I. S. DAVIS.
Spring Hinge.

No. 210,758. Patented Dec. 10, 1878.

Fig. 1.

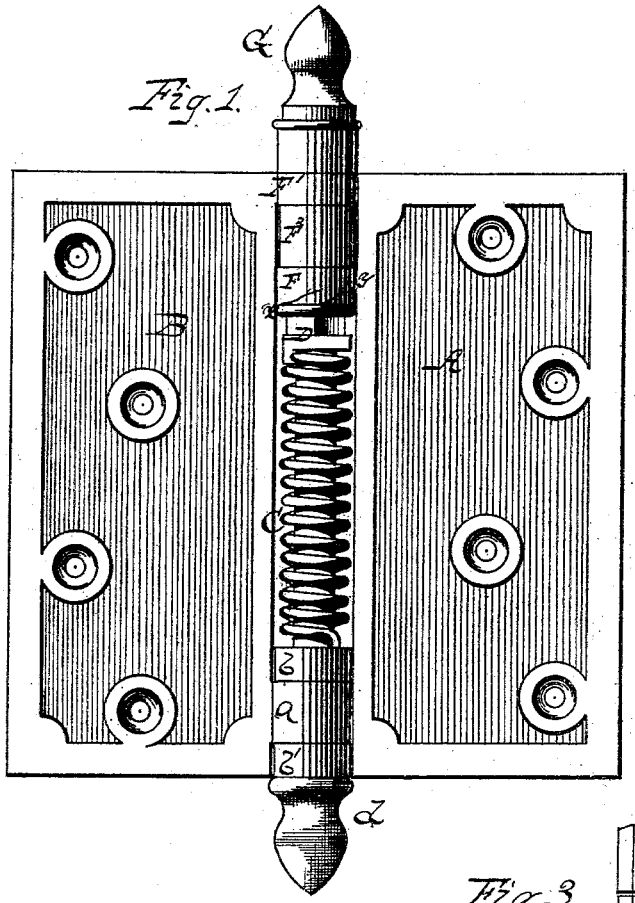


Fig. 2.

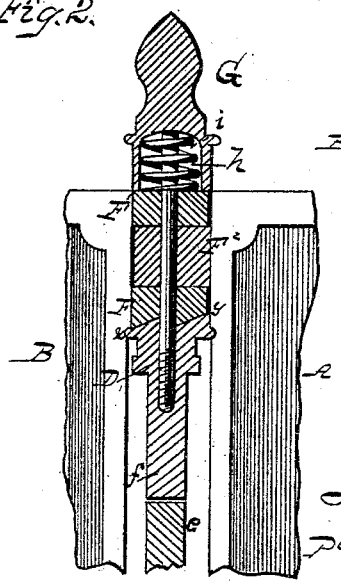
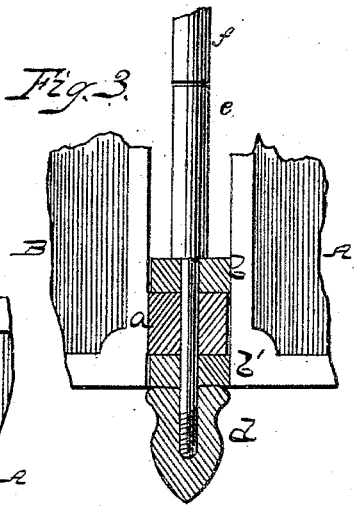


Fig. 3.



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UNITED STATES PATENT OFFICE.

IRA S. DAVIS, OF YPSILANTI, MICHIGAN.

IMPROVEMENT IN SPRING-HINGES.

Specification forming part of Letters Patent No. **210,758**, dated December 10, 1878; application filed October 1, 1878.

To all whom it may concern:

Be it known that I, IRA S. DAVIS, of Ypsilanti, in the State of Michigan, have invented certain new and useful Improvements in Spring-Hinges; and I do hereby declare that the following is a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in the construction and arrangement of the parts of a spring-hinge for doors, gates, &c., as will be hereinafter more fully set forth and pointed out in the claim.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a front view of my improved spring-hinge. Fig. 2 is a vertical section through the upper joint of the hinge. Fig. 3 is a section of the lower part of the hinge.

A and B represent the two leaves of my hinge. The leaf B has, near its lower end, an eye, *a*, which fits between two corresponding eyes, *b b'*, on the leaf A, and a rod, *d*, passed upward through said eyes, connects them together.

The upper eye, *b*, is provided with a circular rod or projection, *e*, over which is placed a coil-spring, C, the lower end of the wire forming said spring being inserted in a hole made in the eye *b*.

The upper end of the wire from which the spring C is made is inserted in a hole in a head, D. This head is provided with a projection, *f*, which extends downward into the spring, and completes, with the corresponding projection E, the support for the spring.

On the upper side of the head D are formed ratchet-teeth *x x*, which correspond with similar teeth *y y*, formed on the under side of an eye, F, secured to the hinge-leaf B. Above the eye F is another eye, F^1, also secured to said leaf B, and between these two fits an eye, F^2, secured to the leaf A. A headed screw, G, is passed downward through these eyes and screws into the head D, thus completing the hinge and uniting the parts together.

The head of the screw G is formed with a recess or chamber, *i*, in its under side, to receive a spring, *h*, surrounding the screw, whereby, even if said screw should be loosened, the ratchet-teeth are held in gear or in contact with each other.

The tension of the spring C can easily be regulated by turning the head D, the screw G being first loosened for that purpose, and when the spring has been adjusted as required, the screw G is to be tightened or screwed up, holding the parts properly together.

In place of the ratchet-teeth *x y*, I may use radial grooves in the adjoining faces of the head D and eye F, and, when the spring is adjusted, insert a pin in two corresponding grooves to lock the head D to the eye.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, in a spring-hinge, of the spring C, ratchet-head D, eye F, provided with ratchet-teeth, screw G, with recess *i* in its head, and the spring *h*, all constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

IRA S. DAVIS.

Witnesses:
EDWARD P. ALLEN,
JNO. W. WISE.