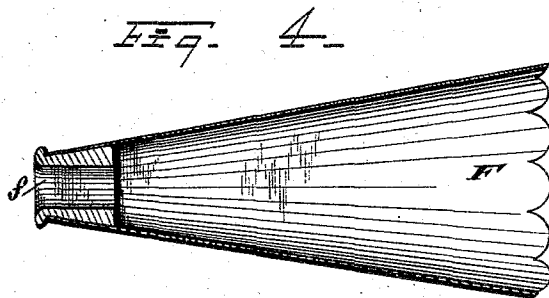
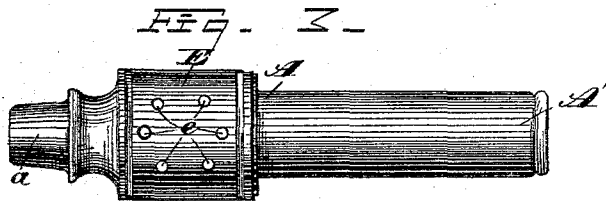
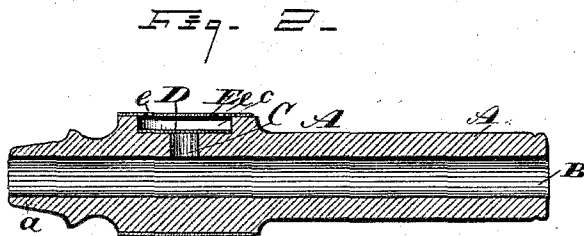
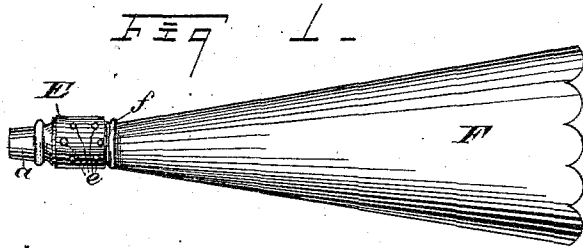


(No Model.)

W. H. FROST.
TOY MUSICAL INSTRUMENT.

No. 301,711.

Patented July 8, 1884.



WITNESSES

Wm. M. Monroe.
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UNITED STATES PATENT OFFICE.

WARREN HERBERT FROST, OF CLEVELAND, OHIO, ASSIGNOR TO GEORGE D. SMITH, OF ROCHESTER, NEW YORK.

TOY MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 301,711, dated July 8, 1884.

Application filed May 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, WARREN HERBERT FROST, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Toy Musical Instruments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in toy musical instruments, the object being to provide a removable flaring end piece.

With this object in view my invention consists in certain features of construction, and in combination of parts hereinafter described, and pointed out in the claim.

My invention is designed as an improvement on a device on which I have already obtained Letters Patent of the United States No. 270,543, dated January 9, 1883.

In the accompanying drawings, Figure 1 is a plan view of my instrument. Fig. 2 is an enlarged horizontal section of the instrument, with the flaring mouth-piece removed. Fig. 3 is an enlarged plan view of the instrument with the flaring end-piece removed. Fig. 4 is a longitudinal section of the flaring end piece and attached sleeve.

A represents the tube or body of the instrument, made preferably round in cross-section, and of any suitable material, but preferably of wood, and with a longitudinal central hole, B, extending from end to end, and a lateral hole, C, extending from the outside and joining the hole B. The part *a* is the mouth of the instrument. Around the hole C is an annular recess, *c*, at the bottom of which is secured the thin diaphragm or membrane D. A metal band, E, incloses this part of the instrument, and is provided with orifices *e*, located

over the recess *c*; but the band is left solid directly over the hole C. By this means the membrane is exposed to the air outside, but is protected by the solid part of the band, that is directly over the central portion of it. The diaphragm on the inside is exposed to the action of the sound-waves as they proceed from the mouth of the speaker through the tube, and the diaphragm is vibrated thereby and produces the musical tones of the instrument.

F is a removable end piece, of any suitable material—for instance, thin sheet metal, or strong, stiff, heavy paper—and is provided with the sleeve *f*, that fits over the rear portion of the part A. The rear portion, A', of the part A is preferably made slightly tapering, so that the sleeve *f*, when slid on the required distance, will fit tight enough to hold the part F without other fastening. The sleeve on the outside is conical-shaped, to fit the part F. This flaring end piece greatly increases and improves the tones of the instrument, and makes the instrument more attractive in appearance, and when made detachable the instrument may be sold with or without the attachment.

What I claim is—

The combination with a toy musical instrument, consisting, essentially, of a tube, mouth-piece, and diaphragm actuated by sound-waves of the voice, of a removable flaring end piece provided with a sleeve adapted to slip over the rear end of the said instrument, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 7th day of May, 1884.

WARREN HERBERT FROST.

Witnesses:

JNO. CROWELL,
CHAS. H. DORER.