D. DICK.

Door-Springs.

No. 139,458. Patented June 3, 1873.

Fig. 1.

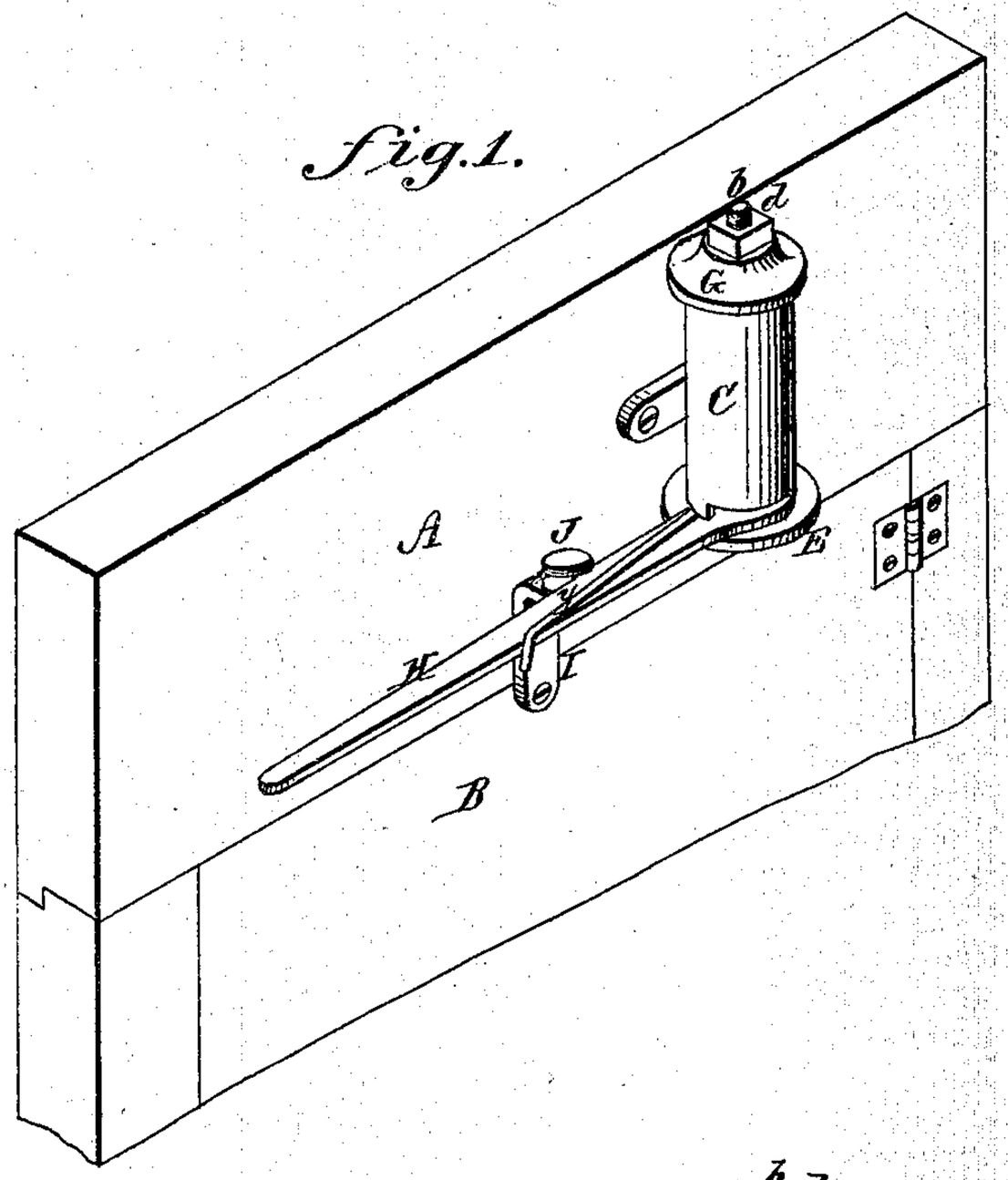


Fig. 2.

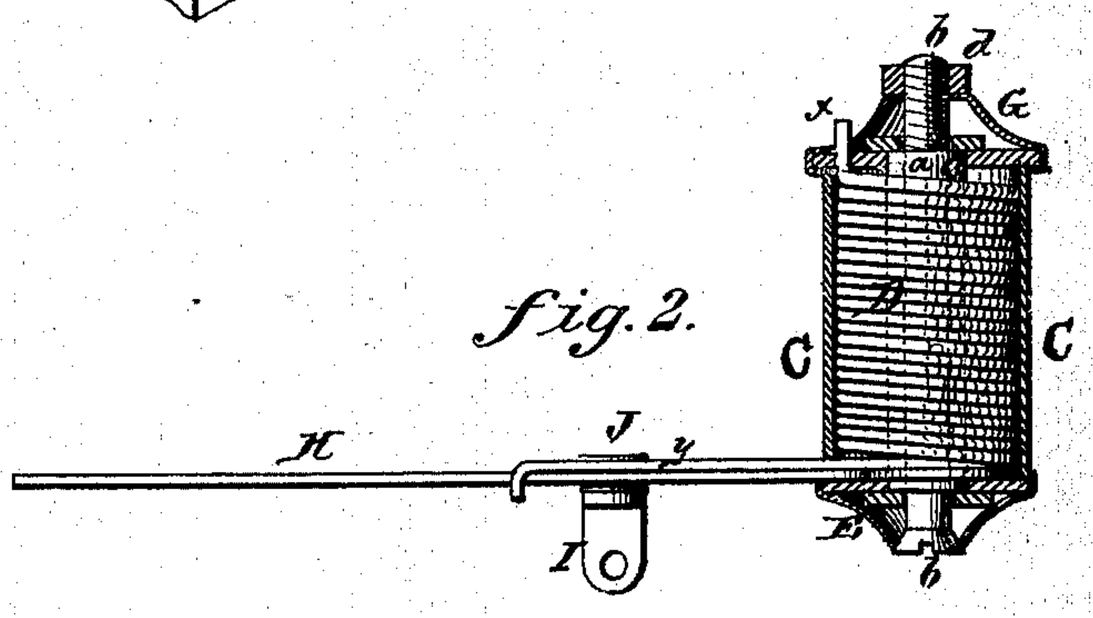
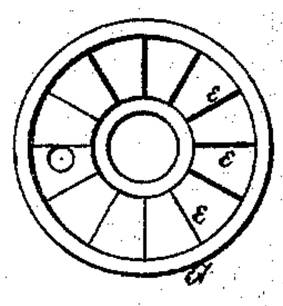
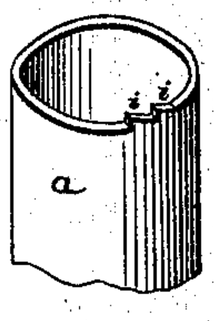


Fig. 3.





Witnesses
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UNITED STATES PATENT OFFICE.

DAVID DICK, OF NEW YORK, N. Y., ASSIGNOR TO BARBARA M. BARMORE, OF SAME PLACE.

IMPROVEMENT IN DOOR-SPRINGS.

Specification forming part of Letters Patent No. **139,458**, dated June 3, 1873; application filed April 15, 1873.

To all whom it may concern:

Be it known that I, DAVID DICK, of No. 397 West street, New York city, in the county of New York and State of New York, 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 invention consists in the combination of the cylinder, top cap, spring, and arm with lever and roller to form a door-spring, as hereinafter more fully 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 perspective view of the upper part of a door, showing my door-spring applied to the same. Fig. 2 is a section of the spring-case, showing the spring and the other parts connected therewith, and Fig. 3 shows the device for regulating the tension of the spring.

A represents the upper part of a door-frame with the door B. To a suitable bracket attached to the door-frame A is secured a cylinder, C, in a vertical position, which cylinder contains a spiral spring, D. The cylinder C may be made in one piece with the bracket or separate and attached to it, as desired. It is located above the door and a short distance from the inner end of the door, as shown in Fig. 1. E represents the lower and G the upper cap of the cylinder, and from the latter attached to it extends a tube, *a*, down through the spring D, and rests on the lower cap E. A screw, *b*, is then passed up from below and fastened by a nut, *d*, on top, as shown in Fig. 2. The upper end of the spring D is inserted in a hole, at *x*, in the upper cap G, while the lower end extends outward between the cylinder and lower cap E in the form of an arm, *y*, having its outer end bent downward to bear against a lever, H, which is placed with its inner end around the tube *a*, and projects out, also, between the cylinder and lower cap. On the upper end of the door B is a bracket, I, carrying a flanged roller, J, in which the lever H works.

It will readily be seen that from the position and construction of this door-spring the pressure on the door is strongest when closed and lightest when the door is open, the door being fulcrum in one position and the spring-pressure fulcrum in the other. The top cap G is provided with ratchet-teeth *e e* on the under side, and on the upper edge of the cylinder is one or more teeth, *i*, so that by turning the top cap the pressure of the spring may be increased or diminished at pleasure, the teeth retaining the pressure given.

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

The combination of the cylinder C, top cap G, spring D, arm *y*, lever H, and roller J, all constructed as described, and arranged on the door-frame and door in the position 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.

DAVID DICK.

Witnesses:
GEO. S. THOMPSON.
CHAS. MITTAM.