May 24, 1932. M. R. SHOFER 1,859,537

CAN SEPARATOR FOR SHIPPING CONTAINERS

Filed May 27, 1931

Fig. 1

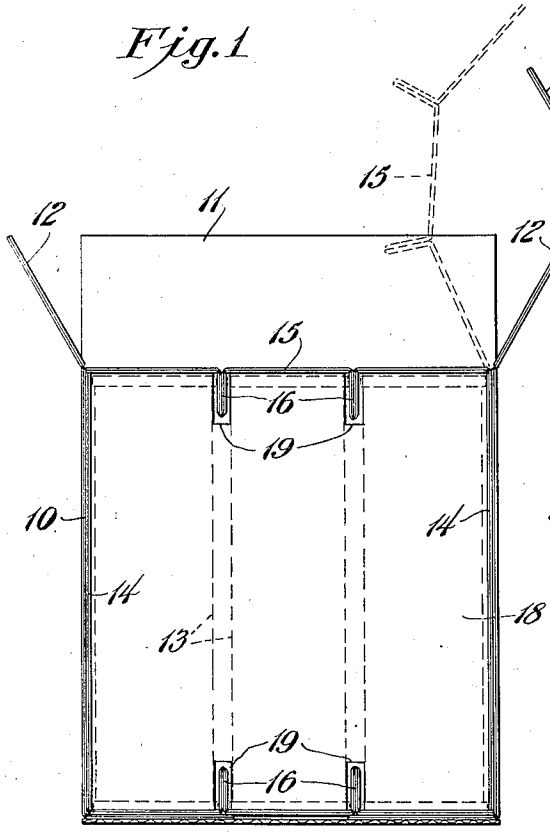


Fig. 2

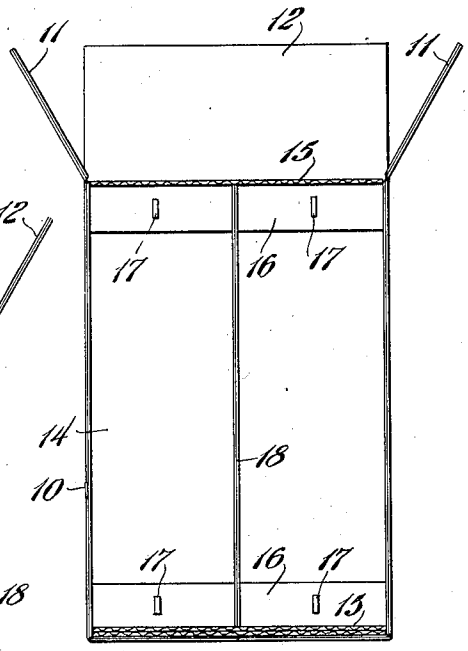


Fig. 3

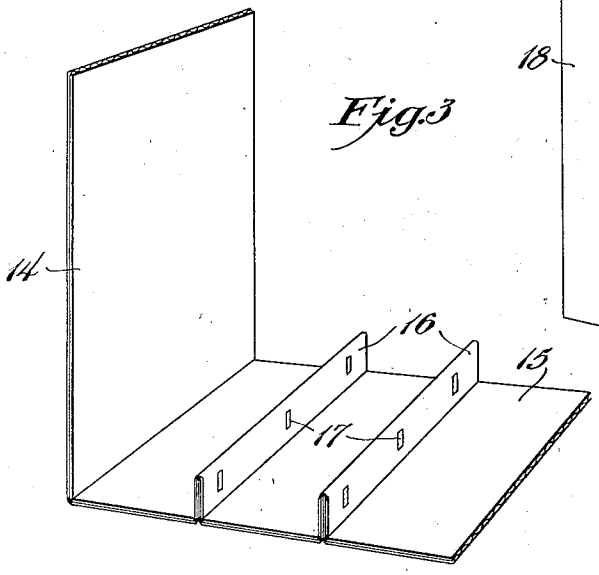
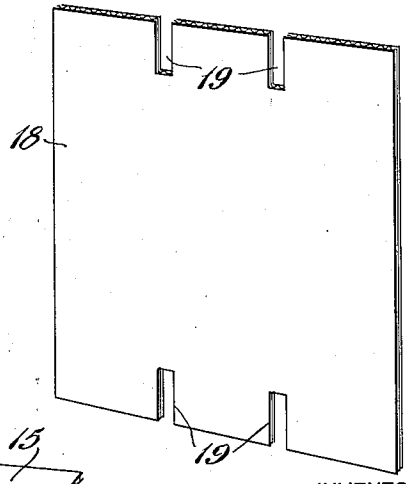


Fig. 4



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UNITED STATES PATENT OFFICE

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CAN SEPARATOR FOR SHIPPING CONTAINERS

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This invention relates to shipping containers for canned foods and aims, among other objects, to provide improved division members or separators constituting strengthening or bracing means for the containers which are usually made of corrugated paper.

Other aims and advantages of the invention will appear in the specification, when considered in connection with the accompanying drawings, wherein:—

Fig. 1 is a vertical, sectional view of a shipping container having the preferred form of division members inserted therein;

Fig. 2 is a vertical sectional view taken at right angles to Fig. 1;

Fig. 3 is a perspective view of one of the separators; and

Fig. 4 is a perspective view of a longitudinal division member.

Referring particularly to the drawings, the improved separators are applied to an ordinary corrugated paper box 10 which is illustrated as being rectangular in shape and having the usual closure flaps 11 and 12 on the top edges of the sides and ends respectively. In this example, the box is of such height as to accommodate a series of tin cans 13, shown in dotted lines in Fig. 1, inserted endwise therein and extending from the top to the bottom. The purpose of the improved division members is to separate the cans so that they will not bump together and to protect the beaded ends thereof.

In this example, the end separators for the cans are adapted to be inserted in the box and are preferably composed of two separate pieces of corrugated paper board, each having a vertical wall portion 14 adapted to fit against the end walls of the box 10 and to contact with the side walls. They are scored to provide pad portions 15 each having vertical division walls or partitions 16 formed by doubling the board upon itself and stapling the doubled portions together by means of staples 17. The pads 15 fit in the bottom and top of the box so that the short divisions or partitions 16 stand vertically, as shown in Fig. 1, and extend crosswise of the box. In Fig. 1, it will be noted that the upper pad member 15 has its vertical wall portion 14 extending downwardly into the box at the right-hand end. The arrangement is such that the pad 15 is hinged at the upper edge of the box so that it can be opened like one of the end lids 12 for the insertion of the cans.

Referring to Figs. 1 and 4, there is shown a longitudinal partition board 18 having slots or notches 19 at its upper and lower edges to accommodate the doubled partitions 16 formed on the end pads 15. If only two longitudinal rows of cans are put in the box, one such partition board is used between the rows and is inserted in the middle of the box, as indicated in Fig. 2 with the side edges contacting with the inner sides of the vertical wall portions 14 at the ends of the box. This board can easily be slid into place after the bottom pad member 15 is inserted in the box and the vertical wall 14 of the top pad member 15 is slipped inside the box at the right-hand end. Thus, the board constitutes a further reinforcing member for the box and prevents the cans from contacting with each other at their inner sides.

When the board 18 has been inserted in the box, the cans may be put in their individual compartments and the upper pad 15 swung down over the tops of the cans while the double division walls 16 enter the spaces between the cans and the notches 19 in the board. The flaps 11 and 12 are then closed and secured or sealed in the usual way.

From the foregoing description, it will be seen that the top and bottom pad members with their double division walls and the end pads reinforce the box at the top, bottom and ends and effectively protect the ends of the cans during shipment. These members can be made very cheaply, either of a single, continuous strip of corrugated paper or fiber board or two duplicate pieces, as shown. Moreover, the longitudinal division wall constitutes a further reinforcement for the box in the middle. All of the separators can be made to fit snugly in any box and can be collapsed or packed in a relatively small shipping space to be sent to the user with the collapsed boxes. The construction is such that a great saving in corrugated board is effected

by utilizing the short doubled division walls formed on the pads instead of utilizing separate, transverse division walls extending the full height of the box.

Obviously, the present invention is not restricted to the particular embodiment thereof herein shown and described.

What I claim is:—

1. In combination with a paper board shipping container of rectangular cross-section, separate division and packing members for a plurality of rows of cans comprising top and bottom pad members fitting closely within the top and bottom of the container and each having integrally formed, doubled and opposed partition members extending toward each other to separate the upper and lower ends of the cans; and vertical wall members on the end pads extending the length or height of the container and reinforcing the end walls and all corners of the container.

2. In combination with a paper board shipping container of rectangular cross-section, division members for a plurality of rows of cans comprising top and bottom pad members adapted to fit closely within the top and bottom of the container and having integrally formed, doubled partition members to separate the upper and lower ends of the cans; vertical wall members on the end pads adapted to reinforce the end walls of the container; and a longitudinal partition board in the container having notches at the upper and lower ends to receive the doubled partition members and providing a separator for longitudinal rows of cans in the box.

3. In combination with a corrugated, rectangular shipping box for canned foods and the like, separate top and bottom pad members insertible in the box and having scored, doubled portions extending transversely thereof constituting opposed, inwardly extending separators for the cans at their ends, said pads having wall extensions coextensive with and fitting against the side walls of the box and constituting reinforcements therefor and for all corners of the box.

4. In combination with a stiff paper board box for shipping canned goods, a pair of corrugated board pads each of which is substantially L-shaped and is adapted to be inserted in the top and bottom of the box and each having one portion of the L-shaped body provided with doubled division walls stapled together forming transverse and opposed partitions in the top and bottom of the box to protect the cans at their upper and lower ends; and vertical extensions on the pads coextensive with and lying against opposite side walls of the box.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature.

MARC R. SHOFER.