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H. M. LEVY

1,459,225

PAPER BOX

Filed Sept. 7, 1920

Fig. 1.

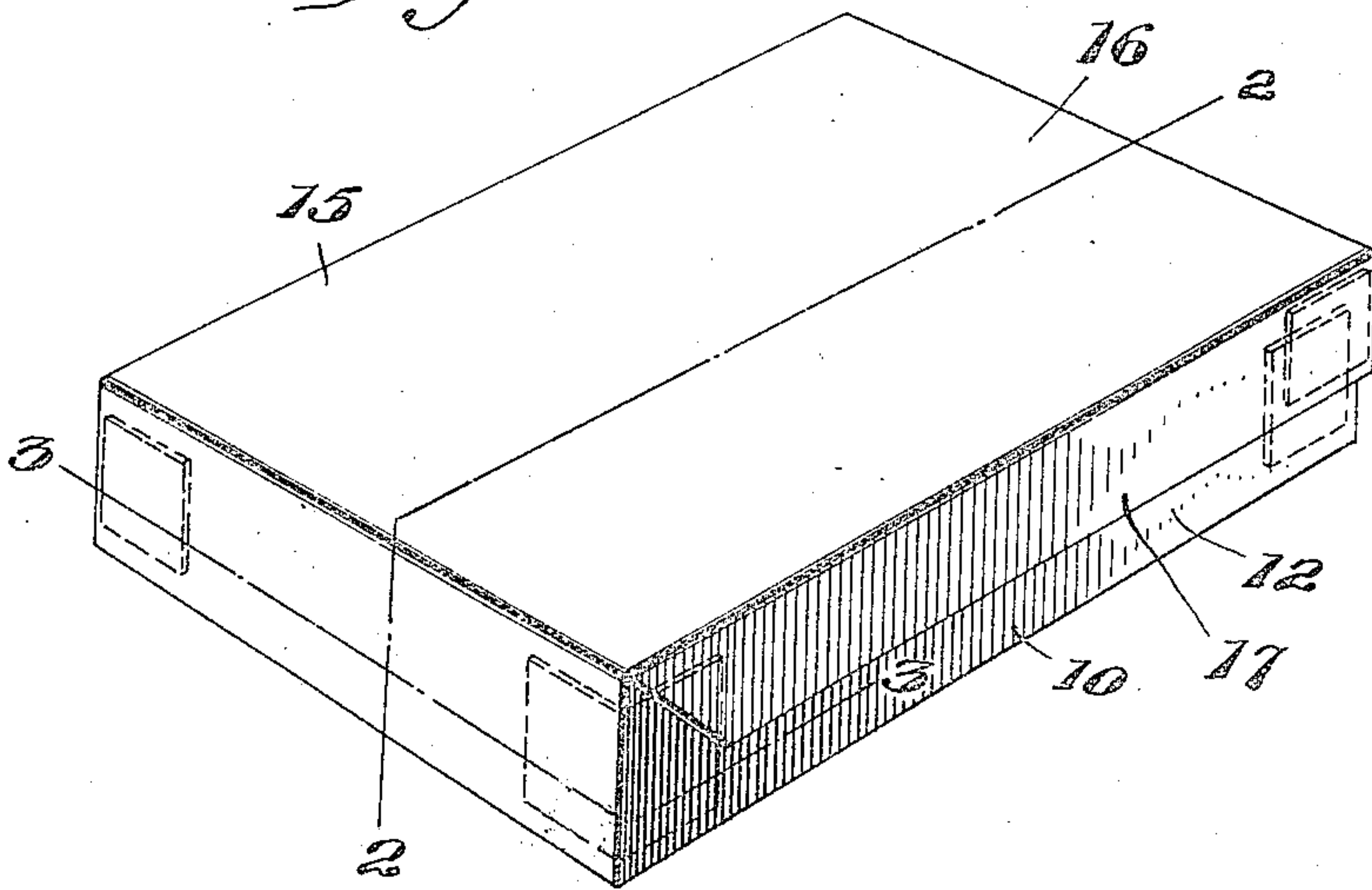


Fig. 2.

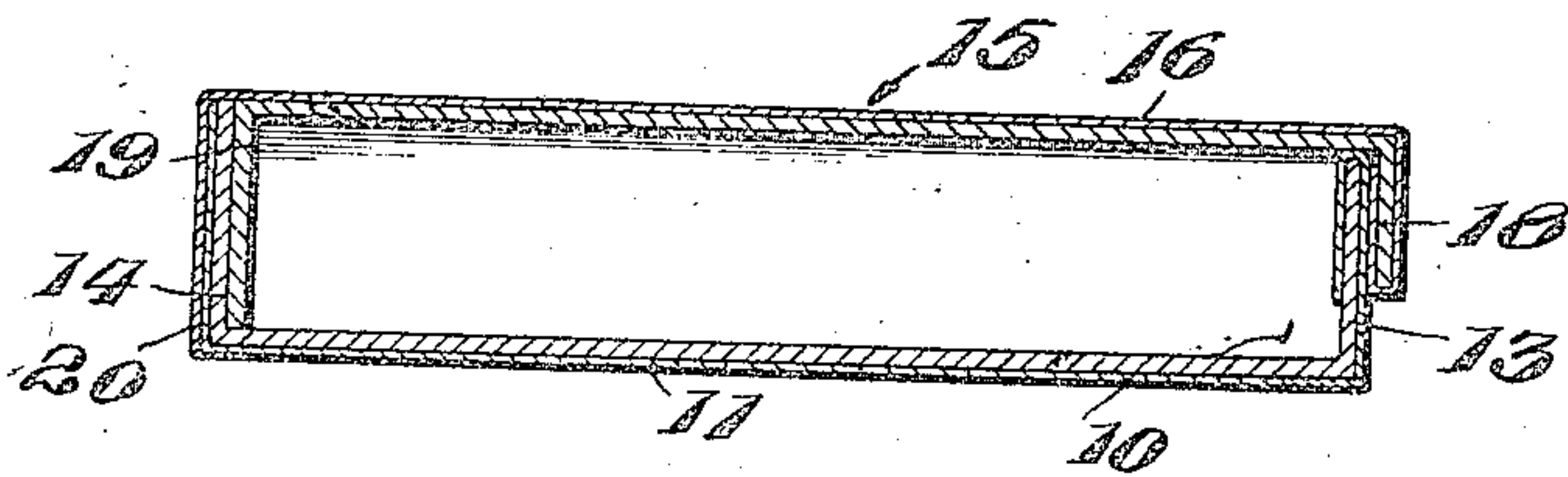


Fig. 3.

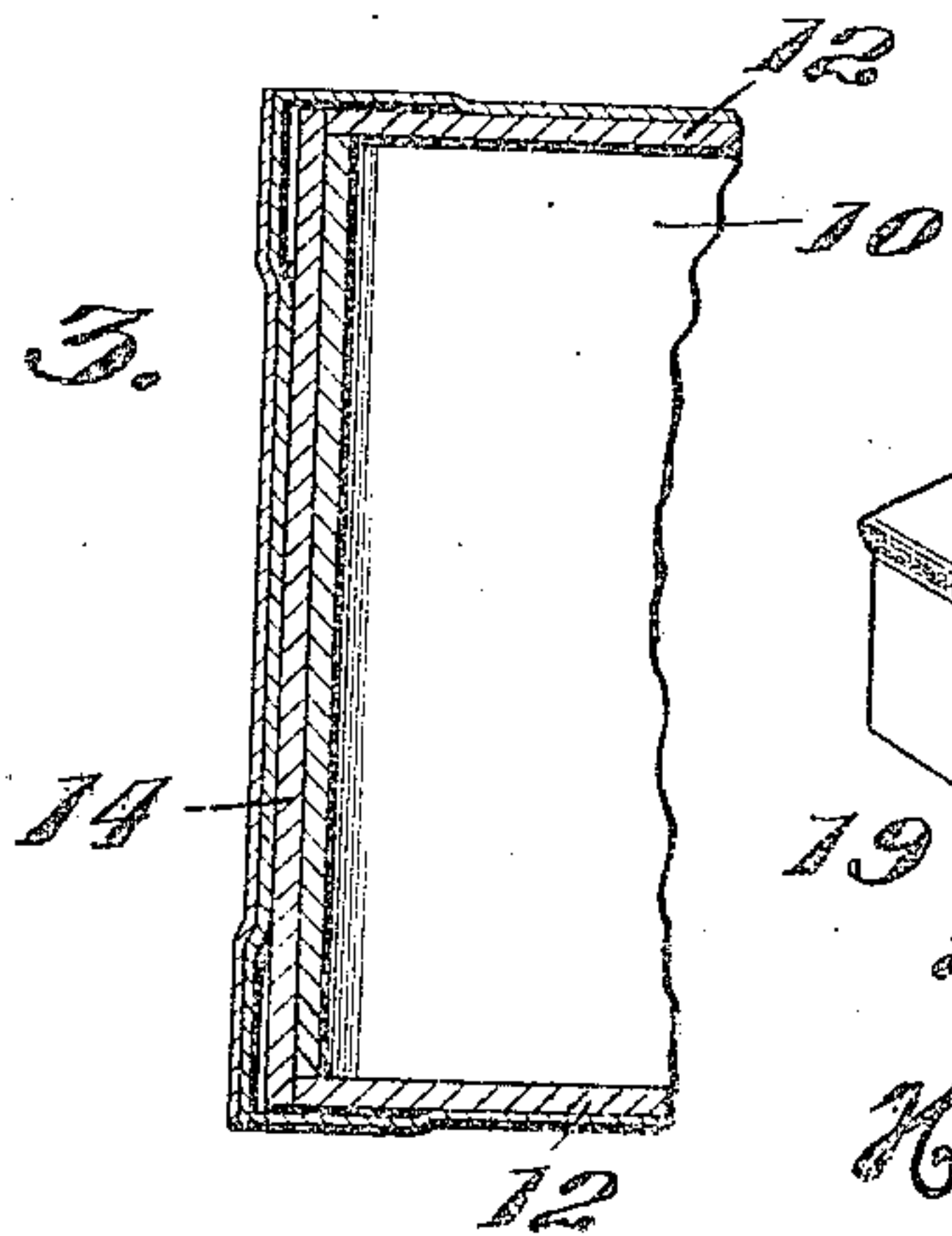
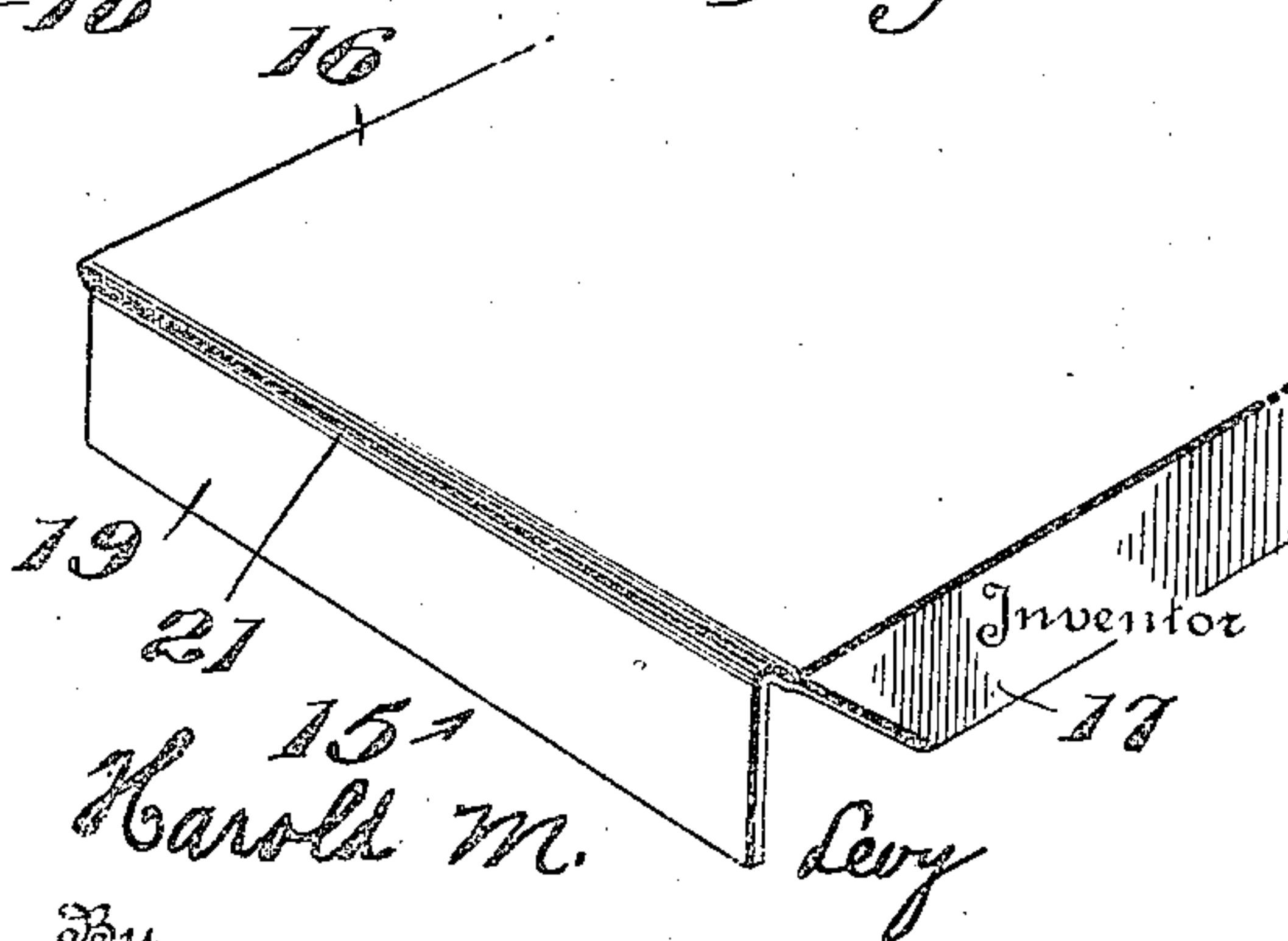


Fig. 4.



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PAPER BOX.

Application filed September 7, 1920. Serial No. 408,420.

To all whom it may concern:

Be it known that I, HAROLD M. LEVY, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, has invented certain new and useful Improvements in Paper Boxes, of which the following is a specification.

This invention relates to paper boxes, and more particularly to that type of boxes in which the body or tray and the cover are made separate and afterwards hingedly connected.

It has for its object the provision of a paper box, which is easily manufactured and which is durable in use. A further object is the provision of a durable hinge for cardboard boxes or the like without the use of cloth or other flexible material, being confined to the materials of which the box is composed. A still further object of the invention is the development of a method of forming the hinge, whereby it is made more durable.

Other objects and advantages of the invention will hereinafter appear in the following description and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, wherein all reference characters are employed to designate similar parts throughout the several figures,

Figure 1 is a perspective of my box,

Figure 2 is a sectional view taken upon the line 2—2 of Figure 1, showing the several component parts of which the hinge is made,

Figure 3 is a similar view taken upon the line 3—3 of Figure 1 of a portion of the box showing the hinge section thereof, and

Figure 4 is a perspective of the end of the cover section before it is applied to the body.

In the following description, I have set forth a single embodiment of my invention, but it will be understood that this embodiment is exemplary only, and that the invention is susceptible of many changes within the spirit and scope of the appended claims.

The numeral 10 designates the body or tray of a box, which consists of a bottom 11, side flanges 12, a front flange 13 and a rear flange or hinge support 14. The body may

be made of ordinary cardboard cut into the desired blanks, the sides and ends being bent up out of the plane of the bottom, and suitably connected together to form the body or tray section of the box. While any method of attaching the sides and ends together may be employed, I have shown in dotted lines in Figure 1 and in section in Figure 3 short strips of stout paper, which are attached to the sides and ends by adhesive.

The body or tray is shown as covered by a relatively thin paper, which is pasted to the outside of the bottom, the outer faces of the side and end flanges and for a portion of the inner faces thereof.

The cover section is designated by the numeral 15 and consists of a top 16, side flanges 17, front flange 18 and a hinge flap 19. This cover is likewise made from a single blank of any suitable cardboard with the side and front flanges and the hinge flap bent down from the plane of the top, but I prefer to make the cover of a bending quality of box board to secure a neater, more easily formed and more durable hinge for the box. The cover section also has a covering of thin paper which extends over the top, the outer face of the flanges and a portion of the inner faces thereof. It is not secured to the hinge flap but is extended to provide a projecting end overlapping the flap for a purpose hereinafter to be explained.

While the hinge flap may be of any suitable dimensions without departing from the spirit of the invention, I prefer to make the same of a width equal to the inside width of the body or tray and of a height equal to the depth of the body or tray section.

In the connecting of the cover section to the body or tray section, the hinge flap is attached to the end flange 14 of the body or tray and as shown it is applied to the inner face thereof by means of a coating of adhesive. It will be noted that by this construction the end of the tray or body is made considerably stouter and at a point where the strain due to the opening and closing movements of the cover would occur.

After the cover is thus attached to the body of the box, the projecting portion of the

paper covering for the cover, as seen at 20, is attached to and completely covers the paper covering of the end flange 14, but it is obvious that the projecting end may be attached directly to the flange 14 by omitting the bottom covering on this member. I prefer that this section 20 of the covering paper be attached to the flange 14 when the box cover is in closed position, thereby relieving this paper covering section from strain in the opening and closing movements of the cover. Besides obscuring from view the bend 21 of the box board of the cover, this section 20 of the covering will tend to protect the said bend or hinge.

In making my box I prefer to first form the tray and the cover, then wrap the body or tray, next glue the hinge flap into the inside of the wrapped box, and finally wrap the cover, attaching the section 20 of the wrapping or covering to the end flange while the cover is in its closed position.

While I have described my invention as having a hinged flap attached to the cover section and the covering paper of the cover as extended over the hinge bend and attached to the end flange of the tray section, it will be understood that these details may be altered without departing from the spirit of the invention.

By my invention there is produced a paper box of the hinged cover type, which is durable in use and neat in appearance. Since the hinge flap is integral with the cover and made of a bending quality of box board, the box may be opened and closed repeatedly without breaking or tearing the hinge. The gluing of the covering paper to the parts adjacent the hinge while the box is closed adds materially to the strength of the hinge, since by this means there is little liability of the breaking of the paper covering. It is to be noted that the flexible box board used prevents the box hinge from tearing or splitting on the inside of the box, and that the section 20 of the covering paper prevents the outside of the box from showing the crease or split, which is more liable to appear there. It is to be further noted that the hinge is produced without the use of any special flexible material, such as cloth or the like.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A paper box comprising a body or tray section having an end flange, a cover section having a hinge flap secured to one side of said end flange, and a covering for said cover section secured to the opposite side of said end flange.

2. A paper box comprising a body or tray section of cardboard and having an end flange, and a cover section of a bending quality of cardboard and having a hinge

flap formed at one end thereof, said hinge flap being secured to one side of said end flange by adhesive, and a strip of covering paper attached to the cover section, passed over the bend of the hinge flap and secured to the other side of said end flange.

3. A paper box comprising a body or tray section having an end flange and a cover section having a hinge flap of a height and length corresponding to the depth and width, respectively, of said end flange and secured to one face of said end flange by adhesive, and a strip of covering paper secured to the cover section, passed over the bend of the hinge flap and secured to the other face of the end flange.

4. A paper box comprising a body or tray section having an end flange and a cover section having a hinge flap formed by bending the material of the cover at an angle, a covering secured to the bottom and side and end flanges of said tray or body section, and a covering secured to the top of said cover section and extending beyond the bend of said hinge flap, the hinge flap being secured to the inner face of the end flange and the extended portion of said covering being secured to the outer face of said end flange.

5. A paper box, comprising a body or tray section having an end flange, a cover section having a hinge flap secured to the inner face of said end flange, and coverings for said box sections, one of which is attached to the outer face of said end flange, passed over the hinge and attached to the top of the cover section.

6. A paper box comprising a body or tray section and a cover section, one of said sections being provided with a hinge flap formed by bending a portion of the material of the section, which flap is attached to the inner face of the other section, and a covering strip of paper attached to the section having the hinge flap, passed over the bend thereof and attached to the outer face of the other section.

7. A hinge for a cardboard box or the like comprising a hinge supporting section, a hinge flap formed by bending a cardboard body and secured to one face of said hinge supporting section, and a paper covering attached to the other face of said hinge supporting section, passed over the bend of said hinge flap and secured to the cardboard body.

8. A hinge for cardboard boxes and the like comprising two cardboard members to be hingedly connected, consisting of a hinge flap upon one of said members formed by bending a portion thereof at an angle and a hinge support upon the other of said members, the hinge flap overlapping and secured to one face of the hinge support, and a strip of paper secured to one of said members, passed over the bend of the hinge flap and

secured to the other face of said hinge support.

9. The process of forming a hinge for a paper box or the like comprising a tray or
5 body and a hinged cover, consisting of bending a section of the cover to form a hinge flap, securing said hinge flap to the inside

of an end member of the tray, and pasting a covering to the outside of the cover, and to the outside of said end member of the
10 tray while the cover is in bent position.

In testimony whereof I affix my signature.

HAROLD M. LEVY.