

A. A. STIMSON.
Door-Springs.

No. 147,077.

Patented Feb. 3, 1874.

Fig. 1

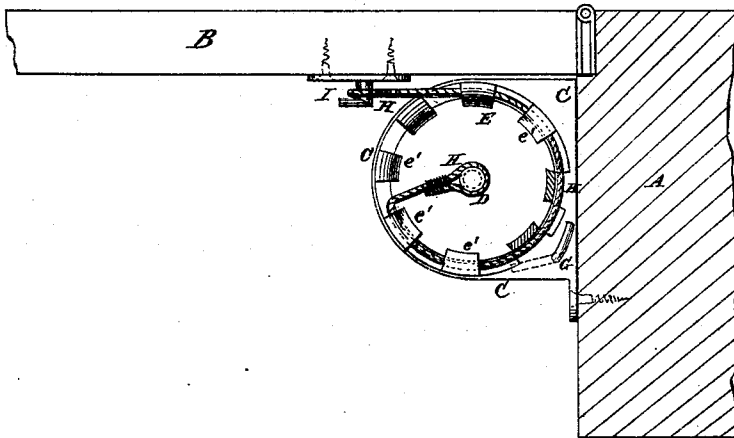


Fig. 2

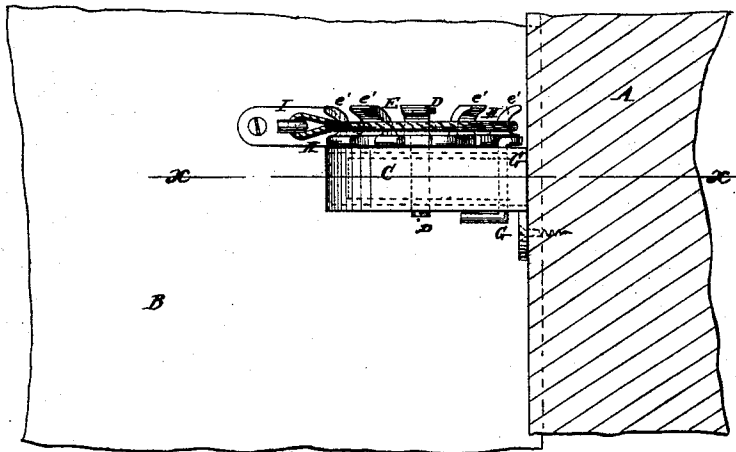
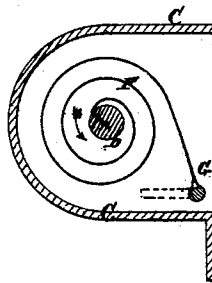


Fig. 3



Witnesses:

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Per

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UNITED STATES PATENT OFFICE.

ASHBEL A. STIMSON, OF MONTPELIER, VERMONT.

IMPROVEMENT IN DOOR-SPRINGS.

Specification forming part of Letters Patent No. **147,077**, dated February 3, 1874; application filed July 26, 1873.

CASE B.

To all whom it may concern:

Be it known that I, ASHBEL A. STIMSON, of Montpelier, in the county of Washington and State of Vermont, have invented a new and useful Improvement in Door-Springs, of which the following is a specification:

Figure 1 is a top view of my improved door-spring, shown as applied to a door. Fig. 2 is a side view of the same. Fig. 3 is a detail section of the same, taken through the line *xx*, Fig. 2.

My invention has for its object to furnish an improved door-spring, simple in construction, convenient in use, effective in operation, and inexpensive in manufacture. The invention consists in improving door-springs by the introduction of certain novel features, which will first be fully described, and then clearly pointed out in the claims.

A represents the door-casing, and B represents the door. C is the case of the spring, which is made with lugs for convenience in securing it in place. To the case C is pivoted a short shaft, D, upon the upper end of which is formed a wheel, E, around the upper side of the edge of which is formed a series of upwardly-projecting lugs, *e'*, which, in connection with the lower part of said edge, form the cord-groove. The lower part of the edge of the wheel E is notched beneath the lugs *e'*, as shown in Figs. 1 and 2. This construction enables the wheel to be drawn from the mold. F is a coiled spring, placed within the case C, and one end of which is secured to the shaft D. The outer end of spring F is secured to a pin, G, which is passed through the case C, near the edge of the wheel E, and the ends of which are bent at right angles, as shown in Figs. 1, 2, and 3. The upper end of the pin G is designed to enter one of the notches in the lower part of the edge of the wheel E, to serve as a catch to hold said wheel against the action of the spring F when placing, removing, or adjusting the cord H. The other end of the pin G serves as a handle for operating said pin. H is the cord, which may be made of wire,

catgut, rawhide, or other suitable material, and which has a loop formed upon each end, one of which loops is passed over a hook or other catch, I, attached to the door B, and the other loop is passed over the upwardly-projecting end of the shaft D.

The body of the cord H is passed through the space between two of the lugs *e'* of the wheel E, and is then passed around the rim of said wheel. The tension of the spring is adjusted by simply moving the cord H from one to another of the lugs *e'*.

The case C is shown in the drawing as being attached to the door-jamb, and the catch I as being attached to the door; but, if desired, (and in some cases this arrangement is preferable,) the case C may be attached to the upper part of the door, and the catch I to the top casing, the cord H working just above the top edge of the door, as the door swings open and shut. In this case the cord H draws from the side of the wheel E next the door-hinge, and as the door swings open the cord approaches the axis of the hinges, and finally passes said axis, so that the tension of the spring will hold the door open.

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

1. A door-spring pulley-wheel having its groove formed of curved lugs *e'*, placed on one side thereof, as described, so as not only to answer the ordinary purpose of a groove, but to allow the tension of the spring to be adjusted by passing the cord over a different number of lugs.

2. A bent pin or catch, G, combined with a door-spring wheel, E, having notches at or near the periphery, as set forth, to hold it while the tension of the spring is being adjusted.

ASHBEL A. STIMSON.

Witnesses:

T. B. MOSHER,
C. SEDGWICK.