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J. B. DE MESQUITA

BOX

Filed April 6, 1925

Fig. 1.

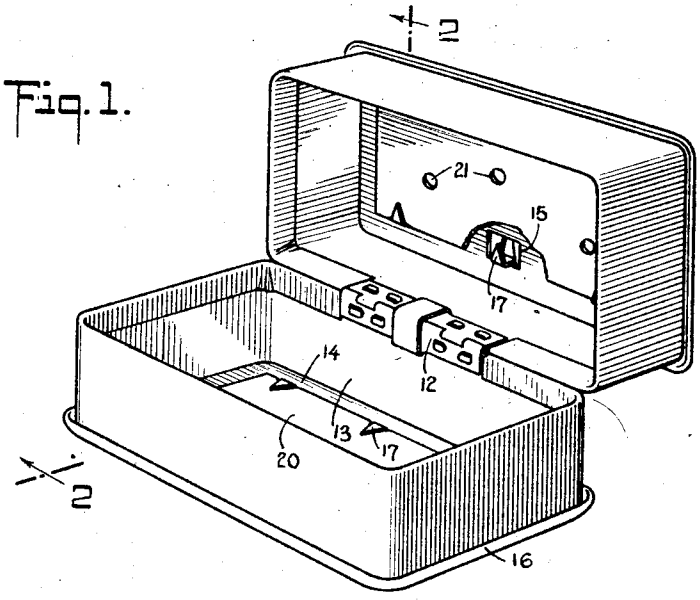
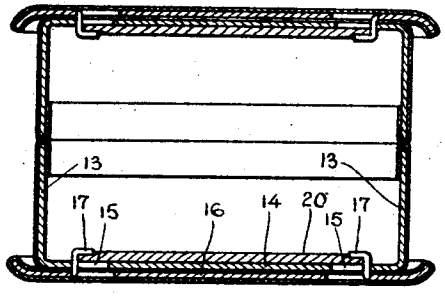


Fig. 2.



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BOX.

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This invention relates generally to a box construction and more specifically to a box construction in which a metal end or base member is associated with a metal side wall construction to form a box part.

My invention serves a particular utility in connection with the manufacture of that character of box in which a base member or a top member is formed separate from the side wall construction and in which the two are to be associated to form a unitary box part and more particularly in connection with a box construction in which it is desired on the one hand to form the box part of separate elements which are covered prior to their association and which can be associated together without in any way impairing or effecting the covering of each or the general appearance of the box part as a whole.

I am aware that boxes of this type made of metal have hitherto been manufactured in which a metal base member is provided with tabs or spurs struck up therefrom and which tabs or spurs are passed through the bottom of the box and then bent down thereupon. This arrangement I have found, has certain disadvantages among which are the following: (first) where a die is employed to force or bend the metal tabs or prongs down upon the metal box bottom, its wear upon the die is materially increased because of the fact that the die has to operate wholly against unyielding metal surface; (secondly) the tabs or prongs when seated or forced down upon the metal of the bottom will be positioned thereabove and will therefore form protuberances or portions projecting or extending slightly above such bottom; (thirdly) where these boxes are to be lined or covered on the inside with a material such as plush, it is difficult to hold this inner lining or covering in position because of the fact that metal does not readily receive and hold a binder.

Among the more important objects of my invention therefore are: the provision of an arrangement whereby the bottom member can be associated with the box in such a way that no protuberances or obstructions result; the provision of an arrangement whereby the association of the bottom member with the box will provide for retaining the inner covering or lining in position; and the provision of an arrangement whereby the association of the bottom member with the box will simultaneously provide for the countersinking of the tabs or fingers and for the attachment of lining to the inner surface of the box.

For the attainment of these objects and such other objects as may hereinafter appear or be pointed out, I have illustrated embodiments of my invention in the drawings wherein:

Fig. 1 is a perspective view of the box with the cover open and looking down upon the inside thereof; and

Fig. 2 is a vertical section taken transversely of the box, on line 2—2 of Fig. 1.

In Fig. 1, I show a type of box which comprises upper and lower parts pivoted to each other by the hinge construction 12 and while these parts are shown as substantial duplicates and the description of the bottom part will therefore suffice for the other, it will be understood that this is done merely for purposes of illustration.

The box parts are each made up of a side wall forming structure and of the supplementary bottom or base member attached thereto, the former being made of sheet metal preferably stamped so as to provide the continuous upstanding wall 13 and the bottom 14 which is cut away at predetermined points as shown at 15 so as to provide a plurality of openings therethrough preferably positioned adjacent the outer edges thereof. The supplemental bottom member 16 is also preferably made of sheet metal stamping from which are cut up preferably adjacent opposite edges the tabs or prongs 17 corresponding in number and in position to the number and positioning of the openings 15 through the bottom 14 and arranged to register therewith when the two are associated and the tabs or prongs 17 are of a sufficient length that when passed through the openings 15 of the bottom 14, they extend thereabove for a substantial distance.

An insert 20 preferably of material which is relatively tough and yet permits of its being distorted or compressed such as fibre board and of a width so as to be received between the groups of prongs 17 on opposite sides of the base member 16 is positioned upon the bottom 14 of the box part 13 with its longitudinal side edges closely adjacent to the upstanding prongs 17 after they have

been inserted and the prongs 17 are then bent oppositely and inwardly toward each other as shown in the drawings and down upon the insert 20.

Upon viewing the figures of the drawing, it will be observed that the opening 15 through the bottom 14 is of such dimension relatively to the dimensions of the prongs 17 that when the prongs are pressed therethrough and upon the upper surface of the insert 20, such bent over portion of the prongs is positioned above the openings 15 and wholly within the outlines thereof and no portion of the prongs extends over any part of the metal of the base 14.

By this arrangement, I obtain the following: When the prongs or tabs 17 are bent into their position of the drawing as by a die, the prongs can be forced into the material of the fibre board insert 20, thereby not only more firmly anchoring these prongs but also countersinking them into the insert 20 so that they do not present any upstanding protuberances, or projections, due to the position and relative dimensions of the openings above referred to. Due to the fact that the prongs when bent downwardly by the die where a die is employed, are forced down upon yielding base, namely the fibre board insert 20, yielding first because of the inherent characteristics of the insert and secondly because of the fact that the metal therebeneath is cut away, the wear upon the die will be less than that which is incident upon forcing down metal upon metal.

Furthermore, by employing a fibre board insert 20 for engaging with the prongs, I further provide in the bottom of the holder on the inside a substantial area of a character which will more effectively hold the binder such as glue or cement and to which therefore the lining with which the inside of these boxes are generally provided can be more effectively or more easily secured.

For purposes of still more effectively securing a lining to the inside of the box, I may provide the insert 20 with the spaced holes or depressions 21 within which deposits of a binder may be received.

It will thus be seen that the bottom of the receptacle or container is made of three superposed portions one of which namely the member 16 serves as the base, another of which is the insert 20 and that the two are supported on opposite faces of the bottom portion 14 which forms the third portion by the fingers 17 which is carried by one of the two and passes through the third and engages the other of the two and that the fingers 17 serve the double function of securing the base on the outside of the container and of affixing the insert 20 to the inside of the container.

The employment of the prongs 17 positioned and functioning as recited, permits of covering the supplementary bottom member 16 and the side wall forming member 13 before the two are associated and of their association without in any way adversely effecting the covering. Furthermore, the dimensions and the contour of the supplemental bottom or base member 16 can be made as desired regardless of the dimensions and contour of the side wall forming structure 13.

While I have described my box as made of metal because it is in this connection that it serves its highest utility, yet it will be understood that as to certain phases of this invention, the invention is not so limited. It will be further understood that while I show my bottom portion 14 as solid except for the openings 15, portions thereof may be cut away as long as there is sufficient metal left to support the insert 20.

Having thus described my invention and illustrated its use what I claim as new and desire to secure by Letters Patent is:—

1. In a device of the character described, a plurality of superposed members, one member having portions struck up therefrom, an intermediate member having openings so positioned and dimensioned as to permit said struck-up portions to be passed therethrough, and another member having portions extending over said openings, whereby the struck-up portions can be bent down upon the portions last named.

2. In a box, three superposed members, the intermediate member having openings of predetermined size, an adjacent member having portions extending over said openings, and a member so formed and positioned that portions thereof extend through said openings and engage those portions of the adjacent member which extend over the aforementioned openings.

3. In a box, the combination of a base, a side forming strip projecting from and presenting a bottom portion positioned upon said base, the bottom portion presenting an opening therethrough, a member seated upon said bottom portion and extending over said opening and a tab extending from the base through the opening in the bottom portion and bent down upon the upper surface of said member and acting to clamp and secure the base to the member.

4. In a box, the combination of a base, a side forming strip projecting from and presenting a bottom portion positioned upon said base, the bottom portion being cut away, a distortable member seated upon said bottom portion and extending over said cut away portion and a tab extending from the base through the cut away portion of the bottom portion and bent down upon the upper surface of said member and acting to clamp and secure the base to the member, the length of the tab being such that it contacts

with that portion only of the distortable member which extends over the cut away portion.

5. In a device of the character described, in combination, a base, side walls projecting from and presenting a bottom portion positioned upon said base, the bottom portion to provide openings of predetermined size, a distortable member seated upon the bottom portions and extending over said openings, and members carried by the base and extending through the openings with their ends bent down upon the portions of the distortable member, which extend over the openings.

6. In a device of the character described, in combination a base, side walls projecting from and presenting a bottom portion positioned upon said base, the bottom portion being cut away to provide openings of predetermined size, members carried by the base and extending through the openings in the bottom portion, a distortable member seated upon the bottom portion and received between the upwardly extending members carried by the base and with its opposite edges positioned adjacent said members, the projecting ends of the tabs being bent down upon the upper surface of said distortable member.

7. In a device of the character described, in combination a base, side walls projecting from and presenting a bottom portion positioned upon said base, the bottom portion being cut away to provide openings of predetermined size, members carried by the base and extending through the openings in the bottom portion, a distortable member seated upon the bottom portion and received between the upwardly extending members carried by the base and with its opposite edges positioned adjacent said members, the projecting ends of the tabs being bent down upon the upper surface of said distortable member, the distortable member being positioned over the openings and the parts being so dimensioned that the bent down ends of the members carried by the base are superposed over the openings.

In witness whereof, I have hereunto signed my name.

JULIUS B. DE MESQUITA.