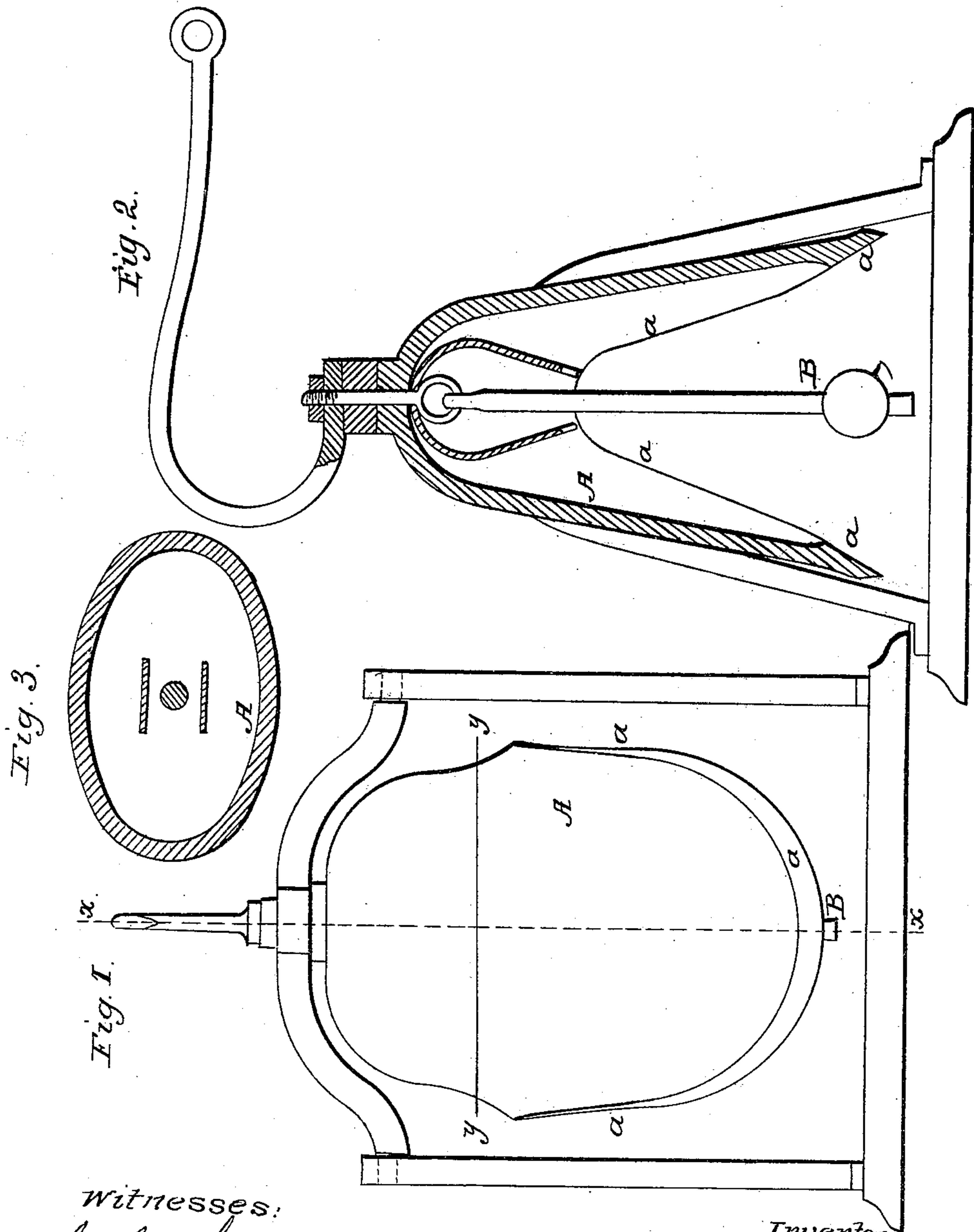


J. S. TIBBETS.

Bell.

No. 39,433.

Patented Aug. 4, 1863.



Witnesses:
J. W. Coombs.
G. W. Reed

Inventor:
Jonathan S. Tibbets
per M. M. Ho
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UNITED STATES PATENT OFFICE.

J. S. TIBBETS, OF EVANSVILLE, INDIANA.

IMPROVED BELL.

Specification forming part of Letters Patent No. 39,433, dated August 4, 1863.

To all whom it may concern:

Be it known that I, JONATHAN S. TIBBETS, of Evansville, in the county of Vanderburg and State of Indiana, have invented a new and useful Improvement in 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 drawings, making a part of this specification, in which—

Figure 1 is a side view of a bell constructed according to my invention; Fig. 2, a vertical section of the same, taken in the line *xx*, Fig. 1; Fig. 3, a horizontal section of the same, taken in the line *yy*, Fig. 1.

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

This invention relates to an improvement in that class of bells which are suspended, and have an oscillating clapper or tongue either within or at the outer side of the bell.

The invention consists in constructing the bell of oval form, and also with a sinuous or increased length of chime, as hereinafter fully shown and described, whereby an increased volume of sound is obtained of an ordinary bell of the same weight, and also a more prolonged sound obtained and an improved tone.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the bell, which is of oval form in its horizontal section, as will be fully understood by referring to the drawings, in which Fig. 1 shows one of the broad sides of the bell, and Fig. 2 a vertical section taken transversely with the broad sides, so that one of the narrow sides is shown. Fig. 3 shows the oval clearly, but, of course, does not give any idea of the longitudinal form. The bell is

of flaring form, and has a clapper or tongue, B, suspended within in the usual or any proper way.

The chime *a*—that is to say, the bottom edge of the bell—may be in a horizontal plane, or it may extend upward in the narrow sides of the bell, so as to give it a sinuous or increased length. This, of course, is effected by casting the bell with the lower edges of its narrow sides hollowed out, as shown more particularly in Fig. 2. In Fig. 1, however, the chime is indicated by its flaring or projecting edge.

By constructing or casting the bell in this form I obtain with a given weight of metal more vibrating surface than is obtained by the ordinary bells, which are of circular form in their horizontal section, and consequently a greater volume of sound is produced, as well as a more prolonged sound, and experiment has proven that a better tone is also produced.

From actual experiment it has been ascertained that a bell of thirty-one and a half pounds constructed according to my invention will give or produce a sound equal to that produced by one weighing one hundred (100) pounds, and a tone equal to one produced weighing two hundred and fifty (250) pounds.

Having thus described my invention, I claim as new and desire to secure by Letters Patent as an improved article of manufacture—

A bell cast of oval form in its horizontal section, and a sinuous chime, as herein set forth.

J. S. TIBBETS.

Witnesses:

SAMUEL P. SCHWING,
JAMES SCANTLIN, Jr.