T. A. RHODES.

CRATE OPENER.

APPLICATION FILED SEPT. 19, 1918.

1,312,873. Patented Aug. 12, 1919.

Fig. 1.

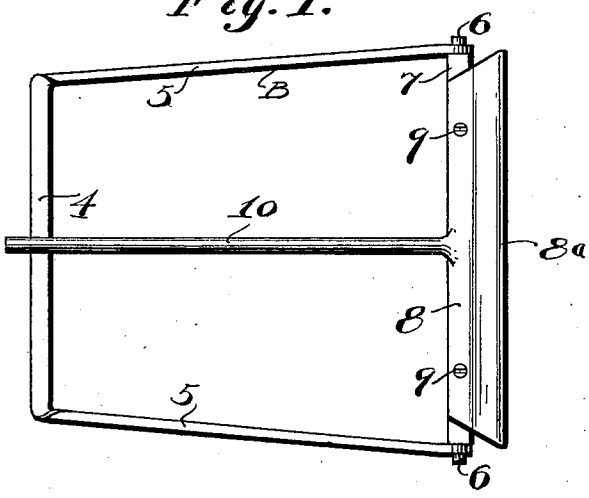


Fig. 2.

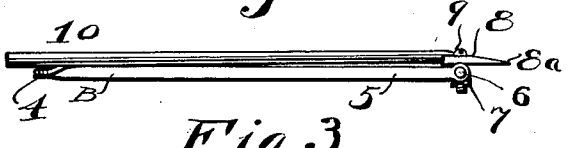


Fig. 3

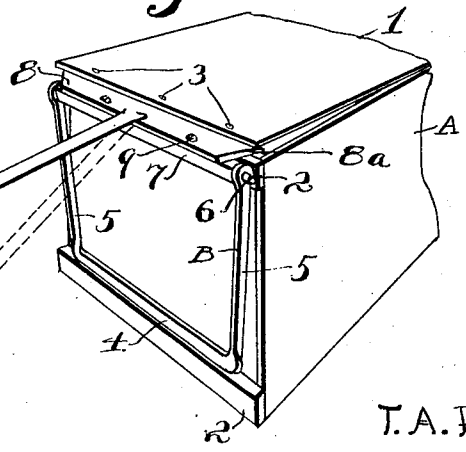
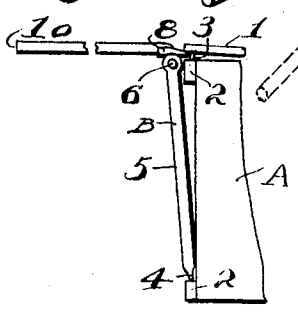


Fig. 4.



Inventor

T. A. RHODES.

By H. S. Hill

Attorney

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THURMAN ALLEN RHODES, OF ALTAMONT, ILLINOIS.

CRATE-OPENER.

1,312,873. Specification of Letters Patent. Patented Aug. 12, 1919.

Application filed September 19, 1918. Serial No. 254,707.

To all whom it may concern:

Be it known that I, THURMAN ALLEN RHODES, a citizen of the United States, residing at Altamont, in the county of Effingham, State of Illinois, have invented a new and useful Crate-Opener; and I 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 a device for removing the covers of egg crates and like containers, and has for its object to provide a device of this character which embodies novel features of construction whereby the thin and securely nailed covers of such containers can be easily removed without loss of time and without splitting and mutilating the covers. thereby enabling the covers to be used repeatedly and avoiding the loss which is incident to replacing broken covers with new covers. This opener can be used in opening orange and lemon boxes as well as egg cases and other crates of similar construction.

The conventional shipping crate for eggs and like articles of produce is constructed of light wood or veneer and when the cover is securely nailed in position it is difficult to remove the same without splitting or mutilating it to such an extent that it is not practical to use it again. Eggs must be frequently inspected and it is necessary to remove the cover of the crate each time the eggs are handled and candled. At the present time these crate covers cost five cents each, and it will be readily understood that where large consignments of eggs are frequently inspected the loss incident to replacing broken crate covers amounts to a very considerable sum of money.

The object of the present invention has accordingly been to provide a practical and inexpensive opening device by means of which the securely nailed veneer covers can be quickly removed without damaging the same, thereby saving loss of time in opening the crates and avoiding the loss which is incident to furnishing new lids for practically nine out of every ten crates opened.

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 top plan view of a crate opener constructed in accordance with the invention.

Fig. 2 is a side elevation of the same.

Fig. 3 is a perspective view of one end of an egg crate showing the cover opener applied thereto in operative position.

Fig. 4 is an end view of the cover opener, showing the position assumed by the same when initially applied to an egg crate, the handle being broken away.

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

For the purpose of illustration the opener is shown as applied to a conventional egg crate A which has the usual cover 1 at the top thereof and the usual horizontal cleats 2 at the ends thereof, the cover being secured in position by the usual nails 3. The opener includes a frame B which is adapted to be fitted against the end of the crate A in a substantially upright position with the lower end thereof resting upon the upper edge of the bottom cleat 2. This frame may conveniently have a U-shaped configuration and include a cross bar 4 and side pieces 5, as shown on the drawing. When the crate is in operative position the cross piece 4 rests upon the bottom cleat 2 of the crate with the frame in an upright position. The sides 5 of the frame are provided at their upper ends with bearings which receive trunnions 6 at the ends of a bar 7 which is parallel to the cross piece 4. The bar is thus free to rotate about a longitudinal axis, and an elongated blade 8 is secured to the bar by suitable fastening members 9. This blade is sufficiently long to extend substantially the full width of the crate cover 1, and the forward edge 8^a thereof is preferably beveled or

sharpened so that it can be readily driven between the upper edge of the crate and the cover. An operating lever 10 projects rearwardly from the blade 8 in the same plane as the blade, and is rigidly secured thereto so that by manipulating the lever the blade can be swung about the trunnions 6 as an axis and tilted to pry the crate cover 1 open.

The frame B is preferably of such a height that when it is arranged in an upright position at the end of the crate with the cross piece 4 thereof resting on the bottom cleat 2, the blade 8 will be supported at an elevation slightly above the top of the crate when the blade is in a horizontal position. When using the lid removing device the frame B is first swung away from the crate and held out of engagement with the cleat 2 until the edge 8^a of the blade 8 has been inserted in the crevice between the top of the crate and the cover 1. A few light taps with a hammer or like tool on the end of the lever 10 will drive the sharp edge of the blade under the end of the lid or cover 1 until it is in position to exert an upward pull on the nails 3 when tilted. The handle 10 is then swung upwardly a sufficient amount to admit of the frame B being swung against the end of the crate and the cross piece 4 at the bottom thereof positioned upon the bottom cleat 2. The cover or lid 1 is thus initially loosened, and an inward and downward pressure on the lever or handle 10 then completes the opening of the end of the crate, the inward component of the push serving to hold the device in position, while the downward component of the push serves to pry the lid from the crate. With this device the lid or cover 1 can be quickly removed from the crate without splitting or mutilating the same, and there is not only a saving in the time required to open the crates, but the great loss which is ordinarily incident to splitting and breaking the lids is avoided. Where this opener is employed the lids 1 can be used repeatedly, and it is not necessary to furnish a large number of new lids each time a consignment of crates must be opened to inspect the contents thereof.

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

1. A crate opener including a flat open frame adapted to fit against the end of a crate and provided at its lower end with a horizontal cross piece adapted to rest loosely upon an end cleat of the crate, an elongated blade arranged substantially parallel to the cross piece and pivotally mounted upon the upper end of the frame, said blade having an edge adapted to enter the space between the cover and the top of the crate and extending substantially the full width of the cover, and a lever rigid with the blade for tilting the same to pry the cover open, said lever being collapsible against the frame.

2. A crate opener including a flat open frame adapted to fit against the end of a crate and provided at its lower end with a horizontally disposed cross piece adapted to rest loosely upon an end cleat of the crate, an elongated blade arranged substantially parallel to the cross piece and pivotally mounted upon the upper end of the frame, said blade having an edge adapted to enter the space between the cover and the top of the crate and extending substantially the full width of the cover, the frame being of sufficient height to support the blade in a plane slightly above the top of the crate when the frame is in operative position on the end cleat, and a handle rigid with the blade for tilting the same to pry the cover open.

3. A crate opener including a U-shaped frame formed at its lower end with a cross piece adapted to rest loosely upon an end cleat of the crate, an elongated blade pivotally mounted between the arms of the U-shaped frame at the top thereof and arranged parallel to the cross piece, said blade being formed with an edge adapted to enter the space between the cover and the top of the crate, and a lever rigid with the blade for tilting the same to pry the cover open, said lever being collapsible against the frame when the device is not in use.

4. A crate opener including a frame having a cross piece at its lower end adapted to rest loosely upon an end cleat of the crate and formed with side pieces provided with bearings, a cross bar journaled between the bearings, an elongated blade carried by the cross bar and formed with an edge portion adapted to be inserted into the space between the cover and the top of the crate, said blade extending substantially the full width of the crate cover, and a lever rigid with the blade for tilting the same to pry the cover open.

5. A crate opener including a U-shaped frame adapted to fit against an end of a crate in an upright position with the cross piece resting loosely upon the end cleat of the crate, a cross bar journaled between the arms of the U-shaped frame, an elongated blade applied to the cross bar and formed with an edge portion adapted to enter the space between the cover and the top of the crate, and a lever rigid with the blade for tilting the same to pry the cover open.

6. A crate opener including a U-shaped frame adapted to fit against the end of a crate in an upright position with the cross piece thereof resting loosely on an end cleat of the crate, a cross bar journaled between the sides of the frame, an elongated blade rigid with the cross bar and having an edge portion adapted to enter the space between

the cover and the top of the crate, the blade being in a plane slightly above the top of the crate when it is swung into a horizontal position and the frame is supported on the end cleat, and a handle rigid with the blade for tilting the same to pry the cover open.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THURMAN ALLEN RHODES.

Witnesses:
J. L. BRUMMERSTEDT,
H. H. KELLY.

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