

(No Model.)

L. JOHNSON & L. FRIDLUND.
EGG SEPARATOR.

No. 579,646.

Patented Mar. 30, 1897.

Fig. 1.

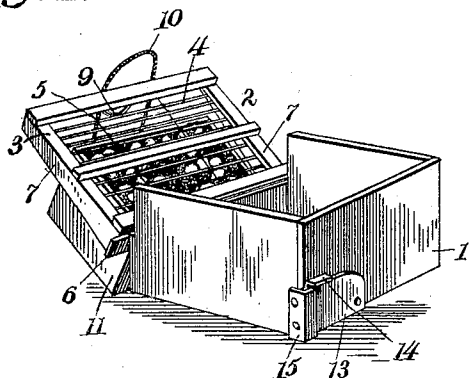


Fig. 2.

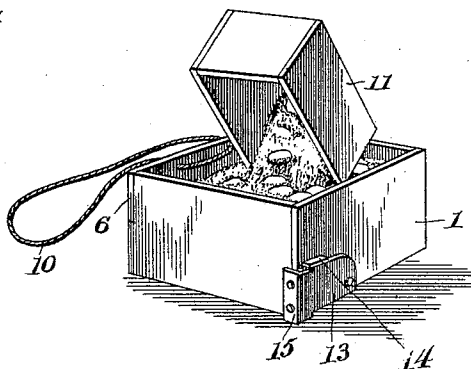


Fig. 3.

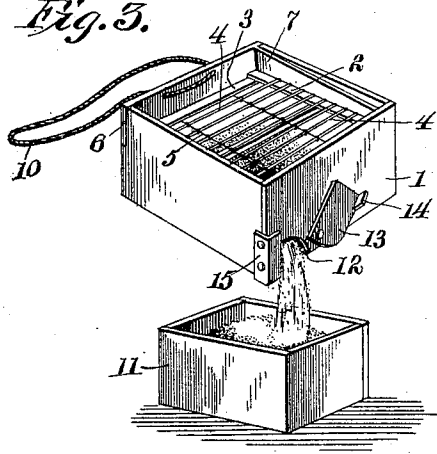
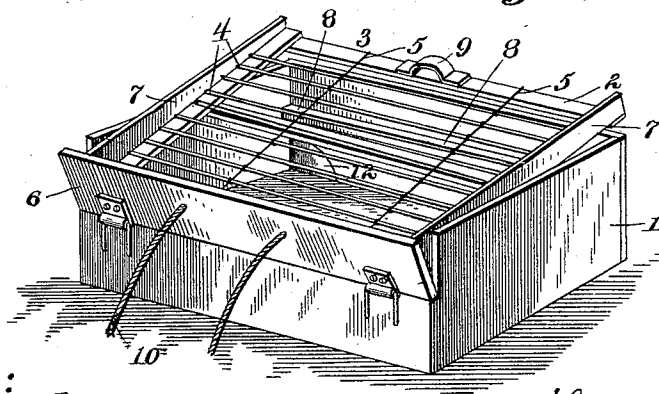


Fig. 4.



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UNITED STATES PATENT OFFICE.

LEWIS JOHNSON AND LEWIS FRIDLUND, OF WILLMAR, MINNESOTA.

EGG-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 579,646, dated March 30, 1897.

Application filed May 27, 1896. Serial No. 593,259. (No model.)

To all whom it may concern:

Be it known that we, LEWIS JOHNSON and LEWIS FRIDLUND, citizens of the United States, residing at Willmar, in the county of Kandiyohi and State of Minnesota, have invented certain new and useful Improvements in Egg-Separators, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention aims to provide an improved means or device for separating eggs from the filling material—such as bran, oats, feed, and similar substance—in which they are packed and shipped by the farmer to the merchant or dealer to be again packed for the market, trade, or consumer.

The purpose of the invention is to construct a device which will be portable, light, easy of manipulation, and adapted to be applied to the box or package in which the eggs are packed and shipped to the merchant, and which will be cheap, compact, and effective for the purpose designed.

Other objects and advantages are sought to be attained and will appear from the following description and accompanying drawings, in which—

Figure 1 is a perspective view of a separator, showing it fitted to a box or package in which the eggs are shipped packed in a loose filling, such as bran, oats, &c. Fig. 2 shows the box or package inverted, so as to dump the eggs and filling upon the screen. Fig. 3 shows the manner of returning the filling material to the box or package. Fig. 4 is a perspective view of the separator, showing the screen partially elevated.

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

The separator comprises, essentially, a case 1 and a separating-screen 2, the latter formed of a frame 3, either of metal or wood or a combination of the two, so as to provide a light and substantial structure, and a sieve consisting of parallel wires 4 and crossing tie-wires 5, the latter being coiled about the parallel wires 4, so as to maintain the latter in fixed relation. These several wires are secured to the side bars of the frame in any convenient and substantial manner. The

frame 3 is hinged at one side to a side of the case 1. The upper portion of the side of the case to which the frame 3 is hinged is cut away, and the hinged side of the frame is provided with a longitudinal strip 6 of a height about equal to the depth of the cut-away side of the case, so as to extend about flush with the top side of the case. End strips 7 are attached to the end bars of the frame 3 and to the adjacent ends of the longitudinal strips 6, and these end strips taper or diminish in width toward the free side of the separating screen or frame. The end portions of the longitudinal strip 6 project beyond the end strips 7, so as to engage with the end pieces of the case 1 above the cut-away side, thereby giving a finished appearance to the structure.

The wires 4 and 5 form a fabric or meshed bottom, which supports the eggs, so as to prevent them from rolling about, and allows for the escape of the filling material in which the eggs are packed. A cleat 8 is provided on the inner side of a case opposite that to which the separating-screen is hinged and is designed to support the separating-screen when the latter is in operative position. A handle 9 is provided at the free edge of the separating-screen for convenience in elevating the screen when required.

A cord or similar device 10 is secured at one end to the longitudinal strip 6, intermediate the ends of the said strip, and is of a length to extend beneath the bottom and along the two sides of the box or package 11, in which the eggs to be separated are shipped to the merchant, and this cord is preferably doubled upon itself and passed through openings near the top edge of the strip 6, the fold affording a convenient means to be grasped when it is required to have recourse to the said cord. The purpose and intent of this cord 10 will appear in connection with a description of the operation of the device.

A discharge-opening 12, of approximately triangular form, is provided in a side of the case immediately above the bottom and at a corner and is designed for the escape of the filling material when it is required to empty the same from the case into the box or package in which the eggs are shipped or into any convenient receptacle. A door 13 closes the discharge-opening 12 and is pivoted at one

end and is provided at its opposite end with a lip or projection 14 to be engaged by the finger or other instrument for convenience in opening and closing the door. An angle-stop 5 15 is fitted to the corner of the case adjacent to the opening 12, and a wing thereof engages with the free end of the door 13 and holds the latter closed against the pressure of the filling material within the case. This 10 angle-stop 15 fits a corner of the case and extends along two sides and the bottom thereof and is formed of sheet metal cut and bent into the required shape or may be cast or manufactured in any convenient way.

15 It being required to separate the eggs from the filling material in which they are shipped, the package or box 11 in which the eggs are shipped is tilted for convenience and the separating-screen is turned so as to extend over 20 the open side of the box or package, as clearly indicated in Fig. 1, the cord 10 having previously been passed transversely over the screen, so as to extend beyond the outer side of the box or package, and the latter resting 25 upon the said cord and coming between the cord and the screen. By grasping the outer looped or folded end of the cord and lifting thereon the box or package will be elevated and the separating-screen simultaneously 30 turned, and by a proper manipulation of the box and screen the latter will be brought to a normal position within the case and the box or package will be inverted thereon, as shown most clearly in Fig. 2. The box 11 is lifted, 35 leaving the eggs and filling material upon the screen, when by a slight movement or rolling of the eggs the filling material will quickly pass through the screen into the bottom of the case, leaving the eggs on the top of the 40 screen, from which they are removed and packed in the usual way into cell-cases for the market. After the eggs are removed from the separating-screen the case is lifted and tilted toward the corner having the discharge- 45 opening 12, which latter is uncovered by opening the door 13, when the filling material will quickly escape into the package or box 11 or other receptacle placed to receive the same.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a device for separating eggs from loose filling material in which they are generally packed, the combination of a case having the upper portion of a side cut away, a separating-screen hinged to the cut-away side, tapering strips secured to the end bars of the screen-frame and coming within the end pieces of the case, and a longitudinal strip secured to the screen-frame and to the wider 60 ends of the tapering strips and extending beyond them to engage with the extremities of the end pieces of the case above the said cut-away side and of a height to come flush with the top of the case, substantially as set forth. 65

2. In a device for separating eggs from loose filling material in which they are generally packed, the combination with a case and a separating-screen hinged to the case so as to be turned over the box or package containing 70 the eggs to be separated, of a cord or similar device attached to the separator and adapted to support the box or package while inverting it over the case, substantially in the manner set forth. 75

3. The means for separating eggs from the loose filling material in which they are generally packed substantially as herein specified, the same consisting of a case having the upper portion of a side cut away and having 80 a door-controlled opening in one side at a lower corner, a separating-screen hinged to the cut-away side of the case and having a longitudinal strip at the hinged side to close the space formed by the removed portion of 85 the cut-away side, and a cord or like device secured to the said longitudinal strip to support the box or package while inverting it over the case, substantially as described.

In testimony whereof we affix our signatures in the presence of two witnesses.

LEWIS JOHNSON.
LEWIS FRIDLUND.

Witnesses:
G. S. OGRESS,
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