

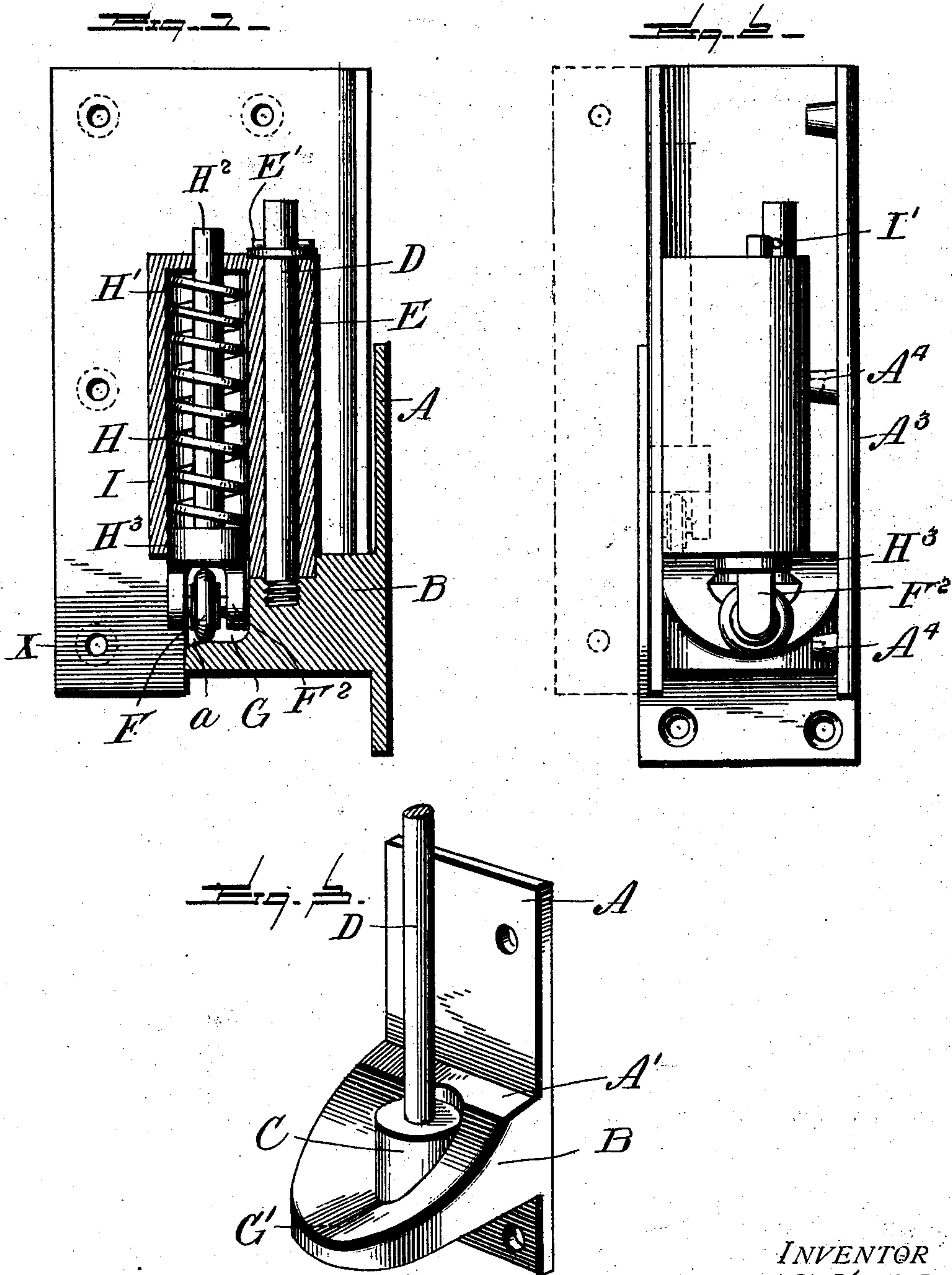
No. 690,782.

Patented Jan. 7, 1902.

J. G. SMITH.
HINGE.

(Application filed July 3, 1901.)

(No Model.)



WITNESSES:

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HINGE.

SPECIFICATION forming part of Letters Patent No. 690,782, dated January 7, 1902.

Application filed July 3, 1901. Serial No. 67,004. (No model.)

To all whom it may concern:

Be it known that I, JAMES G. SMITH, a citizen of the United States, residing at Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Hinges; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in hinges, and especially to a hinge comprising a pintle-carrying plate which has a double spiral or inclined way on a lateral extension of said plate and about a central boss carrying the pintle and the provision of two complementary plate-sections, one of which has integral therewith a hollow partitioned box, one compartment of which containing a spring-actuated plunger carrying an antifriction-wheel designed to travel upon the inclined way, the other compartment of which has its inner wall circular in outline and forming a bearing-surface for the pintle, while the two complementary plate-sections have their rear longitudinal edges curved toward each other and held in contact, the inner faces of the plate-sections being adapted to embrace the opposite sides of a door to which the plates are secured, thus enabling the latter to swing in either direction and to be held normally in a closed relation.

To these ends and to such others as the invention may pertain the same consists, further, in the novel construction, combination, and adaptation of parts, as will be hereinafter more fully described and then specifically defined in the appended claim.

My invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view through the pintle-carrying plate and portions of one of the complementary plate projections. Fig. 2 is an edge view of the two plate-sections as held to the pintle-carrying plate, and Fig. 3 is a detail view in perspective of the pintle-carrying plate.

Reference now being had to the details of

the drawings by letter, A is the pintle-carrying plate, which plate is adapted to be secured to the door-frame, and B is a right-angled projection which has a flattened upper surface A', which merges into the inclined and slightly-spiral track G' about the central boss C. This boss is centrally recessed and carries the pintle D. The upper end of said boss is in a plane slightly below the upper flat surface of the projection B, as will be noted in Figs. 1 and 3 of the drawings.

The plate-section A² has its rear longitudinal edge inwardly curved and is notched, as at a, so as to allow said curved edge to extend over the upper flat portion of the projection a distance equal to one-half the width of said projection. In Fig. 1 this curved edge is shown as extending over and in contact with the upper flat portion of the extension. Integral with the inner wall of the plate-section A² is a box H, having a hollow compartment I, in which the plunger H³ works. This plunger has a stem H², which works through and is guided in an aperture through the top of said box. Interposed between the plunger and the top of the box and about said stem is a coiled spring H', and between the lugs F² on the bottom of the plunger is mounted the antifriction-wheel F. The cylinder-compartment E of the box is fitted over the pintle, as shown in Fig. 1, and a pin E' holds the plate-section A² in place on the pintle.

The second plate-section A³, having the lugs A⁴, with threaded sockets therein, is of a shape substantially like plate A², having an inwardly-curved rear longitudinal edge, which when fastened to the plate A² by means of bolts, (not shown,) which are designed to pass through the holes in plate A² and engage the threaded sockets A⁴, with a door intervening between said plates A² and A³, contacts with the curved edge of plate A², thus forming a casing about the pintle and the boxing turning thereon.

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

A double-acting hinge, comprising the stationary plate A having a lateral extension B, a central boss on the latter, an inclined and spiral track about said boss, the pintle seated

in a threaded hole in said boss, the two complementary plates A^2 and A^3 , notched as described and having their rear longitudinal edges curved toward each other and held in
5 contact over said extension, the box on the inner face of said plate A^2 , the plunger working in said box, the antifriction-wheel, the stem of the plunger guided in an aperture in said box, the lower end of the pintle-engag-

ing portion of said box resting on said boss 10 and against a concaved shoulder of the extension, as shown and described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JAMES G. SMITH.

Witnesses:

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