(No Model.)

H. L. FERRIS.

SPRING HINGE.

No. 496,476. Patented May 2, 1893.

Fig. 1.

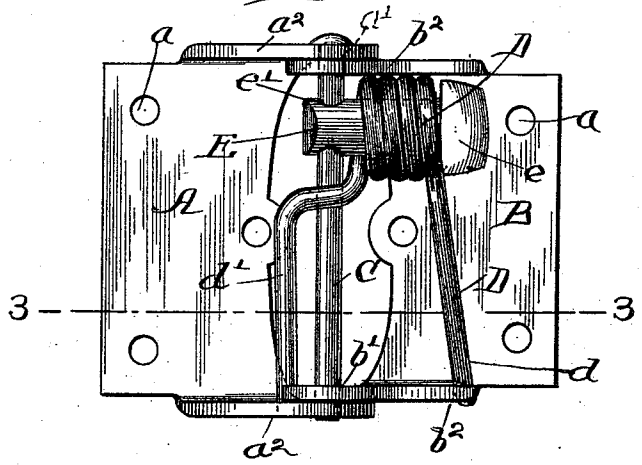


Fig. 2.

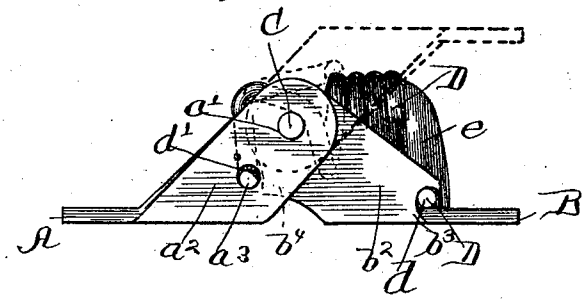
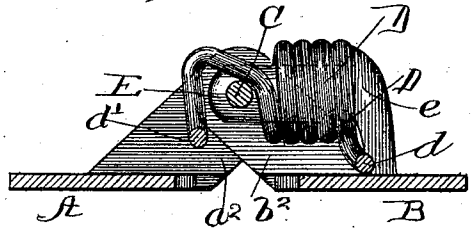


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY L. FERRIS, OF HARVARD, ILLINOIS.

SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 496,476, dated May 2, 1893.

Application filed August 20, 1892. Serial No. 443,555. (No model.)

To all whom it may concern:

Be it known that I, HENRY L. FERRIS, a citizen of the United States of America, residing at Harvard, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Spring-Hinges, of which the following is a specification.

My invention relates to certain improvements in spring hinges, the purpose of which is to adapt and arrange the parts of a hinge to the use of leaves stamped from steel plate and incidentally to simplify and render more compact the complete hinge.

The means which I have devised are clearly shown in the drawings presented herewith, Figure 1 being a face view of my improved hinge; Fig. 2 an end view; and Fig. 3 a cross-section in line 3—3 of Fig. 1, all of said figures showing the leaves of the hinge lying in the same plane, which is the position in which the hinge is ordinarily applied to a door. In Fig. 2, however, another position is shown in dotted lines.

The two leaves of the hinge are lettered A, B, and are shown as consisting of steel plates stamped out in the proper shape and with the necessary screw holes a, b, and pintle holes a', b'. Ears a^2, b^2, are formed by bending up portions of the steel plates. The pivot of the hinge is a pintle C, extending from end to end which may be headed on both ends, if desired, to keep it in place. A coiled spring D, is provided with a core E, having an enlarged head e, resting upon the leaf B, and a hole e', encircling the pintle C. The coiled spring D has one end d, resting in a notch b^3, in one of the ears b^2, and the other end d', bent upward over the pintle C, and extended down upon the other side and to a hole a^3, in one of the ears a^2. The tension of the spring is such as to cause the end d', to bear down upon the leaf A, in Fig. 2, and a shoulder b^4, upon the adjacent ear b^2, is arranged to strike against the spring and form a stop to prevent the hinge from closing too far. Looking at the dotted lines in Fig. 2, it will be seen that, as the leaf A, swings upward, the end d', of the spring passes over to the other side of the pivotal line of the hinge causing the tension of the spring to act upon the leaf A, so as to throw it in the opposite direction.

The advantages of this hinge lie in its compactness, cheapness and its peculiar adaptation to a steel hinge. After once stamping out the leaves A, B, the only remaining operation consists in bending up the ears a^2, b^2, at right angles to the leaves, all the various stops and the devices for attaching the spring being formed in such a manner as to be stamped out in the original operation. The core E, can be cast ready to put into the hinge.

I claim as new and desire to secure by Letters Patent—

1. The combination with the leaves A, B, and core E, of the pintle C, passing through said core and spring D, mounted upon the core and having its two ends engaged respectively with the opposite leaves of the hinge; substantially as described.

2. The combination of the leaf A, having a hole a^3, the leaf B, having the notch b^3, the pintle C, the core E, supported upon the pintle and resting upon the leaf B, and the spring D, engaging at one end in the notch b^3, and having the other end bent up and over the pintle and extended into the hole a^3; substantially as described.

HENRY L. FERRIS.

Witnesses:
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