April 24, 1934. H. J. HEWITT 1,956,444

COLLAPSIBLE CRATE AND BOX

Filed July 15, 1932

Fig. 1.

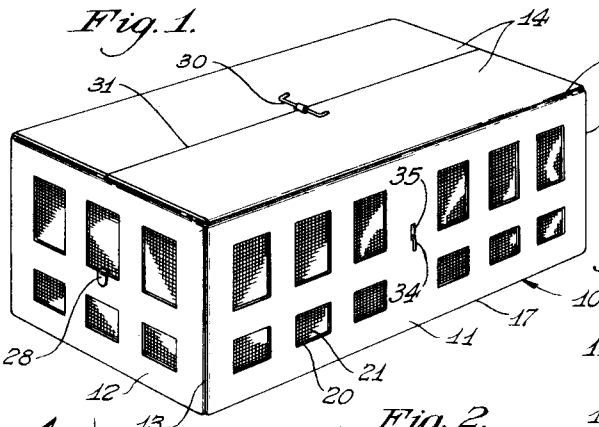


Fig. 3.

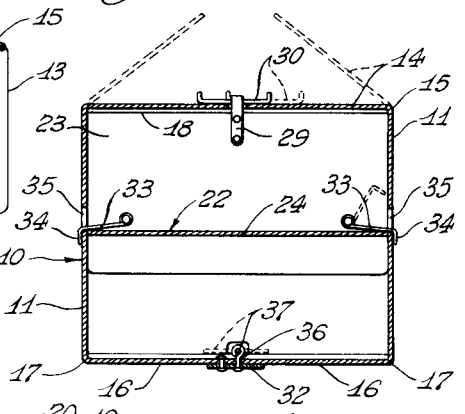


Fig. 2.

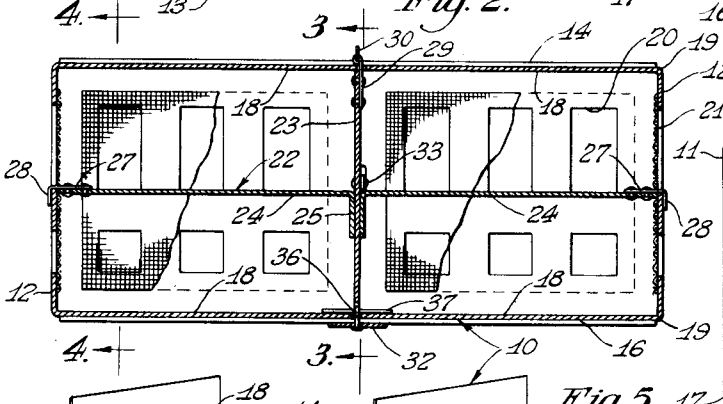


Fig. 4.

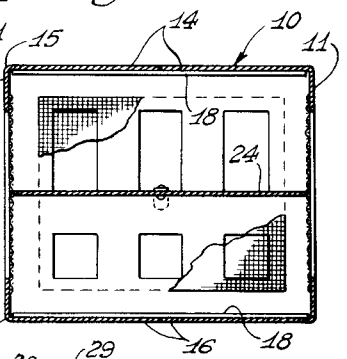


Fig. 5.

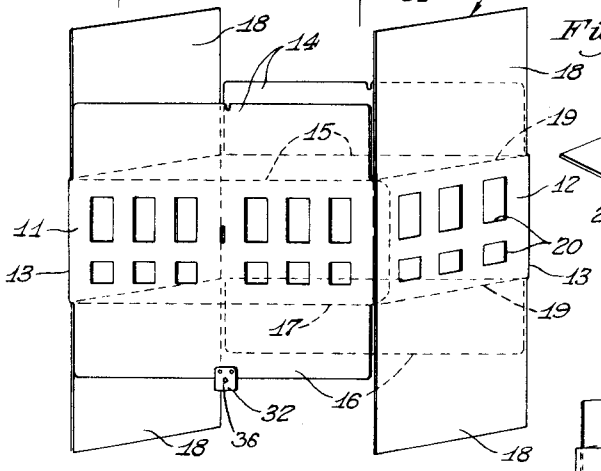


Fig. 6.

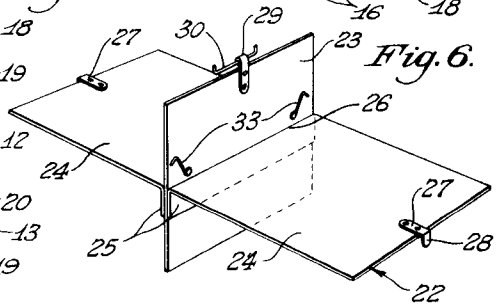


Fig. 9.

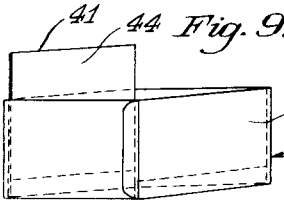


Fig 10

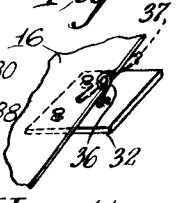


Fig. 7.

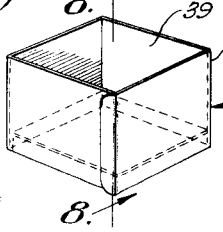
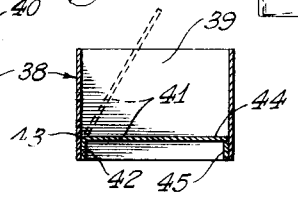


Fig. 8.



WITNESS:

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HIS ATTORNEYS

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UNITED STATES PATENT OFFICE

1,956,444

COLLAPSIBLE CRATE AND BOX

Henry J. Hewitt, Chicago, Ill.

Application July 15, 1932, Serial No. 622,726

2 Claims. (Cl. 229—15)

This invention relates to certain novel improvements in a collapsible crate and box, and has for its principal object the provision of an improved construction of this character which will be highly efficient in use and economical in manufacture.

An object of this invention is to provide an improved collapsible shipping crate for articles of merchandise, such, for example, as fruits, or other edibles, which may be shipped collapsed or flat for convenience and economy in transportation, and which may be readily opened up for use.

Another object of the invention is to provide new and collapsible boxes which may be shipped flat or collapsed, for convenience and economy in transportation, and which may be readily opened up and placed in the compartments of the new crate for use.

Other objects of the invention are: to provide a new and collapsible partition member insertible into the crate to divide the same into a plurality of compartments; to provide novel latching means for holding the crate in opened position; and to construct the crate so that it will be properly ventilated to prevent decay of the edibles shipped therein.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing, showing the preferred form of construction and in which:

Fig. 1 is a perspective view of the new crate in expanded or opened position;

Fig. 2 is a longitudinal vertical sectional view of the new crate shown in Fig. 1;

Fig. 3 is a transverse sectional view on line 3—3 in Fig. 2;

Fig. 4 is a transverse sectional view on line 4—4 in Fig. 2;

Fig. 5 is a perspective view of the new crate in partially collapsed position;

Fig. 6 is a perspective view of the new collapsible partition element of the new crate;

Fig. 7 is a perspective view of one of the new collapsible boxes insertible into the new crate;

Fig. 8 is a sectional view on line 8—8 in Fig. 7;

Fig. 9 is a perspective view of the new box, illustrated in Figs. 7 and 8, shown in collapsed position; and

Fig. 10 is a detail fragmentary view illustrating the latching means for the bottom flaps of the crate.

The new collapsible crate is preferably made of fibrous material such as, for example, fibre board, and is generally indicated at 10. The new crate includes side and end walls 11 and 12, respectively, hingedly connected together along fold lines 13; top closure flaps 14 hingedly connected to the side walls 11 along fold lines 15; bottom closure flaps 16 hingedly connected to the side walls 11 along fold lines 17; and top and bottom end closure flaps 18 hingedly connected to the end walls 12 along fold lines 19.

To properly ventilate the new crate to prevent decay of the edibles shipped therein, openings 20 are provided in the side and end walls 11 and 12 of the crate, and over these openings 20, on the inside of the crate, are arranged strips of reticulated material or mesh 21 to prevent access of insects, and foreign objects to the interior of the crate when the same is in expanded or open position.

To divide the crate into compartments, a new collapsible partition member, generally indicated at 22, is provided. This partition member includes a vertical partition element 23 and horizontal partition elements 24. These horizontal partition elements 24 have portions 25 attached to the element 23 and are hingedly connected to the element 23 along fold lines 26 formed at the upper edges of the portions 25.

To secure the collapsible horizontal partition elements 24 in extended position in the crate 10 a supporting element 27 is attached to the outer end of each partition element 24. These supporting elements have angled end portions 28 which are projectible through openings 20 in the end walls 12 and down the outside of and parallel to the latter so as to support the partition elements 24 in extended position.

Pivotally mounted on the partition element 23 are latching elements 33 which have angled end portions 34 projectible through openings 35 in the side walls 11 to hold the vertical partition element 23 in position in the crate.

Attached to the vertical partition element 23 is a supporting bracket 29 in which is slidably mounted a latching pin 30. To latch the crate in closed position the top, end closure flaps 18 are collapsed into horizontal position parallel to each other. One of the top closure flaps 14 is then brought down into closed position and the latching pin 30 is then retracted (dotted lines, Fig. 3) over the closed flap 14 whereupon the other closure flap 14 is moved into closed position parallel to the first-named flap 14. The latching pin 30

is then slid (to the left, Fig. 3) into position to straddle the meeting edges 31 of the closure flaps 14.

A latch plate 32 is attached to one of the bottom closure flaps 16 so as to straddle the meeting edges of these flaps 16. Mounted in this plate is a swivel pin 36 in which is mounted a latching pin 37. To latch the bottom closure flaps 16 in opened or expanded position the bottom end closure flaps 18 are brought into closed position parallel to each other and the flaps 16 are then moved into closed position parallel to each other so that the plate 32 straddles the meeting edges of these flaps 16; whereupon the swivel pin 36 is rotated so that the latch pin 37 straddles the meeting edges of the closure flaps 16.

The new collapsible fruit box is generally indicated at 38. This box may be made of any suitable material, such as, for example, fiber, and includes side walls 39 hingedly connected along fold lines 40. The box 38 includes a bottom member 41 which has a portion 42 attached to one of the side walls 39. The bottom member 41 includes a portion 44 that is hingedly connected to the portion 42 along a fold line 43. Attached to one of the side walls 39 of the box 38 is a strip 45 upon which one end of the portion 44 of bottom member 41 rests when the box 38 is in opened position. The boxes 38 being collapsible, may be readily packed and transported, and may be readily opened up for arrangement in the various compartments of the crate 10.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification, without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. A collapsible crate including side walls and having end walls provided with openings extending laterally therethrough, a collapsible partition arranged in said crate and dividing the same into compartments, said partition including a vertical center piece and horizontally extending portions projecting laterally from said vertical piece and supporting elements attached to said horizontal portions at the ends thereof, said supporting elements having downwardly angled end portions projected through said openings and bearing upon the said side walls of the crate to support the said horizontal portions of the partition in extended position in the crate.

2. A collapsible crate including a box-like body having an open top and closure flaps hingedly attached to said body to close said open top, a vertical partition in said crate, a latching pin slidably mounted between its ends upon said partition at the top thereof for movement in a direction parallel to the longitudinal axis of said partition, whereby said pin may be slid toward one end of the partition to allow one of said flaps to be moved downwardly upon said partition into closed position whereupon the said pin may be slid in a direction opposite to the first-named direction and projected over the said first-named and closed flap to allow the other of said flaps to be moved downwardly upon the said partition into closed position after which and when both flaps are closed the said latch pin may again be slid in the direction of its first-named movement to span the meeting edges of the flaps and thus keep both of the flaps latched in closed position.

HENRY J. HEWITT.