

W. A. HARWOOD.
Toy-Horns.

No. 144,026.

Patented Oct. 28, 1873.

Fig. 1

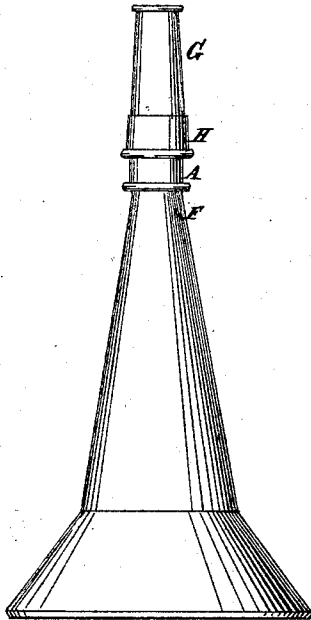


Fig. 2

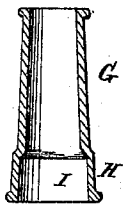


Fig. 3 x

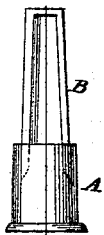


Fig. 4

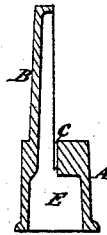


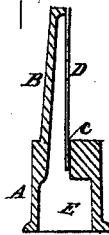
Fig. 5



Fig. 6



Fig. 7



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM A. HARWOOD, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN TOY HORNS.

Specification forming part of Letters Patent No. **144,026**, dated October 28, 1873; application filed September 6, 1873.

To all whom it may concern:

Be it known that I, WILLIAM A. HARWOOD, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Horns, of which the following is a specification:

The objects of my invention are to simplify and cheapen the construction of sheet-metal horns, particularly toy horns; also, to insure uniformity of tone, and produce any desired tone without the slow and tedious method of tuning each instrument by filing the reed by hand, which has up to this time been the practice.

In the first place, I cast the mouth-piece in two parts, in one of which I form a little slot by casting it on a thin plate, in which slot the reed is inserted at one end, and wedged in so as to be held, and the other piece, which is in the form of a conical tube, fits on over the one in which the reed is fitted, and is secured by wedging on it, and at the same time it binds the one to which the reed is attached, so as to permanently secure the latter by being driven onto the reed-piece, and without any other fastening, so that the parts are secured as fast as they can be assembled. In the second place, the part having the reed is formed with a conical tubular portion on the end to be attached to the body of the horn, and secured to it by forcing it on the conical end, so as to be held on it by friction. It may also be soldered, if desired.

Figure 1 is a side elevation of the complete horn. Fig. 2 is a sectional elevation of the outside portion of the mouth-piece. Fig. 3 is a side elevation of the inside portion to which the reed is attached. Fig. 4 is a section of Fig. 3 on the line *xx*. Figs. 5 and 6 are side elevations of the reed, and Fig. 7 is a sectional elevation of the reed-piece with the reed attached.

Similar letters of reference indicate corresponding parts.

The reed-piece consists of the tapered tubular portion A and the sectional tubular portion B. They are cast in one piece, and cast

on a little plate, which forms the narrow slot C, in which the reed D is secured. The part A is cored out at E in the proper size and taper to fit onto the small end of the body F. G represents the piece for inclosing the reed. It consists of a tapered tube, enlarged at H, and adapted to fit on the part A of the reed-piece, and be secured by being forced onto it.

The reeds D are cut or punched out of a sheet of tempered brass by a tool which makes them all of the same size. The mouth-pieces are also exactly uniform as to size, including the slot C for the reed, so that any reed will fit any mouth-piece, and any outside part of the mouth-piece will fit any inside part.

The reeds are bent a little, as shown in Fig. 6, after being cut out, then forced into the slots, and then the outside piece is forced on the inside piece, which completes the putting of the mouth-piece together. As the metal is soft, the outside piece compresses the slotted portion of the inside piece on the reed, and permanently secures it.

The reeds being uniform in size, and the slots in which they are attached being exactly the same depth, the tones will be the same, provided the reeds are bent the same distance from the end and to the same extent. By varying the extent of the bend and the distance from the end the tone will be varied to suit.

The completed mouth-piece is forced onto the tapered end of the horn-tube F, and is held fast thereby. It may also be soldered to the tube, if necessary.

It is intended to make all the mouth-pieces of one standard size for horns of different sizes, and adapt the horn-tubes F to them at the small end.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A mouth-piece for horns, composed of the inside piece A B and outside piece G H, constructed and combined substantially as specified.

2. The slit C, arranged in the part A of the reed-piece relatively to the part B, for securing the reed, and formed in the casting of the said piece, substantially as specified.

3. The reed secured in the slot of the reed-piece by compressing the metal on the reed by the part A forced on said reed-piece, substantially as specified.

4. The combination of the reed-piece A B,

outside piece G H, and the reed D, substantially as specified.

5. The mouth-piece cast with a socket, I, and attached to the horn-tube F by forcing the latter into said socket, substantially as specified.

Witnesses: WM. A. HARWOOD.

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