A. A. STUART.

Door-Bells.

No. 139,206. Patented May 20, 1873.

fig. 1.

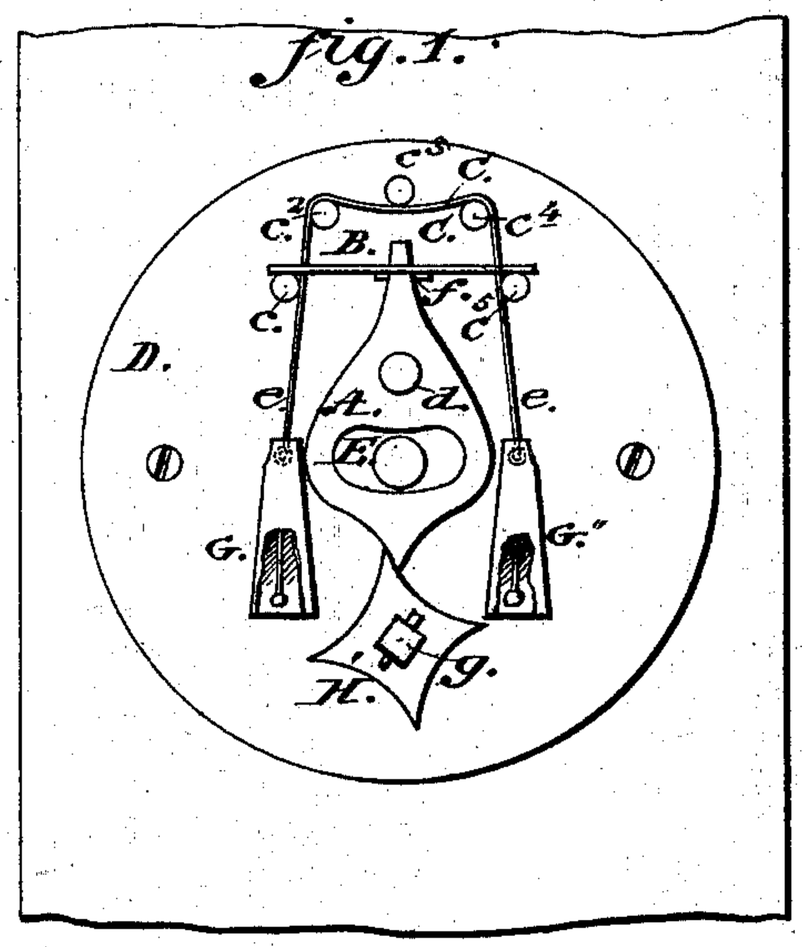


fig. 2.

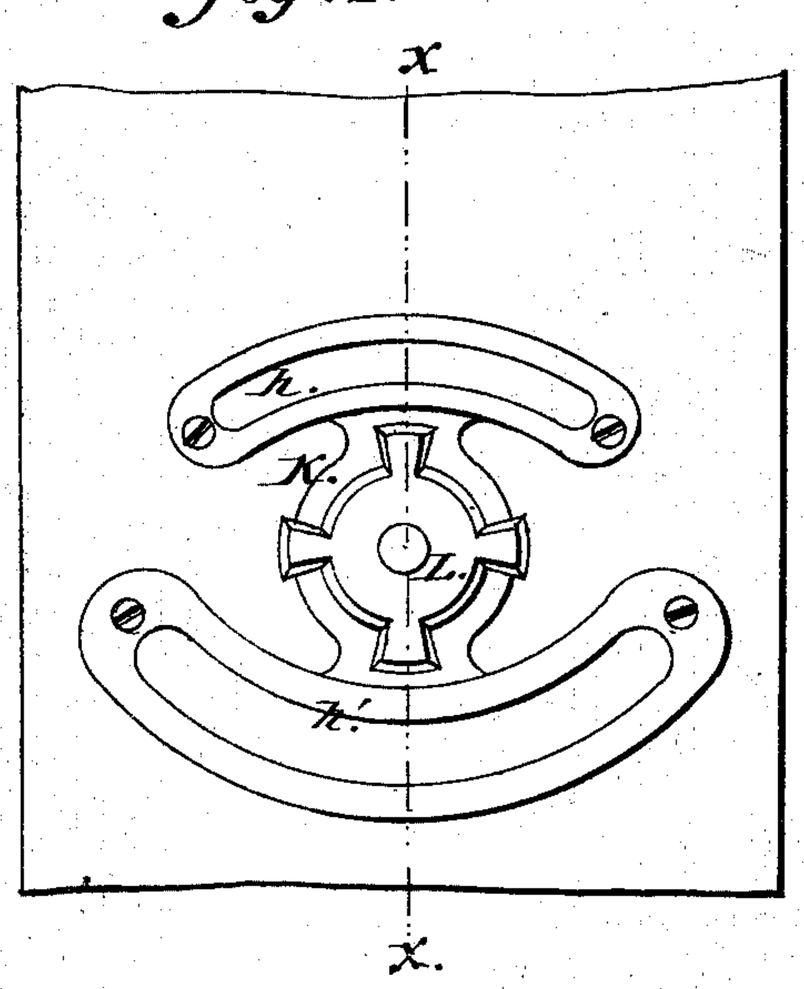
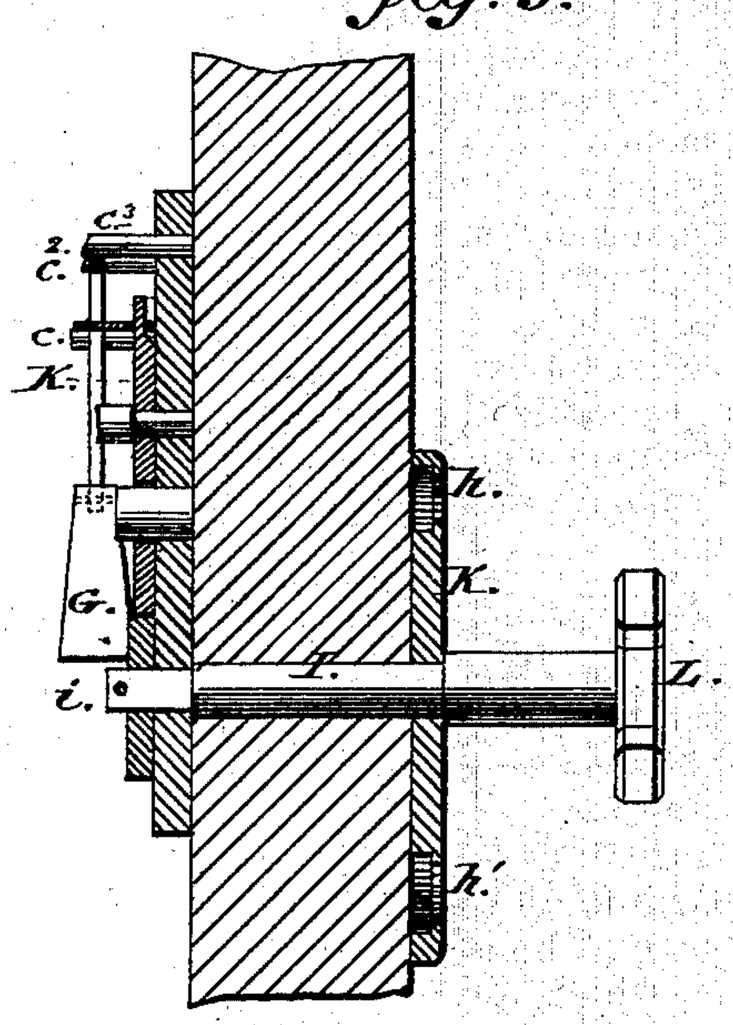


fig. 3.



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UNITED STATES PATENT OFFICE.

ADDISON A. STUART, OF CEDAR RAPIDS, IOWA.

IMPROVEMENT IN DOOR-BELLS.

Specification forming part of Letters Patent No. **139,206**, dated May 20, 1873; application filed March 28, 1873.

To all whom it may concern:

Be it known that I, ADDISON A. STUART, of Cedar Rapids, Linn county, and State of Iowa, have invented a new and useful Improvement in Door-Bells and Door-Plates, combined; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms a part of this specification:

Nature and Object of Invention.

My device consists of a couple of clapper-bells, hung loosely upon spring-wires, which are confined by several pins secured to a plate, which is attached to the inside of a street-door, immediately opposite the door-knob. Said bells are moved by a star-shaped cam attached to the knob-spindle, the joints of which bear against a lever acting directly against the bells, alternately causing them to be thrown off eccentrically and returned by the spring-wires upon which they are hung after each of the points of the star has performed its function.

Description of Drawing.

Figure 1 is an elevation of door-bells, as seen from the inside of the door; Fig. 2, door-plate and knob, as seen from outside; Fig. 3, section on line *x x*.

Similar letters of reference denote corresponding parts in all the figures.

A is the lever, which is secured to the plate D by a pin, which forms its fulcrum. This lever has a slot concentric with the axis A, which fits over a pin, F, which, together with said slot, serves to limit the movement of the lever A as it is returned by the action of the straight spring B. G G are the bells, hung loosely upon the wires C. These wires are confined between the pins $c\ c^2\ c^3\ c^4\ c^5$. The straight spring B rests upon the pins $c\ c^5$, and has small holes at either end, through which is strung the wires C, which arrangement gives mutual support and security to both the straight spring and the wire. The spring B has a slot at a middle point between its bearings on the pins $c\ c^5$, through which is passed the point of the lever A. A small pin, *f*, gives a shoulder-bearing to the lever against the spring B. The star-shaped cam H is fastened to the square end of the knob-spindle I. The plate K is provided with grooves *h h*, in which may be fitted plates of metal, with the number of the house above and the name below the knob, or vice versa, the same being set in the back of the plate before it is fastened to the door. The grooves *h h* are rabetted to form shoulders at the front of the plate to prevent the name and number plates from being taken out of their places after the door-plate has been placed in position against the door.

The plate I intend to form in a single piece of metal or any other suitable substance, the whole surrounding the door-knob. The knob-spindle has a shoulder, which bears against the door-plate, and is secured from the back of the door by the pin *i*, which passes through its square end.

A hand catching hold of the knob I may ring a bell by turning either to the right or left, as the points of the star cam H bear against a corresponding point at the end of the lever A. Said lever is moved in the direction given by the cam, and carries with it the bell, which its bulging side comes in contact with. After the point of the cam passes the point of the lever the spring B returns the lever against the opposite bell and rings it, while the wire spring to which the first bell is attached vibrates and rings it.

Claim.

What I claim as new and my invention, and desire to secure by Letters Patent, is—

The mechanical arrangement, composed of the bells G G, attached to the wire C, forming springs confined by the pins $c\ c^2\ c^3\ c^4\ c^5$, the lever A, with its associate parts, the spring B, the bells G G, and the star-cam attached to the knob-spindle, all arranged as described, for the purpose set forth.

A. A. STUART.

Witnesses:
F. B. WRIGHT,
G. W. WILLIAMS.