

S. C. HALEY.
SHIPPING BOX.
APPLICATION FILED DEC. 8, 1910.

1,055,034.

Patented Mar. 4, 1913.
2 SHEETS—SHEET 1.

Fig. 1.

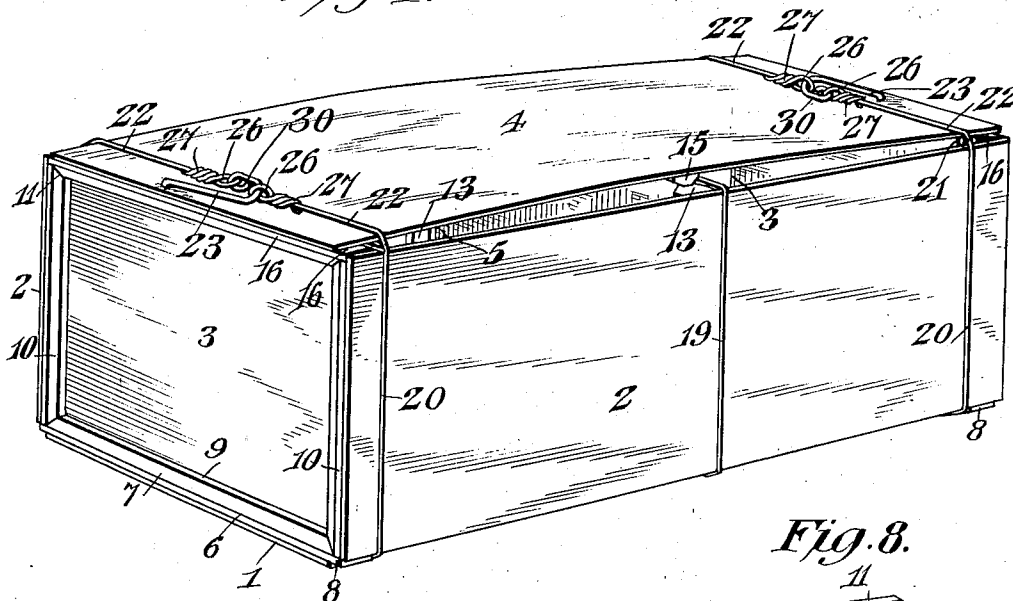


Fig. 8.

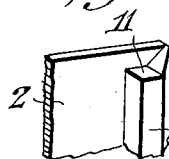
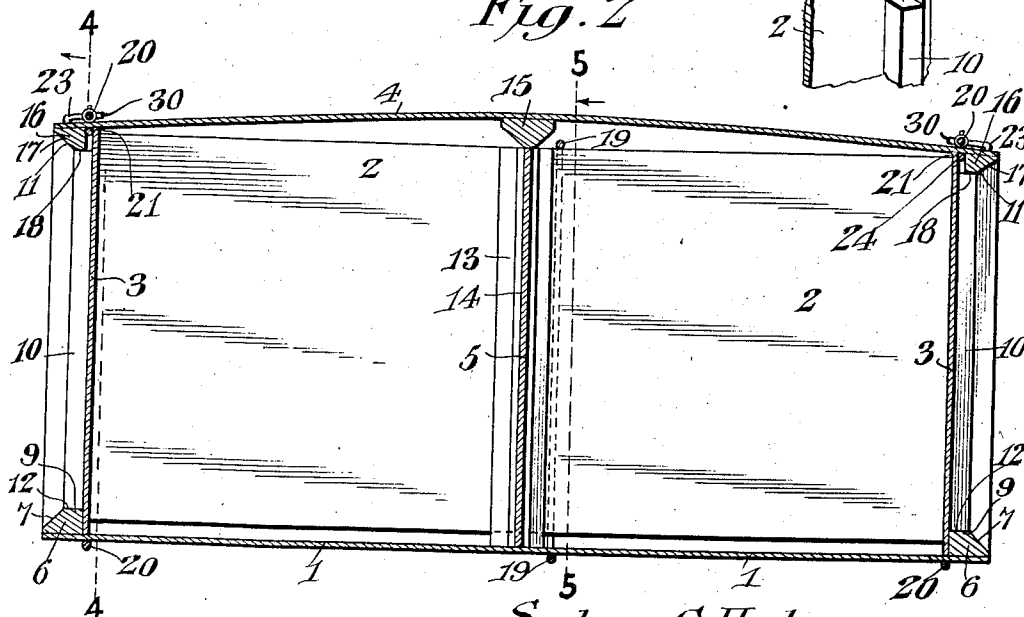


Fig. 2.



WITNESSES

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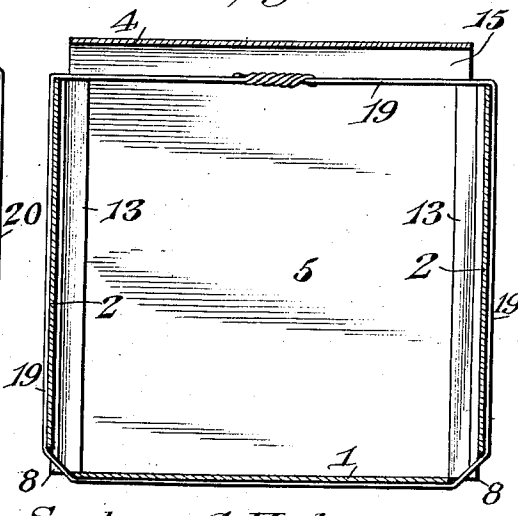
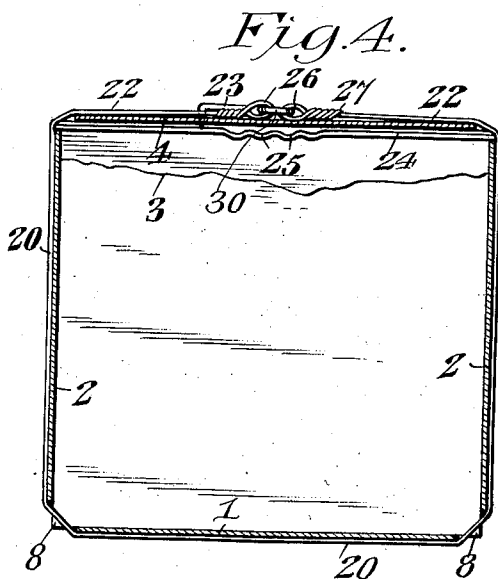
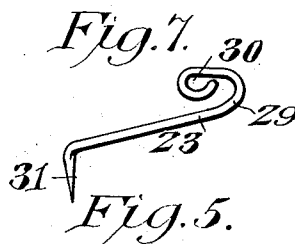
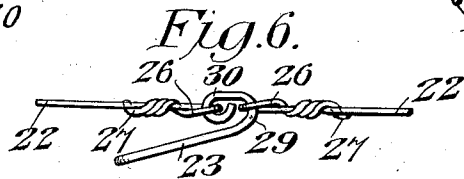
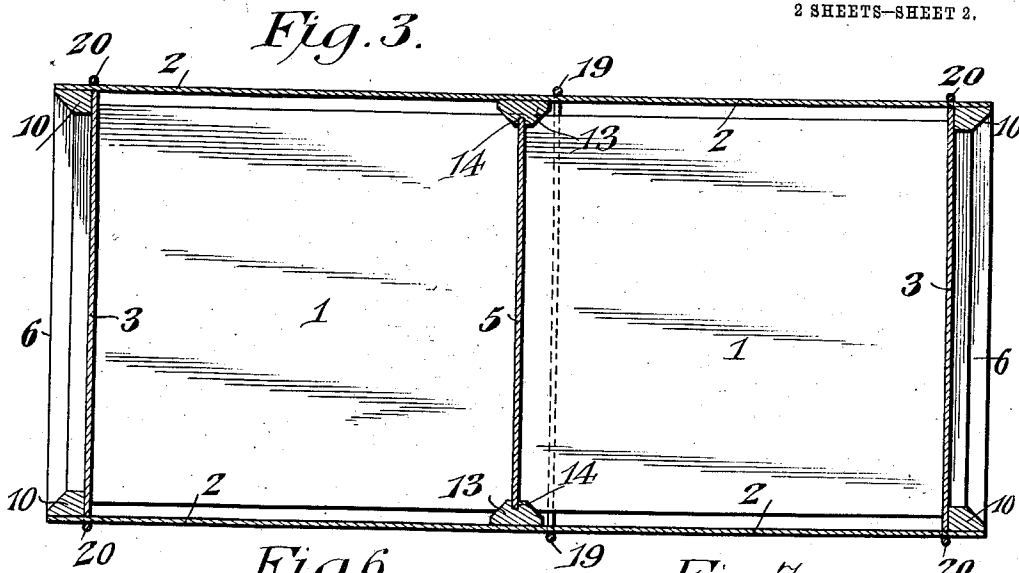
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2 SHEETS-SHEET 2.



WITNESSES

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SHIPPING-BOX.

1,055,034.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed December 8, 1910. Serial No. 596,384.

To all whom it may concern:

Be it known that I, SYDNEY C. HALEY, a citizen of the United States, residing at Eustis, in the county of Lake and State of Florida, have invented a new and useful Shipping-Box, of which the following is a specification.

The invention relates to improvements in boxes for shipping oranges and other produce.

The object of the present invention is to improve the construction of shipping boxes, and to lessen their cost of manufacture, and to effect a material saving in time and labor both in putting the box together at the factory and applying the top only to the same after it has been filled by a packer.

Another object of the invention is to provide a shipping box of this character, adapted to be used in the fields as a picking box, and equipped with means for enabling the top after the box has been packed and closed to be readily removed without tearing the box to pieces, and to be replaced as securely as when originally applied to the body of the box.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a perspective view of a shipping box, constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a horizontal sectional view. Fig. 4 is a transverse sectional view on the line 4—4 of Fig. 2. Fig. 5 is a similar view on the line 5—5 of Fig. 2. Fig. 6 is an enlarged detail view, illustrating the manner of detachably connecting the end of the top engaging extensions of the end hoops. Fig. 7 is a detail view of the cam lever. Fig. 8 is a detail perspective view of a portion of one of the sides of the box.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

In the embodiment of the invention illus-

trated in the accompanying drawings, the box is designed principally for shipping oranges, but it may be advantageously employed for shipping various produce. It comprises in its construction, a bottom 1, sides 2, ends or heads 3, a top 4 and a central transverse partition 5, all constructed of thin material, such as is usually employed in the manufacture of orange boxes. The bottom 1 is provided at its ends with transverse cleats of bars 6, beveled at their outer faces at 7 and having projecting terminals 8 off-setting the sides 2 from the side edges of the bottom to form corner ventilating openings or cracks. The end bars or cleats of the bottom have flat upper faces 9, and vertical inner edges or shoulders against which the bottom portions of the ends or heads 3 abut.

The sides are provided at their ends with vertical end cleats or bars 10, beveled at their outer faces or edges similar to the transverse bottom bars or cleats 6, and provided at their upper and lower ends with recesses 11 and 12, and having inner vertical edges to form stops for the ends or heads 3 of the box. The lower recess 12 has a horizontal bottom wall and an inclined top wall, and it conforms to the configuration of the transverse bottom cleats or bars 6 to interlock the sides of the box to the bottom thereof. The sides are provided at their center with intermediate vertical cleats or bars 13, oppositely beveled at their inner faces and provided with central vertical grooves 14 for the reception of the side edges of the transverse partition 5. The intermediate vertical bars or cleats of the sides 2 extend below the lower edges thereof and rest upon the bottom 1 at the side edges of the latter, as clearly illustrated in Fig. 5 of the drawings. The upper ends of the intermediate vertical bars or cleats and the upper edge of the central transverse partition are substantially in the same plane as the upper edges of the sides 2.

The top 4 is of a length slightly in excess of that of the bottom to enable it to be bowed, as shown in Fig. 2 of the drawings, to enable the oranges to be packed within the box in the usual manner, viz., higher at the center than at the ends. The top is provided with intermediate and end transverse bars or cleats 15 and 16. The transverse bar or cleat 15 extends across the

lower face of the top 4 at the center thereof, and it is oppositely beveled, as clearly shown in Fig. 2 of the drawings, and it rests upon the intermediate vertical cleats of the sides 5 and the central transverse partition 5 and to enable the top to be bowed. The end cleats or bars 16 have beveled outer faces or edges 17 and flat or horizontal lower edges 18 to fit in the upper recesses 11 of the vertical end bars or cleats 10 of the sides 2, whereby the top is interlocked with the sides and held against longitudinal movement when the parts are assembled. In applying the top to the box, the ends of the top are pressed or forced downwardly to arrange the transverse bars or cleats 16 in the recesses 11, and the ends of the box are then located below the plane of the central portion, the box being bowed longitudinally and the intermediate transverse cleat or bar 20 forming a fulcrum for the top.

The body of the box including the bottom, sides, ends and the central partition is connected together by intermediate and end wire hoops 19 and 20, having their terminals welded or otherwise permanently secured together to form continuous hoops or bands. The box is built up within the hoops or bands, which in practice will be supported within a suitable cradle or frame (not shown). The bottom is first placed within the hoops, then the sides are introduced into the same while in an inwardly slanted position, and are placed upon the bottom in engagement with the transverse end bars or cleats thereof. The sides are simultaneously brought to a substantially vertical position by the operator who forces one of the sides from him while drawing the other side to him. The intermediate partition is then driven into the grooves of the strips 13, and the ends or heads are forced into position between the sides and against the end cleats. The upper edges 21 of the ends or heads project above the planes of the upper edges of the sides. By building the interlocking members of the body of the box within the hoops instead of forcing the hoops over and around the body, the box may be easily and rapidly set up by unskilled labor.

The end hoops are provided at the top with opposite ties or extensions 22, which are passed over the end portions of the top and connected together by a locking lever 23. The extensions are preferably formed integral with the sides and bottom of the hoops or bands, and the top portions 24 of the end hoops or bands consist of separate pieces of wire, preferably heavier than the wire of the sides and bottom of the hoops or bands, and provided at their upper portions with crimps or bends 25. The terminals of the top portions 24 are preferably welded to the sides of the hoops or bands,

and the crimped or bent portions render the tops of the end hoops or bands extensible and enable the same to expand when the ends or heads of the box are driven into place, thereby making a snug fit and causing the sides to frictionally engage the ends or heads 3 to retain the same in an upright position until the box is packed. The ends of the extensions are bent on themselves to form loops 26, and the terminals 27 of the wire are twisted, as shown. The loops at the ends of the extensions may be connected together in a variety of ways for fastening the top on the body of the box. In the accompanying drawings I have shown the cam lever 23 for detachably securing the ends of the ties or extensions 22 together. The cam lever 23 is preferably constructed of a single piece of stout wire, and consists of a straight handle portion and a curved engaging portion 29, substantially hook-shaped, as shown, and terminating in an eye 30, which is formed at one of the terminals of the wire. The other terminal of the wire is bent laterally at right angles and pointed to form a spur or prong 31. The eye 30 is linked into the loop of one of the ties or extensions, and the lever is passed through the other loop and is oscillated to carry such loop to the curved hook-shaped portion. This draws the ends of the ties or extensions together and tightly binds the top on the body of the box. When the lever is in its locking position, as illustrated in Fig. 6, it is adapted to be swung over on the side, and the prong or spur is adapted to be driven into the top of the box, whereby the lever is securely retained in its locked position. The spur pierces the veneer and is embedded in the end cleat 16 of the top 4. By this construction the hand lever may be operated in an upright position, and then secured in a horizontal position. The body of the lever is adapted to be disengaged from the top of the box without releasing the connected ends of the loops, so that it is not necessary to drive the spur into the top to fasten the latter on the body. The fastening means will enable the top of the box to be removed without tearing the box to pieces, and it may be replaced and fastened in position with equal facility. The end hoops or bands encircle the box at the outside of the ends or heads, and the pressure or tension is sufficient to retain the hoops or bands in position. The projecting terminals of the end cleats of the bottom besides off-setting the sides to form the ventilating openings or cracks extend slightly beyond the hoops and serve as stops to prevent the end hoops or portions from slipping off the box.

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

1. A shipping box comprising a body in-

cluding a bottom, sides and ends, continuous hoops or bands encircling the body and provided at opposite sides thereof with ties or extensions, and a cover fitted on the body over the hoops or bands and secured by the ties or extensions, which are extended across the outer face of the cover.

2. A shipping box comprising a body including a bottom, sides and ends, continuous transversely disposed hoops or bands encircling the bottom and sides and extending across the open top of the body, a cover fitted on the body over the hoops or bands, and ties or extensions passed over the cover and connected to the opposite sides of the hoops or bands below the cover, whereby the cover may be detached without removing the hoops from the body.

3. The combination with a box body including a bottom, sides and ends, a top, and

a continuous hoop or band encircling the body below the top and provided at opposite sides of the box with ties having terminal loops and extended across the outer face of the top, and a lever connected at one end to one of the loops and provided adjacent to the same with a curved hook-shaped portion adapted to be passed through the other loop for securing the ties together, said lever being provided at its other end with a laterally projecting spur adapted to be driven into the top.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

SYDNEY CLARK HALEY.

Witnesses:

HELEN EVELYN HALEY,
ELIZABETH CLARK HALEY.