May 4, 1954 H. B. CLIFFORD 2,677,569

EGG CARRIER

Filed Aug. 27, 1951

Fig. 1.

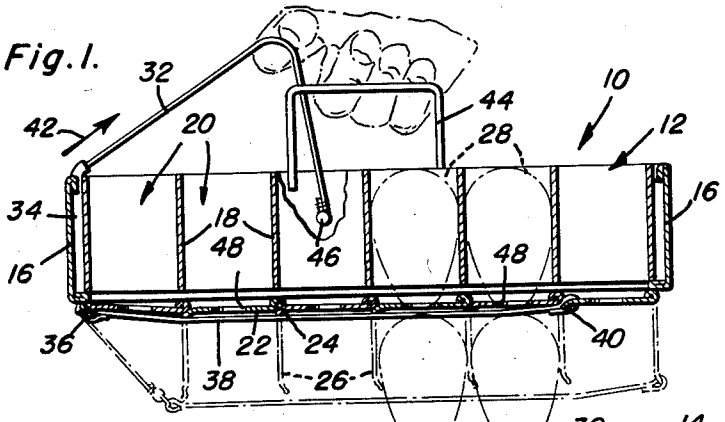


Fig. 2.

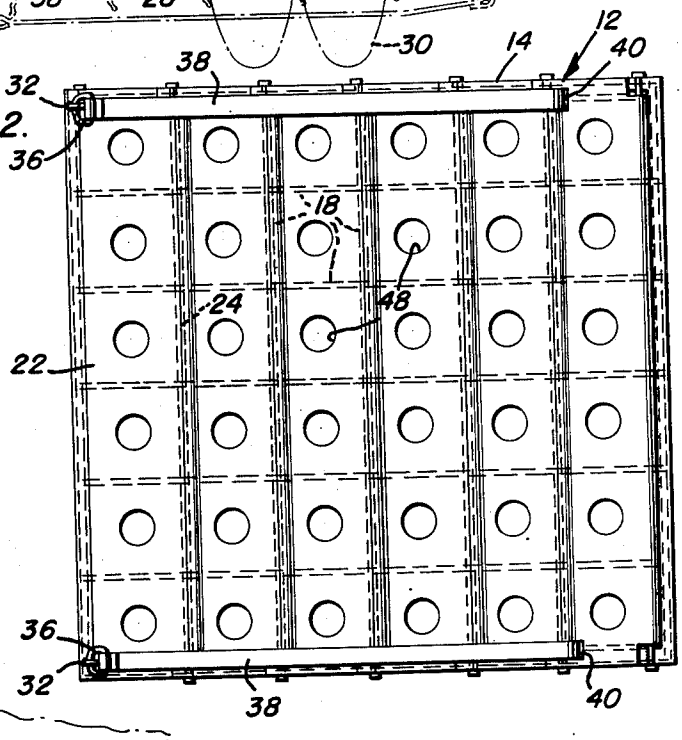


Fig. 3.

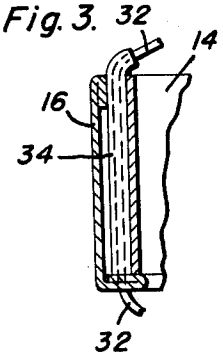
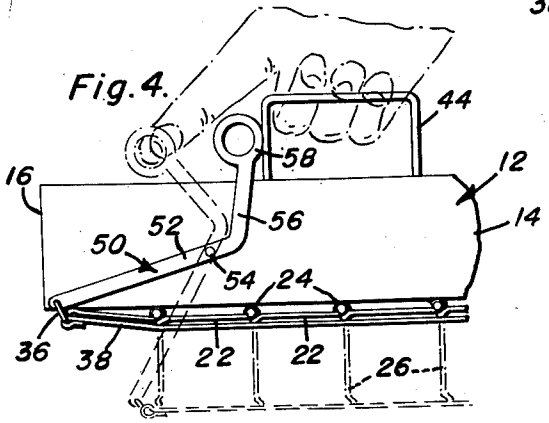


Fig. 4.



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EGG CARRIER

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Application August 27, 1951, Serial No. 243,843

7 Claims. (Cl. 294—87)

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This invention relates to new and useful improvements and structural refinements in egg carriers and the principal object of the invention is to provide an egg handling device whereby several eggs may be simultaneously lifted, carried and deposited into a receptacle or an egg candling machine, this being achieved in a highly simple, expeditious and dependable manner.

This application is a continuation-in-part of my co-pending application Serial No. 160,021, filed May 4, 1950, on an Egg Candling Apparatus.

Some of the advantages of the instant invention reside in its simplicity of construction, in its efficient operation, and in its adaptability to economical manufacture.

With the above more important objects and features in view and such other objects and features as may be apparent as this specification proceeds, the invention consists essentially of the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is a longitudinal sectional view of the invention;

Figure 2 is an underside plan view thereof:

Figure 3 is a fragmentary sectional detail of the closure actuating means used in the invention; and

Figure 4 is a fragmentary side elevational view of a modified embodiment of the invention.

Like characters of reference are employed to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, more particularly to Figures 1, 2 and 3, the invention consists of an egg carrier which is designated generally by the reference character 10 and embodies in its construction a rectangular frame 12 including a pair of side walls 14 and a pair of end walls 16, the frame 12 being provided with a plurality of intersecting partitions 18 which define therein a plurality of individual egg compartments 20. As far as the frame 12 itself is concerned, the compartments 20 are open at the top and bottom thereof.

A set of elongated panels 22 are provided with transverse pins or shafts 24 whereby they are hingedly connected at the ends thereof to the lower edges of the frame side walls 14, these panels being swingable from a substantially horizontal position as shown by the full lines in Figure 1 to a downwardly swung, open position, illustrated by the dotted lines 26. It is to be noted that when the panels 22 are horizontal, they provide closures for the bottoms of the compartments 20 so as to retain eggs in the compartments as indicated at 28. However, when the panels 22 are swung downwardly, the eggs may be either discharged from the device by lifting the frame upwardly (see 30), or the device may be filled with eggs by passing the frame downwardly over the eggs arranged in a systematic group, such as for example, in a shipping container.

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In any event, means are provided for swinging the panels 22 upwardly to their closed position and for retaining the panels closed, these means consisting of a pair of cords 32 which extend slidably through suitable tubular guides 34 secured to the opposite ends of one of the end walls 16, the lower ends of the cords being connected by suitable eyes 36 to the ends of a pair of transversely spaced straps 38. The other ends of the straps 38 are anchored to the last or outermost panel as shown at 40 and it will be observed that the straps 38 underlie the panels 22 so that by simply pulling the cords 32 upwardly as indicated at 42, the engagement of the straps 38 with the panels 22 will cause the panels to be swung upwardly to their closed position. On the other hand, when upward pulling force on the cords 32 is relaxed, the panels 22 will swing downwardly under the influence of gravity and the cords 32 will be drawn downwardly accordingly.

The side walls 14 of the frame 12 are provided with a pair of inverted U-shaped handles 44 and the upper ends of the cords 32 are anchored to the side walls as at 46, adjacent the handles, so that the cords may be conveniently manipulated while the handles are being gripped.

It is to be also observed that the panels 22 are provided with a series of apertures or openings 48 which afford seats for the eggs 28 in the compartments 20 and which also facilitate the passage of light through the device and the eggs therein, when the invention is used for candling purposes.

Referring now to the modified embodiment of the invention illustrated in the accompanying Figure 4, this embodiment employs a modified form of the panel actuating means used in substitution for the cords 32 and guides 34 previously described.

In the modified form of the invention the eyes 36 at the ends of the straps 38 are connected to the lower ends of a pair of bellcranks 50 which have arms 52 pivoted as at 54 to the opposite side walls 14 of the frame 12 and have relatively short other arms 56 provided with suitable finger pieces 58 disposed immediately adjacent the respective handles 44. It will be apparent that

when the actuating mechanism is in the position shown by the full lines in Figure 4, the panels 22 will be closed, but when the mechanism is permitted to shift to the position illustrated by the dotted lines, the panels 22 will be opened.

It is believed that the advantages and use of the invention will be clearly understood from the foregoing disclosure and accordingly, further description thereof at this point is deemed unnecessary.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that minor changes in the details of construction and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

Having described the invention, what is claimed as new is:

1. An egg carrier comprising a rectangular frame, a set of partitions provided in said frame and defining transverse rows of individual egg compartments open at the top and bottom thereof, a set of transversely extending panels arranged in a row and hinged at the ends thereof to lower edges of opposite sides of said frame and swingable from horizontal positions wherein they constitute closures for the bottoms of the respective rows of compartments to downwardly swung open positions, handles provided at upper edges of said frame, and means disposed adjacent said handles and extending to a position underlying said panels and operatively connected to said panels for swinging the latter simultaneously to their closed positions.

2. An egg carrier comprising a rectangular frame, a set of partitions provided in said frame and defining a plurality of individual egg compartments open at the top and bottom thereof, a set of panels arranged in a row and hingedly connected along one edge to lower edges of said frame and swingable from horizontal positions wherein they constitute closures for bottoms of said compartments to downwardly swung open positions, and means underlying said panels for swinging said panels to their closed positions, wherein said means comprises a strap connected at one end to the free edge of the last panel in the row and actuating means connected to the other end of the strap.

3. An egg carrier comprising a rectangular frame, a set of partitions provided in said frame and defining a plurality of individual egg compartments open at the top and bottom thereof, a set of panels arranged in a row and hingedly connected along one edge to lower edges of said frame and swingable from horizontal positions wherein they constitute closures for bottoms of said compartments to downwardly swung open positions, and means underlying said panels for swinging said panels to their closed positions, wherein said means comprises a strap connected at one end to the free edge of the last panel in the row and actuating means connected to the other end of the strap, wherein the actuating means comprises a flexible cord.

4. An egg carrier comprising a rectangular frame, a set of partitions provided in said frame and defining a plurality of individual egg compartments open at the top and bottom thereof, a set of panels arranged in a row and hingedly connected along one edge to lower edges of said frame and swingable from horizontal positions wherein they constitute closures for bottoms of said compartments to downwardly swung open positions, and means underlying said panels for swinging said panels to their closed positions, wherein said means comprises a strap connected at one end to the free edge of the last panel in the row and actuating means connected to the other end of the strap, wherein the actuating means comprises a bell crank.

5. An egg carrier comprising a rectangular frame, a set of partitions provided in said frame and defining transverse rows of individual egg compartments open at the top and bottom thereof, a set of transversely extending panels arranged in a row and hinged at the ends thereof to lower edges of opposite sides of said frame and swingable from horizontal positions wherein they constitute closures for the bottoms of the respective rows of compartments to downwardly swung open positions, handles provided at upper edges of said frame, and means disposed adjacent said handles and extending to a position underlying said panels and operatively connected to said panels for swinging the latter simultaneously to their closed positions, wherein said means comprises a strap connected at one end to the free edge of the last panel in the row and actuating means connected to the other end of the strap.

6. An egg carrier comprising a rectangular frame, a set of partitions provided in said frame and defining transverse rows of individual egg compartments open at the top and bottom thereof, a set of transversely extending panels arranged in a row and hinged at the ends thereof to lower edges of opposite sides of said frame and swingable from horizontal positions wherein they constitute closures for the bottoms of the respective rows of compartments to downwardly swung open positions, handles provided at upper edges of said frame, and means disposed adjacent said handles and extending to a position underlying said panels and operatively connected to said panels for swinging the latter simultaneously to their closed positions, wherein said means comprises a strap connected at one end to the free edge of the last panel in the row and actuating means connected to the other end of the strap, wherein the actuating means comprises a flexible cord.

7. An egg carrier comprising a rectangular frame, a set of partitions provided in said frame and defining transverse rows of individual egg compartments open at the top and bottom thereof, a set of transversely extending panels arranged in a row and hinged at the ends thereof to lower edges of opposite sides of said frame and swingable from horizontal positions wherein they constitute closures for the bottoms of the respective rows of compartments to downwardly swung open positions, handles provided at upper edges of said frame and means disposed adjacent said handles and extending to a position underlying said panels and operatively connected to said panels for swinging the latter simultaneously to their closed positions, wherein said means comprises a strap connected at one end to the free edge of the last panel in the row and actuating means connected to the other end of the strap, wherein the actuating means comprises a bell crank.

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