

A. CRAWFORD.
Spring-Hinges.

No. 133,699.

Patented Dec. 10, 1872.

Fig. 1.

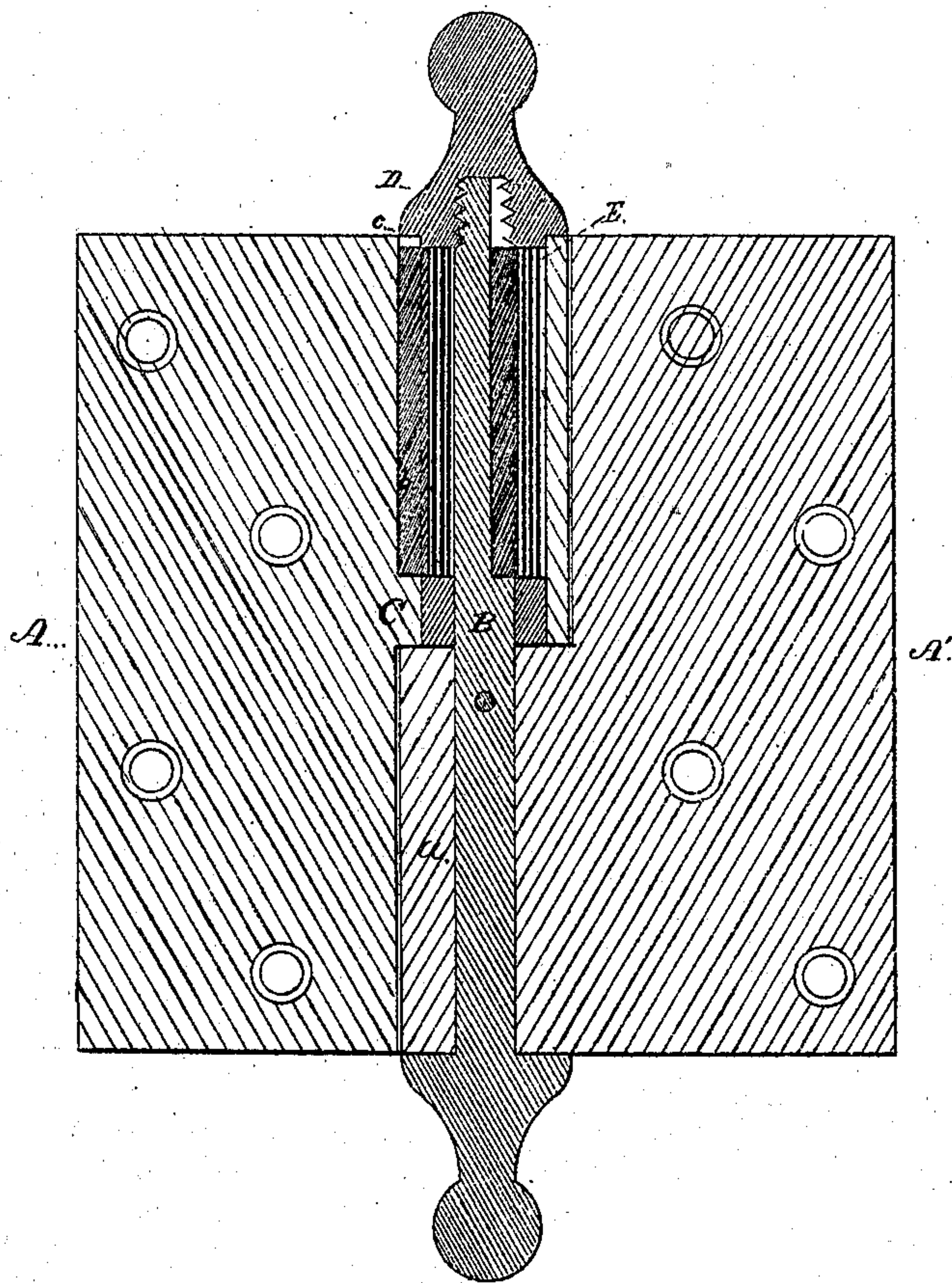
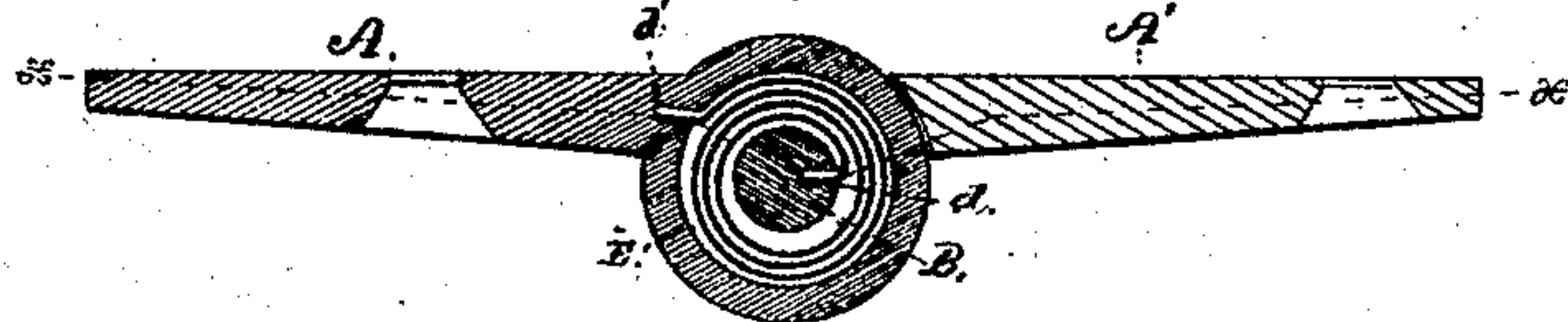


Fig. 2.



Witnesses

Geo Gray

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UNITED STATES PATENT OFFICE.

ANGUS CRAWFORD, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SPRING-HINGES.

Specification forming part of Letters Patent No. 133,699, dated December 10, 1872.

To all whom it may concern:

Be it known that I, ANGUS CRAWFORD, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Spring-Hinges; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, in which—

Figure 1 is a horizontal sectional elevation, and Fig. 2 a transverse section, of a hinge constructed in accordance with my invention.

My invention has reference to that class of hinges which, when applied to a door, shall close the latter by the resilient action of a spring or motor disposed within the barrel or socketed portion or portions of the hinge.

I am aware that a spring-hinge, in the abstract, is not new, and that many attempts in this direction have produced articles of little practical value.

The object of my invention is to provide a simple, strong, and reliable hinge, one which shall be effective in operation and little liable to get out of order; and it consists in the employment, in that class of hinges in which a spring is applied to the pintle and a surrounding tube, of a washer surrounding the pintle and having a diameter corresponding with the internal diameter of the tube, which, in conjunction with a screw-cap provided with an annular shoulder, serves to confine the parts together, and prevent, in a great measure, any play or wear of the parts, by keeping the axis of the pintle coincident with the axis of the surrounding tube, as will be hereinafter fully set forth.

In the said drawing, A and A' denote the two halves or leaves of the hinge. B is the pintle, which is firmly secured within the cylindrical part *a* of the lower half or leaf A', and extends upward and has a male screw cut upon its upper end. C is an annular washer, which is disposed around the lower part of the pintle. The said pintle extends up through the tubular part *b* of the leaf A, the lower part of

the tube embracing the washer and resting upon the top of the cylinder *a*. D is a screw-cap, which screws upon the top of the pintle, and serves to confine the parts together. This screw-cap has an annular shoulder, *c*, formed upon its lower surface, such shoulder having a diameter corresponding with that of the washer C, and both corresponding with the internal diameter of the tube *b*, the said washer and shoulder, acting in conjunction, serving to maintain the tube *b* in its true normal position with respect to the axis of the pintle. E is a coiled plate spring, which is disposed around the pintle and is enveloped by the tube *b*. Each extremity of this spring is bent at a right angle, forming flanges *d d'*, the inner one of which, *d'*, enters a groove made longitudinally in the pintle, as shown in Fig. 2, while its other end or flange *d* is received within a groove made longitudinally in the inner face of the tube *b*.

The spring may have any desirable number of coils, such as will impart to it the desired degree of resilient force. The lower end of the spring rests upon the washer C, while its upper end impinges against the lower face of the screw-cap D.

From the above it will be seen that the two halves or leaves of my spring may be readily detached from each other, and the spring removed whenever it may be desirable.

Having described my invention, what I claim as an improved article of manufacture is—

The improved hinge, as described, consisting of the leaves A A' and tube *b*, pintle B, washer C of the same diameter as the internal diameter of the tube *b*, screw-cap D having an annular shoulder, *c*, and spring E, all arranged, constructed, and operated as set forth.

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Witnesses:

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