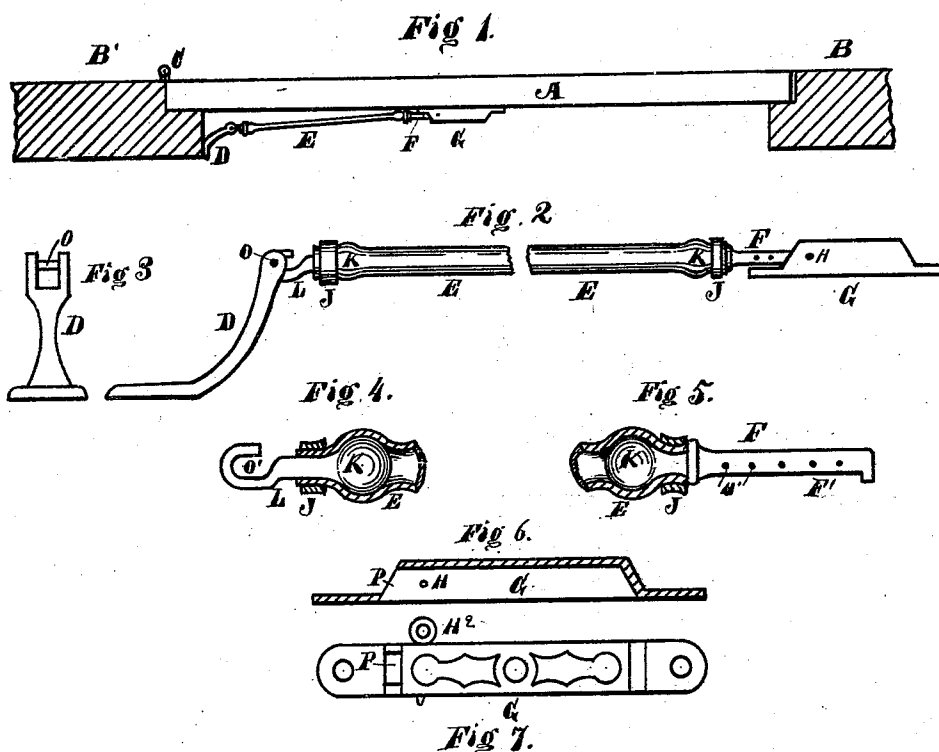


C. E. MILLER.

ADJUSTABLE ATTACHMENT FOR DOOR-SPRINGS.

No. 172,887.

Patented Feb. 1, 1876.



WITNESSES;
J. S. Long
H. Smith

INVENTOR.
Charles E. Miller.
Per. C. D. Sprink. his Atty.

UNITED STATES PATENT OFFICE.

CHARLES E. MILLER, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN ADJUSTABLE ATTACHMENTS FOR DOOR-SPRINGS.

Specification forming part of Letters Patent No. 172,887, dated February 1, 1876; application filed January 3, 1876.

To all whom it may concern:

Be it known that I, CHARLES E. MILLER, of Indianapolis, county of Marion, State of Indiana, have invented certain new and useful Improvements in the Attachments of Rubber-Tube Door-Springs, that are secured to doors and door-frames, whereby a useful and readily-adjustable door-spring is obtained, of which the following is a description, reference being had to the accompanying drawings.

My invention consists of an adjustable piece constructed with an extension at one end, which is perforated with a series of holes, and provided at the other end with a ball or conical plug, the extension part being inserted in holes formed at the end of the case, which is secured to the door, and held in any required position by means of the pin and pin-holes in the case, and extension part of the adjustable piece.

Figure 1 represents a top view of a door, showing the relative position of each piece used as a door-spring. Fig. 2 is an enlarged side view of the door-spring. Fig. 3 is a front view of the curved hinged arm. Fig. 4 is a sectional view of the hook that operates in the fork of the curved arm, and also shows the manner in which the rubber tube is secured on the ball or conical plug of the hook. Fig. 5 is a sectional view of the adjustable end which operates in the case, that is secured to the door, and also shows the manner of securing the rubber tube to the ball or conical plug. Fig. 6 is a sectional view of the case that is secured to the door. Fig. 7 is a top view of the same.

In the drawings, A represents a door, hinged at C to the frame B', and shows the relative arrangement of the curved arm D, rubber-tube spring E, adjustable piece F, and case G, as attached thereto to form a door-spring. The curved arm D is formed with a fork and wrist-pin, O, as shown in Fig. 3, in which the

loop O' of the hook L operates as a hinge, to allow the rubber spring to always have a straight line at any position in which the door may stand. The other end of the piece, with the hook L, is formed with a ball or conical plug, K, over which the end of the rubber tube E is drawn and secured there by the rubber band J, as shown in the drawings, which effectually prevents the rubber tube E from being pulled off of the ball or conical plug K, and makes a firm fastening. The other end of the rubber tube E is secured, in like manner, to the ball or conical plug K of the adjustable piece F, which has an extension, F', that is perforated with a number of holes, H¹, and is inserted in the opening P at the end of the case G, and held in any desired hole H¹ by means of the pin H², passing through the hole H in the case G, as shown in the drawings.

I am aware that rubber tubes have been used before as door-springs, and as such I do not claim it.

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

In a door-spring, the adjustable piece F, constructed with the extension F' at one end, which extension is perforated with a series of holes, H¹, and also provided with a ball or conical plug, K, at the other end, in combination with the case G, arranged with openings P at the ends, to receive the extension F', and provided with a pin-hole, H, to receive the pin H² and hold the adjustable piece F, in the manner and for the purposes specified and set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES E. MILLER.

Witnesses:

E. O. FRINK,
S. C. FRINK.