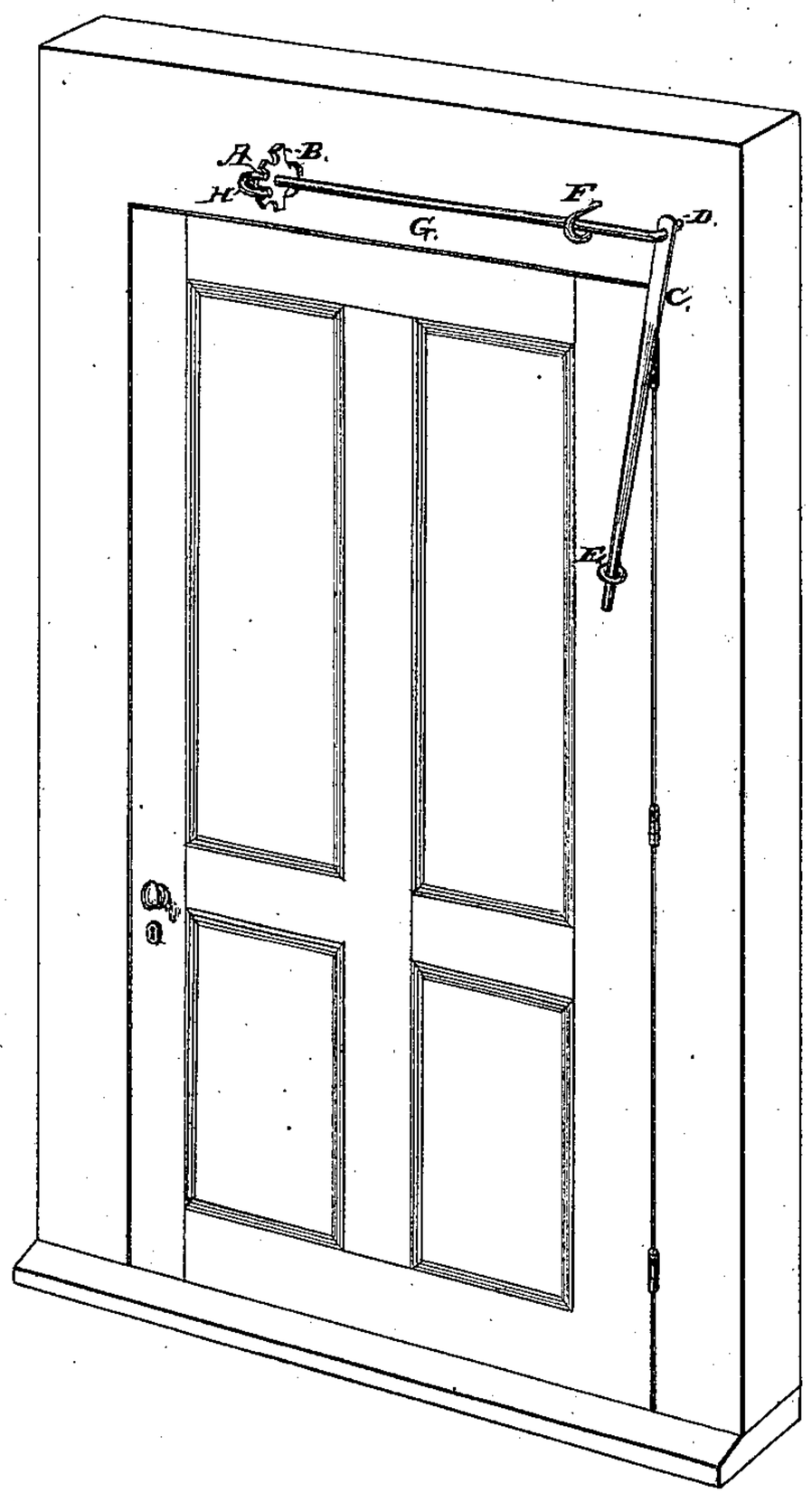
H. C. JONES.
Door Spring.

No. 202,033. Patented April 2, 1878.



Attest:
Jno. D. Patten.
R. E. Grant

Inventor:
Hezekiah C. Jones

UNITED STATES PATENT OFFICE.

HEZEKIAH C. JONES, OF WINONA, MINNESOTA.

IMPROVEMENT IN DOOR-SPRINGS.

Specification forming part of Letters Patent No. **202,033**, dated April 2, 1878; application filed November 15, 1877.

To all whom it may concern:

Be it known that I, HEZEKIAH C. JONES, of the city and county of Winona, State of Minnesota, have invented a new and Improved Method of Opening and Closing Doors, Gates, &c.; and I do hereby declare that the following is a true, full, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The nature of my invention consists in the novel combination of a straight metal torsion-spring, having a crank at one end and a loop at the other, the loop terminating in an abrupt hook, a straight metal lever or spring arm, a metal eyelet, a metal hook, and a semicircular ratchet-tension, all as hereinafter more fully described and claimed.

To enable others skilled in the art to make and use my invention, I will describe its construction and combination.

The metal spring is an ordinary wire, usually made of steel, but can be made of other metal. The loop is intended to be hooked into the ratchet-tension, the end of the loop or hook passing through the ratchet, and the spring passing over the outer edge of the ratchet-tension through slots, which hold it in position. The position of the mainspring and the loop in the ratchet-tension may be changed, so that the mainspring shall pass through the ratchet and the end of the loop on the outer edge through the slots, thus reversing the action of the spring. The combination or point of contact of the spring with the ratchet is represented by letter A in the annexed drawing.

The ratchet-tension B consists of a half-circle, made of metal, of a size to suit the spring, with its outer circular edge toothed or cut with slots; and upon the straight edge opposite the slots is a screw or screws, which are used to fasten the ratchet-tension in its place. The construction of the ratchet-tension is represented by letter B in the accompanying drawing.

The lever C is made of steel or other metal, and consists of a simple straight arm, with a hole in one end, the other end being smooth, round, and slightly tapering. The construction of the lever is represented by letter C in the accompanying drawing.

The crank D on the end of the spring G is made to pass through the hole in the end of the lever C. The spring and its crank-arm are shown by letters G and D in the accompanying drawing.

The hook H is made of metal, with the loop on one end, to hold it in position. The position of the hook and its construction are sufficiently shown by letter H in the accompanying drawing.

The eyelets or staples are made of metal, and their construction and position are sufficiently shown by the letters E and F in the accompanying drawing.

I am aware that a torsion-spring has been used on a door-frame in connection with a lever attached to the door and to the torsion-spring, hence I do not claim such, broadly, as my invention; but

I claim as my invention—

The combination of the torsion-spring G, provided with a hook, H, on one end, the tension-ratchet B, consisting of a toothed semicircle, and the lever C, connected to the crank D on the other end of the torsion-spring, the rod or spring G and lever C being secured to the door-frame and door, respectively, by means of the tension-ratchet B and the staples F E, all substantially as and for the purposes herein set forth.

HEZEKIAH C. JONES.

Witnesses:

H. A. TOULMIN,

J. J. MCCARTHY.