A. A. STIMSON.

SPRING-HINGE.

No. 176,377. Patented April 18, 1876.

Fig. 1.

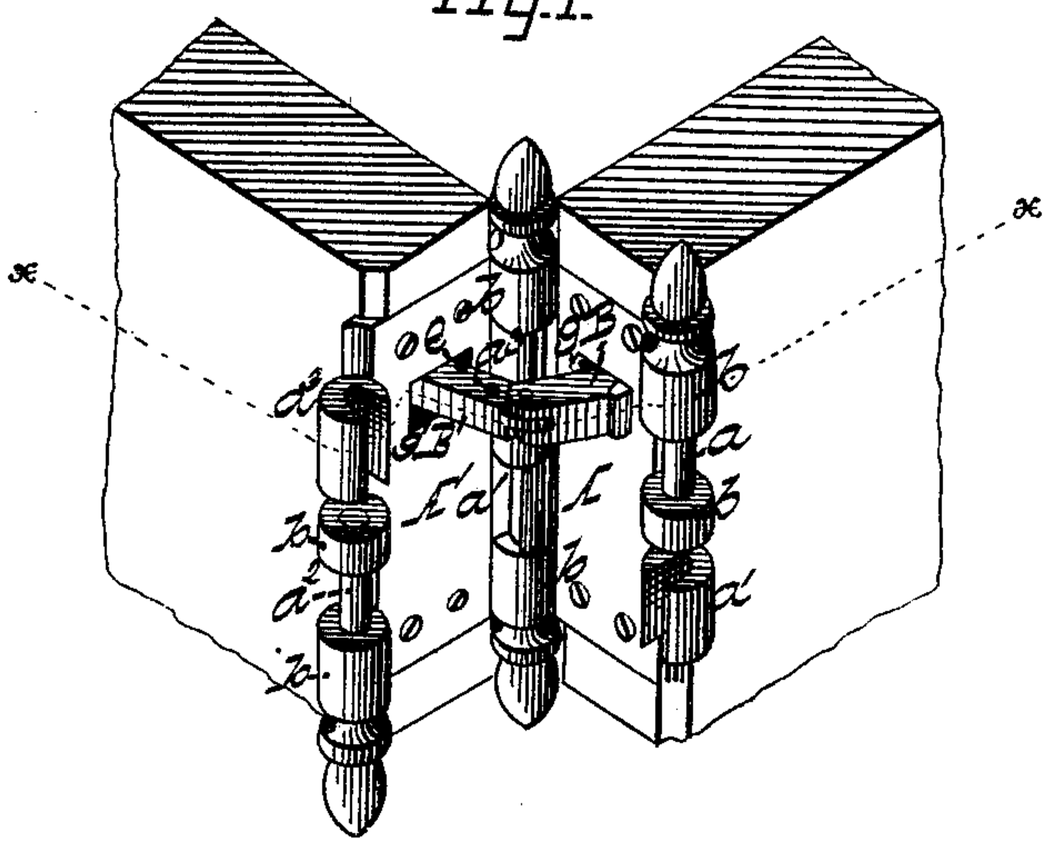


Fig. 2.

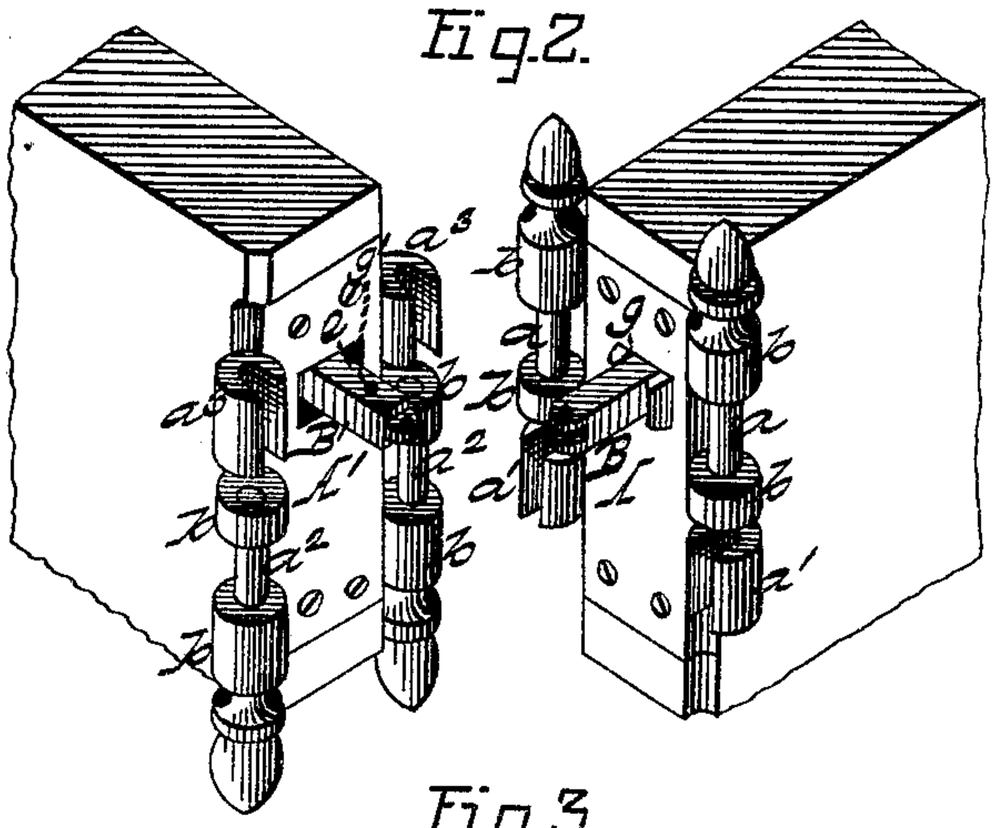
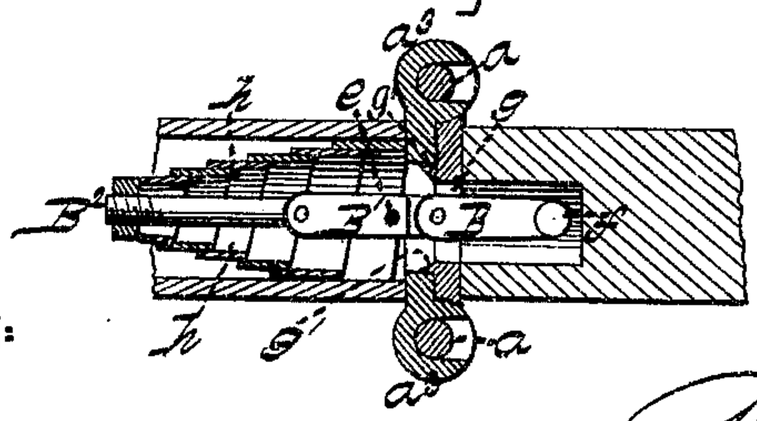


Fig. 3.



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UNITED STATES PATENT OFFICE.

ASHBEL A. STIMSON, OF MONTPELIER, VERMONT, ASSIGNOR TO HIMSELF AND CHARLES T. SABIN, OF SAME PLACE.

IMPROVEMENT IN SPRING-HINGES.

Specification forming part of Letters Patent No. **176,377**, dated April 18, 1876; application filed December 13, 1875.

To all whom it may concern:

Be it known that I, ASHBEL A. STIMSON, of Montpelier, in the county of Washington and State of Vermont, have invented certain new and useful Improvements in Double-Acting Hinges; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a perspective view of my improved double-acting hinge with the door at right angles to the jamb. Fig. 2 is a similar view of the same, the parts being disconnected, and Fig. 3 is a horizontal section thereof through the dotted line *x x* of Fig. 1.

Corresponding parts in the several figures are denoted by like letters.

This invention relates to a certain improvement in double or single acting hinges by which the ordinary third plate or its substitute, in the form of bars, connecting the parts of the hinge together at their upper and lower ends, is dispensed with. It consists of two plates or leaves, hinged or united together by pintles and knuckles or sockets, those upon the upper portion of one plate or leaf alternating with those upon the lower portion of the other leaf or plate, and of links or jointed bars passing through openings in the said plates or leaves, and bearing one against the rear side of one of the same, the free end of a third bar having connected thereto, in a suitable manner, a spring, substantially as hereinafter more fully set forth.

In the annexed drawing, A A′ refer to the two plates or leaves of my hinge. Upon the sides of the upper portion of one, A, are provided pintles *a a*, and directly below these knuckles or sockets a^1 a^1, and upon the sides of the lower portion of the other A′ is provided a similar arrangement of pintles, a^2 a^2, and sockets a^3 a^3. The pintles are connected to the leaves or plates by knuckles *b b*, the outer ones of which may be ornamented, and which may be of the same diameter as those forming the sockets a^1 a^3, to form a continuous joint of uniform size and shape on both sides of the hinge. It will be observed that, as the door opens or closes, a pintle and socket upon one side of the upper portion of one plate will mesh with a socket and pintle upon the lower portion of the other plate, thus alternately acting upon each other, by which the friction and wear are equally distributed upon the parts. The openings to permit of the insertion into the sockets of the pintles being out of line with the direction in which the door opens and closes, they are prevented from leaving their places or sockets, thus locking the knuckle securely, except when the door is closed. Through this construction the ordinary third plate or its substitute, in the form of bars, uniting the upper and lower ends of the plates or leaves together, is also dispensed with, and the hinge strengthened, its pintles being shortened and at short intervals connected to the leaves or plates. B B^1 B^2 are three or more links or bars jointed together, one being provided with stops *f* and passing through an opening, *g*, permitting of the stops bearing against the rear side of the leaf or plate A, and the third one, B^2, passing through an opening, *g′*, in the plate A′, and supplied with a spring, *h*, preferably of a volute form, and for closing the door. To prevent the spring drawing the links or bars to which it is attached into the jamb when disconnected from the one connected to the door, a hole, *e*, may be made in the link B^1, and a pin inserted therein, holding the same in readiness for the readjustment of the parts.

One part of my invention, it will be observed, can be produced by forming each plate or leaf with a single pintle and knuckle or socket.

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

1. The plates A A′, each having upon one side a pintle and upon the other side a slotted knuckle or socket, in combination with the links or jointed rod B B^1 B^2, having a stop, *f*, bearing against the rear side of the plate A, and provided with a spring, *h*, bearing against the rear side of the plate A′, substantially as shown and described.

2. The two-part double-acting spring-hinge, consisting of plates or leaves A A′, one having the pintles *a a* upon its upper surface, and directly below the same slotted knuckles or sockets a^1 a^1, and the other a similar arrangement of pintles, a^2 a^2, and slotted knuckles or sockets a^3 a^3 upon its lower surface, in combination with suitable connecting mechanisms, substantially as and for the purpose set forth.

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Witnesses:
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