

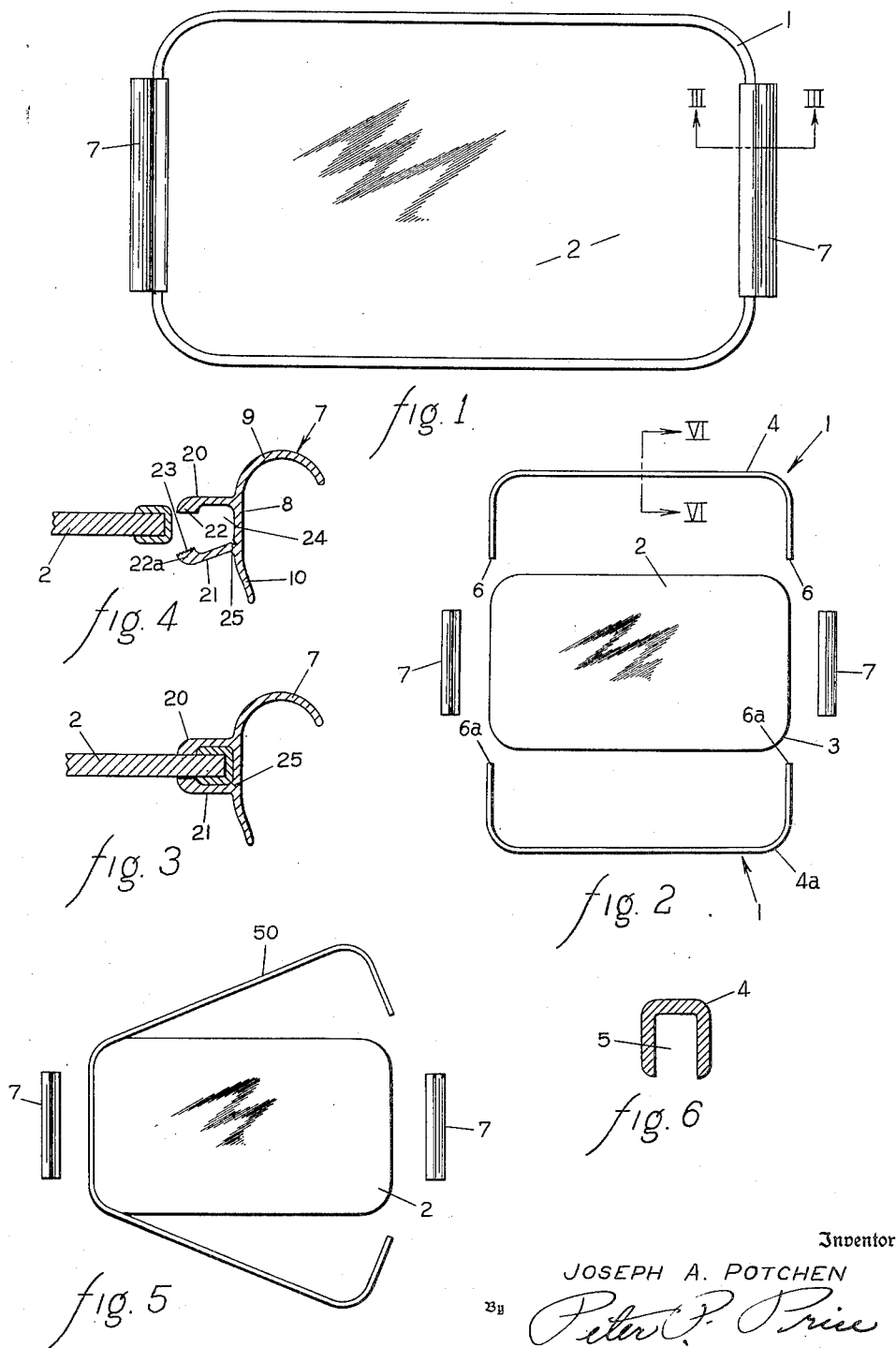
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SERVING TRAY AND METHOD OF MAKING SAME

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SERVING TRAY AND METHOD OF
MAKING SAME

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This invention relates to serving trays and a method of making serving trays and more particularly to the design of and manufacture of a simplified ornamental serving tray adapted particularly to domestic use but also usable for commercial purposes.

Since serving trays are largely used for the serving of food and particularly in the entertaining of guests or the serving of patrons in a restaurant, it is a requisite of these trays that they be designed to have a neat and pleasing ornamental appearance. Appearance is so important in this type of article that where there is a conflict between appearance and good manufacturing design, it frequently occurs that the good manufacturing design is sacrificed in favor of the appearance.

It is, therefore, the ideal in designing articles such as trays to combine a design for simple and economical fabrication with a design having an attractive ornamental appearance. The trend of the present demand for articles of this type is toward simplified design incorporating a pleasing balance of curves and unencumbered lines. To this end, I have designed a tray having a small number of component parts each designed to fill an important structural function and at the same time to produce, as a combination, an attractive ornamental appearance. By reducing the number of component parts involved, the cost of the finished unit is substantially reduced. In addition, the unit lends itself to rapid, simple assembly. This rapid assembly reduces the final cost of the unit by eliminating much of the time and labor involved in assembling a complex structure which, in previous designs, often involved the necessity of making a number of subassemblies.

My invention goes further than the mere reduction of the number of parts involved. It eliminates one of the most unsatisfactory aspects of conventional tray design by eliminating the necessity for any type of fasteners such as screws, bolts, rivets or the use of cements, glues or other bonding agents. By eliminating these bonding agents and fasteners, the life of the article is greatly extended. The article is more durable because there are no fasteners to work loose or be damaged and there are no bonding agents to become detached or be deteriorated by solvents such as the chemicals incident to food or cleaning compounds. At the same time, the over-all strength of the unit is materially increased since the parts, once assembled, are neither subject to slowly working loose nor becoming slowly sepa-

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rated in any other manner. The strength of the joint formed in my assembly is many times that available with conventional fasteners.

It is, therefore, a primary object of my invention to provide a serving tray having a minimum number of component parts, each of a simple design and subject to rapid and easy assembly.

It is a further object of my invention to provide a serving tray having a neat and pleasing appearance.

A further object of my invention is to provide a strong and durable serving tray which will withstand long and continued usage without becoming disassembled.

These and other advantages of my invention will be immediately seen by those acquainted with the design and manufacture of serving trays upon reading the following specification and the accompanying drawings.

Figure 1 is a plan view of my serving tray.

Figure 2 is an exploded, plan view of my serving tray.

Figure 3 is an enlarged, fragmentary, sectional view of my serving tray taken along the plane III—III of Figure 1 showing the handle in assembled condition.

Figure 4 is an enlarged, fragmentary, sectional view of my serving tray taken along the same plane as Figure 3 showing the handle in position for assembly but prior to attachment to the tray.

Figure 5 is a partially exploded, plan view of a modified form of my serving tray.

Figure 6 is an enlarged, sectional view of the rim for my serving tray taken along the plane VI—VI of Figure 2.

In executing the objects and purposes of my invention I have provided a serving tray consisting of a base or platform surrounded by a split rim locked into place by a pair of handles. The handles form the one and only lock for securing and holding the entire assembly in place.

Referring to the drawings in greater detail, the numeral 2 indicates a body member or platform of substantial thickness and made of any suitable material. The platform 2 may be made of wood, glass, laminated paper, any of the various materials having a urea or phenol basis, or of any suitable metal. The shape of the platform 2 may be circular or noncircular. For the sake of brevity, only the rectangular shape is illustrated. However, the illustration of this particular shape is not to be taken as limiting.

The corners 3 of the noncircular tray, such as the rectangular tray illustrated, are rounded to facilitate the fabrication and assembly of the rim

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1. The rim 1 includes the rim segments 4 and 4a each consisting of an elongated member having a U-shaped cross section. The recess in each of the rim segments 4 and 4a is of such width that when the segments of the rim are mounted on the platform 2, the platform 2 will seat closely within the recess or inner channel 5 of the rim. The rim segments 4 and 4a are identical, each of them having a length equal to one half the perimeter of the platform 2. When the rim segments 4 and 4a are assembled on the platform 2, they are designed each to receive snugly the platform 2 within the channel 5 and to have their ends 6 and 6a, respectively, closely abutting each other about the longitudinal centerline of the platform 2.

The handles 7 each consist of a body member 8 functioning as a hand grip at the upper end and as a leg at the lower end. The hand grip 9 of each of the handles 7 is curved through a substantial arc whereby a large, positive and convenient grip is provided. The leg 10 of the body portion serves as a support for the handle and ultimately for the assembled tray. The handle is equipped with a projecting clamp consisting of an upper jaw 20 and a lower jaw 21. Both the upper jaw 20 and lower jaw 21 are formed integral with the body portion 8 and are spaced apart at their point of junction with the body portion 8 a distance equal to the height of the rim 1. The upper jaw 20 is substantially perpendicular to the body portion 8. The lower jaw 21 before assembly diverges from the upper jaw 20. This permits the rim 1 to be received into the pocket 24 formed between the jaws. A relief 25 is provided at the point of juncture between the lower jaw 21 and the body portion 8. At the free end of the upper jaw 20 and of the lower jaw 21, each of the jaws is provided with a lip 22 and 22a, respectively. The lips 22 and 22a are directed toward each other and have a depth equal to the wall thickness of the rim 1. The lip 22a is equipped with serrations 23 for purposes which will appear more fully hereinafter.

In the modified design of my tray, illustrated in Figure 5, all of the parts employed in the assembly of this tray are identical to the parts used in the tray illustrated in Figure 2, except that the rim 50 instead of consisting of two segments is a single part split at one of its ends whereby it may be spread apart to receive the platform 2.

The rims 1 and 50 may each be made of any suitable material having sufficient resistance to wear and abrasion to withstand normal usage at the edge of a tray and having the desired ornamental appearance necessary to balance the design of the tray. The handles 7 may be formed of any suitable material which is both strong and capable of being deformed when the handle is assembled to the tray. It is necessary that the jaws 20 and 21 of the handle 7 be capable of deformation yet have sufficient strength that, once squeezed into their clamping position, they will not again separate without the application of substantial force. I have found that aluminum makes a particularly desirable material for this handle, although other materials may be used.

Assembly

The method of assembling my tray consists of mounting the two rim segments 4 and 4a on the platform 2 by merely slipping them over the sides of the platform 2 and pushing them toward each

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other until the edges of the platform 2 are securely seated within the channels 5 of the rim segments. When this has been done, the handles 7, with their jaws 20 and 21 separated as illustrated in Figure 4, are seated over the rim at each end of the tray. The handles are centered between the sides of the tray and, as so located, the clamping jaws 20 and 21 seat over the ends of the rim segments 4 and 4a. The upper jaw 20 is seated against the rim 1 and acts as a locating stop. When the handles 7 have each been inserted until the rim 1 has been fully received into the pocket 24, the clamping jaws 20 and 21 are squeezed together by any suitable means, such as a clamp or press, until the clamping jaws 20 and 21 tightly engage the rim 1 and securely seize it between them. In this squeezing operation the upper jaw 20 remains stationary or substantially so. The lower jaw 21 is bent upwardly to engage the rim and platform. The relief 25 weakens the joint between the lower jaw 21 and the body member 8 whereby the lower jaw 21 will move before the upper jaw 20. At the same time the lips 22 and 22a of the clamping jaws surround the rim and bear against the upper and lower faces of the platform 2, respectively. The serrations 23 engage the lower face of the platform 2 to securely anchor the handles 7 from being withdrawn lengthwise of the tray. The serrations 23 may be eliminated since the tight engagement between the rim 1 and the platform 2 caused by the clamping or squeezing action caused by the clamping jaws 20 and 21 is normally sufficient to prevent any endwise displacement of the handles.

The handles 7, once installed, are permanently mounted on the tray. The handles, when mounted, cover the joints between the rim segments 4 and 4a and secure the rim segments 4 and 4a against displacement. Thus, all of the component parts of the tray are by this single, simple operation rigidly secured together into a permanent assembly. No additional fastening means or bonding agent is necessary. Further, since the clamping jaws 20 and 21 are each of substantial thickness and the moment arm created by the length of the leg 10 or the length of the handle 9 is comparatively short compared to the strength developed by the jaws 20 and 21, the handle is not subject to being loosened by ordinary use or even by limited abuse. Since the jaws depend upon the permanent deformation of the metal and have a large area of common engagement with both the platform and the rim, a much tighter and more permanent anchorage is secured than is possible with rivets, bolts, screws or other conventional fastening means.

The tray as so assembled consists of only five simple parts. Of these five simple parts the rim segments 4 and 4a are interchangeable and the handles 7 are each identical and interchangeable. Therefore, the entire tray consists of only three different and distinct parts. The assembly of the tray consists of only three distinct operations. These are: the assembly of the rim segments 4 and 4a to the platform 2; the placing of each of the handles 7 over the ends of the rim and platform assembly; and the closing of the jaws of the handles 7 to lock together the assembly.

The assembly of the modified form of my tray illustrated in Figure 5 is different only to the extent that the platform 2 is placed within the rim 50 which, at its open end, is then squeezed together. This mounts it about the periphery of

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the platform. The handles 7 are then assembled to the rim-platform assembly and secured into place in a manner identical with the mounting of the handles 7 on the rim-platform combination shown in Figure 2. In the case of the modified form of my tray, the handle 7, at the split end of the rim 50, serves to complete the assembly and anchor it into place. The handle 7 at the other end of the tray serves only as additional anchorage for the rim.

It is obvious from this description that more handles may be added to any of these trays without departing from the principle of my invention. Additional handles may be mounted on each of the long sides of the tray illustrated in Figure 1, if such is desired for ornamental reasons. Where a triangular tray is involved, the rim may be made of one, two or three pieces depending upon the most desirable fabrication arrangement and may be held in place by handles placed on each of the three sides. Where a circular tray is desired, the rim may be made of a one-piece ring split to permit assembly with the base or platform or the ring may be made up of a plurality of arcuate segments and held together by handles identical to the handles 7 except that they will be concavely curved to fit the arc of the perimeter of the tray. In each case, the rim is held in place by the gripping action of the handles which also serves to permanently and firmly secure the handles to the tray assembly.

These and other modifications of my tray may be made without departing from the principle of my invention. Each of these modifications is to be considered as included in the hereinafter appended claims unless these claims by their language expressly state otherwise.

In the following claims the term "split rim" means both a rim having a single cut through it to permit opening and a rim made up of two or more unattached segments.

I claim:

1. As an article of manufacture, a tray, the combination comprising: a base member; a rim open at one point, said rim having walls defining an internal channel receiving said base member; said rim mounted on and surrounding said base member and engaging the periphery thereof; a handle having a pair of spaced jaws defining a pocket therebetween; a portion of said rim on each side of said opening therein received into said pocket and tightly engaged by said jaws; each of said jaws extending over said rim and tightly engaging said base member inwardly of said rim.

2. As an article of manufacture, a tray, the combination comprising: a platform; a two-piece rim, each of said pieces having walls defining an internal channel for receiving said platform; each piece of said rim mounted on said platform closely about and engaging the periphery thereof; a pair of handles each having a pair of spaced jaws defining a groove therebetween; one end of each piece of said rim received in the groove between and tightly engaged by the jaws of each of said handles; the jaws of each of said handles

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extending inwardly of said tray beyond said rim and tightly engaging said platform.

3. The method of assembling an article of manufacture and attaching a handle thereto, the steps which include: loosely assembling a body member and a rim, providing a handle having a leg and a pair of spaced jaws, seating said jaws over said rim, simultaneously pressing said jaws against said rim and deforming the portion of said rim engaged by said jaws into tight engagement with said body member.

4. As an article of manufacture, a tray, the combination comprising: a platform; a split rim; said rim having walls defining an internal channel for receiving said platform, said channel having a width equal to the thickness of said platform; said rim mounted on said platform closely about and engaging the periphery thereof; a pair of handles each having a body portion including a grip along one edge and a leg along the other edge and a pair of spaced jaws intermediate said grip and said leg; each of said jaws having a lip on its end remote from said body portion of said handle and spaced from said body portion a distance equal to the width of said rim; said jaws defining a pocket therebetween; said rim received into said pocket with the split in said rim intermediate the ends of one of said handles; said rim tightly engaged by said jaws, and said platform engaged by said lips adjacent said rim.

5. As an article of manufacture, a platform, the combination comprising: a body member; a split rim having walls defining an internal channel for receiving said body member; said rim mounted on said body member closely about and engaging the periphery thereof with the ends of said rim seated closely adjacent each other; a handle including a clamp, said clamp seated over the ends of said rim for engaging said rim; said clamp engaging said body member inwardly of said rim toward the center of said platform.

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