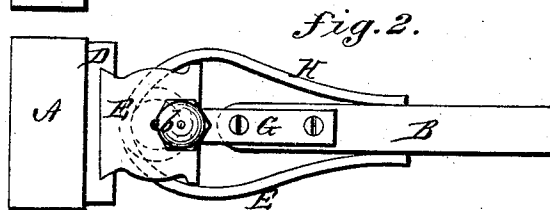
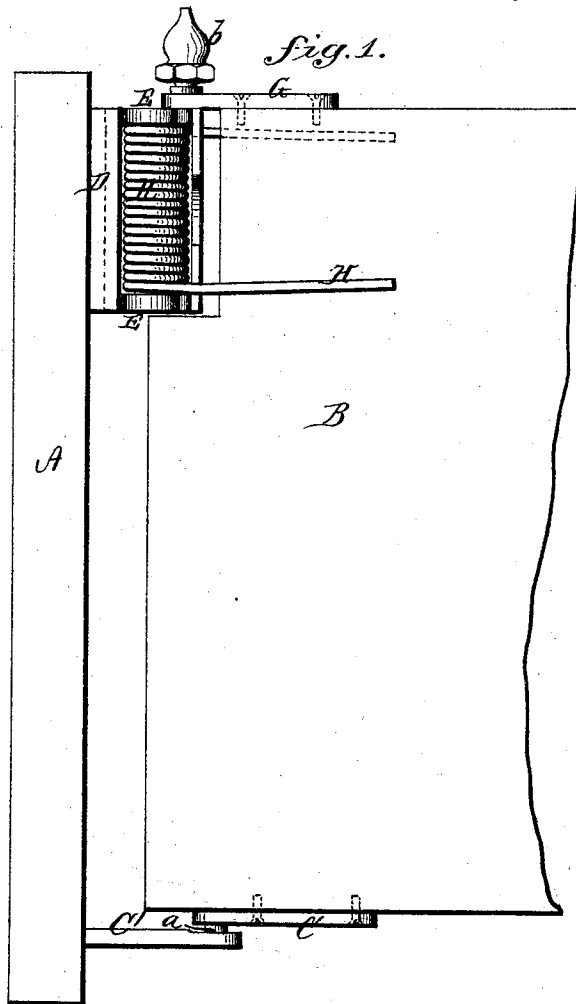


A. TITTMAN.
Door-Springs.

No. 140,446.

Patented July 1, 1873.



Witnesses
John A. Ellis
Edward E. Ellis

Inventor
Alexander Tittman
Per
J. H. Alexander & Co
Attys

UNITED STATES PATENT OFFICE

ALEXANDER TITTMAN, OF EVANSVILLE, INDIANA.

IMPROVEMENT IN DOOR-SPRINGS.

Specification forming part of Letters Patent No. **140,446**, dated July 1, 1873; application filed May 20, 1873.

To all whom it may concern:

Be it known that I, ALEXANDER TITTMAN, of Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Door-Springs; and I 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, which form a part of this specification.

The nature of my invention consists in the employment of a spring so arranged in a metal plate that it will operate upon both sides of the door hinged upon said plate, as hereinafter set forth; also, in the combination of the various parts, to be hereafter 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 drawing, in which—

Figure 1 is a front view, and Fig. 2 a plan view, of a door with my spring attached.

A represents a part of the door-frame, and B a door intended to swing both ways. At the lower end of the door is secured a bar, C, with downward-projecting pin *a*, which rests in a socket or recess on an arm, C', which projects from the door-frame A, thus forming the lower hinge for the door. At the upper end of the frame A is secured a casting, D, provided with a dovetailed tapering groove, into which is inserted metal frame E, that side of said frame which enters the groove being dovetailed and wedge-shaped so as to enter the groove and be held in the same. A bar, G, is fastened to the upper edge of the door B, and pivoted by a headed pin or screw, *b*,

to the upper end of the metal frame E, thus forming the upper hinge for the door. In the metal frame E is inserted a spiral spring, H, and held by means of a central post or rod. The ends of this spring extend horizontally outward on opposite sides of the door, and bear against the same, as shown in Fig. 1.

The spring being held in the frame, the tension of the ends is in opposite directions, and, hence, whichever way the door may be opened, the spring will bring it back and keep the door closed, even against a very strong draft.

This door-spring is very useful on doors for churches, theaters, offices, summer-saloon doors, &c.; and in case the main door is to be used, and the summer-door detached, the whole spring-rigging is taken along with it out of sight.

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

1. The spring H attached in the metallic frame E, and having its ends operating on opposite sides of a door, B, hinged to said frame, substantially as and for the purposes herein set forth.

2. The combination of the casting D having dovetailed tapering groove, the frame E fitting in said groove, the spring H, and hinge-bar G, with the door B, all constructed and arranged 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.

ALEXANDER TITTMAN.

Witnesses:

JOHN RHEINLANDER,
CHAS. MILLER.