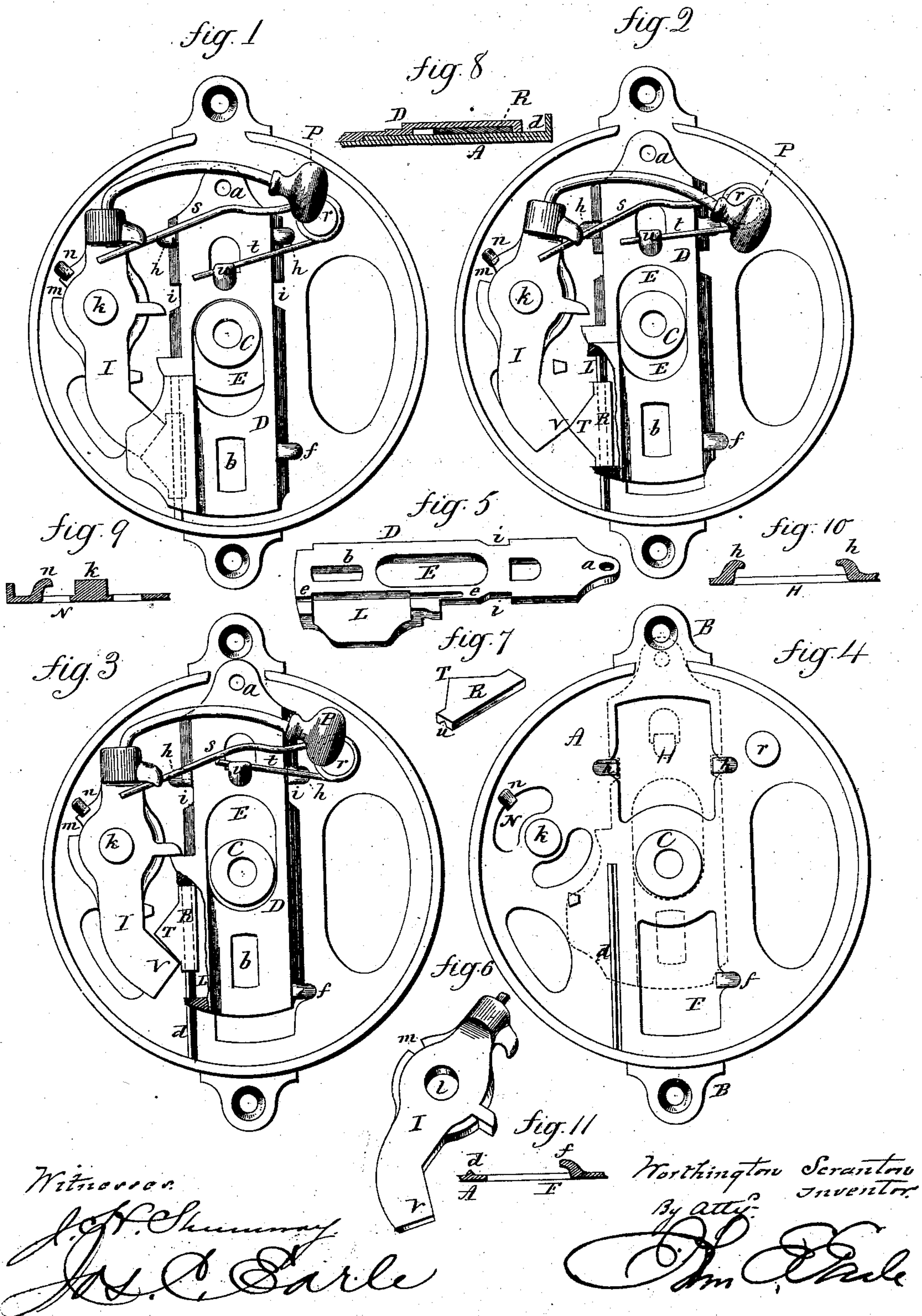


(Model.)

W. SCRANTON
DOOR BELL.

No. 272,336.

Patented Feb. 13, 1883.



UNITED STATES PATENT OFFICE.

WORTHINGTON SCRANTON, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO
SARGENT & CO., OF SAME PLACE.

DOOR-BELL.

SPECIFICATION forming part of Letters Patent No. 272,336, dated February 13, 1883.

Application filed October 31, 1881. (Model.)

To all whom it may concern:

Be it known that I, WORTHINGTON SCRANTON, of New Haven, in the county of New Haven and State of Connecticut, have invented
5 new Improvements in Gong-Bells; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part
10 of this specification, and represent, in—

Figure 1, a front view of the post and mechanism with the bell removed; Figs. 2 and 3, the same views with portions removed and
15 showing the parts as in operation; Fig. 4, front view of the base-plate; Fig. 5, perspective view of the slide from the under side; Fig. 6, perspective view of the hammer-lever; Fig. 7, perspective view of the trip detached; Figs.
20 8, 9, 10, and 11, detached sectional views.

This invention relates to an improvement in that class of bells commonly called "gong-bells," and such as are applied sometimes directly to a door to be operated by a lever upon
25 the outside, and sometimes at a distance to be operated through a line of wire, the object of the invention being to simplify the usual construction, whereby all the parts may be cast complete, requiring only the subsequent tum-
30 bling operation, thereby avoiding the usual mechanical labor in the completion of the bell; and the invention consists in the construction, as hereinafter described, and particularly re-
cited in the claims.

35 A represents the base or plate, which is fitted with ears B or other devices for securing the bell in place. It is of usual circular shape, or may be of any other desirable outline, and is provided with the usual center post, C, to
40 which the bell is attached.

Dis the slide, having a longitudinal opening, E, through it, so that it may set over the center post and be moved longitudinally—that is, diametrically—either by pull or lever fitted at
45 one end with an eye, *a*, for the attachment of the wire, and at the other end with an opening, *b*, for the lever, either with the one or both, or may be otherwise arranged for connection with the pull.

50 On the plate A is a rib, *d*, (see Figs. 4 and 11;) running parallel with the diametrical line

on which the plate D is arranged, the plate D having upon its under surface a groove, *e*, corresponding to the said rib, so that when set in place, as seen in Figs. 1, 2, and 3, it rests upon
55 the said rib as a guide, and may be moved longitudinally thereon, as from the position in Fig. 2, its normal condition, to that in Fig. 3, its position complete for pull and return.

On the plate A, and opposite the rib *d*, is a
60 hook-shaped lug, *f*, (see Fig. 4,) which extends over the edge of the slide when in place, as seen in Fig. 1. This hook-shaped lug is made in casting by forming an opening, F, below it, as seen in Figs. 3, 4, and 11. On the other
65 side of the center-post two lugs, *h h*, similar to the lugs *f* are arranged, so as to hook the one over one side of the plate and the other over the other, as seen in Fig. 1, the lugs *h h* and *f* serving to hold the slide in place upon
70 its guide. The lugs *h h* are also formed in casting by leaving an opening, H, through the plate below, as seen in Fig. 10. In order to introduce the slide beneath these hook-shaped lugs and upon its guide *d*, the slide is con-
75 structed with a notch, *i*, upon its two sides and opposite each other, and so that the slide being introduced beneath the lug *f* the notches *i i* will pass down over the lugs *h*, the slide at this time being in the position seen in broken
80 lines, Fig. 4. Then the slide is moved backward to bring it beneath the respective lugs, as seen in Fig. 1, and in which position it will slide freely back and forth, held in its position by
85 the said lugs.

I is the hammer-lever, arranged upon a stud, *k*, cast on the plate A, the lever cast with an opening, *l*, corresponding to said stud, as seen in Fig. 6. To prevent its accidental slipping from said stud, the hub of the lever is cast
90 with a notch, *m*, at one side to set down over a hook-shaped lug, *n*, (see Fig. 9,) and when down the hub passes beneath that lug, as seen in Fig. 1, the hook-shaped lug *n* being shaped in casting by means of an opening, N, in the
95 plate below it, as seen in Figs. 4 and 9. The bell-hammer P is attached to one end of the lever I, so as to turn upon the stud or pivot *k*. A two-armed wire spring is arranged upon a stud, *r*, one arm, *s*, bearing upon the hammer-
100 lever, the other arm, *t*, bearing upon a lug, *u*, on the slide, the tendency of said spring being

to force the slide in one direction and the hammer in the opposite direction or into their normal position, but yield for the operation of the parts.

5 On the under side of the slide D is a recess, L, (see Figs. 2, 3, and 5,) into which the trip R is placed. This trip, as seen in perspective, Fig. 7, is constructed with a groove, *w*, upon its under side, so as to rest and ride upon the
10 guide *d*, and is shorter than the recess L, as seen in Figs. 2 and 3, so as to have a certain amount of freedom within the spaces L of the slide. On one side of this trip a projection, T, is made, extending toward the hammer-lever
15 L, and is preferably inclined upon its two sides to an angle of nearly forty-five degrees, the end of the bell-hammer being correspondingly inclined, so as to make a similar point, V, projecting toward the slide when in a state of
20 rest, as seen in Fig. 1. This trip lies in rear of the end of the lever L, and in contact, or nearly so, with the rear end of the recess L in the slide. Hence when the slide is moved, as in Fig. 2, the projecting part T of the trip
25 forces the corresponding end of the lever away from it, as shown in that figure, until the one can escape from the other, then the force of the spring throws the lever back to its place of rest, and in so doing the correspondingly-
30 inclined surfaces of the lever and trip force the trip forward in the recess, as seen in Fig. 3. This leaves the hammer free for a quick return or stroke—that is, it cannot be let down easily, but must fly back with the full force of
35 the spring, because the trip is forced by that spring out of the way of the lever. On the return from the position seen in Fig. 3 to that in Fig. 1, the trip acts in the same manner but upon the opposite side of the point V of
40 the lever. Fig. 8 shows a longitudinal section through the slide and trip. It is for freedom

of the hammer-lever that the recess L in the slide is made longer than the trip, and the trip made independent or detached from the slide. A good result, however, may be produced with the trip made a permanent part of the slide, or the trip may be hinged to the slide, so as to operate upon the bell in one direction and pass over in the opposite direction, an arrangement of trip well known. 45 50

By this construction all the parts of the bell except the spring are readily made in the process of casting, and require no other mechanical labor to fit them for assembling than that given by the tumbling or cleaning operation. The construction is so simple that it is not liable to get out of order, and is as cheap as it is simple. 55

The construction and arrangement of the slide may be applied to other hammer mechanism. Hence I do not wish to be understood as limiting the invention to the construction and combination of all the parts as hereinbefore described; but 60

What I do claim is— 65

In a gong-bell in which the hammer is operated by a slide moving longitudinally or in the same plane with the base or plate, the said plate constructed with hook-shaped lugs, and the slide with notches in its edges to set over said lugs and permit the edges of the said slide to come beneath the said lugs, and be held in place by said lugs, the said slide also constructed with a recess, L, combined with a trip, R, arranged in said recess, and less in length than the said recess, and a hammer-lever, one arm of which is operated by said trip, moved by said slide, substantially as described. 70 75

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Witnesses:

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