J. Regester,

Bell.

No. 112,631. Patented Mar. 14. 1871.

Fig. 1

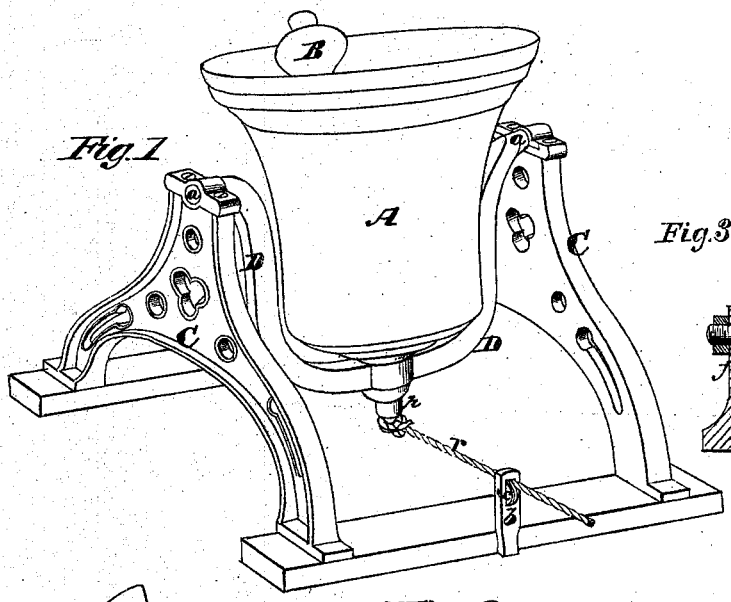


Fig. 3

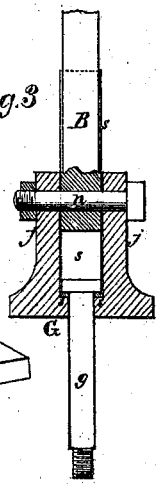
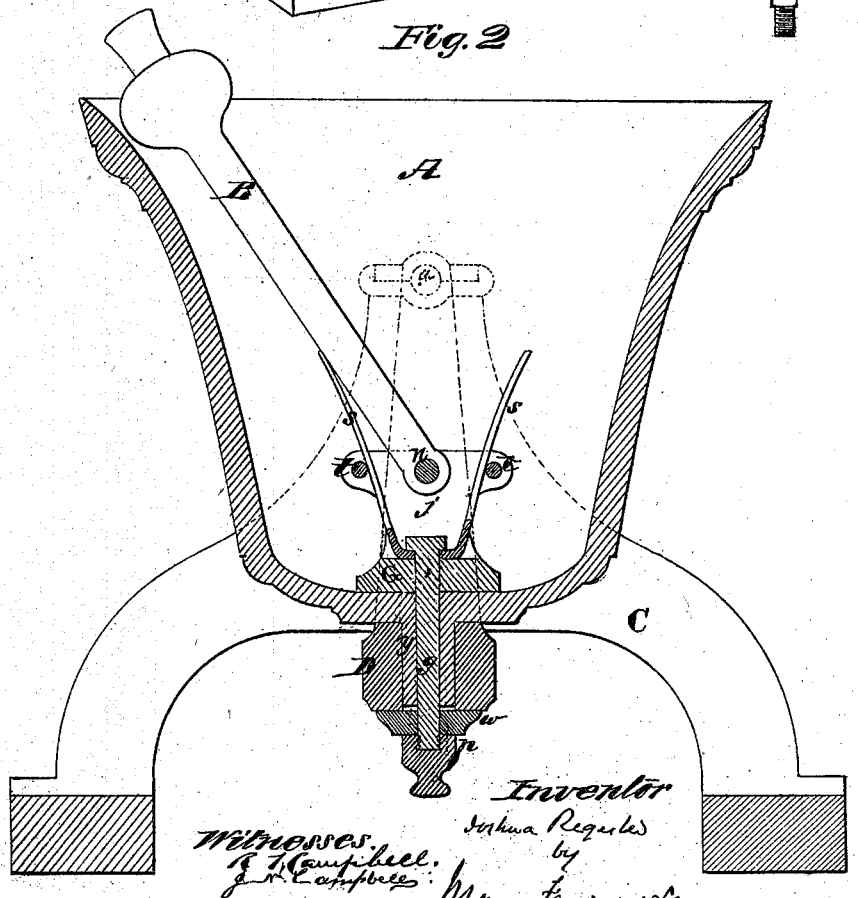


Fig. 2



Witnesses.
J. Campbell.
J. R. Campbell.

Inventor
Joshua Regester
by
Mason, Fenwick & Lawrence.

United States Patent Office.

JOSHUA REGESTER, OF BALTIMORE, MARYLAND.

Letters Patent No. 112,631, dated March 14, 1871.

IMPROVEMENT IN BELLS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOSHUA REGESTER, of the city and county of Baltimore and State of Maryland, have invented a new and useful Improvement in Bells; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of a bell, which is mounted according to my improved plan.

Figure 2 is a vertical central section through the bell and its yoke.

Figure 3 is a sectional view in detail of the clapper and spring-rest attachment.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates particularly to large bells, and consists—

First, in hanging a bell with its mouth or open end directed upward and its point of support upon its vibrating yoke so far below the axis of motion of this yoke that the center of gravity of the bell will fall below said axis and allow the bell to be easily vibrated by the direct application to its lower end of the bell-ropes, as will be hereinafter explained.

Second, in a quadrilateral base-piece, which is adapted to receive in it the pivotal end of the clapper, and also a V-shaped spring, which prevents the clapper-ball from resting on the bell, said base-piece, spring, and clapper being secured to the crown of the bell by means of a single bolt, as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will explain its construction and operation.

Persons whose duty it is to ring large bells which are hung with their mouths or open ends directed downward are aware that the operation is attended with considerable danger, owing to the liability of the clapper to become detached from the bell and fall.

To obviate this objection I hang the bell with its open end directed upward, so that should the clapper B become detached from its pivot *n* it will not fall out of the bell.

The crown or lower end of the bell A is supported upon a vibrating yoke, D, which yoke is curved in such manner that the ends of its arms extend up nearly to the top or open end of the bell, and are supported by standards C C, at points *a a*.

The axis of vibration of the yoke D is thus raised so high above the crown of the bell that this latter part will preponderate, and thus maintain the inverted position of the bell and allow it to be vibrated with very little expenditure of labor, and by means of ropes applied to its lower end in line with its vertical center.

The clapper B, which is constructed in the usual well-known manner, is pivoted between two jaws, *j j*, which rise from a base-piece, G.

The upper ends of these jaws *j j* extend out laterally, and are connected together by cross-pieces, *t t*, which afford bearings or supports for the arms of a U-shaped spring, *s*.

This spring is centrally perforated, and is secured fast to the bell with the base-piece G, by means of a bolt, *g*, which passes through the neck *y* of the bell in yoke D, and receives on its end a washer, *w*, and a nut, *p*, as shown in fig. 2.

By means of the jaws *j j* and cross-pieces *t t*, on base-piece G, the arms of the spring *s* are prevented from being displaced from their proper position in the plane of vibration of the clapper B.

The spring-arms *s* afford yielding supports for the clapper-head to strike the bell freely, but prevent this head from resting on the bell.

Under this arrangement it will be seen that the bell-ropes by which the bell is rung are attached to the nut *p* in the vertical center of the bell, thus allowing the bell to be swung easily and with little or no jar to the steeple, it being only necessary to move the bell sufficient to change the gravity of the clapper, thereby giving a uniform blow, and thus the bell can be rung fast or slow, at pleasure.

Having described my invention,

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

1. The bell A, which is operated by a rope attached to its crown, and which is also supported upon a vibrating yoke, D, with its mouth directed upward, and so that the center of gravity of the bell falls below the axis of motion of the yoke, in combination with spring-clapper supports *s*, substantially as described.

2. The perforated base-piece G, constructed with fulcrum-pins *t t*, isolated as described, the U-spring *s s*, when confined by the pin *g*, having a bearing against the inner side of the pins, and at the same time the whole length of the arms of this spring, from the head of the pin *g* to their tips, having freedom to play when under tension or released, substantially as and for the purpose described.

JOSHUA REGESTER.

Witnesses:

DAVID A. TUTTLE,

DANIEL T. REGESTER.