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LETTER TRAYS

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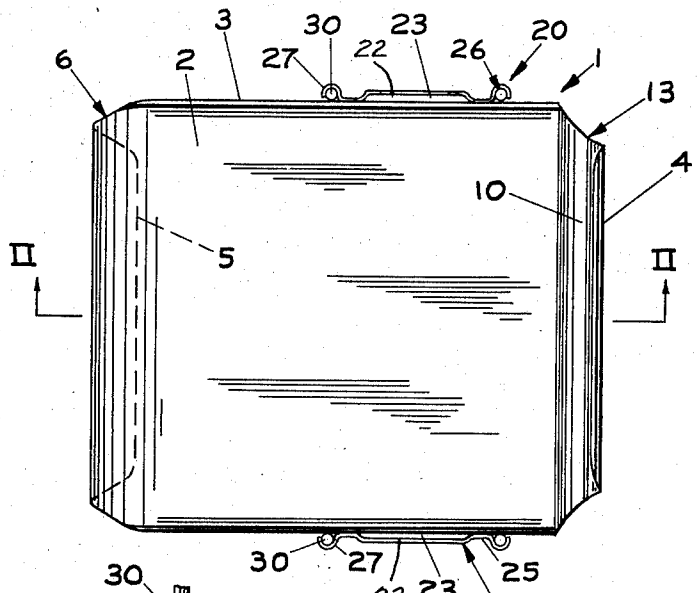



FIG. 1

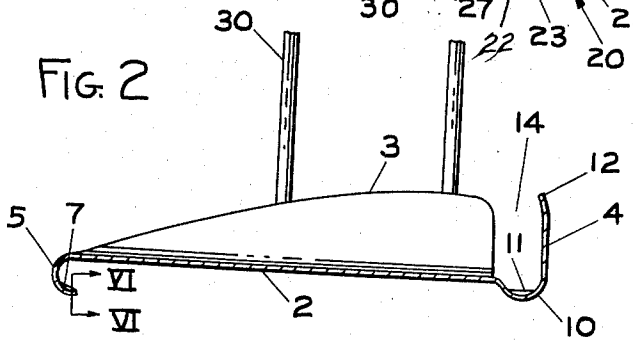



FIG. 2

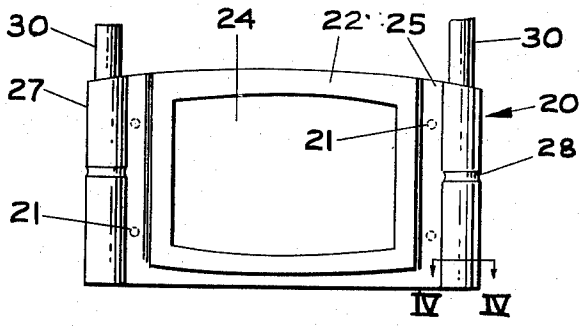
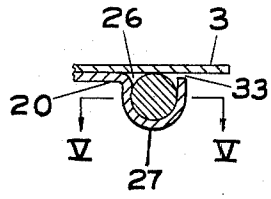



FIG. 3




FIG. 6

FIG. 4



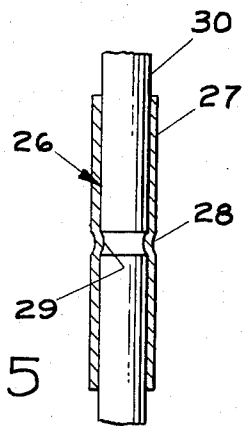




FIG. 5

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# LETTER TRAYS

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1 Claim. (Cl. 211—126)

This invention relates to letter trays and more particularly to a letter tray for desk use so designed that the tray body is entirely formed from a single sheet of material and the trays, if desired, may be readily stacked one upon another with convenient spacing between them.

Letters trays are a commonly used article and the field being highly competitive, much attention has been devoted to their design and fabrication. However, our invention provides certain very important improvements both in the manufacture and in the utility of letter trays never before accomplished by any design.

Because letter trays are exposed and must be included as part of the ornamental furnishings of modern offices, it is important that their appearance be neat and attractive. Our invention provides a neat, compact tray designed to blend with the appearance of modern office furniture.

At the same time, our design provides a tray which is inexpensive to manufacture. The entire tray may be built with only one assembly operation, that being the assembly of the side plates to the tray. These side plates are so designed that they perform a dual function. They provide a pocket holder for the identification tag and the means for assembling the trays when one or more trays are utilized in a vertically tiered arrangement. This reduction in the number of parts necessary to provide a completely equipped tray is, of itself, an important improvement in these trays.

Our invention provides a tray which is flexible in use since it may be used either as a single tray or as one of a number of trays in stacked relationship. The design permits the assembly or disassembly of the trays to be executed quickly and easily.

Despite the economy effected in the manufacture of the tray and the ease with which the trays themselves may be assembled and disassembled one from the other, a group of trays assembled according to this invention are sturdy and will sustain heavy weights, well in excess of that possible with trays of conventional design.

Our invention effects another important improvement in the design of trays of this type. The tray's design eliminates the possibility of marring the surface of the furniture on which it rests, even though no rubber, felt or other padding is employed. This is a marked improvement because the conventional felt or rubber pads frequently become detached resulting in serious scratching of the furniture surface when the tray is accidentally dragged across the furniture.

These and other objects and purposes of our invention will be readily seen by those acquainted with the design and construction of office equipment upon reading the following specification and the accompanying drawings.

In the drawings:

Fig. 1 is a plan view of a tray constructed according to our invention.

Fig. 2 is a sectional elevation view taken along the plane II—II of Fig. 1.



Fig. 3 is an enlarged side elevation view of the identification holder plate for our tray.

Fig. 4 is a fragmentary, sectional view taken along the plane IV—IV of Fig. 3.

Fig. 5 is a fragmentary, sectional view taken along the plane V—V of Fig. 4 in which the mounting rods are not shown in sections.

Fig. 6 is a fragmentary, sectional view taken along the plane VI—VI of Fig. 2.

In executing the objects and purposes of our invention, we have provided a tray formed from a single sheet of material, the front end of which is rolled downwardly to form a front leg and the back of which is provided with a concave trough to form the rear leg of the tray.

The lateral edges of the sheet are turned upwardly to provide sides and the rear of the sheet is turned upwardly to provide a back. Plates are mounted on each of the sides of the tray. These plates provide a central pocket for holding an identification card and the edges of the plate are rolled to form vertical sockets. These sockets slidably receive detachable rods by which one tray may be supported upon another. Two or more trays may be so stacked one upon another, the only means necessary for so assembling the trays being the rods extending from one tray to the next.

Referring specifically to the drawings, the numeral **1** indicates a tray having a bottom **2**, sides **3** and a back **4**. The sides **3** and the back **4** are integral with the bottom **2**. The entire body of the tray is formed from a single sheet of material.

The front end of the bottom **2** is rolled downwardly under the bottom through an arc of more than 180° to provide a somewhat tubular front leg **5**. The forward end of the bottom **2** is chamfered at **6** whereby the front leg **5** is somewhat narrower than the tray. At each of its ends, the bottom of the leg **5** is bent slightly upwardly at **7** (Figs. 2 and 6). This upward dishing at **7** eliminates all possible contact between the edges of the thin material used to form the tray and the surface on which the tray rests. Thus, if the tray is caused to slide on a finished surface, these edges cannot cause injury by scratching or gouging.

At the tray's rearward end, a concave trough **10** is provided between the back **4** and the main portion of the bottom **2**. This concave trough **10** serves as the rearward leg of the tray. The depth of the trough **10** is substantially less than the diameter of the front leg **5**, thus inclining the bottom **2** rearwardly. This inclination induces papers stacked in the tray to slide toward the back where they will be firmly supported by the back panel **4** rather than sliding out the open front of the tray where they will become scattered. The trough **10** forming the rearward leg extends substantially the full width of the tray and at each of its ends the bottom of the trough is bent or dished slightly upwardly at **11** (Fig. 2) in exactly the same manner as the front leg **5** is dished upwardly at **7**. This upward dishing **11** serves the same purpose as the upward dishing at **7**. The top edge of the back panel **4** is bent slightly inwardly. This tends to give the back panel a certain amount of rigidity and makes it easier to grip the tray if it is desired to lift it by means of the back panel. It also serves to give the tray a somewhat neater and more desirable appearance.

The rearward end of each of the side panels **3** is substantially spaced from the ends of the back panel **4**. At the same time, the bottom **2** is provided with a notch **13** somewhat of the shape of a 45° chamfer between the rearward end of each of the side panels **3** and the ends of the back panel **4**. This spacing of the sides from the back panel together with the notch **13** provides a wide access opening **14** on each side of the tray at

the rear thereof. The access openings **14** permit the contents of the tray to be grasped from the rear when it is desired to lift them out. These trays are frequently used with the front facing in upon the desk and the rear facing outwardly. It is often desirable that office personnel remove the tray's contents from the back rather than the front. The openings **14** permit this to be easily accomplished since the contents of the tray may be grasped from the rear and easily lifted up over the back panel **4** where they can be withdrawn without the necessity of approaching the tray from the front. The openings **14** also permit papers to lie evenly within the tray even though they are not perfectly stacked one upon another without the corners of the papers becoming damaged by being bent against a closed corner structure.

Plates **20** are mounted to each of the sides **3** of the tray. The plates **20** are aligned crosswise of the tray and may be secured to the sides **3** by any suitable means, preferably by spot welding **21**. Each of the plates **20** is formed from a single piece of material and has a raised panel **22** at the center. The raised panel **22** extends to the top of the plate **20** but not to the bottom. The raised portion **22** creates a pocket **23** between the plate and the adjacent side **3** of the tray when the plate is secured to the tray. The width of the pocket **23** is such that an identification card may be slipped into the pocket **23** through the open top of the pocket. The whole central part of the raised portion **22** is cut out to form a central aperture **24** through which the identification material on the card may be read. On each side of the raised portion **22** a narrow, vertical strip **25** of the plate bears firmly against the sides **3** of the tray to provide a suitable location for the spot welds **21**.

The forward and rearward ends of the plate **20** are arched outwardly in a loop to provide a vertical socket **26** on each end of the plate **20** (Figs. 1, 4 and 5). The arched end portions **27** of the plate, while firmly secured along one edge by the spot welds **21**, are free and unattached from the sides **3** along the other edge as indicated by the gap **33** (Fig. 4). By leaving one side of the arched end portion **27** free, these end portions may be moved slightly toward and away from the sides **3**. The importance of this will be explained in detail hereinafter.

Substantially midway between the top and the bottom of the plate, the arched end portion **27** is crimped inwardly at **28** along a horizontal line, creating an inwardly extending ridge or projection **29**. The ridges **29** divide the sockets into upper and lower portions and serve as stops for the hereinafter described rods **30**. The rods **30** constitute the means for attaching one tray to another, the ends of the rods being snugly slidable into the sockets **26**. Each rod may extend only into one portion of the socket since the ridge **29** limits further penetration.

When it is desired to use two or more of the trays **1** in a vertically tiered arrangement, the end of one of the rods **30** is pressed into the upper portion of each of the sockets **26** on the lower one of the trays. The rods **30** are pressed inwardly until further movement is limited by the ridges **29**. The upper tray is then mounted on the rods by introducing the upper ends of the rods into the lower portion of each of the sockets **26** on the upper tray. The sockets will move downwardly over the ends of the rods **30** until further travel is again limited by the ridge **29**. Thus, the ridges **29** provide positive stops which assure the upper tray being supported level with and at a predetermined distance above the lower tray. If a third tray is to be added, additional rods are provided and the same procedure is repeated.

The sockets **26** are designed to be slightly smaller in cross sectional area than the rods **30**. Thus, the rods must be pressed into the sockets, forcing the arched portions **27** of the plates slightly away from the sides **3**. As a result, the ends of the rods are firmly clamped between the plates **20** and the sides **3** of the tray. This clamping effect is sufficient to prevent the trays from separating even though an assembled tier of trays is lifted by grasping the top one of the trays. At the same time, the clamping action is not so great that the rods **30** may not be readily removed if they are firmly grasped and pulled from the sockets. By placing the supporting rods **30** along the sides of the tray, the entire back and back corners of the tray remain free to facilitate the removal of the contents of the trays through the rear as well as through the front.

These trays are designed to be fabricated from relatively thin sheet material such as steel and, if necessary, provided with any suitable protective finish such as lacquer or a baked-on enamel. The rolled front leg **5** of the tray serves an important purpose when the tray is used as the upper one of a tier rather than as the bottom one. In this position, the rolled front prevents injury to personnel should they strike the front of the tray.

The plates **20** are normally mounted parallel to the bottom **2** of the tray, thus, the rods **30** will be inclined at the same angle as the bottom **2** and each tray will be thus inclined so that the papers placed therein will have a tendency to move toward the back and not become accidentally discharged through the open front of the trays.

While we have described a preferred embodiment of our tray, it will be recognized that various modifications of our invention may be made without departing from the principles thereof. Each of these modifications is to be considered as included in the hereinafter appended claims, unless these claims, by their language, expressly state otherwise.

We claim:

A tray having a bottom, vertical sides and means fixedly mounted upon a vertical side of said tray, said means comprising: a body member; the vertical sides of said body member and said vertical side of said tray defining a pair of elongated vertical sockets each open at its top and bottom; a horizontal ridge projecting into each of said sockets intermediate the top and bottom thereof; one side wall of each of said sockets being free and movable with respect to said vertical side of said tray member.

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