No. 669,829. Patented Mar. 12, 1901.

C. GRANT, JR.

COLLAPSIBLE CARRIER.

(Application filed Jan. 12, 1901.)

(No Model.)

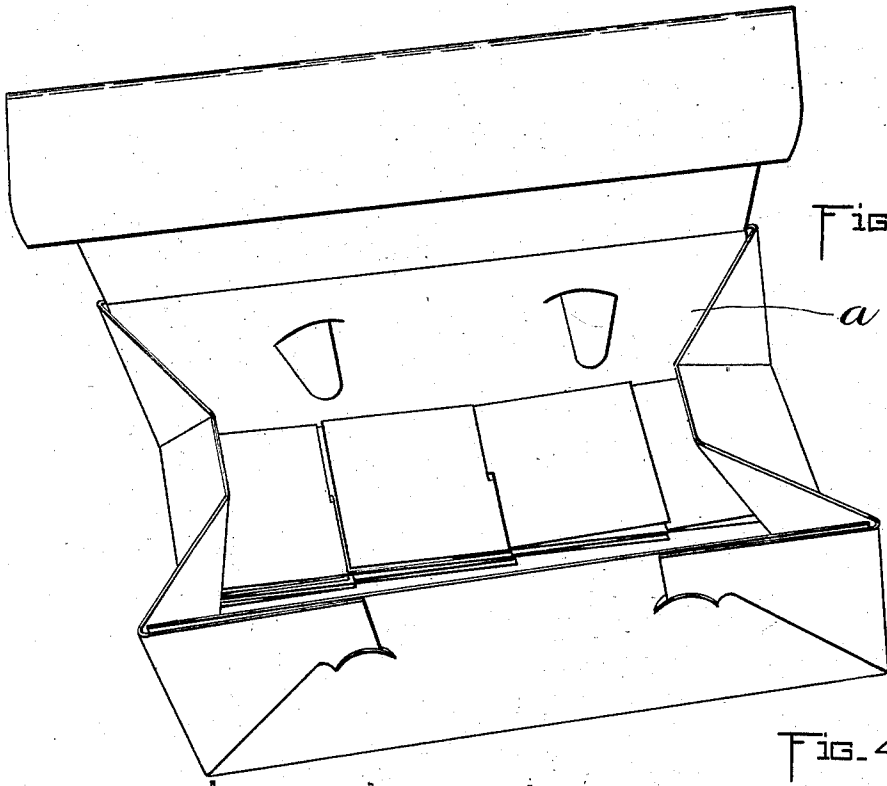


Fig. 1.

Fig. 2.

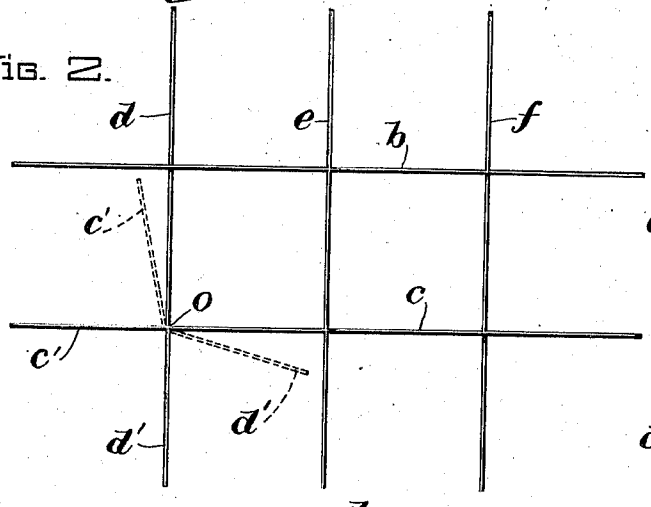
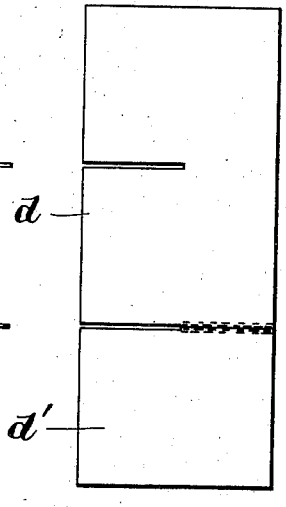


Fig. 4.



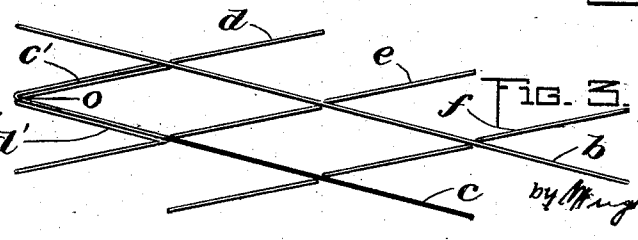


Fig. 3.

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UNITED STATES PATENT OFFICE.

CHARLES GRANT, JR., OF REVERE, MASSACHUSETTS.

COLLAPSIBLE CARRIER.

SPECIFICATION forming part of Letters Patent No. 669,829, dated March 12, 1901.

Application filed January 12, 1901. Serial No. 43,014. (No model.)

To all whom it may concern:

Be it known that I, CHARLES GRANT, Jr., of Revere, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Collapsible Carriers, of which the following is a specification.

This invention relates to crates or boxes for shipping breakable articles, such as eggs, which may be folded to economize space, for convenience in shipping from the maker to the user, and in storing when not in use. Such boxes are usually provided with cells formed of a series of strips of pasteboard or other suitable material, crossing each other at right angles. The cell structure can ordinarily be taken from the box and collapsed to form a compact package; but when it is so collapsed it is longer than the box for which it is made, and so in being shipped from the maker it must be sent separately from the box, with liability of getting lost, or it must be taken apart to be put in the box, whereby the user is put to inconvenience by being obliged to fit the parts together in order to use the crate.

The object of this invention is to provide an improved cell structure for use with a folding carrier which when collapsed may be packed within the carrier and shipped without danger of being lost.

In the drawings illustrating my invention, Figure 1 represents a perspective view of a folding carrier partly opened, showing the improved cell structure collapsed lying within. Fig. 2 represents a plan view of the cell structure extended as when in use. Fig. 3 represents the structure partially collapsed. Fig. 4 represents an elevation of one of the strips of which the cell structure is composed.

The same reference characters designate the same parts in all the figures.

Referring to the drawings, the box *a* (shown in Fig. 1) represents a well-known form of folding carrier adapted to contain eggs and other fragile articles. It is provided with cells formed by a structure consisting of longitudinal strips *b c* and transverse strips *d e f* of pasteboard or other suitable material, having at the same time the requisite stiffness and flexibility, joined together in the ordinary manner, each strip at the points of intersection being slotted through half its width. When such a structure is collapsed, the strip *c* instead of resting against the strip *b* without overlapping at either end is carried by the transverse strips, on account of the stiffness of the latter, to one side, so that one end of it extends beyond the strip *b* a distance equal to the width of one cell. Thus the cell structure when collapsed is longer by the width of a cell than the box into which it fits when extended and therefore cannot be placed inside the box when the latter is folded together.

In order to diminish the length of the collapsed cell structure, one of the outer transverse strips and one of the longitudinal strips, as at the intersection *o*, between the strips *c* and *d*, are arranged to be turned back on the point of *o* as a center, as shown in dotted lines, whereby the end *c'* of the strip *c* may be swung back against the strip *d*, as is shown in Fig. 3 and by dotted lines in Fig. 2, the folded ends fitting in between the free or outer ends of the strips next or adjacent thereto. It is obvious that the turning must be placed at an intersection between two of the outer strips, as no advantage is thereby gained when one of the strips is in the interior of the structure, and it is equally obvious that it makes no difference which of the four extreme intersections is used as a pivotal center, provided the strips are inclined in the collapse of the structure in such a direction as to bring that intersection near to one end of the collapsed structure.

In place of folding the ends of the strips at the point of intersection, as *o*, these ends may be hinged at such point or may be connected in any desired way in order to permit the folding or pivotal action referred to without departing from the spirit and scope of my invention, which comprises a detachable collapsible cell structure capable of being shortened by the described folding action.

Having described my invention, what I claim is—

1. A detachable collapsible cell structure for collapsible carriers, comprising longitudinal and transverse intersecting strips forming chambers, the end of one of the outer longitudinal strips and the end of its companion transverse strip being constructed to be folded backwardly away from each other

to diminish the length of the structure when collapsed.

2. A collapsible cell structure adapted for detachable location in a collapsible carrier, comprising longitudinal and transverse intersecting strips forming chambers, said strips being normally straight from end to end in use, two of the intersecting strips being constructed to have their outer ends folded backwardly between the ends of adjacent strips when the structure is collapsed.

In testimony whereof I have affixed my signature in presence of two witnesses.

CHARLES GRANT, JR.

Witnesses:
A. D. HARRISON,
P. W. PEZZETTI.