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FOLDING CRATE.

APPLICATION FILED MAY 24, 1917.

1,282,117. Patented Oct. 22, 1918.

Fig. 1.

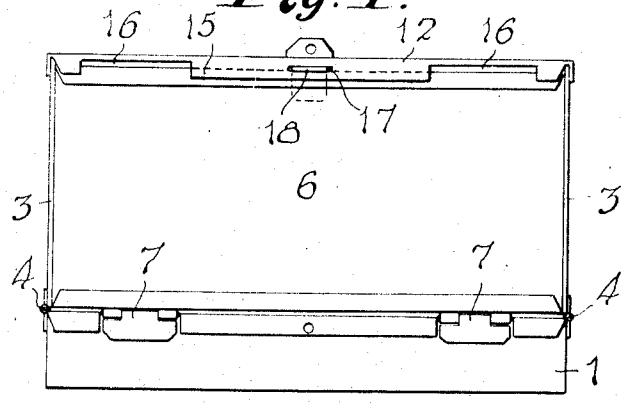


Fig. 2.

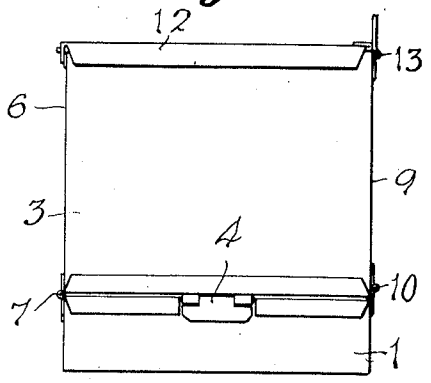


Fig. 4.

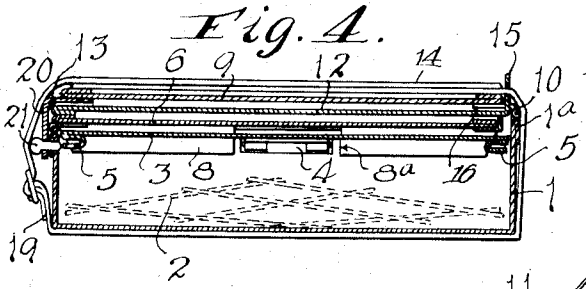


Fig. 3.

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FOLDING CRATE.

1,282,117. Specification of Letters Patent. Patented Oct. 22, 1918.

Application filed May 24, 1917. Serial No. 170,689.

To all whom it may concern:

Be it known that we, CLARENCE OBERLIN OLLOM and OTHO HICKMAN, citizens of the United States, residing at Huntington, in the county of Cabell, State of West Virginia, have invented a new and useful Folding Crate; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to certain new improvements in collapsible crates, and has for its object to provide a device of this character which embodies novel features of construction whereby it can be filled to its capacity when originally shipped and then collapsed for return to the shipper, thereby reducing to a minimum transportation charges for the return of the crate and enabling the crate to be used repeatedly.

Further objects of the invention are to provide a collapsible crate which is comparatively simple and inexpensive in its construction, which can be quickly extended into operative position or collapsed into a small amount of space, which provides a rigid crate which can be safely used in handling fragile articles such as eggs, and which will withstand the rough handling to which such devices are ordinarily subjected when in use.

With these and other objects in view, the invention consists in certain novel combinations and arrangements of the parts as will more fully appear as the description proceeds, the novel features thereof being pointed out in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which:—

Figure 1 is a front elevation of a folding crate constructed in accordance with the invention, showing the same in an extended position.

Fig. 2 is an end view thereof.

Fig. 3 is a detail perspective view of the crate with the sides thereof unfolded preparatory to collapsing the same.

Fig. 4 is an enlarged transverse vertical sectional view through the crate in a collapsed condition.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, which illustrate one embodiment of the invention, the numeral 1 designates a shallow tray shaped base which is ordinarily of just a sufficient depth to admit of the usual fillers or partitions 2 being packed therein when the crate is collapsed. These fillers may be of the kind usually employed in packing eggs, and may be formed of sheet metal or any other suitable material. The rear side of the shallow base 1 is preferably extended slightly above the front and ends of the base, as indicated at 1^a.

The ends 3 of the crate are loosely connected at their lower edges to the corresponding ends of the shallow base 1 by means of comparatively narrow and centrally disposed hinges 4. These ends 3 are formed of sheet metal, and the vertical edges thereof are returned inwardly and then bent outwardly to provide channels 5 which extend the full length of the said vertical edges. The front 6 of the crate has the lower edge thereof loosely connected by a pair of hinges 7 to the front of the base 1, and the vertical edges of the front are formed with inwardly projecting flanges 8 adapted to fit within the before mentioned channels 5 of the ends 3 when the crate is set up for packing purposes. These end flanges 8 of the front 6 are cut-away at their middle portion as indicated at 8^a in order that they may clear the hinges 4 of the crate ends 3 when the crate is folded. In folding the crate the ends 3 are first swung inwardly and the front 6 then folded inwardly against the said ends, the flanges 8 fitting between the lower edges of the ends 3 and the ends of the base 1 and the hinges 4 of the ends being received within the cut-away portions 8^a of the said flanges. The back 9 is loosely connected by a pair of hinges 10 to the upper edge of the extension 1^a at the rear side of the base 1, the ends of the back being formed with flanges 11 which correspond to the flanges 8 of the front, and are designed to be received within the rear channels 5 of the ends 3 when the crate is assembled for use.

The top 12 is permanently connected by hinges 13 to the upper edge of the back 9, and is formed with side flanges 14 and a front flange 15. These flanges 14 and 15 fit around the sides and front of the crate when the crate is set up in position for packing and the cover is closed. A pair of cut-away

portions 16 are provided in the front flange 15 toward opposite ends thereof, said cut-away portions being positioned to correspond to the position of the hinges 10 at the lower edge of the back 9. The middle portion of the front flange 15 is resilient and is slotted at 17 to form a latch member adapted to spring over a lug 18 at the upper edge of the front 6 when the cover is closed. In collapsing the crate, the cover or top 12 is folded tightly against the inner face of the back 9 with the side flanges thereof embracing the edges of the back 9, and the front flange 15 thereof inserted between the lower edge of the back and the rear side of the base 1, the hinges 10 at the lower edge of the back being received within the cut-away portions 16. The top 12 and back 9 are next folded over against the front 6, which has previously been collapsed against the inwardly folded ends 3, as previously described. The slight extension 1^a at the rear of the base 1 compensates for the combined thickness of the top 12 and back 9 and enables these members to be folded flat against the front 6. The slotted portion 17 of the flange 15 of the top 12 then projects upwardly from one side of the collapsed crate and, if desired, this may be utilized to receive a strap or cord 19 for holding the crate in a collapsed condition. The rear edge of the top 12 is also shown as provided with a locking ear 20 which fits against the front of the base 1 when the crate is collapsed, and which may be secured thereto by some suitable fastening member 21.

This construction admits of the crate being quickly collapsed or set up in position for packing, and when the crate is in use the end flanges 8 of the front and the corresponding flanges 11 of the back fit tightly within the channels 5 of the ends 3 to provide a rigid construction which locks the parts securely together and enables the crate to be used with safety for the packing of eggs or fragile articles. When the crate is collapsed the fillers or partitions 3 will be received within the shallow base 1, and everything will be folded into a small amount of space so that the crate can be returned to the shipper at a very slight expense.

Having thus described the invention, what we claim as new and desire to secure by Letters Patent, is:—

1. A folding crate including a shallow box shaped base, ends connected to the ends of the base by narrow centrally arranged hinges and foldable inwardly, the vertical edges of the ends being formed with outwardly facing channels, a front hinged to the front of the base and provided with end flanges adapted to be received within the corresponding channels of the ends when the crate is extended, said flanges fitting between the lower edges of the ends and the base when the crate is folded and being cut away at their middle portions to clear the hinges of the ends, and a back hingedly connected to the back of the base and formed with end flanges adapted to be received within the corresponding channels of the ends when the crate is extended, said back being foldable over the front when the crate is collapsed.

2. A folding crate including a shallow box shaped base having an upward extension at the rear side thereof, ends hingedly connected to the ends of the base and foldable inwardly, a front hingedly connected to the front of the base and foldable inwardly upon the ends, a back connected by spaced hinges to the rear extension of the base, and a cover hingedly connected to the upper edge of the back and formed with a front flange fitting around the front of the crate when the latter is extended and received between the lower edge of the back and the extension of the base when the cover is folded against the inner face of the back to collapse the crate, said flange being cut-away to provide a clearance space for the hinges between the back and the extension of the base.

3. A folding crate including a shallow box shaped base having an upward extension at the rear thereof, ends hingedly connected to the ends of the base and foldable inwardly, a front hingedly connected to the front of the base and adapted to be folded over the collapsed ends, the swinging edge of the front being formed with an outstanding lug, a back connected to the rear extension of the base by spaced hinges, a cover hingedly connected to the upper edge of the back and collapsible against the inner face thereof when the crate is folded, said cover being formed with a front flange which fits around the front of the crate when the crate is extended, and which is received between the lower edge of the back and the rear extension of the base when the crate is folded, said flange being provided with cut-away portions to clear the hinges and being slotted to form a latch for engagement with the before mentioned lug projecting from the front when the crate is extended, and a strap extending around the collapsed crate and passing through the slotted portion of the flange to hold the crate in a folded condition.

4. A folding crate including a shallow box shaped base having an upward extension at the rear thereof, ends connected to the ends of the base by narrow centrally arranged hinges and collapsible inwardly, said ends being provided at their vertical edges with outwardly facing channels which extend throughout the length of the said vertical edges, a front hinged to the front of the base and provided with end flanges adapted

to fit within corresponding channels of the ends when the crate is extended, said front being foldable over the ends when the crate is collapsed and the side flanges thereof then fitting between the lower edges of the ends and the ends of the crate, said flanges being provided with cut-away portions to clear the hinges of the ends, a back connected to the rear extension of the base by spaced hinges and provided at its ends with flanges adapted to engage the corresponding channels of the ends when the crate is extended, and a cover hingedly connected to the back and formed with a front flange adapted to fit around the front of the crate when the crate is extended said cover being foldable against the inner face of the back with the front flange thereof received between the lower edge of the back and the rear extension of the base when the crate is collapsed, said front flange of the cover being provided with cut-away portions to clear the hinges at the bottom of the back, and the upward extension at the rear of the base compensating for the combined thickness of the cover and back so that they can fold tightly against the front when the crate is collapsed.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CLARENCE OBERLIN OLLOM.
OTHO HICKMAN.

Witnesses:
J. W. HARMAN,
K. M. MEADOWS.