

E. C. BARTON.
Door-Bells.

No. 150,934.

Patented May 19, 1874.

Fig. 1.

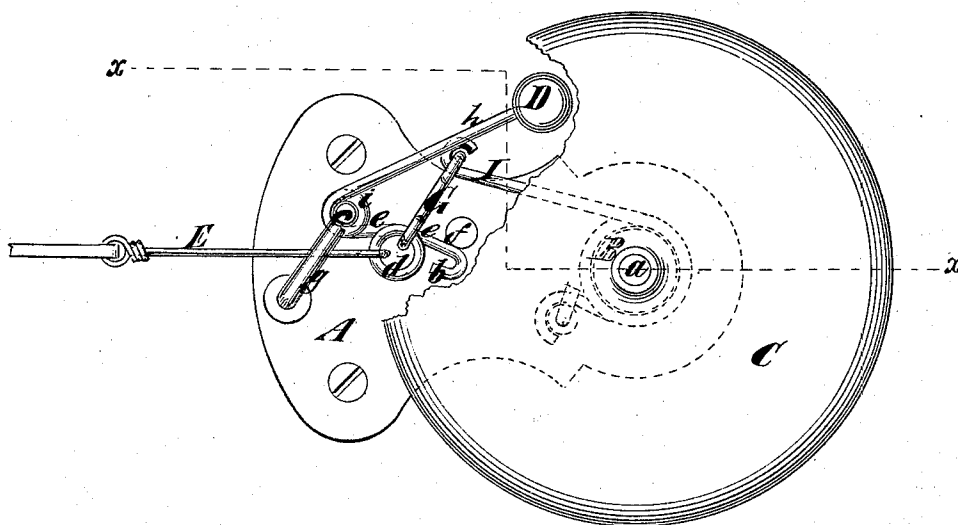
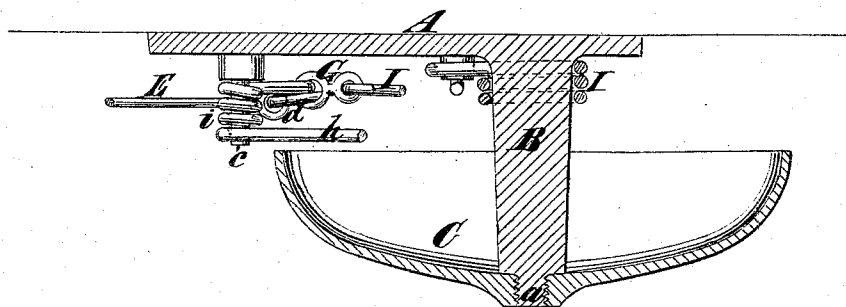


Fig. 2.



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UNITED STATES PATENT OFFICE.

ELIJAH C. BARTON, OF EAST HAMPTON, CONNECTICUT.

IMPROVEMENT IN DOOR-BELLS.

Specification forming part of Letters Patent No. **150,934**, dated May 19, 1874; application filed February 17, 1874.

CASE 2.

To all whom it may concern:

Be it known that I, ELIJAH C. BARTON, of East Hampton, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Gong Door-Bells; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing making part of this specification.

This invention relates to double-stroke gong door-bells having but a single hammer; and it consists in providing the outer end of the hammer-lever with a loop, which serves as a regulator, to limit the distance through which the hammer is allowed to vibrate. It also consists in interposing a link between the hammer-lever and the retracting-spring, whereby a slight pull upon the pull-wire serves to move the lever, and throw the hammer against the bell. It also consists in a novel combination and arrangement of the several parts, whereby I produce a simple, reliable, and durable gong door-bell, as will be hereinafter fully set forth.

In the accompanying drawing, Figure 1 is a front view of my improved gong-bell, showing a portion of the bell broken away to disclose the striking mechanism; and Fig. 2 is partly a section and partly a side view of the same, the section being taken on the plane of the line *x-x*, Fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

A designates a plate, commonly termed a back plate, which has the bell and its striking mechanism affixed to it. It is adapted to be fastened by screws to the interior of a door-casing or to a wall, or wherever else it is to be located. B designates a post, which is cast with or secured to the back plate A, and to which post the bell C is secured. This bell is of the kind commonly known as a gong-bell, and is fastened to the said post in the usual manner, say as shown at *a* in Fig. 2, and with its mouth sufficiently far from the back plate A to allow a free escape of sound. D is the hammer of the bell, and said hammer is attached to a spring-helve, *h*, which carries a coil, *i*, encircling a stud, *c*, which rises from the back plate A, and terminates in a lever, *e*. An eye, *d*, is formed in this lever *e*, and to this eye there is attached on one side the pull-wire

E, and on an opposite side a link, G, which latter is also attached to the free end of the vibrating portion of the retracting-spring I. A loop, *b*, is formed at the outer end of this lever *e*, and this loop, when in its normal position, rests against a stopping-post, *f*, rising from the said back plate A, and which, when drawn forward, as in the act of ringing the bell, strikes against another stopping-post, *g*, also rising from said back plate A; and the said loop *b* also serves as a regulator, to limit the distance the hammer is allowed to vibrate. By expanding or contracting the said loop *b*, (see Fig. 1,) the hammer-lever *e* is arrested at such point of its throw as to increase or decrease the distance through which the hammer D is allowed to vibrate, as the case may be. The stopping-post *g* is bent over at its upper end, so as to bear upon the coil *i*, and keep it upon the stud *c*. The retracting-spring I is coiled around the post B, and secured to the back plate A, as shown in dotted outline in Fig. 1.

It will thus be seen that by my invention I produce a very simple and compact striking mechanism, having no parts which are liable to become deranged or get out of order. It will also be seen that the stopping-post *g* does the double duty of keeping the coil *i* from slipping off of its stud *c*, and serving as a stop to the lever *e*, thereby obviating the necessity of casting an extra post or retaining-guard into the back plate; and it will also be seen that by reason of the attachment of the pull-wire E on one side of the eye *d*, and the link which is secured to the retracting-spring I on the other side of said eye, the strain is equalized, and consequently no part of the lever *e* can become bent, as occurs where the pull-wire E is attached to such lever at one point and the retracting-spring at another point. It will also be seen, as before stated, that the loop *b* affords a very simple means for regulating the extent of the vibration of the hammer, whenever occasion requires this to be done. It will also be seen that by interposing the link G between the hammer-lever *e* and the retracting-spring I an extra joint is afforded, which enables the lever *e* to be started very easily indeed, and, inasmuch as the pull-wire E and the said connecting-link G assume nearly a straight

line with each other so soon as the pull begins, it is almost impossible to draw on the wire E, however easily, without causing the hammer to strike the bell on the forward as well as on the backward stroke of the lever *e*.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the loop *b* with the pull-wire E, lever *e*, stopping-posts *f* *g*, and striking mechanism of a gong door-bell, substantially as and for the purposes herein specified.

2. The combination of the link G with the spring I and lever *e*, the latter being provided

with the eye *d*, the said parts being constructed and operated substantially as and for the purposes herein specified.

3. The combination of the following elements, to produce an improved gong door-bell: A back plate, A, bell C, mounted on the post B, hammer D, hammer-helve *h*, coil *i* on the post *c*, lever *e*, provided with the eye *d* and loop *b*, pull-wire E, link G, and retracting-spring I, all arranged and having a mode of operation substantially as herein specified.

Witnesses: ELIJAH C. BARTON.

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