

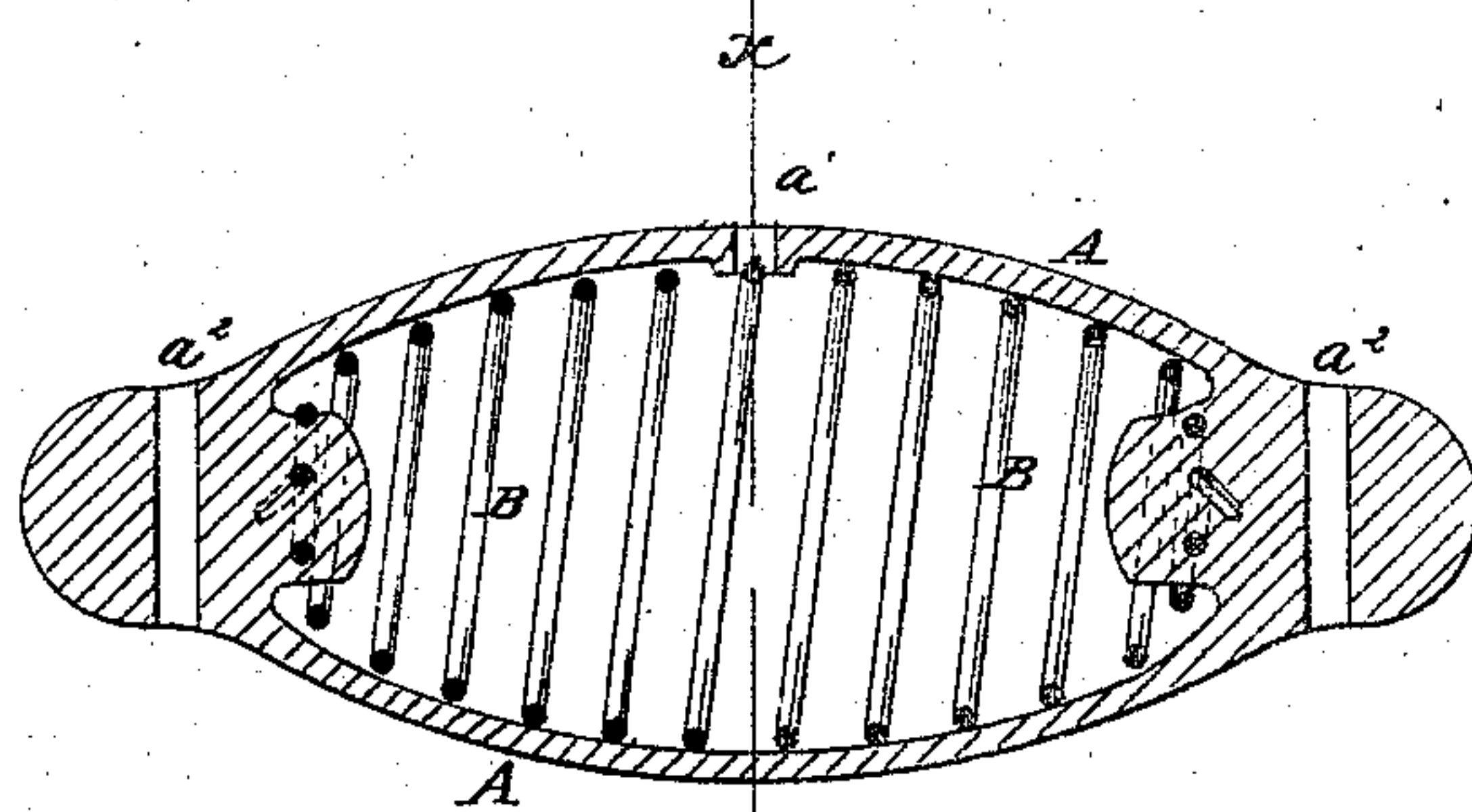
W. M. KELLIE.

Door-Springs.

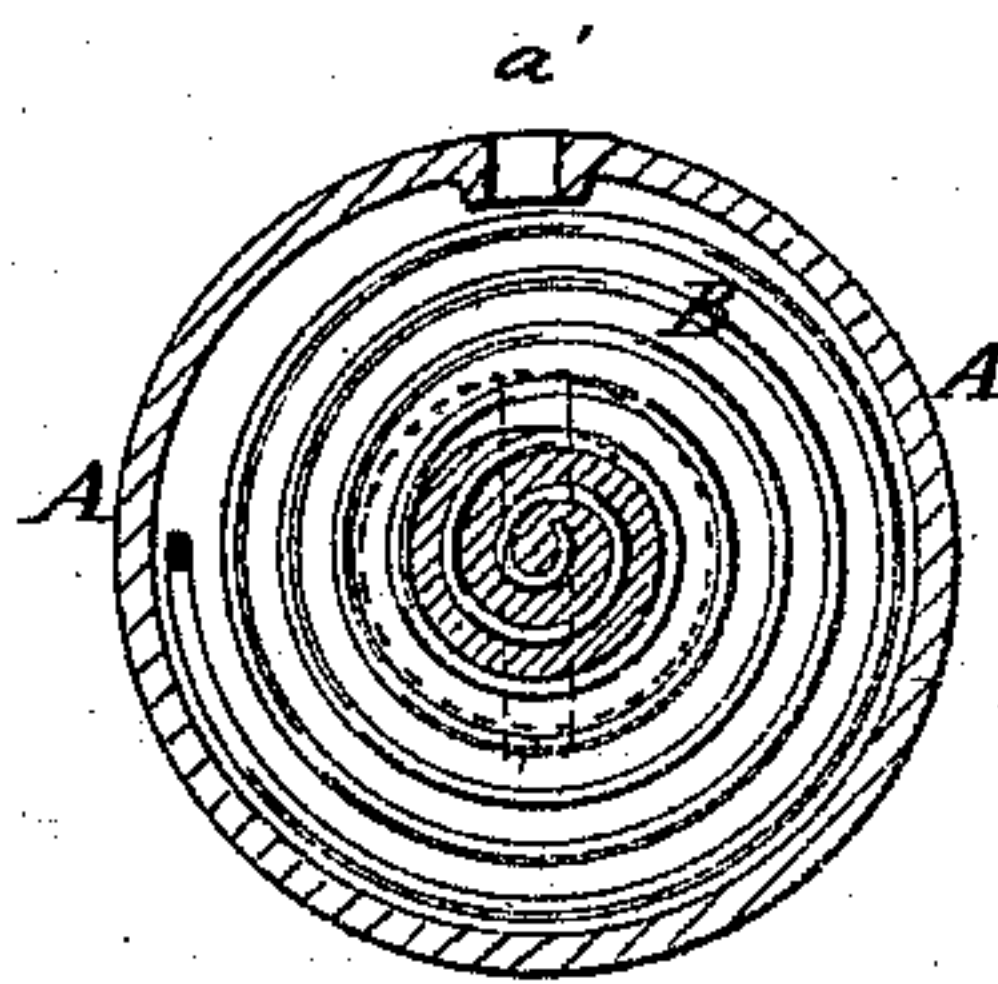
No. 136,923.

Patented March 18, 1873.

*Fig. 1*



*Fig. 2*



Witnesses:  
*A. W. Almquist*  
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# UNITED STATES PATENT OFFICE.

WILLIAM M. KELLIE, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN DOOR-SPRINGS.

Specification forming part of Letters Patent No. 136,923, dated March 18, 1873.

*To all whom it may concern:*

Be it known that I, WILLIAM M. KELLIE, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Door-Spring, of which the following is a specification:

Figure 1 is a detail longitudinal section of my improved door-spring. Fig. 2 is a detail cross-section of the same taken through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved rubber door-spring, which shall be so constructed as to cause the door to close gradually and without slamming. The invention consists in an improved door-spring formed by the combination of the inclosed elliptical coiled-wire spring, having its ends embedded in the solid end parts of the rubber bulb, with said bulb having a hole in its side, and its solid ends perforated to receive the fastenings, as hereinafter fully described.

A represents an elliptical rubber bulb, which is formed around an elliptical coiled-wire spring, B. The body of the coiled spring is loose in the cavity, but its ends are embedded in the solid rubber ends of the bulb A, as shown in Figs. 1 and 2. In one side of the bulb A is formed a hole, *a*<sup>1</sup>, to allow the air to pass in and out with difficulty. A small

ring is raised on the rubber around the hole *a*<sup>1</sup> on the inside of the bulb A, to prevent the wire from closing the said hole. Through the solid ends of the rubber bulb are formed holes *a*<sup>2</sup>, to receive the piece by which it is connected with the door and door-casing.

By this construction, when the door is opened, the bulb A and coiled-wire spring B will be drawn out or elongated, and the coiled spring B will prevent the bulb A from collapsing, and will thus insure the entrance of the air, which from the difficulty with which it is expelled from the cavity through the small hole *a*<sup>1</sup>, will prevent the too rapid contraction of the spring, and thus close the door gradually and without slamming.

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

An improved door-spring, formed by the combination of the inclosed elliptical coiled-wire spring B, having its ends embedded in the solid end parts of the rubber bulb A, with said bulb A having a hole in its side, and its solid ends perforated to receive the fastenings, substantially as herein shown and described.

WILLIAM M. KELLIE.

Witnesses:

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