No. 794,454. PATENTED JULY 11, 1905.

G. H. DAVIS & J. W. BROWN.

HINGE.

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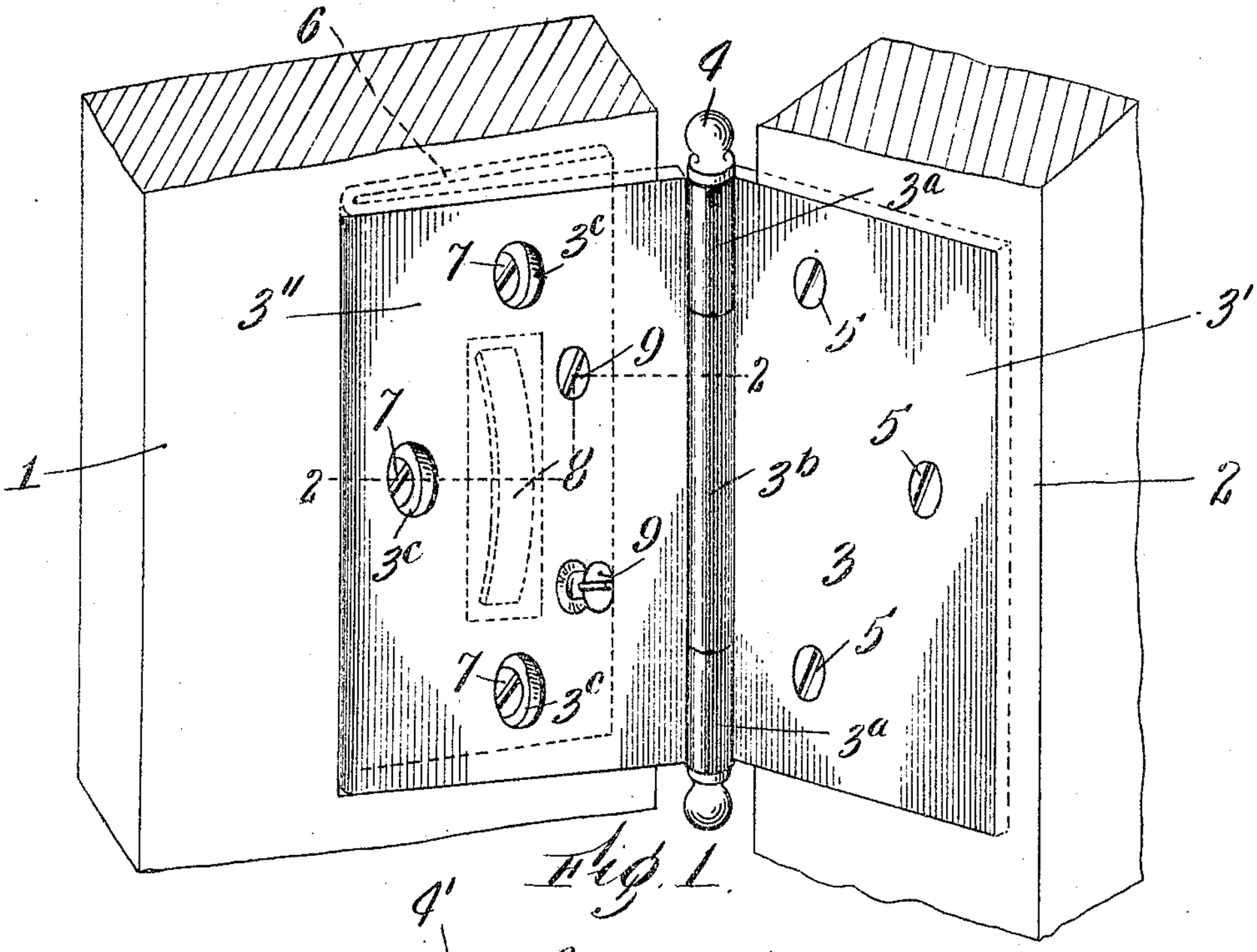

Fig. 1.

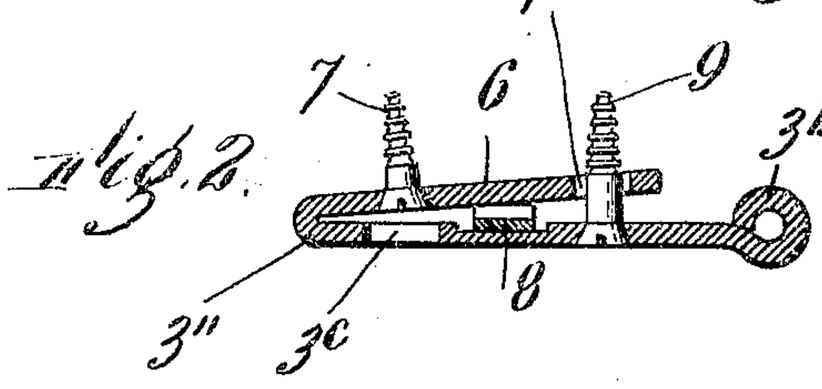

Fig. 2.

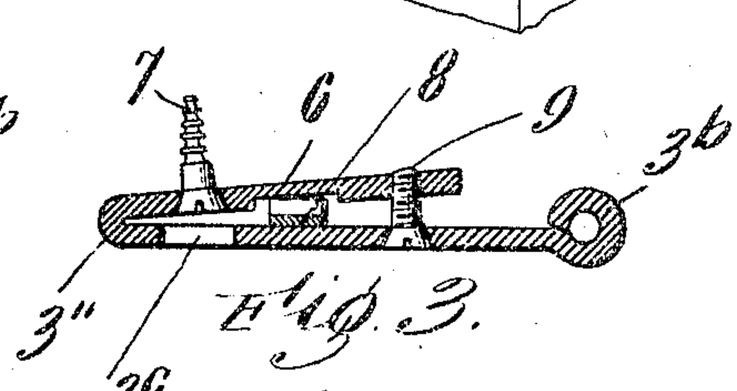

Fig. 3.

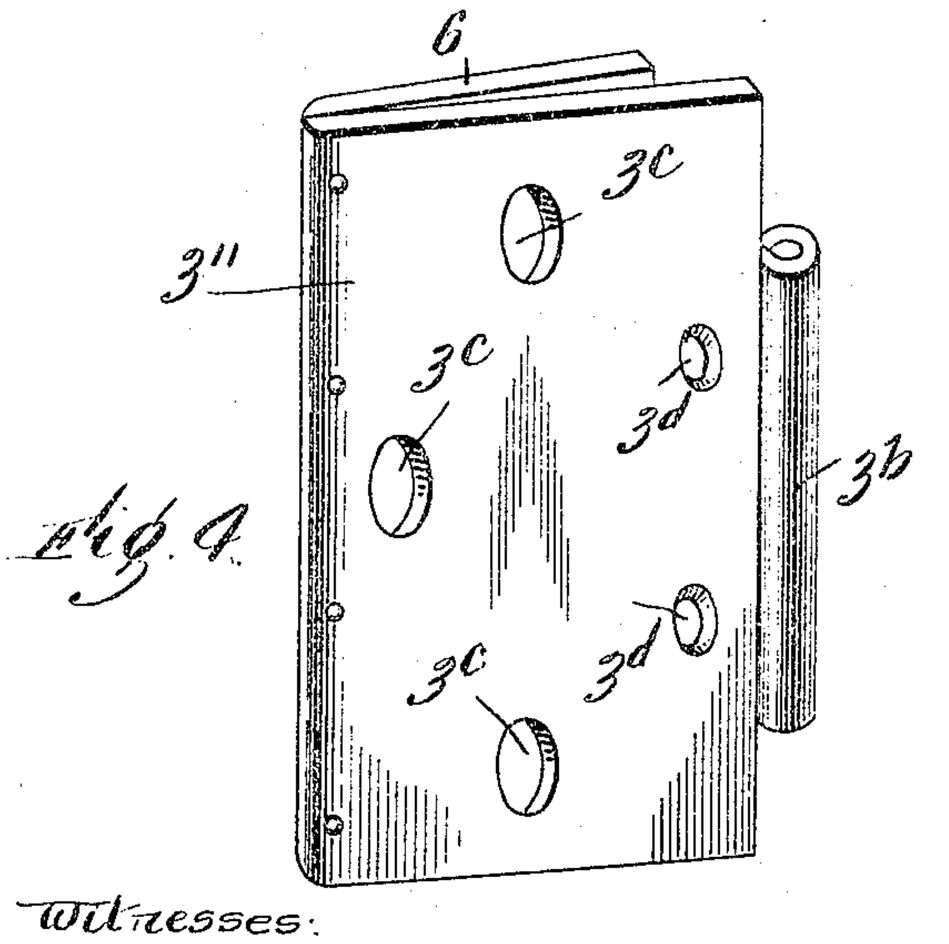

Fig. 4.

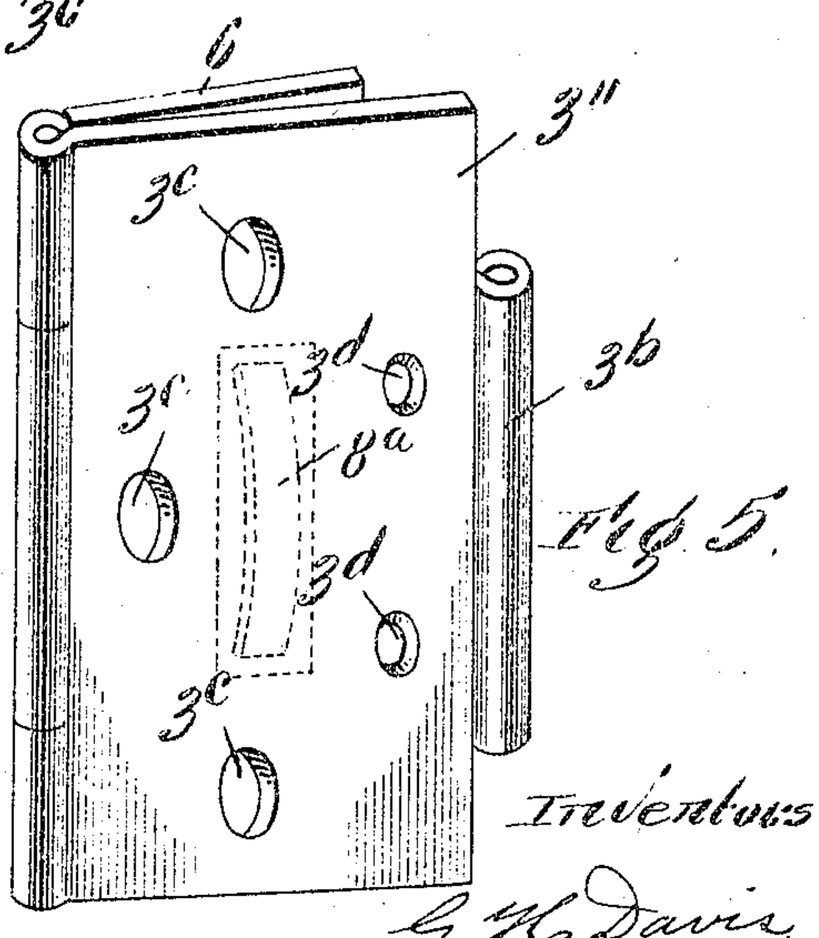

Fig. 5.

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UNITED STATES PATENT OFFICE.

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HINGE.

SPECIFICATION forming part of Letters Patent No. 794,454, dated July 11, 1905.

Application filed February 20, 1905. Serial No. 246,435.

To all whom it may concern:

Be it known that we, GEORGE H. DAVIS and JOHN W. BROWN, citizens of the United States, residing at Worcester, in the county of Worcester and Commonwealth of Massachusetts, have jointly invented certain new and useful Improvements in Hinges, of which the following is a specification.

Our invention relates to hinges for doors, &c., and more particularly to an adjustable hinge.

The object of our invention is to provide an adjustable hinge for a door which may be substituted for and used in place of any ordinary hinge and by means of which the position of the door in the direction of its width relative to the door jamb or casing may be adjusted as desired.

It frequently happens that a door by reason of the wood swelling sticks in opening and closing or in case of the wood shrinking does not properly latch or stay closed. By using our hinges the position of the door may be adjusted in the direction of its width by adjusting the position of one leaf of the hinges.

In our adjustable hinge we preferably make the hinge with two leaves hinged together in the ordinary way, and we combine with the edge of one leaf a plate corresponding in size substantially to the size of the hinge-leaves and made integral with one hinge-leaf or made separate and permanently secured to the outer edge thereof and extending at an angle thereto. Said plate is attached permanently to the door-jamb, and the hinge-leaf attached thereto is adjusted relatively to said plate, preferably by means of screws, to vary the position of said hinge-leaf.

Our invention consists in certain novel features of construction of our adjustable hinge, as will be hereinafter fully described.

Referring to the drawings, Figure 1 shows by broken lines a detached portion of a door-jamb and the inner edge of a door with a hinge embodying our improvements partially open and secured thereto. Fig. 2 is a cross-section through one-half of the hinge on line 2 2, Fig. 1. Fig. 3 corresponds to Fig. 2, but shows a modified construction. Fig. 4 shows a modified construction of one-half of the hinge shown in Fig. 1, and Fig. 5 shows another modified construction.

In the accompanying drawings, 1 is a detached portion of a door jamb or casing.

2 is a detached portion of the inner edge of a door.

3 is our improved hinge, comprising two leaves 3′ and 3″ of the ordinary shape and of any desired size. The leaf 3′ is provided in this instance with two eyes 3^a on its edge and the leaf 3″ with one eye 3^b in the usual way for the hinge-pin 4, which may be detachable, as is customary. The leaf 3′ of the hinge 3 is provided with holes, in this instance three in number, for the attaching-screws 5.

We will now describe our improvements.

One of the leaves of the hinge 3, as 3″, has thereon, extending along its outer edge and preferably integral therewith, as shown in Fig. 1, a plate 6 of substantially the same size and shape as the leaf 3″ and extending upon the outside of the leaf 3″ at a slight angle thereto. The plate 6 is provided with holes therethrough, in this instance three in number, for attaching-screws 7, which pass freely through holes 3^c in the leaf 3″ and are screwed into the door-jamb 1. The attaching of the plate 6 to the door-jamb secures the leaf 3″ of the hinge 3 in position.

In connection with the plate 6 and the leaf 3″ of the hinge 3 we may use a flat leaf-spring 8, (shown by broken lines in Fig. 1,) which may extend within a slotted or a recessed portion in the leaf 6 or in the hinge-leaf 3″, or in both, if preferred.

In connection with the leaf 6 and hinge-leaf 3″ to draw them together and to limit their spreading or moving apart we preferably use two screws 9, which turn freely through countersunk holes 3^d in the hinge-leaf 3″ and also through holes 4′ (see Fig. 2) in the plate 6 and are screwed into the door-jamb. The screws 9 may be screwed into threaded holes in the plate 6, as shown in Fig. 3.

In Fig. 4 is shown a modified construction of the plate 6 and the hinge-leaf 3″. In said Fig. 4 the hinge-leaf 3″ and the plate 6 are made separate and permanently secured together by riveting at one edge, the plate 6 extending at an angle to the leaf 3″, as shown.

In Fig. 5 is shown another modified construction. In said Fig. 5 the hinge-leaf 3″ and the plate 6 are hinged together at one edge, and a spring 8ª (shown by broken lines) is used to move them apart.

The operation of our improved hinge will readily be understood by those skilled in the art. One leaf 3′ of the hinge 3 is secured to the edge of the door in the usual way. The plate 6, attached to the other hinge-leaf 3″, is secured to the door-jamb. In case the wood of the door has swelled and the door will not close readily the screws 9 are screwed in to draw the hinge-leaf 3″ toward the plate 6 to adjust the position of the door in the direction of its width. In case the door does not properly latch by reason of the wood shrinking the screws 9 are turned out, allowing the hinge-leaf 3″ by the action of the spring 7 or by the spring action of the plate 6 and hinge-leaf 3″ to move away from the plate 6, and thus adjust the position of the door in the direction of its width.

The advantages of our improvements in adjustable hinges will be readily appreciated by those skilled in the art.

Our adjustable hinge may be used where the ordinary hinge is used and may be readily substituted for the ordinary hinge.

It will be understood that the details of construction of our improvements may be varied, if desired, and they may be used in connection with hinges of different size and shape and weight.

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

1. A hinge, comprising two leaves hinged together, and a plate permanently attached to the outer edge of one leaf and extending at an angle thereto, and means for adjusting said leaf relative to said plate, substantially as shown and described.

2. A hinge, comprising a plate, a hinge-leaf secured to one edge thereof, and extending at an angle thereto, and adjustable toward and away from said plate, and means for adjusting said leaf relatively to said plate, and a second hinge-leaf hinged to the first-mentioned leaf, substantially as shown and described.

3. A hinge, comprising a plate, a hinge-leaf integral therewith, and extending at an angle thereto, and adjustable toward and away from said plate, and means for adjusting said leaf relatively to said plate, and a second hinge-leaf hinged to the first-mentioned leaf, substantially as shown and described.

4. A hinge, comprising a plate, a hinge-leaf secured to one edge thereof, and extending at an angle thereto and adjustable toward and away from said plate, and means for adjusting said leaf relatively to said plate, and a spring interposed between the plate and leaf, and a second hinge-leaf hinged to the first-mentioned leaf, substantially as shown and described.

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