

FRUIT BOX TRAY

The present invention relates to box trays, and particularly to box trays for transporting perishable goods such as fruit adapted to be stacked for easy storage.

The manufacture of boxes in the form of trays for transporting fruits, which are designed to allow them to be stacked during storage as well as during transport, is known in the prior art.

The assembly thereof starts with a cardboard sheet which is provided with die-forms and splits making it possible to fold the same to form the box tray.

A box tray wherein the end walls are formed by a double wall, obtained by folding a protruding portion of the part forming the end wall itself, is known.

For example, in Spanish patent application 87/00592, (Utility Model No. 8901852) and Certificate of Addition application 89/00064, (Utility Model 8903099), both in the name of the present applicant, the formation of the edge of each of _____

the end walls is widened at the top by a triangular section facing towards the inside of the box was described.

The special shape of these end walls is very important with regard to the stacking of boxes in a pile, as well as regarding the reinforcement of the walls near the corners.

However this assembly does not permit, from a technical point of view, the arrangement of a laminate cardboard lid, with the guarantee of support and stability which is required.

The arrangement of lids covering farm products on trays is becoming more and more important so that after removing the trays from the pile they are in during transport, the produce is not exposed to environmental pollution.

Previously, such boxes may have been covered with a sheet of plastics which acts as a lid, but this reduces aeration.

In order to solve the above problem, the invention proposes a new way of making the end walls, maintaining the widened shoulder to support the boxes when piled, but also establishing in the top edge of the side wall,

a longitudinal empty space where corresponding flaps, provided on the longitudinal edges of a laminate lid, are inserted, and whose other sides, free of flaps rest flat on the broadened end walls.

In order to obtain this effect, the end walls of the box are provided with small end flaps defined by corresponding die-forms, which have in the top edge, at each corner, in correspondence with said flaps, a projection which constitutes the centring means of the piled boxes.

The part of the end wall that is folded inwardly to form the inner part of the double end wall is also provided with flaps which extend sideways and are parallel to the flaps of the part forming the outer part of the end wall, the side wall of the box being housed between both flaps.

Since both flaps, of the double end wall, are higher than the side wall, there is an empty space above the side wall which serves for the coupling of the flaps of the lid.

According to the present invention there is provided a box tray, for use in transporting and storing goods such as fruit, comprising a preformed tray and lid, the tray being formed from a blank having a base portion, side portions extending laterally from the base portion and end portions extending longitudinally from the base portion; wherein side walls of the tray are formed by folding the side portions upwardly, and end walls of the tray are formed by folding each end portion upwardly to form a first outer wall, inwardly to form an essentially

horizontal shoulder, and downwardly to form a second inner wall, which outer and inner walls forming each end wall have laterally extending flaps, higher than the side walls of the tray, which flaps are folded 90 degrees at the tray corners so as to extend parallel to and either side of the corresponding side wall, and wherein the lid has a top and downwardly folded side flaps of uniform width and extending along the entire length of the sides of the lid so that when the lid is on the tray the edges of the flaps of the lid rest on the upper edges of the side walls of the tray and the flaps are fitted between the laterally extending flaps at the corners of the box, the top of the lid resting on the horizontal shoulder at each end of the box tray.

Other features and advantages of the invention will be apparent from the following description and accompanying claims.

An embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1. is a plan view of a sheet from which a box tray is obtained by folding the parts limited by the die forms and splits.

Figure 2. is a perspective view of the box, in the process of being assembled, with the lid, also in perspective, ready to be coupled.

Figure 3. is a perspective view of the box totally assembled, without the lid on.

The drawings illustrate the box which comprises, a cardboard sheet having a projection at each of the ends 1 and 2, and extensions of a similar width 3 and 4, which in the area of connection with the end pieces, have split lines defining two rectangular areas which are to form a triangular inwardly projecting shoulder section. This extension forming the inner part of the end wall sideways has extension 6 and 7 in the form of flaps which fold inside the side walls 8 and 9 of the box.

The outer parts of the end walls 1 and 2 have sideways extensions forming flaps 10 and 11 which fold outside over the side wall 8 and 9.

In as much as the sides 8 and 9 are not as high as the flaps 6 & 7 and 8 & 9, between the latter there is an empty space into which is fitted the flaps 12 and 13 respectively, of the longitudinal edges of a laminate lid 14.

The design of the lid is such that its flat ends rest on the top edge of the flaps 6 and 7 and on the front shoulder 5, in such a way that the angular extensions 15 for centring the piled up boxes, still protrude beyond the surface of the lid.

This way, the lid does not hamper the stacking up of the boxes at all and the way it is coupled on each box makes it possible to stay attached to the box when it is removed from the pile in order to protect the products located inside.



Claims:

1. A box tray, for use in transporting and storing goods such as fruit, comprising a preformed tray and lid, the tray being formed from a blank having a base portion, side portions extending laterally from the base portion and end portions extending longitudinally from the base portion; wherein side walls of the tray are formed by folding the side portions upwardly, and end walls of the tray are formed by folding each end portion upwardly to form a first outer wall, inwardly to form an essentially horizontal shoulder, and downwardly to form a second inner wall, which outer and inner walls forming each end wall have laterally extending flaps, higher than the side walls of the tray, which flaps are folded 90 degrees at the tray corners so as to extend parallel to and either side of the corresponding side wall, and wherein the lid has a top and downwardly folded side flaps of uniform width and extending along the entire length of the sides of the lid so that, when the lid is on the tray, the edges of the flaps of the lid rest on the upper edges of the side walls of the tray and the flaps of the lid are fitted between the laterally extending flaps at the corners of the box, the top of the lid resting on the horizontal shoulder at each end of the box tray.



2. A box tray as claimed in claim 1, wherein the lid is laminated.

3. A box tray as claimed in claim 1 or 2, wherein centring means is provided to facilitate the stacking of the boxes.

4. A box tray as claimed in claim 3, wherein the centring means comprises projections in the upper outer corners of the box and corresponding notches in the bottom corners of the box, so that the notches of one box can be centred on the projections of another to form a pile.

5. A box tray substantially as hereinbefore described with reference to, and as illustrated in, the accompanying drawings.
