

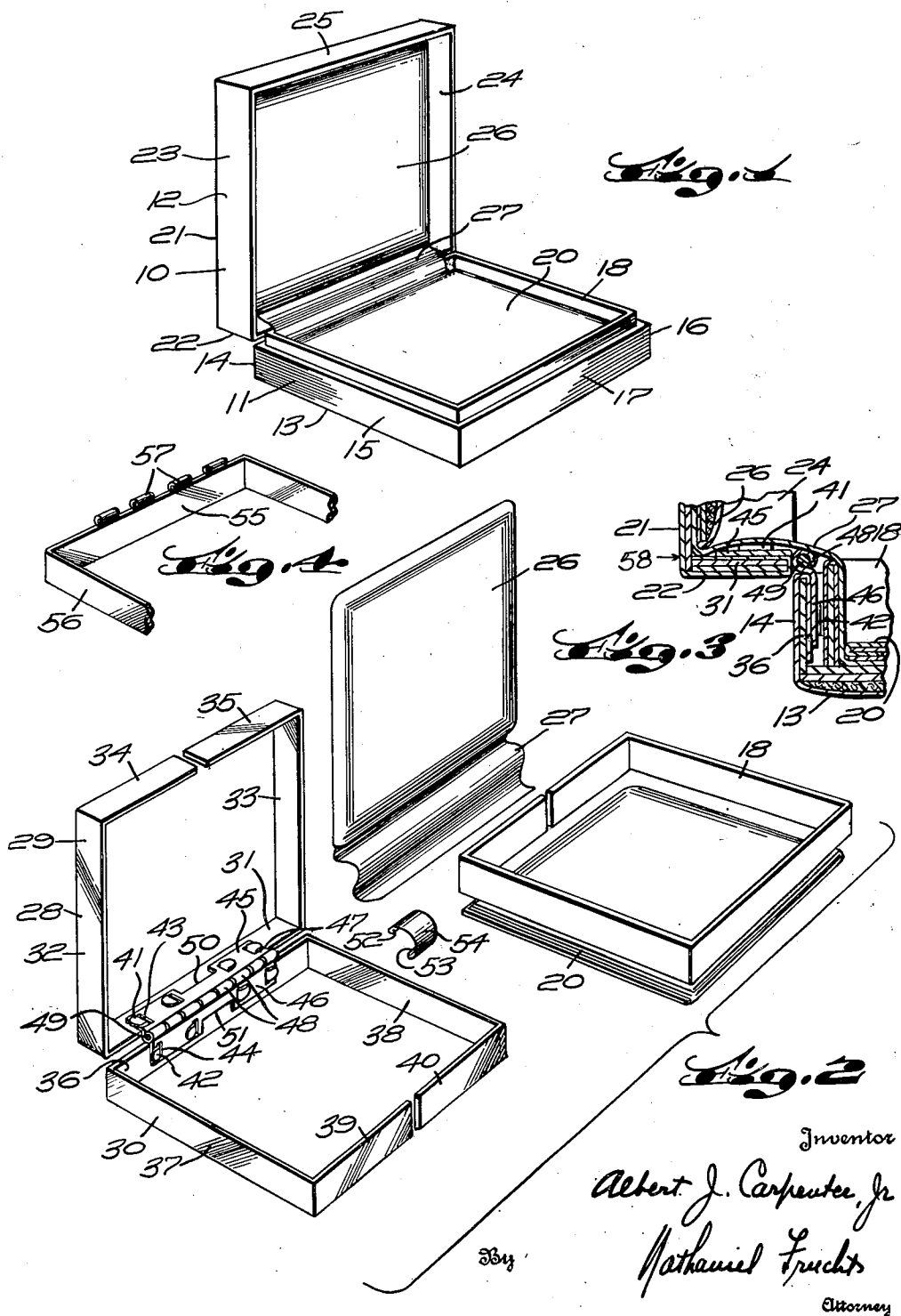
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SHIPPING AND DISPLAY BOX HINGE CONSTRUCTION

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SHIPPING AND DISPLAY BOX HINGE
CONSTRUCTION

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1

The present invention relates to the manufacture of boxes and containers, and has particular reference to a novel construction for a shipping and display jewelry box.

The principal object of the invention is to provide a very rigid construction for a shipping and display box.

Another object of the invention is to provide a novel reinforcement for the body and cover of a shipping and display box.

Still another object is to provide a rigid support frame to which the hinge plates of a shipping and display box are secured.

An additional object of the invention is to provide a rigid support frame for a shipping and display box which is entirely concealed from view when the box is assembled.

With the above and other objects and advantageous features in view, the invention consists of a novel arrangement of parts more fully disclosed in the detailed description following, in conjunction with the accompanying drawings, and more specifically defined in the claims appended thereto.

In the drawings:

Fig. 1 is a perspective view of the novel box, the cover being in open position;

Fig. 2 is an exploded view showing the support frame, its hinge spring, the top inner pad, and the bottom inner pad and liner;

Fig. 3 is an enlarged sectional detail taken transversely through the hinge portion of an assembled box; and

Fig. 4 is a perspective view, partly broken away, of a modified construction for the support frame element.

It has been found desirable to provide an attractive box for shipping and displaying jewelry and the like, which is extremely rigid and will not buckle or bend during use, particularly at the hinge connection. To this end, I provide a rigid support frame having support elements to which the hinge parts are firmly secured, the support elements being shaped to reinforce the box parts and concealed from view.

Referring to the drawings, the novel shipping and display box is designated 10 in Fig. 1, and includes a body portion 11 and a cover portion 12 of flat, thin structurally weak material which is hingedly secured thereto as hereinafter described. The body portion 11 has a bottom wall or base 13, a rear wall 14, side walls 15 and 16, and a front wall 17, and has an inner liner 18 for telescoping into the cover portion, an ornamental

2

bottom pad 20 having a plush or similar facing being provided to receive the jewelry item.

The cover portion 12 has a top wall or base 21, a rear wall 22, side walls 23 and 24, and a front wall 25, and is provided with an ornamental top pad 26 which has a depending flap 27 of textile material or the like, the flap 27 loosely extending over the connection between the cover portion and the body portion and under the bottom pad 20 of the body portion.

A novel support frame 28, see Fig. 2, provides a reinforcing and connecting unit and is formed of an upper support member 29 and a lower support member 30, the support members being made of flat thin strip stock of rigid material, such as metal, and being bent or shaped to fit inside and to contact the walls of the cover portion and the body portion with their entire outer faces. The upper support member 29, in the embodiment illustrated, thus has a rear strip 31, side strips 32, 33 which are bent at right angles to the rear strip, and end strips 34, 35 are bent at right angles to the side strips and extend towards each other as illustrated, to form a front strip. The lower support member 30 is similarly shaped to provide a rear strip 36, side strips 37 and 38, and end strips 39 and 40 which jointly form a front strip.

The rear strips 31 and 36 are each stamped to provide upstanding lock lugs 41, 42, which are respectively adapted to extend through spaced openings 43, 44 in an upper plate 45 and a lower plate 46 of a hinge 47, and to be bent over to lock the hinge to the upper and lower support members. The hinge 47 is of standard type, with hinge rolls 48 and a hinge pin 49, and the plates 45, 46 are recessed as indicated at 50, 51 to receive the intumed ends 52, 53 of a curved strip spring 54, whereby the upper and lower support members are snap retained in open and in closed relation.

The above hinge locking arrangement is preferred, but the hinge plates may be welded or soldered to the back strips of the support elements, if desired, or the support members may be formed as disclosed in Fig. 4, wherein the back strip 55 of the support member 56 has integral hinge rolls 57.

The support frame and its hinge connection thus constitutes an initial assembly which may then be set within the body portion and the cover portion of the box, with the rear strips, side strips and front strips of the support members in contacting relation to the rear walls, side walls, and front walls of the associated body and cover portions, whereby the strips provide rigid reinforcement.

ments which keep the box rigid and strong at all times. The walls of the cover and body portions preferably abut each other edgewise.

After the support frame is set in place in the cover and body portions, an ornamental textile or paper backing 58 is pasted or glued over the outer box parts and over the reinforcing strips; the inner liner 18 is set into the body portion, the top pad 26 is set into the cover portion, and the flap 27 is extended over the hinge connection, the assembly being completed by setting the lower or bottom pad 20 into the body portion and over the end of the flap 27.

Although I have illustrated the reinforcement support members 29 and 30 as being bent into square or rectangular form in Fig. 2, the members may be bent to fit any desired box shape, and need not be substantially continuous, as the essential function of the back strips of the reinforcement members is to provide a rigid support for the hinge connection. As much of the side and end strips as are required to adequately support the sides and the front ends of the box parts may then be utilized; for example, the portion of the reinforcement members which normally extends across the front of the box may be omitted, and part or all of the portions which extend along the sides of the box may also be omitted, depending on the strength of the box walls.

While I have described a specific embodiment of the invention, it is obvious that changes in the size, shape and material of the parts may be made to suit the requirements for different shipping and display boxes, without departing from the spirit and the scope of the invention as defined in the appended claims.

I claim:

1. A rectangular box having cover and body portions made of flat, thin structurally weak material; said portions each comprising a flat base and flat walls substantially vertical thereto, the walls of the two portions abutting each other edgewise; a reinforcing and connecting unit for said portions consisting of a pair of substantially closed flat strip metal frames, one for each portion, each frame conforming to and having its entire outer face in contact with substantially all of the interior face of the walls of its associated portion, and a hinge connecting said frames; and an upstanding liner disposed within the body por-

tion with its outer face in contact with the inner face of the metal frame, the liner extending outwardly from the interior of the body portion in telescopic engagement with the interior face of the metal frame in the cover portion.

2. A rectangular box having cover and body portions made of flat, thin structurally weak material; said portions each comprising a flat base and flat walls substantially vertical thereto, the walls of the two portions abutting each other edgewise; a reinforcing and connecting unit for said portions consisting of a pair of flat strip metal frames, one for each portion, each frame conforming to and having its entire outer face in contact with substantially the entire inner faces of three walls of its associated portion, and a hinge affixed to and connecting said frames; and an upstanding liner disposed within the body portion with its outer face in contact with the inner face of the metal frame, the liner extending outwardly from the interior of the body portion in telescopic engagement with the interior face of the metal frame in the cover portion.

3. A rectangular box having cover and body portions made of flat, thin structurally weak material; said portions each comprising a flat base and flat walls substantially vertical thereto, the walls of the two portions abutting each other edgewise; a reinforcing and connecting unit for said portions consisting of a pair of flat strip metal frames, one for each portion, each frame conforming to and having its entire outer face in contact with substantially the entire inner faces of three walls of its associated portion, and a hinge affixed to and connecting said frames.

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