

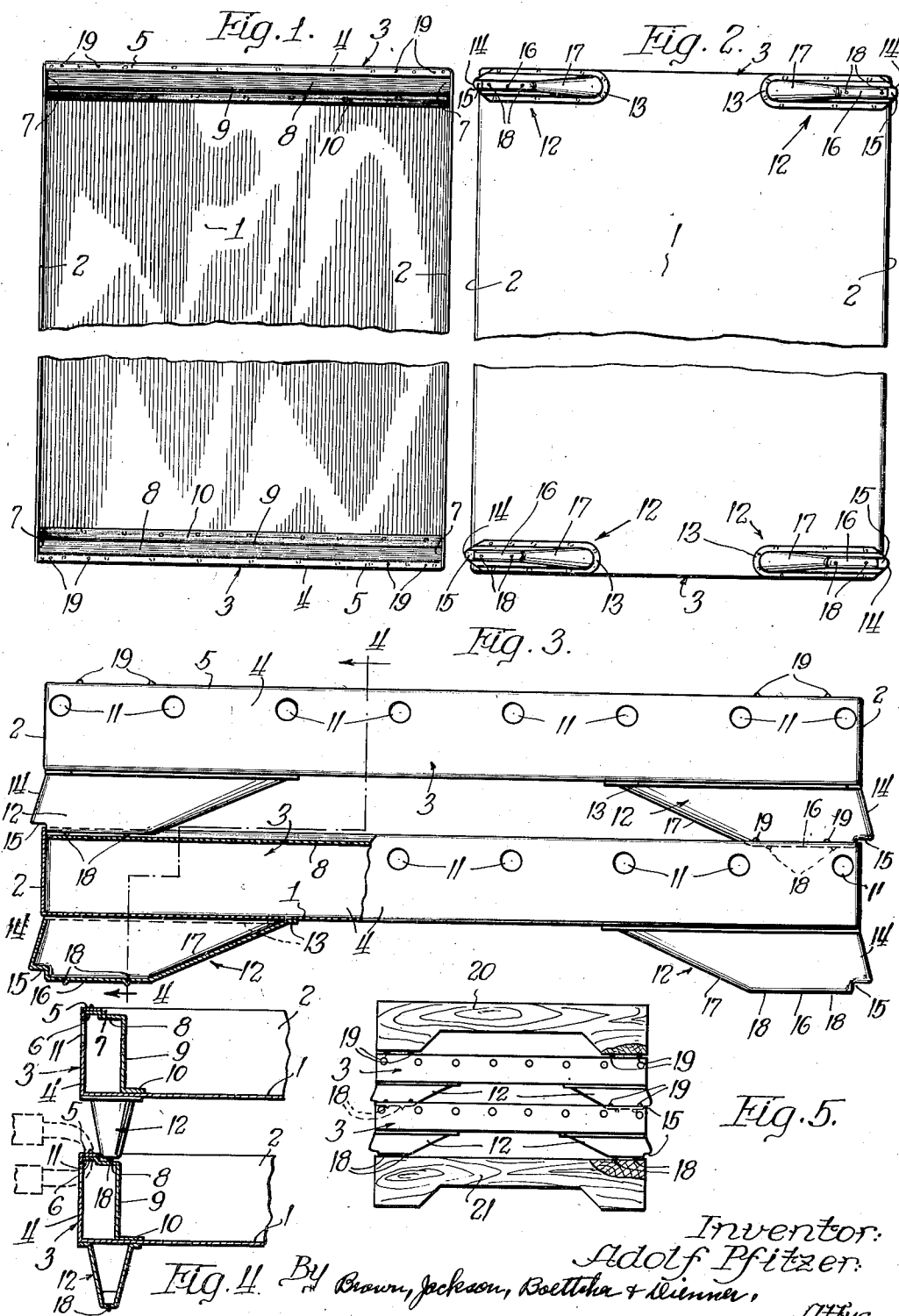
March 19, 1935.

A. PFITZER

1,994,664

CANDY TRAY

Filed July 5, 1934



Inventor:
Adolf Pfitzer
By Brown, Jackson, Boettcher & Kinner,
Attys.

UNITED STATES PATENT OFFICE

1,994,664

CANDY TRAY

Adolf Pfitzer, Chicago, Ill., assignor to Hugh A. Currie, Chicago, Ill., doing business as Currie Mfg. Co.

Application July 5, 1934, Serial No. 733,720

10 Claims. (Cl. 220—97)

This invention relates to trays, and has to do with trays intended for use in candy factories and for like purposes.

One of the main objects of my invention is to provide a candy tray particularly suitable for stacking and so constructed as to eliminate danger of a tray, when moved lengthwise, dropping into an underlying tray and thus damaging the contents of the latter. A further object is to provide a tray of the character stated which can be advantageously formed of sheet metal and possesses adequate mechanical strength, this tray being suitable for stacking with similar sheet metal trays or with wood trays such as are now commonly used. It is a further object of my invention to provide a tray of the character stated which, when disposed in stacks, is held against slippage and is well suited for handling, by lift trucks such as are commonly employed in candy factories. Further objects and advantages of my invention will appear from the detailed description.

In the drawing:—

Figure 1 is a plan view, partly broken away, of a tray embodying my invention;

Figure 2 is an underneath view, partly broken away, of a tray embodying my invention;

Figure 3 is an end view, on an enlarged scale, partly broken away, of two trays embodying my invention and disposed in stacked relation;

Figure 4 is a section taken substantially on line 4—4 of Figure 3, parts being shown in elevation;

Figure 5 is an end view, partly broken away, of a stack of four trays, two of the trays embodying my invention and two of the trays being wooden trays such as are now commonly used.

The tray of my invention is conveniently formed of sheet metal and is of rectangular shape, the tray being of suitable depth for the purpose for which it is to be used. This tray comprises a flat bottom wall 1, side walls 2 integral with the bottom wall, and end members 3 of channel cross-section. Each of these end members includes a vertical wall 4 extending from bottom wall 1, and a horizontal flange 5 extending inward of the tray from the upper edge of wall 4. Flange 5 overlies, and is spot welded to, a flange 6 connected by a short vertical element 7 to a flange 8 at the upper end of a vertical wall 9 provided at its lower end with an inwardly projecting flange 10 seated upon, and spot welded to, the upper face of bottom wall 1. It will be noted that each of the end members is of great width relative to the side walls, and comprises an outer portion, defined by the flange 5, the upper face of

which is flush with the upper edges of the side walls, and an inner depressed portion defined by element 7 and flange 8 which is below the upper edges of the side walls. In order that the flanges 5 and 6 may be spot welded with facility, wall 4 is provided with suitable openings 11 to accommodate a welding electrode.

Supporting legs 12 are secured to the tray at each corner thereof. Conveniently, these legs are formed of sheet metal and are hollow stampings. Each leg is of channel cross-section and is provided, at its upper side, with a peripheral flange 13 extending about the sides and the inner end of the leg. This flange seats against the under face of bottom wall 1 and is suitably secured thereto, conveniently by spot welding. The outer end of each leg 12 is closed by a wall 14 which is inclined downward and outward of the tray so as to extend beyond the adjacent side wall 2. Each leg is provided, at the outer lower corner thereof, with a notch 15 extending transversely of the leg and parallel with side wall 2. The inner side of this notch is disposed substantially in the plane of the inner face of adjacent side wall 2 of the tray and the leg is disposed substantially in the plane of the channel-shaped depression defined by element 7 and flange 8 of the adjacent end member of the tray. It will thus be seen that the distance between the inner sides of the notches of the legs at each end of the tray corresponds to the interior width of the tray, and the distance between each two of the legs at each side of the tray is substantially the same as the distance between vertical elements 7 at the ends of the tray, that is, the distance between the outer or under pressed portions of the end members.

The under face of each leg 12, designated 16, is of considerable length, flat and parallel with bottom wall 1, this under-face being connected to bottom wall by an inclined element 17 in the nature of a strut effectively bracing the leg against stresses inward and transversely of the tray. Bottom wall 16 of the leg is provided with a suitable number of downwardly projecting elements 18 in the nature of rounded points, and flange 5 of each of the end members of the tray is provided with a plurality of similar elements 19 projecting upward therefrom. These elements are intended to press into the corresponding portions of wood trays, such as are now commonly used, which may be disposed in stacked relation with metal trays embodying my invention, it being noted that the metal trays of my invention are of the same general dimensions as the wood trays ordinarily used. When the

trays are disposed in stacks, if a wood tray is disposed upon a metal tray embodying my invention, elements 19 are forced into the wood and effectively eliminate possibility of slippage of the wood tray upon the metal tray. Likewise, if the metal tray be stacked upon a wood tray, elements 18 are pressed into the wood and eliminate possibility of slippage between the two trays.

When two trays embodying my invention are disposed in stacked relation, as in Figures 3 and 4, legs 12 of the upper tray fit into the channel elements of the end members of the lower tray and are disposed snugly between the side walls of this lower tray so as to prevent relative transverse movement between the two trays, the legs of the upper tray and the outer raised portions of the end members of the lower tray cooperating to hold the trays against relative endwise movement. It will be noted that in this position of the tray, the upper sides of the notches of the legs of the upper tray provide elements which overlie the upper edges of the side walls 2 of the lower tray in proximity thereto. In the event the upper tray is moved lengthwise relative to the lower tray to such an extent as to move the legs 12 at one end of the upper tray inwardly of the lower tray and off of the flange 8 of the adjacent end member of the lower tray, slight downward movement of the upper tray brings the legs thereof, at the upper sides of the notches 15, into contact with the upper edges of the side walls of the lower tray. Thereafter, any lengthwise movement of the upper tray results in moving the legs thereof along the side walls of the lower tray, the upper tray being thus supported in such a manner as to prevent movement thereof downward into the lower tray to such an extent as to damage the contents of the latter. In this connection, it is to be noted that the walls at the inner sides of the notches of the legs of the upper tray fit snugly between the side walls of the lower tray and, since these notches are of considerable width lengthwise of the tray, preclude possibility of the upper tray dropping into the lower tray due to any slight lateral turning of the upper tray during lengthwise movement thereof.

In Figure 5 I have illustrated a stack of four trays, the two center trays of the stack being metal trays embodying my invention, and the top and bottom trays 20 and 21, respectively, being wood trays such as are now in common use. The two metal trays are effectively held against relative movement in the manner above described in connection with Figures 3 and 4. The top wood tray 20 is held against relative movement with respect to the adjacent metal tray by engagement of elements 19 of the end members of this metal tray into the wood tray, and the bottom wood tray is held against movement relative to the adjacent metal tray by elements 18 of legs 12 of the latter tray, as previously described. It will be understood that, in practice, the trays are commonly disposed in stacks each containing a considerable number of trays so that any wood trays in the stack and an appreciable distance below the top thereof would be subjected to considerable pressure, under which conditions the elements 18 and 19 of the metal trays are highly effective for securing the wood trays in position in the stack. The legs 12 are spaced apart transversely of the tray, as illustrated, and accommodate therebetween lift elements of lift trucks such as are commonly used in candy factories and similar establishments,

the lift elements of the truck being inserted beneath the end portions of the bottom tray of a stack for lifting the latter. It will be evident that the end members of the bottom tray of a stack frequently have to support considerable weight, and the channel construction of these end members is advantageous as providing a light structure which possesses great mechanical strength adequate to withstand the severe stresses to which these end members are subjected in practice.

What I claim is:—

1. As a new article of manufacture, a tray intended for stacking, said tray being of rectangular shape and comprising a bottom wall and side walls and relatively wide end members having the inner portions of their top surfaces depressed below the side walls to provide channels, and supporting legs secured to the under face of the bottom wall at the corners thereof, said legs extending outward beyond the side walls and each provided with a notch in its outer lower portion, the notches of the legs at each end of the tray being spaced apart a distance corresponding to the interior width of the tray, the legs at each side of the tray being spaced apart a distance corresponding to the distance between the outer portions of said end members and adapted to fit into the channels of a similar underlying tray, the top surfaces of said outer portions of the end members being flush with the upper edges of the side walls and the under faces of the legs being flat and parallel with the bottom plate, said outer portions of the end members being provided with upwardly projecting pointed elements and the legs being provided, at the under faces thereof, with downwardly projecting pointed elements.

2. As a new article of manufacture, a tray intended for stacking, said tray being of rectangular shape and comprising a bottom wall and side walls and relatively wide end members having the inner portions of their top surfaces depressed below the side walls to provide channels, and supporting legs secured to the under face of the bottom wall at the corners thereof, said legs extending outward beyond the side walls and each provided with a notch in its outer lower portion, the notches of the legs at each end of the tray being spaced apart a distance corresponding to the interior width of the tray, the legs at each side of the tray being spaced apart a distance corresponding to the distance between the outer portions of said end members and adapted to fit into the channels of a similar underlying tray, the top surfaces of said outer portions of the end members being flush with the upper edges of the side walls and the under faces of the legs being flat and parallel with the bottom plate.

3. As a new article of manufacture, a tray intended for stacking, said tray being of rectangular shape and comprising a bottom wall and side walls and relatively wide end members having the inner portions of their top surfaces depressed below the side walls to provide channels, and supporting legs secured to the tray at the corners thereof and extending downward therefrom, said legs extending outward beyond the side walls and each provided with a notch in its outer lower portion, the notches of the legs at each end of the tray being spaced apart a distance corresponding to the interior width of the tray, the legs at each side of the tray being spaced apart a

distance corresponding to the distance between the outer portions of said end members and adapted to fit into the channels of a similar underlying tray, the top surfaces of said outer portions of the end members being flush with the upper edges of the side walls and the under faces of the legs being flat and parallel with the bottom plate.

4. As a new article of manufacture, a metal tray intended for stacking, said tray being of rectangular shape and comprising a bottom wall and side walls and relatively wide end members, each of said end members comprising an outer portion having its upper face flush with the upper edges of the side walls and an inner portion depressed below the upper edges of said side walls, and supporting legs secured to the corners of the tray and extending downward therefrom, said legs extending outward beyond the side walls and each having a notch in its lower outer portion, the notches of the legs at each end of the tray being spaced apart a distance corresponding to the interior width of the tray and the legs at each side of the tray being spaced apart a distance corresponding to the distance between the outer portions of said end members.

5. As a new article of manufacture, a tray intended for stacking, said tray being of rectangular shape and comprising a bottom wall and side walls and relatively wide end members, each of said members comprising an outer portion having its upper face flush with the upper edges of the side walls and an inner portion depressed below the upper edges of said side walls, and supporting legs secured to the corners of the tray and extending downward therefrom, said legs being notched and disposed to fit between the side walls and the outer portions of the end members of a similar lower tray disposed in stacked relation thereto, with the legs of the upper tray seating upon the inner portions of the end members of the lower tray and the notches of the legs of the upper tray engaging over the side walls of the lower tray.

6. As a new article of manufacture, a tray intended for stacking, said tray being of rectangular shape and comprising a bottom wall and side walls and relatively wide end members, each of said end members comprising an outer portion having its upper face flush with the upper edges of the side walls and an inner portion depressed below the upper edges of said side walls, and supporting legs secured to the corners of the tray and extending downward therefrom, said legs being disposed to fit between the side walls and the outer portions of the end members of a similar lower tray disposed in stacked relation thereto, with the legs of the upper tray seating upon the inner portions of the end members of the lower tray, said legs having elements extending laterally therefrom and disposed to overlie the side walls of the lower tray in proximity to the upper edges of the side walls of the latter.

7. As a new article of manufacture, a tray intended for stacking, said tray being of rectangular shape and comprising a bottom wall and side walls and relatively wide end members, each of said end members comprising an outer portion having its upper face flush with the upper edges of the side walls and an inner portion depressed below the upper edges of said side walls, and supporting legs secured to the corners of the tray

and extending downward therefrom, said legs being notched and disposed to fit between the side walls and the outer portions of the end members of a similar lower tray disposed in stacked relation thereto, with the legs of the upper tray seating upon the inner portions of the end members of the lower tray and the notches of the legs of the upper tray engaging over the side walls of the lower tray, the outer portions of the end members being provided with upwardly projecting pointed elements and the legs being provided, at the under faces thereof, with downwardly projecting pointed elements.

8. As a new article of manufacture, a metal tray intended for stacking, said tray being of rectangular shape and comprising a bottom wall and side walls and end members of channel cross-section, each end member comprising an outer portion having its top surface flush with the upper edges of the side walls and an inner portion depressed below the top edges of said side walls, and legs secured to the corners of the tray and extending downward therefrom, said legs extending outward beyond the side walls and each being provided in its lower outer corner with a transverse notch extending parallel with the adjacent side wall with the inner side of the notch substantially in the plane of the inner face of said adjacent side wall, the legs at each end of the tray being substantially in the plane of the inner depressed portion of the adjacent end member.

9. As a new article of manufacture, a tray intended for stacking, said tray being of rectangular shape and comprising a bottom wall and side walls and end members, each end member comprising an outer portion having its top surface flush with the upper edges of the side walls and an inner portion depressed below the top edges of said side walls, and legs secured to the corners of the tray and extending downward therefrom, said legs extending outward beyond the side walls and each being provided in its lower outer corner with a transverse notch extending parallel with the adjacent side wall with the inner side of the notch substantially in the plane of the inner face of said adjacent side wall, the legs at each end of the tray being substantially in the plane of the inner depressed portion of the adjacent end member.

10. As a new article of manufacture, a metal tray intended for stacking, said tray being of rectangular shape and comprising a bottom wall and side walls and end members, the inner faces of the end members being flat and perpendicular to said bottom wall, each end member comprising an outer portion having its top surface flush with the upper edges of the side walls and an inner portion depressed below the top edges of said side walls, and legs secured to the corners of the tray and extending downward therefrom, said legs extending outward beyond the side walls and each being provided in its lower outer corner with a transverse notch extending parallel with the adjacent side wall with the inner side of the notch substantially in the plane of the inner face of said adjacent side wall, the legs at each end of the tray being substantially in the plane of the inner depressed portion of the adjacent end member and the height of the legs being materially greater than the depth of said inner depressed portions of said end members.

ADOLF PFITZER.