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ONE-PIECE SHEET METAL TRAY CONSTRUCTION

Charles O. Larson, Sterling, Ill., assignor to Chas. O. Larson Company, Sterling, Ill., a corporation of Illinois

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This invention relates to a new and improved one-piece sheet metal tray construction, especially designed and adapted for use in shops and other places, in which to keep small tools and the like, but suitable for various other uses.

The principal object is to provide a tray construction of the kind mentioned that is simple and economical to manufacture and adapted to be fastened to a wall easily using only one screw or nail at each end, the construction being such that the tray will nevertheless be quite rigid and sturdy.

A salient feature of the present tray construction is the provision of integral end walls that are structurally an arc at the front lower corner to conform to the curvature of the bottom of the trough-shaped body portion for neatness in appearance, these end walls having the rear portions cut off for locating and supporting engagement with the wall on which the tray is mounted.

Another important feature is the provision of interlocked flanges on the rear portion of the end walls arranged to be overlapped by the top rear corners of the trough-shaped body portion of the tray and secured in such relationship by the nails or screws that are entered through registering holes provided in these abutting portions, the nails or screws, one at each end of the tray, serving to fasten the tray to the wall for support.

The invention is illustrated in the accompanying drawings, in which—

Figs. 1 to 3 are perspective views of trays made in accordance with my invention, shown as being made in graduated sizes to accommodate different sizes of small tools;

Fig. 4 is an end view of one of these trays;

Fig. 5 is a top view of the same tray; and

Fig. 6 shows the flat sheet metal blank from which the tray of Figs. 4 and 5 is formed.

The same reference numerals are applied to corresponding parts throughout these views.

Referring first to Figs. 4 to 6, the sheet metal blank 10 shown in Fig. 6 comprises a rectangular main middle portion 11 on the opposite ends of which are integral extensions 12 and 13 that are also generally rectangular in form except for the arcuate edges 14 on the inner ends of these extensions next to the narrow connecting webs 15. This blank is punched from the flat sheet and requires only the bending of the rectangular main middle portion 11 into a trough shape, as indicated at 16 in Fig. 4, and the bending of the extensions 12 and 13 at the webs 15 into parallelism to provide end walls 17 and 18 for the tray, the arcuate edges 14 conforming nicely to the curvature of the bottom of the trough 16 through approximately 90°, as clearly illustrated in Fig. 4. While I prefer, for the sake of economy, to leave the ends 17 and 18 free, they could easily be soldered or welded to the trough 16 along the edges 14. The end walls 17 and 18 are shown as held in abutment with the ends of the trough-shaped body 16 by means of the end portions 19 and 20 of the extensions 12 and 13, the portions 19 and 20 being bent at right angles toward one another on the lines a--b and c--d to provide the flanges 21 and 22 which serve to provide locating and supporting engagement with the wall indicated at W in Fig. 4. These flanges 21 and 22 are overlapped by the top rear corner portions 23 and 24 of the trough-shaped body 16 and there are registering holes in these abutting portions, as indicated at 25 and 26, through which nails or screws can be entered to hold the end walls 17 and 18 of the tray in assembled abutting relation to the ends of the trough-shaped body 16 and at the same time fasten the tray to the wall W for support. In the present case screws 27 are illustrated for this purpose.

It is clear from the above description that I have provided a one-piece sheet metal tray construction that is simple and economical to manufacture and will find many uses in shops and other places for the handy storage of small tools and other articles. For example, the smallest size tray A illustrated in Fig. 1 is adapted to receive a full set of sockets 28 of graduated sizes for a socket wrench set, enabling the keeping of these sockets in an orderly fashion for the quicker selection of the particular size needed. The next larger size tray B, illustrated in Fig. 2, is large enough to accommodate the wrench 29, and the next larger tray C, illustrated in Fig. 3, will accommodate other tools 30. The tray B corresponds to that illustrated in Figs. 4 and 5 but in each instance the same construction is employed and hence the same reference numerals are applied to designate the trough-shaped body 16, opposed end walls 17 and 18, interlocked flanges 21 and 22, and so on.

It is believed the foregoing description conveys a good understanding of the objects and advantages of my invention. The appended claims have been drawn to cover all legitimate modifications and adaptations.

1. In combination, a receptacle of the general class described made from a single piece of sheet material consisting of a rectangular main middle portion and smaller generally rectangular integral end extensions, the middle portion being bent transversely of its length to form an elongated trough-shaped body open at the ends and providing a back wall, bottom wall, and front wall, and the end extensions being integrally connected at one end to the front wall and bent substantially at right angles to the plane of the front wall to abut and close the open ends of the trough, the end extensions being larger in the dimension front to rear of the trough than the trough and the portion on each end extension extending rearwardly beyond the back wall of the trough and being bent at right angles to the plane of said end extension to form an attaching and supporting flange of appreciable width adapted for abutment with and fastening to a wall to which the trough is to be secured for support, and a single fastener extending through the upper end portion of each of said flanges to secure the same to a wall for support of the receptacle thereon and so as to maintain the front and back walls of the trough-shaped body in a fixed spaced relationship.

2. In combination, a receptacle of the general class described made from a single piece of sheet material consisting of a rectangular main middle smaller generally rectangular integral end extensions, the middle portion being bent transversely of its length to form an elongated trough-shaped body open at the ends and providing a back wall, bottom wall, and front wall, and the end extensions being integrally connected at one end to the front wall and bent substantially at right angles to the plane of the front wall to abut and close the open ends of the trough, the end extensions being larger in the dimension front to rear of the trough than the trough and the portion on each end extension extending beyond the rear of the trough and being bent inwardly...
behind the trough in abutment with the back wall there-of at right angles to the plane of said end extension to form an attaching and supporting flange of appreciable width having overlapping abutment with the back wall of the trough and adapted for fastening to a wall with said back wall, and a single fastener extending through the overlapping portion of each of said flanges to secure the same to a wall for support of the receptacle thereon while maintaining abutment of the back wall with the flanges and accordingly holding the front and back walls of the trough-shaped body in a fixed spaced relationship.

5. A receptacle of the general class described made from a single piece of sheet material consisting of a rectangular main middle portion and smaller generally rectangular integral end extensions, the middle portion being bent transversely of its length to form an elongated trough-shaped body open at the ends, and the end extensions being bent substantially at right angles to the plane of the sheet material to abut and close the open ends of the trough, said middle portion being bent substantially in a semi-circle, and the end extensions each having the corner next to the middle portion cut away on an arc of approximately the same radius through nearly 90° leaving only a narrow connecting web between these portions of the piece, the arcuate corner on each extension registering with the arc of the trough when the extensions are in abutment with ends of the trough, the end extensions being larger in the dimension front to rear of the trough than the trough and the portion on each end extension being bent inwardly behind the trough being bent in the dimension front to rear of the trough being bent inwardly behind the trough in abutment with the back wall thereof at right angles to the plane of said end extension to form an attaching and supporting flange of appreciable width having overlapping abutment with the back wall of the trough and adapted for fastening to a wall with said back wall, and a single fastener extending through the overlapping portion of each of said flanges to secure the same to a wall for support of the receptacle thereon while maintaining abutment of the back wall with the flanges and accordingly holding the front and back walls of the trough-shaped body in a fixed spaced relationship.

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