

UNITED STATES PATENT OFFICE.

ANDREW TURNBULL, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO P.
AND F. CORBIN, OF SAME PLACE.

IMPROVED DOOR-BELL.

Specification forming part of Letters Patent No. 48,242, dated June 13, 1865.

To all whom it may concern:

Be it known that I, ANDREW TURNBULL, of New Britain, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in House Door-Bells; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan of the mechanical devices used for operating the hammer of the bell. Fig. 2 is a side view of a bell, showing the part of door in which the shaft of the handle is inserted in section.

Similar letters of reference indicate corresponding parts.

The present invention consists in a novel and peculiar arrangement of mechanical devices for so operating the hammer of a bell as to cause it to strike and ring the same when the door-handle is pulled in the proper direction.

a a in the drawings represent the door-handle fastened to a square shaft, *b*, extending through a proper-shaped opening, *c*, in the door or its jamb *d*, the handle being fastened to the door in the ordinary manner.

f is a spiral spring wound around the shaft *b* of handle, which, when the handle has been drawn out to ring the bell, as will be presently described, retracts the same. On inner end of handle-shaft *b*, and hung on a pivot or fulcrum, *g*, thereof, is a lever, *h*, made in the shape of a wedge at one end, *k*, and in proper position to strike the end *l* of a right-angular lever, *m*, turning upon a fulcrum at *n* of the bed-plate *o* on the door or jamb *d*. On the outer end of arm *p* of right-angular lever *m* is a hammer-head, *r*, for striking the inner surface of gong or bell *s*, hung upon a fixed shaft, *t*, of the bed-plate *o*. By pulling the handle out from the door or its jamb its lever-piece *h*, by bearing down and upon the outer surface of the inner end, *l*, of the right-angular lever *m*, causes the same to turn on its fulcrum, thus moving back the hammer from its bell until it has passed entirely by the same, when the hammer is thrown, by the force of the spring *u* attached to its lever-arm, against the

bell, ringing the same, the position of the parts previous to the ringing of the bell being represented by red lines in Fig. 1, when the handle-shaft, being forced back to its original position against the door by its spring *f*, again causes its lever-piece *h* to pass over the inner arm of the hammer-lever, but this time in an opposite direction, operating the same, as before described, and again causing the hammer to ring the bell.

From the above description it is apparent that by one pull on the handle the bell is rung twice—first, by its outward movement, and, second, by its inner movement, caused by the force of the spring attached to the handle, as described, the advantages of which are evident.

In lieu of connecting the hammer for striking the bell directly to the operating parts, as described, the bell can be placed at any desired position or place, it being only necessary to connect the right-angular lever with the same by means of any suitable connecting-rod.

Another, but substantially similar, mode of giving the hammer a double movement against the bell by one pull of the bell-handle is shown also in the drawings, and consists in connecting the handle (represented by a ring, *w*, therein) to one end of a rod, *x*, connecting the same with the end *y* of a right-angular spring-lever, *z*, turning on a fulcrum at *a*. The end *b'* acts upon the end *c'* of the hammer-lever arm in substantially the same manner as that described for the lever-piece directly attached to the handle-shaft.

The parts composing the above arrangement are represented in yellow on the drawings.

I claim as new and desire to secure by Letters Patent—

The combination, with the hammer-lever *m*, of a device which, in being moved by the outward and inward movement of the knob or handle, shall actuate the lever *m* and its hammer, and thus cause the bell to be rung during each of said movements of the knob or handle, as herein described and represented.

ANDREW TURNBULL.

Witnesses:

MERRITT BRONSON,
R. S. PORTER.