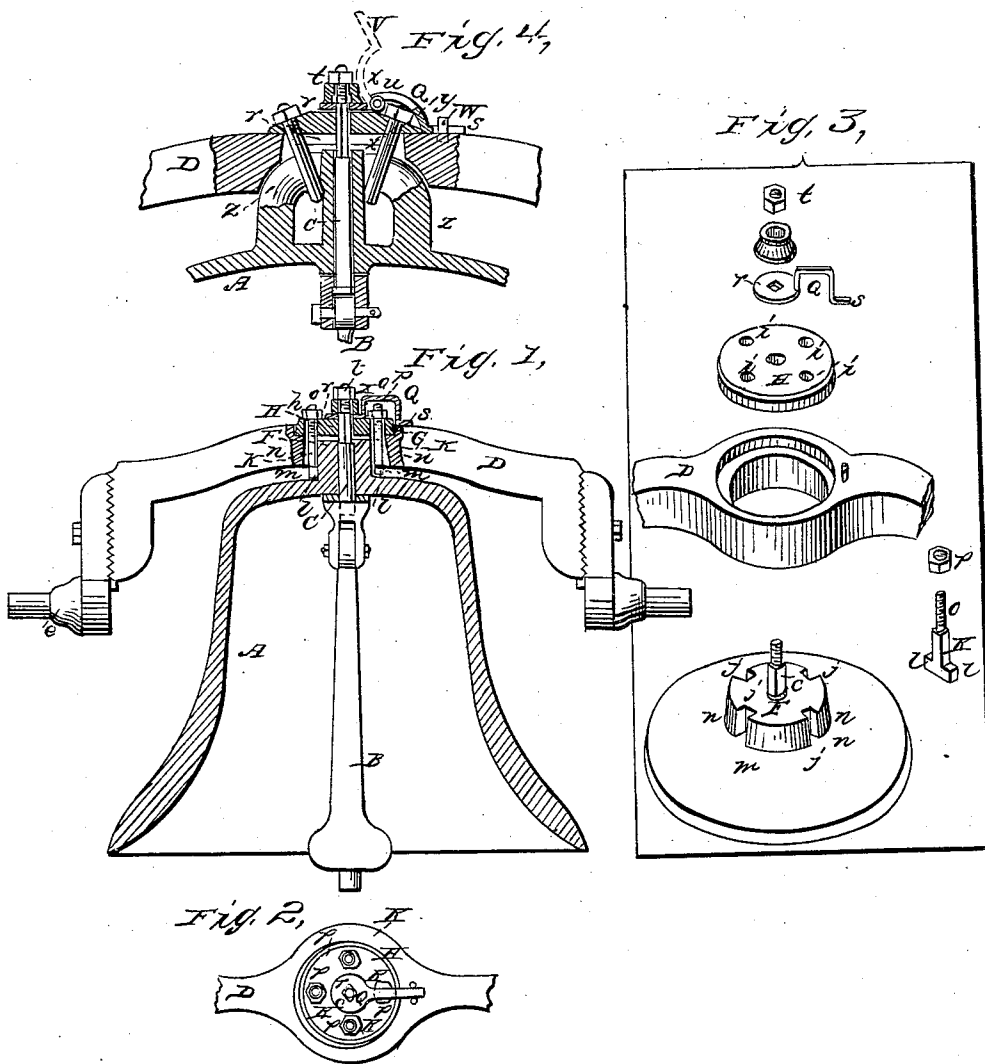


G. R. MENEELY.

Hanging Bells.

No. 30,338.

Patented Oct. 9, 1860.



Witnesses:
George Macanille
Austin F. Park.

Inventor:
Geo. R. Meneely

UNITED STATES PATENT OFFICE.

GEORGE R. MENEELY, OF WEST TROY, NEW YORK.

HANGING BELLS.

Specification forming part of Letters Patent No. 30,338, dated October 9, 1860; Reissued August 13, 1872, No. 5,030.

To all whom it may concern:

Be it known that I, GEORGE R. MENEELY, of the village of West Troy, in the county of Albany and State of New York, have
5 invented certain new and useful Improvements in Hanging Bells; and I do hereby declare that the following contains a full and exact description of the same, reference being had to the annexed drawings, in which
10 like parts are distinguished by the same letters in the several figures.

My invention is applicable to church, factory, and similar bells of that well known class in which it is necessary that the bell,
15 A, should have a clapper, B, hung within the bell to a bolt, C, passed through the crown of the bell, and the bell itself secured to a revolving or rocking yoke, D, provided with suitably supported journals, *e, e*, all
20 in such a manner that by swinging the yoke and bell together around or back and forth on those journals as a common axis, the clapper will be swung and struck against the sound-bow of the bell in a plane at right
25 angles or nearly so to the axis about which the yoke and bell are vibrated; and so that the bell, with the device by which it is secured to the yoke, may be both turned together in the yoke around the clapper and
30 axis of the bell, so as to thereby successively present all parts of the circumference of the sound-bow to the blows of the clapper, and also successively bring all portions of the device by which the bell is united to the
35 yoke into the positions where they are subject to the greatest strain, or on those sides of the bell which are alternately swung uppermost in ringing the bell.

One part of my invention relates to the
40 manner of securing the bell, A, to the yoke, D; and consists in uniting them together by means of a round, tapering, flanged, and slotted neck, F, cast on the top of the bell and fitted into a corresponding round tapering hole, G, made in the yoke; with a
45 movable cap, H, fitted over that hole in the yoke and against the opposite side of the yoke from the bell, and having perforations, *i*, as many in number as the slots *j* in the
50 outside of the neck F of the bell; and with bolts, K, fitted sidewise into the slots *j*, and extended through the hole G in the yoke and also through the holes *i* in the cap H, one end of each bolt K being made
55 with a head, or shoulders, *l, l*, which extend

on both sides of the slot *j* into the recesses, *m*, under the projecting parts, *n*, of the neck F, and the other end *o*, of each bolt being formed with a screw-thread and furnished with a corresponding screw-nut, *p*,
60 which nuts are screwed down on the bolts K against the cap H,—all substantially as represented by Figs. 1, 2 and 3 of the annexed drawings.

By uniting the bell to the yoke by means
65 of the round, tapering, flanged, and slotted neck F, and corresponding round tapering hole G in the yoke, with the cap H and screw-bolts K, as above described, I can not only loosen the nuts, *p*, and then freely
70 turn the bell with the bolts K and cap H around the clapper and axis of the bell, so as to equalize the wear of the sound-bow of the bell by the clapper, and also successively
75 bring the bolts into the positions where they are subject to the greatest strain, and thus equalize their liability to break; but am, in addition, enabled to have the supporting-bolts take hold of the bell at a greater distance from the axis of the bell, and can there-
80 fore secure the bell more firmly in the yoke against the leverage-strain exerted by the bell when swung out horizontally, than is possible when the bell is cast with ears, horns, or canons, *z*, of the same circular
85 extent or limits as the neck F, and secured to the yoke by means of a movable cap, *y*, and clevis-bolts, *x*, as represented in Fig. 4 of the annexed drawings and in my United States patent dated the seventh day of Sep-
90 tember, 1858.

The other part of my invention consists in uniting the clapper-sustaining bolt, C, to the yoke, D, by means of an arm or key Q, so
95 fitted at one end, *r*, to the bolt, C, and at the other end, *s*, to the yoke, and so formed and arranged in respect to the device by which the bell is secured to the yoke, all substantially as represented by the annexed drawings, that the clapper will be thereby pre-
100 vented from being turned around with or within the bell, and the swing of the clapper always maintained at right-angles to the axis of the yoke, while the bell and the device by which the bell is secured to the yoke,
105 are both together being turned in the yoke around the axis of the bell, and in case the nut *t* on the clapper-bolt should become loosened in the operation of ringing the bell. In order that the key Q may not interfere
110

with the turning of any of the nuts of the bolts K or *x*, the key may have a rule-joint as shown at *u* in Fig. 4, so that a part of the key may be temporarily turned up out of the way as indicated at *v* in dotted lines, and turned back again and secured to the yoke by a pin, *w*, or other fastening.

I am well aware that in that class of bells in which the bell may be loosened and turned about its own axis in the yoke, without turning the device by which the bell is secured to the yoke,—(examples of which are shown in No. 841 of the specifications of English patents for the year 1854, in No. 13,089 of United States patents, and on page 465, vol. 64 of the *London Mechanics Magazine*,)—the bolt which supports the clapper has been so connected to the yoke that the clapper was held stationary in the bell while the bell was being turned around the clapper. But the particular constructions and arrangements of parts which were used in such cases for that purpose, would not have kept the clapper from being turned around with the bell in the yoke if the parts by which the bell was united to the yoke had been turned around in the yoke with the bell. Such examples therefore do not show anything equivalent for the construction and arrangement of parts represented in the annexed drawings, by which the clapper is prevented from being turned with the bell while the parts by which the bell is secured to the yoke are being turned in the yoke with the bell about the clapper.

I do not claim securing the bell to the yoke by means of the central screw-bolt which carries the clapper, in combination with a round tapering neck cast on the bell and

fitted into a corresponding round tapering hole in the yoke. That mode of uniting the bell to the yoke is defective; for if there should be a flaw in the clapper-bolt, and only that one bolt should break, the bell must fall; and the leverage-strain of the bell when swung out horizontally in ringing the bell, is greater on that one central bolt when it alone sustains the bell, than upon any one of a series of supporting-bolts, K, arranged—as shown by Figs. 1, 2 and 3 of the annexed drawings,—in a circle around the axis of the bell.

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

1. In uniting the bell to the rocking or revolving yoke, the employment of the flanged and slotted, round, tapering neck F, cast on the bell, the round tapering hole G made in the yoke, the movable perforated cap H, and the series of screw bolts, K, all constructed and arranged in combination substantially as herein described.

2. Securing the supporting-bolt, C, of the clapper, to the yoke, D, by means of a key, Q, formed and applied to the clapper-bolt and to the yoke and arranged with the parts by which the bell is united to the yoke, as herein described; so that the clapper will be thereby prevented from being turned in the yoke with the bell, when the parts by which the bell is secured to the yoke are turned in the yoke, with the bell, about the clapper-bolt.

GEO. R. MENEELY.

Witnesses:

GEORGE MACARDLE,
AUSTIN F. PARK.