No. 693,546. Patented Feb. 18, 1902.

C. M. JOHNSON.

HINGE.

(Application filed Nov. 11, 1901.)

(No Model.)

Fig. 2.

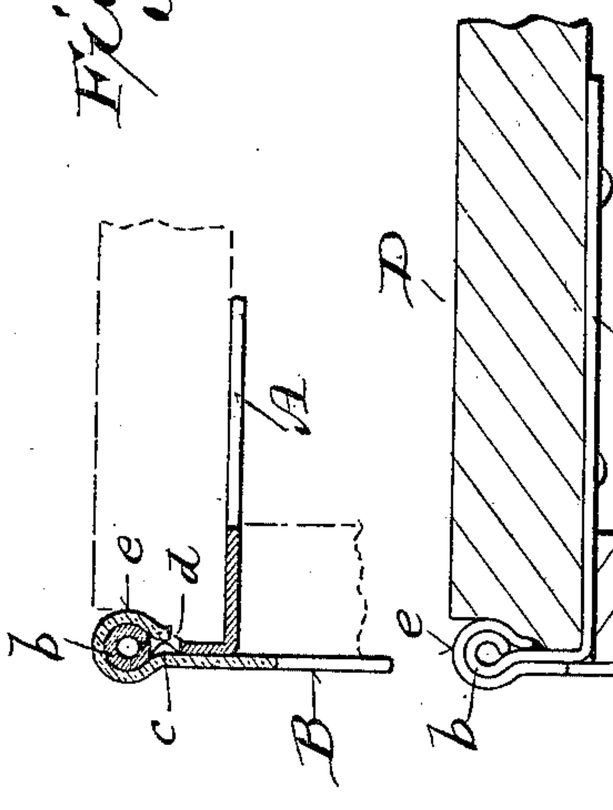


Fig. 1.

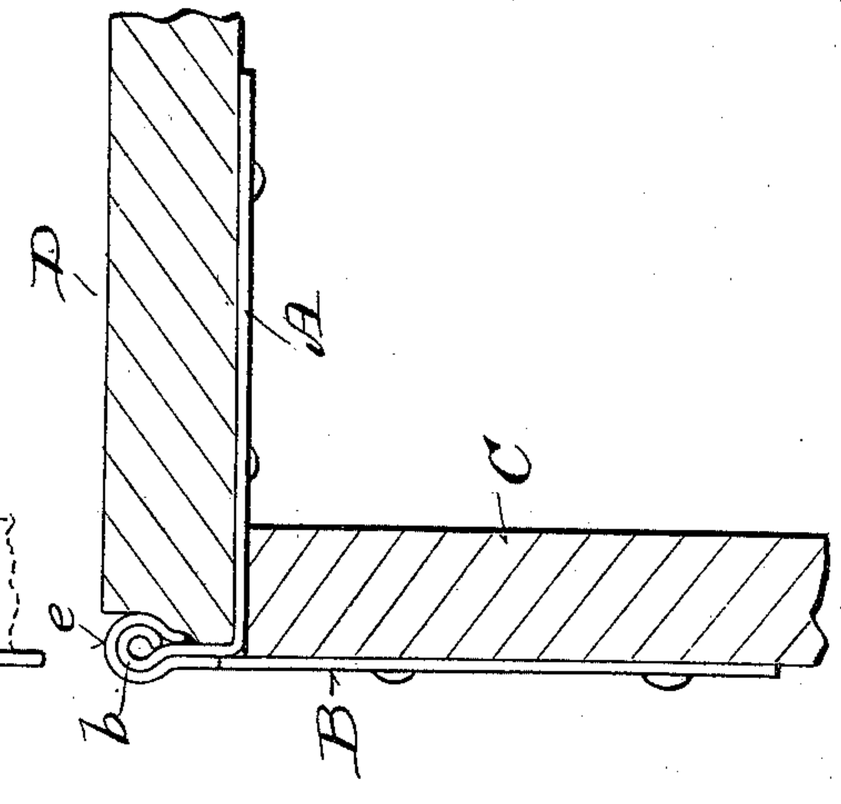


Fig. 3.

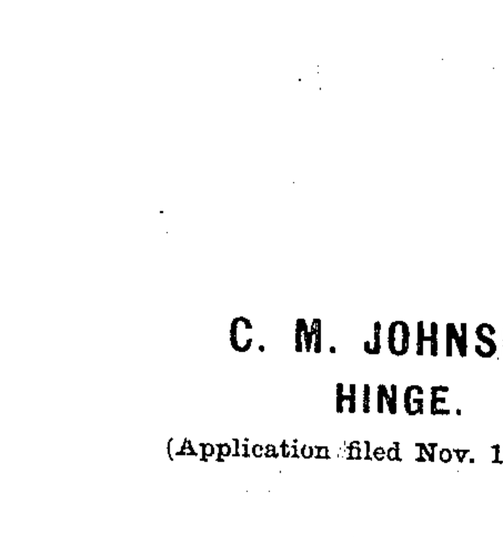
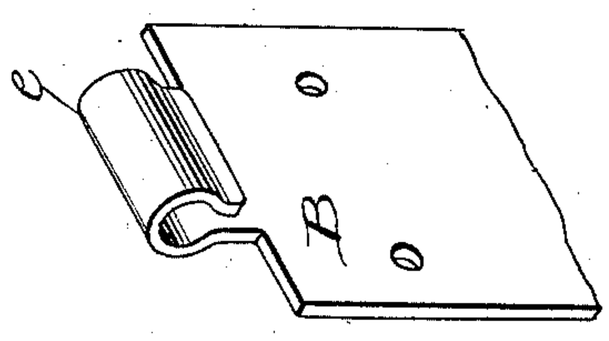


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES M. JOHNSON, OF MILWAUKEE, WISCONSIN, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-HALF TO CHARLES H. COAKLEY, WILLIAM F. COAKLEY, AND STEPHEN S. CRAMER, OF MILWAUKEE, WISCONSIN.

HINGE.

SPECIFICATION forming part of Letters Patent No. 693,546, dated February 18, 1902.

Application filed November 11, 1901. Serial No. 81,833. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. JOHNSON, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Hinges; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to save lids, hinges, and repair of packing-boxes that are made for return to shippers, such boxes being especially common in the bottled-beer trade; and it consists in simple economical hinges that are not susceptible to strain from swung-back box-lids in connection therewith, one of said hinges being hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a sectional view of portions of a box wall and lid connected by a hinge in accordance with my invention; Fig. 2, a partly-sectional view of a fragment of the hinge, and Figs. 3 and 4 perspective views of the joint ends of the hinge-sections.

Referring by letter to the drawings, A indicates one section of my improved hinge made from sheet-steel, the joint end of this hinge-section being offset at a right angle to the remainder thereof and recurved to form a pintle-roll *b*, a slot *c* being provided in said joint end of the hinge-section central of same adjacent to the pintle parallel therewith. Under the pintle-roll *b* and in line with the slot *c* a portion of the joint end of the aforesaid hinge-section is shown bent to form a shoulder *d* for the purpose hereinafter specified. The other sheet-steel section B of the hinge is cut away at the joint end thereof to provide a tongue bent to form an open knuckle *e* engageable with the pintle-roll and slot of the former section.

To assemble the hinge, pintle-roll *b* of section A is slipped into knuckle *e* of section B and slot *c* of the former section brought into register with said knuckle. If the joint end of section A be provided with a shoulder *d*, as herein shown, the pintle-roll *b* of said section can only enter the knuckle *e* of the other section at the extremity farthest from said shoulder, the latter serving as a stop to prevent movement of said pintle-roll farther than is necessary to bring slot *c* into register with said knuckle, this registration of slot and knuckle being necessary to the flexure of the hinge. With a pair of hinges the shoulder *d* of one will be provided at the right and of the other at the left, so that when said hinges are assembled and utilized to connect a box wall and lid the latter will be held against endwise play when swung down.

Both sections of the hinge are provided with apertures through which to drive screws or nails into a box wall and lid, and while I have described said hinge-sections as preferably made from sheet-steel they may be castings, malleable or otherwise.

As herein shown, hinge-section B may be made fast on the outside of a box-wall C and hinge-section A likewise connected to a box-lid D on the under side of same; but it is practical to so arrange the hinge that both sections will be for the most part inside, section A in such an instance being in connection with the box-wall and section B with the box-lid. In either case the box-lid will swing back clear of the box-wall to which it is connected and not strain on the hinge or said wall, it being possible, where there is sufficient clearance, to swing said lid back and down behind the box. The box-lid being closed, the joint end of angular hinge-section A is on a plane parallel to the straight hinge-section B, the remainder of said angular section being at a right angle to said straight section.

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

1. A hinge having a right-angle section and a straight section one of which has a knuckle in engagement with a rounded edge and a slot of the other, the plane of the joint end of the angular section being parallel to the straight section and the remainder of said angular section at a right angle to said straight section when the hinge is closed.

2. A hinge having a right-angle section and

a straight section one of which has an open knuckle engageable with a rounded edge and a slot of the other against a shoulder of same in line with its slot, the plane of the joint end of the angular section being parallel to the straight section and the remainder of said angular section at a right angle to said straight section when the hinge is closed.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

CHARLES M. JOHNSON.

Witnesses:
N. E. OLIPHANT,
B. C. ROLOFF.