W. H. DEAR.

FOLDING EGG CASE.

APPLICATION FILED MAY 22, 1911.

1,007,073.

Patented Oct. 31, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

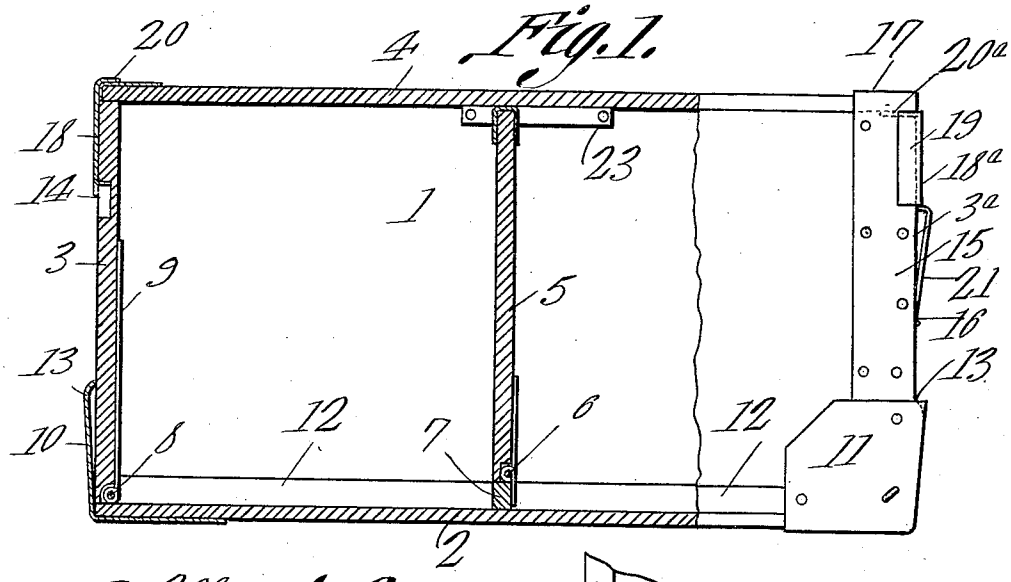


Fig. 2.

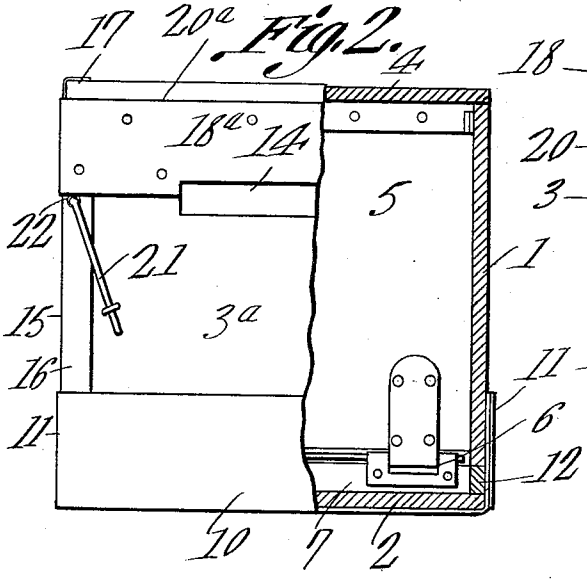


Fig. 6.

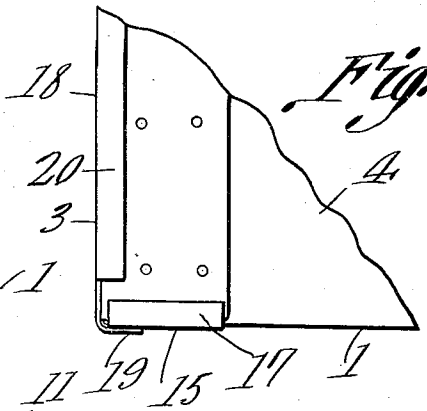
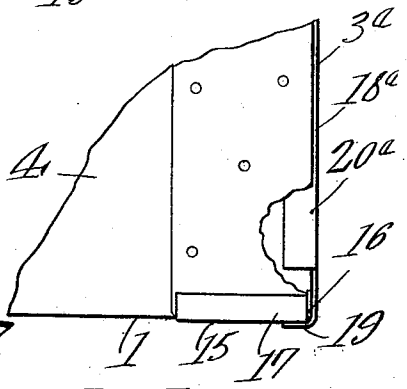


Fig. 7.



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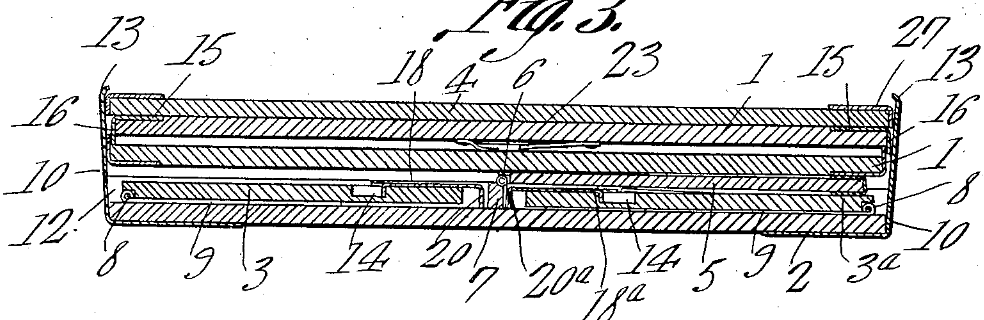
2 SHEETS—SHEET 2.

Fig. 3.



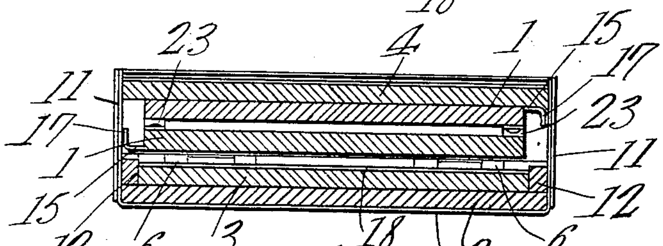


Fig. 4.

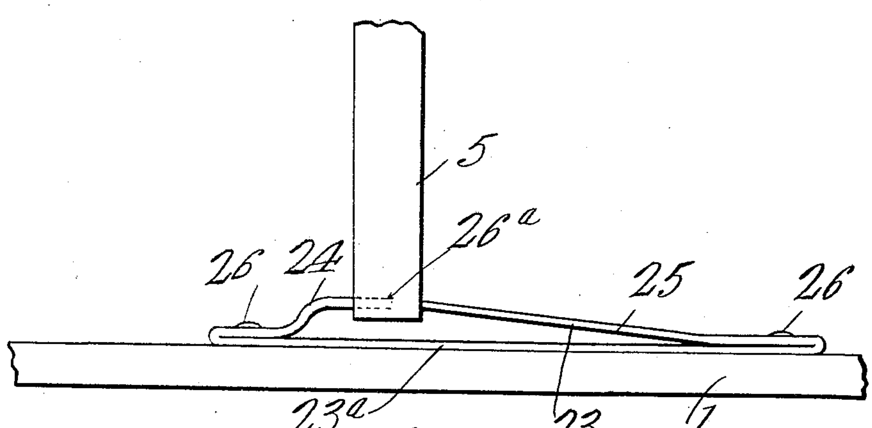


Fig. 5.

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FOLDING EGG-CASE.

1,007,073. Specification of Letters Patent. **Patented Oct. 31, 1911.**

Application filed May 22, 1911. Serial No. 623,760.

To all whom it may concern:

Be it known that I, WILLIAM H. DEAR, a citizen of the United States, residing at Anthony, in the county of Harper and State of Kansas, have invented a new and useful Folding Egg-Case, of which the following is a specification.

This invention relates to improvements in shipping crates or cases, more especially the foldable type.

The invention has for its object to provide for readily effecting the folding of the case, crate or box in such manner as to cause the members thereof to lie in compact or close relation with respect to each other and thus occupy the minimum space, especially for the advantageous shipment of the same.

A further object is to provide for readily collapsing or folding the box or crate members after the removal of the contents of the crate, by doing which, immediately upon emptying the same the crate or case may be gotten out of the way at once, which, it is obvious, is a desideratum.

A still further object is to carry out these ends in a simple, inexpensive, expeditious and effective manner.

The invention consists of certain instrumentalities and features substantially as hereinafter fully disclosed and defined by the claims.

In the accompanying drawing illustrating the preferred embodiment of my invention, wherein it will be understood that various changes and modifications may be made as to the details of the construction and arrangement of the parts without departing from the spirit of the invention: Figure 1 is a partly sectional and partly side elevation of my invention. Fig. 2 is a partly elevational and partly sectional view of the case or crate viewing it from one end. Fig. 3 is a vertical section of the box or crate folded or collapsed. Fig. 4 is a vertical transverse section of the same folded. Fig. 5 is a somewhat enlarged fragmentary view in plan of the springs for retaining one end of the partition in position. Fig. 6 is a plan view of a corner portion and part of the end of the box or crate, the other parts being broken away. Fig. 7 is a further detailed view.

In carrying out my invention, I suitably form or construct the case, box or crate of the usual side, bottom, end, and top members, designated 1, 2, 3, 3^a, and 4 respectively, said members being rectangular in general outline; a partition 5 also preferably rectangular in outline, being arranged about centrally within said case or crate and hinged as at 6 to an edgewise-disposed transverse piece 7 secured to the bottom, this transverse piece also serving when the crate or case is collapsed to divide the latter into shallow compartments for the reception of certain of said members, as presently seen.

The end-members 3 are also hinged as at 8 to the bottom-member 2, at its ends and adapted to fold inwardly down thereon and so as to occupy the shallow compartments resulting from the use of the transverse piece 7. The hinges 8 for the end-members include extended plate-like leaves 9 suitably secured to the inner sides of said end members for strengthening the latter and thus aid in preventing the liability of said end members splitting, as might otherwise occur.

Metal straps or plates 10 are suitably secured edgewise to the bottom-member, at its ends, with their end portions bent at right angles as at 11 to parallel the latter edges of said bottom, or rather upstanding or edgewise disposed longitudinal strips or pieces 12 secured to the bottom at said lateral edges, said strips having their upper edges about flush with the corresponding edge of the partition-bearing transverse piece 7, for obvious reasons. Said end metal straps or plates and their right-angled lateral extensions provide for reinforcing the ends and corners of the box, crate or case, the upper edges of said end plates or straps being preferably inwardly bent as at 13 to engage or form direct bearings or stops at those points for the end-members. The end-members are preferably provided with finger holds or notches 14 near their upper ends for facilitating the handling of the crate or box. Also the side or lateral members are provided at their ends with metal-straps or plates 15 of angular outline in cross section, having longitudinal right-angled short extensions 16 projecting beyond the ends of the lateral members and overlapping the end-members thus serving to both reinforce these points and practically form stops to

guard against the liability of the said end-members being moved outwardly beyond the perpendicular, especially at the upper ends, as will be readily appreciated.

The upper ends of the metal plates or straps 15 are extended above or beyond the upper edges of the lateral members and are formed at said ends with inwardly projecting or overhanging bent portions or flanges 17, and between these flanges and the top edges of the lateral members is received the top or closure member to prevent lateral displacement or movement of said closure or top member and yet allow of the latter being slid or moved endwise as in removing the same from the case or box. Also the end members have suitably secured thereto upon their outer sides, at the upper ends metal straps or plates 18 and 18ª whose ends are laterally bent to form flanges 19 adapted to overlap the metal straps or plates 15 of the lateral or side members as indicated especially in Fig. 1 for aiding the retention of the lateral members in position against outward displacement especially at the upper portions as well as exerting a binding action between these plates 15 and the flanges 19 assisting in holding the end and lateral members firmly in position. It will be noted that the plates 18, 18ª have their upper edges formed with inwardly bent portions or flanges 20, 20ª, the flange 20 overhanging the closure or top member and serving to further retain the top or closure member against upward displacement, while the upper portion of the plate extending above the top edge of the end member limits the endwise sliding movement of the top or closure member in that direction. It will be noted that the corresponding flange 20ª of the opposite end-member strap or plate 18ª is arranged to overlap or rest upon the top edge of the end-member and therefore is in a lower plane than the flange 20, and upon it rests the closure or top member and therefore the plate bearing the flange 20 is not in the way of the removal of said top-member or closure, as would otherwise be the case.

One end-member 3ª is provided with opposite resilient detents 21 suitably secured thereto, as disclosed, whose upper or effective right-angled end portions are received by apertures 22 in the flanged or bent portions of the straps or plates upon the contiguous ends of the lateral or side members, thus providing for securing said lateral or side members in position more especially against casual vertical displacement.

Suitable fastenings 23 are secured to the inner sides of the lateral or side members for the retention of the partition 5 in its upright or effective position as will be seen by reference more particularly to Figs. 1 and 5. These fastenings are each formed preferably of a resilient metal plate, with its straight base-portion 23ª applied directly to the lateral member, said base-portion being extended at its ends and having the thus-formed end-extensions or arms 24 and 25 folded or bent down upon said base portion, and through these end-extensions 24 and 25 and the latter are inserted or driven the fastenings 26, which may be suitable nails or the like entering the lateral or side members. These extensions are inclined with respect to the base-portion so as to stand a suitable distance laterally from the latter, the free ends of said extensions being spaced a short distance apart for engagement with the partition laterally. One extension or arm 24 is much shorter than the other and practically rigid and is adapted to engage a notch 26ª in the partition 5, which is of the requisite depth for that purpose. The other extension or arm 25, which engages the partition from its opposite side, possesses sufficient resiliency to allow it to requisitely yield and flex toward the lateral or side member as it is engaged by the end of the partition as is the case in moving the partition into upright position. As such movement is imparted to the partition it will be noted that just previous to the escape of the partition from the resilient arms or extensions 25 of the fastenings 23, the notches 26 in said partition will receive the free ends of the arms 24 of said fastenings and that when the partition has reached its final position, the partition will snap by the arms or extensions 25, the arms or extensions 24 being received to the full depth of said notches and the free ends of the arms or extensions 25 springing past the ends of the partition and engaging the side of the latter, thus providing for effectively securing the partition in upright or effective position.

It will be noted that by exerting slight downward pressure upon the closure or top-member, at what may be termed its free or opening end, as 27, and pushing thereon in the direction of that end, the opposite end of said top or closure member will be readily released and by continuing to similarly engage the closure it may be wholly removed, as will be readily apparent. The collapsing or folding of the side or lateral end and partition members, it is thought, will also be readily appreciated, it only being required to move the detents 21 into retracted position, with respect to their receiving openings 22 in the straps or plates of said lateral members, when the lateral members are withdrawn, allowing the end members to be folded downwardly into the compartments resulting from the use of the stub-partition 7, the partition 5 then being folded downwardly upon one of said end-members and the lateral members, together with the top

or closure member suitably laid upon the aforesaid parts as clearly disclosed by Fig. 3.

The reassembling of the parts may be readily effected it is believed, without detailing or describing the same herein.

It is clearly apparent from the foregoing description, taken in connection with the accompanying illustration, that my invention is characterized for great convenience for shipping purposes, as well as for storage, especially of eggs, while it is capable of employment with advantage for transporting or shipping oranges, lemons, peaches and the like, it being observed that the box or crate members may be formed of slats for ventilation as required in connection with the shipment and storage of certain of the articles or commodities named above. It is also noted that by reason of its collapsibility, the crate, box or case may be readily or expeditiously re-shipped and caused to occupy the minimum space either for storage or shipment, while the invention is light, readily and inexpensively manufactured, and simple in construction, requiring the use of no latches, hooks or the like fastenings, being practically self-fastening in character, which constitute desiderata especially in this class of receptacles, as is obvious. It will also be observed that my invention or receptacle may equally serve the purposes of a poultry or chicken coop, as such, also as a crate for holding and shipping poultry or chickens, as will be readily appreciated.

I claim:

1. A receptacle of the character described, including foldable or collapsible lateral and end members, a closure member, inflexible straps secured to the end-members, one of said straps having at its top edge an inwardly extending flange adapted to overhang the top or closure member at one end and to serve as a stop to limit the movement of said closure in one direction, and like straps applied to said lateral members at their ends and also having at their upper ends inwardly extending flanges also overhanging said top-member.

2. A receptacle of the character described, including foldable or collapsible lateral and end members, a closure or top member, inflexible straps secured to the end members, one of said straps having at its top edge an inwardly extending flange adapted to serve as a stop to limit the movement of said closure member in one direction, and like straps secured to said lateral members at their ends, said flanges overhanging said top member, the other end strap having also at its top end a like flange resting upon the top edge of the end-member to which strap is attached, below the closure member.

3. A receptacle of the type described, comprising foldable end, lateral and partition members, means for the retention of said foldable members in effective or operative position, and means for the retention of said partition-member in operative position including a resilient metal member secured to a lateral member and having outstanding end-extensions, with their free ends opposed contiguously to each other, one end-extension being received by a notch in said partition and the other end-extension adapted to engage said partition and with the other end-extension holding said partition in upright or operative position.

4. A receptacle of the type described, including foldable end and lateral members, a closure member, a bottom member, inflexible end straps secured to the bottom at its ends and extending upwardly opposite the end members, said straps having right-angled extensions opposed to the lateral members, additional end inflexible straps having upper edge overhanging flanges, one of said flanges being arranged above said top or closure, and lateral inflexible straps secured to said lateral members and having upper end flanges overhanging said top and closure member or resilient holding means attached to said end-members, for engaging the straps of said lateral members.

5. A receptacle of the character described, including foldable or collapsible lateral and end members, a slidable closure member, inflexible straps secured to the end members, one of said straps having an inwardly extending flange adapted to overhang said closure, said strap also being extended beyond the upper edge of the receptacle, the thus extended strap portion being adapted to form a strap for limiting the movement of said closure in one direction and like straps secured to said lateral members, at their ends, said straps also having inwardly extending flanges at their upper ends, adapted to also overhang said closure.

6. A receptacle of the character described, including foldable or collapsible lateral and end members, a slidable closure member, inflexible straps secured to the end members, one of said straps having an inwardly extending flange at its upper end to overhang said closure member, said strap also being extended beyond the upper edge of the receptacle, the thus extended strap portion being opposed to the plane of movement of said closure member to form a stop to limit the movement of the latter in one direction, additional straps secured to said lateral members, at their ends, and having inwardly extending flanges adapted to also overhang said closure member from the side, the other of said end straps having an inwardly extending flange at its upper end arranged to overhang the upper edge of that end of the receptacle, below said closure member.

7. A receptacle of the character described, including foldable or collapsible lateral and end members, a closure member, inflexible straps secured to the end members, one of said straps having an inwardly extending flange at its upper end to overhang said closure member, said strap also being extended beyond the upper edge of the receptacle, the thus extended strap member portion being opposed to the plane of movement of said closure member to form a stop to limit the movement of the latter in one direction, additional straps secured to said lateral members, at their ends, and having inwardly extending flanges adapted to also overhang said closure member from the side, the other of said end straps having an inwardly extending flange at its upper end arranged to overhang the upper edge of that end of the receptacle, below said closure member, said end straps also having lateral flanges overlapping the lateral straps.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM H. DEAR.

Witnesses:
OTHO P. BURCHFIEL,
G. R. FOX.