

## Improvement in Door Bells.

No. 125,530.

Patented April 9, 1872.

*fig. 1*

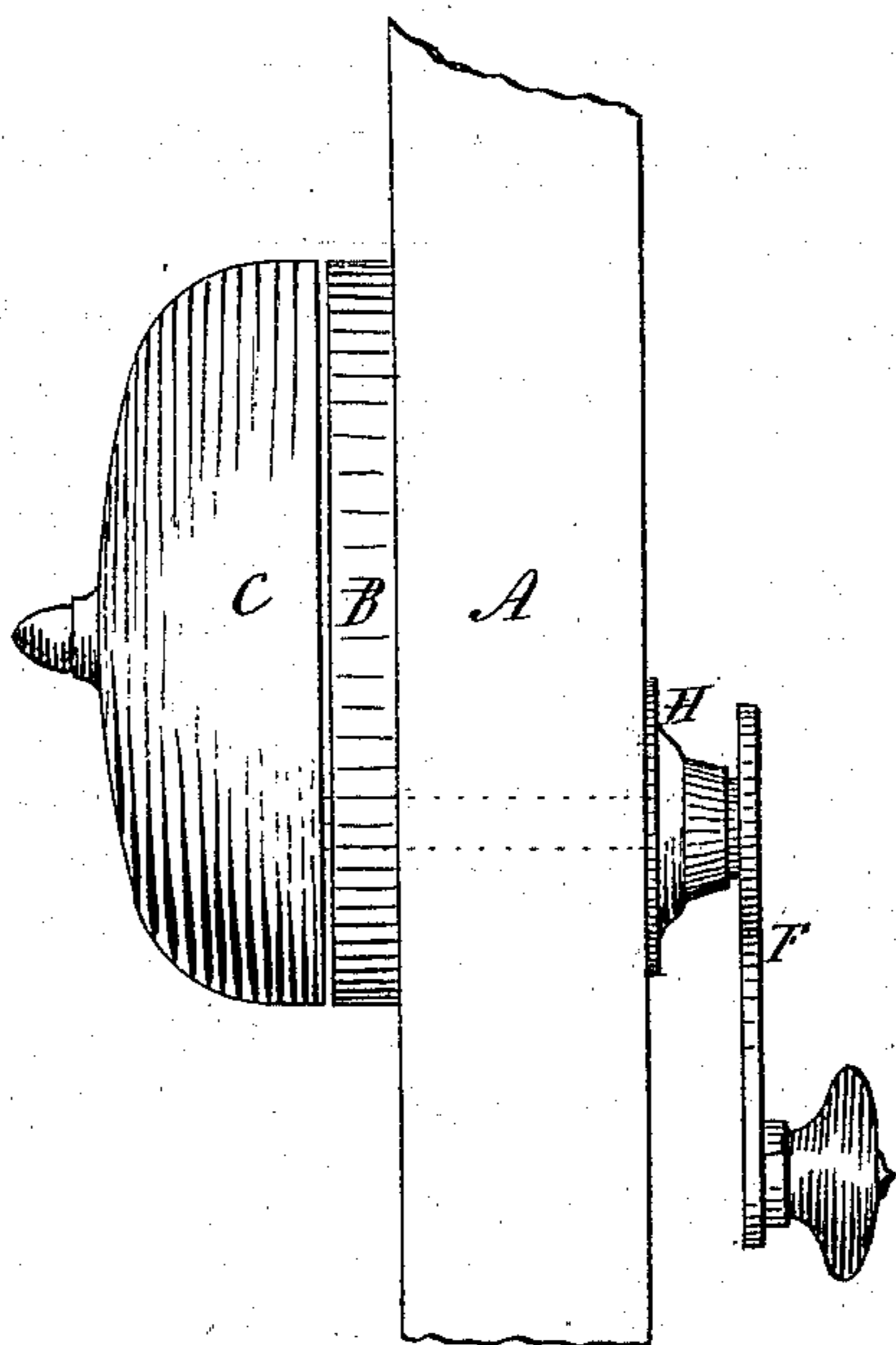


fig. 2.

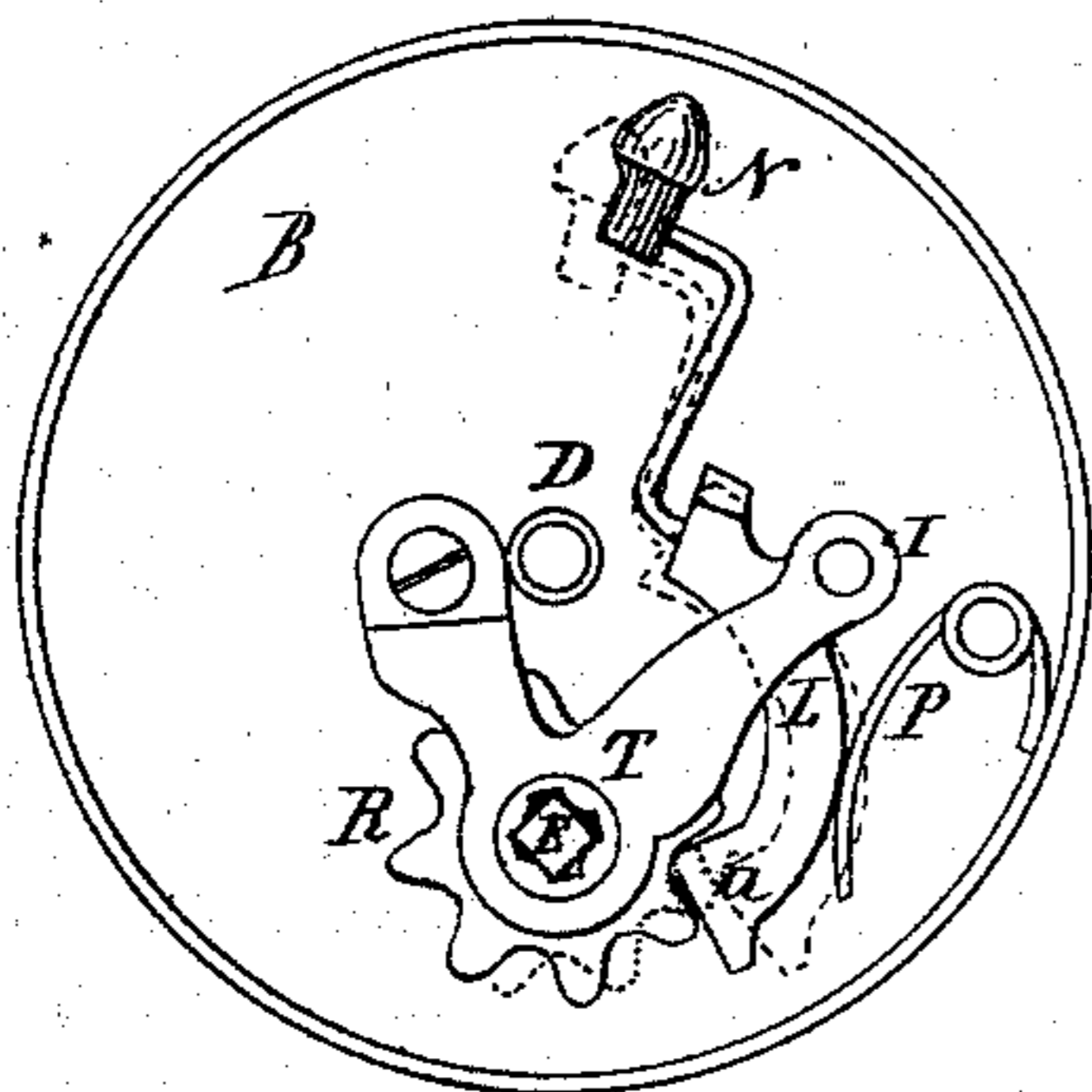


fig. 3.

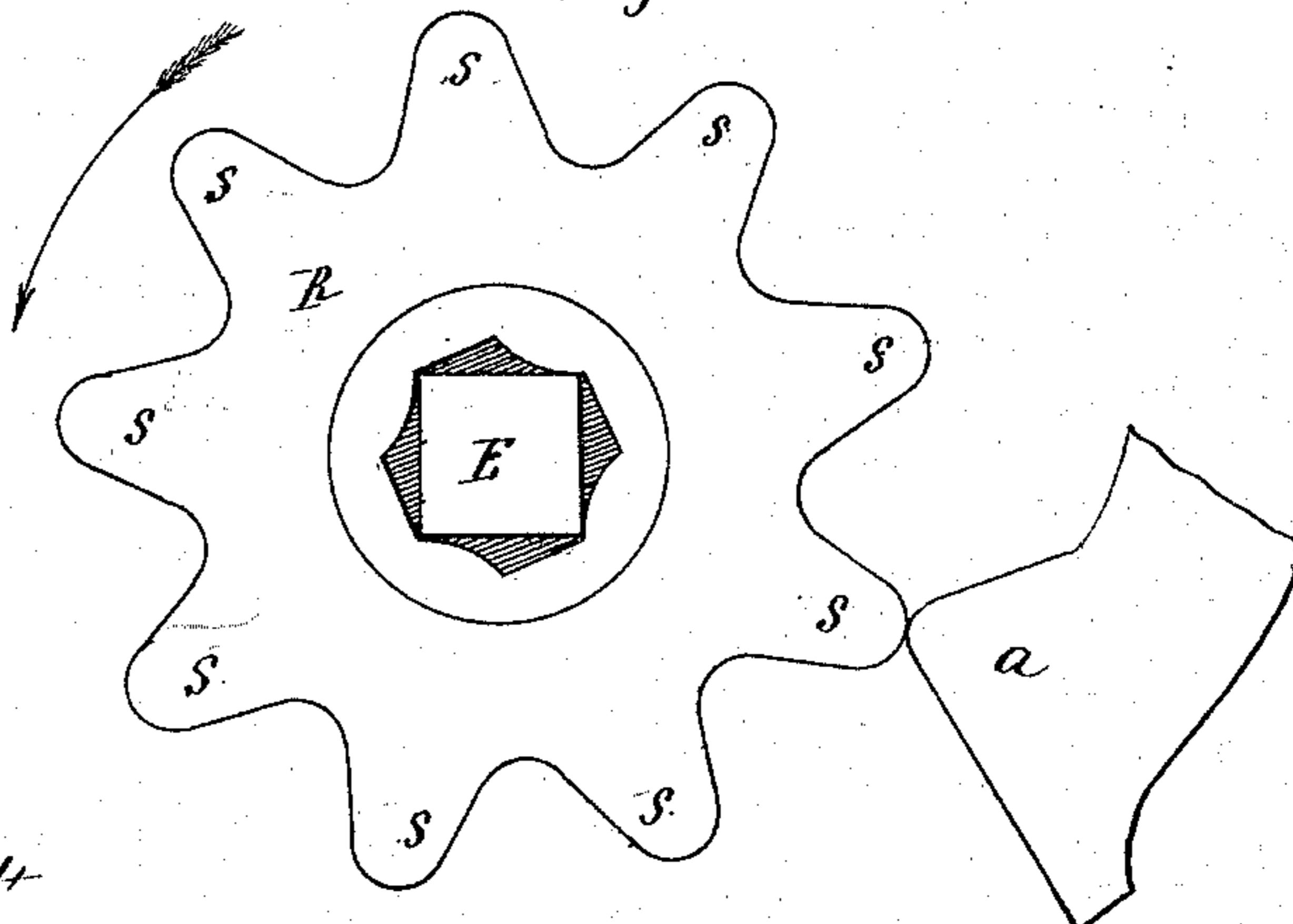
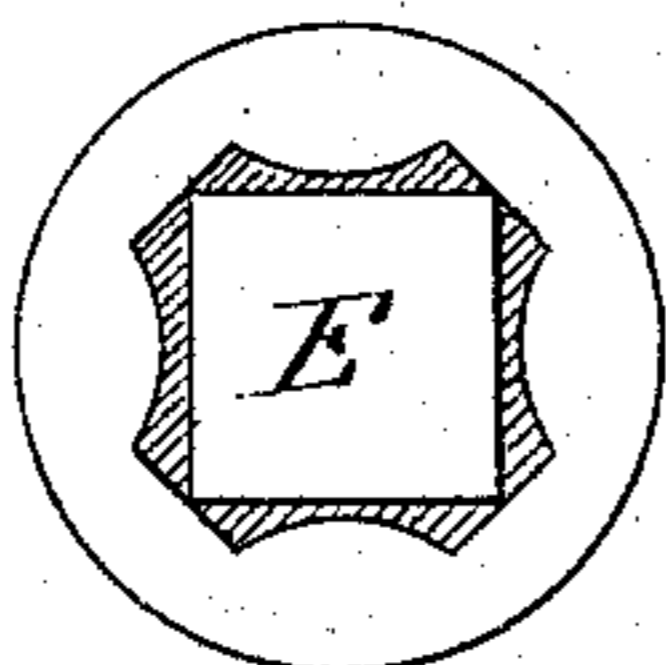


fig 4



Witnesses.

*J. H. Sherman*

A. J. Tebbets

Henry D. Blake  
Inventor

By Atty.

Wm. Earle

# UNITED STATES PATENT OFFICE.

HENRY D. BLAKE, OF NEW BRITAIN, ASSIGNOR TO SARGENT & CO., OF  
NEW HAVEN, CONNECTICUT.

## IMPROVEMENT IN DOOR-BELLS.

Specification forming part of Letters Patent No. 125,530, dated April 9, 1872.

*To all whom it may concern:*

Be it known that I, HENRY D. BLAKE, of New Britain, in the county of Hartford and State of Connecticut, have invented a new Improvement in Door-Bells; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents in—

Fig. 1 a side view, Fig. 2 the base with the bell removed, and in Figs. 3 and 4 detached views enlarged to more fully illustrate the invention.

This invention relates to an improvement in that class of door-bells which are designed to be operated by a knob or crank upon the outside of the door, the bell fixed upon the inside; the object of the invention being to permit the turning of the crank in either direction to produce an unlimited number of successive blows of the hammer; and it consists in constructing the cam upon which the spindle acts, so that, while the turning of the spindle will turn the cam, there will be sufficient play between the spindle and cam to allow the required over motion, in order that the hammer may escape from the cam to strike the bell.

A represents the door, upon the inside of which the base or plate B is attached. C is the bell, secured to the said plate by a center post, D, or otherwise; E, the spindle, which extends through the door, is provided upon the outside with a crank, knob, or other device, F, for turning the said spindle, a suitable bearing, H, being formed for the purpose. Upon the plate B, at I, a lever, L, is pivoted, to which the hammer N is attached, so that, by the turning of the said lever to the position denoted in broken lines, Fig. 2, and there allowed to escape, a spring, P, will throw the lever back with sufficient force to cause the hammer to strike the bell. The lever is thus operated by a cam, R, formed with several

projections, S, and lying in such relative position to the lever L that each of the projections will force the said lever back, as before described; and the recesses between the said projections correspond in form substantially to the end *a* of the said lever, upon which the cam acts, as seen in Figs. 2 and 3; therefore, as the lever falls off from one projection into the next recess, the blow is given. Both sides of each projection being the same, the cam may be turned in either direction with the same result; but, were the cam rigid upon the spindle, the falling off of the lever would be as gradual as its rise, and thereby prevent the blow; therefore, to allow the instantaneous escape of the lever, I construct the opening through the cam, which forms the bearing for the spindle, in substantially octagonal form, or with twice the number of sides or angles with which the spindle is constructed, as seen in Figs. 3 and 4; hence, standing as in Fig. 3, the position of turning to force the lever back, the angles of the spindle bear upon certain points in the cam so as to cause it to turn in that direction; but so soon as the end *a* of the lever has passed to the opposite side of the projection which raised it, its spring will throw it into the next recess, forcing the cam forward on the spindle, as denoted in Fig. 4, leaving the cam loose or free on the spindle until it is again turned to take bearing therein.

This operation is the same whether the spindle be turned in one direction or the other. The said cam is supported in a bearing, T, on the plate, as denoted in Fig. 2.

I claim as my invention—

The combination of the cam R, bell-lever H, and the spindle E, when the bearing for the said spindle in the said cam is constructed relatively to the said spindle, substantially as set forth.

H. D. BLAKE.

Witnesses:

JOHN H. SHUMWAY,  
A. J. TIBBITS.