(No Model.)

H. W. LIBBEY.

SPRING HINGE.

No. 426,597. Patented Apr. 29, 1890.

Fig. 1.

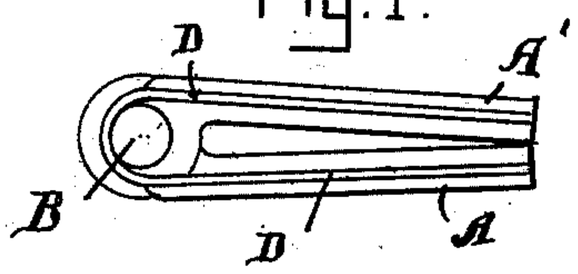


Fig. 2.

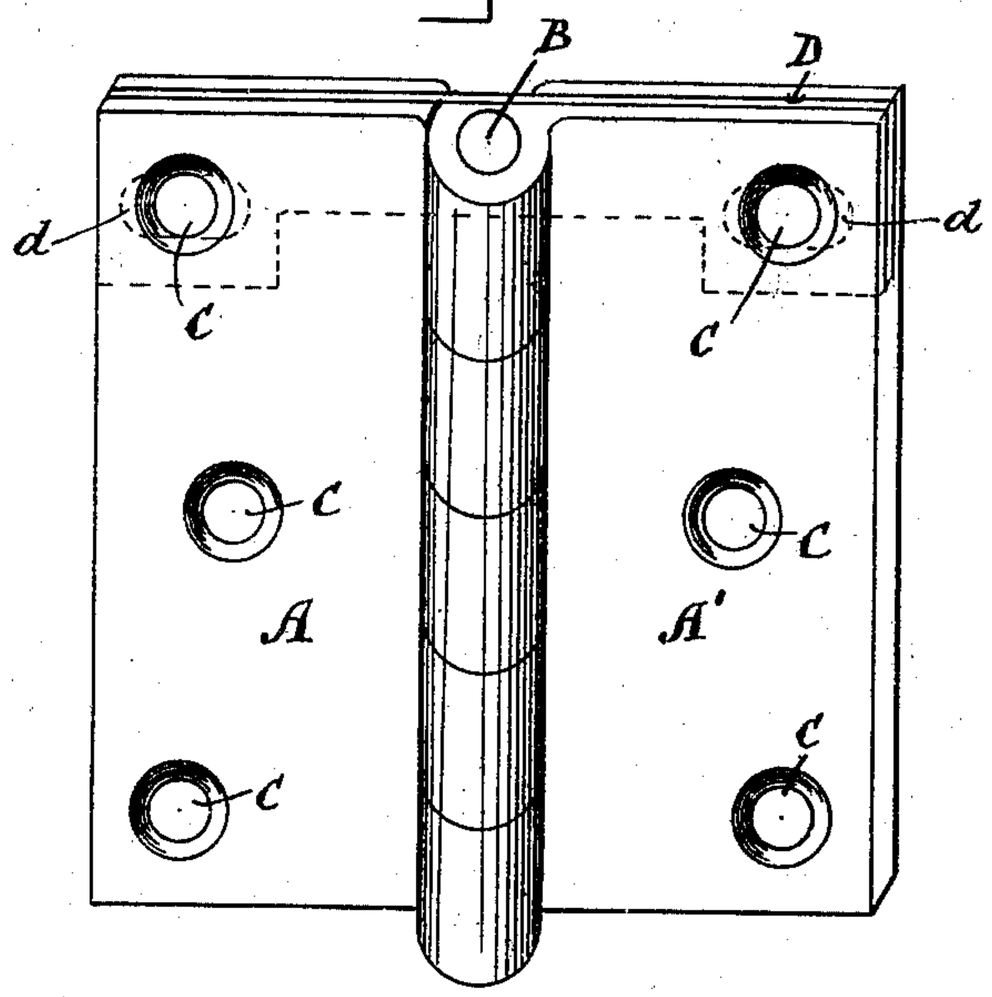


Fig. 3.

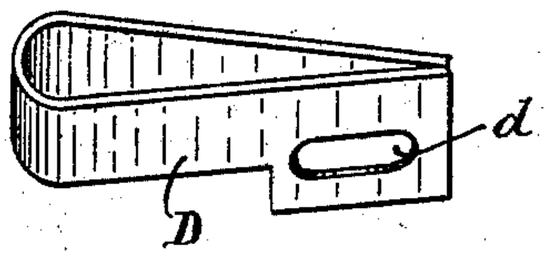


Fig. 4.

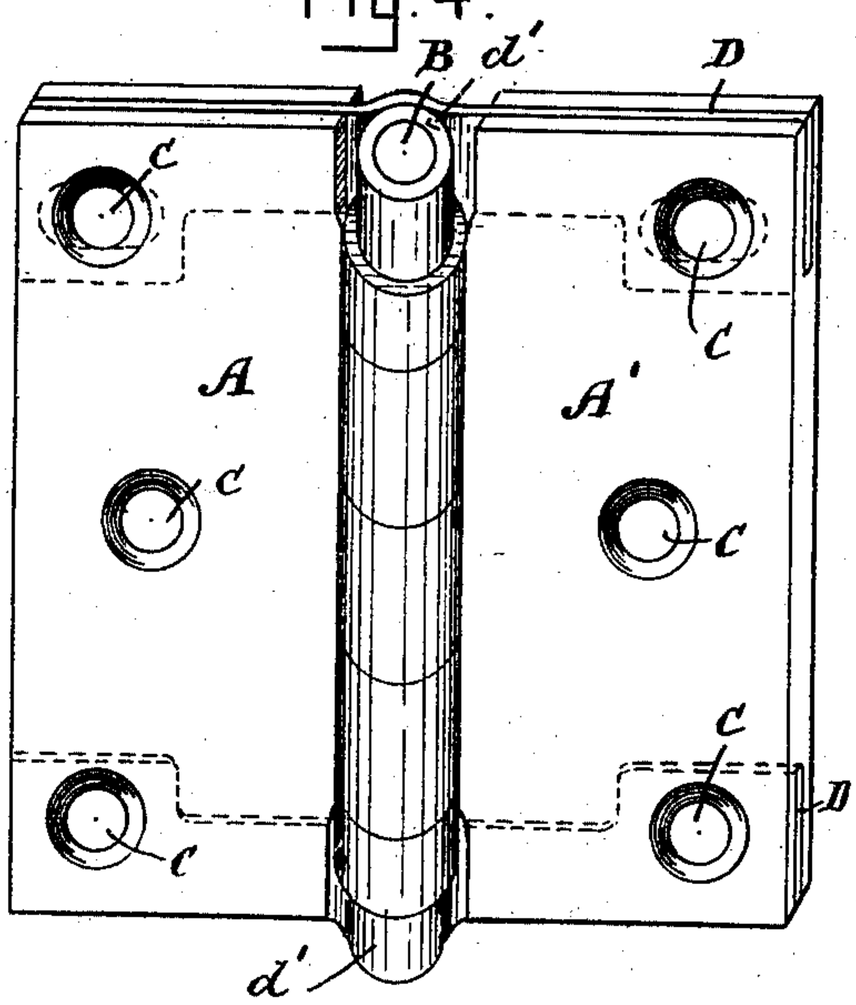


Fig. 7.

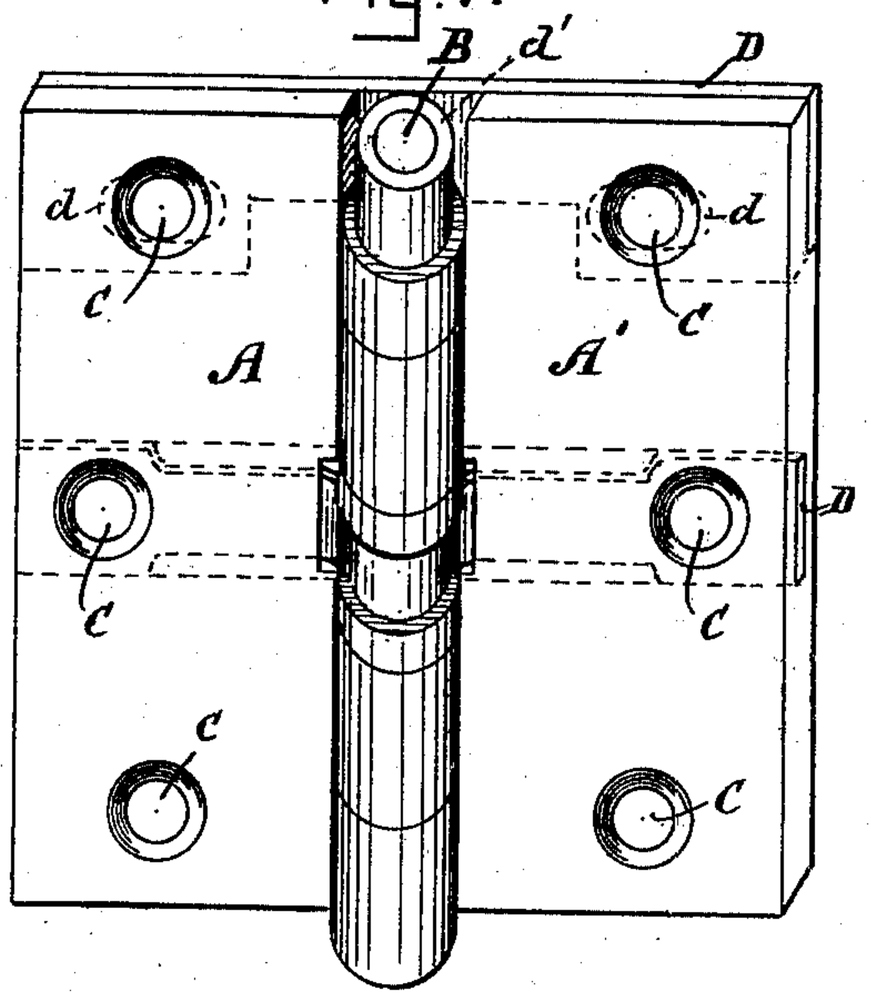
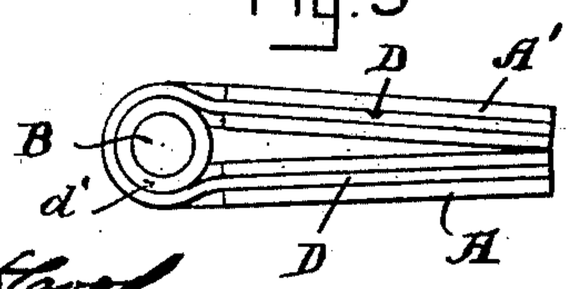
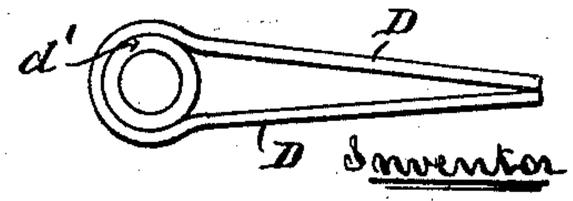


Fig. 5



Witnesses.
William F. Hoard
J. George Seltzer

Fig. 6.



Inventor.
Horace W. Libbey
by Edwin Clarke
attorney.

UNITED STATES PATENT OFFICE.

HOSEA W. LIBBEY, OF BOSTON, MASSACHUSETTS.

SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 426,597, dated April 29, 1890.

Application filed June 26, 1889. Serial No. 315,616. (No model.)

To all whom it may concern:

Be it known that I, HOSEA W. LIBBEY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Spring-Hinges, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to that class of hinges known as "spring-hinges" and is particularly adapted for what are known as "butt-hinges;" and the invention consists in inserting a flat spring into the leaves of the hinge, as hereinafter fully set forth, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a plan or top view of a spring butt-hinge embodying my invention, showing it in the closed position. Fig. 2 is a front view of the same in the open position. Fig. 3 is a perspective view of the spring detached. Fig. 4 is a view of a hinge in the open position with a modified form of spring. Fig. 5 is a plan or top view of the same in the closed position. Fig. 6 is an edge view of the spring detached. Fig. 7 is a view of a hinge with the spring in the center, and also shows the leaves of the hinge halved out instead of grooved to receive the spring.

A A′ represent the two leaves of the hinge, B, the pintle and C the screw-holes. In the leaves, I cut or form a groove or recess at the top, as shown in Fig. 1, into which recess I insert a flat steel spring D. This spring I prefer to make of greater width at the ends than the central portion, and in each end I form a slot *d*, through each of which one of the screws pass that secure the hinge to the door or box. The object of the slot *d* is to allow for the movement of the spring upon the screw when the hinge is being opened or closed.

In Fig. 2 I have shown the hinge provided with a flat spring at its upper end; but, if desired, a similar spring may also be employed at the lower end or in the center of the hinge.

In Figs. 4 to 7 I have shown the spring attached to a short tube *d′* that fits around the pintle B. In Fig. 4 two of these springs are shown, one at the top and one at the bottom, and they are let into grooves or recesses in the leaves, as described, with reference to Fig. 2, and in Fig 7 I have shown one spring in the center let into grooves or recesses, as before described. I have also shown in Fig. 7 a spring at the top, which is simply laid onto the leaves, which are halved out, as shown, to receive the spring. A portion of the interlocking projecting pieces are cut away to accommodate the short tubes *d′*, as shown. It will be seen that by this construction I am enabled to produce a butt-hinge that will always keep in the closed position, or, by reversing the spring, the hinge will be held in an open position. The spring can be readily applied or removed from the hinge, as required.

What I claim as my invention is—

1. A hinge having grooves formed in its two leaves and a flat spring inserted therein, substantially as set forth.

2. The leaves A A′ of a hinge, each having a groove or recess formed therein, in combination with the flat spring D, enlarged at each end, and provided with slots *d*, substantially as and for the purposes set forth.

3. The spring D and tube *d′*, in combination with a hinge having recesses to receive same, substantially as shown and described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 29th day of May, A. D. 1889.

HOSEA W. LIBBEY.

Witnesses:

CHAS. STEELE,

EDWIN PLANTA.