

July 4, 1944.

J. J. MORGAN

2,352,994

RECEPTACLE

Filed May 7, 1942

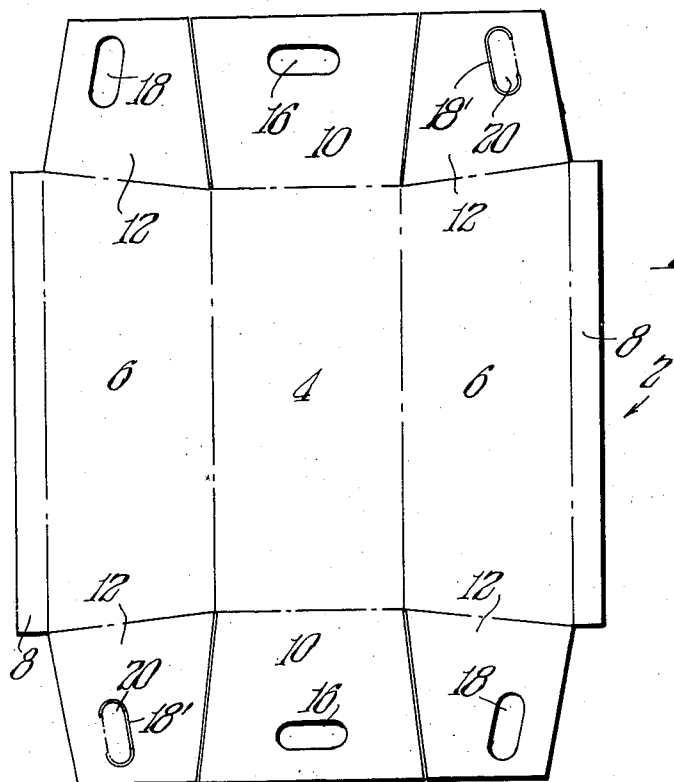


Fig. 1.

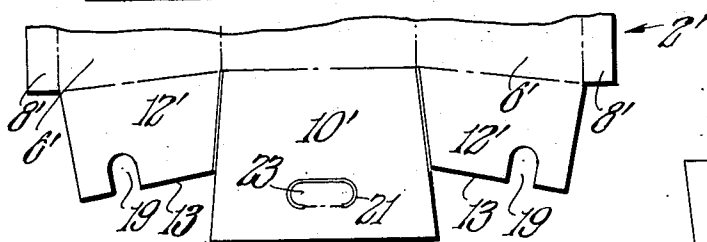


Fig. 2.

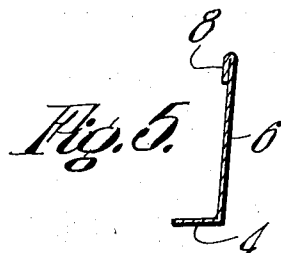


Fig. 5.

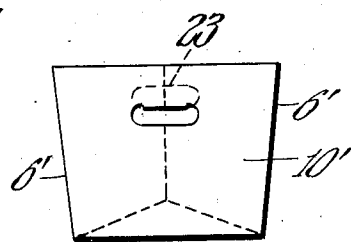


Fig. 4.

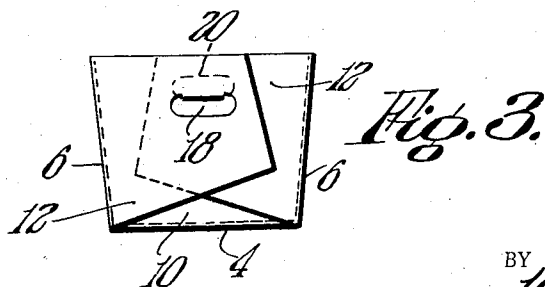


Fig. 3.

INVENTOR.

James J. Morgan.
BY Walter C. Ross, Attorney.

UNITED STATES PATENT OFFICE

2,352,994

RECEPTACLE

James J. Morgan, Hampden, Mass., assignor to
General Fibre Box Company, West Springfield,
Mass., a corporation of Massachusetts

Application May 7, 1942, Serial No. 442,065

2 Claims. (Cl. 229—52)

This invention relates to improvements in shipping boxes or cases and is directed more particularly to the provision of a novel case or carton especially adapted for repeated use and this application is a continuation in part of an application, Serial No. 356,428, filed by me on September 12, 1940.

The case may be shipped by a produce man, for example, to its destination, the contents removed therefrom, and then returned to the producer for refilling and reshipping. Economy is thus affected and, because of the special construction, the cases or boxes may be easily piled one upon another when filled and while performing their carrying function, and may be as easily stacked in nested relation when empty in such a way as to facilitate economical and safe return for use again.

A special feature of the invention is that the box is particularly capable of permitting facile and efficient shipment of such perishable and bulky articles as bunches of bananas, for instance. Such articles are not only difficult to handle in transport but must be treated with considerable care and, preferably, ventilated to some extent.

According to this invention, there is provided a receptacle or container distinctively formed to efficiently accommodate a bunch or bunches of bananas which, as is well known, are of an unusual and irregular size and shape. As special features, the receptacle is strengthened or reinforced at the proper places so as to prevent collapse of the same and possible injury to its contents and, also, it is more or less ventilated.

As an important object of the invention I provide a unitary box-forming blank which may be delivered to the producer or grower in a flat condition, thereby saving space and expense in shipment, and which may be readily set up into shipping or containing position by said producer or grower, the construction of said set-up containers being such that a plurality thereof may be nested, after being emptied, so as to be economically and easily returned for their reuse. As a special feature, too, the receptacle of the invention preferably has a cover integral with the body thereof which makes for proper protection for the contents and also means that the permanently attached cover does not become lost but is always available when the repeat use of the carton is desired.

With the foregoing and various other novel features and advantages and other objects of my invention as will become more apparent as the

description proceeds, the invention consists in certain novel features of construction and in the combination and arrangement of parts as will be hereinafter more particularly pointed out in the claims hereunto annexed and more fully described and referred to in connection with the accompanying drawing wherein:

Fig. 1 is a plan view of a blank embodying the features of the invention;

Fig. 2 is a partial plan view of a blank including a modified form of the invention;

Figs. 3 and 4 are end elevational views showing the blanks of Figs. 1 and 2 in set-up relation; and

Fig. 5 is a partial sectional elevational view showing a longitudinal reinforcing edging.

Referring now to the drawing more in detail, the invention will be fully described.

The receptacle of the invention is preferably formed from a unitary or single blank of fibre or so-called corrugated board or the like. While the particular material employed may obviously vary, the sheet material mentioned is especially suitable since it is economical, sufficiently strong, and bendable at desired places while at the same time not readily distortable at places where such is not desired.

The preferred form of the blank of the invention is indicated generally by 2 and consists of a sheet of material cut and scored, or marked off, to have a central panel 4, which serves as the bottom wall of the box or case and, while preferably rectangular, may obviously vary in shape and size. Extending outwardly from opposite sides of the bottom wall are side walls 6, preferably of equal size and shape, as shown.

End wall members 10 which are preferably flaring extend outwardly from the opposite end edges of the bottom wall while end flaps 12 are hinged to opposite ends of the side walls 6. As shown the blank is cut so that the parts 10 and 12 are not directly connected but are relatively movable into adjacency in a manner to be explained. Longitudinal edging or reinforcing members 8 are provided on the side wall members 6 when desired.

It will be noted that the members 10 taper or flare outwardly. That is, their marginal edges extend in outwardly diverging relation from their jointure with the bottom wall 4. This is so that the receptacle when in set-up position will take the general flaring formation shown in Fig. 3.

Each end wall 10 is provided with a cut-out 16 which may be called a hand-hole and may be

of any shape or size. One of the parts 12 at each end of the blank is provided with a cut-out 18 which is so spaced with relation thereto that when the box is in set-up position the cut-out coincides with the opening 10, while the other of the walls or parts 12 at each end of the box is provided with a slot or slit 18' formed as to provide a flap 20 bendable on the dot-dash lines shown. The elements of the blank are relatively bendable on the bending or score lines represented by the dot-dash lines shown.

The various parts of the blank or sheet from which the box or receptacle is preferably formed having been described, the method of setting up the blank will now be explained.

The side walls 6 are folded upwardly along the scored lines shown to be at an angle, relative to the horizontal bottom wall 4 and the end walls 10 are turned into vertical positions, usually at slightly greater than right angles to the member 4. The end flaps 12 are then folded inwardly along the bending lines connecting them with the walls 6 to lie adjacent the end members 10. The members 10 and 12 at opposite ends of the receptacle are brought into overlapping relation and the parts of the blank are so formed, as shown, that the walls when in set-up position are relatively flaring as shown in Fig. 3.

It will be understood that the construction of the box is usually the same at each end thereof. In setting up the container, those end flaps 12 having the openings 18 are folded into adjacency with the outside of end walls 10 and then the other flaps 12 are folded in to lie against the outside of the others. The parts arranged for overlapping may, however, be disposed in any desired relation.

The arrangement is such that when the parts are so related the openings 18 coincide with holes 16 and the flaps or tabs 20 are bent to extend through the holes and openings and upwardly, as is indicated in Fig. 3. As is shown, the tabs 20 may serve to engage and hold the overlapping, or adjacently-disposed, parts above referred to in desired relation.

As was explained above it is intended for purposes of economy that the blanks be shipped to the customer in flat relation. The purchaser then may set the boxes up in the manner described and shown in Fig. 3.

Furthermore, when the boxes have been used for shipment of goods, they may be returned for re-use in nested relation. This saves space and is obviously more economical than the usual practice where crates, for example, are employed.

It will be appreciated that the parts 10 and 12 may be secured together when the box is in set-up position, by any suitable means such as by stitching, stapling, adhesive or the like. The triple-ply end walls, composed of a member 10 and the members 12, provide sturdy reinforcement for the box and assure that the stalk of the banana bunch, for example, will not puncture it when shifting endwise.

Where the reinforcing edging 8 or 8' is used, it may be swung inwardly relative to the wall 6 or 6' as shown in Fig. 5 or outwardly and secured thereto to said wall in any suitable manner as by stapling, stitching or the like. This will reinforce the edge of the side wall.

According to the form of the invention shown in Fig. 2 the blank 2' at each end has end walls 10' extending from a bottom wall 4' and end members 12' extending from side walls 6'. There

may be longitudinal reinforcements 8' as with the construction shown in Fig. 1.

The end members 12' are arranged so that when the blank is in set up relation as in Fig. 4 their outermost edges 13 are in abutment as shown in dotted lines in said Fig. 4. This provides a double thickness of material at the ends of the receptacle instead of triple thickness as with the blank of Fig. 1 and is preferable when the stock from which the blank is made is sufficiently heavy and stiff.

The parts 12' are provided with recesses 19 and the end members such as 10' have slots 21 forming flaps 23 which are adapted when the parts 10' and 12' are in overlapping relation to enter the opening formed by the recesses 19 and be bent upwardly as shown in Fig. 4, thereby to hold the parts in the desired relation. The overlapping parts 10' and 12' may be secured together by stitching, stapling or other means.

When the blank 2' is in set up relation the end walls 10 and 10' may be disposed either outside of or inside of the parts 12 or 12', all as may be desired.

A cover or closure may be provided that will be so formed and be made from such material as to adequately close the receptacle.

The invention may be embodied in other specific forms without departing from the essential characteristics thereof. Hence, the present embodiments are therefore to be considered in all respects merely as being illustrative and not as being restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all modifications and variations as fall within the meaning and purview and range of equivalency of the appended claims are therefore intended to be embraced therein.

What it is desired to claim and secure by Letters Patent of the United States is:

1. A unitary foldable blank of fiber board or the like adapted for setting up into a unitary receptacle having relatively tapering sides comprising, a substantially rectangular bottom wall, side wall members extending outwardly from opposite longitudinal marginal side edges of said bottom wall, end flap members extending from opposite end edges of said side walls, end wall members separate from said end flaps extending from opposite ends of said bottom wall, certain of the end members at opposite ends of the bottom and side walls provided with elongated tab receiving openings therethrough, and certain others of said end members provided with slits forming tabs and openings with the tabs integral with said members and bendable along upper edges of said openings, all adapted and arranged whereby to form the blank into a receptacle the said side walls and end wall members are bendable relative to the horizontal bottom wall into substantially upright positions and the end flap members are bendable inwardly relative to the side walls with said end wall and flap members at opposite ends of the receptacle in overlapping position and the said tabs inserted through the said openings of the certain end members and bent upwardly to overlie the upper edges of the openings and inner faces of the certain members and serving as the sole means of securing said end wall and end flap members in overlapping relation.

2. A unitary foldable blank of fiber board or the like adapted for setting up into a unitary receptacle having relatively tapering sides com-

prising, a substantially rectangular bottom wall, side wall members extending outwardly from opposite longitudinal marginal side edges of said bottom wall, end flap members extending from opposite end edges of said side walls, end wall members separate from said end flaps extending from opposite ends of said bottom wall, certain of the end members at opposite ends of the bottom and side walls provided with tab receiving openings therethrough, and certain others of said end members provided with slits forming tabs and openings with the tabs integral with said members and bendable along upper edges of said openings, all adapted and arranged whereby to form the blank into a receptacle the said side walls and end wall members are bendable

5 relative to the horizontal bottom wall into substantially upright positions and the end flap members are bendable inwardly relative to the side walls with said end wall and flap members at opposite ends of the receptacle in overlapping position and the said tabs inserted through the said openings of the certain end members and bent upwardly to overlie the upper edges of the openings and inner faces of the certain members and serving as the sole means of securing said end wall and flap members in overlapping relation, and edging members along and bendable relative to longitudinal edges of the side wall members for reinforcing said edges.

JAMES J. MORGAN.