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A. W. ANDERSON

2,813,656

STACKING AND NESTING CONTAINERS

Filed Oct. 19, 1953

2 Sheets-Sheet 1

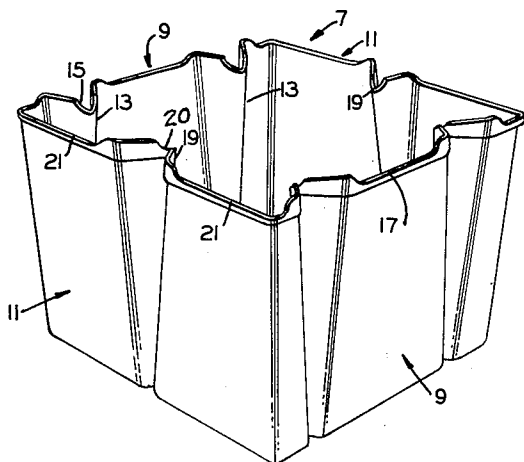


FIG. 1

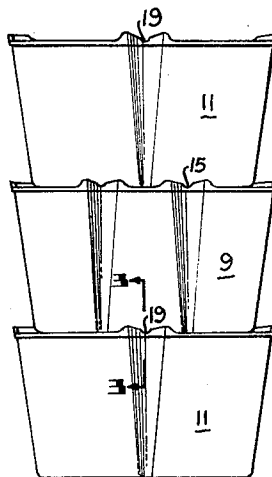


FIG. 2

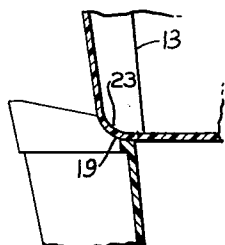


FIG. 3

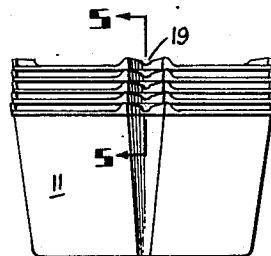


FIG. 4

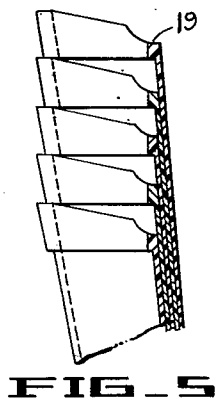


FIG. 5

INVENTOR.
ARTHUR W. ANDERSON
BY ECKHOFF & SLICK
ROBERT A. ECKHOFF
HIS ATTORNEYS

Nov. 19, 1957

A. W. ANDERSON

2,813,656

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2 Sheets-Sheet 2

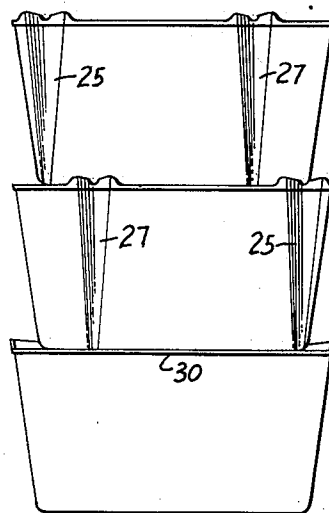
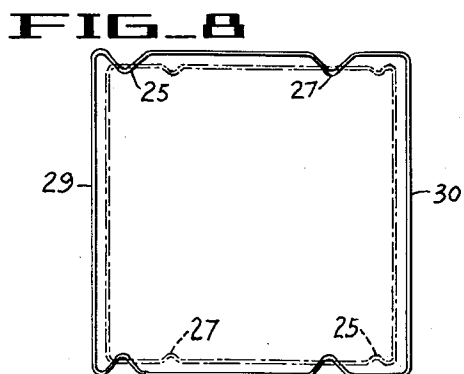
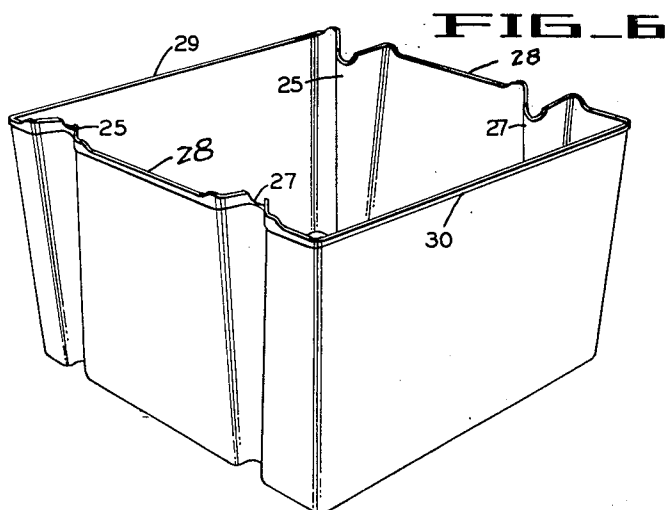


FIG. 7

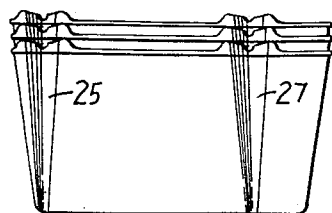


FIG. 9

INVENTOR.
ARTHUR W. ANDERSON
BY ECKHOFF & SLICK
Robert H. Eckhoff
HIS ATTORNEYS

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2,813,656

STACKING AND NESTING CONTAINERS

Arthur W. Anderson, Sebastopol, Calif.

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1 Claim. (Cl. 220—97)

This invention relates to a box structure and particularly relates to a box suitable for use as an orchard lug box and the like.

In the past, orchard lug boxes have ordinarily been made of wood and in such form that they do not stack easily and it is impossible to nest them. As a result, such boxes are not fully satisfactory. In addition, such boxes ordinarily have a short life, are heavy and are somewhat insanitary.

It is therefore an object of the present invention to provide a box, suitable for use as an orchard lug box, which is of sanitary construction, which may be readily nested for easy transportation in a first position, and which may be turned to a second position so the boxes can be stacked without injury to the contents of the boxes.

In general, the objects of the present invention are achieved by providing a box having a series of inward projections wherein the projections in one box mate with those in a second box when the boxes are in a first position wherein the boxes are nested, and wherein the projections also serve to receive and to support another box in a spaced relation to the contents of the lower box when two boxes stacked are in a second position.

Referring now to the drawings, I have shown:

Figure 1 is a perspective view of one embodiment of the present invention.

Figure 2 is an elevational view showing three boxes of the type shown in Figure 1, stacked upon one another.

Figure 3 is a fragmentary cross-section on the line 3—3 of Figure 2, showing the manner in which one box supports the box immediately above it.

Figure 4 is an elevational view of a number of boxes made in accordance with the present invention, showing the boxes nested.

Figure 5 is a fragmentary section on the line 5—5 in Figure 4, showing the manner in which the various boxes nest.

Figure 6 is a perspective view of another embodiment of the present invention.

Figure 7 is an elevational view showing three boxes of the type shown in Figure 6 stacked upon one another.

Figure 8 is a plan view of a box of the type shown in Figure 6 with another box of the same type shown in dotted lines stacked thereon.

Figure 9 is a plan view of three boxes of the type shown in Figure 6, nested.

Referring now to the drawings by reference characters, I have shown a box generally designated 7, having a first pair of side walls generally designated 9, and a second set of side walls generally designated 11. Both sets of walls are tapered, as shown, and the juncture of the walls and the bottom of the box is curved or rounded as at 23. In the embodiment shown in Figure 1, each of the walls 9 has two projections 13 therein, of angular configuration, when viewed from above, and which taper, as shown, so that the projections do not extend beyond the plane of the wall at the bottom of the box as far as

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at the top of the box. Each of the projections 13 has a notched inner lip as at 15, while each of the side walls 9 has a central notch therein as at 17.

The side walls 11 of the box are of similar construction except that only one projection 19 is provided in each side wall 11; each of the projections has a notched inner lip 20 while each of the side walls 11 is notched as at 21 on each side of the projection 19.

In Figure 2, a number of boxes are shown in the stacked position. Since the bottom edge of each of the boxes has rounded corners, as at 23, the rounded corner 23 fits into the notches which have been designated 15 and 20. It will be particularly noted in Figure 2 that for stacking the boxes, the end walls are alternated, i. e., a wall having a single projection, such as 11, is placed directly above a wall such as 9, having two projections, and so on. In this manner, the boxes not only stack, but because of the notched construction, form a structure which is quite stable and resists any accidental force which would knock over a stack of ordinary boxes.

In Figure 4, the boxes are shown in nested position, corresponding side walls having been placed adjacent each other; in other words, a wall corresponding to 11 is placed directly above another wall of the same configuration, and so on. This allows the boxes to nest and occupy a minimum of room. The exact manner of the nesting is shown in detail in Figure 5.

The structure shown in Figures 6 through 9 is generally similar, except that here the stacking and nesting is achieved with projections in only two opposite side walls 28, the other side walls 29 and 30 being plain. Thus, two projections 25 appear opposite each other in one wall 28 and a second pair of projections 27 are opposite each other in the other wall 28, as is shown in Figure 6. However, the projections 25 are spaced differently from the adjacent side wall 29 than are the projections 27 in relationship to their adjacent side wall 30. Thus, the boxes can be nested, as in Figure 9, only when the projections are in vertical alignment. An advantage of this structure is that there are three positions in which the boxes can be stacked, as is shown in Figure 7. Thus, in Figure 7 the lowest box is in one position, the middle box has been turned at 90° to the bottom box and the top box has been turned 180° to the middle box.

A preferred material for making the boxes of the present invention is matted glass fibers held together with a thermosetting resin. However, other suitable materials such as wood or pressed paper stock may be used to form the boxes.

Although I have described the boxes as being suitable for use as orchard lug boxes, it will be apparent to those skilled in the art that the boxes of the present invention may be used for many other purposes. It will also be apparent that other configurations of the projections can be used without departing from the spirit of my invention. For instance, in the first embodiment, I have shown one wall of the box having two projections, while the other involved have a single projection. It is obvious that other combinations could be used such as two opposite walls having two projections, and the other two opposite walls having three projections, and the like.

I claim:

An open top container of generally square shape, having four side walls and a bottom, said side walls tapering from a relatively small bottom to a relatively large top opening whereby one container can nest within another, inwardly extending, hollow projections formed by the material of the side wall in all of said walls, said projections tapering uniformly from the bottom of the container to the top of the container and being larger at the top, the tops of said projections being substantially even with the top of the container, and wherein the pro-

jections provided in a first pair of opposite side walls are of matching placement and wherein the projections provided in a second pair of opposite side walls are similar but wherein the placement of the one set of projections differs from the placement of the other set of projections whereby a number of boxes may be stacked in a first position and nested in a second position.

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