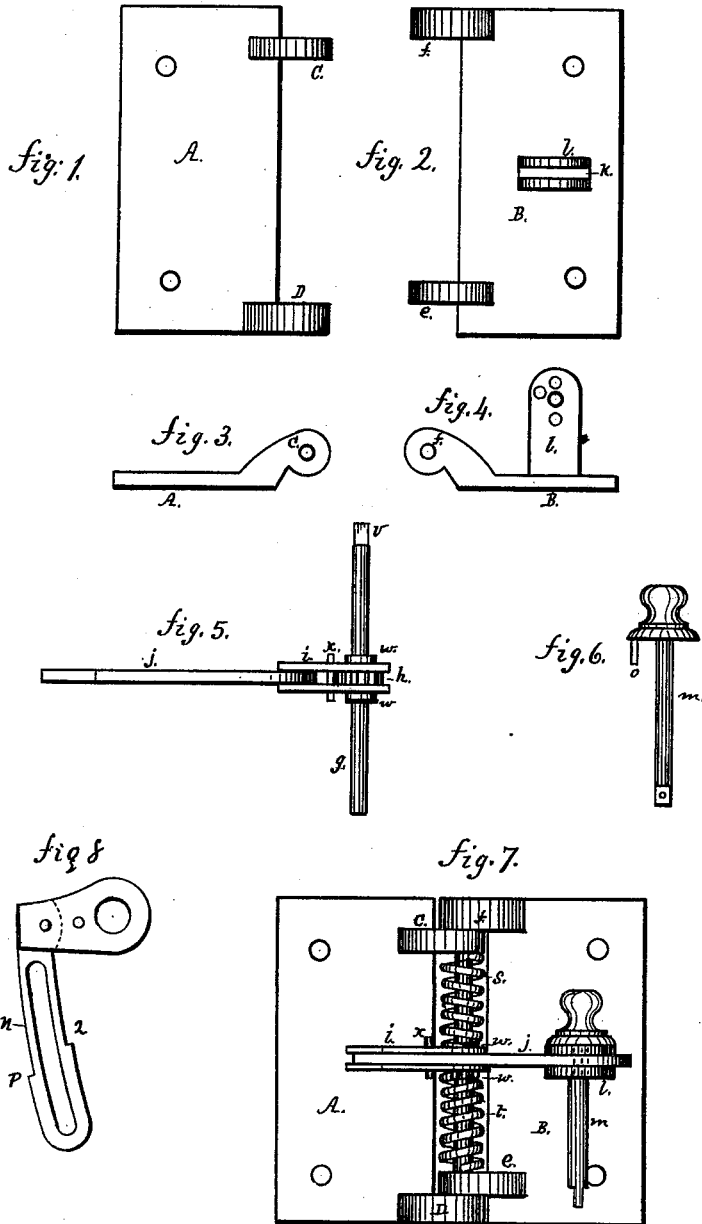


T. DUFFY.
Spring-Hinge for Shutters, &c.

No. 198,452.

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Witnesses
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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN SPRING-HINGES FOR SHUTTERS, &c.

Specification forming part of Letters Patent No. **198,452**, dated December 25, 1877; application filed November 23, 1877.

To all whom it may concern:

Be it known that I, TERRENCE DUFFY, of Pittsburg, in the county of Allegheny, State of Pennsylvania, have invented a new and useful Improvement in Spring-Hinges for Doors and Shutters; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to an improvement in spring-hinges for doors and shutters; and consists in the novel combination of spiral springs with the pintle and knuckles of the hinge, said pintle being provided with an arm and ratchet-wheel, in which arm is a pivoted arm provided with a groove, which moves in a slot in an arm projecting from the face of one of the leaves of the hinge, the arm on the pintle resting against the opposite leaf of the hinge, the whole being so arranged that the door or shutter upon which the hinge is placed can be held open at any desired point by means of a pin placed in the arm projecting from the leaf of the hinge, and operating in connection with said pivoted arm, all as hereinafter more fully described and claimed.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the drawings, Figures 1 and 2 represent the two leaves of a hinge. Figs. 3 and 4 are end views of the same. Fig. 5 represents the pintle provided with a ratchet-wheel, arm, and pivoted arm. Fig. 6 is a side view of the pin used in connection with the arm projecting from the leaf of the hinge and pivoted arm. Fig. 7 represents the several parts arranged in juxtaposition. Fig. 8 is a detailed view of the pivoted and slotted arm.

A and B represent the leaves of the hinge; C D *e f*, the knuckles; *g*, the pintle; *h*, the ratchet-wheel; *i*, the arm projecting from the pintle and resting against the face of the leaf A of the hinge. *j* is a slotted arm pivoted in the arm *i*, and moves in the slot *k* of the arm *l* projecting from the face of the leaf B of the hinge.

The pin *m* (represented in Fig. 6) passes through openings in the arm *l* and through the slot *n* in the arm *j*, and the small pin *o*, passing through openings in the arm *l*, catches against the shoulders *p* or *q* of the slotted arm *j*, which will depend upon the manner of placing the pin *o* in the openings in the arm *l*. One end of the spiral spring S is secured in the knuckles C of the plate A, and the other end of the spring is secured in the sleeve *w* of the arm *i*, and one end of the spring *t* is secured in the knuckle *e* of the plate B, and the other end of said spring is secured in the sleeve *w* of the arm *i*.

Tension is imparted to the spring by placing a wrench on the square end V of the pintle *g*, and rotating it until the desired tension is obtained; then the pin *x* is passed through the arm *i* and a notch in the ratchet-wheel *h*, whereby the arm *i* is held against the plate A of the hinge with a force corresponding to the tension of the springs *s* and *t*.

By the arrangement of the parts hereinbefore described the door or shutter upon which the hinge is placed may be held open at any desired angle. The angle at which the door or shutter is held will depend upon the arrangement and number of the shoulders *p* and *q* upon the arm *j*. The shutter or door is allowed to close by simply drawing up the pins *m* and *o*.

Having thus described the nature, construction, and operation of my improvement, what I claim as of my invention is—

The plate or leaf B, provided with arm *l*, in combination with the plate or leaf A, pintle *g*, springs *s* and *t*, ratchet-wheel *h*, projecting arm *i*, pivoted and slotted arm *j*, and pin *m* *o*, all arranged and operating with relation to each other, substantially as herein described, and for the purpose set forth.

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Witnesses:

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