O. KATZENBERGER.

HINGE.

APPLICATION FILED SEPT. 1, 1910.

984,926. Patented Feb. 21, 1911.

Fig. 1,

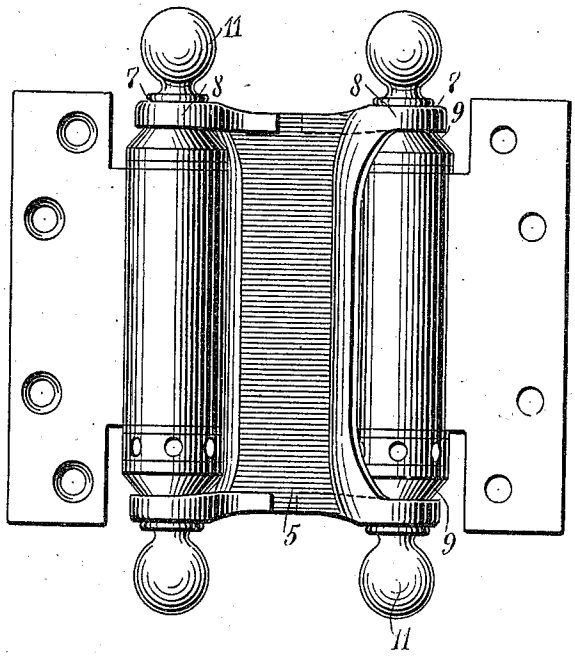


Fig. 2,

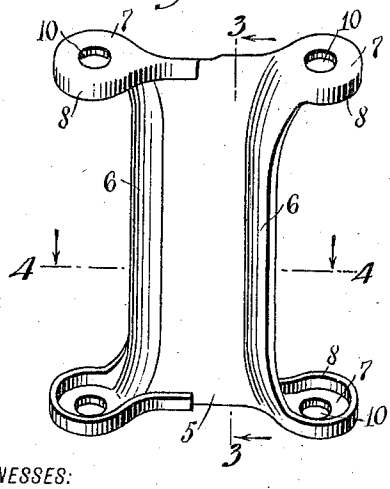


Fig. 3,

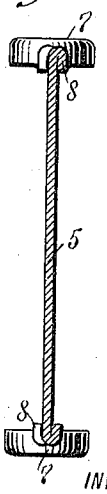
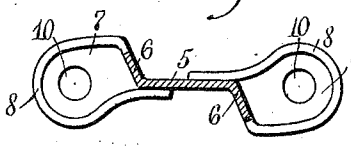


Fig. 4.



WITNESSES:

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HINGE.

984,926. Specification of Letters Patent. Patented Feb. 21, 1911.

Application filed September 1, 1910. Serial No. 580,005.

To all whom it may concern:

Be it known that I, OSCAR KATZENBERGER, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Hinge, of which the following is a full, clear, and exact description.

The invention is an improvement in hinges, especially such as are known as "jamb" hinges, and has in view a hinge leaf, ordinarily the center or intermediate leaf, which is adapted to be stamped from a one-piece blank of sheet metal or material and provide such reinforcement for the oppositely-arranged knuckles as to make it impossible to break or bend them from the body of the leaf under ordinary strain. To this end I stamp from and at an acute angle to the blank, at one or both longitudinal edges, according to the position of the leaf in the hinge, a flange, the flanges when stamped from both edges of the blank, as for a center leaf, being oppositely turned. From the ends of each flange and body of the blank I stamp oppositely-arranged cupped knuckles, with the flanges of the knuckles continuous with the edge of the longitudinal flange at one side of the leaf, and extended inwardly of the said flange and folded from the leaf body to the opposite side of the leaf.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is an outer face view of a jamb hinge having a hinge leaf embodying my improvements; Fig. 2 is a perspective view of the leaf; Fig. 3 is a vertical section of the same on the line 3—3 of Fig. 2, looking in the direction of the arrows; and Fig. 4 is a cross-section of the leaf on the line 4—4 of Fig. 2.

In order to illustrate the nature and application of my improvements, I have selected a jamb hinge, as shown in Fig. 1, the same embodying three leaves, with the intermediate leaf 5 constructed in accordance with my invention. This leaf is stamped from a one-piece blank of sheet metal, the blank in the manufacture of the leaf having a longitudinal flange 6 stamped from each edge or outer portion, the flanges being reversely directed from the body or intermediate portion of the blank and each making an acute angle therewith of about 45°. From the end portions of each flange and the intermediate body portion are stamped oppositely-arranged cupped knuckles 7, the marginal flanges 8 of these knuckles at one side of the hinge being continuous with the edge of the flange 6, as shown in Figs. 1 and 2, and at the opposite side of the hinge, as best shown in Figs. 2 and 3, extended inwardly beyond the flange and folded against the intermediate body portion. As this portion of the flange is integral with the intermediate body portion at the edge, and the opposite portion of the flange integral with the longitudinal flange 6, and these portions of the flange spaced a substantial distance apart, a considerable reinforcement is given to the knuckle along the line where it joins the hinge body, whereby it is not possible to break the knuckle off under ordinary strain. As the weight of the entire door is borne by the knuckles, it is obviously important that they be constructed and joined to the body of the hinge in a substantial way. Each flange 6, it will be noted, adjacent to the knuckle inclines or curves away from the center of the hinge, which allows the outer face of the knuckle and the face of the flange to gradually blend into each other without forming a weakened angle. This curving or inclining of the flange ends also adapts them to conform to the cone or tapered bearings 9 of the connecting hinge leaf. That portion of the flange 8 of each knuckle which is folded against the intermediate or body portion of the hinge not only insures a strong union between the knuckle and leaf, but also increases the rigidity of the hinge body. The folded portion of the flange 8 of one knuckle, as shown, is folded over at one side of the hinge body, whereas the knuckle at the opposite edge of the hinge is folded against the opposite side of the body, this obviously being brought about by reason of the bending of the flanges 6 in opposite directions. The knuckles 7 are provided with the usual central openings 10 for the passage of the hinge pintles 11.

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

In a hinge, a leaf comprising a body portion, a flange stamped from each edge and reversely directed from the longitudinal edges of said body portion, oppositely arranged cup knuckles extending from and

integral with the ends of each of said flanges, and flanges on said knuckles integral with their adjacent flanges and bent back against said body, constituting a reinforcement for the knuckles along the line where they join the body, whereby pressure on the knuckles is transmitted directly along the flanges to the body portion.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OSCAR KATZENBERGER.

Witnesses:
LEO. E. ZECK,
OLGA LUND.