Nov. 13, 1934. J. D. MARTIN 1,980,281

CONTAINER FOR PACKING AND SHIPPING FRUIT

Filed July 30, 1934

Fig. 1

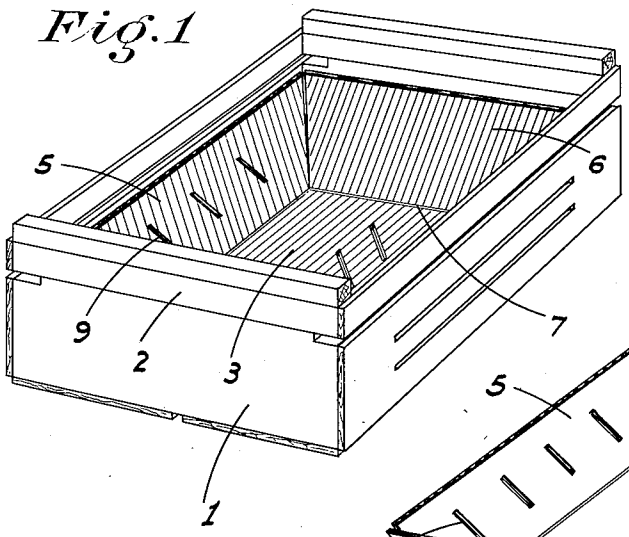
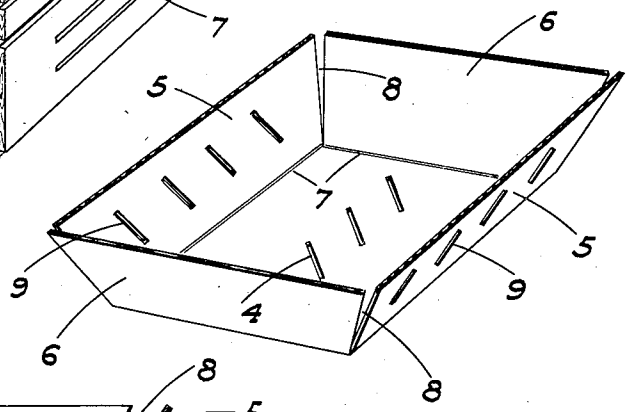


Fig. 2



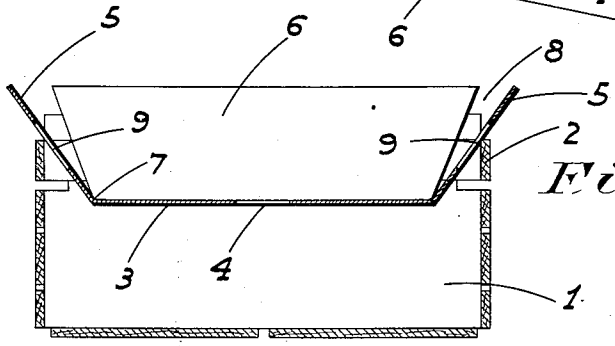


Fig. 3

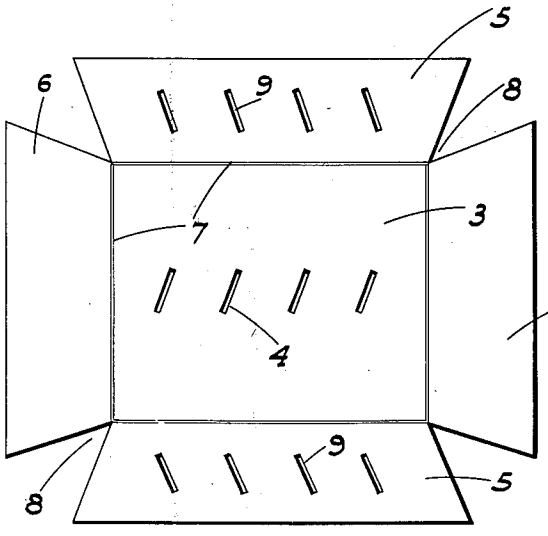


Fig. 4

INVENTOR
J. D. Martin
BY
ATTORNEY

Patented Nov. 13, 1934 1,980,281

UNITED STATES PATENT OFFICE

1,980,281

CONTAINER FOR PACKING AND SHIPPING FRUIT

John D. Martin, Fresno, Calif.

Application July 30, 1934, Serial No. 737,604

1 Claim. (Cl. 217—40)

This application is a continuation in part of the subject matter of applicant's previous application for Container for packing and shipping fruit, filed August 13, 1932, Serial No. 628,621.

This invention relates to containers for packing and shipping fruits, particularly grapes. The principal object of my invention is to provide an insert, to be placed inside the usual wooden straight sided lug box in which grapes are shipped, which will avoid bruising of the fruit, as might be occasioned by jolting incident to transportation; which will also prevent mold or decay while the fruit is confined by increasing the ventilation inside the box, and which will better accommodate itself to the pyramid or cone like shape of the bunches of grapes, than will a straight sided box.

A further object is to provide an insert for the purpose which is arranged so that it may be very easily placed in the box and which by reason of the inserting operation will naturally assume and hold its desired position without the use of nails, clips or other holding means; and yet one which prior to insertion may be perfectly flat so that a number of the inserts may be stacked in compact relationship and will occupy very little space besides being convenient to handle.

A still further object is to provide a device of this character which may be made very cheaply so as not to appreciably add to shipping costs.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claim.

In the drawing similar characters of reference indicate corresponding parts in the several views:

Figure 1 is a perspective view of a standard lug box showing my improved insert mounted therein.

Figure 2 is a similar view of the insert detached but in the shape assumed when actually in place in the box.

Figure 3 is a transverse section of a box and insert showing the latter as being depressed into position.

Figure 4 is a plan view of the insert in its initial outstretched or flat form.

Referring now more particularly to the characters of reference on the drawing, the lug box 1 into which the insert is adapted to be placed is of the standard type and form used in shipping grapes. This box is provided with a removable collar portion 2 on which the lid is fastened and increasing the normal height of the box. This collar is adapted to be removed when the box has reached its destination and at which time the grapes have settled in the box to an extent such that the top of the pack is then approximately on a level with the top of the box proper. Also in these boxes the sides are made of separate slats or of a single slat slotted as shown to provide ventilation, and the bottom slats are similarly separated somewhat for the same purpose.

These features are now common construction and I do not interfere with or alter the same in any way. My improved insert is formed from a blank of suitable flat relatively rigid material such as corrugated fiber or cardboard of the type commonly used in making shipping cartons, and which has a certain amount of resiliency besides being strong and light. The blank is stamped so as to provide a central rectangular panel 3 forming the bottom of the insert and while symmetrical in shape to the bottom of the box 1 is of smaller dimensions. The panel is provided with suitable ventilating slots 4 or the like to register with the separation between the bottom slats of the box and thus provide for bottom ventilation inside the insert.

Side and end extensions 5 and 6 respectively project from the corresponding edges of the panel and of course are integral therewith; the blank being scored as at 7 at the junction of the extensions with the panel so that while the extensions may be easily built upwardly relative to the panel, they will tend to spring outwardly toward their initial horizontal position. The width of the extensions is such that when the insert is outstretched in its initial form it is of greater dimensions both lengthwise and transversely than the corresponding dimensions of the box and collar.

The ends of adjacent extensions when outstretched are cut so as to include an acute angle with each other, so that at the ends of all the extensions V shaped incisions 8 are formed, the apices of which are at the corners of the central panel. The above angle is such that when the extensions are bent upwardly until their ends abut, the top edges of said extensions will then fit snugly within and will frictionally engage the inner walls of the box. The height of the extensions is such that when they are thus bent to position their top edges are on a level slightly below the top of the box proper, as shown in Figure 1. The side extensions 5 are slotted or otherwise perforated as shown at 9 to provide ventilating communication with the separated or slotted sides of the box.

The insert even though scored is still stiff and will tend to remain in a flat outstretched condi-

tion. To place one in a box it is only necessary to lay the insert over the box so that the extensions rest on the box collar, and depress the insert into the box by a downward pressure exerted on the central panel. In doing this the extensions of course bend upwardly along the lines of scoring, as shown in Figure 3. The upper edges of the insert when the latter is fully depressed frictionally engage the relatively rough walls of the box due to the spreading out tendency of the extensions, and thus hold the insert firmly in place and against upward movement. This frictional grip is in fact so firm that boxes with inserts therein may be thrown about, inverted or otherwise roughly handled without the inserts being dislodged.

It is not necessary that an insert when initially placed on the box shall be perfectly centered relative thereto, since the depressing operation causes the insert to automatically assume a centered position. This is because the extensions along their outer edges, being as long as the length and width of the interior of the box, will cause said extensions to naturally shift one way or the other in the box as may be necessary to center the insert; such shifting of course being had as the ends of the extensions come in contact with the opposed walls of the box.

It will be thus seen that with my improved insert ventilation is assured all around the inside of the box, the great packing area better conforms in shape to the shape of the grape bunches, and a cushion effect on the grapes which would otherwise be in direct contact with the walls of the box is had due to their engagement with the relatively soft material of the insert and to the fact that the fruit engaging extensions are spaced from the walls of the box between their top and bottom edges so that a certain yielding of the extensions under pressure is possible.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claim.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

An insert for a straight sided fruit box, such insert comprising an initially flat blank of semi-rigid cardboard, the blank comprising a central element of the shape of the box bottom but of lesser dimensions, edge extensions on the central element, the blank being scored at the junction of the extensions with the central element, the extensions being of such width that when the blank is initially laid on top of the box the extensions will rest across the top edge of the box, the stiffness of the blank coupled with the scoring forming a yieldable spring-like connection between the central element and the extensions whereby when the central element is pressed from the top plane of the box to rest on the bottom thereof the extensions will drag frictionally over the top edges of the walls of the box and come to rest with the top edges of the extensions in close frictional engagement with the inner surfaces of the walls of the box.

JOHN D. MARTIN.