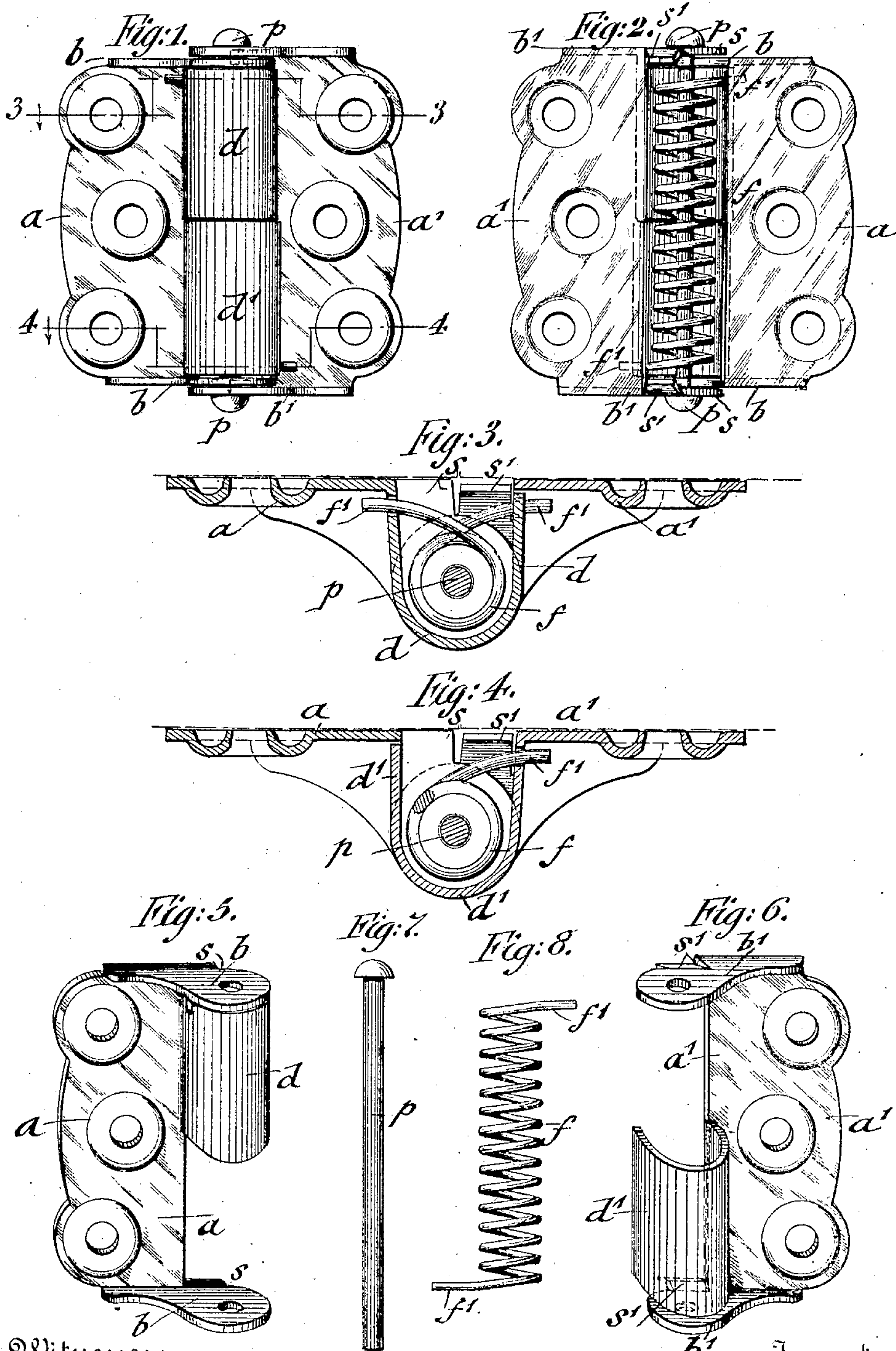


No. 882,289.

PATENTED MAR. 17, 1908.

E. BOMMER.  
SPRING HINGE FOR SCREEN DOORS.

APPLICATION FILED JUNE 5, 1907.



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# UNITED STATES PATENT OFFICE.

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## SPRING-HINGE FOR SCREEN-DOORS.

No. 882,289.

Specification of Letters Patent.

Patented March 17, 1908.

Application filed June 5, 1907. Serial No. 377,292.

*To all whom it may concern:*

Be it known that I, EMIL BOMMER, a citizen of the United States, residing in New York, in the borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Spring - Hinges for Screen - Doors, of which the following is a specification.

This invention relates to an improved spring-hinge for screen-doors, which has the advantage that the upper half of the spring is partly inclosed by the housing-section of one leaf of the hinge, while the lower half of the spring is partly inclosed by the housing-section of the other leaf of the hinge, thereby exposing a smaller portion of the spring when the door is opened than is the case where the entire housing for the spring is integral with only one of the leaves of the hinge, and securing by this arrangement an additional bearing-surface for the spring-hinge, thereby greatly increasing its durability.

The invention consists of a spring-hinge for screen-doors which comprises a pair of hinge-leaves provided at their upper and lower edges with overlapping perforated ears, housing-sections for the spring of approximately half the height of each leaf and made integral with each leaf and extending from the center of the leaf toward the perforated ears, but at opposite sides at the inner edges of the leaves and axially in line with the perforated ears, a coiled spring at the interior of the housing-sections of the leaves, the ends of the spring passing respectively through openings in said housing-sections at opposite sides of the same and near the line of connection of the housing-sections with the face of the leaves, and a pintle passing through the perforated ears of the leaves and the center of the spring and being upset at the ends for connecting the parts of the hinge after they are assembled.

In the accompanying drawings, Figure 1 represents a front-elevation of my improved spring - hinge for screen - doors, Fig. 2 is a rear - elevation of the spring - hinge, Figs. 3 and 4 are horizontal sections taken respectively on lines 3, 3, and 4, 4, Fig. 1, Figs. 5 and 6 are perspective views of each leaf of my improved spring - hinge detached from each other and showing the perforated ears at the ends and the housing-section on the inner edge of each leaf, and Figs. 7 and 8 are respectively the connecting - pintle of the

spring - hinge and the coiled spring for the hinge.

Similar letters of reference indicate corresponding parts throughout the several figures.

Referring to the drawings,  $a$ ,  $a^1$  represent the leaves of my improved spring-hinge for screen-doors. Each leaf is provided with the usual holes for the fastening-screws by which the leaves are attached to the door-casing and door respectively. At the upper and lower ends of each leaf  $a$  and  $a^1$  are formed ears  $b$  and  $b^1$ , which are bent up at right angles to the leaves and are provided with perforations for the connecting - pintle  $p$ . From the inner edge of each leaf  $a$  and  $a^1$  is bent up a U-shaped housing-section  $d$ ,  $d^1$ , respectively the housing-section on the leaf  $a$  being at the upper part of the leaf, and the housing-section on the leaf  $a^1$  being located at the lower part of the same, each housing-section being of one-half of the height of the interior height of the leaf  $a$ ,  $a^1$ , respectively as shown clearly in Figs. 5 and 6. Each housing-section  $d$ ,  $d^1$  is open at the back and provided at a point adjacent to the upper or lower ear, and approximately in line with the face of the leaf, with a hole or perforation through which perforation the ends of a coiled spring  $f$  are passed when the parts of the spring-hinge are assembled. The bent-up ears of the leaf  $a$  are provided with shoulders  $s$ , as shown in Fig. 5, while the bent-up ears of the leaf  $a^1$  are provided with slightly inwardly - bent shoulders  $s^1$ , which abut against each other under the tension of the spring, and hold the two leaves in proper relative position, as shown in Figs. 3 and 4.

The pintle  $p$  is provided with an enlarged head at its upper end and is upset at the lower end after the parts are assembled, which is readily accomplished by placing the spring at the interior of the housing-sections and dropping the pintle through the perforated ears and the center of the spring and then upsetting the lower end of the pintle to form an enlarged head, as shown in Fig. 1. After the connection is made the parts of the hinge are not separable from each other, but are permanently attached for being applied to the door-casing and screen-door.

After the parts are assembled in the manner described, the weight of the door is supported at two points, regardless of whether it is fastened to leaf  $a^1$  or leaf  $a$  of the hinge; thus, if leaf  $a^1$  is fastened to the door, then the upper overlapping ear of leaf  $a^1$  bears



upon the upper overlapping ear of leaf *a*, and the lower edge of the housing-section of leaf *a*<sup>1</sup> bears upon the lower overlapping ear of leaf *a*. Likewise when leaf *a* is fastened to the door, then the ear *b* of the leaf *a*, which ear is then uppermost, bears on the adjacent edge of the housing-section *d*<sup>1</sup>, and the lower overlapping ear of leaf *a* bears upon the lower overlapping ear of leaf *a*<sup>1</sup>, whereby the door is fully supported and easily moved to its open or closed position by the action of the coiled spring of the spring-hinge.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

A spring-hinge for screen-doors, comprising a pair of hinge-leaves, each of which is provided at its upper and lower ends with

perforated ears, a housing-section on each leaf open at the back and formed integral with one leaf at its upper end and with the other leaf at its lower end, a pintle connecting said ears, and a coil-spring arranged within said housing-sections and having its ends extending laterally through similar perforations formed at opposite sides in said housing-sections and adjacent to their connection with the leaves.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

EMIL BOMMER.

Witnesses:

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