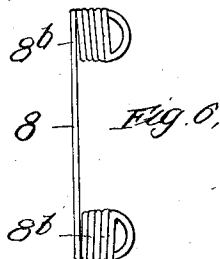
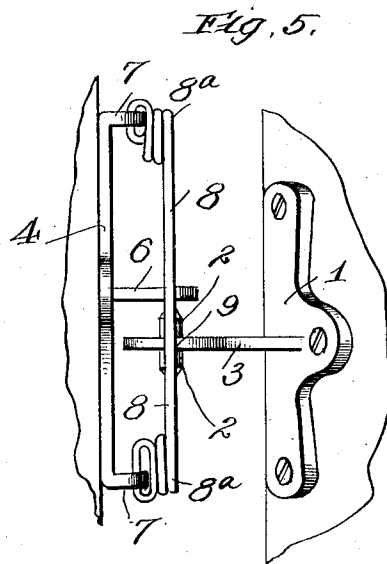
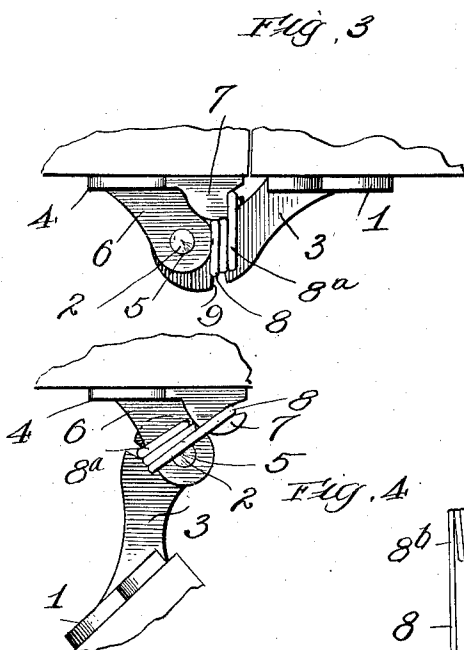
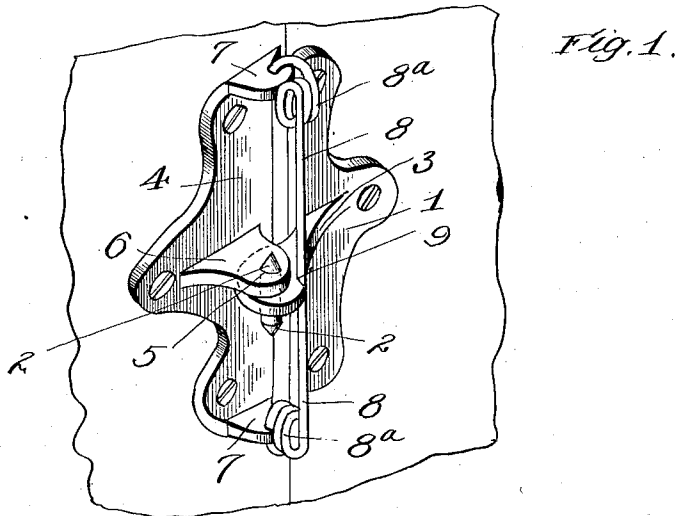
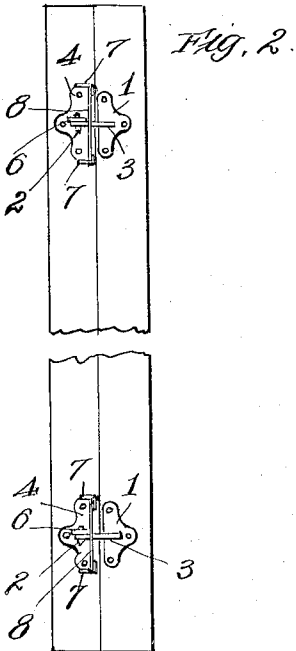


E. MOORE.
 SPRING HINGE.
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1,063,576.

Patented June 3, 1913.



WITNESSES

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SPRING-HINGE.

1,063,576.

Specification of Letters Patent.

Patented June 3, 1913.

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To all whom it may concern:

Be it known that I, ELISHA MOORE, a subject of the King of Great Britain, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Spring-Hinge, of which the following is a specification.

This invention relates to hinges having springs for returning the members of the hinge to the position which they normally assume when the swinging member to be supported is in closed position.

One object of the invention is to provide a hinge, the members of which are readily separable notwithstanding the presence of the spring acting upon the members and to these ends the spring is mounted on one member and brought into engagement with the other member in such manner that when moved in the opening direction beyond the normal limit of swinging movement within which the spring is depended upon, the tension is released from the engaging member so that the pintle of the hinge can be disengaged by axial movement and the swinging member or door removed and, when it is desired to replace the door, it can be again hung upon the fixed members and assume a position which will cause reengagement of the spring, after which the door can be swung toward closed position until the spring enters into control and closes the door.

A further object is to so construct the engaging member that the hinge members can be interengaged by the pintle and the engaging member then swung to the spring engaging position, to pick up the spring.

In carrying out the invention, the hinge is preferably adapted for right and left hand use, for which purpose the pintle is duplicated both above and below the pintle member, and the spring is constructed so that it may be engaged on either side of the supporting bracket of the member which carries it.

A further object is to provide a spring of sufficient capacity which will be very durable.

The invention will be fully understood upon reference to the accompanying drawings in which:—

Figure 1 is a perspective view of the improved hinge assembled and in use. Fig. 2 shows in elevation two members connected

by a pair of the improved hinges. Figs. 3 and 4 are top views showing the hinge, respectively, in closed and partially opened position. Fig. 5 is a detail view of the hinge in full-opening position and partially separated to illustrate the method of assembling and disassembling. Fig. 6 is a detail view showing the modified construction of spring.

1 represents the pintle member, having the pintle 2, extending on opposite sides of its bracket 3, so that the hinge may be located on either side of the door-way.

4 represents the socket member having an opening 5 in its bracket 6 adapted to receive either end of the pintle 2.

7 represents anchoring lugs for the spring 8, which lugs may be on either member of the hinge, in position to receive and firmly anchor both ends of the spring and leave its intermediate portion in position to engage the bracket on the other hinge member. The spring thus constructed engages said other hinge member, whether the latter is on one side or the other of the bracket of the spring carrying member so as to adapt the hinge for location on either side of the door opening. To provide for such engagement of the spring, by the spring engaging member of the hinge, the bracket of said member is provided with a notch 9.

In order that the hinge members may be separated the notch 9 is in such position and the bracket 6 is so formed, that when the door and the jamb are well separated, and the door is opened beyond the normal range of opening movement (see Fig. 4) the tension on the spring 8 will be transferred to the edge of the bracket 6, and the bracket 3 will be so far relieved that its hinge member can be moved in the direction of the axis of the pintle until the pintle is disengaged, when the door will be freed and can be readily removed (Fig. 5). The door can be replaced by reversing this operation, but to render more convenient the replacing of the door, the spring engaging bracket is so formed as to avoid contact with the spring when the door is partially open so that the pintle may be readily engaged, and the edge of the bracket leading up to the spring engaging notch is in the form of a cam, so that when the spring engaging member is swung outward, the spring will ride up upon the engaging bracket until it snaps into the

notch, whereupon the parts will be re-assembled and ready for action as soon as the door is swung away from its full-open position.

- 5 The spring may be varied in construction so long as it is adapted for anchorage on one member and to develop transverse pressure on the other member. It is preferably provided with convolutions 8^a in the positions
10 shown in Fig. 1, or convolutions 8^b in the positions shown in Fig. 6.

I claim:—

1. A spring hinge comprising hinge members having brackets provided with inter-
15 engaging pintle and socket, and a spring anchored at its ends on one hinge member and engaging at an intermediate point with the bracket of the other hinge member; the bracket of the hinge anchoring member being
20 constructed to receive the intermediate portion of the spring when the hinge is open and relieve the spring engaging member from tension, whereby the spring members may be separated.

- 25 2. A spring hinge comprising hinge members having brackets provided with inter-engaging pintle and socket, and a spring anchored at its ends on one hinge member and engaging at an intermediate point with
30 the bracket of the other hinge member; the bracket of the hinge anchoring member being constructed to receive the intermediate portion of the spring when the hinge is open and relieve the spring engaging member
35 from tension, whereby the spring members may be separated, said spring engaging bracket being notched to confine the spring thereon and said notch being in position to hold the hinge open when moved beyond the
40 normal range of swinging.

3. A spring hinge comprising hinge members having brackets provided with inter-engaging pintle and socket, and a spring
45 anchored at its ends on one hinge member and engaging at an intermediate point with the bracket of the other hinge member; the bracket of the hinge anchoring member being constructed to receive the intermediate portion of the spring when the hinge is open

and relieve the spring engaging member 50 from tension, whereby the spring members may be separated, the spring engaging bracket being notched to confine the spring thereon and being formed with a cam edge leading up to said notch, whereby the hinge 55 members may be assembled without pressure of the spring and then swung to the spring engaging position.

4. A spring hinge comprising hinge members having brackets provided with inter- 60 engaging pintle and socket, and a spring anchored at its ends on one hinge member and engaging at an intermediate point with the bracket of the other hinge member; the bracket of the hinge anchoring member being 65 constructed to receive the intermediate portion of the spring when the hinge is open and relieve the spring engaging member from tension, whereby the spring members may be separated; the spring anchoring 70 hinge member being constructed with lugs provided with slots in position to receive the ends of the spring and extending in the direction to have the spring held therein by the tension imposed upon the spring when 75 in use.

5. A spring hinge comprising hinge members having brackets provided with inter-engaging pintle and socket, and a spring anchored at its ends on one hinge member 80 and engaging at an intermediate point with the bracket of the other hinge member; the bracket of the hinge anchoring member being constructed to receive the intermediate portion of the spring when the hinge is open 85 and relieve the spring engaging member from tension, whereby the spring members may be separated; said spring comprising a bar forming the intermediate portion thereof and coils interposed between said bar and 90 the anchorage ends of the spring.

The foregoing specification signed at Boothbay Harbor, Maine, this sixteenth day of September, 1912.

ELISHA MOORE.

In presence of—

JNO. W. BRACKETT,
A. E. NICKERSON.