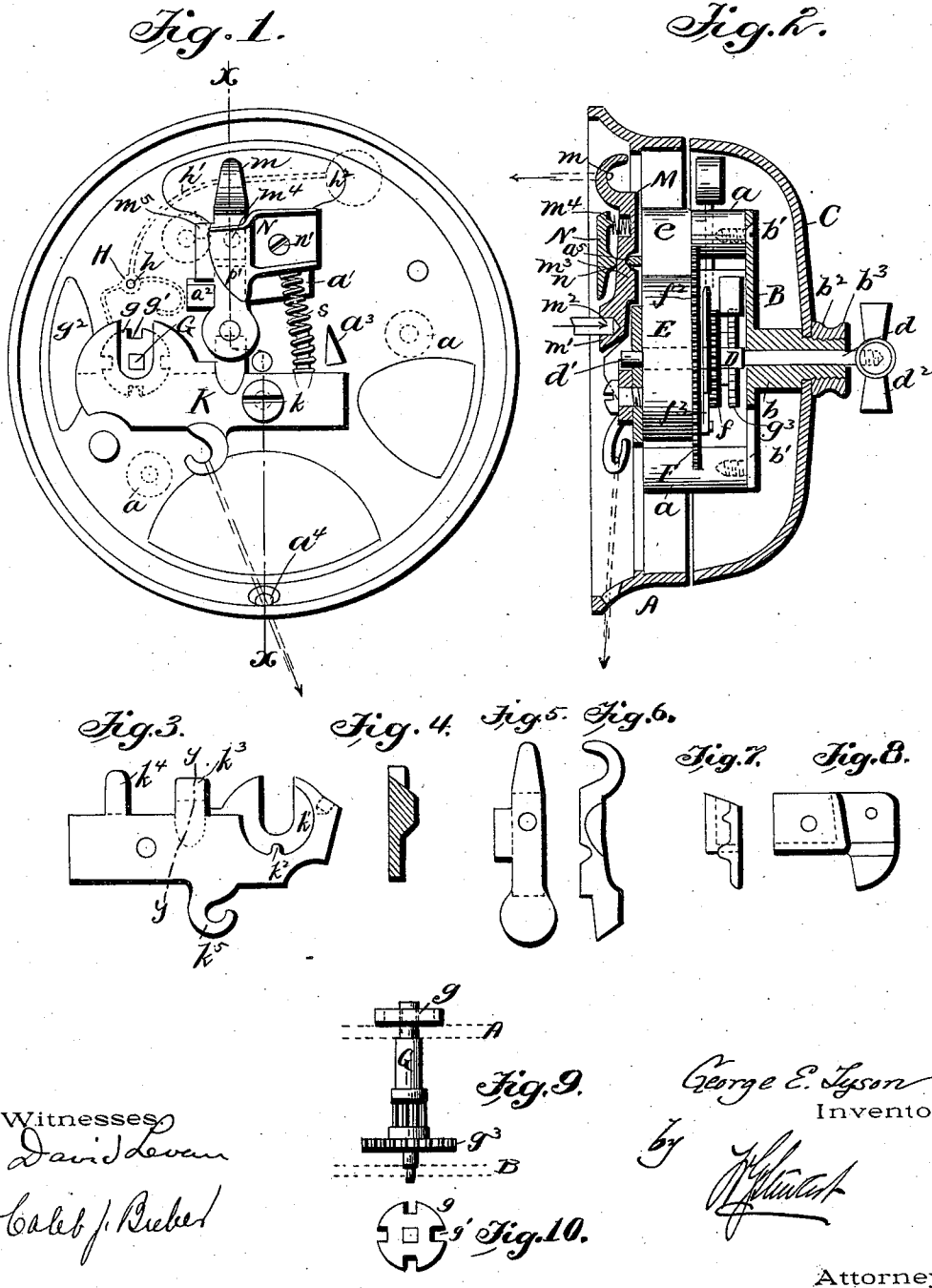


(No Model.)

G. E. TYSON.
DOOR BELL.

No. 574,464.

Patented Jan. 5, 1897.



UNITED STATES PATENT OFFICE.

GEORGE E. TYSON, OF READING, PENNSYLVANIA.

DOOR-BELL.

SPECIFICATION forming part of Letters Patent No. 574,464, dated January 5, 1897.

Application filed June 15, 1896. Serial No. 595,603. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. TYSON, a citizen of the United States, residing at Reading, county of Berks, State of Pennsylvania, have invented certain Improvements in Bells, of which the following is a specification.

My invention relates to that class of call-bells in which the hammer is operated by a clock-movement; and my object is to improve the releasing mechanism so as to render the operation more easy and satisfactory and to enable the push or pull to be exerted in any direction whatever with relation to the bell, as may be most convenient for any preferred location of the latter.

Figure 1 is a rear view of a bell having my improvements applied thereto. Fig. 2 is a cross-sectional view on the line $x x$ of Fig. 1. Figs. 3 to 10 are separate views of details. A represents the base-plate of the bell, B the second plate, secured to pillars $a a a$ on the base-plate, and C the bell proper, secured by means of a nut b^3 to a shouldered boss b on the plate B. The clock-movement, located between the plates A and B, comprises the usual elements.

D represents the main arbor, which has an extension d , passing through the boss b and provided with a turn button or bar d^2 to wind up the mechanism.

E is the mainspring, having its outer end e fixed to one of the posts a .

F is the main gear-wheel, f the ratchet-wheel, and f^3 the pawl with spring f^2 .

G is the escapement-arbor, in gear with the main arbor D and having an escapement-wheel g^3 , and H is the escapement-pallet, mounted on an arbor h and carrying the hammer h' h^2 .

All of the above mechanism is of usual and well-known construction, the purpose and effect being to produce a vibratory movement of the hammer whereby it is adapted to rapidly strike the bell during the unwinding of the mainspring E.

My invention consists in the improved mechanism provided for locking and releasing the escapement, which I will now particularly describe.

The inner end of the escapement-arbor G projects through the base-plate A and is squared to receive a wheel g , which rotates

with it. This wheel is provided with notches g' in the rim, which are adapted to engage a projection or tooth k^2 on a lever K, which is pivoted at k to the plate A, so as to turn in a plane at right angles to the arbor G. This lever K is normally pressed into engagement with the notched wheel g , so as to prevent rotation of the arbor G, by means of a spiral spring s , one end of which enters a pocket a' on the base-plate, while the other engages a projection k^4 on the lever. The latter is also provided with a hook k^5 or other connection for an operating-cord which may be passed through an opening a^4 in the base A, so as to pull directly upon the lever to sound the bell. A stop a^3 is provided to positively limit the movement of the lever against the pressure of the spring.

In order to provide for operating the bell by either a pull or a push exerted in directions substantially parallel with the plane of the arbor G, instead of at right angles thereto, as above described, I employ, in connection with the main lever K, a supplemental lever M, which is capable of operating the main lever by its movement in a plane at right angles to that in which the latter moves. This lever M is pivoted intermediately of its length between fulcrum-supports a^5 on the base-plate A and n on an outer fulcrum-plate N, which is bolted at n' to the base-plate. The lever M is maintained in proper position upon the base-plate by means of a boss m^3 , which enters a recess in said plate, and by contact with a boss a^2 on the latter and with the fulcrum-plate N. A spring m^4 is interposed between the latter plate and the lever to normally depress the outer end, which is formed with a cord connecting extremity m , as shown. The inner end m' of the lever is wedge-shaped, as indicated, and is provided with a recess m^2 for the reception of a push-rod by means of which this end of the lever is depressed against the tension of the spring m^4 . When thus depressed, the wedge-shaped extremity m' pushes against a boss k^3 on the main lever K and rocks the latter sufficiently to release the escapement-arbor G, thereby operating the bell. The same effect is obviously produced by a pull upon the cord attached to the opposite end m of the supplemental lever M.

It will thus be seen that by employing two

levers arranged to move in planes at right angles to each other I am enabled to operate the bell by either a push or a pull exerted in any direction whatever.

5 The construction which I have herein particularly shown and described may evidently be modified without departing from the spirit of the invention.

What I claim is--

10 1. In a bell the combination with a clock-movement mechanism for operating the hammer, of a main lever pivoted to swing into or out of engagement with the escapement of said mechanism, and a supplemental lever pivoted
15 to swing in a plane at right angles to said main lever and adapted to operate the latter substantially as set forth.

20 2. In a bell having a clock-movement mechanism for operating the hammer substantially as described, the combination of the pivoted

lever K, the supplemental pivoted lever M, and the fulcrum-plate N and fulcrum-support a^5 for said lever M substantially as set forth.

3. In a bell having a clock-movement mechanism for operating the hammer substantially as described, the combination of the pivoted lever K having a pulling connection k^5 and pushing-lug k^3 , stop a^3 , supplemental lever M having one end engaging said lug, fulcrum-plate N and retaining-boss a^2 for said supplemental lever, and spring s, all substantially as set forth.

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

GEO. E. TYSON.

Witnesses:

W. G. STEWART,
CAMERON E. STRAUSS.