panel, the two closure panels each being of greater area than any of the other four walls of the box.

4. A display box comprising a polygonal frame of walls of fiber board forming the sides of the polygon and joined to each other at the corners of the polygon, the polygon being open at its ends, the free edges of two of the walls of the polygon being notched out between the corners of the polygon, at both ends of the polygon, and two closure members applied to the open ends of the polygon to close the same, each of said closure members having a closure panel extending across the open end of the polygon and a plurality of marginal flanges secured to said closure panel and snugly embracing the outer surfaces of the frame walls with the marginal flanges of one closure member substantially meeting the marginal flanges of the other closure member on at least certain of the sides of the polygon so as to cover substantially the entire outer surfaces of such sides of the frame walls, each closure member including a transparent window extending throughout a major part of the area of said closure panel and also around two edges of said closure panel and into portions of two of said marginal flanges in approximate registry with the notched out portions of said walls of the polygon.

5. A display box comprising a polygonal frame of walls of fiber board forming the sides of the polygon and joined to each other at the corners of the polygon, the polygon being open at its ends, and two closure members applied to the open ends of the polygon to close the same, each of said closure members having a closure panel extending across the open end of the polygon and a plurality of marginal flanges secured to said closure panel and snugly embracing the outer surfaces of the frame walls with the marginal flanges of one closure member substantially meeting the marginal flanges of the other closure member on at least certain of the sides of the polygon so as to cover substantially the entire outer surfaces of such sides of the frame walls, each of said closure members also having a transparent window throughout a substantial part of the area of the closure panel and throughout adjacent portions of two opposite marginal flanges to expose the contents of the box to view from both ends of the polygon.

6. A display box comprising a polygonal frame of walls of fiber board forming the sides of the polygon and joined to each other at the corners of the polygon, the polygon being open at its ends, and two closure members applied to the open ends of the polygon to close the same, each of said closure members having a closure panel extending across the open end of the polygon and a plurality of marginal flanges secured to said closure panel and snugly embracing the outer surfaces of the frame walls with the marginal flanges of one closure member substantially meeting the marginal flanges of the other closure member on at least certain of the sides of the polygon so as to cover substantially the entire outer surfaces of such sides of the frame walls, and a handle in the form of a flexible member secured to one of the side walls of said frame and extending outwardly to an accessible position through the crack between the two adjacent marginal flanges covering such side wall of said frame, said handle being relatively narrow in a direction transverse to the length of said crack.

7. A display box comprising a polygonal frame of walls of fiber board forming the sides of the polygon and joined to each other at the corners of the polygon, the polygon being open at its ends, and two closure members applied to the open ends of the polygon to close the same, each of said closure members having a closure panel extending across the open end of the polygon and a plurality of marginal flanges secured to said closure panel and snugly embracing the outer surfaces of the frame walls with the marginal flanges of one closure member substantially meeting the marginal flanges of the other closure member on at least certain of the sides of the polygon so as to cover substantially the entire outer surfaces of such sides of the frame walls, each of said closure members also having a transparent window throughout a substantial part of the area of the closure panel and extending also over parts of two marginal flanges of each closure member, to expose the contents of the box to view, the ends of the polygonal frame abutting against the inner surfaces of the closure panels along certain portions of the perimeter of the polygonal frame and being cut back along certain other portions of the perimeter opposite the portions of said transparent window which lie in said marginal flanges, so as not to interfere with vision through said portions of said window.

8. A display box comprising a polygonal frame of walls of fiber board forming the sides of the polygon and joined to each other at the corners of the polygon, the polygon being open at its ends, and two closure members applied to the open ends of the polygon to close the same, each of said closure members having a fiber board body including a closure panel extending across the open end of the polygon and a plurality of marginal flanges secured to said closure panel and snugly embracing the outer surfaces of the frame walls, a window opening in said fiber board closure panel, a transparent sheet extending across said window opening and overlapping the exterior surface of said fiber board body around said window opening, and a wrapper sheet overlying the outer surface of said fiber board body and overlapping the edges of said transparent sheet so that the edges of said transparent sheet around said window opening are embraced between said fiber board body and the overlying wrapper sheet, the marginal flanges of one closure member substantially meeting the marginal flanges of the other closure member around all sides of the polygonal frame so that the transparent sheets and wrapper sheets of the closure member form substantially the entire exterior surface of the box and substantially completely cover the outer surface of said frame.

9. A display box in substantially the form of

a rectangular parallelepiped having transparent observation windows extending across two opposite sides and partly across the adjacent portions of two other opposite sides, said box including a tubular cardboard base member open at two ends, and a pair of cover members telescoped over the open ends of the base member in directions toward each other, each of said cover members being of permanently set-up and rigid construction and including a main wall for extending across one open end of the tubular base member and connected marginal flanges approximately perpendicular to said main wall for embracing and telescoping over the walls of said tubular base member, the main wall and marginal flanges of each cover member being made of a cardboard frame having a cut-out observation window extending across one dimension of said main wall and into the adjacent portions of two marginal flanges on two opposite sides of said main wall, said base member being so shaped as to avoid substantial obstruction of vision through those portions of the observation windows which are in said marginal flanges of said cover members, each cover member further including transparent sheeting extending across and transparently closing said observation window in said main wall and both of said two opposite flanges.

10. A display box in substantially the form of a rectangular parallelepiped having transparent observation windows extending across two opposite sides and partly across the adjacent portions of two other opposite sides, said box including a tubular cardboard base member open at two ends, and a pair of cover members telescoped over the open ends of the base member in directions toward each other, each of said cover members being of permanently set-up and rigid construction and including a main wall for extending across one open end of the tubular base member and connected marginal flanges approximately perpendicular to said main wall for embracing and telescoping over the walls of said tubular base member, the main wall and marginal flanges of each cover member being made of a cardboard frame having a cut-out observation window extending across one dimension of said main wall and into the adjacent portions of two marginal flanges on two opposite sides of said main wall, said base member being so shaped as to avoid substantial obstruction of vision through those portions of the observation windows which are in said marginal flanges of said cover members, each cover member further including a flexible transparent sheet adhesively secured around the margins of said window and extending taut across the portion of said window in said main wall and around corners at opposite sides thereof and across the portions of said window in said marginal flanges.

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