April 18, 1933. R. V. BURDICK 1,904,778

METHOD OF MAKING METAL BOXES

Filed Oct. 28, 1929

Fig. 1.

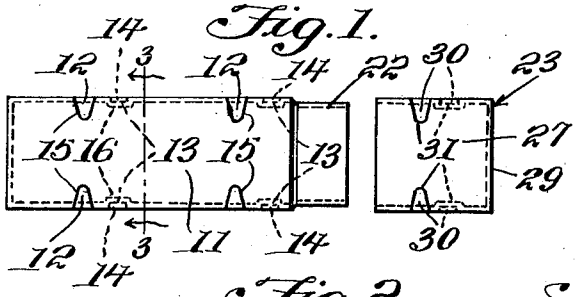


Fig. 3.

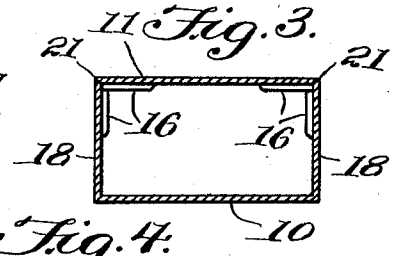


Fig. 2.

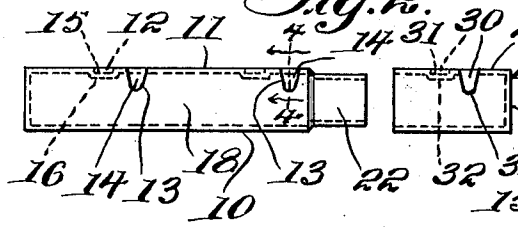


Fig. 4.

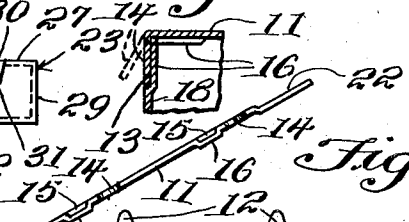


Fig. 6.

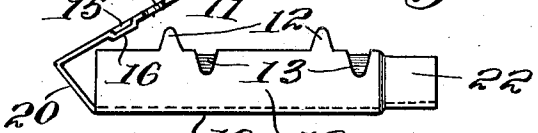


Fig. 5.

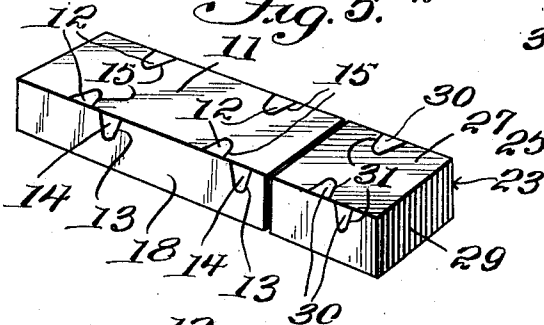


Fig. 8.

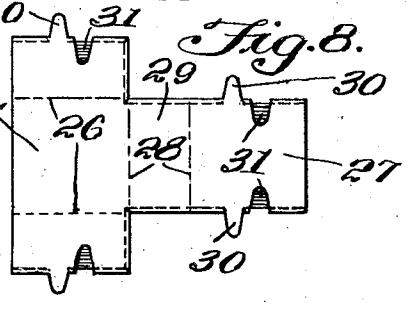
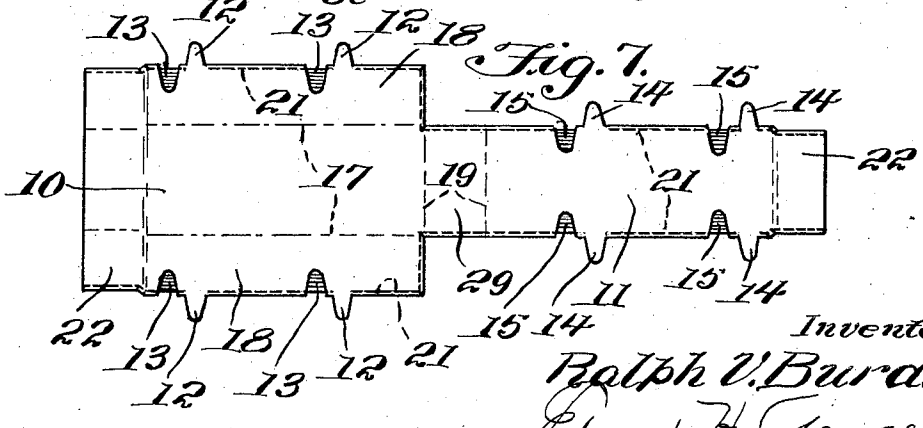


Fig. 7.



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Patented Apr. 18, 1933 1,904,778

UNITED STATES PATENT OFFICE

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METHOD OF MAKING METAL BOXES

Application filed October 28, 1929. Serial No. 403,035.

My invention provides a new and improved method of forming a sheet metal box from a single blank of material, with a view of producing a box possessing the desired strength and rigidity, and at the same time minimizing the cost of production.

Primarily the invention aims to provide a comparatively small box admirably adapted for the sale of leads used in the ordinary and well known forms of mechanical pencils, although it is desired to have it understood that the box can be manufactured in any size, for any and all purposes without departing from the spirit or scope of the invention.

These and other objects will appear from the following specification when read in connection with the accompanying drawing, and wherein:

Figure 1 is a plan view of the box with the cover removed.

Figure 2 is a view taken at a right angle to Figure 1.

Figure 3 is a sectional view on line 3—3 of Figure 1.

Figure 4 is a fragmentary sectional view on line 4—4 of Figure 2, showing by dotted lines one of the bendable ears before it is bent against the adjacent wall of the box.

Figure 5 is a perspective view of the finished product.

Figure 6 is a view showing one of the steps in the method of forming the box.

Figure 7 is a view of the blank from which the box is formed.

Figure 8 is a similar view of the blank from which the cover is formed.

The blank from which the box is formed is preferably of the construction illustrated in Figure 7, and includes a relatively wide portion 10 and a relatively narrow portion 11. The blank is stamped to provide each of said portions with bendable ears and correspondingly shaped depressions, the ears and depressions of the portion 10 being indicated at 12 and 13 respectively, while the corresponding features of the portion 11 are indicated at 14 and 15 respectively. It will be observed that the ears normally project from the opposed longitudinal edges of their respective portions, with the ears of each portion so disposed with relation to the depressions, that after the blank has been formed into a box, in a manner to be presently described, the ears of one portion are bent at right angles thereto, and into the adjacent depressions of the other portion, lying flush with outer surfaces of the adjacent walls of the box. However, by providing certain walls of the box with the depressions above mentioned, each wall so characterized is consequently formed with a rib or bead 16, the latter lying within the box, and located at points to afford the box in its entirety the desired strength and rigidity. Here it is desired to be stated that a box of any particular size can be provided with any number of ears and depressions, located at the most advantageous points for the purposes intended, and manifestly the number and location of such ears and depressions will vary, depending of course upon the size and contemplated use of the box so formed.

In the formation of the box, the portion 10 is bent along spaced parallel lines 17 to provide right-angularly disposed side walls 18, the central or intermediate portion 10 constituting of course one of the body walls of the box. The relatively narrow portion 11, which is equal in width to the central or intermediate portion 10 just referred to, constitutes the other opposed body wall of the box, and this portion 11 is bent along spaced transverse lines 19 to form the end wall 20. As clearly illustrated in Figure 6, after the portion 11 has been bent to provide the end wall 20, the portion 11 is then brought into engagement with the edges of the side walls 18. If desired the edges of the blank can be slightly beveled as at 21, so that incident to the formation of the box, the walls 11 and 20 will properly and effectively engage the adjacent edges of the side walls 11. The final operation in the completion of the body of the box, resides in bending the ears 12 carried by the side walls 11 over and into the depressions 15 of the wall 11, and reversely bending the ears 14 carried by the latter mentioned wall over the adjacent edges of the side walls and into the depressions 13 formed therein. In this manner, the walls of the box are effec-

tively clamped together, with the bendable ears lying flush with the outer surfaces of the box.

It will also be noted from an inspection of Figure 7 that the opposed ends of the blank are slightly reduced as at 22, thereby providing the box with a neck-like portion to slidably accommodate the cover 23, and also define a shoulder 24 to limit the movement of the cover upon the box.

In Figure 8 I have illustrated the blank from which the cover is formed, and both the construction and method of forming the cover is substantially similar to that of the body of the box.

The relatively wide portion 25 of this blank is bent along spaced parallel lines 26 to provide the side walls of the cover, while the reduced portion 27 of the blank is folded upon spaced transverse lines 28 to form the end wall 29, and the other opposed wall of the cover. Both portions 25 and 27 of the blank are formed with bendable ears and depressions 30 and 31 respectively, and in the final operation, the ears of one portion are bent at right angles thereto and into the depressions of the other portion to complete the cover.

What is claimed is:

The method of forming a sheet metal box, comprising, stamping a blank with two parts, each having securing ears thereon and receiving depressions therein along corresponding edges, bending a substantial portion of one part of the blank at either side at right angles thereto to form three sides of the box, bending the blank medially upon two parallel lines to form the bottom and the remaining side of the box from the other part of the blank, and finally securing the bent side portions of the first-named part and the side-forming portion of the second-named part together by bending the securing ears of each part of the blank into the receiving depressions of the other part thereof.

In testimony whereof I affix my signature.

RALPH V. BURDICK.