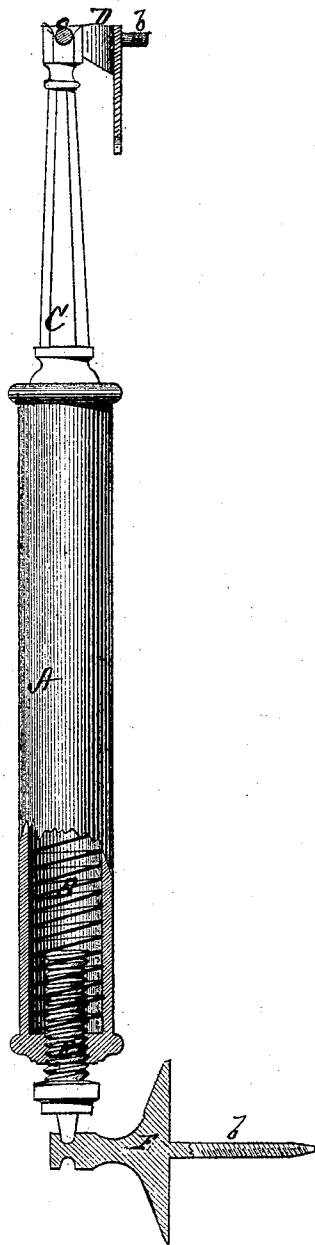


J. Simpson,
Door Spring.

No. 96,493.

Patented Nov. 2, 1869.



Witnesses
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United States Patent Office.

JOSEPH SIMPSON, OF NEWARK, OHIO.

Letters Patent No. 96,493, dated November 2, 1869.

IMPROVED DOOR-SPRING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOSEPH SIMPSON, of Newark, in the county of Licking, and in the State of Ohio, have invented certain new and useful Improvements in Door-Springs; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in regulating the tension of the spring in a door-fastener by means of a tenoned screw in the bottom of the tube enclosing the spring, and in the construction and general arrangement of the parts, as hereinafter described.

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 drawings, which represent a side view of my invention, partly in section.

A represents a cylinder or casing of suitable material, having a strong spiral or coiled spring, B, enclosed within the same. This spring bears against one end of the cylinder, while the other end of the spring bears against an arm, C, which is placed with one end within the cylinder, and projecting beyond the same. This arm is, by a flange or other suitable means, prevented from being pressed out of the cylinder by the spring B.

The outer end of the arm C is provided with a notch or recess across its face, which fits around the pin *a* of the hinge D.

At the end of the cylinder A, against which the spring B bears, is inserted a screw-bolt, E, the outer end of which is pointed and fits into a recess in the knob F.

The hinge D and knob F are both cast with a screw,

b, embedded into the same for the purpose of screwing them into the door or door-frame, thus obviating the necessity of drilling or otherwise making holes through their flanges for the insertion of screws.

The hinge D is secured to the door-frame, and the knob F to the door, in such a position and at such distance apart, that when the screw-bolt or adjustable end-piece E is inserted into the cylinder A as far as it will go, the said cylinder A, with its arm C, will exactly fit between them in a horizontal position.

When the door now is opened, the arm C will of course be pressed to a certain degree into the cylinder by the compression of the spring B, and, as soon as the force is removed from the door, the spring expanding, will cause the door to close.

It will readily be seen, that by extending the end-piece E, (the hinge D and knob F, being fixed,) the spring B will become in the same proportion compressed, and hence its tension greater.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the tube A and spring B, the movable screw E, provided with a tenon on its outer end, as and for the purposes set forth.

2. The combination of the hinge-piece D, grooved arm C, tube A, spring B, tenoned screw E, and knob F, all constructed and operated as and for the purposes set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 5th day of March, 1869.

JOSEPH SIMPSON.

Witnesses:

C. L. EVERT,
A. N. MARR.