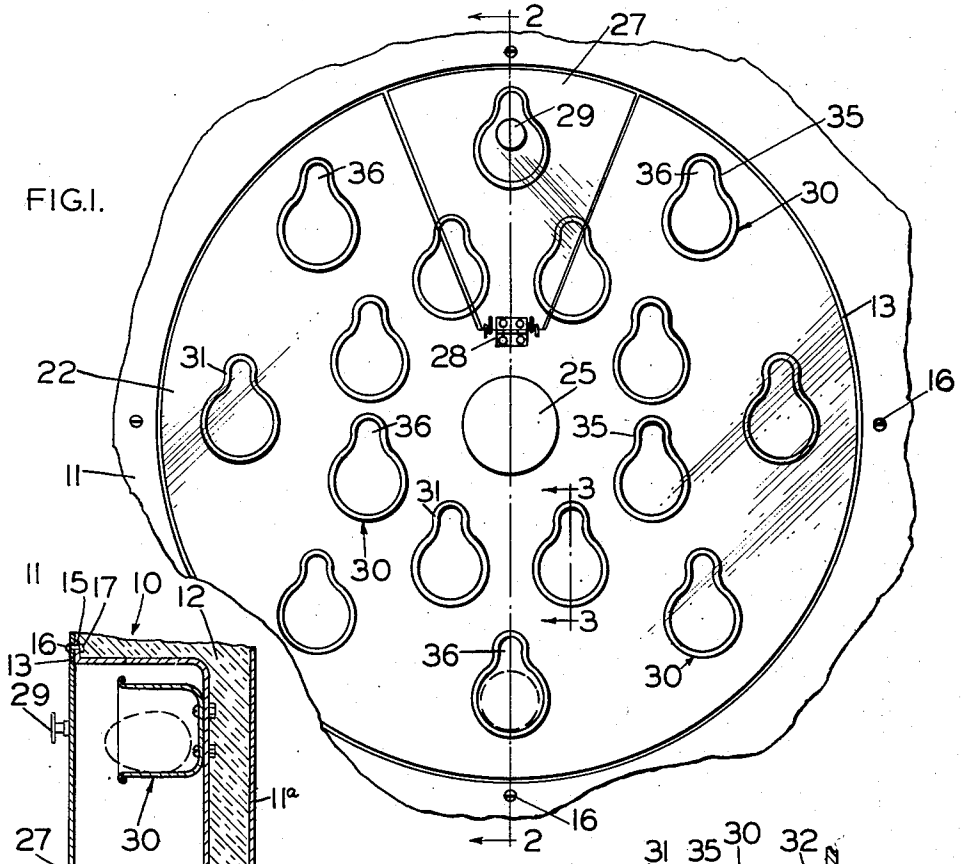
Feb. 2, 1954 E. B. DERR 2,668,090

EGG STORAGE AND DISPENSING DEVICE

Filed April 3, 1951 2 Sheets-Sheet 1

FIG.1.



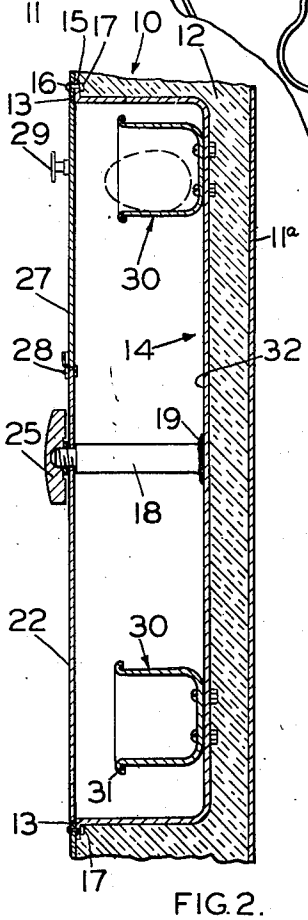


FIG.2.

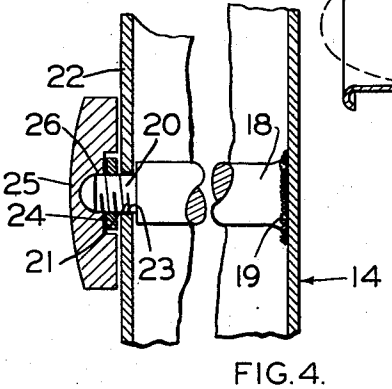


FIG.4.

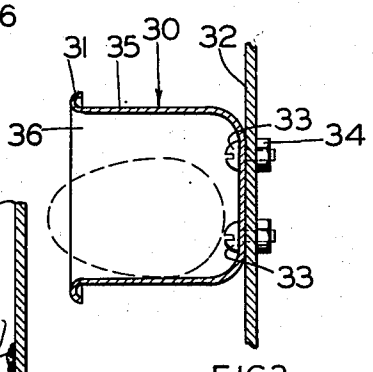


FIG.3.

INVENTOR
ELMER B. DERR

Paul O. Pippel
ATT'Y

Feb. 2, 1954 E. B. DERR 2,668,090

EGG STORAGE AND DISPENSING DEVICE

Filed April 3, 1951 2 Sheets-Sheet 2

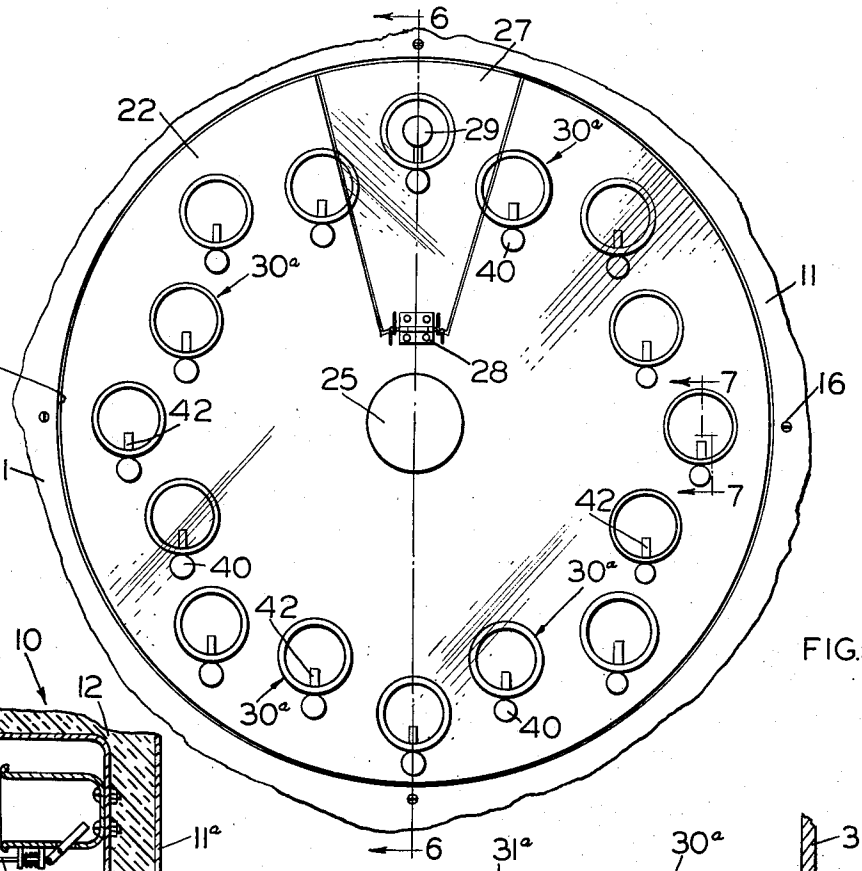


FIG.5.

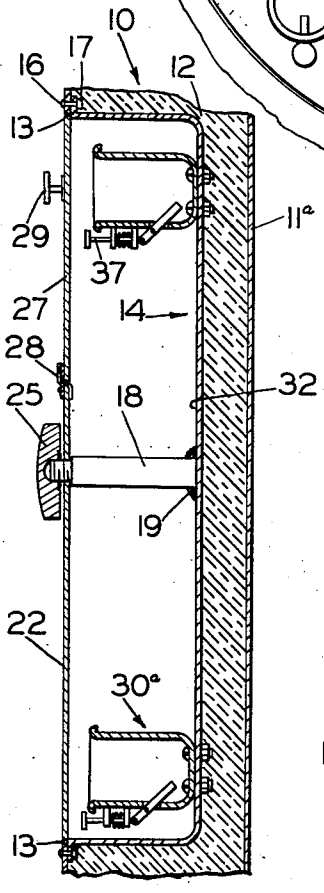


FIG.6.

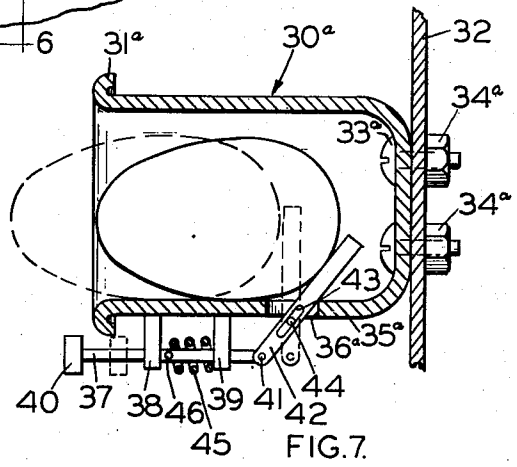


FIG.7.

INVENTOR
ELMER B. DERR
Paul O. Pippel
ATT'Y

Patented Feb. 2, 1954

2,668,090

UNITED STATES PATENT OFFICE

2,668,090

EGG STORAGE AND DISPENSING DEVICE

Elmer B. Derr, Oak Park, Ill., assignor to International Harvester Company, a corporation of New Jersey

Application April 3, 1951, Serial No. 218,937

7 Claims. (Cl. 312—242)

1

This invention relates to food storage and dispensing devices, but more specifically it is concerned with the provision of a device for storing and dispensing eggs and which, additionally, is suitable for installation in the insulation space of a refrigerator cabinet.

The present trend of increasing demands for more available food storage capacity in the modern household refrigerator has introduced the perplexing problem of how such additional demands can be best met without increasing the overall exterior dimensions of the cabinet. Heretofore attempts have been made to more efficiently utilize the area defined within the inner walls of such cabinets, by adding shelves to the access door and the like, but the overall results accomplished by such efforts have not been entirely satisfactory. It was found that still greater and more efficient utilization of the area contained within the exterior dimensions of the conventional cabinet could be made, without impairing the operating efficiency of the refrigeration system, by providing facilities for storage of a limited number of articles of food in the insulation space between the outer and inner liners of refrigerator cabinets. Accordingly it is the primary object of this invention to provide a simple yet highly effective means for increasing the available food storage capacity of a household type refrigerator cabinet without increasing the exterior dimensions of such a cabinet.

Another object is to provide a food storage and dispensing device that is suitable for installation in a portion of the insulation space disposed between the inner and outer walls of a refrigerator cabinet.

A further object is to provide a simple, improved, and easily constructed storage device that is adapted for storing eggs in individual containers and which, further, is readily adapted for installation in a portion of the thermal insulation space in a refrigerator cabinet.

A still further object is to provide an egg storage device that may be positioned in a readily accessible location in a wall or the door of a refrigerator cabinet, and which, further, is provided with simplified means for removing an egg stored therein.

A yet still further object is to provide an egg storage and dispensing device having a plurality of individual containers or cells concentrically and radially disposed about a horizontal axis and upon which axis is rotatably positioned a transparent member that is adapted to provide

2

a cover for said containers, said device being adapted for positioning in a portion of the insulation space in a refrigerator cabinet.

Another important object is to provide an egg storage and dispensing device having a plurality of individual containers each of which may be readily and independently removed for cleaning or replacement.

A further important object is to provide an egg storage and dispensing device that is positionable within the insulation space between the inner and outer panels of a conventional refrigerator cabinet in such manner that it does not occupy any of the useful storage space in the food compartment of said cabinet, and is further disposed so that access thereto may be had from said food compartment and through an opening in a transparent cover member provided therefor.

Other objects and advantages will be understood and will become more apparent from the following description when read in conjunction with the drawings in which:

Figure 1 is a front elevation of a portion of an inner panel of a refrigerator cabinet wherein a preferred embodiment of the present invention has been incorporated.

Figure 2 is a section taken on line 2—2 of Figure 1.

Figure 3 is an enlarged sectional view, taken on line 3—3 of Figure 1, of one of the individual egg containers forming part of the present invention.

Figure 4 is a partial section in enlarged detail of the pedestal support and of the securing means for the transparent cover member forming a part of the present invention.

Figure 5 is a view similar to Figure 1 showing a modified embodiment of the present invention.

Figure 6 is a section taken on line 6—6 of Figure 5.

Figure 7 is an enlarged sectional view, taken on line 7—7 of Figure 5, of one of the individual egg containers forming a part of the modified embodiment.

Referring now to the drawings, where corresponding elements have been represented with like numerals, it will be noted that a section of a conventional insulated wall structure of a refrigerator cabinet, designated by the numeral 10, has been shown as containing a conventional inner panel member 11, an outer panel member 11a, and the usual thermal insulation 12, therebetween. Although the illustrated embodiment of the present invention, for purposes of simpli-

fying the drawings, shows its application to a wall structure in a refrigerator cabinet, it will readily be understood that such wall may be either one of the side or rear walls as readily as that of the front wall which, as is well understood, constitutes the access door in a refrigerator cabinet, and such application is envisaged by the present invention. Accordingly the concept of this invention should in no wise be limited to an embodiment wherein it has been applied specifically to any one of such designated wall structure in a refrigerator cabinet.

The inner panel 11 has a circular opening 13 therein and a portion of the insulation 12 therebehind has been removed to provide a recess adapted for receiving a magazine or container 14, preferably circular in shape, positioned therein. Said container or magazine is fashioned, preferably, with an outwardly turned flange 15 around the marginal edge thereof that is adapted to abut the inner panel 11, and said container may be fixedly positioned thereagainst by any suitable means such as the peripherally spaced bolts 16 and nuts 17.

A pedestal support member 18 is positioned substantially in the center of the container 14 and affixed thereto by any suitable means, such as by the welding indicated at 19. The forward end of the pedestal has a reduced bearing section 20, and an extension thereof that is provided with a screw thread 21, and is adapted to rotatably support a transparent cover member 22, preferably circular in shape, which may be dimensioned so as to fit into the opening 13 in the inner panel member 11. An opening 23 in the center of said cover is dimensioned so as to permit the cover to be rotatably positioned over the reduced end section 20, of the pedestal 18, and into the opening 13 in said inner panel. A threaded collar 24 is provided to retain said cover in position while, at the same time, permitting its rotation about the reduced end of the pedestal 18. A decorative nut-like closure member 25, having a threaded bore 26, may be used to enclose the outer exposed end of the pedestal and, at the same time, provide a locking means for retaining the threaded collar 24 in place as the cover member 22 is rotated about the pedestal. The cover 22 which, preferably, is fashioned from some transparent material, such as any one of the well-known plastics, has a segmental cut-out 27 therein for purposes which will be apparent as the description proceeds. Said cut-out, which may operate as an access window-opening, is hingedly affixed, by means of some suitable conventional spring controlled hinge 28, to said cover member. A handle member 29, secured by any suitable means to the cut-out window section 27, may be provided to assist in the rotation of said cover and as a means for opening said window section. It will be noted that the cover member 22, and its cut-out window section 27, each has its outer marginal edge extended so as to overlie a portion of the flange 15, on the container 14, whereby such overlays may be used as a bearing surface for the cover and its window as well as an abutment or stop for the window.

Individual cup-like containers or cells 30, having a rolled over forward marginal edge 31, are arranged in rings concentrically disposed around the pedestal 18, and the individual containers peripherally spaced from one another are removably affixed to a vertical wall 32 of the container 14. In order that the individual cups or cells may be readily removable at will for cleaning or

replacement each cup 30 is affixed, by some suitable and readily removable means, to the wall 31 of said container. Although any one of many suitable conventional affixing means may be used for this purpose the preferred embodiment illustrated utilizes threaded screw members 33 and threaded nut-like members 34, in turn, fixedly secured to the wall 32.

The cups 30 although dimensioned to receive a full sized egg are, preferably, somewhat shallower in depth than the overall length of the egg for purposes which will presently be better understood. Each cup or egg retainer 30 is fashioned, substantially, cylindrical in shape with one end open and is provided with a longitudinally extending rib portion 35 that is arranged to provide a channel-like recess 36, opening into the interior of the cup, that may be used as a finger slot when removing an egg from the cup.

The window 27, of the cover member 22, may be so dimensioned and the cups so spaced peripherally that the eggs can be removed from only one cup or retainer at a time. In this manner the accidental release of an egg from any one cup when the window 27 is opened is avoided. As additional eggs are required the cover member 22 is rotated till the window section 27 is opposite a cup containing an egg.

In the event an egg should be broken while in one of the individual cup retainers that particular cup may readily be removed simply by removing the screws 33 associated therewith. If the interior of the container 14 is to be cleaned the cover member 22 may be readily removed by unscrewing the nut member 25 and the threaded collar 24. If desired, of course, such cover member may also be removed for the purpose of filling the cups with eggs.

In Figures 5, 6 and 7 there is illustrated a modified embodiment of the present invention wherein a different means for dispensing, or removing the egg from the individual container, is employed. In this embodiment corresponding elements have been represented with the same numerals as heretofore designated for Figures 1, 2, 3 and 4. The magazine or container and its cover member are identical with corresponding elements heretofore described, but the individual cup members for retaining and storing the eggs and the dispensing means associated therewith are modified. As indicated in Figures 5, 6 and 7 each individual cup or retainer 30*a* is cylindrically shaped with one end open and fashioned with a rolled over marginal edge 31*a*, and is removably affixed to the container wall 32 by the screw and nut means 33*a* and 34*a*. In the cup wall 35*a* there is provided a slotted opening 36*a* through which an ejector or push bar member may project as hereinafter described. A rod-like shaft 37 is slidably positioned in a pair of supports 38 and 39, which, in turn, are secured by any suitable means to the outer surface of the cup wall 35*a*. A push button-like handle 40 is affixed by any conventional means to one end of said shaft while the opposite end thereof is provided with a transversely mounted pin 41 upon which is pivotally mounted an ejector or push bar member 42. Said ejector member is positioned so as to project through the slotted opening 36*a*, in the cup wall, and into the cup, and is fashioned with a longitudinally extending slot 43 therein that is adapted to slidingly accommodate a transversely disposed pin 44 fixedly secured by any suitable means to the cup wall.

A coil spring 45 is positioned over the shaft 37

and one end thereof may be bent over and anchored in a transverse opening **46** in said shaft. The opposite end of said spring abuts the support **39** and the spring is so positioned that when it is in its free or uncompressed state the shaft **37**, push button handle **40** and ejector **42** assume the position indicated by the solid lines in Figure 7. When it is desired to dispense an egg pressure is applied to the button **40** which, in turn, compresses the spring **45** and simultaneously causes the ejector **42** to rotate to the position indicated in dotted lines in Figure 7. It will be readily understood that as the ejector member **42** rotates, counterclockwise as viewed in Figure 7, about pin **44** the egg will be moved sufficiently forward so that it may be readily removed by hand. Likewise it will be evident that when pressure is removed from button **40** the ejector will, because of the reactive component of spring **45**, return to its normal position of rest, as indicated by the solid lines in Figure 7.

From the foregoing it will be apparent that a novel, simple and inexpensive egg storage and dispensing device has been developed, and that such device may be readily incorporated in the insulation space of a conventional household refrigerator cabinet without utilizing any of the available storage space in said cabinet. The device as so located becomes readily available and highly accessible to the user and, furthermore, the contents thereof can be easily ascertained because of the transparent cover employed therewith.

While only two preferred forms of the invention have been shown and described, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various changes and modifications without departing from the spirit thereof, and it is desired, therefore, that only such limitations shall be placed thereupon as are specifically set forth in the appended claims.

What is claimed is:

1. A food container and dispensing device of the character adapted for positioning within a recess formed in a vertical wall structure fashioned with spaced apart inner and outer panels with thermal insulation therebetween and with an opening in the inner panel that registers with the recess thereof, comprising: a circularly-shaped magazine having one end thereof open, and having a peripherally extending flange projecting outwardly from the edge of said opening; said magazine being adapted for removable positioning wholly within the recess and between the inner and outer panels of the wall structure with the opening in said magazine in axial alignment with the opening in the inner panel, and with said peripheral flange abutting the inner panel adjacent the opening therein; a plurality of individual containers having one end thereof open and being arranged in two concentric staggered rows and adapted for retaining food articles placed therewithin; said containers being positioned wholly within and removably affixed to said magazine and with the open end of each container facing the opening in said magazine; means associated with each of said individual containers to facilitate the manual removal of food articles therefrom; a cover member rotatably mounted on a horizontally extending pedestal support affixed to said magazine and disposed so as to provide simultaneously a closure for the open end of said magazine and a shield to prevent food articles from accidentally being removed from said individual containers; said cover having an opening therein alignable selectively with the opening in each of said individual containers through which cover opening food articles may be placed into and removed from each of said containers.

2. An egg container and dispensing device according to claim 1 and characterized by an ejector means associated with each of said individual containers to facilitate the manual removal of eggs therefrom.

3. An egg container and dispensing device according to claim 1, and further characterized by an ejector means, associated with each of said individual containers to facilitate the removal of eggs therefrom, which includes a manually operated rod pivotally affixed to an ejector member positioned to contact one end of an egg disposed in said container whereby movement of the rod causes the ejector member to move an egg toward one end of the container.

4. An egg container and dispensing device according to claim 1, and further characterized by an ejector means, associated with each of said individual containers to facilitate the removal of eggs therefrom, which includes a push bar rotatably mounted on each container and positioned so as to extend through a slotted opening in the container and into contact with one end of an egg disposed in said container, and a manually operable rod pivotally affixed to one end of said push bar whereby movement of the push bar operates to urge an egg toward one end of the container.

5. An egg container and dispensing device of the character adapted for positioning within a recess formed in a vertical wall structure fashioned with spaced apart inner and outer panels with thermal insulation therebetween and with an opening in the inner panel that registers with the recess thereof, comprising: a circularly-shaped magazine having one end thereof open, and having a peripherally extending flange projecting outwardly from the edge of said opening; said magazine being adapted for positioning wholly within the recess and between the inner and outer panels of the wall structure with the opening in said magazine in axial alignment with the opening in the inner panel, and with said peripheral flange abutting the inner panel adjacent the opening therein; means for removably securing said peripheral flange to the inner panel of the wall structure; a plurality of individual cup-like containers having one end thereof open and adapted for retaining one egg in each container and being arranged in two concentric circles with the containers of one of the two circles staggered with respect to the containers of the other circle; said containers being positioned wholly within and removably affixed to said magazine and with the open end of each container facing the opening in said magazine; egg releasing means associated with each individual container to facilitate the manual removal of an egg therefrom; a cover member rotatably mounted on a horizontally extending pedestal support affixed to said magazine, and having said cover disposed so as to simultaneously provide a closure for the open end of said magazine and a shield for the open ends of the individual containers to prevent eggs positioned therewithin from accidentally being removed from said individual containers; said cover extending so that the marginal edges thereof overlie a portion of said peripheral flange whereby said flange provides a stop-like abutment for said cover; and

having said cover provided with an opening therein that is selectively alignable with the opening in each of said individual containers and through which cover opening eggs may be placed into and removed from each of said containers.

6. An egg container and dispensing device of the character adapted for positioning within a recess formed in a vertical wall structure fashioned with spaced apart inner and outer panels with thermal insulation therebetween and with an opening in the inner panel that registers with the recess thereof, comprising: a circularly-shaped magazine having one end thereof open, and having a peripherally extending flange projecting outwardly from the edge of said opening; said magazine being adapted for removable positioning wholly within the recess and between the inner and outer panels of the wall structure with the opening in said magazine in axial alignment with the opening in the inner panel, and with said peripheral flange abutting the inner panel adjacent the opening therein; a plurality of individual substantially circularly-shaped containers having one end thereof open and being arranged in two concentric staggered rows and adapted for retaining eggs placed therewithin; said containers being positioned wholly within and removably affixed to said magazine and with the open end of each container facing the opening in said magazine; means to facilitate the manual removal of eggs from said containers, including a longitudinally extending channel-like recess in one side of each container that opens into the interior of said container; a cover member rotatably mounted on a horizontally extending pedestal support affixed to said magazine and disposed so as to provide simultaneously a closure for the open end of said magazine and a shield for the open ends of the individual containers to prevent eggs positioned therewithin from accidentally being removed from said containers; said cover having an opening therein alignable selectively with the opening in each of said individual containers and through which cover opening eggs may be placed into and removed from each of said containers.

7. An egg container and dispensing device of the character adapted for positioning within a recess formed in a vertical wall structure fashioned with spaced apart inner and outer panels with thermal insulation therebetween and with an opening in the inner panel that registers with the recess thereof, comprising: a circularly-shaped magazine having one end thereof open, and having a peripherally extending flange projecting outwardly from the edge of said opening; said magazine being adapted for removable positioning wholly within the recess and between the inner and outer panels of the wall structure with the opening in said magazine in axial alignment with the opening in the inner panel, and with said peripheral flange abutting the inner panel adjacent the opening therein; a plurality of individual substantially circularly-shaped containers having one end thereof open and being arranged in two concentric staggered rows and adapted for retaining eggs placed therewithin; said containers being positioned wholly within and removably affixed to said magazine and with the open end of each container facing the opening in said magazine; means to facilitate the manual removal of eggs from said containers, including a longitudinally extending channel-like recess formed in one side of each container and extending the full length thereof and which opens into the interior of said container whereby a finger of the operator's hand may be inserted behind an egg in the container to slide the egg therefrom; a cover member rotatably mounted on a horizontally extending pedestal support affixed to said magazine and disposed so as to provide simultaneously a closure for the open end of said magazine and a shield for the open ends of the individual containers to prevent eggs positioned therewithin from accidentally being removed from said containers; said cover having an opening therein alignable selectively with the opening in each of said individual containers and through which cover opening eggs may be placed into and removed from each of said containers.

ELMER B. DERR.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
159,565	Damen	Feb. 9, 1875
739,209	Ocumpaugh	Sept. 15, 1903
927,379	Points	July 6, 1909
1,282,485	Sterling	Oct. 22, 1918
1,442,953	Kehoe	Jan. 23, 1923
2,086,018	Dyer	July 6, 1937
2,133,430	Cox	Oct. 18, 1938
2,137,031	Smith	Nov. 15, 1938
2,351,815	Jensen	June 20, 1944
2,527,137	Kafer	Oct. 24, 1950
2,565,995	Spencer	Aug. 28, 1951