G. W. TUCKER.

SLEIGH-BELLS.

No. 183,605. Patented Oct. 24, 1876.

Fig. 1.

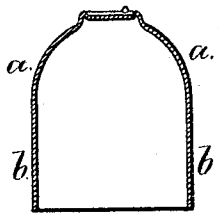


Fig. 2.

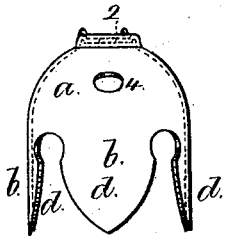


Fig. 3.

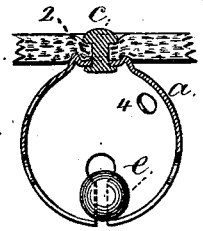
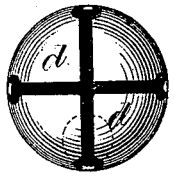


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE W. TUCKER, OF WATERBURY, CONNECTICUT.

IMPROVEMENT IN SLEIGH-BELLS.

Specification forming part of Letters Patent No. **183,605**, dated October 24, 1876; application filed September 18, 1876.

To all whom it may concern:

Be it known that I, GEORGE W. TUCKER, of Waterbury, in the county of New Haven and State of Connecticut, have invented an Improvement in Sleigh-Bells, of which the following is a specification:

Sleigh-bells have been made of two hemispheres of sheet metal, united by interlocking flanges at the edges, and the sheet metal has also been contracted around a separate base, so as to employ a single piece of sheet metal in addition to the separate base.

The object of the present invention is to obtain a sleigh-bell made entirely of one piece of sheet metal, and at the same time to produce musical or resonant tongues that vibrate more freely and produce a clearer note than the sleigh-bells heretofore made.

I strike up with dies a cup-shaped blank having a rounded bottom, and perforate the same with a central hole for the rivet, and with the proper holes or openings to tone the bell and to give freedom to the escape of the resonant vibrations from the inside of the bell, and I cut the edges of the said cup into scallops shaped like a Gothic arch. There are three or more of these arch-shaped points at equal distances around the edge of the cup, and they are bent inward after the clapper of the bell has been placed in the cup. This bending operation is performed in dies that close the metal down to the globular or other shape, leaving the tongues at the proper distance from each other to form the slots.

By this construction there are three or more (preferably four) tongues pointing toward each other, and they are of hard, sonorous, and homogeneous metal that vibrate by the contact of the clapper or ding, and these tongues give a clear tone and depth of vibration that it is impossible to obtain from the bells heretofore made.

In the drawing, Figure 1 is a section of the cup. Fig. 2 is an exterior view, with the metal perforated and cut out to form the arch-shaped points. Fig. 3 is a section of the complete bell, and Fig. 4 is an end view of the same.

The dies employed are of ordinary character, shaped to accomplish the successive operations, as well known to persons skilled in the art.

After the cup-shaped blank of sheet metal has been drawn to the form shown in Fig. 1, with the hemispherical base *a* and straight sides *b*, it is perforated at 2, for the attaching-rivet *c*, Fig. 3, and with the openings 4 for the passage of vibrations of air from the inside of the bell. The arch-shaped scallops *d* are also cut out in the cylinder *b*, after which the clapper or ding *e* is inserted into the cup and the scallops *d* pressed toward each other by a hemispherical die that bends said points and closes them, leaving, however, slots between the vibrating points of the proper width, or these slots may be rendered true by rotary saws or files.

A bell made in this manner is a new and useful article of manufacture, that is superior to those heretofore constructed in the particulars hereinbefore named.

I claim as my invention—

1. A sleigh-bell made of one piece of sheet metal, including the portion to which the attaching-rivet is applied, as set forth.

2. A sleigh-bell made of sheet metal, having three or more vibrating tongues pointing toward each other with intervening slots, substantially as set forth.

3. The method herein specified of making sleigh-bells from a cup-shaped blank by cutting out the blank with arch-shaped tongues, and bending those tongues toward each other for retaining the clapper, substantially as set forth.

Signed by me this 11th day of September, 1876.

GEO. W. TUCKER.

Witnesses:

HENRY M. STOCKING,

S. NORTHROP.