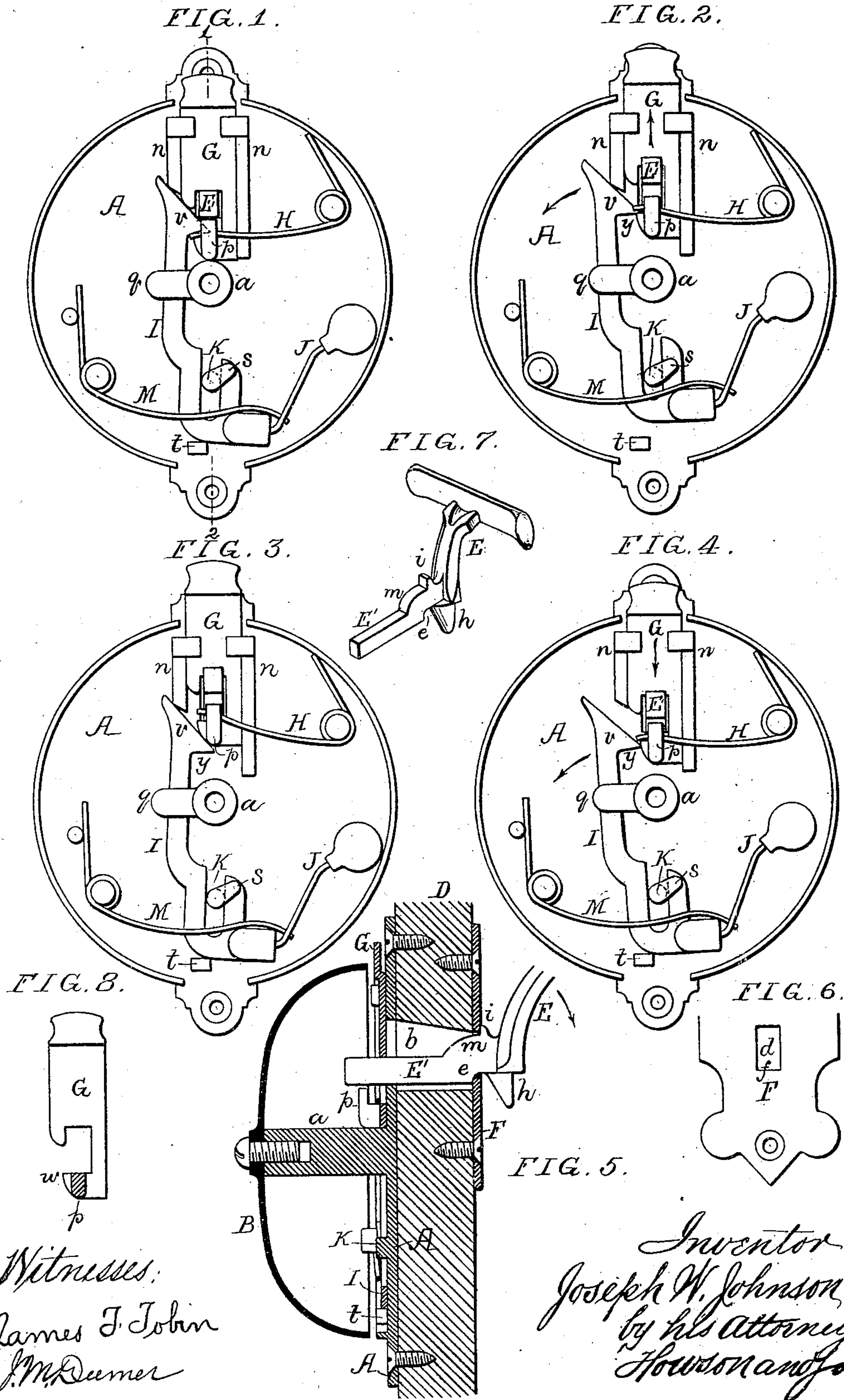


(Model.)

J. W. JOHNSON.  
Door Bell.

No. 238,398.

Patented March 1, 1881.



Witnesses:  
James F. Tobin  
J. M. Damer

Inventor:  
Joseph W. Johnson  
by his attorneys,  
Howson and Son



# UNITED STATES PATENT OFFICE.

JOSEPH W. JOHNSON, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO WILLIAM M. GRISCOM, MATTHAN HARBSTER, AND WILLIAM HARBSTER, OF READING, PENNSYLVANIA.

## DOOR-BELL.

SPECIFICATION forming part of Letters Patent No. 238,398, dated March 1, 1881.

Application filed December 14, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, JOSEPH W. JOHNSON, a citizen of the United States, residing at New Britain, Hartford county, State of Connecticut, have invented certain Improvements in Gongs for Doors, &c., of which the following is a specification.

My invention relates to improvements in that class of gongs in which a plate carrying a bell is also provided with mechanism through the medium of which the bell may be struck, and the main object of my invention is to provide the gong with such striking appliances that on moving the operating device in one direction the bell will be struck, and after the operating device has been released there will be a second and automatic blow on the bell as the operating device recovers its normal position.

A further object of my invention is the economical manufacture of the gong.

In the accompanying drawings, Figures 1, 2, 3, and 4 are views showing the striking works of the gong in different positions; Fig. 5, a vertical section of the gong on the line 1 2, Fig. 1, showing the gong attached to a door or other object and a handle for operating the gong; Fig. 6, part of the escutcheon-plate for the operating-handle; Fig. 7, a perspective view of the operating-handle drawn to a reduced scale, and Fig. 8 a detached view of a part of the striking-works.

I will in the first place describe the operating-handle, which I propose to use when the gong is secured to one side of a door and has to be struck from the opposite side of the same.

To a hub, *a*, projecting from the plate A is secured the bell B, the plate, which is preferably of the circular form shown, being secured to a door, D.

E is the operating-handle, an arm, E', on which passes through a slot, *b*, in the door D, and through a slot, *d*, in a plate or escutcheon, F, secured to the outside of the door, the under side of the arm having a recess, *e*, for the reception of the lower edge, *f*, of the slot *d* in the escutcheon-plate, this edge constituting the pivot of the operating-handle, the movement of which is limited in one direction by the stop *i*, and in the opposite direction by the lower stop, *h*. The arm E' of the oper-

ating-handle can be passed through the slot of the escutcheon-plate when the latter is detached from the door; but when the escutcheon carrying the handle has been secured to its place, the arm E' cannot be withdrawn, but can be vibrated on the edge *f* of the slot in the escutcheon-plate to an extent determined by the said stops *h* and *i*, the maintenance of the recess *e* of the arm on the edge of the slot being assured by the rounded portion *m* of the arm, which is at all times nearly in contact with the upper edge of the slot. By this peculiar manner of connecting the handle to the door through the medium of the slotted escutcheon-plate, I avoid the expense of a pivot-pin.

Although I have referred to D as a door, it may be any other object to one side of which it may be convenient to attach a gong, while the operating-handle is connected to the opposite side in the manner described.

To guides *n n*, in front of the plate A, is adapted a sliding bolt, G, a detached view of which is shown in Fig. 8, and which has a projection, *p*, acted on by a spring, H, the bolt being slotted for the reception of the arm E' of the operating-handle.

A lever, I, carrying the striking-arm J, is loosely connected to the plate A in the following manner: The upper portion of the lever is overlapped by a projection, *q*, on the hub *a* of the plate, and the lower portion by the part *s* of a projection, K, on the plate, the said projection being adapted to a slot in the lever, and thereby serving to guide the same, and to serve as a pivot-pin, a spring, M, maintaining the lever in contact with a stop, *t*, on the said plate A.

The normal condition of the operating parts is that shown in Fig. 1. On raising the sliding bolt, by depressing the operating-handle, the top of the projection *w* of the said bolt catching against the under side of the projection, *y*, of the lever I will raise the latter; but as the upper inclined edge, *v*, of the lever bears against the lower end of the guide *n*, the said lever must necessarily be moved outward on its guiding-pivot K in the direction of the arrow, Fig. 2, until it finally escapes from the control of the sliding bolt, when the lever,



owing to the spring M, will instantly fall and be brought into such violent contact with the stop *t* that the elastic arm of the striker will yield and its knob will strike the bell, the arm recoiling, however, immediately after the blow, so that the knob will be free from actual contact with the bell. The above movements and results are accomplished during the depression of the operating-handle in the direction of the arrow, Fig. 5, to the extent permitted by the stop *h*; but, on relieving the handle it will immediately recover its former position, Fig. 5, and in doing this the bell will again be struck, for on relieving the handle the sliding bolt will be under the influence of the spring H, and, being depressed by the latter, will strike the inclined top of the lever, move the latter back, as shown in Fig. 4, until the projection *w* of the bolt passes the nose *y* of the lever, when, by the action of the spring M, the lever will be suddenly moved forward and its striker will be brought into contact with the bell.

It will be seen that no fine fitting is required in making the above-described parts and in putting them together, the bolt being simply adjusted to its guides and the striking-lever to its projections on the plate A, the springs retaining both bolt and lever in their proper positions.

The gong may be sounded by simply raising the bolt and permitting it to fall, any suitable

attachments being combined with the bolt for this purpose; but, in most cases, I propose to combine the gong with the operating-handle E, and to apply it to a door or other object, substantially in the manner described above.

I claim as my invention—

1. The combination, in a gong, of the base-plate A, a striking-lever, I, secured to said base-plate, so as to be free both to slide and vibrate, and having an inclined top, *v*, and projection *y*, a spring, M, acting on the lever, an elevating device acting on the projection *y*, and a lug or strip, *n*, acting on the inclined top *v* of the striking-lever, as set forth.

2. The combination of the base-plate A, the striking-lever I, free to slide and vibrate and having an inclined top, *v*, and projection *y*, the spring M, the strip *n*, the spring-bolt G, having a projection, *w*, and the pivoted operating-lever, as set forth.

3. The combination of the striking-lever I, and mechanism for operating the same, with the base-plate A, having the projection *q*, the pivot K, with projection *s*, and the lug *t*, as specified.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

JOSEPH W. JOHNSON.

Witnesses:

JAMES R. KENNEY,  
ELLWOOD H. DEYSHER.