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A. H. RADDE

2,534,989

HINGE FOR PLASTIC RECEPTACLES

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Fig. 1

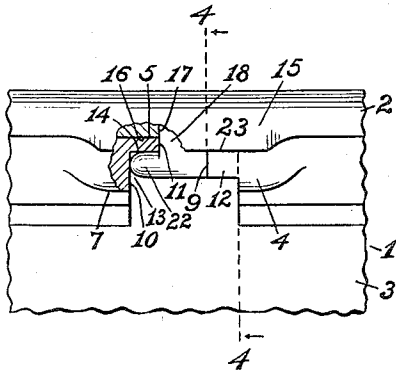


Fig. 2

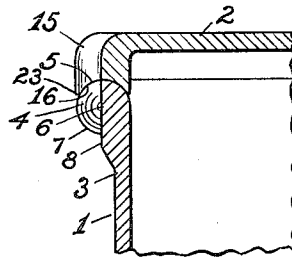


Fig. 3

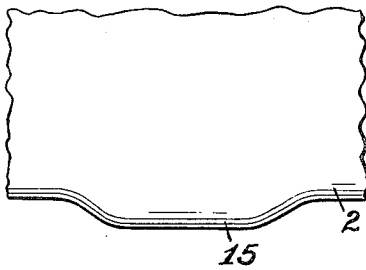


Fig. 4

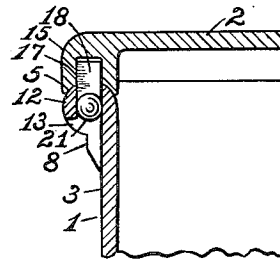


Fig. 5

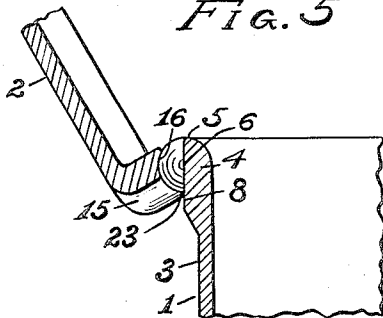
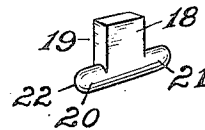


Fig. 6



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HINGE FOR PLASTIC RECEPTACLES

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1

This invention relates to hinges for boxes made of plastic material and more especially to plastic hinges.

The main object of the invention is to provide a box or case of plastic material and a cover of the same material so hinged thereto that the cover, in its opening movement, will not become disconnected from the box.

Another object of the invention is to provide a box and cover of the above character, in which the body of the box and the cover are each produced with integral parts for cooperating to form the hinge.

A further object of the invention is to provide a box and cover of plastic material, each having integral hinged parts joined together by a separate member.

For a clear understanding of the invention, reference will be had to the following description and accompanying drawings, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings,

Figure 1 is a rear view of a fragmental portion of the body of a box and the cover therefor with the hinge constructed in accordance with my invention,

Fig. 2 is an end view of same,

Fig. 3 is a plan view,

Fig. 4 is a sectional view taken on line 4—4 of Fig. 1,

Fig. 5 is a similar view to Fig. 2, the cover being open, and

Fig. 6 is a perspective view of the connecting member.

Referring to the drawings, 1 is a portion of the body of a box or similar receptacle made of plastic material and 2 a cover for the same and made of the same material. In plastic articles of this type and when it is desirable to provide a hinge or hinges for the cover, it is an advantage to be able to form the hinges at the time of molding the parts to be hingedly connected together. For accomplishing same in accordance with this invention, the upper portion of the rear side portion 3 of the body of the box is enlarged at 4 and the upper edge thereof is rounded at 5 on the arc of a circle struck from a center point 6 and continuing at the rear under side 7 to a longitudinal face 8. At the rear side of the enlarged portion 4 of the side portion 3 of the body of the box where each hinge is to be located, said enlarged portion for its entire height is cut out vertically at 9 and said cut out portion is further widened at its lower end as at 10 leaving lateral bosses 11 and 12. Extending from the under

2

side of each of the bosses 11 and 12 is an eye opening 13, which terminates in the arc of a circle also struck from the center point 6 and indicated at 14.

The rear edge of the cover 2 is enlarged to the same thickness as the enlarged upper portion 4 of the body of the box at a point corresponding to the location of each hinge as at 15, and the under side thereof is provided with a recess 16 on the arc of a circle corresponding to the arc 5 of the upper edge of the body of the box for serving as a complementary part of the hinge. For connecting the hinge portion 15 of the cover to the hinge portion 4 of the body of the box, the portion 15 is provided with a rectangular recess 17 of the same width as the cut out portion 9 of the body of the box, and extending upwardly from its under side for receiving the shank 18 of a member 19 having oppositely extending pintles 20 and 21 adapted to pass between the sides of the recess 10 and into the eye openings 13 of the bosses 11 and 12. The connecting member 19 is also made of plastic material and the pintles 20 and 21 thereof are in cross section the same diameter as the thickness of the shank 18 and have ball ends shown at 22.

To attach the cover 2 to the body of the box 1, the cover is first placed in proper position upon the body of the box for closing same. A suitable adhesive is applied to the walls of the recess 17 or to the upper end portion of the shank 18 of the connecting member 19, and then said member is placed in position by passing the shank 18 thereof vertically up through the cut out 9 between the bosses 11 and 12 of the body of the box and the pintles 20 and 21 through the lower wider recess 10, and finally forcing said shank into the recess 17 of the cover and said pintles into the eye openings 13 of said bosses until said pintles engage the upper ends or surfaces 14 of said eye openings. When the adhesive applied to the recess 17 or to the shank 18 becomes set or acting as a solvent between the plastic surfaces, the connecting member 19 is securely fixed to the cover 2, thereby connecting the cover to the body of the box and forming the hinge. As the connecting member 19 serves to hold the surface of the recess 16 of the cover 2 in contact with the rounded surface 5 of the body of the box and also the pintles 20 and 21 in contact with the surfaces 14 of the eye openings 13 in permanent relation, the cover and the connecting member fixed therein will not become dislodged from the body of the box in the opening and closing movements of said cover. The cover 2 is limited in

3

its opening movement, slightly beyond its fully open position, due to the lower rear edge 23 of the enlarged portion 15 thereof engaging the rear face 8 of the body of the box.

From the drawings and description, it is apparent that a simple and practical hinge for a box made of plastic material may be provided by molding hinge portions as parts of the body of the box and the cover at the time of making same, and connecting said hinge portions by a plastic member. And that the cover will be so connected to the body of the box that it will not become disconnected or dislodged therefrom even upon its opening or closing movements. Also that the cover will be held in a limited open position.

Having fully described my invention, what I claim is:

1. In a box made of plastic material, a body, a cover for the body, the body having a rear side, the rear side having a rounded upper edge, the cover having a rear edge, the rear edge of the cover having a rounded recess adapted to receive said rounded upper edge of the body, said rear side of the body having a vertical cut out, bosses at the sides of the cut out, the bosses having eye openings, said rear edge of the cover having a recess in alinement with said cut out, a member, the member having pintles, and said member being fixed in said last mentioned recess of said rear edge of the cover and its pintles entering said eye openings for hingedly connecting said cover to said body.

2. In a box made of plastic material, a body, a cover for the body, the body having a rear side, the rear side having a rounded upper edge, the cover having a rear edge, the rear edge of the cover having a rounded recess adapted to receive said rounded upper edge of the body, the rear edge of the cover having an upwardly extending vertical recess, the rear edge of the body having eye openings, a member, the member consisting of a shank and a pair of oppositely extending pintles, and the shank of said member being fixed into said upwardly extending vertical recess of the cover and its pintles entering said eye openings for hingedly connecting said cover to said body.

3. In a box made of plastic material, a body, a cover for the body, the body having a rear side, the rear side having a rounded upper edge, the cover having a rear edge, the rear edge of the

4

cover having a rounded recess adapted to receive and fit over said rounded upper edge of the body, said rear side of the body having a vertical cut out, the cut out extending upwardly and being widened at each side of its lower end, said cover having a vertical recess registering with said cut out of the body, a member, the member having a shank, the shank having lateral pintles at its lower end adapted to enter said widened portion of said vertical cut out of the body, and said shank of said member being fixed in said recess of the cover and its pintles hingedly connecting said cover to said body.

4. In a box made of plastic material, a body, a cover for the body, the body having a rear side, the rear side being enlarged at its upper edge, the rear side having a rounded upper edge, the cover having a rear edge, the rear edge of the cover having a rounded recess adapted to receive and fit over said rounded upper edge of the body, said enlarged upper edge of the side of the body having a vertical cut out for its entire height and said cut out being widened at each side at its lower end, said cover having a vertical recess above and opposite said vertical cut out of the body, a member, the member having a shank adapted to enter from below said vertical cut out of the body and said vertical recess of the cover, the shank having a pair of oppositely extending lateral pintles adapted to enter said widened cut out of the body, said rounded upper edge of the body and said rounded recess of the cover being struck from the center point of said pintles, and means securing the upper end of the shank of said member in said vertical recess of the cover for hingedly connecting said cover to said body.

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