

E. DEWEY.
 MODE OF CONSTRUCTING AND HANGING BELLS.
 No. 1,114. Patented Apr. 10, 1839.

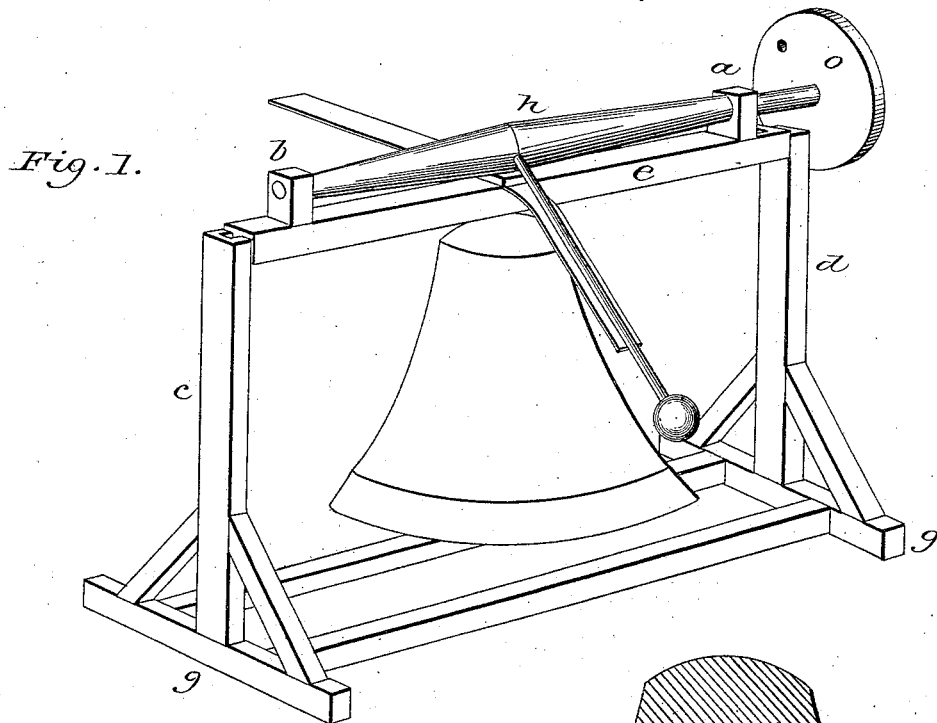


Fig. 2.

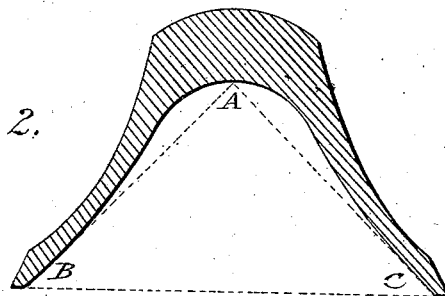
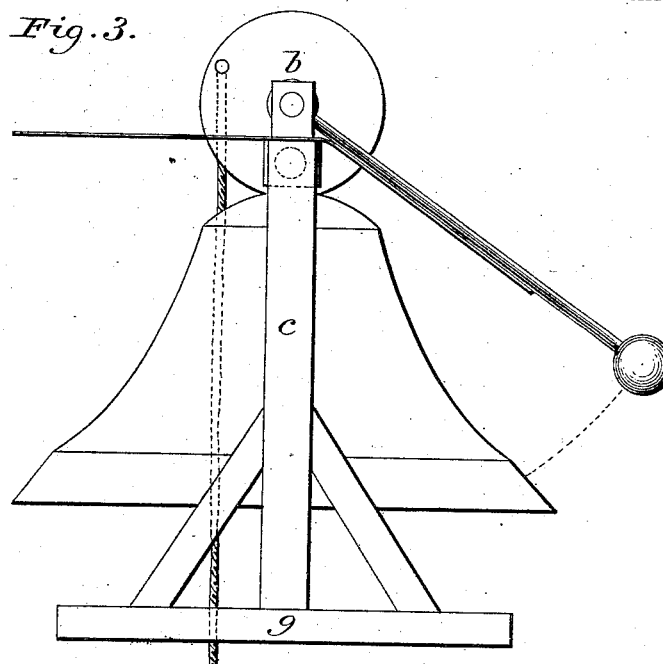


Fig. 3.



UNITED STATES PATENT OFFICE.

EBENEZER DEWEY, OF NEW YORK, N. Y.

MODE OF CONSTRUCTING AND HANGING BELLS.

Specification of Letters Patent No. 1,114, dated April 10, 1839.

To all whom it may concern:

Be it known that I, EBENEZER DEWEY, of the city and State of New York, have invented, made, constructed, and applied to use certain new and useful Improvements in Church and other Bells and in the Mode of Hanging the Same.

Said improvements are described as follows:

10 The internal surface or cavity of the bell is of the form of a cone whose base is in diameter twice its height.

Figure 2 of the drawing represents a section of the bell upon a plane passing through its axis perpendicular to its base or mouth. 15 The lines A, B, and A, C, in Fig. 2 represent lines drawn upon the inner surface of the bell from points opposite to each other in the base or lip of the bell and terminating at a point at the top and in the axis of the same 20 which lines are equal to each other and contain between them at the point A a right angle and the dotted line B, C, represents the diameter of the mouth of the bell. The 25 diameter of the mouth of the bell is forty lines and the thickness of the lip is one line and one third of a line in thickness at the top, and one half a line in thickness at one third the distance from the base or mouth to 30 the crown and gradually diminishing in thickness from thence to the crown.

Fig. 3 gives an end view (with the eye in a line with the yoke to which the bell is attached) of the bell yoke hammer and the 35 shaft to which the hammer handle is attached or through it passes and the spring which extends across the yoke and by which the hammer is raised from the bell after the stroke is given by it to the bell.

40 The mode of hanging my bell is shown in Fig. 1 of the drawings and is described as follows: "e" represents the yoke to the center of which the bell is fastened by a bolt which passes through the top of the bell, the 45 yoke and the spring with a nut upon the upper end of it resting upon the spring. "c" "d" represent two posts standing upon two sills "g, g" and supported by brass on either side of them upon which posts the journals 50 in the ends of the yoke rests by which the

bell is easily vibrated or moved when force is applied to it with the hammer or other means.

The letters "a" and "b" represent two short posts framed into the top or upper 55 side of the yoke at or near the ends of it, ten or twelve inches long through which the shaft "h" passes or into which the ends of it are inserted. Through the shaft "h" in the middle of it the hammer handle passes. 60 In one end of the shaft "h," is a short gudgeon which in the short post "b," and in the other end of it is a longer gudgeon which passes through the short post "a," and extends out beyond the post "e" and the wheel 65 "o," is placed upon the end of it. The spring by which the hammer is raised from the bell extends on each side of the yoke two thirds of the length of the hammer handle and is made of iron or steel. To the side of 70 the wheel "o" opposite the hammer the rope is attached by which the hammer is thrown from one side of the bell to the other. The object of suspending the yoke upon gudgeons is that the bell may yield to the 75 stroke of the hammer when the bell is struck by it. The shaft "h" is attached to the yoke by the posts "a," "b" that the hammer may at all times have the same relation to the bell whether the same is hanging still or is 80 swinging and that the hammer shall always strike the bell in the same place and the bell being movable will yield to the force of the hammer and is much less liable to be broken than it would be if the bell was stationary 85 and immovable.

The thickness of this bell may be varied at pleasure to produce a tone more sharp or more flat. If it is desired to make a bell, the tone of which shall be more sharp than the 90 tone of another bell of the same dimensions the thickness of it must be increased; and so "vice versa." It is supposed that a bell of this form is much less liable to break by ringing, and that it is much more easily 95 vibrated than bells of the common form and that a much less quantity of metal in this form will produce more and a greater sound than the same heft of metal in a bell of the common form. 100

I claim—

1. The gradual diminution of the thickness
of the sides of the conical bell from the lip at
its base to the apex or crown in the manner
5 above described.

2. And also the combination of the yoke
and shaft containing the hammer handle and
the spring in the manner and for the purpose
above described.

In testimony that the above is a true speci- 10
fication of my improvements as above de-
scribed I have hereunto set my hand this
15th day of March 1839.

EBENEZER DEWEY.

Witnesses:

THEODORE C. VAN WYCK,
HIRAM H. HERRICK.