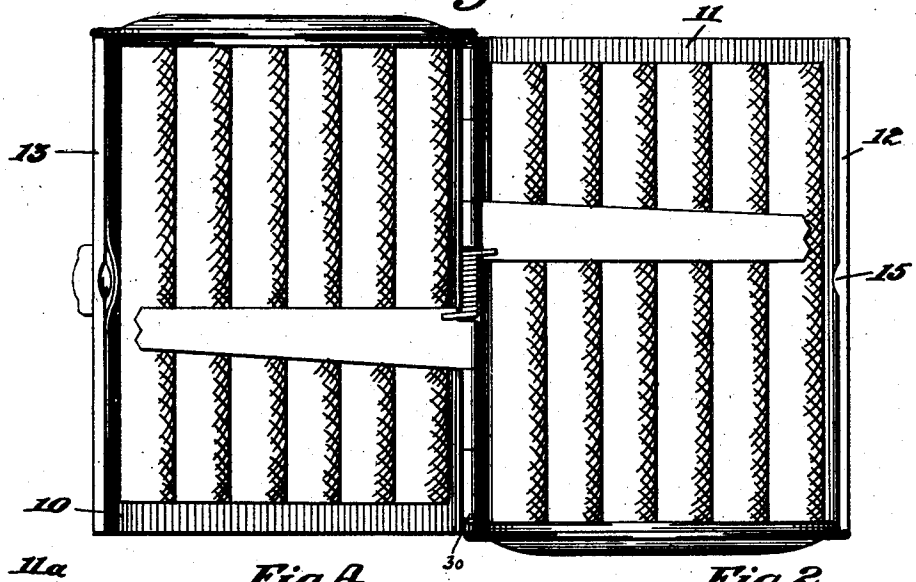
July 23, 1935. I. M. JOHNSON 2,009,180

RECEPTACLE AND METHOD OF MAKING SAME

Filed July 25, 1934

Fig. 1.



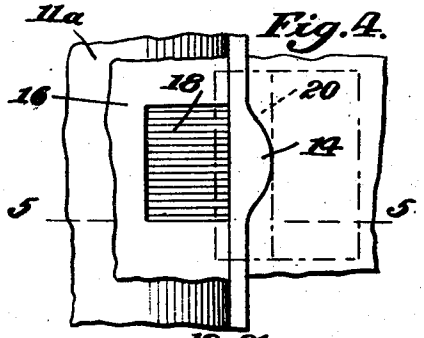
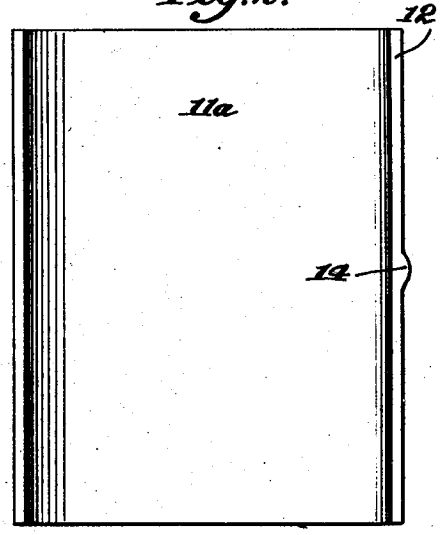


Fig. 4.

Fig. 2.



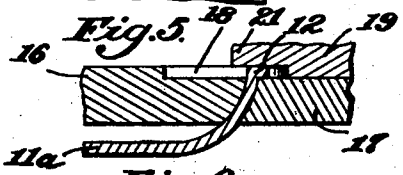


Fig. 5.

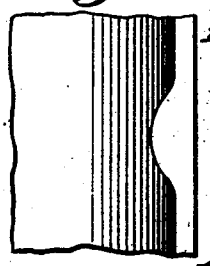


Fig. 6.

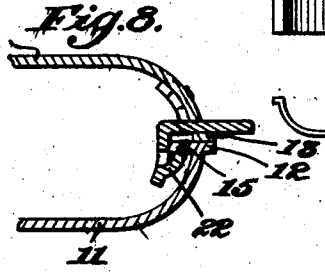


Fig. 8.



Fig. 3.

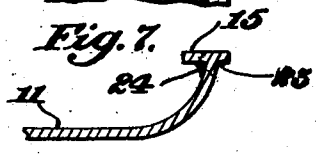


Fig. 7.

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RECEPTACLE AND METHOD OF MAKING SAME

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Application July 25, 1934, Serial No. 736,942

12 Claims. (Cl. 29—148.2)

While the invention is not entirely confined thereto it has to do with receptacles which in general are made up of two or more parts which come into face to face engagement with each other. In such structures it is common to provide means for holding the parts in position to close the receptacle. This may contemplate a latch, sometimes spring controlled, on one member and a catch or keeper for the latch appropriately positioned on the other member. The keeper frequently extends inward and may present no projecting portion on the surface of the receptacle. It is frequently desirable that the contacting edges of the members of the receptacle closely and neatly engage each other throughout their entire extent including that portion at which is located the latch and the keeper it engages. In many devices as made the keeper causes an irregularity in the engaging line so that either there is an opening at the keeper or a projection at the keeper causing the parts to be more or less out of engagement throughout a part or all the rest of the facing edges. This has in some instances caused manufacturers to insert a liner in the receptacle at one or both sides of the meeting edges. The liner ordinarily has plain, smooth, regular engaging contact surfaces but may be so formed on the side engaging the members of the receptacle as to accommodate any irregularities present such for instance as the irregularity caused by the keeper. Sometimes keepers are made separate from the members of the receptacle and are welded, riveted or otherwise attached thereto. Sometimes when the keeper made integral with the member and projecting therefrom in the blank the keeper itself is turned in for the finished article. This naturally causes the thickness of the metal of the keeper to rise above the adjacent edge. In order to overcome this the member is sometimes nicked at the sides of the keeper and the keeper then turned in as near as may be in line with the edge or a little below. All of these methods have undesirable characteristics to overcome which is a purpose of the present invention.

The present invention contemplates providing an original blank from which the member is to be made having an integral projecting portion corresponding to the keeper. Such members are ordinarily made of relatively thin sheet metal and consequently in the blank the keeper portion lies in substantially the same plane as the adjacent edge of the member. Such a blank may be so treated as to cause the projecting keeper portion to be displaced inwardly while maintaining it in substantially the same plane and without bending or turning. During this operation preferably the other portions of the member will be held against deformation and the only deformation allowed to take place will be that in the keeper portion itself. Such a formation may to some extent tend to disturb the metallic structure and may tend to somewhat weaken in part the connection between the member and the keeper. Ordinarily this slight structural change will not be of consequence since there will remain sufficient strength in the junction between the keeper and the member to retain the keeper in its position for practical purposes. In some instances it may be found desirable possibly from an abundance of caution to reinforce the finished junction at least in part.

It will be understood that the invention is capable of application to many situations. For illustrative purposes it may be shown and described in connection with a cigarette case of a particular construction with the general details of which the present invention is not concerned.

In the accompanying drawing Figure 1 shows a plan view of a cigarette case embodying the invention, the case being illustrated open. Fig. 2 is a plan view of a blank from which may be made the member of the case carrying the keeper. Fig. 3 is an end view of the blank illustrated in Fig. 2. Fig. 4 is a fragmentary plan view of the blank in dies for forcing the keeper inward. Fig. 5 is a fragmentary vertical sectional view on the line 5—5 of Fig. 4. Figs. 6 and 7 are respectively fragmentary plan and sectional view showing the finished keeper. Fig. 8 is a fragmentary transverse sectional view of a closed receptacle taken through the latch and cooperating keeper.

The cigarette holder illustrated comprises two sections 10 and 11 hinged together at 30. In Figs. 2 and 3 is shown a blank 11a which as illustrated includes a curved body portion and an edge member 12 which has a smooth transverse contact with the corresponding edge member 13 of the member 10. Projecting from the edge member 12 is a small portion 14, here shown as curved, which is eventually to become the inwardly extending keeper 15 illustrated on the member 11 in Figs. 1, 6, 7 and 8. As illustrated in Figs. 4 and 5 the blank 11a may be supported by an internal die member 16 and an external die member 17. The die member 17 may be properly formed to engage the outer surface of the blank 11a and fits under the edge member 12 having a smooth surface in the plane of the under-edge of the member 12.

The internal die member 16 is shaped to engage the other side of the member 11a and has its upper surface in substantially the same plane with the upper surface of the edge member 12. The upper side of the die member 16 is provided with a recess or cavity 18 opposite the projecting portion 14 and corresponding in depth to the thickness of the member 15. Cooperating with the die members 16 and 17 which engage and hold the blank 11a may be a third die member 19 which rests upon and is movable upon the upper surface of the die member 17. In its lower surface the die member 19 has a recess 20 extending from end to end of a depth corresponding to the thickness of the projecting portion 14 and the extending edge member 12. This provides a projecting front portion 21 to the die member 19 which overhangs and rests upon the edge strip 12 and the projecting portion 14. With the apparatus in the position indicated in Figs. 4 and 5 the die member 19 may be forced to the left until the edge of its recess comes into contact with the edge of the edge strip 12. This movement will force the projecting portion 14 inwardly and into the recess 18. At the same time the upper and lower die members will prevent the projecting portion from either rising or falling so that it remains during this movement into its final position in substantially the plane of the edge member 12. This operation will cause the projecting portion 14 to become the inwardly extending keeper 15 as indicated in Figs. 6 and 7. As indicated in Fig. 8 in the completed structure when closed the catch member 22 carried by the member 10 may engage the keeper 15 and hold closed the receptacle with the edge member 13 of the member 10 throughout its entire length in substantially exact contact with the edge member 12 of the member 11. The structure associated with the catch 22 need not be described but it may be resiliently mounted as on springs in any appropriate well known manner.

The movement of the die member 19 deforms the projecting portion 14 and may tend to interfere with the structural integrity of the metal at the point indicated by 23 in Fig. 7. This may occur particularly at the middle of the projecting portion 14 where the flow of the metal is greatest. While ordinarily this may not materially interfere with the integrity or strength of the structure it may be desired at times to reinforce the joint by solder or other suitable means as indicated at 24 in Fig. 7.

It will be noted that the figures of the drawing have not all been made upon the same scale some having been made larger in an effort to more clearly indicate details. It is to be understood, however, that the sizes and proportions form no part of the present invention which may be embodied in many different structures of varying sizes in accordance with the purposes or desires of one employing the invention. Likewise the projection 14 may be pushed or forced inwardly by any other suitable means, the specific dies 16, 17 and 19 shown not being essential to the invention.

I claim as my invention:

1. A cigarette case comprising two members each adapted to receive and hold cigarettes, a hinge between the members allowing them to close and bring the sides holding the cigarettes facing each other, a latch on the engaging edge of one member, and an integral keeper for the latch on the adjacent edge of the other member, said keeper having been made from a projection pressed inwardly while being held against bending.

2. A receptacle comprising two members, a hinge between the members allowing them to close together, a latch on the engaging edge of one member, and an integral keeper for the latch on the adjacent edge of the other member, said keeper having been made from a projection pressed inwardly while being held against bending.

3. A receptacle comprising two members adapted to close together, a latch on one member, and an integral keeper for the latch on the adjacent edge of the other member, said keeper having been made from a projection pressed inwardly while being held against bending.

4. Stamping and shaping a member of a receptacle with a projection in the plane of one edge, and forcing the projection only inward in the same plane to act as a catch for closing the receptacle.

5. Stamping and shaping a member of a receptacle with a projection, holding all the member but the projection against deformation, and forcing the projection inwardly to act as a catch for closing the receptacle.

6. Stamping and shaping a member of a receptacle with a projection, and forcing the projection inward while holding it against bending to act as a catch for closing the receptacle while holding the rest of the member against deformation.

7. Stamping and shaping a member of a receptacle with a projection in the plane of one edge, holding against deformation all the member except the projection, and forcing the projection inward in the same plane to act as a catch for closing the receptacle.

8. Stamping and shaping a member of a receptacle with an outwardly extending rib at one edge having a projection therefrom, holding against deformation all the member except the projection, and forcing the projection inwardly in substantially the same plane to act as a catch for closing the receptacle.

9. Stamping and shaping a member of a receptacle with an outwardly extending rib at one edge and a projection in the plane of the rib, and forcing the projection only inward in the same plane.

10. Stamping and shaping a member of a receptacle with an outwardly extending rib at one edge and a projection in the plane of the rib, holding against deformation all the member except the projection, and forcing the projection inwardly in the plane of the rib.

11. Stamping and shaping a member of a receptacle with a projection, and forcing the projection only inward while held against bending to form an inwardly extending projection.

12. Stamping and shaping a member of a receptacle with an outwardly extending portion to form a catch and forcing the portion inward while holding it against bending to act as a catch for closing the receptacle.

IVER M. JOHNSON.