

(No Model.)

W. L. UPSON.
DOOR BELL.

No. 432,344.

Patented July 15, 1890.

Fig. 1.

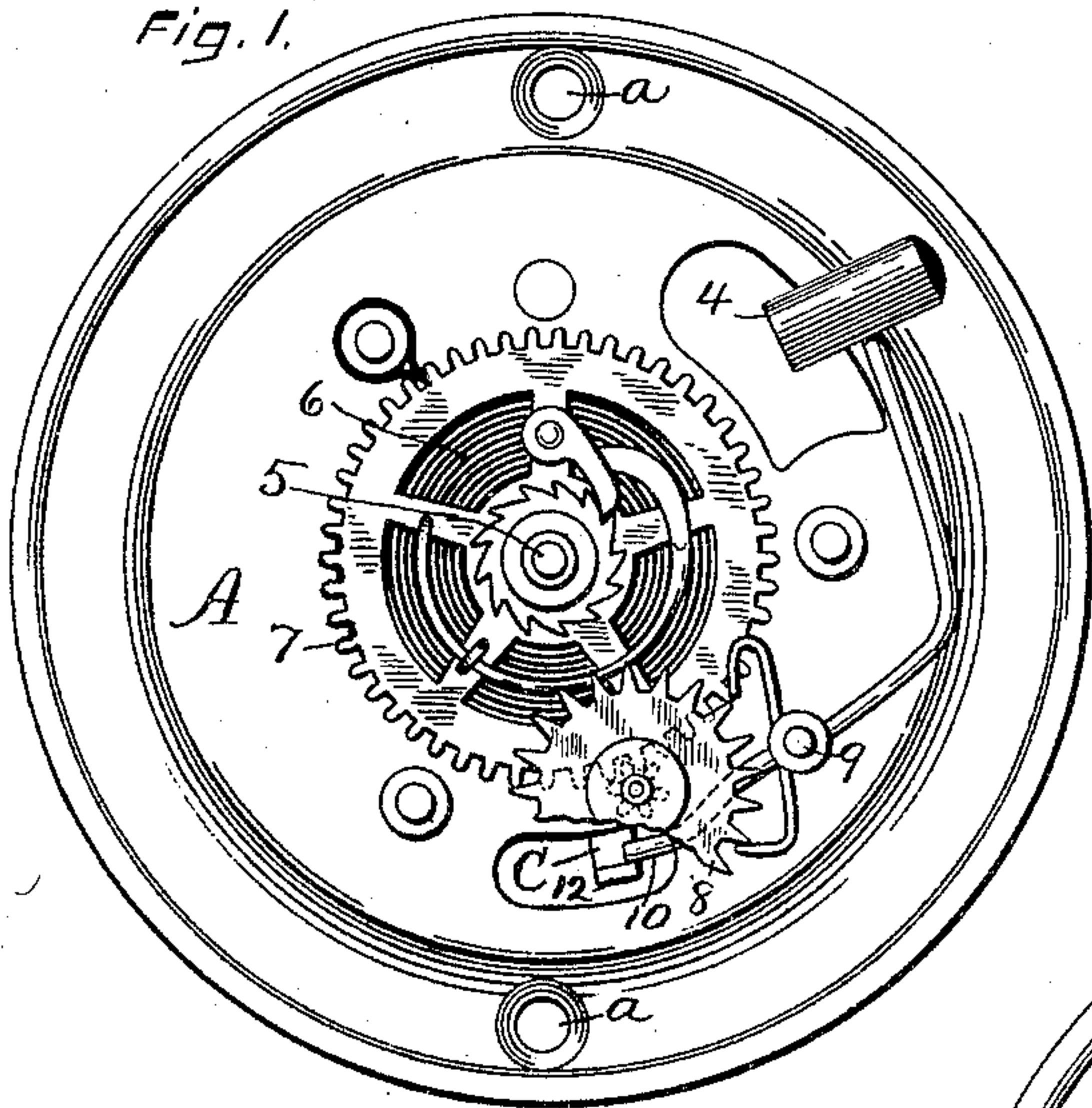


Fig. 2.

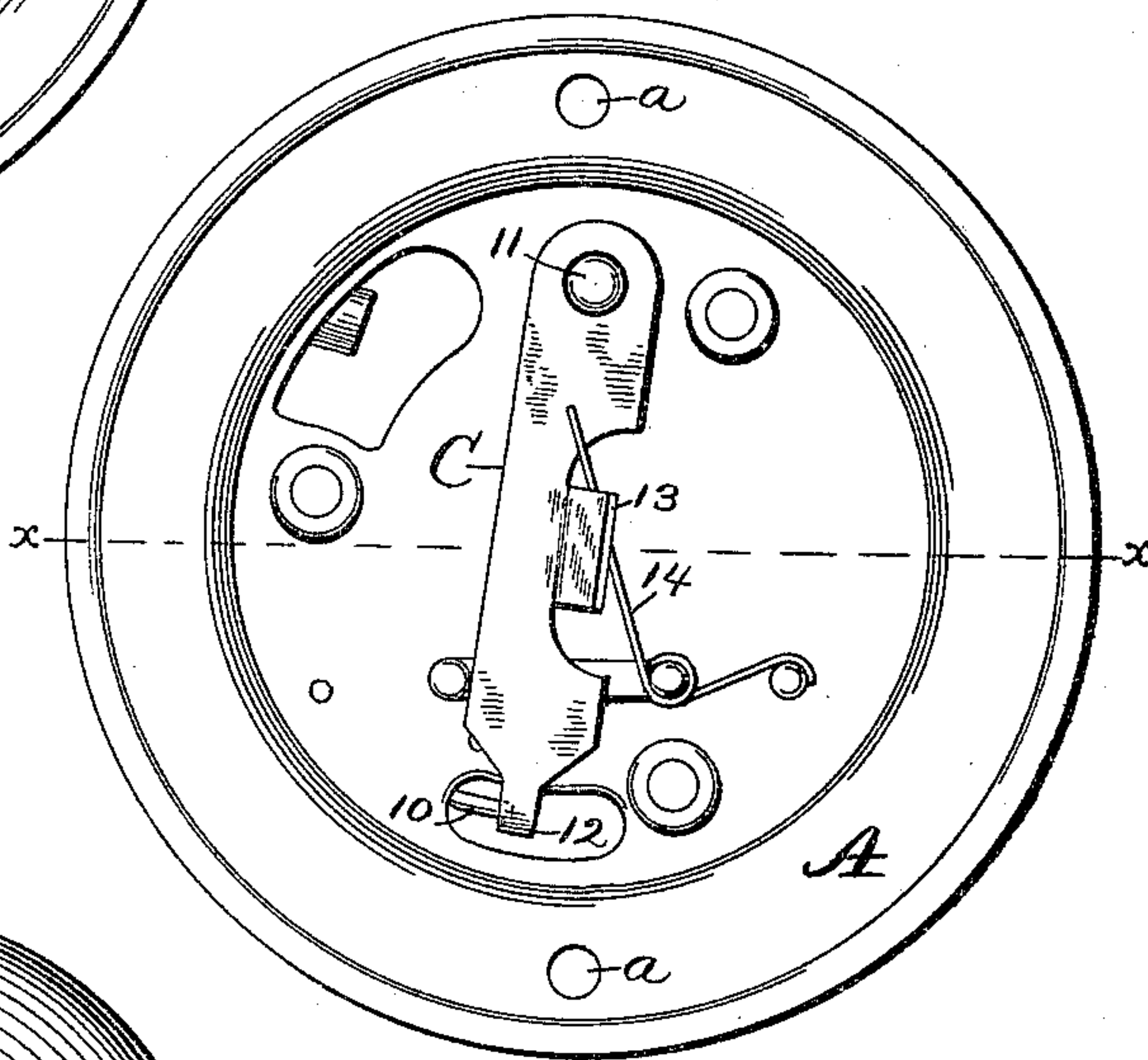
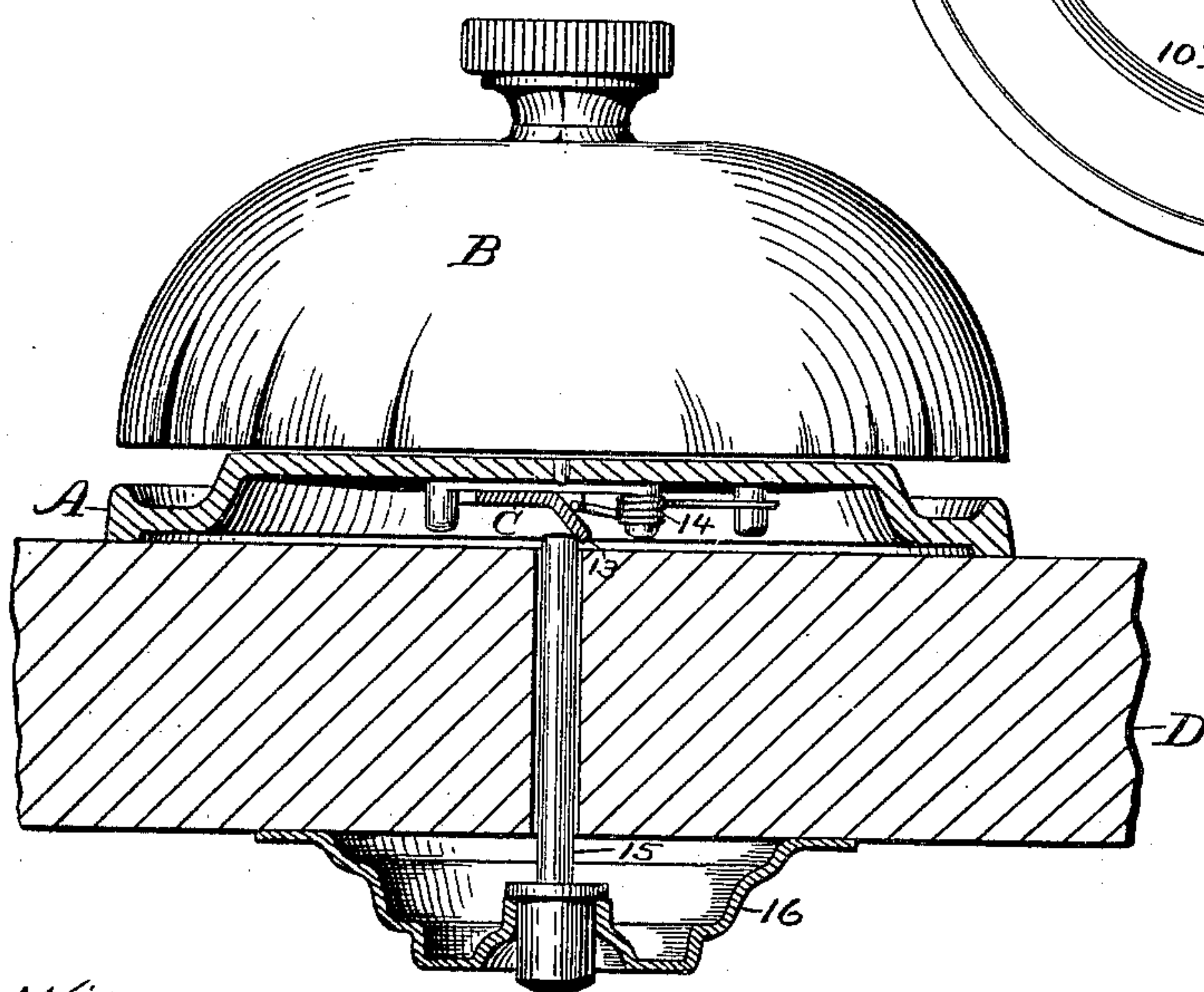


Fig. 3.



Witnesses.

John Edwards Jr.
W. H. Whiting

Inventor.

Waldo L. Upson.
By James Shepard. Atty.

UNITED STATES PATENT OFFICE.

WALDO L. UPSON, OF MERIDEN, ASSIGNOR TO THE PECK, STOW & WILCOX COMPANY, OF SOUTHTINGTON, CONNECTICUT.

DOOR-BELL.

SPECIFICATION forming part of Letters Patent No. 432,344, dated July 15, 1890.

Application filed March 25, 1890. Serial No. 345,255. (No model.)

To all whom it may concern:

Be it known that I, WALDO L. UPSON, a citizen of the United States, residing at Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Door-Bells, of which the following is a specification.

My invention relates to improvements in door-bells; and the objects of my improvement are simplicity and economy in construction, convenience in the manner of applying the bell in place, and general efficiency and utility.

In the accompanying drawings, Figure 1 is a front elevation of my bell, the gong and front plate being removed and a portion of the escapement-wheel broken away. Fig. 2 is a rear elevation of the same; and Fig. 3 is a side elevation of the gong and push-pin, with a sectional view of the escutcheon, the door, the base-plate, and operating-lever.

A designates the base-plate, which is recessed or chambered upon its back side, as shown in Figs. 2 and 3. Upon its front is the bell-striking mechanism of the class resembling an alarm-movement, the same consisting in general of a winding-shaft 5, spring 6, and main wheel 7 mounted on said shaft, said main wheel gearing into a pinion for driving the escapement-wheel 8 for actuating the hammer as the spring runs down, all substantially as in ordinary bell-striking mechanisms of this class. The gong B is mounted over the base-plate, so as to conceal and cover the bell-striking mechanism in the ordinary manner of mounting such gongs.

The novelty of my invention resides in the mechanism for holding and releasing the bell-striking mechanism. The hammer-shaft 9 is provided with a vibrating arm 10 upon the front side of the base-plate. Upon the rear side of the base-plate I pivot the operating-lever C, as at 11 in Fig. 2, said lever extending substantially diametrically across the back of the base-plate to a point near the vibrating arm 10, where it is turned forwardly through a slot in the base-plate to form the holding and releasing lug 12 for engaging said arm, as shown in Figs. 1 and 2. The middle portion of this lever is provided with an inclined

wing or cam 13, which preferably stands at an angle of about forty-five degrees to the plate that forms the body of this operating-lever C. A spring 14 is secured upon the base-plate, with one arm pressing against one side of this cam, so as to force the operating-lever when released into the position shown in Figs. 1 and 2, for catching upon and holding the vibrating arm 10 of the hammer-shaft. This operating-lever C is so mounted upon the base-plate that the cam 13 is substantially in the center of the bell, and is also within a diametrical line extending from one to the other of the screw-holes *a* in the base-plate A, that receive the fastening-screws for attaching the bell to a door. A section of the door is represented at D, Fig. 3. In attaching the bell thereto the base-plate is placed upon the door and the door marked from the holes *a a* for receiving the screws. A line is then drawn from center to center of said screw-hole marks and another hole marked at the middle of said line, at which middle mark a hole is bored through the door for the push-pin 15, which pin may be of any ordinary construction and provided with any suitable or ordinary escutcheon 16. This pin is made long enough for the thickest door, and if when applied there is an excess of length it is marked on the inside of the door at a point near the surface thereof and then cut off at said mark. The parts may then be secured in place with the end of the push-pin 15 resting upon that side of the cam or incline 13 that is opposite the spring 14. Upon depressing the push-pin to bear against said cam the operating-lever C will be moved laterally (to the right as viewed in Fig. 1, to the left as viewed in Figs. 2 and 3) to release the holding and releasing lug 12 from the vibrating arm 10 of the hammer-shaft, thereby permitting the bell-striking mechanism to operate as long as the push-pin is depressed. Upon releasing the push-pin the spring 14 returns the operating-lever C and push-pin 15 to the position represented in Fig. 3, thereby again bringing the holding and releasing lug 12 into position to secure the vibrating arm 10 and prevent the bell-striking mechanism from operating until the push-pin is again depressed. If desired, the push-pin may also be provided

with a spring for returning it to place; but such spring is not necessary when the spring 14 is present.

I claim as my invention—

5. 1. The combination of a bell-striking mechanism of the class described having a vibrating arm 10, with the operating-lever C, having the holding and releasing lug at one end, and the cam 13 at its middle portion adapted to
10 be operated by a push-pin, substantially as described, and for the purpose specified.

2. In a door-bell, the base-plate A, having the bell-striking mechanism upon its front side, and the pivoted operating-lever arranged
15 within a recess on its rear side, substantially as described, and for the purpose specified.

3. In a door-bell having a bell-striking mechanism and holding and releasing mechanism, the base-plate A, provided with screw-holes

a a on diametrically-opposite sides, and the 20 operating-lever pivoted to said base-plate and having the cam 13 at the middle point of a line extending from one to the other of said screw-holes, substantially as described, and for the purpose specified.

4. The combination of the bell-striking mechanism having a vibrating arm 10 on its hammer-shaft, the base-plate A, upon which said mechanism is mounted, the operating-lever C, also mounted on said base-plate, and
25 provided with a cam 13 and holding and releasing lug 12, and the push-pin 15, arranged for pressing upon said cam, substantially as described, and for the purpose specified. 30

WALDO L. UPSON.

Witnesses:

E. B. COWLES,
A. L. STEVENS.