

July 26, 1938.

C. A. WHITE ET AL

2,124,808

SHIPPING CONTAINER FOR CANNED GOODS OR THE LIKE

Filed Sept. 14, 1936

3 Sheets-Sheet 1

Fig. 1.

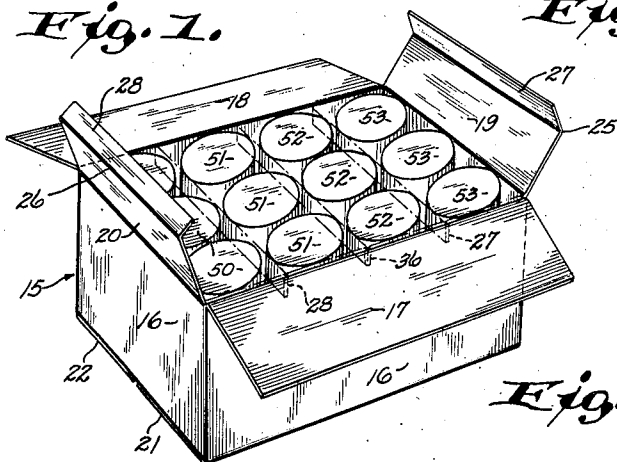


Fig. 4.

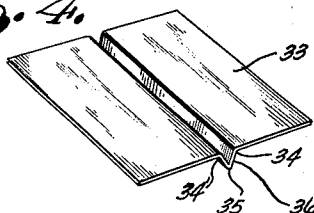


Fig. 5.

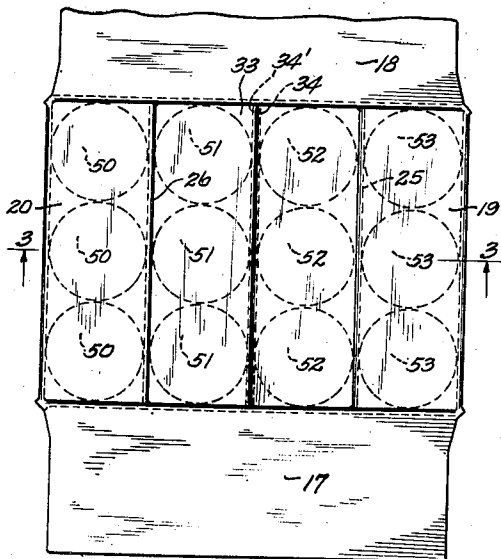
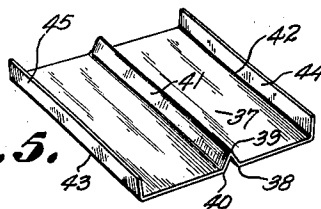


Fig. 3.

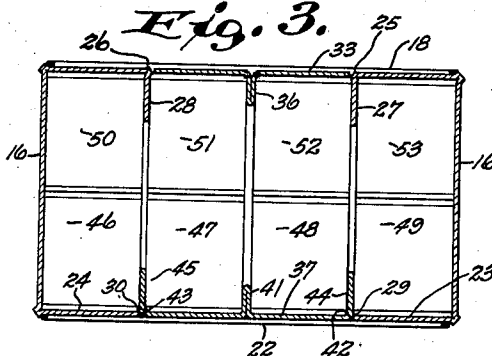


Fig. 2.

Fig. 7.

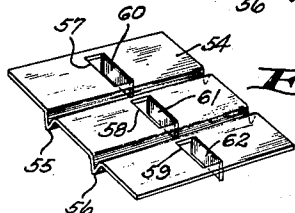
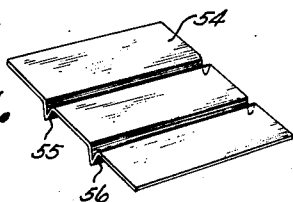


Fig. 8.

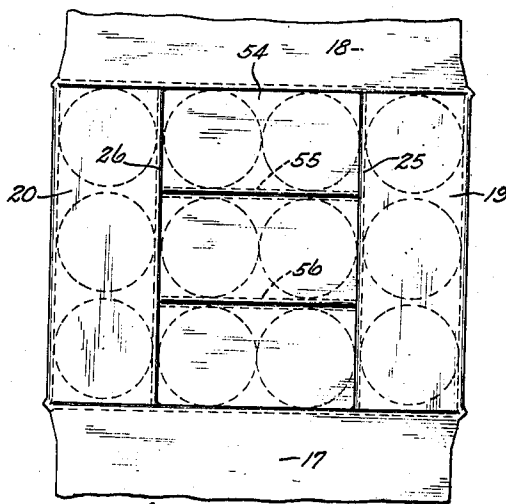


Fig. 6.

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Fig. 9.

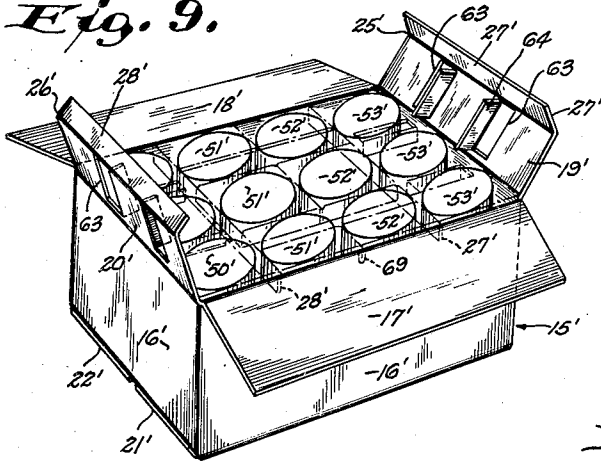


Fig. 12.

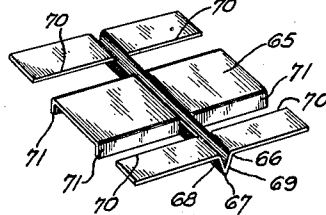


Fig. 11.

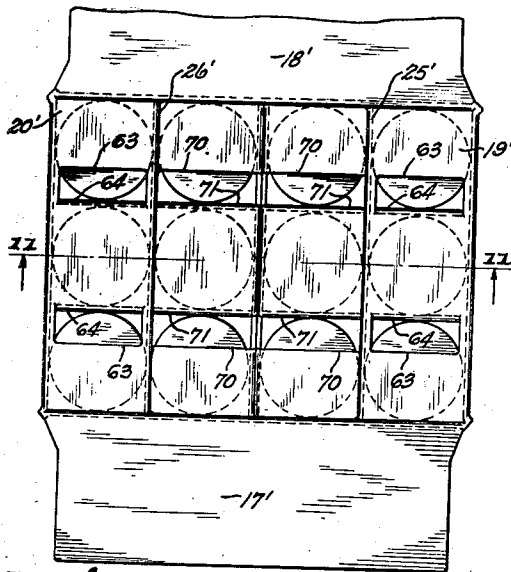
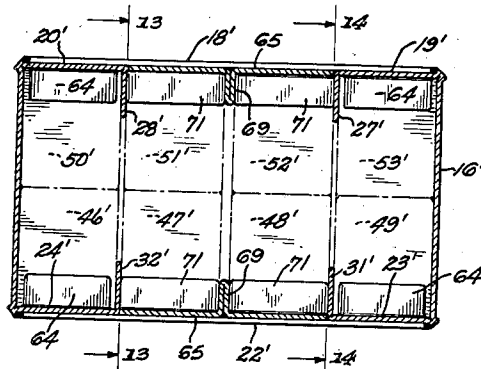


Fig. 10.

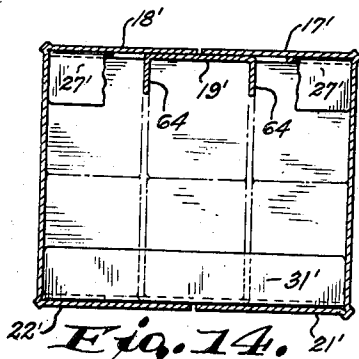


Fig. 14.

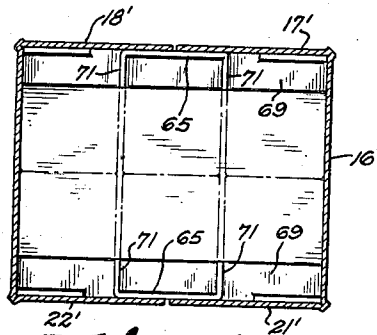


Fig. 13.

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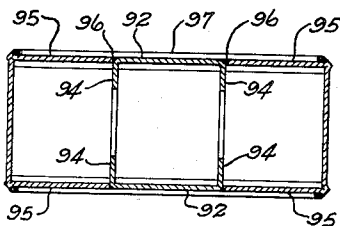
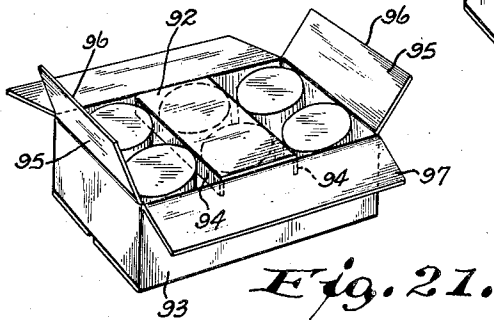
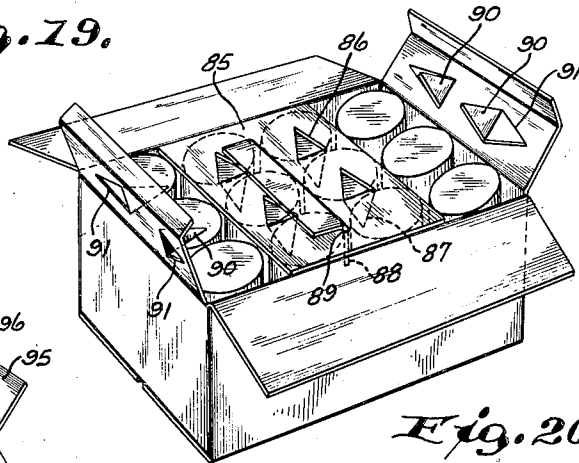
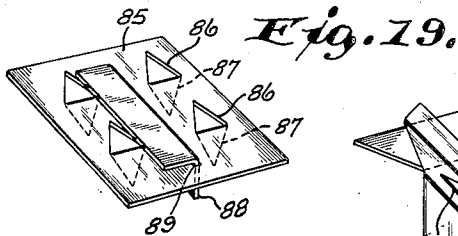
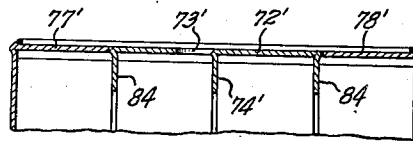
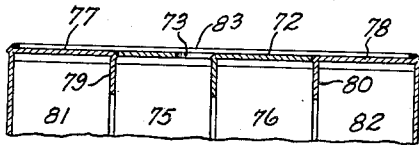
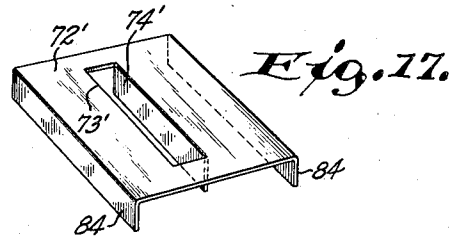
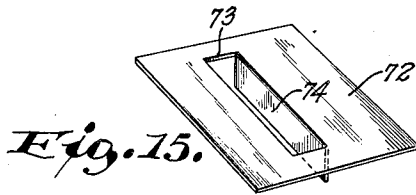
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SHIPPING CONTAINER FOR CANNED GOODS OR THE LIKE

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,124,808

SHIPPING CONTAINER FOR CANNED GOODS
OR THE LIKE

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Application September 14, 1936, Serial No. 100,654

16 Claims. (Cl. 229—27)

This invention relates to improvements in shipping containers for canned goods or the like. Heretofore canned goods has been packed in fiber or corrugated board shipping containers, and no practical and economical means has been provided for separating of the individual cans within the shipping container or for preventing the cans from denting one another during shipment. Packers of food products are constantly bothered by complaints as to the condition in which their cans arrive at the retailers, and these packers are not only desirous of eliminating these complaints, but also of improving the appearance of their products on the retailers' shelves. This difficulty is particularly serious in connection with products such as canned pineapple, which are shipped unusual distances and wherein the transfer of the shipping containers from one medium of transportation to another is necessary.

Various separating devices have heretofore been manufactured for use in packing commodities of different shape and nature than the articles for which the present invention is intended, but these prior structures are not suitable for the packing of cylindrical articles having flat ends, such as cans, wherein for the purpose of economy in shipment, the ends of the cans of one layer must be in registration with the ends of the cans of the layer above and wherein no substantial amount of lost space between adjacent cans of the same layer is permitted.

It is therefore an object of the present invention to provide an improved shipping container having novel means for separating cans therein and for minimizing the possibility of the cans denting one another during shipment and delivery.

A more specific object of the invention is to provide an improved shipping container for the purpose described, having members positionable at the top and bottom of the container between the end flaps thereof and provided with inwardly projecting can-separating means, said members being cooperable, in certain instances, with specially constructed end flaps in performing said separating function.

A further object of the invention is to provide an improved shipping container having can-separating members cooperable with specially constructed end closure flaps, wherein the side closure flaps are retained in conventional form so that conventional sealing methods may be employed in closing the case.

A further object of the invention is to provide an improved shipping container as above de-

scribed wherein the can-separating members not only perform a separating function but also serve to brace the container and render the same more rigid.

Other objects of the invention are to provide a shipping container for canned goods or the like wherein the container proper is formed from the conventional shipping container blank so that there is no increased manufacturing expense; wherein the auxiliary separating devices are inexpensively formed from flat sections of material of regular outline; wherein said auxiliary separating devices may be economically shipped in flat form to the packer; wherein the process of packing cans in the container is relatively simple; and wherein the weight of the packed shipping container is not appreciably increased.

With the above and other objects in view, the invention consists of the improved shipping container for canned goods or the like and all its parts and combinations as set forth in the claims and all equivalents thereof.

In the accompanying drawings illustrating preferred embodiments of the invention wherein the same reference numerals designate the same parts in all of the views:

Fig. 1 is a perspective view of a shipping container with the top closure flaps open, the dot-and-dash lines showing the end flaps folded to separating position and showing the auxiliary separating member in position;

Fig. 2 is a plan view of said container with the end flaps and auxiliary separating device in position and with the side closure flaps open;

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2, the side closure flaps being in closing position;

Fig. 4 is a perspective view of one form of auxiliary separating member for use in the top of the container;

Fig. 5 is a perspective view of one form of auxiliary separating device for use in the bottom of the container;

Fig. 6 is a plan view of a shipping container with a different form of auxiliary separating member in position;

Fig. 7 is a perspective view of said modified form of auxiliary separating member alone;

Fig. 8 is a perspective view of another form of auxiliary separating member;

Fig. 9 is a perspective view of a modified form of shipping container constructed to provide for separation of the cans in both directions;

Fig. 10 is a plan view of said container with

the end flaps in separating position and with the auxiliary separating member in place;

Fig. 11 is a sectional view taken on line 11—11 of Fig. 10;

Fig. 12 is a perspective view of the auxiliary separator used in conjunction with this form of shipping container;

Fig. 13 is a sectional view taken on line 13—13 of Fig. 11;

Fig. 14 is a sectional view taken on line 14—14 of Fig. 11;

Fig. 15 is a perspective view of another form of separating member;

Fig. 16 is a fragmentary longitudinal vertical sectional view through the upper portion of a container showing how the separator of Fig. 15 may be employed;

Fig. 17 is a perspective view of still another form of separator;

Fig. 18 is a fragmentary longitudinal vertical sectional view through the upper portion of a container showing how the separator of Fig. 17 may be employed;

Fig. 19 is a perspective view of another form of separating member;

Fig. 20 is a perspective view of a container with the end flaps and side closure flaps open, showing the separator of Fig. 19 in position;

Fig. 21 is a perspective view of a smaller shipping container showing a separating member positioned therein and particularly designed for this size of case; and

Fig. 22 is a longitudinal vertical sectional view through the container of Fig. 21, the container flaps being in closing position.

Referring more particularly, first to Figs. 1 to 5 inclusive of the drawings, the numeral 15 designates a shipping container of the conventional form for holding two layers of cans, each layer accommodating one dozen cans. The container is preferably made of either fiber board or corrugated board and comprises four foldably connected wall portions 16, there being top closure flaps 17, 18, 19 and 20 foldably connected to the upper edges of said walls 16, and similar bottom closure flaps 21, 22, 23 and 24 foldably connected to the lower edges of said side walls 16. In order to produce the shipping container proper no change is necessary in the present box-forming machinery except that lines of scoring 25 and 26 must be formed in the flaps 19 and 20 respectively as shown in Fig. 1 to provide bendable flanges 27 and 28; and the corresponding bottom closure flaps are preferably cut off short as at 29 and 30 (see Fig. 3).

A top separating member 33 (see Fig. 4) may be formed from a flat sheet of fiber board or corrugated board scored along parallel lines 34, 34' and 35 to provide for folding of the member 33 to the condition of Fig. 4 so as to form a depending separating flange or ridge 36 of double thickness.

A similar auxiliary separating member 37 for use in the bottom of the container (see Fig. 5) is also provided, and said member has its central portion formed with parallel lines of scoring 38, 39 and 40 so that the member is foldable to the position of Fig. 5 to provide an upwardly projecting flange or ridge 41 of double thickness. This bottom auxiliary separating member is also preferably formed with additional lines of scoring 42 and 43 adjacent opposite edge portions to provide upwardly bent edge flanges 44 and 45 respectively.

To pack this type of shipping container the

bottom closure flaps 21 and 22 are folded to the position of Figs. 1 and 3, the inner surfaces being covered with an adhesive. The other pair of bottom flaps 23 and 24 which have already been folded inwardly to the position of Fig. 3 are thus united to the flaps 21 and 22 by means of the adhesive. Next, the auxiliary separating member 37 for use in the bottom of the container is folded to the position of Fig. 5 and inserted in the manner shown in Fig. 3, the flanges 44 and 45 closely engaging the edges of the end flaps as at 29 and 30. The cans forming the bottom layer are then placed in position to form four parallel rows 46, 47, 48 and 49, there being three cans in each row. It is apparent that the row 46 is separated from the row 47 by the flange 45, that the row 47 is separated from the row 48 by the flange 41, and that the row 48 is separated from the row 49 by the flange 44. It is also apparent that the flanges fit snugly between the rows of cans to leave no room for shifting movement.

Next, the cans forming the upper layer are placed in the container to form four rows 50, 51, 52 and 53. The upper closure flap 20 is then bent inwardly from the full line position of Fig. 1 to the dot-and-dash line position therein, the flange 28 being inserted between the rows of cans 50 and 51 as shown more clearly in Fig. 3. The other closure flap 19 is folded inwardly in a similar manner with its flange 27 inserted between the rows of cans 52 and 53. The top auxiliary separating member 33 is then placed on top of the rows of cans 51 and 52 with the flange or rib 36 separating the rows of cans 51 and 52. Next, adhesive is brushed over the tops of the flaps 19 and 20 and over the top of the auxiliary member 33, and the closure flaps 17 and 18 are then folded to closing position into contact with the adhesively coated surfaces.

In Fig. 6 a very similar arrangement is illustrated wherein the auxiliary separating members 54 are of slightly different form as shown more clearly in Fig. 7. These members 54 are scored in a direction at right-angles to the direction of scoring of the separating member 33 so that they are foldable to provide inwardly extending flanges 55 and 56, which flanges are adapted to separate the six center cans into three groups of two cans each as clearly shown in Fig. 6. The bottom of the container of Fig. 6 may be constructed in an identical manner to the top, using one of the auxiliary separating members 54.

In Fig. 8 a slight modification of the separating member 54 is shown wherein the member is die-cut as at 57, 58 and 59 to provide inwardly foldable tongues 60, 61 and 62, which tongues extend at right-angles to the flanges 55 and 56. It is apparent that the separating member of Fig. 8 will provide individual separation of the six center cans in each layer due to the fact that the tongues 60, 61 and 62 provide for additional separation.

Referring more particularly to Figs. 9 to 14 inclusive, it is apparent that a construction has here been provided wherein each can is separated from every other adjacent can in the same layer. The shipping container proper is of identical construction to that shown in Fig. 1 except that the end closure flaps 19' and 20' at the top, and the closure flaps 23' and 24' at the bottom are each die-cut as at 63 to provide inwardly bendable tongues or flanges 64. The top and bottom auxiliary separating members may

be identical and are shown in Fig. 12 and indicated by the numeral 65. Each of these members is scored centrally along three parallel lines 66, 67 and 68 to provide for the formation of a flange or ridge 69 of double thickness. Each separating member is further die cut as at 70 to provide for the formation of inwardly foldable tongues 71, which tongues extend at right-angles to the flange 69.

10 This container is packed and closed in the same manner as used in connection with the form shown in Fig. 1 except that at the bottom, the individual cans of the row 46' are separated from one another by the inwardly extending
15 tongues 64 in connection with the bottom flap 24'; the individual cans of the row 49' are separated by the tongues 64 in connection with the closure flap 23'; and the individual cans of the rows 47' and 48' are separated by the tongues 71 of the bottom auxiliary separating member 65. The cans of the rows 50', 51', 52' and 53' forming the top layer are also individually separated in a similar manner by the tongues 64 of the top flaps 19' and 20' and by the tongues 71 of the top auxiliary separating member. As a
25 result of this form of the invention, it is apparent that each can is maintained out of contact with adjacent cans in the same layer. It is also apparent that all of the flanges and tongues fit snugly between the cans to prevent shifting of the latter.

The separating member shown in Fig. 15 consists of a flat section of fiberboard, corrugated board, or other suitable material 72 die-cut as
35 at 73 to provide an inwardly bendable tongue 74. This tongue is insertable between the rows of cans 75 and 76 (see Fig. 16) of a container of the same type as shown in Fig. 1 and having end closure flaps 77 and 78 provided with inwardly bendable flanges 79 and 80 respectively. The flange 79 is insertable between the rows of cans 81 and 75, and the flange 80 is insertable between the rows of cans 82 and 76. The side closure flaps 83 are then folded over and adhesively
40 united to the separating member 72 and to the closure flaps 77 and 78 in the same manner as heretofore explained in connection with Fig. 1.

The separating member 72' shown in Fig. 17 is of similar form to the separating member 72 shown of Fig. 15 and is die cut as at 73' to form an inwardly bendable tongue 74'. This form of separating member, however, is also provided with inwardly bendable edge flanges 84 for use in the manner shown in Fig. 18 in connection with
55 a container having its end closure flaps 77' and 78' cut short and lacking the inwardly bendable flanges 79 and 80 of the form shown in Fig. 16.

Referring to Fig. 19, the separating member 85 shown therein is die-cut as at 86 to provide inwardly bendable tongues 87 for separating the individual cans of the two middle rows as shown in Fig. 20. A separate transverse tongue-forming member 88, preferably L-shaped in cross-section, is connected in any desired manner to the member 85. For example, the member 85 may be slotted as at 89, and the member 88 inserted in the slot as illustrated in Fig. 19. The member 88 may also be glued or stitched in position. This type of separating member may be
70 used in conjunction with the container of Fig. 9, or the container of Fig. 9 may be modified as shown in Fig. 20, to employ diamond-shaped tongues 90 which are formed by die-cutting the end flaps as at 91. Thus, the container of Fig.

20 provides for separation of all of the individual cans from one another.

The separating member 92 illustrated in Fig. 21, is particularly adapted for use in a shipping container having only three rows of cans, such as the container 93. The member 92 is of a length substantially the same as the width of the container and is formed with edge flanges 94 insertable between the rows of cans. The end flaps 95 of the container are of such length that the free edges 96 abut the flanges 94 so that there is a continuous surface to which the container side flaps 97 may be glued, as shown in Fig. 22.

It is apparent that the structure is simple to manufacture, that the shipping containers proper may be shipped in collapsed form, and that the separators may be shipped flat in stacks. It is also apparent that the packing of cans in the containers is relatively simple and that the cans will be effectively held against shifting movement and that damage from denting will be reduced to a minimum. It is also apparent that the container is additionally strengthened and braced by the separating members, and that conventional sealing methods may be employed.

While it is a feature of the invention that this method of can separation may be employed in connection with shipping containers of standard construction, with but slight modification, it is of course possible to utilize the principle of the invention in connection with shipping containers of various other forms and of various capacities.

While several forms of the invention have been shown and described, it is obvious that various changes and modifications may be made without departing from the spirit of the invention, and all of such changes are contemplated as may come within the scope of the claims.

What we claim is:

1. A shipping container for canned goods or the like comprising a body portion, end closure flaps in connection with said body portion having transverse portions which terminate short of one another when said flaps are folded over the contents of the container, said transverse portions being provided with inwardly projected flanges positioned for insertion between certain cans within the container, a member covering the contents of the container not covered by said end flaps, and side closure flaps foldable over said end closure flaps and over said last-mentioned member.

2. A shipping container for canned goods or the like comprising a body portion, closure flaps in connection with said body portion, one pair of closure flaps having end portions bent inwardly and positioned for insertion between certain of the cans within the container, separating means positioned between said inwardly bent end portions and having inwardly extending means positioned for insertion between other cans within the container, and the other pair of closure flaps being foldable over said first pair and over said separating means to completely close the container.

3. A shipping container for canned goods or the like comprising a body portion, closure flaps in connection with said body portion, at least one of said closure flaps being provided with an inwardly projecting flange positioned for insertion between certain of the cans within the container to maintain the same out of contact with one another, and auxiliary separating means positionable adjacent said closure flaps and having

means projecting between other cans within the container.

4. A shipping container of a size to hold one or more layers of cans with four rows of cans in each layer comprising a body portion, a closure flap in connection with one end of said body portion having an inwardly projecting flange positionable between the cans of the first and second rows, a closure flap in connection with the other end of said body portion having an inwardly projecting flange positionable between the cans of the third and fourth rows, auxiliary separating means positionable over the cans of the second and third rows and having an inwardly projecting flange positionable between the cans of said second and third rows, and closure flaps in connection with the sides of the body portion foldable over said end closure flaps and over said auxiliary separating means to close the container.

5. A shipping container for canned goods or the like comprising a body portion, and closure flaps in connection with said body portion, at least one of said closure flaps being provided with an inwardly projecting flange positioned for insertion between certain of the cans within the container to maintain the same out of contact with one another, and said closure flap being die-cut to provide inwardly bendable can-separating flanges extending at right-angles to the first-mentioned flange.

6. A can-separating device for use in a shipping container for canned goods, comprising a body portion having a plurality of intermediate parallel lines of scoring to provide for the formation of an inwardly projecting flange of double thickness insertable between rows of cans in the container, said body portion being die-cut on each side of said lines of scoring to provide inwardly bendable can-separating tongues extending at right-angles to the lines of scoring which define the flange.

7. A shipping container of a size to hold one or more layers of cans with four rows of cans in each layer comprising a body portion, a closure flap in connection with one end of said body portion having an inwardly projecting flange positionable between the cans of the first and second rows, a closure flap in connection with the other end of said body portion having an inwardly projecting flange positionable between the cans of the third and fourth rows, auxiliary separating means positionable over the cans of the second and third rows and having inwardly projecting can-separating means, and closure flaps in connection with the sides of the body portion foldable over said end closure flaps and over said auxiliary separating means to close the container.

8. A shipping container of a size to hold one or more layers of cans with four rows of cans in each layer comprising a body portion, a closure flap in connection with one end of said body portion having an inwardly projecting flange positionable between the cans of the first and second rows and having other inwardly projecting flanges extending at right-angles to said last-mentioned flange and positionable between the individual cans of said first row, a closure flap in connection with the other end of said body portion having an inwardly projecting flange positionable between the cans of the third and fourth rows and having other inwardly projecting flanges extending at right-angles to said last-mentioned flange and positionable between the individual cans of said fourth row, auxiliary

separating means positionable over the cans of the second and third rows and having inwardly projecting can-separating means, and closure flaps in connection with the sides of the body portion foldable over said end closure flaps and over said auxiliary separating means to close the container.

9. A shipping container of a size to hold one or more layers of cans with four rows of cans in each layer comprising a body portion, a closure flap in connection with one end of said body portion having an inwardly projecting flange positionable between the cans of the first and second rows and having other inwardly projecting flanges extending at right-angles to said last-mentioned flange and positionable between the individual cans of said first row, a closure flap in connection with the other end of said body portion having an inwardly projecting flange positionable between the cans of the third and fourth rows and having other inwardly projecting flanges extending at right-angles to said last-mentioned flange and positionable between the individual cans of said fourth row, auxiliary separating means positionable over the cans of the second and third rows having an inwardly projecting flange positionable between the cans of said second and third rows and having other inwardly projecting flanges extending at right-angles to said last-mentioned flange and positionable between the individual cans of said second and third rows, and closure flaps in connection with the sides of the body portion foldable over said end closure flaps and over said auxiliary separating means to close the container.

10. A can-separating device for use in a shipping container for canned goods comprising a body portion positionable over the cans in a container and having inwardly projecting means insertable between rows of cans in the container, said body portion being die-cut on each side of said inwardly projecting means to provide other inwardly bendable separating tongues extending at right-angles to said first-mentioned inwardly extending means.

11. A shipping container for canned goods or the like comprising a body portion, end closure flaps in connection with said body and having transverse portions at their swinging ends which are spaced apart when said flaps are folded over the contents of the container, a separating member positioned over the contents of the container between said transverse portions of said end flaps, said separating member having an opening cut therein, a tongue extending transversely of the container and projecting inwardly from said opening for separating articles within the container, and side closure flaps foldable over said end closure flaps and over said separating member.

12. A shipping container for canned goods or the like comprising a body portion, end closure flaps in connection with said body and having transverse portions at their swinging ends which are spaced apart when said flaps are folded over the contents of the container, a separating member positioned over the contents of the container between said transverse portions of said end flaps, said separating member being die-cut to provide an inwardly bendable tongue for separating articles within the container, and side closure flaps foldable over said end closure flaps and over said separating member.

13. A shipping container for canned goods or the like comprising a body portion, end closure

flaps in connection with said body and having transverse portions at their swinging ends which are spaced apart when said flaps are folded over the contents of the container, a separating member positioned over the contents of the container 5 between said transverse portions of said end flaps, said separating member being die-cut to provide an elongated slot extending transversely of the container and to provide a tongue formed from 10 the cut material and bendable inwardly from an edge of said slot for separating articles within the container, and side closure flaps foldable over said end closure flaps and over said separating member.

15 14. A shipping container for canned goods or the like comprising a body portion, end closure flaps in connection with said body and having transverse portions at their swinging ends which are spaced apart when said flaps are folded over 20 the contents of the container, a separating member positioned over the contents of the container between said transverse portions of said end flaps, said separating member having an opening cut therein, a tongue extending transversely of the 25 container and projecting inwardly from said opening for separating articles within the container, said separating member having other inwardly projecting tongues extending at right-angles to said first-mentioned tongue for additionally separating articles within the container, 30 and side closure flaps foldable over said end closure flaps and over said separating member.

15. A shipping container for canned goods or the like comprising a body portion, end closure

flaps in connection with said body and having transverse portions at their swinging ends which are spaced apart when said flaps are folded over the contents of the container, a separating member positioned over the contents of the container 5 between said transverse portions of said end flaps, said separating member having an opening cut therein, a tongue extending transversely of the container and projecting inwardly from 10 said opening for separating articles within the container, said separating member and end flaps having other inwardly projecting tongues extending at right-angles to the first-mentioned tongue of the separating member for additionally 15 separating articles within the container, and side closure flaps foldable over said end closure and over said separating member.

16. A shipping container for canned goods or the like comprising a body portion, end closure flaps in connection with said body and having 20 transverse portions at their swinging ends which are spaced apart when said flaps are folded over the contents of the container, a separating member positioned over the contents of the container between said transverse portions of said end 25 flaps, a tongue which is L-shaped in cross-section having a portion connected to the separating member to lie in the plane thereof and having a portion projecting inwardly to separate articles within the container, and side closure flaps fold- 30 able over said end closure flaps and over said separating member.

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