No. 686,025. Patented Nov. 5, 1901.

J. M. CANNON.

DOOR HINGE.

(Application filed Feb. 8, 1901.)

(No Model.)

Fig. 1.

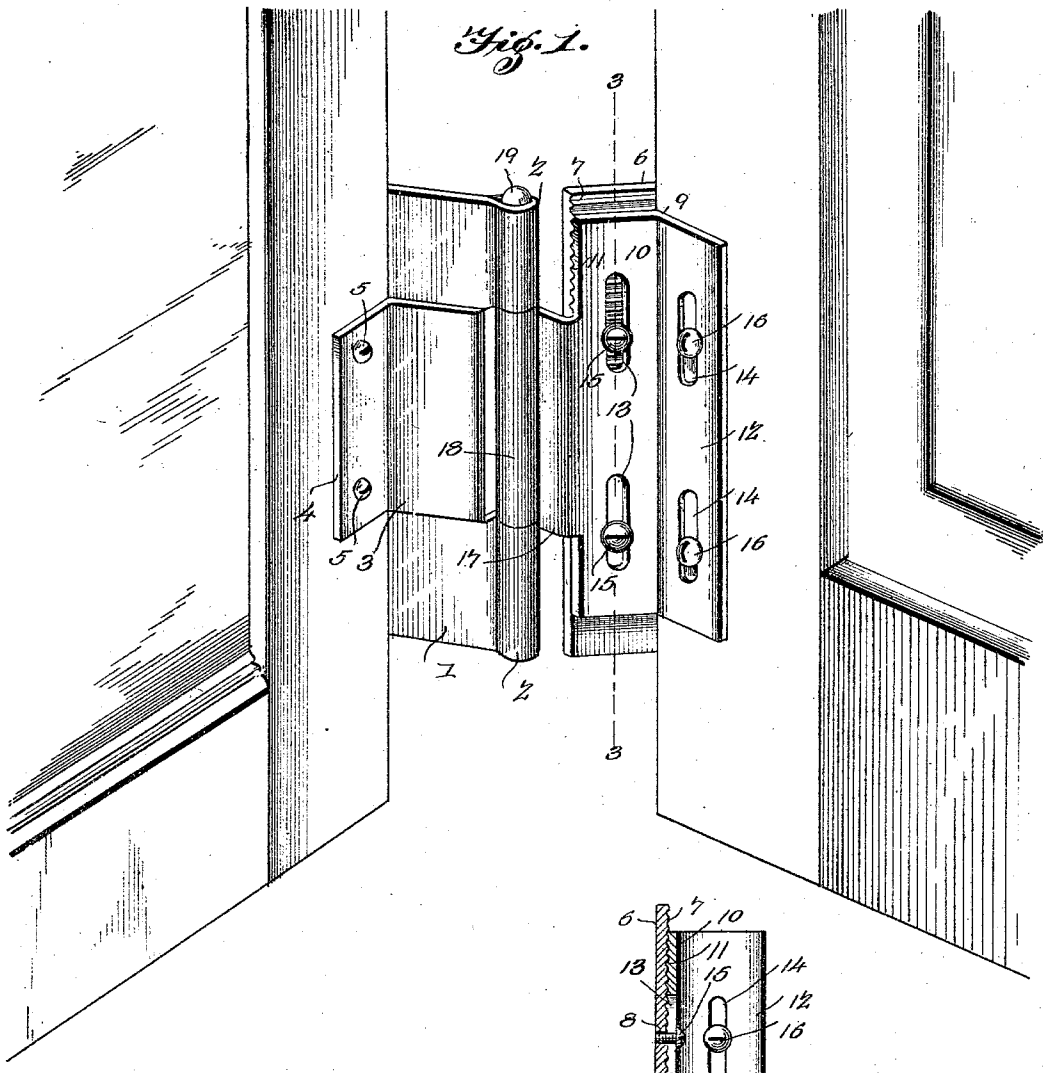


Fig. 2.

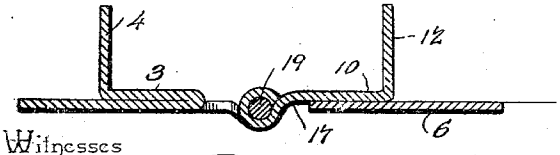
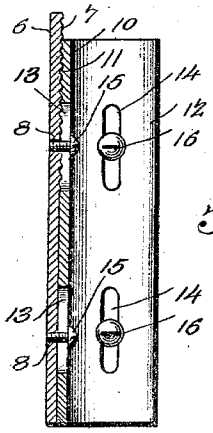


Fig. 3.



Witnesses
Jos. P. Dondero
Chas. D. Hoyer.

By his Attorneys.
J. M. Cannon Inventor
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

JOSEPH M. CANNON, OF BOWEN, ILLINOIS, ASSIGNOR OF ONE-HALF TO SAMUEL H. RAMSEY, OF BOWEN, ILLINOIS.

DOOR-HINGE.

SPECIFICATION forming part of Letters Patent No. 686,025, dated November 5, 1901.

Application filed February 8, 1901. Serial No. 46,563. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH M. CANNON, a citizen of the United States, residing at Bowen, in the county of Hancock and State of Illinois, have invented a new and useful Door-Hinge, of which the following is a specification.

This invention relates to hinges particularly adapted for doors and the like, and has for its object to provide a device of this class wherein vertical adjustment is possible without removing either leaf from the part to which it is attached, and also to reinforce the leaves and prevent the fastenings from working loose by removing a portion of the direct strain therefrom.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a door and frame, showing the improved hinge applied thereto. Fig. 2 is a horizontal section taken through the central portion of the connected hinge-leaves. Fig. 3 is a section on the line 3 3, Fig. 1.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a hinge-leaf, which is adapted to be secured to a suitable portion of a door-frame and provided with upper and lower knuckles 2 and a supplemental or bracing leaf 3, which is formed by bending back a centrally-cut strip of metal on the said leaf and close thereto and which has a right-angular securing-flange 4, through which fastenings 5 are passed into the frame and on a side of the latter in a plane at right angles to the part against which the main portion of the leaf 1 is secured, as clearly shown in Fig. 1. The purpose of this supplemental leaf is to prevent the fastening devices of the main leaf 1 from working loose by setting up a counter-brace to prevent pulling on the fastenings of the main leaf in an outward direction, and which arises from the weight of the door tending to drag or pull down the leaves attached to the frame or jamb. The other portion of the hinge comprises a leaf-plate 6, which is securely fastened to the edge of the door adjacent the leaf 1, and has on the upper portion of the inner surface a line of corrugations 7, and therein at a suitable distance apart two screw-threaded openings 8 are also formed and in vertical alinement, as more clearly shown by Fig. 3. In conjunction with the leaf-plate 6 an angle-leaf 9 is used, and one member 10 has the outer face at the upper portion also provided with a line of corrugations, as at 11, to interlock or coincide with the corrugations 7 on the leaf-plate 6. The other member 12 of this angle-leaf is in a plane at right angles to the member 10 and is fitted against the adjacent side portion or face of the door, both members 10 and 12 having pairs of vertically-alined slots 13 and 14 to receive headed screw-bolts 15 and 16, the bolts 15 engaging the screw-threaded openings 8 in the leaf-plate 6 and the bolts or screws 16 secured in the door. From the center of the angle-leaf 9 and extending away from the edge of the member 10 opposite to the position of the member 12 is a short arm 17, which terminates in a knuckle 18 of a length to rotatably and removably fit between the inner opposing ends of the knuckles 2 of the leaf 1 and be pivotally connected to the latter by a pintle 19.

In adjusting the door to compensate for warpage, shrinking, or settling the screw-bolts 15 and 16 are loosened sufficiently to permit the currogations 7 and 11 to become disengaged, and after the desired adjustment has been made the said bolts are again tightened up to draw the member 10 of the angle-leaf 9 close to the leaf-plate 6, so as to have the said corrugations again in close relation. It will be understood that the corrugations prevent the parts from slipping after being adjusted, and it will also be apparent that the supplemental bracing-leaf 3, carried by the leaf 2, will serve as an important auxiliary in bracing the said leaf 1 during the adjusting operation just explained and prevent the fastenings from working loose, no matter how often the adjustment may be changed, and without the said supplemental leaf it will be obvious that the continual manipulation of the adjustable leaf or portion of the same would tend to loosen the supporting-leaf extending from the frame or jamb.

To suit various applications, changes in the form, size, proportions, and minor details of

construction may be resorted to without departing from the principle of the invention.

Having thus described the invention, what is claimed as new is—

The combination with a door and support therefor, of a hinge comprising a hinge-leaf having a supplemental or bracing leaf formed by bending back a centrally-cut strip of metal from the said hinge-leaf, the latter being secured to the said support and the bracing-leaf standing outwardly at right angles to an intermediate portion thereof, a leaf-plate for immovable attachment to the end edge of the door and provided with locking corrugations extending transversely of one side thereof, an angle-leaf comprising right-angularly-disposed members, each of the latter having a pair of vertically-alined slots and the one adjustably attached to the door and the other formed with transversely-extending locking-corrugations to adjustably engage those of the leaf-plate, the member that adjustably interlocks with the leaf-plate having a portion thereof pivotally connected to the said hinge-leaf, and adjustable fastening devices for the said angle-leaf.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH M. CANNON.

Witnesses:
L. S. CROSSLAND,
GEO. W. NASH.