No. 203,675. Patented May 14, 1878.

Fig. 1.

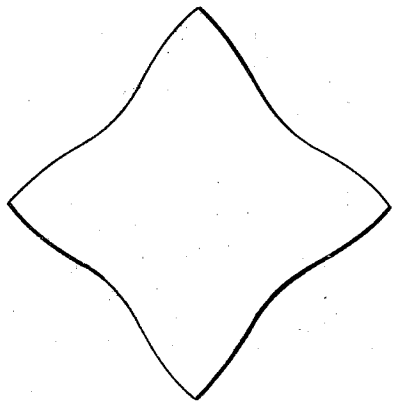


Fig. 2.

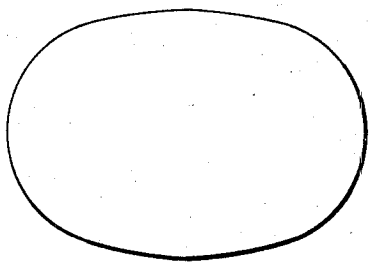


Fig. 3.

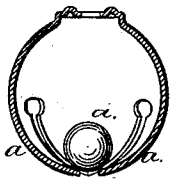


Fig. 7.

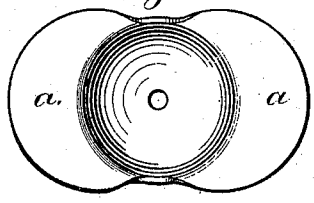


Fig. 6.

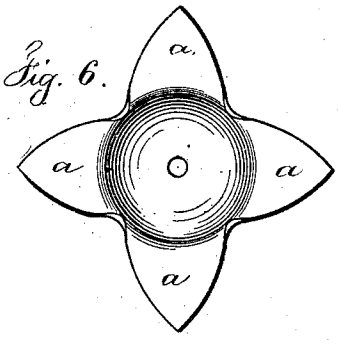


Fig. 4

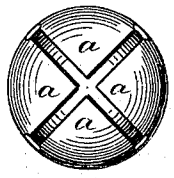


Fig. 10.

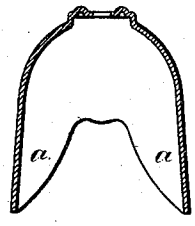


Fig. 8.

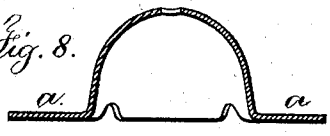


Fig. 11.

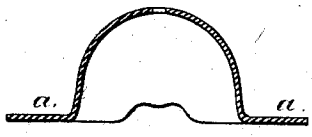


Fig. 5.

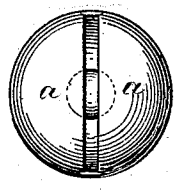
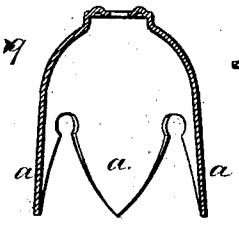


Fig. 9



Witnesses

Chas H. Smith.
Geo. T. Pinckney.

Inventor

George W. Zucker.
per Lemuel W. Serrell
Atty.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE W. TUCKER, OF WATERBURY, CONNECTICUT.

IMPROVEMENT IN THE MANUFACTURE OF SLEIGH-BELLS.

Specification forming part of Letters Patent No. **203,675**, dated May 14, 1878; application filed January 21, 1878.

To all whom it may concern:

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

In Letters Patent No. 183,605 a sleigh-bell is shown as made of one piece of metal stamped up into the form of a cup, and then the edges notched to form tongues, that are bent down toward each other to inclose the clapper.

My present improvement is made for saving metal, lessening the amount of scrap, and dispensing with the notching operation described in said patent.

I make use of a blank cut out with points, or in an oval form, so that when stamped up to shape, the tongues or lips for the sleigh-bell will be formed so as to need little or no cutting or trimming, and hence there will be but little waste or scrap metal.

In the drawing, Figure 1 represents the shape of the blank for forming a sleigh-bell with four vibrating tongues. Fig. 2 represents the blank for forming a sleigh-bell with one slot and two vibrating lips. Figs. 3 and 4 represent the four-tongued bell made from the blank Fig. 1, and Fig. 5 represents the single-slotted bell made from the blank Fig. 2.

The central part of either blank is first struck up into a hemispherical form, as seen in Figs. 6, 7, 8, and 11, with the two curved lips *a a* projecting in a plane at right angles to the axis of the dies, as shown in Figs. 7 and 11; or they may be brought into a cylindrical condition, as seen in Fig. 10, either by one or more operations.

If there are three, four, or more tongues, as seen in Figs. 6, 8, and 9, where four tongues are shown, they are stamped up with dies in the same manner.

In this condition the base of the sleigh-bell is completed by the central perforation, a flat bottom, and two or more projections, to prevent the bell turning on the strap, as now usual. If the ends of the slots are to terminate in round holes, the sheet metal is now to be cut between one tongue and the next for this purpose, as shown in Fig. 9; and if there should be any inaccuracy in the edges of the tongues or lips, the same is to be cut off true, but generally this will not be required.

The sleigh-bell is now closed by the pressure of a die that acts to bend the tongues or lips toward each other, (after the clapper has been inserted,) and thereby produce a globular or nearly globular bell, with one or more slots across its face, as seen in Figs. 3, 4, and 5.

By this method of manufacturing there is but little waste or scrap metal, and the labor required and the wear on the dies are lessened.

I claim as my invention—

The method herein specified of making sheet-metal sleigh-bells, consisting in cutting out the blank in an oval or pointed form, as shown, pressing the same into a cup shape, and at the same operation drawing the metal at the junction of the points or lips to form the base of the slots, and then bending the points or lips toward each other, so as to leave a slot or cross-slot in the face, as set forth.

Signed by me this 17th day of January, A. D. 1878.

G. W. TUCKER.

Witnesses:

OTIS S. NORTHROP,

W. S. ATWOOD.