

No. 684,074.

Patented Oct. 8, 1901.

V. C. LUPPERT.  
FRICTION HINGE.

(Application filed June 25, 1901.)

(No Model.)

Fig. 1.

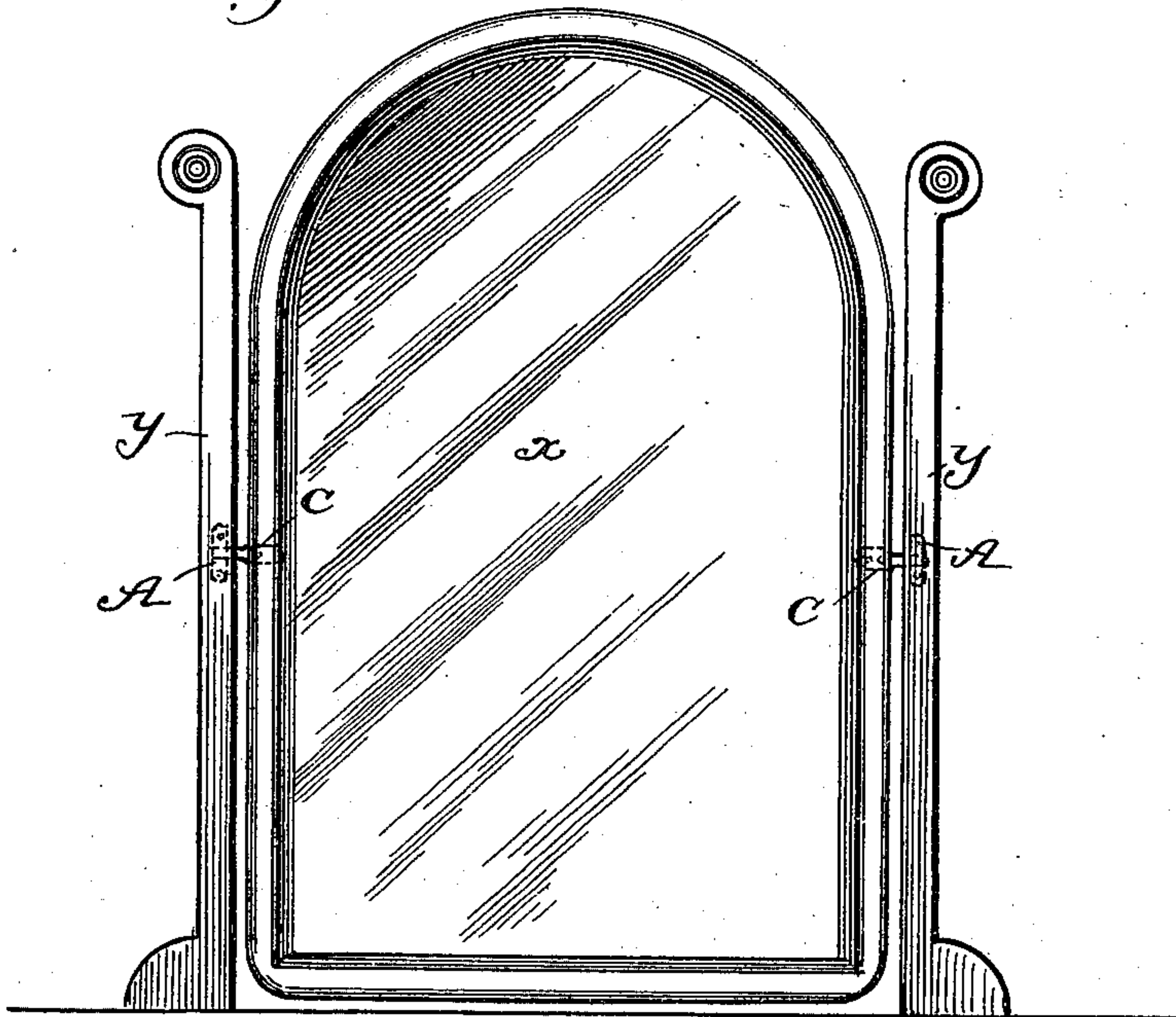
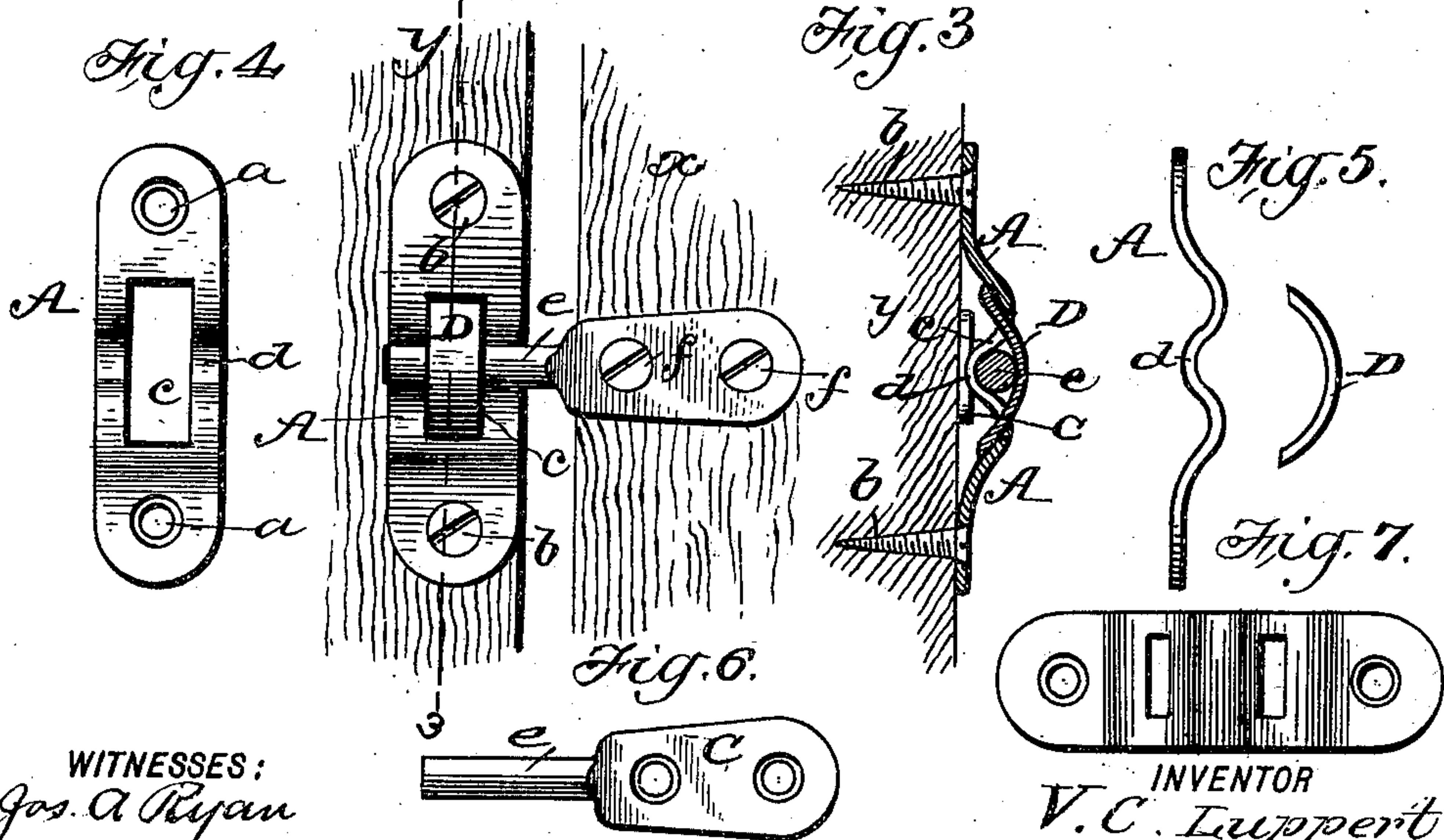


Fig. 2.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

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## FRICTION-HINGE.

SPECIFICATION forming part of Letters Patent No. 684,074, dated October 8, 1901.

Application filed June 25, 1901. Serial No. 65,960. (No model.)

*To all whom it may concern:*

Be it known that I, VALENTINE CHARLES LUPPERT, a citizen of the United States, residing at South Williamsport, in the county of Lycoming and State of Pennsylvania, have made certain new and useful Improvements in Friction-Hinges, of which the following is a specification.

My invention is an improvement in that class of friction-hinges which are particularly adapted for supporting mirrors, swinging screens, transoms, &c., where it is desirable that the same may be prevented from movement after being set in a certain position or at a certain angle.

The invention is embodied in the construction, arrangement, and combination of parts hereinafter described, and illustrated in the accompanying drawings, in which—

Figure 1 is a front view of a bureau-mirror supported by my improved hinge. Fig. 2 is an enlarged rear view of the hinge and adjacent portions of the mirror-frame and standards or supports. Fig. 3 is a section on the line 3 3 of Fig. 2. Fig. 4 is a plan view of the larger spring leaf or plate comprising the hinge proper. Fig. 5 is an edge view of the two leaves or parts of the hinge proper. Fig. 6 is a plan view of the pintle. Fig. 7 shows a modification.

The larger leaf or plate A of my hinge is provided with a hole *a* at each end for the reception of a fastening-screw *b* and with a central longitudinal slot *c*. The said leaf or plate is also corrugated transversely, as shown best in Figs. 3 and 5. There are three corrugations, the central one, *d*, forming practically half of the socket, in which the cylindrical tenon *e* of the pintle C works. The smaller leaf or plate D is curved upon the arc of a circle and made of such length and size that it may be inserted in the slot *c* of the plate A and its ends will project beneath the adjacent edges, forming the ends of the slot. The tenon *e* of the pintle C lies between the plate D and the central bend *d* of plate A. Both the plates A and D are constructed of spring material, and their relative curvature is such that the pintle C is pressed firmly between them, so that considerable force is required to rotate it. The pintle C being secured to the mirror-frame

by screws *f*, as shown best in Fig. 2, it is apparent that the mirror will be held fixed at any angle at which it may be placed, but that it may be easily adjusted or turned from one angle to another, owing to the leverage which its length affords.

It is a distinguishing feature of my invention that the main spring plate or leaf A has a general curvature between its perforated ends or end portions, whereby its central portion or corrugation *d* is held out of contact with the surface to which the plate is attached. Thus, as shown in Fig. 3, the central corrugation *d* is separated from the standard Y by a narrow space, and the tenon *e* of the pintle C is offset laterally, as required, to adapt it to such construction and arrangement. From this it results that the pressure applied to the pintle is in no way dependent upon the screws *b*, which secure the plate A in place; but the pintle is held by an elastic but firm pressure by means of the two coacting springs A and B. It is apparent that this pressure may be varied at will by increasing or lessening the curvature of either of the plates or leaves, especially the plate D, or by increasing the thickness, and thereby lessening the elasticity, of the plates or by increasing the diameter of the pintle *e*. It is apparent that it is the ends of the slot which alone have any functional relation to the smaller leaf D, and it is therefore obvious that it is not necessary that the slot shall be extended through the central corrugation or bend *d*, since it would suffice if narrow slots were formed on opposite sides of said bend for the reception of the plate B, as shown in Fig. 7. In such case the smaller leaf will be less curved than in the construction first described. It is further obvious that from a functional standpoint it is immaterial whether the pintle be attached to the movable part and the hinge proper to the fixed part, or vice versa.

The hinge is exceedingly simple in construction and may be manufactured at small cost, while it is easily applied and very effective in use.

What I claim is—

1. The combination, with a pintle attached to a swinging frame, of a friction hinge or holder comprising a spring plate or leaf, hav-

ing a transverse corrugation or bend, and a slot extending on opposite sides of said slot, and a smaller leaf adapted for insertion in said slot and engagement at the ends thereof, the said plates applying elastic pressure to the pintle which is held between them, substantially as shown and described.

5. 2. As an improved article of manufacture, the hinge proper composed of a main plate having a transverse bend and a slot or opening on each side of the same, and a curved spring plate or leaf adapted to enter said slot and be engaged with the larger plate, as and for the purpose specified.

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Witnesses:

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