

May 29, 1934.

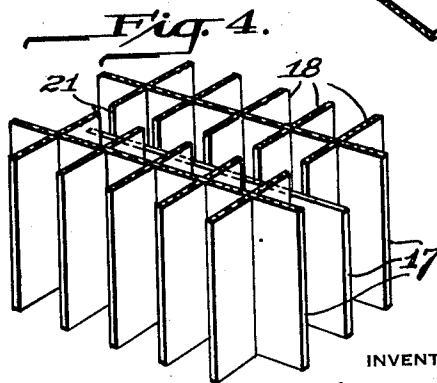
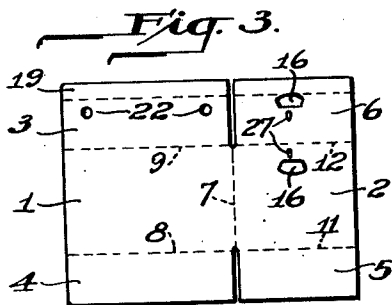
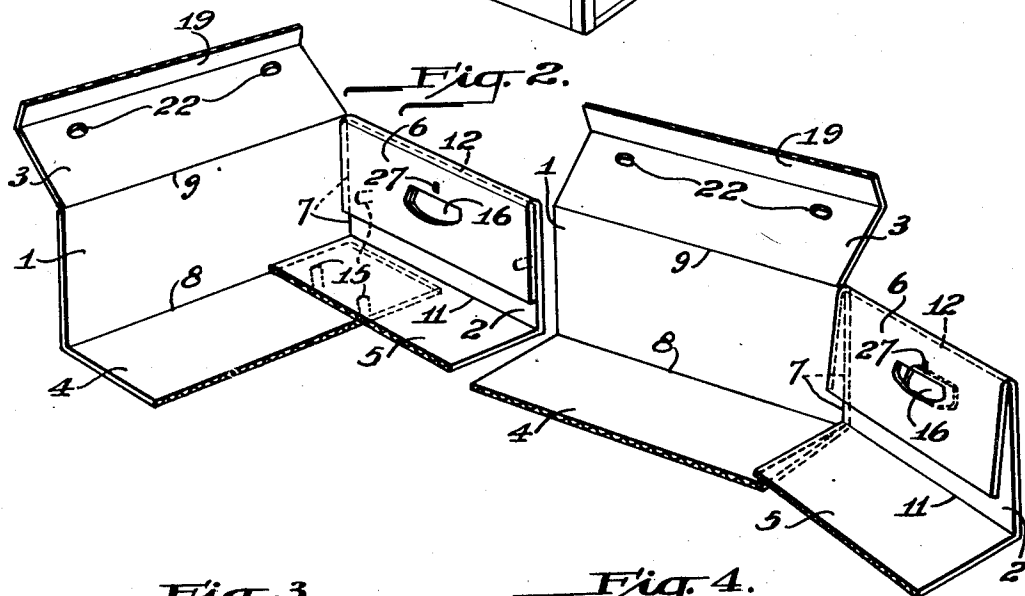
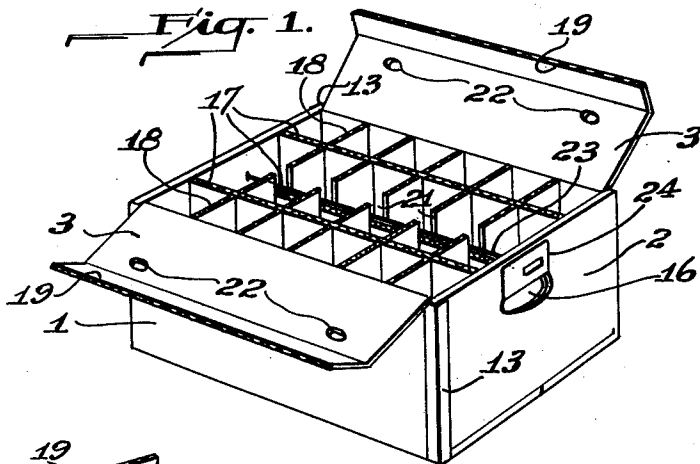
E. J. LAUTH ET AL

1,960,947

SHIPPING CONTAINER

Filed June 8, 1933

2 Sheets-Sheet. 1



WITNESSES

A. B. Wallace.
J. E. Dickinson

INVENTORS

Edward J. Lantz and
Norman O. Bohnke
by Brown Cretchlow & Flick
their attorneys

May 29, 1934.

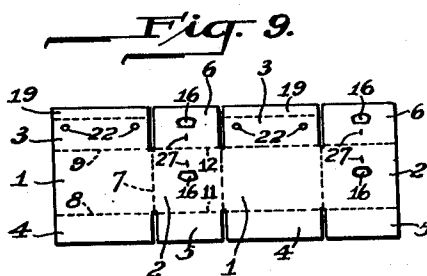
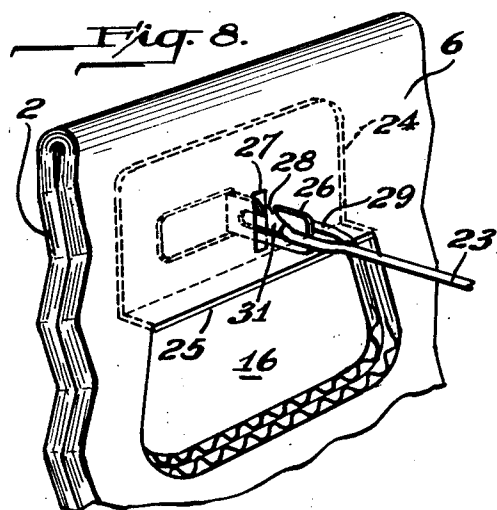
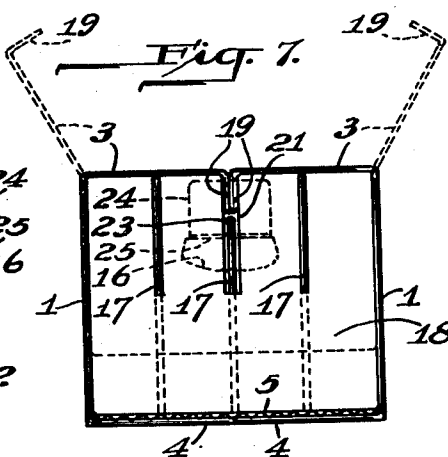
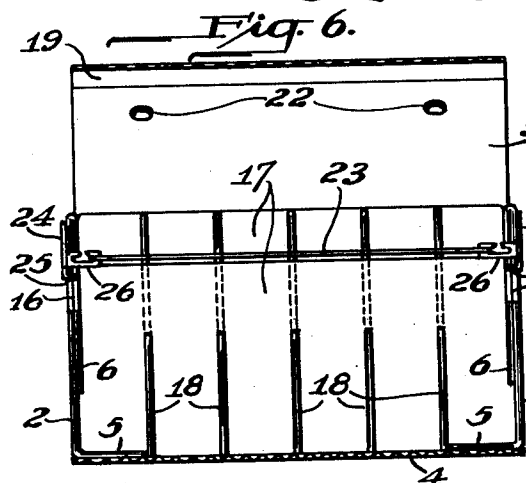
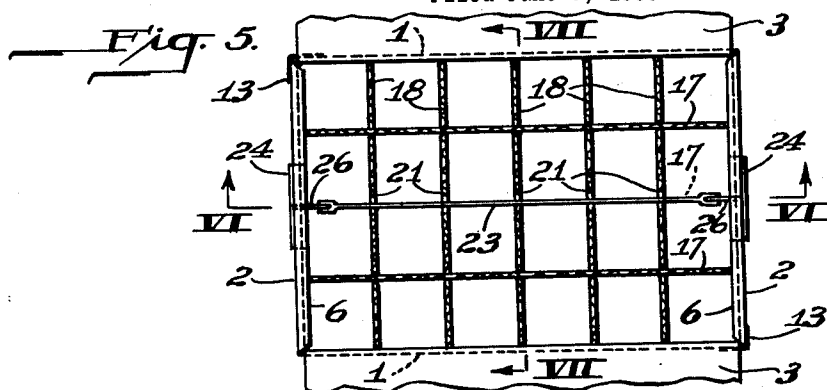
E. J. LAUTH ET AL

1,960,947

SHIPPING CONTAINER

Filed June 8, 1933

2 Sheets-Sheet. 2



INVENTORS

*Eduard J. Lauth and
Norman C. Bokake
by Brown Critchlow & Flick
Their Attorneys*

WITNESSES

*A. B. Wallock
J. E. Dickinson*

UNITED STATES PATENT OFFICE

1,960,947

SHIPPING CONTAINER

Edward J. Lauth, Pittsburgh, and Herman C. Bohnke, Carnegie, Pa., assignors to Superior Paper Products Company, Carnegie, Pa., a corporation of Delaware

Application June 8, 1933, Serial No. 674,858

7 Claims. (Cl. 229—15)

This invention relates to containers or boxes of the type used more particularly for the handling and shipping of bottled beverages such as beer and what is commonly referred to as soft drinks, and especially to a box adapted for such use which is made of corrugated paperboard or materials of that character.

Bottled goods of this character are customarily sold at least to the retailers in case lots consisting of twenty-four bottles, and in the past it has been the usual practice to use wooden boxes or cases as they are frequently called for packaging the bottles. The reason for such boxes being used in spite of their excessive cost and weight, as well as excessive bulk as compared to paperboard boxes, has been due chiefly to the fact that the various kinds of paper or fibre-board boxes available for such purpose in the past have not been sufficiently strong to stand up under the rigorous treatment to which the boxes are subjected, especially in the more particular kind of service for which this invention is intended. The service contemplated is that of trucking, shipping and delivering bottled goods from the manufacturer to the retailer or consumer, and returning the empty bottles in the original cases back to the producer and using the cases over and over again for such purpose. In such service it is the usual practice for the men handling the cases to pick them up by the handholes which are provided in their ends for that purpose and throw them around on and off trucks and freight cars in no delicate fashion. Furthermore, they frequently carry them one in each hand, holding them only by one end. Consequently, because of the weight of the bottles, especially when full, these boxes have to be exceptionally sturdy and durable to withstand such treatment.

With the foregoing in mind, and especially the fact that boxes made of corrugated paperboard and the like are considerably cheaper, lighter, easier to handle and require less space than wooden boxes, it is the primary object of this invention to provide a box adapted for such service made of corrugated paperboard or the like which is simple and relatively inexpensive to manufacture and at the same time both light in weight and sufficiently sturdy and mechanically strong to meet all the requirements which may be imposed upon it.

Another object is to provide a novel cover on a box of this character, as well as novel filler arrangement which is normally locked in place but adapted to be readily removed and replaced by a new filler when worn.

A still further and more particular object is to provide for reinforcing a box of this type in a novel fashion so that it will be fully capable of withstanding the strains to which it is subjected when it is picked up by only one of its ends.

These and various other objects, as well as the various other novel features and advantages of the invention, will be apparent when the following detailed description is read in conjunction with the accompanying drawings, of which Fig. 1 is a perspective view of a box constructed in accordance with the invention, showing the cover flaps in their opened position; Fig. 2 a similar view showing the parts of the box in the process of assembly; Fig. 3 a plan view of one of the two similar blanks out of which the box proper is made; Fig. 4 a perspective view of the bottle-spacing filler used in the box; Fig. 5 a plan view of the box as shown in Fig. 1; Fig. 6 a sectional view taken on the line VI—VI of Fig. 5; Fig. 7 a sectional view taken on the line VII—VII of Fig. 5, showing the cover flaps in full lines in their closed position and in dotted lines in their opened position; Fig. 8 a perspective view to enlarged scale of one of the strut anchors mounted in one of the end handholes; and Fig. 9 a plan view of a modified form of box-forming blank.

Referring to the drawings, as illustrated particularly in Figs. 2 and 3 the invention may be practiced by forming a box out of two identically cut and creased rectangularly shaped blanks or pieces of fibrous material, such as corrugated paperboard, cardboard, fiber board or similar materials, all of which are contemplated wherever mentioned, either in the following description or claims. As shown, each of these blanks comprises a side wall 1, an end wall 2, and top and bottom closure flaps 3, 4 and 5, as well as an end wall reinforcing flap 6, which are integrally attached to the side and end wall sections 1 and 2, respectively.

To facilitate the assembly of the box a crease 7 is impressed in each blank between the side wall 1 and the end wall 2, and similar creases 8, 9, 11 and 12 between the top and bottom closure flaps and the end-wall reinforcing flap 3, 4, 5 and 6, respectively. In making the assembly the side and end walls 1 and 2 are folded at right-angles to each other and the abutting corners of the two blanks bound together by suitable means such as by a strip of adhesive tape 13 as shown in Fig. 1. Thereafter the bottom closure flaps 5 on the bottoms of the end walls 2 are folded inwardly and

the side-wall bottom closure flaps 4 then folded under them and the thus formed bottom either glued or bound together with staples 15 in a rigid fashion. When this is completed, the end-wall reinforcing flaps 6 at the top of the end walls are folded into the box and firmly secured to such walls, whereby forming a very sturdy and rigid end-wall structure. To provide handholes for the box, registering openings 16 are cut in the flaps 6 and in the end walls 1 at a convenient point near the top and in the center of these parts of the blank.

For separating the bottles in the box a filler such as shown best in Fig. 4, in which there are twenty-four compartments, is fitted in the box. This, of course, may be altered, but as illustrated it is made up of three lengthwise and five crosswise partitions fitted together in the customary fashion through the use of spaced slots which are cut in their opposed edges as shown in Figs. 6 and 7.

To provide for holding the cover flaps 3 in their closed position when the box is closed, but in such a way that they can be readily opened so as to permit the box being conveniently used a number of times, they are made somewhat longer than half the width of the box and provided on their free ends with flap portions 19 which are folded at right angles to them and adapted to fit down into the box and be held in place by the filler. The center lengthwise partition 17 of the filler is cut away at its top to receive these flaps, as are the middle slots 21 in the crosswise partitions, and to facilitate the opening of the lid-forming flaps 3 suitable finger holes 22 are provided in them.

Another, and an outstanding feature of the invention, is the provision of a strut 23 which is mounted between the two end walls 1 of the box to give it sufficient strength to permit its being picked up by either of its ends. As shown, this strut consists of a length of wire which is demountably attached to a pair of anchor plates 24 mounted in the end walls 2. The particular plate illustrated, and which, as will be appreciated, may be varied in construction, comprises an oblong strip of sheet steel which is fitted on the outside of the box above the hand opening 16 and provided on its lower edge with a flange 25 adapted to fit in the top of the hand opening 16.

For engaging the end of the strut and assisting in holding the plate 24 in place, a lug 26 is struck out of it and bent inwardly therefrom at 90° in a vertical plane and extended through openings 27 cut in the end wall 2 and flap 6 for its reception. In the free end of such lug a diagonal slot 28 is provided for receiving an eye 29 formed on the strut, being made just large enough to receive the eye 29, and is terminated at its lower end in a horizontal slot 31 in which the eye 29 may move when the ends of the case are forced inwardly beyond their normal position to thereby prevent the disengagement of the strut from the anchor.

When assembled, the strut 23 is adapted to rest along the top of the center lengthwise partition 17 of the filler and hold the filler in place so that it will not fall out of the box in case it is turned upside down. To replace the filler when it becomes worn, the end walls 2 are forced inwardly sufficiently to release the strut which is then removed along with the anchor plates and both it and them then replaced after the new filler is in place.

As will be appreciated by those skilled in the art, in place of making the box out of two separate blanks it may be formed in other ways, as

for example, as shown in Fig. 9, where a single blank is illustrated which may be used for such purpose.

To reiterate, a box constructed in accordance with this invention is both light and inexpensive to manufacture, and through the provision of the double end walls and the central endwise supporting strut is fully capable of withstanding all the strains to which a box of this type may be subjected in service. In addition, through the provision of the novel cover provided, it may conveniently be closed to conceal its contents as well as protect the tops of the bottles in a way which permits its being opened with ease.

According to the provisions of the patent statutes, I have explained the principle and mode of operation of my invention, and have illustrated and described what I now consider to represent its best embodiment. However, I desire to have it understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically illustrated and described.

I claim:

1. A corrugated paperboard box comprising side, bottom and end walls, a wire strut extending between said end walls in spaced relation to said side and bottom walls, a pair of substantially rigid strut end supporting anchor members having retaining means engaged in hand holes provided in said end walls and means provided on said anchor members for releasably connecting to them the ends of said strut.

2. A corrugated paperboard box comprising side, bottom and end walls and handhole openings in said end walls, anchor plates having retaining means removably engaged in said handholes, means in each of said anchor plates for engaging the end of a strut, and an endwise disposed reinforcing strut connected between said anchor plates.

3. A corrugated paperboard bottle handling box comprising side, bottom and end walls and foldable extensions on said end walls folded upon such walls for reinforcement, a pair of anchor members having retaining means engaged in hand holes in said end walls in spaced relation with said side and bottom walls, and an endwise reinforcing strut releasably connected between said anchor plates.

4. A corrugated paperboard bottle handling box comprising side, bottom, and end walls, a bottle-separating filler mounted within said walls, a pair of anchor members provided with retaining means mounted in hand holes in said end walls in spaced relation with said side and bottom walls, and an endwise reinforcing strut detachably connected between said anchor members in a manner to hold said filler in place.

5. A box for packaging and handling bottled goods comprising side and end walls having foldable flaps connected to the upper and lower edges thereof, said lower flaps all being folded inwardly to form a bottom for the box, said flaps on the upper edges of said end walls being folded upon such walls to increase their strength, said flaps on the upper edges of said side walls being adapted to fold inwardly and form a cover for the box, a bottle-separating filler mounted within said walls, a pair of strut anchors mounted on said end walls adjacent a pair of handhole openings provided therein, and an endwise strut releasably connected between said anchors above said filler.

6. In a corrugated paperboard box, a strut-engaging anchor comprising a rigid plate adapted to fit against the wall of a box, a lug struck out of

said plate to be passed through the wall of the box and engage the end of a strut, said lug having in it an inclined slot for receiving the end of the strut, and a horizontal slot at the base of said inclined slot to assist in preventing the strut becoming dislodged.

flanged edge adapted to fit in the top of a hand-hole provided on the box, and a strut-engaging lug attached to said plate with its body disposed in a vertical plane at right-angles to said anchor proper.

EDWARD J. LAUTH.
HERMAN C. BOHNKE.

7. In a flexible box, a strut-engaging anchor comprising a rigid plate equipped with a lower

10	85
15	90
20	95
25	100
30	105
35	110
40	115
45	120
50	125
55	130
60	135
65	140
70	145
75	150