No. 610,799. Patented Sept. 13, 1898.

J. K. & H. R. CLARK.

SPRING HINGE.

(Application filed May 12, 1898.)

(No Model.)

Fig. 1.

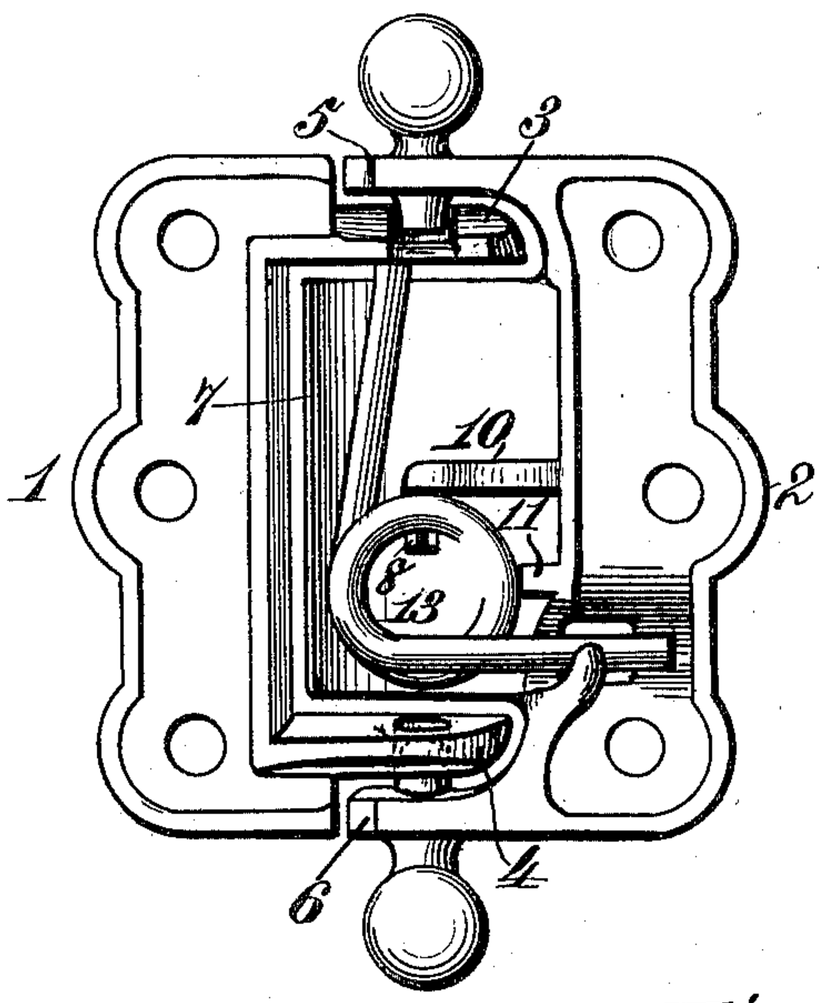


Fig. 2.

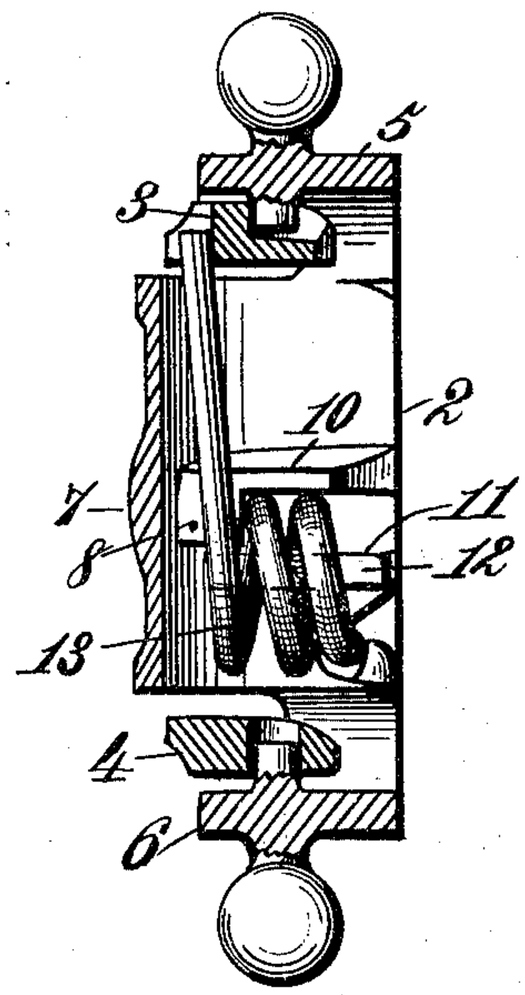
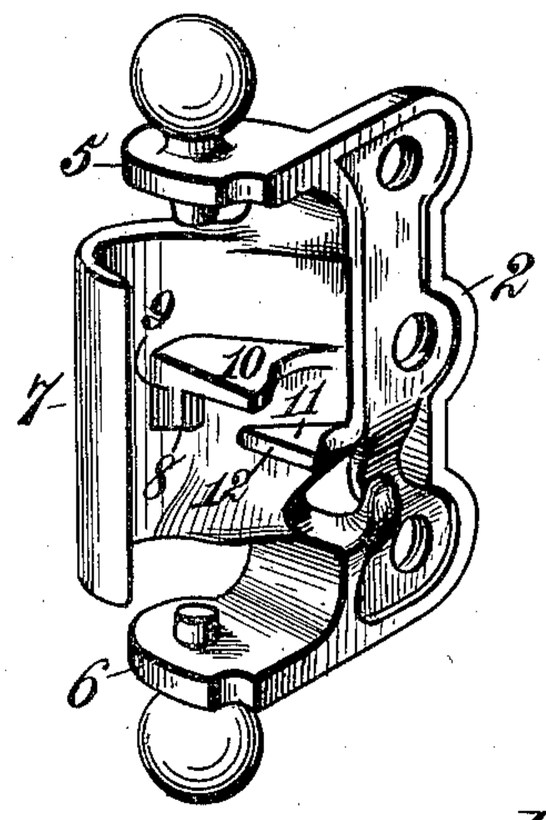


Fig. 3.



Witnesses.
Robt Gorett.
W. B. Keeler

Inventors.
John K. Clark.
Henry R. Clark.
By James L. Norris.
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UNITED STATES PATENT OFFICE.

JOHN K. CLARK AND HENRY R. CLARK, OF BUFFALO, NEW YORK, ASSIGNORS TO MARY K. CLARK AND SARA J. CLARK, OF SAME PLACE.

SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 610,799, dated September 13, 1898.

Application filed May 12, 1898. Serial No. 680,494. (No model.)

To all whom it may concern:

Be it known that we, JOHN K. CLARK and HENRY R. CLARK, citizens of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Spring-Hinges, of which the following is a specification.

Our invention relates to improvements in spring-hinges, and has for its object to provide an improved means for securely seating the spring within the hinge.

In the accompanying drawings, illustrating our invention, Figure 1 is a rear elevation of a hinge constructed according to our invention. Fig. 2 is a central vertical sectional view of the same; and Fig. 3 is a detail view of one member or wing of the hinge, showing our improvements applied thereto.

The reference-numerals 1 2 indicate, respectively, the two members or wings of the hinge, which are pivotally united at the top and bottom in the ordinary manner. For the sake of clearness it may be stated that this connection comprises two bearing lugs or plates 3 4, located, respectively, at the top and bottom of the wing 1, the bearing-plate 3 being provided with a recess and the bearing-plate 4 with a central aperture, which receive studs provided on the inner faces of projecting lugs 5 6, located, respectively, at the top and bottom of the wing 2. Said wing 2 is further provided with a curved hood or housing 7, in which is seated the spring of the hinge. Centrally of said housing and projecting inward at right angles to the inner side of its fixed wall is a flat bearing-lug 8, the outer side 9 of which rises vertically from the center of the housing. In other words, said lug is an integral portion of the wall of the housing and projects outward to a line projecting from the transverse central portion of said housing at right angles to the plane of its longitudinal extension. At the base of lug 8 is a substantially horizontal flanged extension 10, projecting toward the open side of the housing 7 and designed to afford a seat for the spring. At a suitable distance from the lug 8 a second but smaller lug 11 projects outward from the wall of the housing, said lug having an outer straight side 12, against which the side of the spring is designed to bear.

The numeral 13 indicates the hinge-spring, the coils whereof are arranged at right angles to the axial line of the hinge and the opposite free ends of which are secured, respectively, in a notch in the bearing-plate 3 and in a recess in the wing 2. When the parts are in operative position, the upper part of the coiled portion bears against the under side of the flanged extension 10. The inner part of said coil bears against the outer edge of the lug 8, and one side of said coil—say the right-hand side, as shown in the drawings—bears against the edge of the lug 11. The lugs 8 and 11 and the flange 10 serve to hold the springs securely in place in the hinge member 2 and offer a minimum amount of frictional resistance to the operation of the spring, so that its entire power may be exerted on the two members of the hinge.

It will be understood, of course, that the lugs 5 and 6, with their studs, the housing 7, the lugs 8 and 11, and the flange 10 are all cast as an integral part of the wing 2.

We are aware that various means have been devised for retaining a spring of the character described within the housing of the hinge; but a large number of these are impracticable by reason of the cost of manufacture or the difficulty of casting the same. Our improvement provides a very simple and efficient means for the purpose described and presents no obstacle to casting, the lugs being readily removable from the sand, and thereby permitting rapid manipulation and insuring a large output per day. Further, no auxiliary means, such as wedges or the like, are necessary to aid in holding the spring in place in the hinge.

Having thus fully described our invention, what we claim is—

1. In a spring-hinge, the combination with the hinge members, one of which is provided with a housing, of a lug projecting from the inner side of the housing, a flange extending at right angles to said lug, a second lug projecting from said housing, and a coiled spring having its free ends secured in opposite hinge

members and its coils bearing against said flange and said lugs, substantially as described.

2. In a spring-hinge, the combination with the hinge members, one of which is provided with a housing, of a lug 8 projecting at right angles to the inner side of the housing, a flange extending at right angles to said lug, a second lug, 11, projecting from said housing, and a coiled spring having its free ends secured in opposite hinge members and its coils arranged at right angles to the axial line of the hinge and bearing against the under side of said flange and against the edges of said lugs, substantially as described.

3. As a new article of manufacture a hinge member having a housing, and a spring-seat cast integral therewith comprising a lug projecting at right angles to the inner side of the housing, a flange extending at right angles to said lug, and a second lug projecting from the inner side of the housing, substantially as described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

JOHN K. CLARK.
HENRY R. CLARK.

Witnesses:
E. W. KUHN,
W. ASPINWALL.