

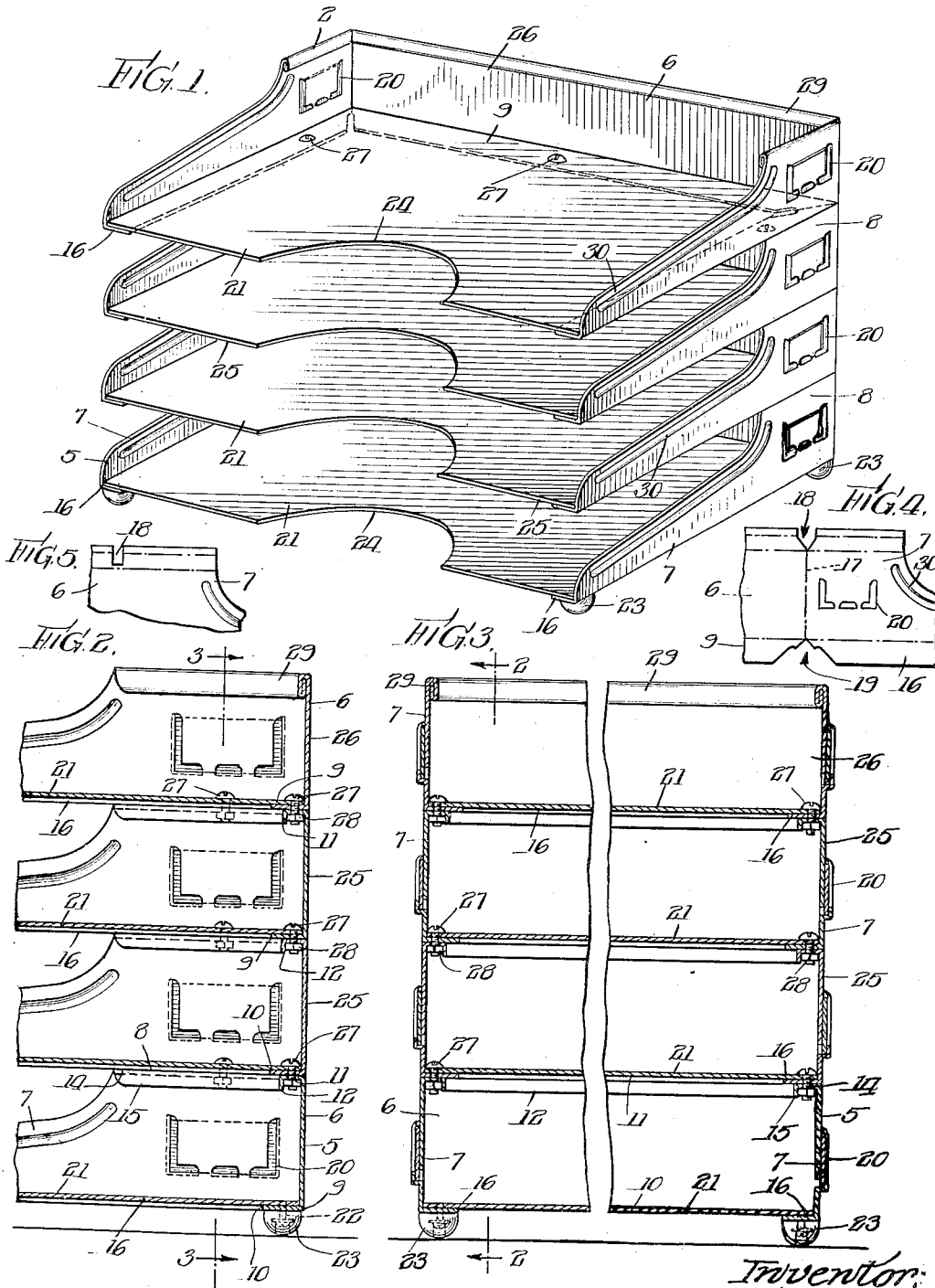
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DESK TRAY

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# UNITED STATES PATENT OFFICE

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## DESK TRAY

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This invention relates to desk trays in general and particularly desk trays which are made of sheet metal. More specifically, the invention relates to a sheet metal desk tray which can be arranged in tiers.

The primary object of the invention is to provide an improved all metal desk tray which may be built up in tiers and operatively connected together.

Another object is to provide a desk tray which has the back and two sides stamped from a single piece of sheet metal and which is provided with inturned flanges for securing a bottom to the sides and back and for securing other trays thereto.

A further object is to provide an improved desk tray which holds articles filed therein, which permits easy access to the articles contained therein, and which permits easy removal of the articles.

A still further object is to provide a novel construction of trays which have solid or closed backs, which have partly open sides, and which have open fronts.

Numerous other objects and advantages will be apparent throughout the progress of the following specification.

The invention comprises in general a desk tray which is stamped from a single piece of sheet metal and which is built up in tiers. Each tray is provided with an inturned flange at its bottom whereby a bottom may be readily fastened thereto. All the trays except the uppermost tray are provided with inturned flanges at the tops whereby the lower flanges on an upper tray may be fastened to the upper flanges on a lower tray. The uppermost tray, instead of being provided with an inturned flange, is provided with a double fold to present a neat smooth edge. The bottom tray may be provided with rubber feet which are connected to the flanges provided on its lower edge. All of the trays may have parts struck-out therefrom to act as holders for receiving cards to designate the contents of each tray.

The accompanying drawing illustrates a selected embodiment of the invention and the views therein are as follows:

Fig. 1 is a detail perspective view of the

improved trays arranged in stacked relation one above the other.

Fig. 2 is a detail sectional view on the line 2—2 of Fig. 3.

Fig. 3 is a detail sectional view on the line 3—3 of Fig. 2.

Fig. 4 is a detail plan view showing the manner in which all but the uppermost trays are punched or stamped from sheet metal blanks.

Fig. 5 is a detail view showing the manner in which the uppermost tray is cut and notched from a sheet metal blank.

Referring to the drawing, 5 designates a lower tray having a solid or closed back 6 and a pair of partly open sides 7 which are formed integral with the back. The part 8 of the sides, Fig. 1, is straight and is substantially the same height as the back 6. The back is bent-over at its bottom as indicated at 9, Fig. 2, to provide an inwardly extending flange 10. The top of the back is bent inwardly to provide the inturned flange 11 from which a downwardly turned lip 12 is formed.

The sides 7 are also provided with inturned flanges 14 and downturned lips 15 which are similar in all respects to the flanges 11 and 12 respectively, formed on the back. The sides are also provided with lower side flanges 16 which are similar in all respects to the inturned flange 9 formed on the back.

The sides and back are preferably formed in one piece and stamped or punched from a sheet metal blank to the proper configuration as shown in Fig. 4. The sides are folded along the line 17, Fig. 4, and bent at right angles from the back 6. A notch 18 is cut into the upper end of the blank, Figs. 4 and 5, to permit the metal to be freely bent at this point, while the bottom edge is provided with a notch 19 which is cut in the particular configuration shown to provide for the turned flanges 16 on the sides and the turned flange 9 on the back.

The notch 18 shown in Fig. 4 is applicable to all trays except the uppermost one which is notched as shown in Fig. 5. All the trays are provided with the lower notch 19 as shown in Fig. 4. These notches permit the sides to

be bent from the back and also permit the flange and rolled construction to be made at the tops and bottoms of the sides and back.

Parts may be struck-out from the sides as clearly shown in Figs. 1, 2, and 4, to provide a holder 20 into which a card may be inserted to designate the contents of the tray.

A tray bottom 21 is inserted in position and rests upon the flanges 16 on the sides and the flange 9 on the back. The bottom of the lowermost tray is fastened to the flanges 16 and 9 by means of the fastening members 22 engaging the rubber feet 23. The front of each each bottom 21 may be cut away at 24, Fig. 1, to permit easy access to the papers or articles placed in the tray.

Intermediate trays 25 and a top tray 26 may be provided to build up a tier of trays as clearly shown in the various figures. The intermediate trays 25 are made in substantially the same way as the lower tray 5 except the rubber feet 23 are omitted. To fasten an intermediate tray to the bottom tray, or an intermediate tray to another intermediate tray, screws 27 are provided which pass through alined holes in the bottom 21, the inturned flanges 9 and 16 on the back and sides respectively, and the inturned flanges 11 and 14 at the top of the back and sides respectively. Nuts 28 for the bolts 27 hold the various parts together and are arranged behind the downturned lips 12 and 15 on the back and sides respectively. The papers or other articles thus filed or stored in the trays do not come in contact with the fastening means.

The top tray 26 is also provided with the lower flanges 9 and 16, but the upper flanges and lips 11 and 12 on the back and 14 and 15 on the sides, are eliminated. Instead of providing these flanges or lips, the upper edge of the top tray 26 is provided with a double fold 29 to provide a neat smooth marginal edge and to eliminate all sharp corners and edges. If only one tray is required on the desk, it is preferred that an upper tray 29 be used and the feet 23 be employed for holding the bottom in place and providing a rest for this tray. If a stack of two trays is required, a bottom tray 5 is used, and a top tray 26 is fastened to the lower tray 5 in the same manner in which the intermediate trays are fastened to the lower tray. If more than two trays are required, the intermediate trays 25 are arranged between the lowermost tray 5 and the uppermost tray 26. As many intermediate trays as may be required may be inserted in position. Each tray is made in the same manner and has exactly the same contour as any of the other trays except the top tray 26 is provided with the inturned fold instead of having the inturned flanges. All the trays are connected together in the same manner. The fastening of the trays consists in passing bolts 27 through the cooperating flanges of an upper and lower tray. The low-

er flanges on an upper tray rest upon the upper flanges of a lower tray with a bottom resting on top of the lower flanges of each of the trays. The fastening means thereby connect the two adjacent trays together and also fasten the bottom in position in its proper tray. The bottom of an upper tray rests upon the upper edge of the back and on the straight edges 8 of the sides. Instead of having the sides inclined downwardly as shown in Fig. 1, the sides may extend further forwardly, if desired, although the inclination of the sides is the preferred construction. The sides may also be indented to provide the beading 30 to render the sides more rigid as well as make them ornamental.

The invention provides a tray of simple construction whereby a plurality of trays may be connected together in stacked formation. The trays are neat in appearance, ornamental, and can be readily and economically manufactured. The bottom of any tray is interchangeable with that of another tray, and these bottoms may be cut out to permit easy access to the space provided between the trays. If desired, parts may be struck-out from the sides to provide a space for receiving a card to designate the contents of the tray.

Changes may be made in the form, construction, and arrangement of the various parts without departing from the spirit of the invention or sacrificing any of its advantages, and the right is hereby reserved to make all such changes as fairly fall within the scope of the following claims.

The invention is hereby claimed as follows:

1. In combination, a sheet metal tray having a back, sides bent forwardly from said back and made integral therewith, lower inturned integral flanges bent from said back and sides, a bottom supported by said flanges, flanges bent inwardly from the top of said back and sides, a second back arranged above said first back, sides integrally connected to said second back, lower inturned flanges on said second back and said last named sides and supported by the upper inturned flanges on said first named back and sides, a second bottom arranged on top of the lower flanges of said second back and sides, and fastening means passing through said second bottom, said flanges on said second back and sides, and the upper flanges on said first named back and sides.

2. In combination, a sheet metal tray having a back, sides bent forwardly from said back and integral therewith, lower inturned integral flanges bent from said back and sides, a bottom supported by said flanges, flanges bent inwardly from the top of said back and sides, a second back arranged above said first back, sides connected to said second back, lower inturned flanges on said second back and said last named sides and supported by the upper inturned flanges on said first

- named back and sides, a second bottom arranged on top of the lower flanges of said second back and sides, fastening means passing through said second bottom, said flanges on said second back and sides, and the upper flanges on said first named back and sides, downturned lips on said upper flanges, and nuts arranged inwardly of said lips and engaging said fastening means.
3. In combination, a sheet metal tray having a back, sides bent forwardly from said back and integral therewith, lower inturned integral flanges bent from said back and sides, a bottom supported by said flanges, flanges bent inwardly from the top of said back and sides, a second back arranged above said first back, sides connected to said second back, lower inturned flanges on said second back and said last named sides and supported by the upper inturned flanges on said first named back and sides, a second bottom arranged on top of the lower flanges of said second back and flanges on said second back and sides, and the upper flanges on said first named back and sides, downturned lips on said upper flanges, and nuts arranged inwardly of said lips and engaging said fastening means, upper flanges on said second named back and sides, and means for fastening another tray to said last named upper flanges.
4. In combination, a plurality of trays adapted to be arranged one above the other in tiers, each of said trays having a back and a pair of side members, lower inturned flanges extending inwardly from said back and sides, upper inturned flanges extending inwardly from said back and sides, the lower flanges of one tray adapted to rest upon the upper flanges of an adjacent tray, means for connecting said upper and lower flanges, and a bottom for each of said trays.
5. A three-sided open front letter tray comprising a back made of sheet metal, sheet metal sides bent forwardly from said back, each of said sides comprising an end portion of the same height as the back and a portion integral with the side portion and sloping downwardly toward the bottom of the side, integral inturned flanges bent from the lower edges of said back and sides, a bottom supported by said flanges, means removably fastening the bottom to said flanges, and flanges turned inwardly from the back and each end portion said bottom being provided with a cut-away at its forward end to permit easy access to an article carried by said tray.
6. A letter tray comprising a back made of sheet metal, sheet metal sides bent forwardly from said back, each of said sides comprising an end portion of the same height as the back and a portion integral with the side portion and sloping downwardly toward the bottom of the side, inturned lower flanges of the lower edges of said back and sides, a bottom fastened to said lower flanges, inturned upper flanges at the upper edges of said back and each end portion and a second tray of like construction arranged above the first tray, and means passing through the upper flanges of the first tray said bottom and lower flanges of the second tray for removably fastening the second tray to the first tray.
- In witness whereof, I have hereunto subscribed my name.
- JAMES E. BALES.

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