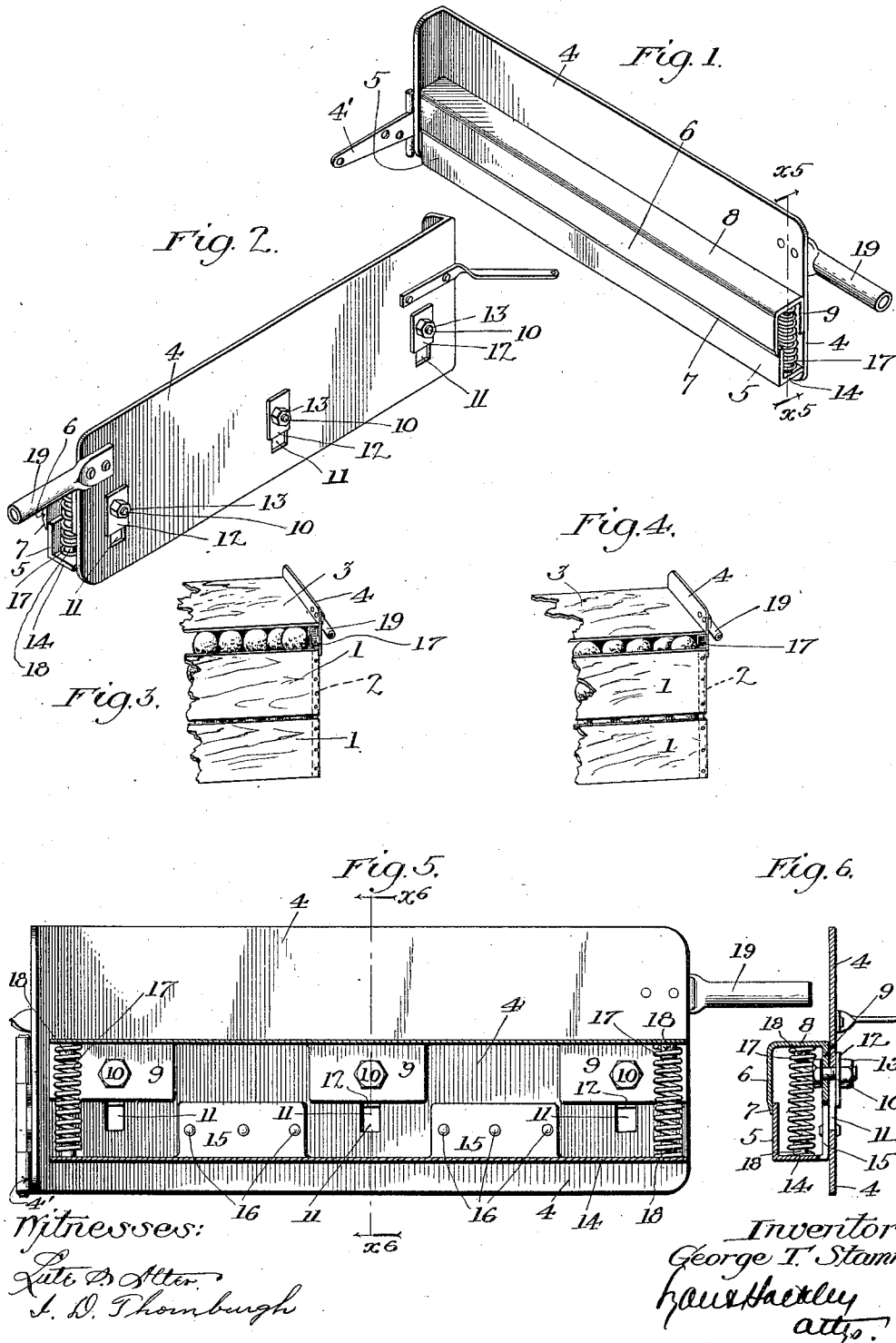


G. T. STAMM.
ORANGE BOXING DEVICE.
APPLICATION FILED SEPT. 25, 1911.

1,030,342.

Patented June 25, 1912.

2 SHEETS-SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 7.

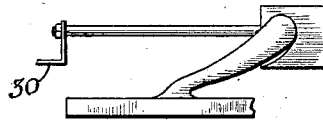
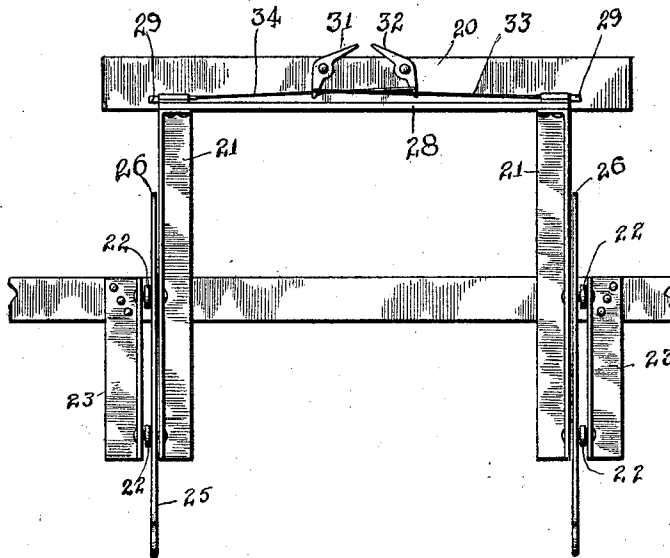


Fig. 8.

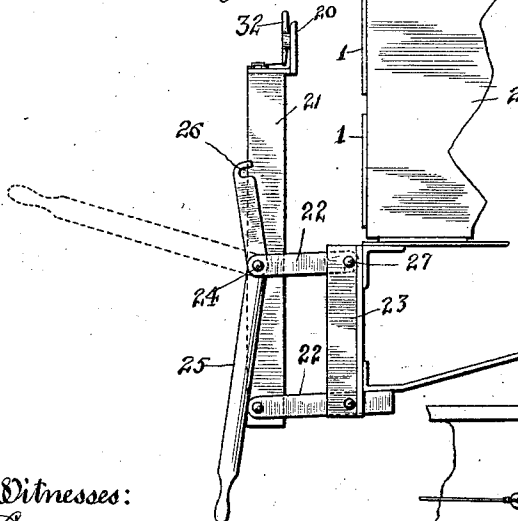
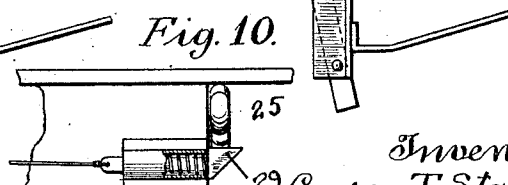


Fig. 9.

Fig. 10.



Witnesses:

Edw. D. Allen
A. D. Thornburgh

Inventor:

George T. Stamm
John Mackley

UNITED STATES PATENT OFFICE.

GEORGE THEODORE STAMM, OF UPLAND, CALIFORNIA.

ORANGE-BOXING DEVICE.

1,030,342.

Specification of Letters Patent.

Patented June 25, 1912.

Application filed September 25, 1911. Serial No. 651,283.

To all whom it may concern:

Be it known that I, GEORGE T. STAMM, a citizen of the United States, residing at Upland, in the county of San Bernardino and State of California, have invented a new and useful Orange-Boxing Device, of which the following is a specification.

This invention relates to a device adapted to be employed in boxing oranges, and the object of the invention is to provide a device whereby the upper oranges in the box are prevented from being squeezed and the skin bruised between the ends or sides of the box and the cover when the cover is being placed in position for nailing.

Referring to the drawings: Figure 1 is a perspective view of one side of the device. Fig. 2 is a perspective view of the other side of the device. Fig. 3 is a perspective view of a portion of a box, showing the cover about to be moved down into nailing position, the orange protecting device being shown in position. Fig. 4 is a view similar to Fig. 3, showing the cover moved down nearly into nailing position with the centers of the oranges pressed below the upper edge of the box end. Fig. 5 is a section on line x^5-x^5 of Fig. 1. Fig. 6 is a section on line x^6-x^6 Fig. 5. Fig. 7 is a front elevation of the side guard. Fig. 8 is an end elevation of the side guard with part of the box broken away, showing the side guard in relaxed position. Fig. 9 is a view similar to Fig. 8, showing the side guard closed. Fig. 10 is an enlarged plan view of the lock for holding the lever which operates the said guard.

The boxes in which the oranges are to be packed have thin side pieces 1 nailed to thick end pieces 2, and the cover 3 is nailed to the ends 2 after the oranges have been placed in the box. After the oranges have been placed in the box, the uppermost oranges usually lie, as indicated in Fig. 3, with their centers above the upper edge of the side pieces 1 and end pieces 2, and heretofore when the cover 3 has been forced down into nailing position, the skins of the upper oranges, were often bruised between the cover and the end pieces and side pieces on account of the greater diameter of the oranges being above the upper edges of the sides 1 and end pieces 2, so that the overhanging portions of the oranges at the ends and sides were interposed between the upper edge of the end and side pieces and the

cover and as the cover was forced down, the interposed portion of the orange was squeezed, and its skin bruised between the cover and the end and side pieces and the fruit thus bruised would not keep.

The present invention prevents the bruising referred to, which is accomplished by interposing a collapsible guard between the box end and box cover, which guard will press the end row of oranges inward and prevent their bulging portions from becoming interposed between the box cover and box end as the box cover is moved down into nailing position, the guard automatically collapsing as the cover is thus moved down until the guard has been collapsed to its least width, at which time the oranges have been moved so low that their greater diameters are below the upper edge of the end and at this time the guard is then removed and the cover and oranges may be forced down to bring the cover to final nailing position, as by this time the greater diameters of the end oranges bear directly against the end piece 2.

The end guard comprises a plate 4 having a hinge 4', by means of which it may be secured to a boxing machine, not necessary to show herein, the hinge permitting the guard to be swung out of the way when not in use. The collapsing members of the guard comprise a lower plate 5 and an upper plate 6 which overlaps the lower plate 5 and has a beveled edge 7 to prevent bruising oranges when the plate 6 is moved down. The plate 6 unites with a top plate 8 and the latter has three down-turned lugs 9, there being a stud 10 in each lug which passes through a slot 11 in the plate 4 and thereby slidably supports the guard member 6. A washer 12 is arranged between the plate 4 and the nut 13 on each stud 10.

The bottom guard member 5 is supported by a bottom bar 14 having two up-turned lugs 15 which may be secured in any desired manner, as by rivets 16 to the plate 4, the lugs 15 being received in the spaces between the lugs 9 of the upper guard member 6 when the latter is depressed. Coil compression springs 17 are arranged between the ends of the bars 8 and 14 and serve to normally hold the bar 8 and guard member 6 in elevated position, studs 18 holding the springs in position. A handle 19 is secured to the plate 4, whereby the device may be swung into or out of operative position.

In use, after the box has been filled with oranges, the device is swung into position so that the collapsible members of the guard lie between the upper edge of the end piece 2 and the top 3, as shown in Fig. 3, the plates 5 and 6 thus bearing against the outer end row of oranges and forcing the latter inward sufficiently to bring the end oranges safely within the vertical plane of the inner face of the end piece 2. To this end, the bars 8 and 14 are of a width slightly greater than the thickness of the end piece 2, as indicated in Fig. 3. The device having been placed in this position, the cover 3 is then rested upon the top bar 8 and then pressed down, forcing the upper bar 8 and its guard member 6 down, and pressing the spring 17 until the parts assume the position shown in Fig. 4. As the cover is thus pressed down, the guard members 5 and 6 form a smooth surface against which the outer oranges bear and along which they slide or roll as the cover is pressed down without the skins becoming abraded or bruised. After the cover has been pressed down into position shown in Fig. 4, the centers or larger diameters of the oranges are below the upper edge of the end pieces and at such time, the guards are swung out, the oranges being retained then by the end pieces 2 of the box and after the guard members have been swung out from between the cover and end pieces, the cover is moved down into final nailing position close against the end pieces, and during this final downward movement of the cover, the larger diameters of the oranges rest against the end pieces so that there are no portions of the oranges which protrude or are interposed between the cover and the end pieces and thus the skins of the oranges are not pinched or bruised during the final downward movement of the cover 3.

Figs. 7 to 10 inclusive, show the side guard mechanism consisting of the guard plate 20 which is supported by two vertical arms 21, each arm 21 being pivotally supported by a pair of links 22, the links 22 being pivoted to a bracket 23, the links 22 causing the arm 21 to always maintain a position parallel to the box. Pivoted at 24 at each arm 21 is a hand lever 25 with a notched end 26. When the side guard is to be swung up to guard the oranges against being bruised against the sides of the box the lever 25 is pulled up into the position shown by dotted line in Fig. 8, which causes the end 26 to engage with the projecting end of the pivot 27, whereupon further upward swinging movement of the lever 25 carries the link 22 upward with it and likewise the arm 21, and both levers 25 should be operated in unison so that arms 21 will be moved up without straining the top bar 28 which unites them. When the levers 25 are thus moved up the parts assume the position

shown in Fig. 9, the guard 20 standing with its inner face flush with the inner faces of the sides of the box 1, so that as the cover is moved down the oranges in the top layer are prevented from being squeezed outwardly and abraded or bruised by the edge of the side 1. Each lever 25 is detachably locked in the position shown in Fig. 9 by a sliding latch-bolt 29 shown in detail in Fig. 10, the latch-bolt acting automatically to engage the lever 25 so that the guard 20 is positively held in position during the downward movement of the cover 3, after which the levers 25 may be released by downward movement of a plate 30 which presses upon two pivoted levers 31 and 32, see Fig. 7, the lever 31 being connected by connection 33 with the latch-bolt 29 at the right and lever 32 being connected by connection 34 with latch-bolt 29 at the left. As the plate 30 moves down it depresses both levers 31 and 32 which act through their connections 33 and 34 to withdraw the latch-bolt 29.

What I claim is:

1. An orange boxing device comprising a collapsible guard provided with guard plates to hold the oranges away from the end pieces of the box as the box cover is moved down.

2. An orange boxing device comprising a plate, a stationary guard member secured to the plate, another guard member slidably secured to the plate and overlapping the first guard member.

3. An orange boxing device comprising a plate, a stationary guard member secured to the plate, another guard member slidably secured to the plate and overlapping the first guard member, and yielding means for normally holding the slidable guard member in extended position from the stationary guard member.

4. An orange boxing device comprising a slotted plate, a stationary guard member secured to the plate, another guard member overlapping the first guard member, studs extending from the first guard member through the slots in the plate, and compression springs between the stationary and movable guard members.

5. An orange boxing device comprising a plate, a stationary guard member secured to the plate, another guard member slidably secured to the plate and overlapping the first guard member, a hinge at one end of the plate, and a handle at the other end of the plate.

6. A side guard comprising a guard plate, vertical arms supporting said plate, a pair of links operating each arm, levers for swinging said arms into guarding position, means for detachably locking said guard in guarding position, and means for releasing said locking means.

7. A side guard comprising a guard plate, vertical arms supporting said plate, a pair

of links operating each arm, levers for swinging said arms into guarding position, means for detachably locking said guard in guarding position, means for releasing said locking means, means permitting said levers to swing independently of said arms through a definite movement.

8. A side guard comprising a guard plate, vertical arms supporting said guard plate, means for swingingly supporting said arms to permit the guard plate to be moved into or out of guarding position, levers for swinging said guard plate into guarding position, latch-bolts for engaging said levers when the guard is in guarding position, pivoted levers carried by the guard plate, connections from said levers to the respective latch-bolts and means for tilting said last named levers.

9. An orange boxing device comprising a collapsible guard provided with guard plates to hold the oranges away from the end

pieces of the box as the box cover is moved down, a stationary guard member secured to the plate, another guard member slidably secured to the plate and overlapping the first guard member, a hinge at one end of the plate, a handle at the other end of the plate, a side guard comprising a guard plate, vertical arms supporting said plate, a pair of links operating each arm, levers for swinging said arms into guarding position, means for detachably locking said guard in locking position, means for releasing said locking means, means permitting said levers to swing independently of said arms through a definite movement.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 14th day of September 1911.

GEORGE THEODORE STAMM.

In presence of—

G. T. HACKLEY,
GLADYS RUSSELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."