

APPLICATION FILED DEC. 23, 1908.

Patented Mar. 15, 1910.

A technical drawing showing a cross-section of a mechanical assembly. A large, irregularly shaped component is labeled 'A' at its bottom left. A smaller, curved component is labeled 'B' at its bottom right. The components are shown in a cross-sectional view, with hatching used to indicate different materials or sections.

This diagram, labeled Fig. 1, shows a cross-section of a mechanical assembly, possibly a watch movement. It features a semi-circular top cover with a hatched pattern. Inside, there are several gears: a large gear labeled 'I' on the left, a smaller gear labeled 'II' in the center, and another gear labeled 'III' on the right. A lever system is visible, including a vertical lever 'J' and a horizontal lever 'K'. A spring is labeled 'L'. Various adjustment screws and pins are indicated by labels: 'F' and 'F'' on the top cover, 'e' and 'e'' on a central vertical pin, 'g' and 'g'' on a horizontal pin, and 'g5' and 'g6' on a curved component. The entire assembly is mounted on a base labeled 'A', with a vertical rod extending downwards labeled 'B'.

Inventor
William R. Moore
By J. H. Bates

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM R. MOORE, OF EAST ORANGE, NEW JERSEY.

DOOR-BELL.

952,129.

Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed December 23, 1908. Serial No. 469,023.

To all whom it may concern:

Be it known that I, WILLIAM R. MOORE, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Door-Bells, of which the following is a specification.

My invention relates to improvements in door bells for houses or apartments and for such other similar structures to which they may be adapted, and the object of the invention is to provide a push-button bell operated mechanism of an automatic or self-winding character which will be simple in construction, easily and conveniently operated, and to imitate those bells which are struck electrically.

With these and other objects in view the invention consists in the novel construction and combination of parts as will be hereinafter more fully and in detail described and the asserted novelty specifically claimed.

I have fully and clearly illustrated my invention in the accompanying drawings, in which;

Figure 1 is a view complete of my invention as applied to a portion of the door. Fig. 2 is a view of the bell shown in sectional elevation, and Fig. 3 is a similar view looking in the opposite direction. Fig. 4 is a detail view of the cap and push rod.

Similar letters of reference indicate corresponding parts in the several figures.

Referring by letters to the annexed drawings: A designates a portion of a supposed door having an opening *a* therethrough, and through which is passed an ordinary push-button rod B, and having a push-button *b'* secured upon the forward and outer end thereof.

C designates an escutcheon secured to the outer side of the door in the usual manner and encircling the push-button.

D designates a circular base-plate secured by means of screws *d* to the inner side of the said portion of the supposed door A within which is partly inclosed my improved bell or gong operating mechanism, the construction of which will now be explained.

E designates a hollow post having its forward end rigidly and centrally secured to the base-plate D, its opposite end being free and provided for a short distance within the bore of the post with screw-threads *e* to engage a correspondingly threaded screw *e'* by

which a bell or gong F is attached to and detached from this end of the hollow post, and when said bell or gong is attached the operating mechanism is entirely inclosed.

G designates a small oscillating shaft which is transversely and operatively passed through an opening *g* formed through the forward end of the post E, said shaft having secured upon one of its ends an eccentric *g'* and an eccentric pin *g''*, and upon its opposite end is secured a pinion *g'''*, the teeth *g''''* of which mesh with the teeth *g'''''* of a cog wheel *g''''''* which is secured to a short shaft H which is operatively journaled in the hollow post E upon the same side of the post as the pinion *g'''* and midway the length of the post. a washer *h* being secured upon the shaft H and interposed between the post E and the inner side of the cog wheel *g''''''* as an offset to the latter. Upon the end of this shaft H is secured a pinion *h'*, said pinion being adapted to mesh with teeth formed upon one end of an oscillating sector lever I, the opposite end of this lever being pivotally and operatively secured to the rear end of a slotted pillar post J by means of a pivot *j*. Secured to the pivoted end of this sector lever I and projected upwardly therefrom is a short arm K, the upper end of which terminates in a cap *k* to receive or engage the rear end of the push-rod B, a small opening *k'* being formed in the circular base-plate and in alinement with one formed in the door portion through which the push-rod is also passed to engage said cap.

L designates a coiled spring having one and its forward end secured to a small projection *l* formed in the base-plate D, its opposite or rear end being secured to a pin *l'* projected from the sector lever near its upper end.

M designates a short shaft projected rearwardly from the base-plate and in juxtaposition to the flanged or circumferential portion thereof, and upon this shaft is operatively secured a double bell-hammer composed of a semi-circular strip of metal N having lugs or ears *n*, *n* formed integrally therewith and provided with perforations *o*, *o* therein which are in alinement with each other and through which the shaft M is passed, the free ends of this strip N being provided with striking knobs O, O and an eccentric rod P having its lower end secured to the eccentric pin of the eccentric and its opposite end detachably secured to

the strip of metal N as shown at *p* in Fig. 1 of the drawings.

The operation of my device may be briefly stated as follows: When the operator pushes
5 the push-button in the usual manner strokes are given upon the gong by the knobs of the hammers through the medium of the mechanism hereinbefore described, and upon releasing his hand therefrom and the
10 return of the push-button to its normal position the strokes of the gong are repeated by the same medium, the tone or sound of the gong imitating those bells which are electrically operated.

15 Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. The combination with the door, a base-plate secured to the door, a push-rod hav-
20 ing a push-button secured upon its forward end and said rod passed through the door and plate; of a post a bell cap mounted thereon a short shaft passed transversely through said post and provided upon one
25 end with a pinion and upon its opposite end with an eccentric, an eccentric pin secured thereto, an eccentric rod having one end secured to said pin, a double oscillating hammer to which is secured the opposite
30 end of said eccentric rod, said double oscillating hammer having lugs formed integrally thereon, a short shaft projected rearwardly from the base plate and passed through the lugs for supporting operatively
35 the double oscillating hammer, a short post projecting from the base-plate, a sector lever pivoted in the end of said post and having teeth, a second shaft secured in said first mentioned post, a second pinion on said
40 shaft meshing with said sector lever, a cog-wheel on said shaft which meshes with said first mentioned pinion, a coiled spring hav-

ing one end secured to the base-plate and its opposite end secured to said lever said push-rod being adapted to bear upon said 45 sector arm.

2. The combination with the door, a base-plate secured to the door, a push-rod having a push-button secured upon its forward end and said rod passed through the door and 50 plate, a post a bell cap mounted thereon a short shaft passed transversely through said post, and provided upon one end with a pinion and upon its opposite end with an eccentric, an eccentric pin secured thereto, 55 an eccentric rod having one end secured to said pin, a double oscillating hammer to which is secured the opposite end of said eccentric rod, said double oscillating hammer having lugs formed integrally thereon, 60 a short shaft projected from the base plate and passed through the lugs for supporting operatively the double oscillating hammer; of a short pinion shaft journaled in the post and provided with a pinion upon its end, 65 a cog wheel secured to said shaft, a washer interposed between said cog wheel and post, a sector lever provided with teeth which mesh with the pinion, a short arm secured to the lower end of the sector lever and pro- 70 jected upwardly therefrom, the upper end of which terminating in a cap for engagement with the push-rod, a coiled spring having one end secured to the base-plate and its opposite end secured to a pin projected from 75 the sector lever, and a slotted pillar post in which the lower end of the sector lever is pivotally and operatively secured.

In testimony whereof I affix my signature, in presence of two witnesses.

WILLIAM R. MOORE.

Witnesses:

G. ROWLAND MUNROE,
ROSALIE KAPLAN.