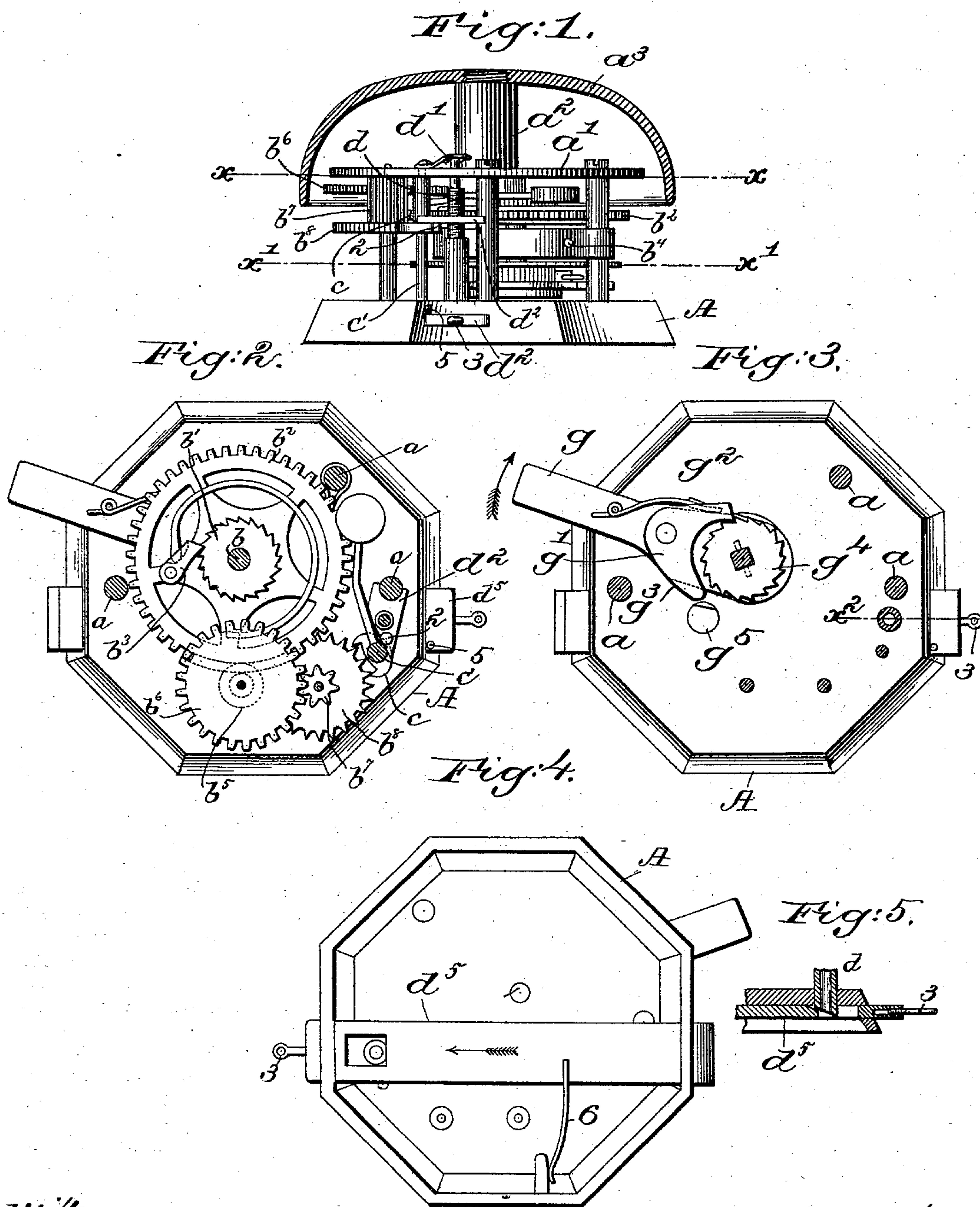


(No Model.)

N. J. BUSBY.  
BELL.

No. 492,779.

Patented Mar. 7, 1893.



Witnesses.

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# UNITED STATES PATENT OFFICE.

NAHUM JUDSON BUSBY, OF MAPLEWOOD, MASSACHUSETTS.

## BELL.

SPECIFICATION forming part of Letters Patent No. 492,779, dated March 7, 1893.

Application filed December 16, 1891. Serial No. 415,214. (No model.)

*To all whom it may concern:*

Be it known that I, NAHUM JUDSON BUSBY, of Maplewood, county of Middlesex, State of Massachusetts, have invented an Improvement in Gong-Bells, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention is an improvement on that class of bell shown in United States Patent No. 447,538, dated March 3, 1891, and granted to me.

The object of this invention is to simplify the hammer-actuating train, and the means for winding the spring, and to permit the spring to operate as desired.

I have adapted the bell, herein shown as having its actuating train normally wound up, to be released by or through a slide which acts upon the shaft of the pallet-locking device, the said shaft, or the slide, one or both, having a beveled or cam surface, so that when one is moved across the face of the other the pallet will be unlocked, permitting the train acting on the pallet, to vibrate the hammer until the pallet is again locked.

In this present invention I have combined with the main shaft of a motor or train having a ratchet-wheel, and a train-locking device of some suitable form, and a winding lever and pawl (the latter being of peculiar construction), a pawl-releasing device, whereby, when the winding lever or pawl-carrier, of whatever form, is moved in one direction, the ratchet-wheel on the main shaft is rotated, the pawl acts, and the spring is wound up; but during the early movement of the lever or pawl-carrier when returning to its normal position, the pawl is released or automatically disengaged from the said ratchet-wheel, and immediately the train is held from completely running down by or through the operation of the said locking-device.

Figure 1 in side elevation, with the gong in section, shows a bell embodying my invention; Fig. 2, a section below the line  $x$ ; Fig. 3, a section below the line  $x'$ ; Fig. 4, an underside view; and Fig. 5, a detail on the line  $x^2$ , Fig. 3.

The base A, of any suitable shape and material, has suitable pillar posts  $a$ , on the top of which is supported the pillar-plate  $a'$ , hav-

ing a hub or stand  $a^2$ , on which is supported the gong  $a^3$ .

The driving-train shown consists essentially of a main shaft  $b$ , having a ratchet  $b'$ , a gear  $b^2$  having a detent  $b^3$ , an actuating spring  $b^4$  normally wound up, pinion  $b^5$ , gear  $b^6$ , pinion  $b^7$ , and escape-wheel  $b^8$ . The escapement acts on a pallet  $c$ , fast on a pallet-shaft  $c'$ , the latter carrying the hammer and being adapted to be moved by the escapement-wheel whenever the train is not locked.

As a locking device for the train, I have, in this instance of my invention, shown a two-part longitudinally-adjustable endwise-moving shaft  $d$ , having a plate  $d^2$ , shown as guided by one of the pillar-posts, the locking device shown acting frictionally against the side of the pallet and holding it locked in engagement with the escapement-wheel, as in Figs. 1 and 2. The plate  $d^2$  has a projection 2, see Figs. 1 and 2 which is so located as to substantially touch the outer side of the pallet between its ends, so that when the pallet is locked frictionally it is impossible for said pallet to be stopped in a position with the hammer in contact with the gong. The upper end of the shaft  $d$  is acted upon by a spring  $d'$ , while the lower end of the shaft, see Fig. 5, at a point below the base, is shown as beveled, to be acted upon by a beveled part of a slide-bar  $d^5$ , represented as provided with a stop or projection 5 and as acted upon by a spring 6, see Fig. 4. The slide has at one end a take-up device 3, shown as a screw eye, which, when an actuating wire connected with said take-up gets slack, the screw may be rotated to put the proper tension upon the wire. The slide, when moved in the direction of the arrow, Fig. 4, either by pushing or pulling it in any usual way commonly practiced in actuating door-bells, will act on the lower end of the shaft  $d$  and raise it to remove the pin or projection of the locking-device from the pallet, when the train being thus unlocked starts to run, causing the escapement to move the hammer.

To wind the motor, I have provided a lever or pawl-carrier  $g$ , provided with a peculiar pawl  $g'$ , shown as acted upon by a spring  $g^2$  and as having a tail  $g^3$ . When moving the lever in the direction of the arrow, Fig. 3, the pawl engages the ratchet-wheel  $g^4$ , fast on the



main shaft *b*, and rotates the shaft to wind the spring, and if or when the lever is released and the shaft turned in the opposite direction, a part of the pawl meets the stop *g*<sup>5</sup>, which disengages the pawl from the said ratchet, leaving the shaft, whenever the locking-device for the train is released by or through the slide-bar *d*<sup>5</sup>, free to turn under the action of the spring 6.

10 The bell so far described is very simple in operation and may be readily applied in almost any desired position for a door-bell, or may be substituted for any usual form of door-bell adapted to be rung by pulling on a 15 wire.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The driving train, and its escapement 20 wheel and pallet, combined with the longitudinally movable slide co-operating with the locking device for the train, a spring to normally retain said device in operative position, said movable slide engaging and actuating 25 the locking device longitudinally against the action of said spring to release the train, substantially as described.

2. The driving train, a normally operative locking device therefor, a winding ratchet and a rocking winding lever or pawl-carrier having a pawl pivoted thereon to engage said ratchet when the lever is moved forward, combined with a releasing device in the path of movement of, and to disengage the pawl from the ratchet when the said lever or pawl-carrier is moved backwardly, substantially as described. 30 35

3. In a bell, its striking mechanism, the driving train therefor, and the normally operative locking device for said train, combined 40 with a movable slide engaging with and to move said locking device into inoperative position to release the train, the operating cord or wire for said slide, and an adjustable take-up between said slide and cord, substantially 45 as described.

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

NAHUM JUDSON BUSBY.

Witnesses:

GEO. W. GREGORY,  
EMMA J. BENNETT.