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PRODUCE TRAY

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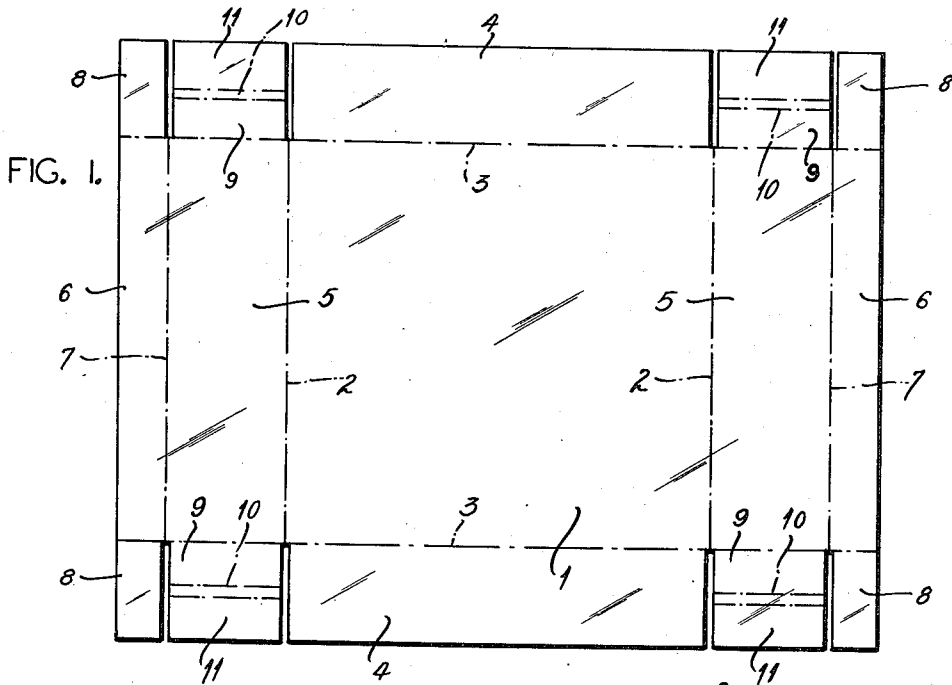


FIG. 2.

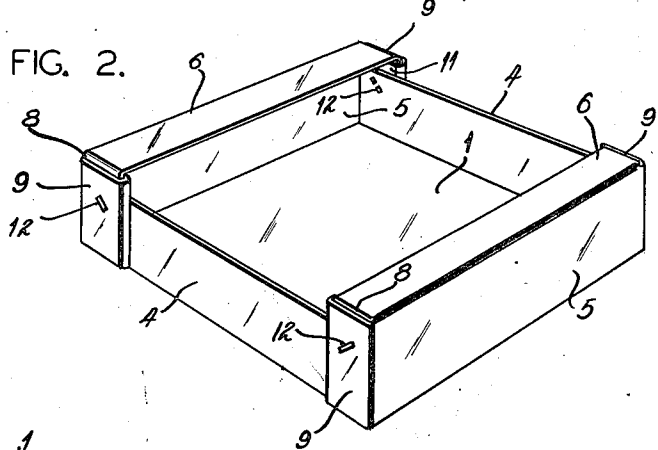
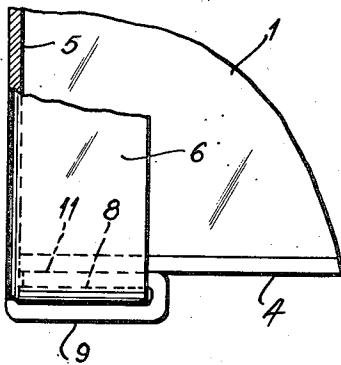


FIG. 3.



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PRODUCE TRAY

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2 Claims. (Cl. 229—32)

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This invention relates to a carrying tray made out of solid fibreboard, corrugated fibreboard or any other suitable material, and more particularly to a tray which will provide proper ventilation for fresh fruits and vegetables or similar articles when the trays are stacked, one on another.

The use of fibreboard containers and tray for produce such as fruit and vegetables has always presented a problem of providing proper ventilation. Fresh fruits and vegetables must have free circulation of air or spoilage will result. Most fibreboard produce containers are provided with die cut holes in their walls to allow for air circulation but this has never been the complete answer since this requires another step in manufacture. Furthermore, die cut holes weaken the container and often do not provide adequate circulation when containers are stacked. There has long been a need for an open tray of fibreboard which is inexpensive to manufacture and can be stacked and still provide adequate air circulation.

One of the primary objects of this invention is to provide a container for produce which will readily admit of stacking and will also provide for adequate ventilation for the produce carried.

Another object of this invention is to provide a tray for produce requiring a minimum blank waste.

A still further object of this invention is to provide a produce tray which can be shipped to the user in a flatwise condition and can be easily and quickly fabricated without special tools or special skill.

One of the final objects of this invention is to provide a produce tray suitable to be constructed of solid fibreboard or corrugated fibreboard.

Other objects and advantages of this invention will be apparent to those skilled in the art upon a full and complete understanding of the construction and operation of this device.

This invention provides a reinforced supporting structure for a receptacle comprising a wall having a stacking flange with a depending end marginal member, said wall also having an end flange with a marginal flap attached thereto, said end flange, said flap, and said depending marginal member forming a column which is secured to the adjacent wall.

The invention also consists in the parts and in the arrangements and combinations of parts hereinafter described and claimed. In the accompanying drawings which form part of this

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specification and wherein like numerals and symbols refer to like parts wherever they occur:

Fig. 1 is a plan view of a blank from which a tray embodying this invention is folded; the broken lines indicate the scored portions and the solid lines indicate the outline of the blank,

Fig. 2 is a perspective view of the tray in the completely assembled form, and

Fig. 3 is an enlarged plan view of one of the corners of the tray.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated is formed from a single blank having a bottom panel 1 defined by opposing pairs of end scores 2 and side scores 3. The side scores 3 define the bottom edge of side walls 4, and the end scores 2 define the bottom edge of the end walls 5. The upper edge of each end wall 5 is provided with a stacking flange 6 defined by a score 7. Each end of each stacking flange 6 is provided with an end tab 8 defined by a continuation of the score 3. In a similar manner, each end of each end wall 5 is provided with an end wall flange 9 defined by a continuation of the score 3. Double scores 10 on the outer margin of each end wall flange 9 define foldable end wall flaps 11. The end wall flanges 9 and end wall flaps 11 are provided with slots at the ends thereof which separate the flanges 9 and flaps 11 from the end tabs 8 and the side walls 4.

The tray may be fabricated by bending the side walls 4 and end walls 5 upwardly along the side scores 3 and end scores 2 to a substantially upright position.

Next the stacking flanges 6 are folded inwardly along the scores 7 to form substantially right angles with the end walls 5. The end tabs 8 are folded downwardly along the continuations of the scores 3 into a substantially vertical position.

The end wall flanges 9 are folded along the continuations of score 3 to a position flatwise against the outer face of the end members 8. Lastly, the end wall flaps 11 are rebent along the double scores 10 and inserted into the spaces between the inner faces of the end tabs 8 and the outer faces of the side walls 4. The end wall flaps 11, the end tabs 8, the end wall flanges 9, and the side walls 4 are then connected together by staples 12 or other suitable means.

Preferably, the end wall flanges 9 are provided with end wall flaps 11 as illustrated in the drawings, but these end walls flaps are optional and can be omitted. While it is preferred to insert the end tabs 8 between the end wall flanges 9 and

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end wall flaps 11, the end tabs 8 may also be secured to the outside faces of the end wall flanges 9 or adjacent to the side walls 4.

The tray is now in set up form and it is ready for use. The end construction including the end wall 5 and the stacking flange 6 act to strengthen the container and prevent any spreading of the side wall 4. The end tab 8, the end wall flange 9, and the end wall flap 11 form a 3 ply column which is connected to the side wall 4 thereby providing a rigid structure to resist any vertical force such as a stacking load. When the trays are stacked one on another, the stacking flange 6 and the aforementioned supporting column structure will sustain any normal load thereon. Since the end walls and supporting columns are of a greater height than the side walls 4, there is a space provided between stacked trays which allows for the ventilation which is so necessary for perishable produce.

It is to be understood that the embodiments herein described are illustrative and not restrictive, and it is also to be understood that the invention may be susceptible of embodiment in other modified forms, and that all such modifications which are similar or equivalent hereto come equally within the scope of the claims.

What I claim is:

1. An open top rectangularly shaped tray comprising a bottom, a pair of opposed side walls and a pair of opposed end walls of greater height than said side walls, the upper edge of each of said end walls having a stacking flange integral and substantially co-extensive in length therewith folded inwardly at right angles thereto, said flange having end tabs depending therefrom, each end of said stacking flange being reinforced by a 3-ply rigid vertical load sustaining column extending from the bottom of said tray to the upper edge of said end wall, said column being formed by a flange connected to the end of said end wall folded inwardly at right angles thereto, said flange having an extension folded in spaced parallel relation to the inner face of said flange, said extension being positioned flatwise between the adjacent side wall and said end tab connected to said stacking flange, said end tab being interposed between said end wall flange and the folded

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extension thereof, all of said elements of said column extending to the bottom of said tray and being secured in flatwise contacting relation to said adjacent side wall.

2. An upwardly opening container adapted to provide ventilation for the contents when stacked in vertical tiers, said container comprising a bottom, a pair of opposing side walls, and a pair of opposing end walls of greater height than said side walls, each of said end walls being provided with an upper marginal stacking flange folded inwardly at right angles to said end walls, each of said end walls being provided with a foldably connected end flange having a foldably connected end flap thereon, said end flange being disposed inwardly at right angles to said end wall with said end flap reversely folded in spaced parallel relation thereto, said end flange and said spaced end flap being positioned in parallel relation with the end portion of the adjacent side wall, said stacking flange having end tabs thereon substantially equal in length to the height of said end wall positioned downwardly between said end flange and said spaced end flap to form a solid, three-ply, rectangularly shaped reinforcing column, said reinforcing column extending from said stacking flange downwardly to the lower margin of said end wall, said reinforcing column being fixed to said adjacent side wall.

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