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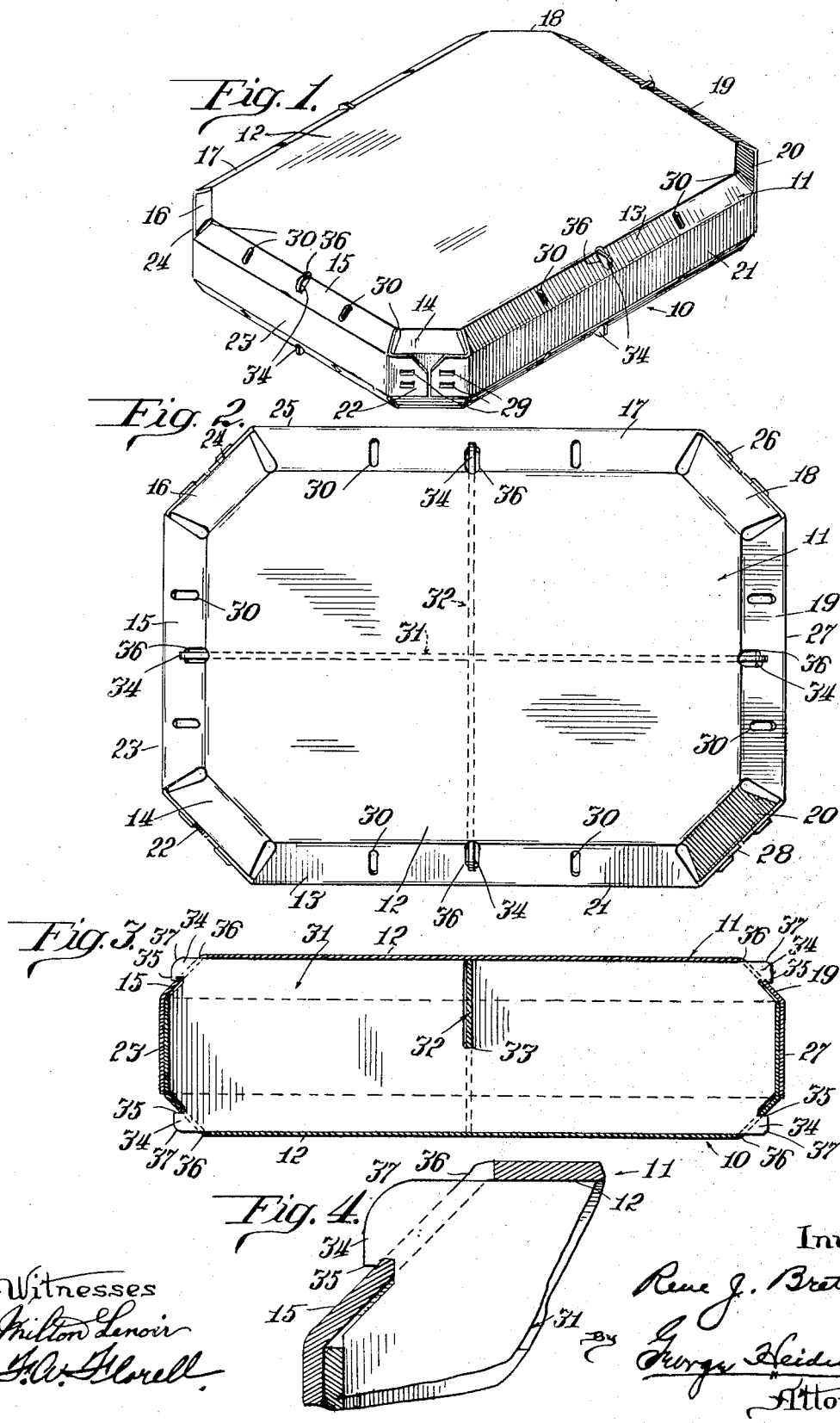
R. J. BRETON

1,945,878

SHIPPING PACKAGE

Filed Oct. 12, 1932

2 Sheets-Sheet 1



Witnesses
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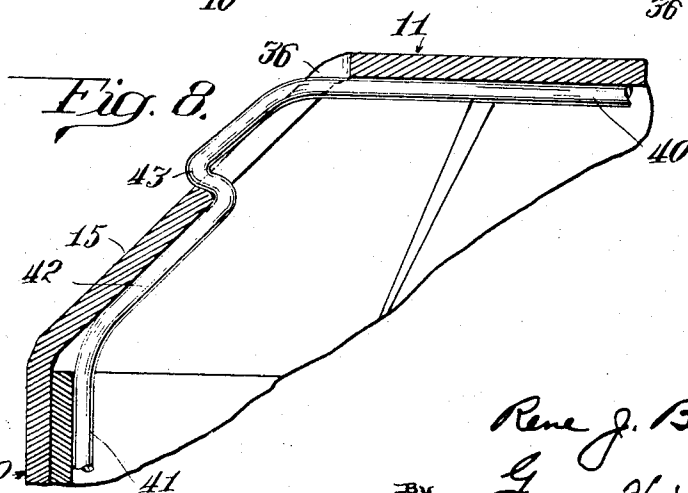
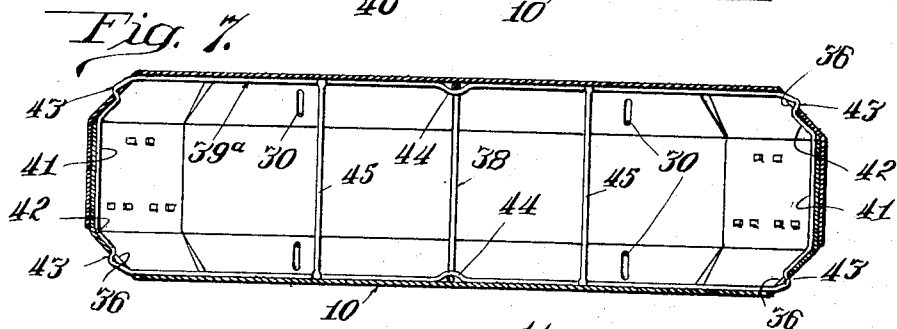
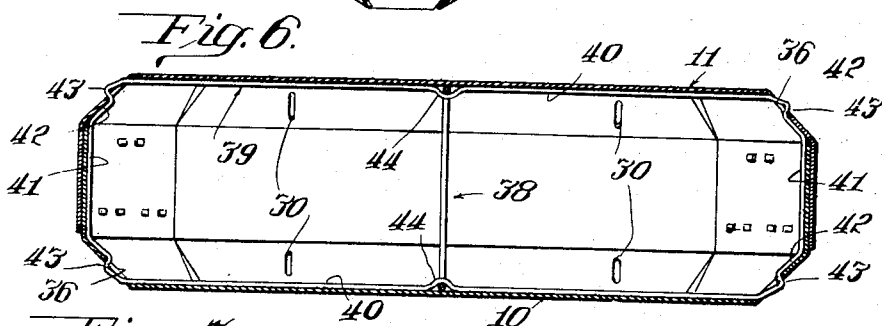
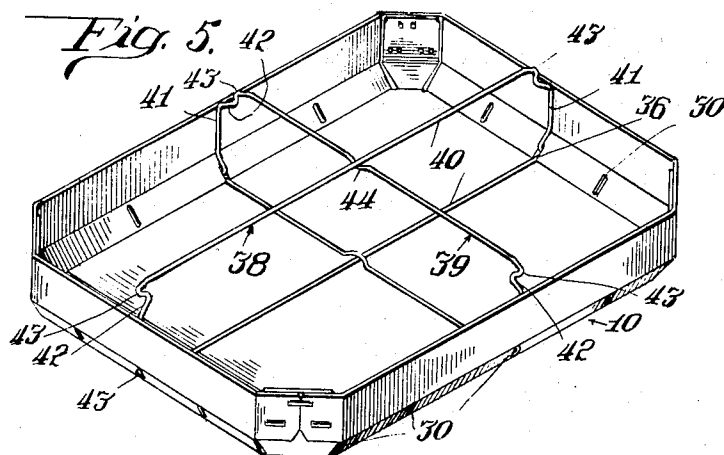
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2 Sheets-Sheet 2



Witnesses

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UNITED STATES PATENT OFFICE

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SHIPPING PACKAGE

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9 Claims. (Cl. 229—6)

My invention relates more particularly to means for locking the package or container in closed condition.

The invention is especially designed for use with a package consisting of an upper or cover section and a lower or body section of a type designed for the shipping and holding of perishable commodities requiring proper ventilation during shipment and storage. That is to say, my invention relates to packages whereby ventilation about stacked packages, as well as through the respective packages, is obtained, without need for employment of special spacing strips, with the result that the storing or stacking capacity of a freight car or storage space is greatly increased and superior ventilation obtained.

My invention has for its object means whereby the top and bottom sections of members of the package will automatically be locked together when the top or cover member or section is properly applied; while at the same time reinforcing the package and preventing undue shifting of the commodity therein.

The objects and advantages of my invention will be readily comprehended from the following description of the accompanying drawings, wherein:

Figure 1 is a perspective view of a shipping package involving my invention; the package being shown in closed position.

Figure 2 is a top plan view, with the reinforcing and locking means indicated in dotted lines.

Figure 3 is a cross sectional view of the package.

Figure 4 is a detail sectional elevation of a portion of a package section and a portion of the locking means.

Figure 5 is a perspective view of a bottom member of the package shown provided with a modified form of locking means.

Figure 6 is a transverse sectional view of the package with the modification of locking means shown in Figure 5.

Figure 7 is a view similar to Figure 6 showing a modification of the modified form of locking means employed in Figures 5 and 6.

Figure 8 is a detail sectional view of one portion of the package and one end of the locking means shown in Figures 6 and 7.

In the specific exemplifications of the invention, the package comprises a bottom section or member 10 and a top section or cover member 11, which are similar in construction and merely vary in size sufficient to permit the two mem-

bers to telescope; the general construction of the package being similar to the package shown and described in my application Serial No. 301,268.

As the top and bottom members, except as to size, are similar in construction, a description of one member will suffice. Both members are each preferably formed from a single sheet of suitable material, such as stiff card or fibre board, veneer or other light sheet material having sufficient strength and stiffness; and the sheets scored or bent substantially alike, except that the sheet constituting the top is preferably slightly larger to permit the top 11 to receive the side walls of the bottom member as shown.

These sheets are scored or bent to provide a main flat portion 12 (constituting either the top or the bottom as the case may be) sloping marginal portions 13, 14, 15, 16, 17, 18, 19 and 20 and the vertical side portions at 21, 22, 23, 24, 25, 26, 27 and 28; with the vertically disposed portions, at what may be termed the corners of the package, stapled or otherwise suitably secured together, as shown at 29 in Figure 1.

As my improved package is especially intended for shipping perishable commodities, such as grapes, the sloping portions are shown provided with ventilating openings or slots, as shown at 30. As both members are identical in construction and both preferably provided with the openings or slots 30, and in view of the shape of the package the slots or openings will remain exposed in stacking the packages one above the other and in contacting tiers or rows, it is apparent that complete ventilation through each package, as well as air circulation about the eight sides of the package, is obtained and made possible.

In order that the top or cover member 11 may be locked to the bottom member or section 10, I provide the combination partition and lock members 31 and 32, preferably arranged as shown in dotted lines in Figure 2.

These members 31 and 32 may be made of heavy cardboard, fibre board, wood, or other stiff sheet material, of width preferably equal to the interior depth of the package when the top or cover member is in place so as to contact with the flat bottom 12 of the bottom section and with the flat top 12 of the cover section and thus reinforce the same against pressure.

In the particular style of package illustrated, the partition member 31 is of length greater than member 32 and extends from end to end of the package, while member 32 extends transversely; which is accomplished by slotting each member

part way of its width as shown at 33 in Figure 3, so as to permit them to interlock with each other.

The ends of the members 31 and 32 are cut to conform to the formation of the side walls of the package and at the upper and lower corner portions provided with the extensions or ears 34. These extensions or ears 34 are each cut to provide the undercut or shoulder as shown at 35 in Figure 4; and these ears are of size or length greater than the internal distances between the sloping portions of the sides of the top and bottom sections.

At points coincident with the ends of the combination partition and lock members the sloping side wall portions of the top and bottom sections are provided with openings or slots 36, located in the sloping side wall portions adjacent to the flat top and bottom walls 12 of the two sections 11 and 10. As more clearly shown in Figures 3 and 4, the extensions or ears 34 are located intermediate of the vertical planes of the ends of the combination partition and lock members and therefore within the planes of the vertical portions of the sides of the package, but extend beyond the planes of the sloping portions of the side walls. In order to permit the top section 11 of the package to more readily slide down onto the bottom section, the outer corners of the ears 34 are preferably rounded, as shown at 37 in Figure 4.

These combination partition and lock members are first inserted in the bottom section 10 with their longitudinal lower edges in contact with the flat bottom 12 of section 10; the rounded corners 37 riding on and causing the sloping side wall portions to slightly flex until the ears or extensions enter the slots 36, which allows the sides of the bottom section to flex or spring back to place into the undercut portion of shoulders 35 of the ears, thereby firmly locking the partition members 31 and 32 in the bottom section 10.

After the package has been filled with the grapes, or other commodity, the top or cover section 11 is then forced downwardly into telescopic relation with the bottom section 10; the sloping side wall portions of the top section in advance of the slots 36 riding over the curved corners 37 of the ears 34, causing the sides of the cover section 11 to flex slightly outward until the ears reach the slots 36 in the cover section, when the sides will immediately spring back and into the undercut portion of shoulders 35 of the ears and thus automatically and firmly lock the cover section 11 to the bottom section 10.

By proper pressure on the cover section and particularly adjacent to the side walls, the latter will be flexed sufficiently outward to enable the side walls of the cover section to clear or be sprung out and off the shoulders 35 and allow the cover to be removed.

It is apparent that the combination partition and lock members, instead of the right angular relation shown, may be differently arranged and the slots in the side walls of the top and bottom sections of the package be positioned in keeping with the disposition of the combination partition and lock members; or merely one partition member may be employed.

Where the packages are of comparative size, it is desirous, particularly in the shipment of grapes, to provide partitions as shown so as to prevent too great shifting of the grapes; the partition members tending to reenforce the packages

in addition to providing the automatic locking means described.

In Figure 5 I illustrate a modification of the locking means, without involving the function of a partition.

The locking means here shown is shown in the nature of a pair of continuous wire members formed into skeleton frames or members 38 and 39, having substantially the same configuration as the partition members 31 and 32, of vertical dimensions substantially equal to the depth of the package when the cover member 11 has been applied to the bottom member 10.

These members 38 and 39 are preferably made of stiff wire so as to also reenforce the package, without, however, dividing the package interior into separate compartments as is the case with the partitions 31 and 32 shown in Figure 2.

In this form of locking means, like in that shown in Figures 2 to 4, the junctures between the longitudinal portions 40 and the end portions 41 are formed by the sloping portion 42, to extend parallel with the inner face of the sloping marginal portions of the top and bottom members of the package and thence bent outwardly into the hook forming ear portions 43 which are adapted to pass through the lock slots 36 in the top and bottom members and allow the sloping marginal portions of the top and bottom members to spring beneath the hook portions of the ears 43 and thereby automatically lock the top and bottom members of the package together in telescopic relation.

One or more of these lock members may be employed. With certain commodities, such as cheese, butter, and the like, dividing the interior of the package may not be desirable and hence the skeleton or frame like locking means would be employed. With the package itself made of comparatively stiff material, sufficient reinforcement will be provided by the use of a single skeleton lock member 38 or 39, made of heavy wire or more or less stiff material. On the other hand, it may be desired to use a pair of these skeleton lock members 38 and 39 as shown in the drawings, with the members arranged as shown. In order to permit the two members to be arranged as shown, one of the members, for example member 39, at the points of intersection with member 38 are grooved or bent as shown at 44 to receive the longitudinal portions 40, 40 of the other member 38.

If additional bracing is desired, the skeleton lock members may be reenforced by use of one or more brace members as at 45 in Figure 7, where the lock member 39^a, for example, is shown provided with a brace or reenforcing member 45 intermediate of the center and each end of the lock member 39^a. It will be understood, of course, that as many brace members 45 may be employed as may be found desirable and if necessary, both skeleton lock members may be provided with these brace members 45.

It is also evident that the package may be given somewhat different shape from that disclosed; and while I believe the constructions shown to be the best embodiments of the invention, modifications may be made without, however, departing from the spirit of my invention as expressed in the claims.

What I claim is:

1. In a package composed of a top section and a bottom section having side walls adapted to telescope with each other, the side walls of the top section adjacent to the top being provided

with vertical slots, a partition arranged in the bottom member against movement, the partition adjacent to the junctures between the ends and the upper longitudinal edge being formed to provide outwardly and downwardly sloping portions adapted to extend through said slots and automatically lock the top section in place.

2. A package composed of a top section and a bottom section, each having side walls composed of vertical portions and sloping portions intermediate of the vertical portions and the top and bottom, respectively, of the two sections, the sloping portions of the side walls being provided with openings therethrough; and a partition in the package having extensions at the upper and the lower corners thereof adapted to extend through said openings and form locking engagement therewith.

3. A package composed of a top section and a bottom section, each having side walls composed of vertical portions and sloping portions intermediate of the vertical portions and the top and bottom, respectively, of the two sections, the sloping portions of the two sections being provided with slots; and a partition in the package having extensions at the upper and at the lower corners thereof adapted to extend into said slots, the outer sides of the extensions being curved to cause the vertical portions of the side walls to ride thereover, while the inner sides are formed to provide locking engagement with one end of each slot.

4. A package composed of a top section and a bottom section having side walls composed of vertical portions and sloping portions intermediate of the vertical portions and the top and bottom, respectively, of the two sections, the vertical portions of the two sections being adapted to telescope with each other, the sloping portions of both sections having vertically disposed slots therethrough; and a partition in the package having extensions at the upper and lower corners thereof extending beyond the planes of the sloping portions of the side walls, the upper surfaces of the extensions at the upper corners and the lower surfaces of the extensions at the lower corners being curved so as to cause the vertical portions of the side walls to ride thereover, while the lower surfaces of the top extensions and the upper surfaces of the bottom extensions are undercut to form locking engagement with the adjacent ends of the respective slots.

5. In combination with a shipping package composed of a top member and a bottom member, the side walls of the members being provided with slots; locking means having a contour substantially like the inner cross-sectional contour of the package and provided at its ends with extensions adapted to pass through said slots, each extension on one of the sides having a shoulder

adapted to form locking engagement with the side wall of a package member.

6. A package composed of a top section and a bottom section, each having side walls provided with vertical slots; and a partition arranged in the package and coextensive with the interior dimensions of the package and provided at the upper and lower corners thereof with extensions undercut on one of the surfaces, said extensions being adapted to enter said slots and the undercut surfaces to form locking engagement with the respective ends of the slots.

7. In combination with a shipping package composed of telescoping members, the side walls of each member being provided with slots, reinforcing means shaped to conform with the inner cross-sectional configuration of the package adapted to be arranged transversely within the package in contact with the members, said means at the ends being provided with sloping extensions adapted to enter the slots in said members and formed to provide opposingly disposed shoulders adapted to form locking engagement with the ends of the slots.

8. In combination with a shipping package composed of a pair of telescoping members whose side walls are provided with slots; locking means shaped to conform with the inner cross-sectional configuration of the package and provided at its ends adjacent to the upper and lower longitudinal sides of the means with extensions adapted to pass through said slots, with the juncture between the extensions and the longitudinal sides of the means made to slope outwardly, while the juncture between the extensions and the ends of the means are shouldered to effect locking engagement with the side walls of said members.

9. In a package of the character described, the combination of an upper section and a lower section, each having side walls composed of vertical portions and sloping portions intermediate of the vertical portions and the top and bottom, respectively, of the two sections, said sloping portions having ventilating openings, while the vertical portions of the two sections are adapted to telescope, the sloping portions of both sections having vertically disposed slots terminating adjacent to the top of the upper section and adjacent to the bottom of the lower section; with a partition of stiff material arranged vertically within the package and having ends conforming with the side walls of the two sections and the juncture between the ends and the top and bottom longitudinal edges of the partition provided with undercut extensions adapted to enter said slots in both sections and form locking engagement, respectively, with the upper ends of the slots in the lower section and with the lower ends of the slots in the upper section.

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