

(No Model.)

J. H. ALEXANDER.
SPRING HINGE.

No. 308,337.

Patented Nov. 25, 1884.

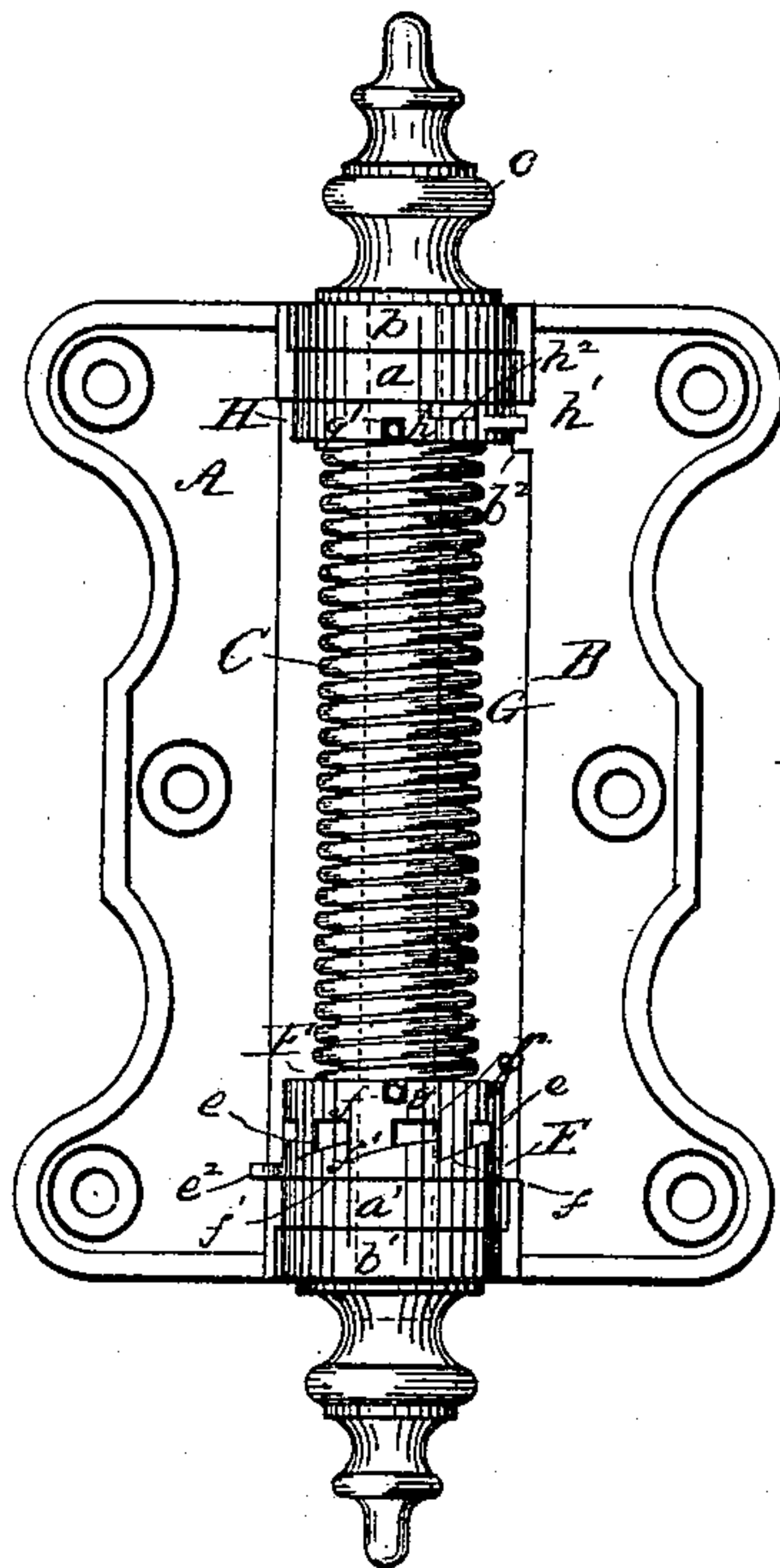


Fig. 1

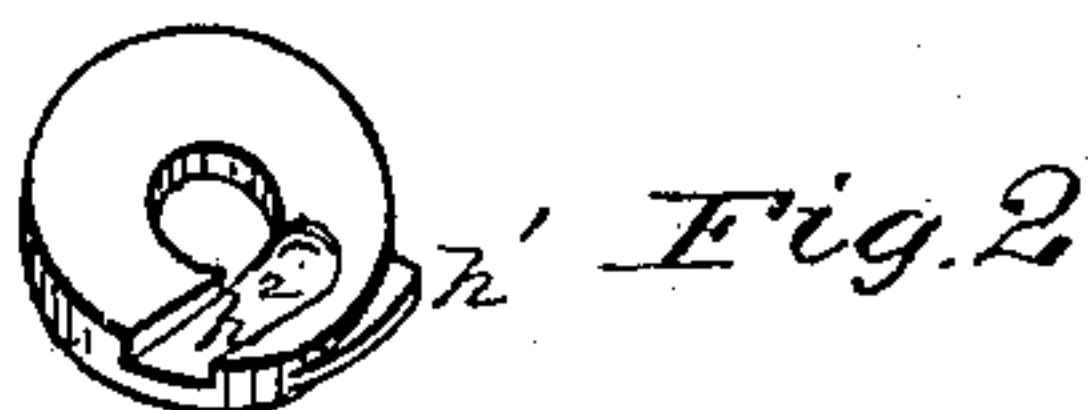


Fig. 2

WITNESSES:

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JAMES H. ALEXANDER, OF PHILADELPHIA, PENNSYLVANIA.

SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 308,337, dated November 25, 1884.

Application filed January 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. ALEXANDER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Spring-Hinges; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is an elevation of my improved hinge. Fig. 2 is a detail view.

My invention relates to spring-hinges; and my improvements have special reference to means for producing and increasing the tension of the springs and for relieving such tension. The tension is obtained by means of a pair of ratchet-collars below the spring; and my improvements relate to constructing the moving ratchet with interdental spaces which receive the teeth of the fixed ratchet, and which also form sockets for the reception of a lever or adjusting device. The tension is relieved by moving the washer to which the upper end of the spring is secured downwardly on the pintle; and my improvements in this connection consist in forming the said washer with an external lug and one of the leaves of the spring with an intercepting projection or shoulder, said washer having also a socket or recess for the reception of a pin or lever, whereby it is crowded down against the spring, so as to bring its lug out of alignment or engagement with the shoulder on the hinge-leaf.

Referring to the accompanying drawings, A and B represent the two leaves of a hinge having, respectively, lugs or eyes a a' and b b' for the passage of a pintle, C, which is a round bolt with a head, c .

E is a ratchet, which encircles the pintle C and rests upon the eye a' of leaf A. It has ratchet-teeth e e on the upper side, and a laterally-projecting lug, e^2 , which bears against said leaf.

F is another ratchet surrounding the pintle C, having a slot, f , for fastening or receiving

the end g of the spiral spring G. This ratchet has its teeth f' f' on its lower side, and the interdental spaces are extended inwardly to form sockets f^2 , permitting the insertion of an adjusting lever or device (such as a common nail) to facilitate the turning of said ratchet F on ratchet E to obtain and increase the tension of said spring G. The upper end, g' , of said spring fits in a slot, h , in a washer, H, encircling pintle C. Said washer has a lateral projecting lug, h' , which bears against a projection or shoulder, b^2 , on leaf B when tension is produced on spring G. Said washer is also formed with a socket or recess, h^2 , on its upper side, into which may be inserted the end of a nail or lever to crowd or press the washer down on the spring, compressing the latter to permit the lug h' to clear shoulder b^2 , and thus relieve the torsion of said spring G, the lug a of leaf A serving as a fulcrum for said lever or nail.

What I claim as my invention is as follows:

1. In a spring-hinge, the locking-ratchet E, having interdental spaces adapted to receive the teeth of an engaging ratchet, and forming sockets over said teeth for the reception of a nail or adjusting device, substantially as shown and described.

2. In a spring-hinge having a shoulder or lug, b^2 , on one of its leaves, a washer, H, having a laterally-projecting lug, h' , which engages with said shoulder, and having a slot, h , for fastening the end of a spiral spring thereto, substantially as shown and described.

3. In a spring-hinge, the combination, with the wings A B and spiral spring G, of a locking-ratchet located at one end of the spring, and a washer or collar for releasing the tension of the spring, located at the other end of the latter, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of December, 1883.

JAMES H. ALEXANDER.

Witnesses:

THOS. O. CONNOLLY,
ANDREW ZANE, Jr.