Jan. 31, 1933. J. L. COYLE 1,895,974

EGG CARTON

Filed Oct. 21, 1927 2 Sheets-Sheet 1

Fig. 1.

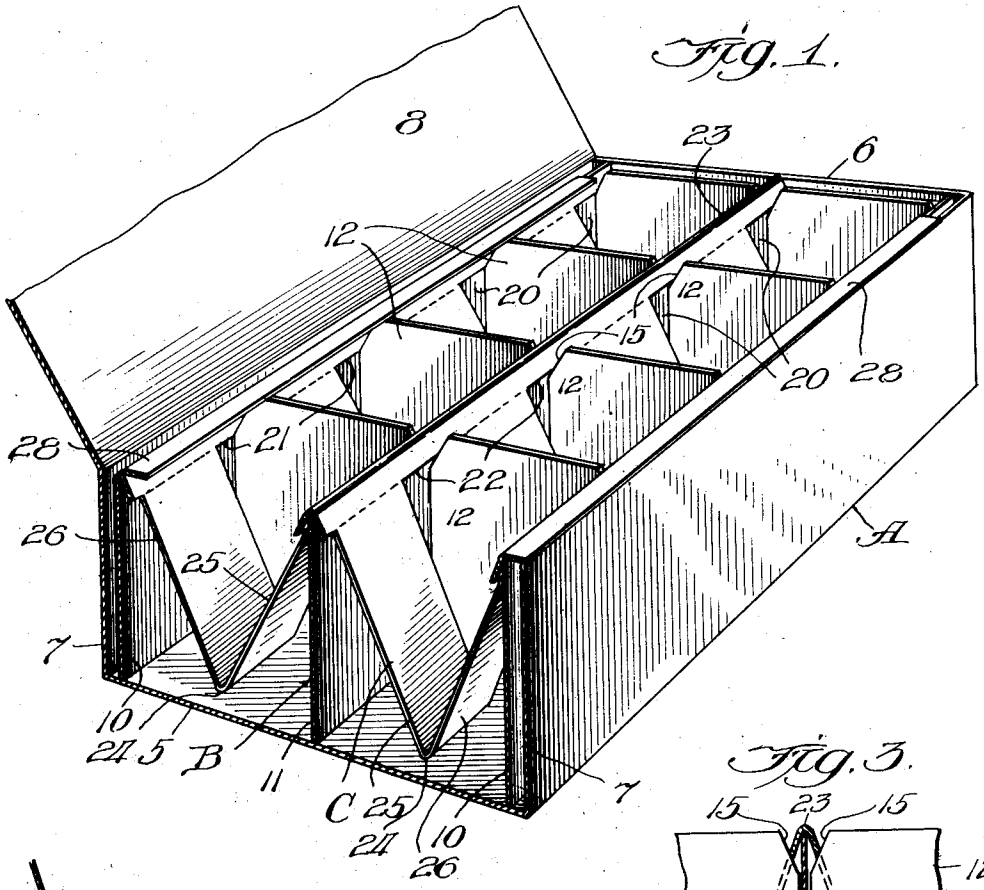


Fig. 2.

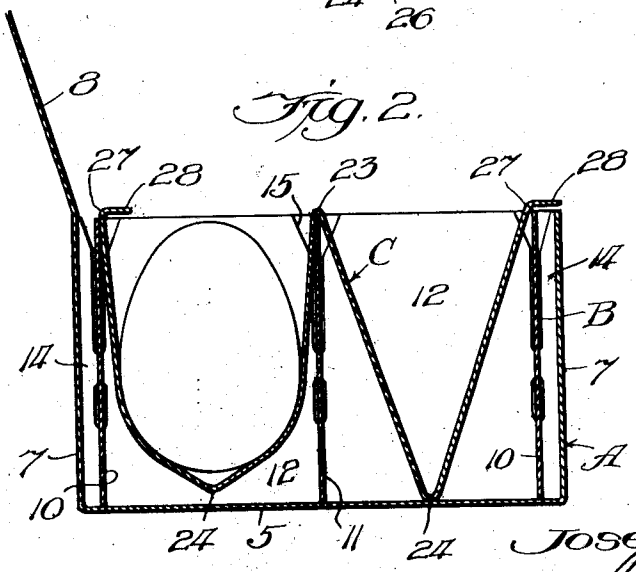


Fig. 3.

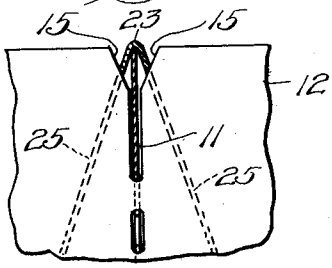
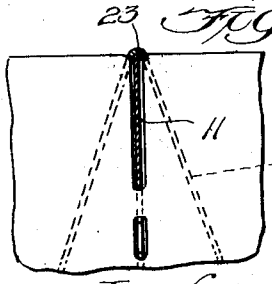


Fig. 4.



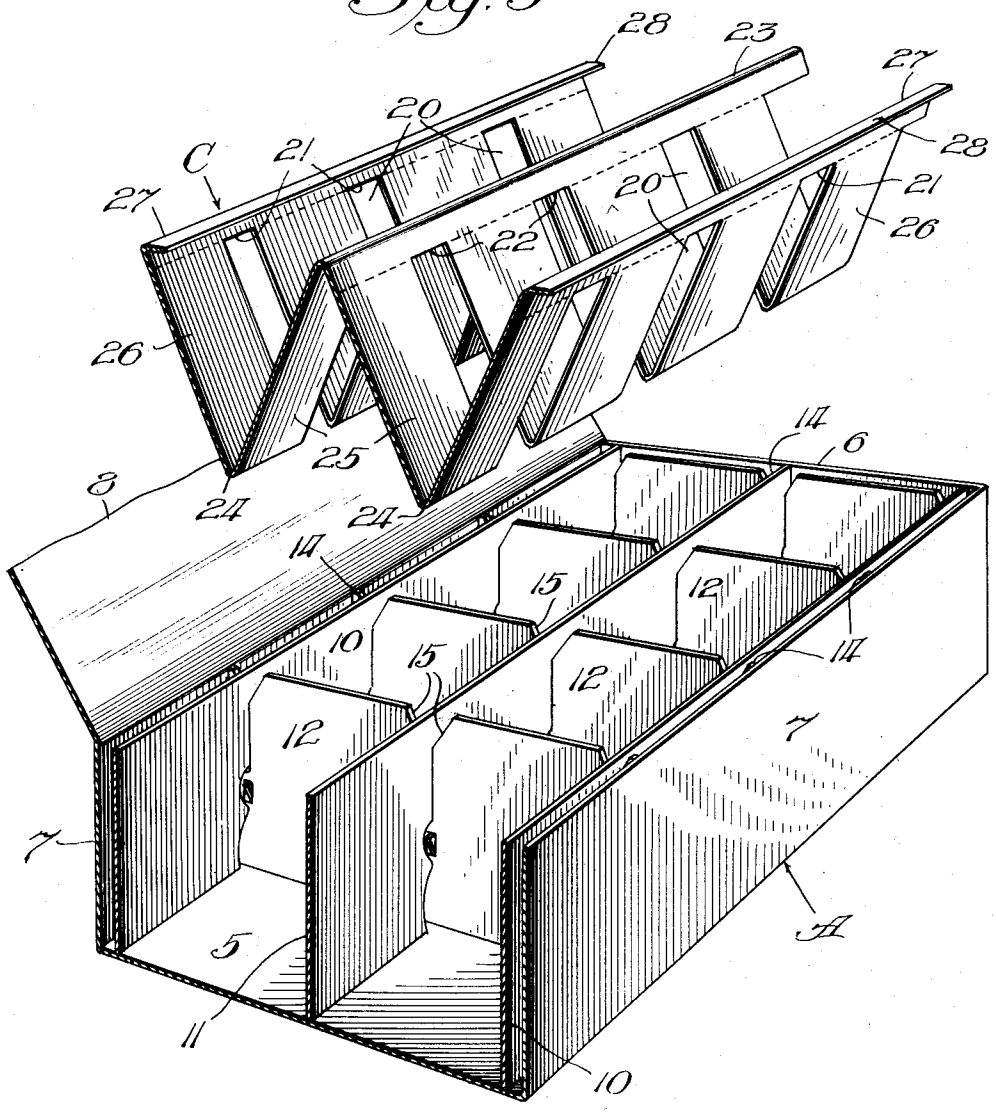
Inventor:
Joseph L. Coyle
by Edmund F. Allen
Attys

Jan. 31, 1933. J. L. COYLE 1,895,974

EGG CARTON

Filed Oct. 21, 1927 2 Sheets-Sheet 2

Fig. 5



Inventor:
Joseph L. Coyle
by Manning & Manning
Attys

Patented Jan. 31, 1933

1,895,974

UNITED STATES PATENT OFFICE

JOSEPH L. COYLE, OF LONDON, ONTARIO, CANADA, ASSIGNOR TO COYLE SAFETY CARTON COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF DELAWARE

EGG CARTON

Application filed October 21, 1927. Serial No. 227,793.

This invention relates generally to a carton for eggs and like commodities, and more particularly to an article suspension means formed independently of the carton, adapted for separable association therewith for the purpose of furnishing additional protection to the carton contents.

The present improvements are concerned with a unitary structure in the form of a separable attachment which provides within each cell or pocket of the carton a suspended support which will adequately protect the eggs or other contents during shipment and handling. For this purpose I have designed a suspension unit which may be made of card board or appropriate semi-flexible material having certain cuts and bends therein adapted to co-operate with the usual or ordinary cellular type of carton. Such a means which is of unitary structure is receivable into operative position with little or no effort, so as to enhance the usefulness of the container.

In the accompanying drawings is set forth a preferred embodiment of my invention in the manner following:

In Figure 1 is illustrated a perspective cross sectional view of an egg carton equipped with the present suspension means;

Fig. 2 is a transverse section therethrough, taken centrally through a pair of cells therewithin;

Fig. 3 is a fragmentary section through the ridge of the suspension unit and partition wall supporting same, one cross wall being shown in elevation;

Fig. 4 is a similar view in which the cross wall is of slightly modified construction; and

Fig. 5 is a disassembled view of a carton with the suspension unit separated slightly therefrom.

The carton A herein illustrated is of a conventional kind in that it comprises a bottom 5 from which upstand end walls 6 and side walls 7, one of the latter having an extension forming a flap 8 which, when folded down, serves as a cover for the box. Within such a carton are a plurality of compartments which may be provided by a filler B of usual construction, having outer side walls 10 with one or more intermediate partitions 11, and, transverse thereto, a plurality of cross walls 12. These several walls which are interlocked in any appropriate manner may each terminate in a tongue 14 which abuts one of the carton walls, whereby the proximate filler wall is spaced therefrom an appreciable distance. Adjacent each intersection of a cross wall 12 with one of the other filler walls, I may also provide notches 15 flaring outwardly adjacent the top edges thereof, as best shown in Figures 2 and 3. This exact construction is not necessary, however, as such notches may be omitted, as shown in Figure 4.

Egg cartons having multiple compartments provided by fillers, or otherwise, have long been known, and no claim thereto is herein advanced. In such a structure is formed a plurality of cells or pockets for the reception of eggs, or other like commodities, each of which is separated effectively from the others which are contained within the same box. The protection thus afforded to the contents of the box is, however, rather limited, since opposite ends of each egg lie directly adjacent the bottom and cover flap of the carton and so are liable to injury in response to any force proceeding from such directions. It is primarily with a view to providing protection in the form of a unitary suspension means for the eggs that the present invention has been designed.

As shown best in Figure 2, I utilize a suspension unit C made of a single piece of material having a size and shape designed to co-operate with the carton with which it is to be associated. Cardboard of commercial quality is suitable for the suspension unit, it being a requirement that it be yieldable to conform to conditions of use, and be bendable along lines which preferably are pre-formed, as by scoring. In the form shown, the carton is designed to receive eggs in two rows, and the suspension unit is accordingly provided with two sets of slots 20 which align with each other as well as with the cross walls 12 which are adapted to project thereinto when the suspension unit is operatively positioned in the box. These slots which extend transversely of the suspension unit terminate

short of opposite edges thereof, as at 21 (see Fig. 1) and at a point 22 which is short of a line 23 extending centrally between such edges. Between these slots the material remaining in this unit takes on the general form of straps which are then bent as per the letter W, first along the middle line 23 which forms a central ridge, then reversely at 24 to provide inner and outer oblique walls 25 and 26, respectively. Adjacent opposite edges of this unit further bends are made, as at 27, to provide ledges 28 which may extend either inwardly or outwardly, as desired.

A suspension unit answering to these general characteristics is adapted to be applied to an egg carton such as illustrated herein. It is set in place with its several walls 25 and 26 disposed within the individual pockets or cells of the filler. These walls stand normally straight, and in angular relation to each other, so that the lower bends 24 lie close to the carton bottom substantially midway between the center partition 11 and opposite walls 10 of the filler. The ridge 23 is adapted to rest on the top edge of the center piece 11 so as to be supported thereupon. With a construction such as appears in Fig. 3, the ends of the slot 20 are receivable within the notches 15 formed in the cross walls 12 adjacent the center piece and side walls 10. Where such notches are absent, as in Figure 4, the suspension unit may rest directly upon the top edges of the filler walls. In this manner I provide for a suspension of the oblique walls 25 and 26. The ledges 28 are of minor importance, being desirable for general strength and convenience in handling. They are foldable either inwardly or outwardly, both of these two arrangements being suggested in Figures 1 and 5.

With a suspension unit so formed and positioned, a plurality of V cells, one within each pocket of the filler, are provided for the reception of eggs or other commodities. The fillers so assembled may be folded flat for the purpose of shipping to the trade ready for insertion into suitable cartons or containers designated as A shown in Figs. 1 and 2. A filler made in accordance with the showing in Figs. 1 and 2 when unfolded or set up for use is self-supporting and may be filled with eggs before placing it into a carton for shipment or after the filler has been placed into the carton. Obviously, the self-supporting filler, which is a separate unit from the carton or other container, as shown, may be removed from the container with its commodities suspended within the cells and the filler placed in another carton, container, or the like, or wherever desired, without disturbing the commodities carried by the filler and suspended above the surface on which the filler is rested. With the placing of an egg in each cell, the walls 25 and 26 which are normally straight, or substantially so, as shown at the right hand side of Fig. 2, are required to curve in conformity with the contour of an egg, or other object, which is placed therewithin. In so doing, the bend 24 which initially was close to the carton bottom is raised therefrom so as to assure suspension of the egg at an appreciable height thereabove. In addition, the outward flexing of the walls 25 and 26 necessary for the accommodation of eggs, or other like objects, results in an equalized pressure being directed against opposite walls of such articles whereby they are firmly held against displacement within the pockets provided for their reception. The parts may be so proportioned that the upper ends of the eggs remain slightly below the top edges of the filler and suspension unit on which the cover is rested when the box is closed. In this position the eggs will remain during all ordinary handling, due to constant side pressure from the straps forming the suspension unit, so that the top and bottom of the eggs will be held away from the adjacent parts of the pockets and so be protected against shocks of any kind. The suspension unit tends to remain in place not only due to the clamping action of its inner walls 25 against the top of the partition piece, but also because of the folding down thereover of the cover which, in ordinary practice, is secured to the box against accidental opening.

This invention is advantageous both in providing enhanced protection for the carton contents, and in the simplicity of its construction and wide applicability of its use to the many styles of carton fillers now in use. It may be sold and handled as an accessory, where better protection for eggs is desired, and because of its one-piece construction may be blanked out and shipped flat at a minimum of expense for transportation, packing and shipment. Obviously it may be designed and proportioned for use with fillers having the usual 1 x 2, 2 x 2, 2 x 3, 2 x 6, 3 x 4, or other pocket arrangements, there being no essential constructional variations necessary for such adaptations.

I claim:

1. A filler or article carrier adapted for reception in a carton, wrapper or other container, comprising upright members, upright cross-pieces interengaged with said members and forming therewith a plurality of cells in one or more rows, and cell side and bottom portions hung on said upright members and cross-pieces, the whole forming a collapsible but self-supporting cellular tray-like device to partition and hold articles for use, and for transportation or sale in a carton or other container.

2. A filler or article carrier adapted for reception in a carton, wrapper or other container, comprising an element including a

plurality of hingedly connected strips to form side and bottom walls of a trough, a plurality of cross-pieces having base portions on which they may rest, transverse slot formations in said trough element and co-operating slot formations in the cross-pieces, whereby said trough element may be inter-engaged with the cross-pieces at substantially right angles thereto to form cells wherein said side and bottom walls are hung in the manner of a sling.

JOSEPH L. COYLE.