

W. T. MUNGER.  
Improvement in Door-Bells.

No. 116 082.

Patented June 20, 1871.

Fig. 3

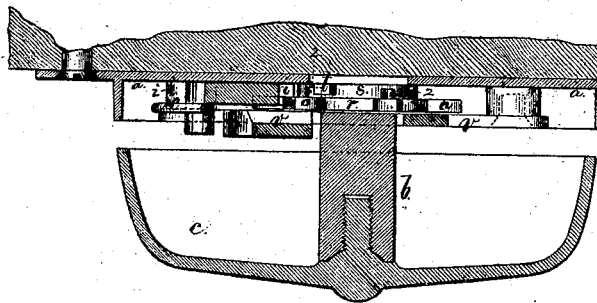


Fig. 4.

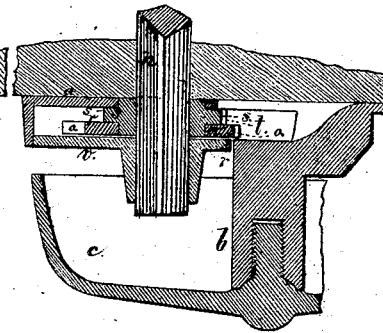


Fig. 1

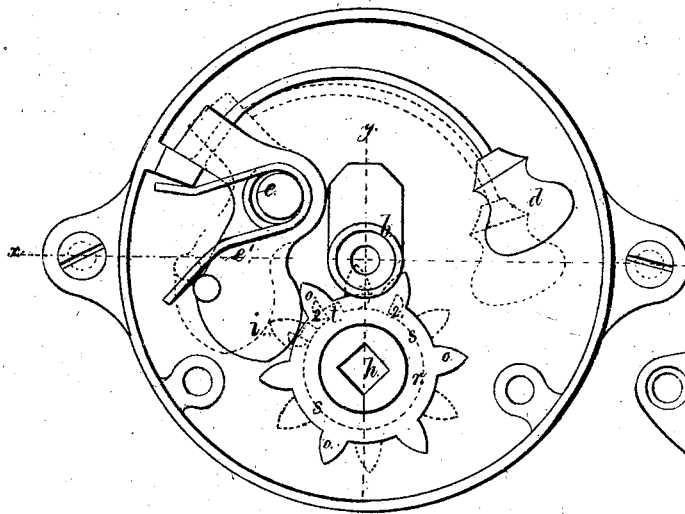
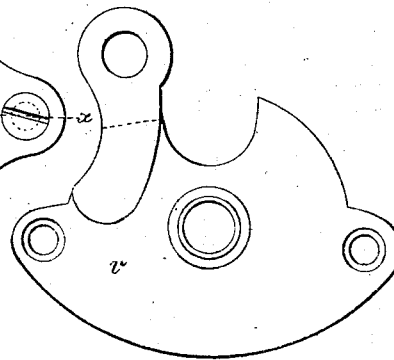


Fig. 2.



Witnesses

Chas. H. Smith  
Harold Penell

Inventor  
Wallace T. Munger

Lemuel M. Perrell  
att'y

# UNITED STATES PATENT OFFICE.

WALLACE T. MUNGER, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO P.  
& F. CORBIN, OF SAME PLACE.

## IMPROVEMENT IN DOOR-BELLS.

Specification forming part of Letters Patent No. 116,082, dated June 20, 1871.

*To all whom it may concern:*

Be it known that I, WALLACE T. MUNGER, of New Britain, in the county of Hartford and State of Connecticut, have invented and made an Improvement in Door-Bell Attachments; and the following is declared to be a correct description of the same.

A door-bell has been made with a crank-handle upon the outside of the door and a spindle passing therefrom to a disk and levers that operate the hammer. In this instance the parts are liable to allow the hammer to descend gradually instead of suddenly, thereby failing to strike a clear and distinct blow on the bell. My invention is for obviating this difficulty and cheapening the construction, and for this purpose I make use of a revolving tumbler actuated by the spindle of the crank, and acting upon a loose spur-cam wheel that gives motion to the lever of the hammer when moved in either direction, and there is a certain amount of play or motion allowed between the tumbler and the spur-cam wheel, so that the cams may be freely moved out of the way of the end of the hammer-lever as said lever is moved to strike the bell.

In the drawing, Figure 1 is an elevation of the parts of the bell attachment with the bell and cap-plate removed. Fig. 2 shows the cap-plate removed. Fig. 3 is a section of the parts at the line *x x*; and Fig. 4 is a section at the line *y y*.

The base-plate *a* is made with a stud, *b*, carrying the bell *c*. *d* is the hammer upon a spring-arm or lever upon the fulcrum *e*; and *i* is the end of such lever, against which the spur-cams *o* on the wheel *r* operate. The wheel *r* revolves with the spindle *h* and a crank thereon; but instead of being directly connected thereto there is a revolving tumbler, *s*, intervening, the same being connected with the spindle *h* by a square hole for the spindle to pass through, and there is an arm, *t*, upon said

tumbler *s* that extends between two stops, 2, upon the spur-cam wheel *r*, and this cam-wheel *r* has a circular bearing upon the tumbler *s*, and the parts are held in position by the cap-plate *v*.

If the crank and spindle *h* are turned the arm *t* also causes the spur-cam wheel *r* to revolve and one of its cams *o* to press back *i* and draw the hammer back from the bell. As the cam passes *i* and the spring *e'* is bringing the hammer down upon the bell, the part *i* of the lever presses the said cam-wheel around sufficiently to prevent the cam obstructing the movement as the bell is struck, the space between the stops 2 and arm *t* allowing of this movement. This construction allows of the parts being made so that they will operate when the crank is turned in either direction. The dotted lines in Fig. 1 show the hammer drawn back, and as the hammer descends the cam-surfaces slide upon each other and the cam-wheel *r* is moved forward, and the stop 2 (against which the arm *t* had acted in raising the hammer) moves on away from that arm, so that there is nothing to prevent the hammer descending with rapidity to strike a sharp blow upon the bell. To obtain the required space for the tumbler *s* and wheel *r*, they revolve partially beneath the stud *b*, as seen in Fig. 4.

I claim as my invention—

The tumbler *s* and arm *t*, in combination with the spur-cam wheel *r*, stops 2, and bell-hammer *d i*, the parts being arranged and operating substantially as and for the purposes set forth.

Signed by me this 2d day of May, A. D. 1871.

W. T. MUNGER.

Witnesses:

CHARLES PECK,  
EDWD. L. PRIOR.