May 20, 1958 G. WILMOT 2,835,432

PACKING BOX

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Fig. 1.

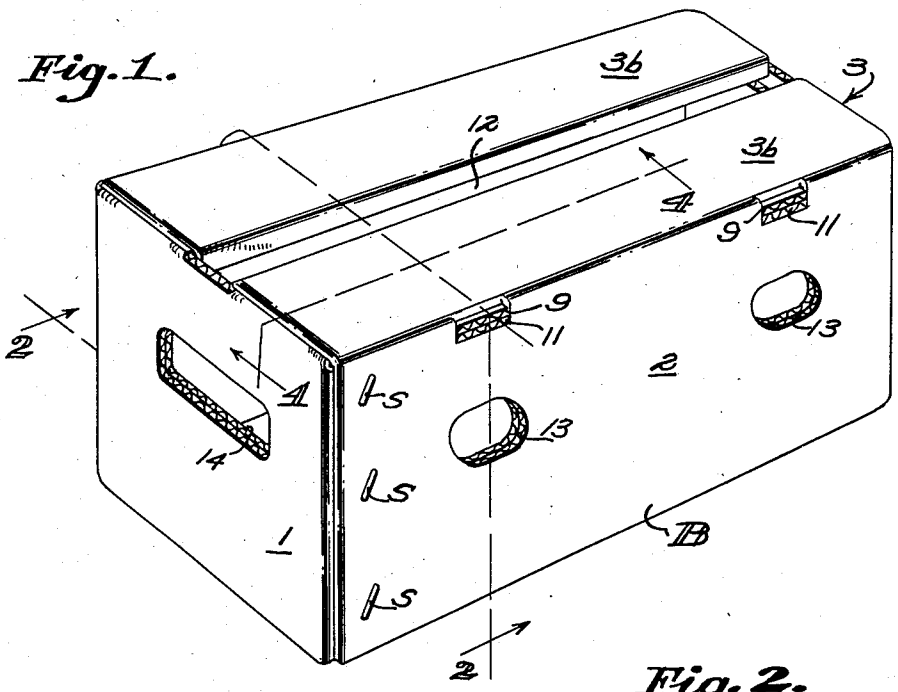
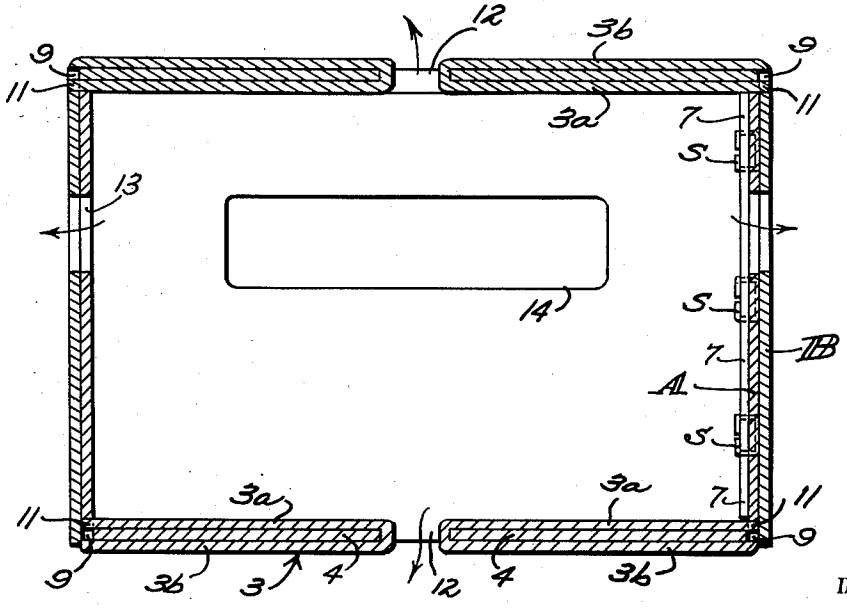


Fig. 2.



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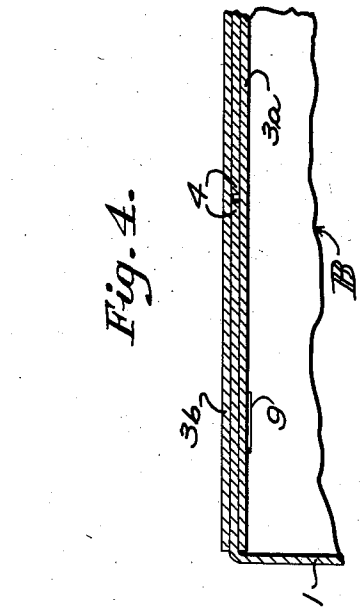


Fig. 4.

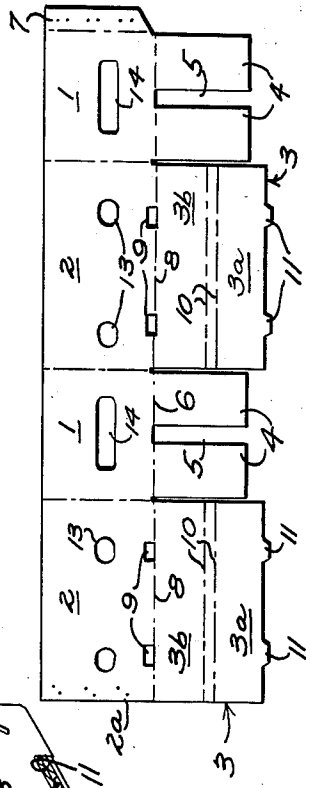


Fig. 5.

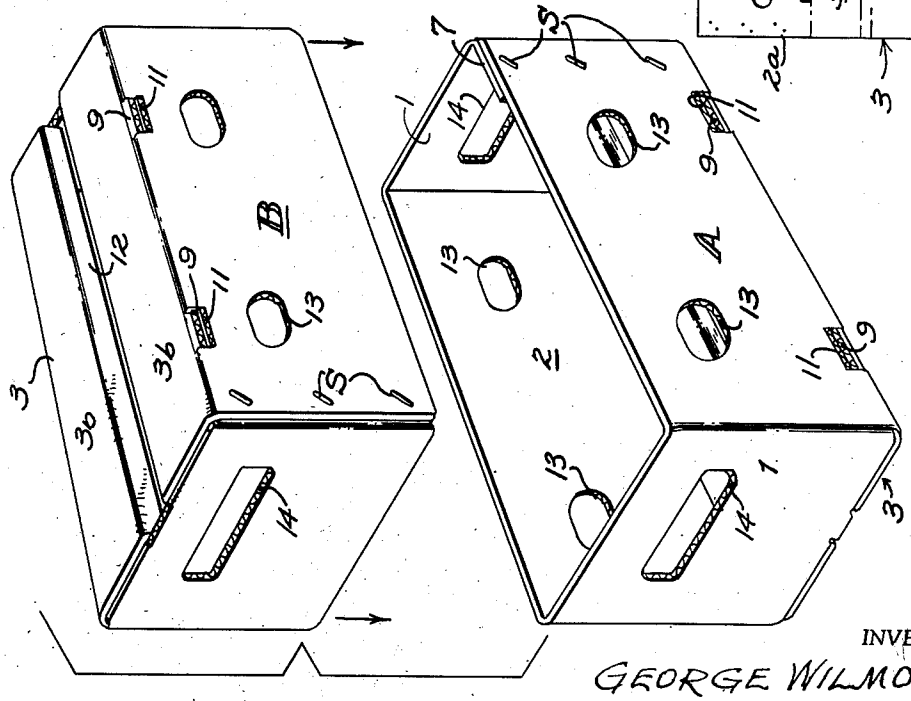


Fig. 3.

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PACKING BOX

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Application June 6, 1955, Serial No. 513,193

1 Claim. (Cl. 229—39)

This invention relates to boxes or cartons for shipping fruit or the like, and more particularly to a ventilated type of box made from fibrous material.

One of the objects of the invention is to provide a box including mating telescoping sections each of which have similar structural characteristics, although it will of course be understood that one section is made of slightly smaller size than the other in order to enable the sections to be readily fitted together. Thus, the respective sections may be formed of blanks made by dies which blanks lend themselves to appropriate manipulation for mass production.

A further object of the invention is to provide each section of the box with end, side, and bottom walls, the latter being made especially strong so that when the two sections are assembled they provide a substantial reinforced top and bottom for the completed box. In that connection, what will hereinafter be referred to as the bottom wall of each section, includes bottom portions, which may be folded upon themselves in a manner to sandwich therebetween flaps on the end walls, said bottom portions having offset tongues at their free edges for interlocking with mating key openings formed in the line of fold, at the junction between the side walls and bottom portions, in such a way as to give the desired strength and at the same time provide a longitudinal vent which will enhance ventilation in the box vertically from bottom to top.

A further object of the invention is to provide one of the end walls with a projecting ear for engaging with the related edge of one of the side walls to be stapled to the inner face thereof after the bottom portions have been folded so that their projecting tongues engage in the key openings described above.

With the above and other objects in view which will more readily appear as the nature of the invention is understood, the same consists in the construction and arrangement shown in the accompanying drawings, in which:

Fig. 1 is a perspective view of the box ready for use.

Fig. 2 is a vertical cross section taken on the line 2—2 of Fig. 1.

Fig. 3 is an exploded perspective view illustrating the sections which make the complete box shown in Figs. 1 and 2.

Fig. 4 is a detailed cross sectional view taken on the line 4—4 of Fig. 1.

Fig. 5 is a plan view of the blank from which the sections are made.

Similar reference characters designate corresponding parts throughout the drawings.

Referring first to Fig. 3, it will be more clearly observed that the box includes the section A which telescopes within the section B.

Since each of the sections have common characteristics, a description of one will suffice for the other, although it will of course be understood that the section A is made small enough to fit into section B.

Each section includes the end walls 1—1, the side walls 2—2 and the bottom walls designated generally as 3—3. In Fig. 3 the top of section B includes what will be termed the bottom wall, since it has the same characteristics as the actual bottom wall 3 of section A.

The end walls 1—1 are provided with flaps 4 which are longitudinally and medially divided as indicated at 5 by a clearance and ventilation slot, and, of course, the said flaps 4 are connected with the end walls 1, by the scored hinge 6.

One of the end walls, namely the right-hand end wall in Fig. 5, is provided with a projecting ear 7, which, as will later appear, is intended to receive staples S to connect it to the edge 2^a of the left-hand side wall 2 in Fig. 5.

The side walls 2 have the bottom walls 3 connected thereto by the scored hinges 8. The scored hinge is provided, in each instance, with spaced alined openings 9 which are formed at the junction of each side and bottom wall.

Each bottom wall 3 includes a bottom portion 3^a which is folded over along the spaced score lines 10 so that it may overlie the bottom portion 3^b, with the flaps 4 sandwiched therebetween, as will more clearly appear from Fig. 2. When the bottom portions 3^a and 3^b embrace the flap portions 4, the projecting tongues 11 at the free edge of each bottom portion will interlock with the openings 9 previously described.

When the bottom portions 3^a and 3^b are folded upon themselves to embrace the flaps 4, the fold lines 10 will be laterally spaced apart sufficiently to provide a longitudinal vent 12, as will be apparent from Fig. 2. It will now be understood that the clearance slot 5 in each flap 4 permits of receiving the portions 3^a and 3^b to maintain the longitudinal continuity of the vent 12.

The sections A and B may be provided with registering ventilation holes 13 in the side walls, and registering holes 14 in the end walls so that when the sections A and B are assembled, as in Fig. 1, the holes 14 will provide finger grips for requiring both sections to be lifted together.

Assuming that the blank of Fig. 5 is ready for assembling, it will be understood that the flaps 4 of the end walls 1 are first folded inwardly at right angles to the end walls, and then the bottom portions 3^a and 3^b will be manipulated so that the parts of the flaps at each side of the slot 5 will be embraced by the folded bottom portions 3^a and 3^b, the portion 3^b forming the outer face of the bottom wall while the portion 3^a folds over the inner face of the flaps so that its tongues 11 engage the openings 9. The blank then being in self-sustaining rectangular form, it will be seen that the ears 7 may be brought into contiguous relationship to the edge 2^a so that the ear will be inside the box section and then staples S may be applied to completely maintain each box section in ready-for-use condition.

When the sections A and B are assembled, their top and bottom walls will be reinforced by a triple thickness of material, while they both have the longitudinal vents 12. Thus, the boxes may be readily stacked without the load superimposed thereon causing sagging of either top or bottom and ventilation may be readily maintained.

I claim:

A ventilated packing box comprising a pair of structurally duplicate mating telescopic sections one being slightly smaller than the other and wherein the box with the sections in telescoped position is provided with a vent of substantial width extending longitudinally of both the top and bottom walls and extending throughout the length of the box, a pair of holes in each side wall, said holes in one wall being laterally aligned with those in the opposite wall, and a relatively long rectangular

hole in each end wall intermediate the top and bottom edges thereof and with the hole in one end wall longitudinally aligned with the hole in the opposite end wall; each section having side and end walls and a three-ply bottom wall, said three-ply bottom wall comprising first and second bottom portions defined by spaced parallel score lines, said respective first bottom portions each being connected respectively with a longitudinal edge of each side wall, spaced key openings in said side walls adjacent each of the respective connections of the said respective first bottom portions of the bottom wall, spaced tongue-like keys on the free edges of the said respective second bottom wall forming portions, a pair of flaps connected with the lower edge of each end wall with adjacent edges thereof in substantial spaced relation providing therebetween a slot disposed midway of the width of the end wall, said flaps being of a length substantially equal to one-half of the length of the side walls, one of said end walls having a laterally projecting ear secured to the inner side of one of the side walls, said flaps being disposed normal to said end walls and in parallel relation with said side walls, said respective first and second bottom wall portions of a respective bottom wall being

folded along their respective fold lines intermediate the side walls and with the free edges of the folds along the score lines in engagement with the inner edges of said end wall flaps and in substantial spaced relation, said respective flaps being sandwiched between the folded first and second bottom wall forming portions respectively and said keys carried by said second bottom wall forming portions being interlocked with said key openings and providing said three-ply bottom wall and said longitudinally extending vent.

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