

[72] Inventor **Arthur Serwer**
Jericho, New York
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 [73] Assignee **Cole Steel Equipment Co., Inc.**
New York, New York
a corporation of New York

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Primary Examiner—Nile C. Byers, Jr.

Attorneys—Norman Friedman, Morris I. Pollack, Arthur T.
 Groeninger, Stephen E. Feldman and Philip Furgang

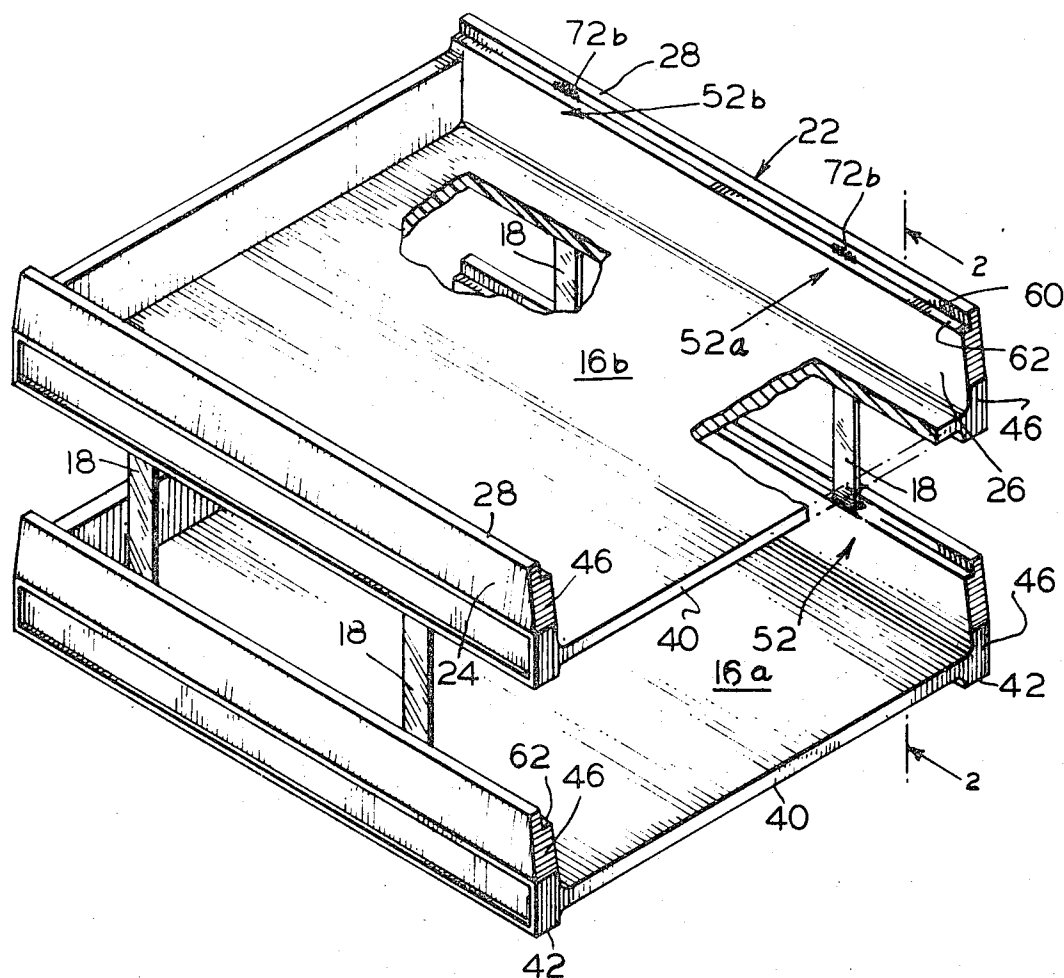
[54] **STACKING DESK TRAYS**
18 Claims, 5 Drawing Figs.

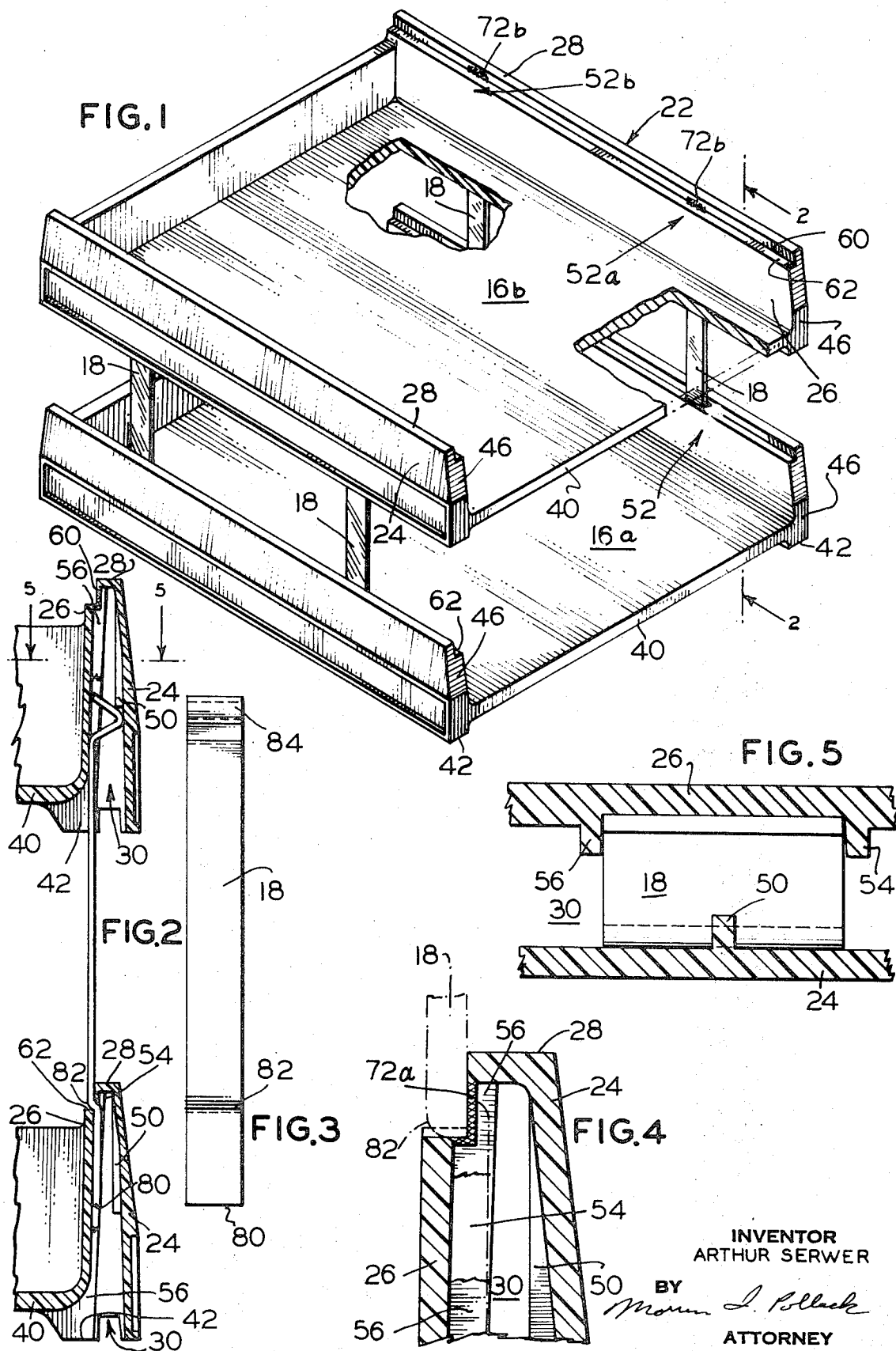
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ABSTRACT: Each tray is formed from plastic and with inverted and substantially U-shaped sides providing a pair of spaced side walls and an upper edge defining a downwardly opening cavity. A plurality of ribs extend from the side walls into the cavity at a plurality of locations to form post receiving locations each adapted to receive a stacking post to facilitate stacking of one tray upon another. The entryway from the upper edge into each of said post locations is flashed over with plastic to normally present a smooth surface. However, the plastic covering the entryway is formed so as to be frangible and easily broken away when it is desired to insert a post therethrough to stack the trays.





STACKING DESK TRAYS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to desk, or letter, trays and more particularly to desk or letter trays constructed to permit the stacking of one tray upon the other, in spaced relationship, through the intermediary of stacking posts.

2. Description of the Prior Art

It has long been common practice to stack desk or letter trays one upon the other to facilitate the disposition of a plurality of trays in a limited area. These desk or letter trays are commonly found in offices as "IN" and "OUT" baskets, and are otherwise used for a great many purposes. They are usually made of wood or metal formed into open top boxes having a bottom and either two, three or four upturned sides.

A common method of stacking trays requires the utilization of a plurality of posts each of which is adapted to grip the upper edge of the bottom tray and the lower portion of the top tray. However, these posts are generally unsightly in appearance, interfere with the usage of the trays when disposed at the tray corners and generally do not form adequate support for the upper tray when otherwise disposed.

A great many trays have secured thereto extra pieces of material forming channels adapted to receive stacking posts. However, the trays so formed are usually unsightly in appearance; while the channels in many instances do not provide adequate guide or support structure for the posts when the trays are stacked.

SUMMARY OF INVENTION

It is therefore an object of this invention to provide an improved desk or letter tray.

It is a further object to provide an improved stackable desk or letter tray.

A still further object is to provide a stackable desk or letter tray having formed within the walls thereof guide and positioning structure adapted to receive stacking posts in such a manner that the guide and positioning structure is normally hidden from view, is not unsightly in appearance, but is readily available when required for use.

This invention involves desk or letter trays of the type adapted to be stacked one upon the other through the intermediary of stacking posts, and wherein each tray has formed in the side walls thereof hollows which are adapted to receive the stacking posts. The entryway into the hollow from the top of the tray is flashed over so as to present a continuous surface with the flashing formed to permit ready insertion of the stacking posts therethrough when it is desired to stack trays one upon the other.

In carrying out the invention, according to a preferred embodiment thereof, each tray is formed of plastic with its sides and back in a substantially inverted U-shaped configuration such that the spaced walls are closed at the top and open at the bottom to define a hollow cavity. The inner wall surfaces are interconnected to a floor portion forming the tray itself. The side walls have formed therebetween a plurality of sets of stacking post receiving and positioning locations each including a plurality of ribs extending from the walls into the cavity to securely receive and position the stacking posts. The plastic from which the tray is formed forms a continuous surface along the upper edge of the tray along the side walls thereof covering over the entryway into the post locations. However, the plastic over the entryway may readily be broken away when the lower portion of the stacking posts is pushed thereagainst. The upper tray is thereafter set upon the stacking posts with the stacking posts being received into the open hollow portion thereof between the guide ribs so as to form a secure stack.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a front prospective view of a pair of stacked desk trays embodying the present invention;

FIG. 2 is an enlarged section taken on line 2-2 of FIG. 1;

FIG. 3 is a side view of the stacking posts shown in FIGS. 1 and 2;

FIG. 4 is a still further enlargement of the upper corner of a tray showing a post in phantom and a frangible covering for the entryway into the post location between the walls thereof; and

FIG. 5 is a sectional view taken on line 5-5 of FIG. 2.

DESCRIPTION OF PREFERRED EMBODIMENT

For convenience, the invention will be described as applied to a pair of desk or letter trays which are formed from plastic and include spaced side walls defining a cavity within which is formed stacking post receiving and positioning ribs to receive and position two stacking posts on each side of a tray to facilitate stacking on one tray on another; it being understood nonetheless that without the departing from the scope of the invention that subject tray construction may utilize post receiving and positioning elements other than ribs; and may be utilized to stack more than two trays, one upon the other, for trays formed from material other than plastic, for trays utilizing more or less than two stacking posts on each side thereof, and for trays utilized for other than correspondence purposes.

With reference to FIG. 1 there is shown generally at 16 a pair of desk trays with a lower desk tray 16a supporting an upper desk tray 16b through the intermediary of four supporting posts 18 (FIGS. 1, 2 and 3).

Each desk tray 16 is formed of a suitable plastic (such as medium impact styrene) and so as to have upwardly extending sides 22 (FIG. 1) each formed in an inverted substantially U-shaped configuration so as to provide an outer wall 24, (FIGS. 2, 4 and 5) an inner wall 26, and an upper edge 28 all of which define therebetween a cavity 30 opening downwardly. Inner walls 26 are integral with a bottom or floor 40 (FIGS. 1 and 2) while outer walls 24 are constructed to form a lower or resting edge 42. A front wall 46 interconnects outer walls 24, inner walls 26, and upper edges 28 so as to present a smooth surface along the front face of tray 20.

A guide rib 50 (FIGS. 2, 4 and 5) extends from outer wall 24 into cavity 30 at each of a plurality of post locations 52a (FIGS. 1 and 5), 52b (FIG. 1), etc.; while a pair of positioning ribs 54 (FIGS. 2 and 5) 56 extend from inner wall 26 into cavity 30 at each such location. Ribs 54, 56 are spaced a distance approximately equal to the width of support post 18 so as to properly receive and position same; while guide rib 50 is disposed opposite ribs 54, 56 and approximately midway therebetween.

Upper edges 28 (FIGS. 2 and 4) of each tray 16 are formed with inwardly facing walls 60 and upwardly facing shoulders 62. A breakaway or frangible area 72a (FIGS. 1 and 4), 72b, (FIG. 1) etc. is disposed at each post location 52a, 52b etc. so as to cover the entryway into cavity 30 at each such location.

Each support post 18 is formed with an inserting end 80 (FIGS. 2 and 3) a seating shoulder 82, and a tray mounting end 84.

When it is desired to stack a pair of trays 16 the user need only locate four support posts 18 on lower tray 16a and dispose upper tray 16b thereupon. To install a post 18 at a particular location such as 52a end 80 of post 18 is pressed against breakaway or frangible area 72a until the material thereof yields permitting the entry of end 80 into cavity 30. End 80 then strikes guide rib 50 and is guided thereby between positioning ribs 54, 56 until post 18 is completely inserted and shoulder 82 thereof rests upon shoulder 62 of tray 16a. The other posts 18 are inserted in a similar manner. Upper tray 16b is then disposed upon tray support ends 84 of support posts 18 by inserting upper ends 84 into cavity 30 and between ribs 54, 56 of tray 16b with each end 84 bottoming against rib 50 to form a proper seat thereagainst.

From the above description it will thus be seen that a novel and improved desk or letter tray has been provided; which tray by utilizing hollow sides having formed therein guide and positioning structure for support posts and by providing a

frangible plastic covering for the entryway to the post area, permits the ready stacking of one tray upon the other while at the same time presenting an aesthetically pleasing smooth surface for those trays upon which another tray is not to be stacked.

It is understood that although I have shown of the preferred form of my invention that various modifications may be made in the details thereof without departing from the spirit as comprehended by the following claims.

I claim:

1. A tray comprising:
 - a. bottom wall means;
 - b. side wall means extending along at least one edge of said bottom wall means;
 - c. said side wall means including between the exterior surfaces thereof post receiving means defining at least one post location adapted to receive a post for the purpose of stacking trays one upon the other; and
 - d. material means covering an entryway to said post location in such a manner as to be readily removed therefrom and so as to present a continuous surface until so removed.
2. The tray of claim 1 wherein the entire tray is formed from said material means and said material means is a plastic.
3. The tray of claim 1 wherein said side wall means includes a pair of spaced post locations each adapted to receive a post and each having the entryway thereof covered by material means.
4. The tray of claim 1 wherein said side wall means extends along two oppositely disposed edges of said bottom wall means.
5. The tray of claim 4 wherein each side wall means includes at least two post locations each of said locations having its respective entryway covered by said material means.
6. The tray of claim 1 wherein said side wall means is formed of an inverted and substantially U-shaped configuration with an outer wall, an inner wall and an upper edge defining therebetween a downwardly opening cavity.
7. The tray of claim 6 wherein a plurality of ribs extend from said side walls into said cavity at a predetermined location to define therebetween said post location.
8. The tray of claim 7 wherein said material means covering said entryway is formed from the material of said side walls but so as to be frangible in nature and readily broken away upon the application of pressure thereagainst to permit entry of a post into said post location.
9. A stack of trays comprising:
 - a. at least one tray support post;
 - b. a first tray having a bottom wall, and a side wall connected to said bottom wall so as to extend along at least one edge thereof and adapted to have the lower portion of said tray support post inserted through the surface thereof and into a post location formed between the exterior surfaces of said side wall and so as to support said tray support post in a substantially vertical position; and
 - c. a second tray having a bottom wall, and a side wall connected to said bottom wall so as to extend along at least one edge thereof and having formed between the exterior surfaces of said side wall a post location similar to said post location in said first tray and adapted to receive the upper portion of said post supported by said first tray so as to permit the stacking of said first tray and said second tray one over the other.
10. The stack of trays of claim 9 wherein said side walls of said first and said second trays each have formed therein a pair of post locations and there are provided a pair of posts, one for each such post location.
11. The stack of trays of claim 10 wherein said side walls extends along opposed oppositely disposed edges of said bottom

walls and each said side wall includes at least one post location.

12. A stack of trays comprising:

- a. at least one tray support post;
- b. a first tray having a bottom wall, and a side wall connected to said bottom wall so as to extend along at least one edge thereof and adapted to have the lower portion of said tray support post inserted through the surface thereof and into a post location formed therewithin so as to support said tray support post in a substantially vertical position; and
- c. a second tray having a bottom wall, and a side wall connected to said bottom wall so as to extend along at least one edge thereof and having formed therein a post location similar to said post location in said first tray and adapted to receive the upper portion of said post when supported by said first tray so as to permit the stacking of said first tray and said second tray one over the other.
- d. said first tray and said second tray being formed integrally and of a plastic material with the material covering each of said post locations but so as to be easily broken away therefrom.

13. The stack of trays of claim 12 wherein each side wall is formed of an inverted and substantially U-shaped configuration with an outer wall, an inner wall and an upper edge defining therebetween a downwardly opening cavity.

14. The stack of trays of claim 13 wherein at each of said post locations there is integrally formed from the material of said side walls a plurality of ribs extending into said cavity to define said post location.

15. The stack of trays of claim 14 wherein each of said plurality of ribs includes a pair of spaced post positioning ribs extending from one wall and adapted to receive therebetween a stacking post and a guide rib extending from the opposed wall midway between said pair of post positioning ribs.

16. A desk or letter tray comprising:

- a. a pair of opposed spaced sides each formed of plastic material and in an inverted and substantially U-shaped configuration so that each provides spaced inner and outer side walls and upper edges defining therebetween downwardly opening cavities;
- b. a bottom wall formed integrally with said inner side walls of said opposed spaced sides to interconnect same;
- c. a pair of support post locations formed within said cavity in each of said sides, each such post location including a pair of spaced post support ribs extending from said inner wall into said cavity and a guide rib extending from said outer wall into said cavity midway between said post support ribs, said pairs of post support ribs and said guide ribs extending from proximate said upper edge towards said opening to said cavity; and
- d. an entryway for each of said post locations proximate said upper edge and said inner wall, said entryway originally being flashed over with said plastic material in a manner to be easily broken away therefrom so as to present a substantially smooth and continuous surface until broken away.

17. The desk or letter tray of claim 16 including:

- a. a stacking post for each of said post locations;
- b. each stacking post being formed of a width and thickness to fit into said post location and so as to include a first end adapted for insertion through said material into said post location and between said post support ribs, a shoulder adapted for seating upon a shoulder of said side formed at said post location, and an upper end adapted for insertion upwardly through the opening of the cavity of another tray and between the support ribs thereof.

18. The tray of claim 17 wherein the movement of said support post between said support ribs of said another tray is limited by engagement between said upper end and a guide rib of said another tray.