July 15, 1930. J. M. SHIELDS 1,770,534

SHEET METAL BOX

Filed June 20, 1929 2 Sheets-Sheet 1

Fig. 1.

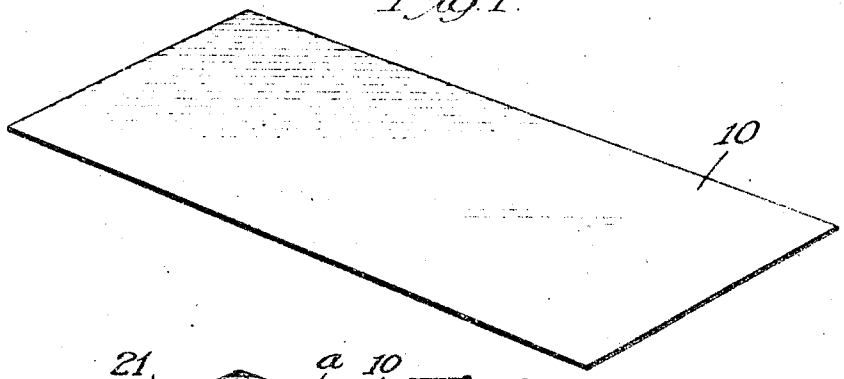


Fig. 2.

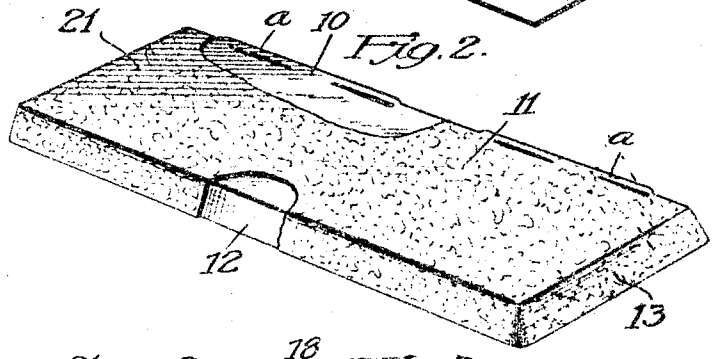


Fig. 3.

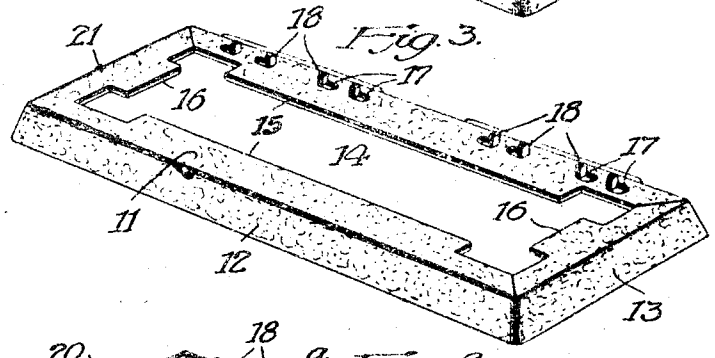
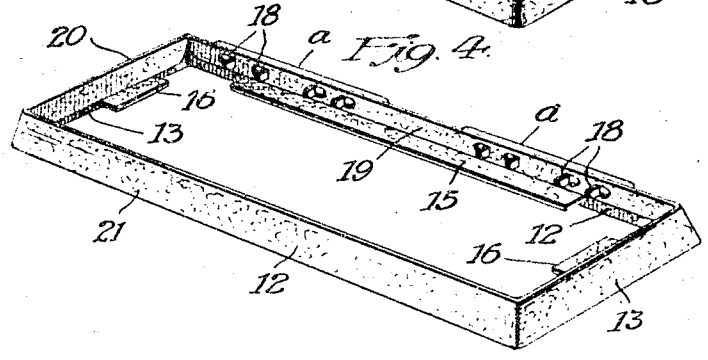


Fig. 4.



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SHEET METAL BOX

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Fig. 5.

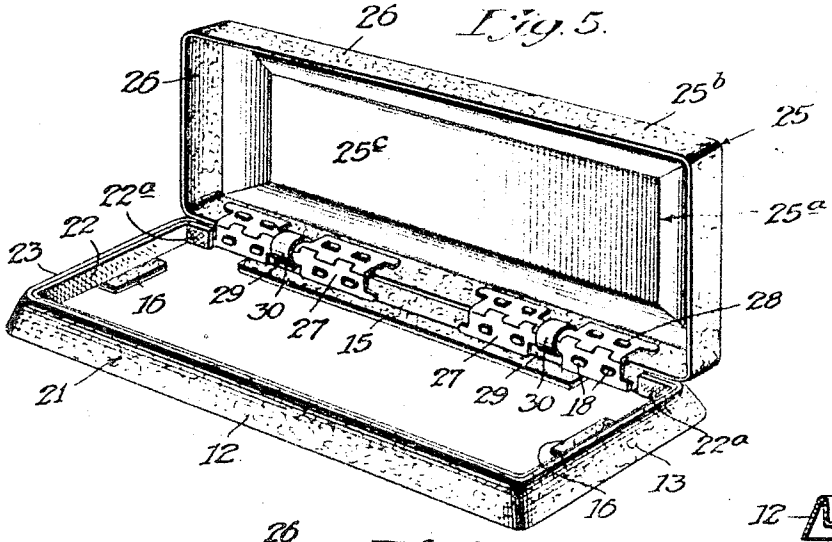


Fig. 6.

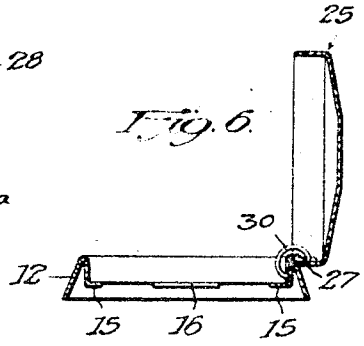


Fig. 7.

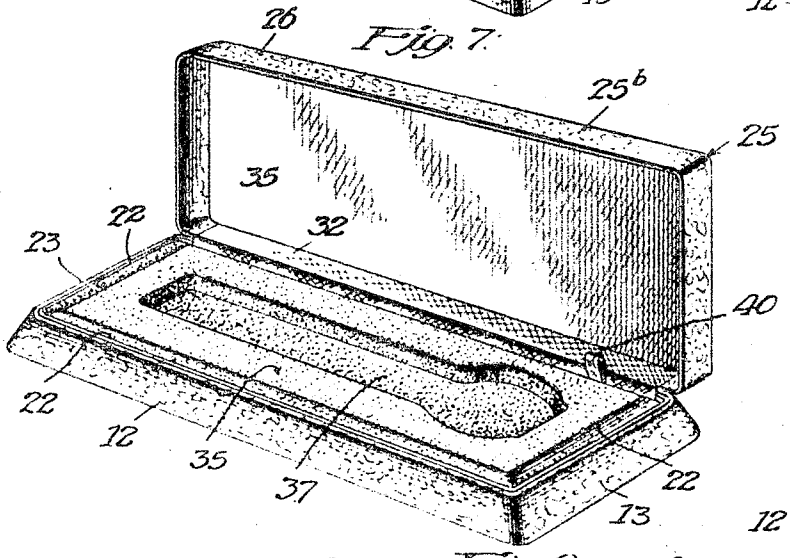


Fig. 8

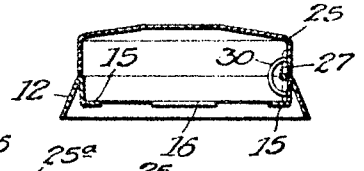
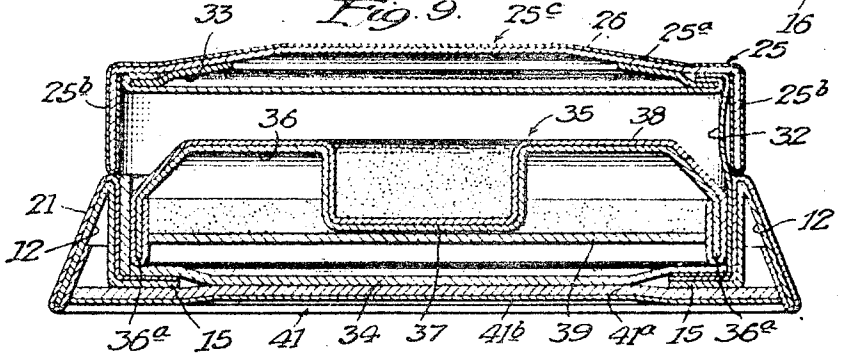


Fig. 9.



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UNITED STATES PATENT OFFICE

JOHN M. SHIELDS, OF CHICAGO, ILLINOIS, ASSIGNOR TO F. H. NOBLE & CO., OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS

SHEET-METAL BOX

Original application filed January 26, 1928, Serial No. 249,537. Divided and this application filed June 20, 1929. Serial No. 372,260.

My invention relates to improvements in jewelry cases and like containers and its purpose is to provide an improved case adapted for use as a container for watches, jewelry, pens and pencils, and various other articles. The present application is a division of my pending application for patent filed January 26, 1928, Serial No. 249,537, and relates to the construction of the box therein described. The principal object of the invention is to provide an improved jewelry case or similar container comprising a box body member or frame structure which may be conveniently and readily formed at small cost from sheet metal, by stamping and punching, and in which the parts necessary to the formation of the complete box or container may be readily assembled without the use of auxiliary fastening means. A further object of the invention is to provide a container for articles such as those mentioned comprising a plurality of parts which may be readily fitted together and which retain themselves in their proper positions without being rigidly attached to the frame or box of the container. Other objects of my invention relating to various features of construction and arrangement of the parts will appear more fully hereinafter.

The nature of my invention will be understood from the following specification taken with the accompanying drawings in which one form of my improved jewelry case is illustrated, and a convenient method of forming the same is described. In the drawings,

Figure 1 shows a perspective view of the sheet metal blank from which the frame structure of the box or lower part of the jewelry case is formed;

Fig. 2 is a perspective view of the sheet metal blank after the first punching operation has been performed thereon in the process of making the frame structure of the container and after the covering material forming the exterior finish of the box body has been applied, a portion of this covering material being broken away to show a depression formed in the metal blank to accommodate the roll of the hinge of the box;

Fig. 3 is a perspective view similar to that of Fig. 2 showing the arrangement of the parts after the next succeeding punching operation of the covered blank;

Fig. 4 is a perspective view similar to that of Fig. 3 showing the relative arrangement of the parts after a still further punching and bending operation has been performed on the covered sheet metal structure.

Fig. 5 is a perspective view showing the structure illustrated in Fig. 4 with the cover and hinges of the case applied thereto and with an outer lining applied on the inside of the box;

Fig. 6 is a cross-sectional view taken at right angles to the axes of the hinges illustrated in Fig. 5;

Fig. 7 is a perspective view similar to that of Fig. 5 showing the complete jewelry case with all of the linings and other interior members applied;

Fig. 8 is a transverse sectional view through the box and cover with the linings and other interior parts removed, the cover being in closed position; and

Fig. 9 is an enlarged cross-sectional view taken transversely of the jewelry case with all parts thereof in place and with the cover in closed position.

First briefly describing the method employed by me in forming my novel box, more fully set forth in my pending application, it may be explained that the frame member of the body portion of the box is formed by first stamping the edges of a rectangular blank of sheet metal 10 downwardly and outwardly, and also forming in the blank depressions *a*—*a* for the hinge roll. The blank is then covered (by use of a suitable adhesive) with the covering material 21 used to give finish to the box, this material extending around the edges of the side flanges 12 and end flanges 13 forming the outer walls of the box body, which in the present instance slope downwardly and outwardly, though obviously any other desired contour may be employed. By other operations a portion of the center of the blank is removed from the top portion 11 and tongue 17 and 18 formed on the blank. The blank is then bent to form downwardly

extending inner side walls 19 and end walls 20 and inwardly extending horizontal flanges 15 and 16 connected to the bottom of the inner walls 19 and 20, respectively. The edges of the covering material 21 within the frame structure are protected by a surrounding lining member 22 which is in the form of a band of relatively stiff fabric or other material having its lower edges resting on the flanges 15 and 16 and having its upper edges terminating substantially flush with the upper edges 23 of the surrounding frame to which the covering 21 has been applied. The ends 22ª of the lining member 22 are preferably secured in place by glue or the like.

As shown in Fig. 5, the case also comprises a cover 25 having a top wall member 25ª bounded by an integral surrounding flange 25ᵇ which is formed by punching a sheet metal plate to project the surrounding flanges transversely thereto. The top wall 25ª may be formed, as shown, with a rectangular elevated portion 25ᶜ. This cover has a layer of leather, imitation leather or other covering material 26 applied thereto by glue or the like with the edges thereof carried upwardly inside of the flanges 25ᵇ. The edges of the flanges 25ª are adapted to coincide with the edges 23 of the lower box frame when the cover is closed. The lower frame structure and the cover 25 are secured together by hinges 27 and each hinge member is provided with apertures adapted to be engaged by the tongues 18 formed on the lower frame and by other tongues 28 formed on the cover. The tongues on the cover and frame are bent transversely to hold the hinges firmly in place, the depressions *a*—*a* formed in the box body member to receive the hinge rolls serving to permit a close seating of the cover upon the box. Each of the pivotally connected hinge members is provided with a notch as shown at 29 to be engaged by a curved leaf spring 30 having substantially the form of the letter C with the ends thereof hooked about the edges of the hinge members at the bottoms of the notches 29. These spring members are such that they will hold the cover 25 in either an open or closed position after the cover is swung beyond an intermediate neutral point. In Fig. 6 of the drawings the springs 30 are shown as serving to hold the cover 25 in its open position while in Fig. 8 they are illustrated in position to maintain the cover closed.

In constructing the box, after the parts have been formed and assembled in the manner illustrated in Fig. 5, the lining members and a jewelry tray or support are put in place. A strip of silk 32 or the like is arranged over the hinges and the hinge joint longitudinally of the box and of sufficient width to overlap the adjacent bottom flange 15 and also the top wall 25ª of the cover. A cover lining member 33 overlapping the outer side of one edge of the hinge covering 32 is secured by glue or paste to the inside of the cover. This cover lining 33 may preferably be a sheet of cardboard or a rectangular cardboard frame covered with silk or other material similar to that forming the hinge covering 32 and upon engaging paste or glue previously applied to the inside of the cover it will be held in place and will at the same time hold the hinge covering 32 in place by friction. If the body structure of the cover lining 33 has sufficient stiffness and resiliency it may be caused to retain itself in position without employing any glue or other fastening means.

A sheet of cardboard 34 constituting an inner bottom wall is arranged in the bottom of the lower frame structure with its edges resting on the flanges 15 and 16 and of such a size that it fits closely within the outer lining strip 22. One edge of the cardboard sheet 34 rests on the edge of the hinge covering 32 and holds the lower part thereof in place. Within the container constructed as thus far described, is arranged the jewelry tray or support 35 which is preferably made up of a sheet metal frame 36 stamped from a sheet metal blank to form downwardly extending outer flanges 36ª and one or more intermediate depressions 37, the single depression 37 shown in Figs. 7 and 9 being of suitable shape to receive a wrist watch and its connected wrist band. The sheet metal frame 36 of the jewelry tray has an outer covering 38 of plush or the like, the lower edges of which are turned upwardly on the insides of the flanges 36ª and secured in place by a sheet 39 of cardboard or sheet metal. The plush lining 38 conforms to the contour of the depression 37 which is enlarged at one end as shown in Fig. 7 to receive the watch. This jewelry tray preferably has a tab 40 attached to the side thereof so that it may be pulled upwardly and replaced by another tray having a depression of different conformation to receive another article of jewelry of different shape. This tray is held in place by gravity and by frictional contact with the surrounding lining member 22. The opening between the surrounding walls formed by the covered flanges 12 and 13 of the box beneath the tray is closed by an outer bottom wall 41 made up of a sheet 41ª of cardboard or sheet metal having a covering 41ᵇ of leather or the like applied to the lower surface thereof. This outer bottom wall 41 lies immediately below the flanges 15 and 16 of the box body, adjacent the inner wall or cardboard sheet 34 resting on top of such flanges, and is glued to such sheet to secure the parts together and complete the box body, the flexibility of the wall members being sufficient to permit a firm glued connection to be made.

Although one form of the inventon has been shown and described in connection with one method of forming the improved jewelry

case, it will be understood that the invention may be embodied in various forms and practiced in various ways within the scope of the appended claims.

I claim:

1. A case for jewelry and the like including a lower frame structure of sheet metal having surrounding outer walls united at their upper edges with downwardly extending inner walls provided with inwardly directed flanges, a cover of flexible material applied to said walls, and a jewelry tray supported by said flanges.

2. A case for jewelry and the like including a sheet metal box frame having surrounding outer walls of sheet metal united at their upper edges with downwardly extending inner walls having flanges projecting horizontally from the lower edges thereof, an inner bottom wall within said inner walls resting on said flanges, and an outer bottom wall within said outer walls beneath and adjacent said flanges secured to said inner bottom wall.

3. A case for jewelry and the like including a sheet metal box frame having surrounding outer walls of sheet metal united at their upper edges with downwardly extending inner walls having flanges projecting horizontally from the lower edges thereof, a tray supported by said flanges within said inner walls, a bottom wall arranged within said outer walls beneath said flanges and means for securing said bottom wall to said flanges.

4. A case for jewelry and the like comprising a sheet metal box frame having continuous downwardly and outwardly flared outer walls united at their upper edges with downwardly extending vertical inner walls having horizontal flanges extending inwardly from their lower edges, and a bottom member within the outer walls supported by said flanges.

5. A case for jewelry and the like including a sheet metal box frame having surrounding outer walls of sheet metal forming a supporting base and united at their upper edges with downwardly extending inner walls having inwardly extending horizontal flanges disposed above the plane of the lower edges of the outer walls, and a bottom member within said inner walls secured to said flanges.

6. A case for jewelry and the like including a sheet metal box frame having surrounding outer walls of sheet metal forming a supporting base and united at their upper edges with downwardly extending inner walls having inwardly extending horizontal flanges disposed above the plane of the lower edges of the outer walls, an inner bottom member above said flanges and supported thereby, and an outer bottom member within said outer walls below said flanges and secured to said first-mentioned bottom member.

7. A case for jewelry and the like including a sheet metal box frame having surrounding outer walls of sheet metal forming a supporting base and united at their upper edges with downwardly extending inner walls having inwardly extending horizontal flanges disposed above the plane of the lower edges of the outer walls, and a cover formed with flanges arranged to seat upon the bend between said outer and inner walls of the box frame, said cover being provided with hinges having leaves attached severally to the inside of one inner wall of the box frame and the inside of the corresponding flange of the cover.

JOHN M. SHIELDS.