

(No Model.)

G. S. & H. D. BRONSON.
SPRING HINGE:

No. 577,593.

Patented Feb. 23, 1897.

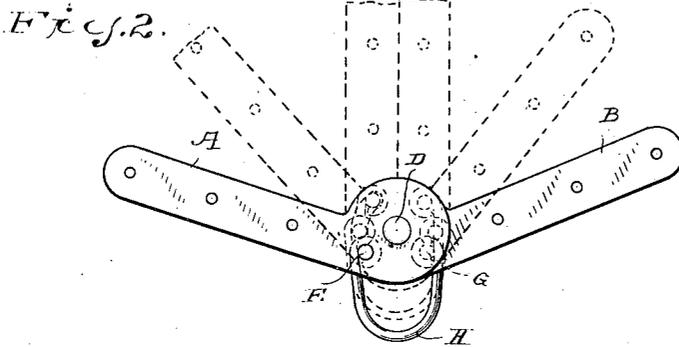
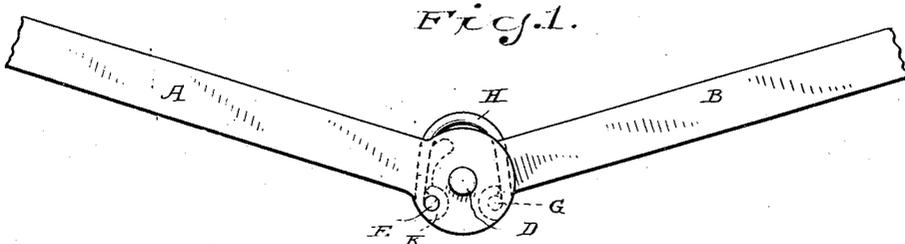


Fig. 5.

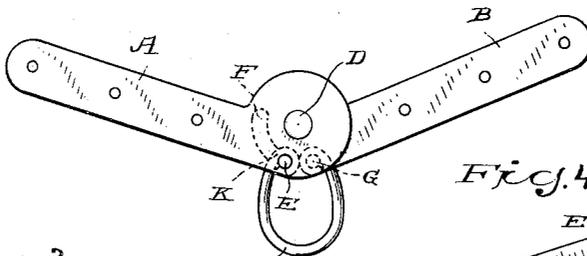


Fig. 3.

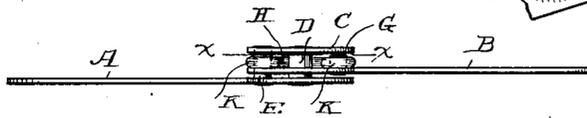


Fig. 4.

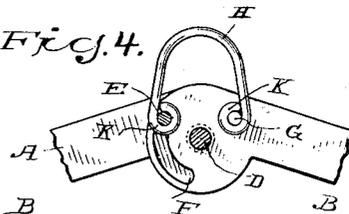
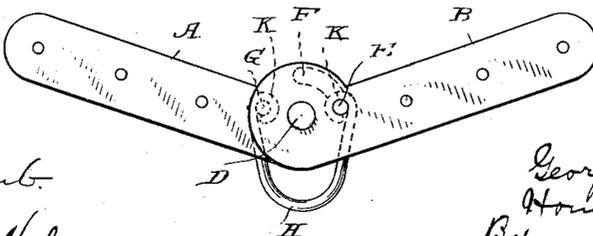


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE S. BRONSON AND HOMER D. BRONSON, OF BEACON FALLS, CONNECTICUT, ASSIGNORS TO THE HOMER D. BRONSON COMPANY, OF SAME PLACE.

SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 577,593, dated February 23, 1897.

Application filed October 21, 1896. Serial No. 609,438. (No model.)

To all whom it may concern:

Be it known that we, GEORGE S. BRONSON and HOMER D. BRONSON, citizens of the United States, residing at Beacon Falls, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Spring-Hinges; and we do hereby 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.

Our invention has for its object to provide a simple, inexpensive, and durable hinge adapted for general use and especially adapted for use as a desk-hinge or bag-hinge, and which may be so constructed and arranged that the spring will act to throw the leaves of the hinge either to the open or to the closed position or to both the open and the closed positions, depending upon which side of a dead-center the leaves are carried.

With these ends in view we have devised the novel hinge of which the following description, in connection with the accompanying drawings, is a specification, letters being used to designate the several parts.

Figure 1 is an elevation illustrating a form of our novel hinge in which the two leaves of the hinge are plates or strips of metal, as, for example, the jaw-frames of a traveling-bag, the parts of the hinge being formed integral with the plates; Fig. 2, a section illustrating a form of our novel hinge adapted for general use, as, for example, a desk-hinge, an open position of the hinge being shown in full lines and an intermediate position in which the studs are in line with each other, and also the closed position being shown in dotted lines, this form differing from the form illustrated in Fig. 1 in that the bow of the spring extends in the opposite direction; Fig. 3, an edge view of the form of our novel hinge illustrated in Fig. 2, as seen from above in said figure; Fig. 4, a section on the line $x x$ in Fig. 3. In this form of our novel hinge the construction is such that the spring will act to throw the leaves either to the open or closed position. Fig. 5 is an elevation corresponding with Fig. 2 with the exception that the parts are so arranged that the spring will act only to throw the leaves toward the open

position, and Fig. 6 is an elevation corresponding with Fig. 2 with the exception that the parts are so arranged that the spring will act to throw the leaves only toward the closed position and that a reverse hinge is shown.

A and B denote hinge-leaves which lie parallel with each other, and C a plate which is secured parallel with the leaves at a slight distance therefrom by a central shouldered stud D, on which leaf B turns freely, and a stud E, which passes through an opening F in leaf B, both of said studs rigidly engaging leaf A and the plate.

G denotes a stud extending outward from leaf B and into close proximity with the plate, but not in engagement therewith.

H denotes a bow-spring having at its ends attaching-eyes K, one of which engages stud E and the other stud G.

It will be obvious from Fig. 2 that in the form illustrated in Figs. 1 to 4, inclusive, when the parts are placed in the intermediate position indicated in dotted lines, that is, a position in which the three studs are in line with each other, the spring will have no action on the leaves. As soon, however, as the leaves are moved in either direction the springs will act to either open or close the leaves. For example, if the parts are moved from the intermediate position toward the closed position the spring will act to throw the leaves to the closed position, and if the parts are moved from the intermediate position toward the position shown in full lines, that is, the open position, the spring will instantly act to throw the leaves toward that position, the engagement of stud E with the end of opening F serving in either instance as a stop to limit the movement of the leaves, this opening being preferably made just long enough so that when the leaves are in the closed position stud E will lie at one end of the opening and when at the extreme open position stud E will lie at the other end of the opening.

The shape of the hinge-leaves is of course not of the essence of our invention, but the shape of the leaves may be varied to suit the special requirements of the use to which the hinge is to be placed, nor does it matter so far as the principle of our invention is con-

cerned whether the bow of the spring extend in one direction or the other, that is, as in either Figs. 1 or 2.

Should the use to which the hinge is to be placed require such an arrangement that the action of the spring will be to throw the leaves to the open position, it is simply necessary to change the location of the opening and studs E and G to substantially the position shown in Fig. 5. It will be obvious that when the leaves in this form of our novel hinge are at the closed position the three studs will be approximately in line with each other, stud E lying at the end of opening F, as in the other form. The instant the leaves are moved toward the open position studs E and G will pass out of line with stud D and the spring will instantly act to throw the leaves toward the open position. The reverse of this is apparent in the form illustrated in Fig. 6. In this form the parts are so arranged that the spring will act only to throw the leaves toward the closed position, the studs being approximately in line with each other and stud

E at one end of opening F when the parts are in the open position, so that the instant the leaves are moved toward the closed position the spring will act to throw them to that position.

Having thus described our invention, we claim—

A hinge consisting of leaves lying parallel with each other and a plate lying parallel with the leaves and secured to one of said leaves by studs D and E, one of said leaves being pivoted on stud D and being provided with an opening through which stud E passes and with a stud G and a bow-spring the ends of which are attached to studs E and G substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE S. BRONSON.
HOMER D. BRONSON.

Witnesses:

JOHN F. BRONSON,
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