

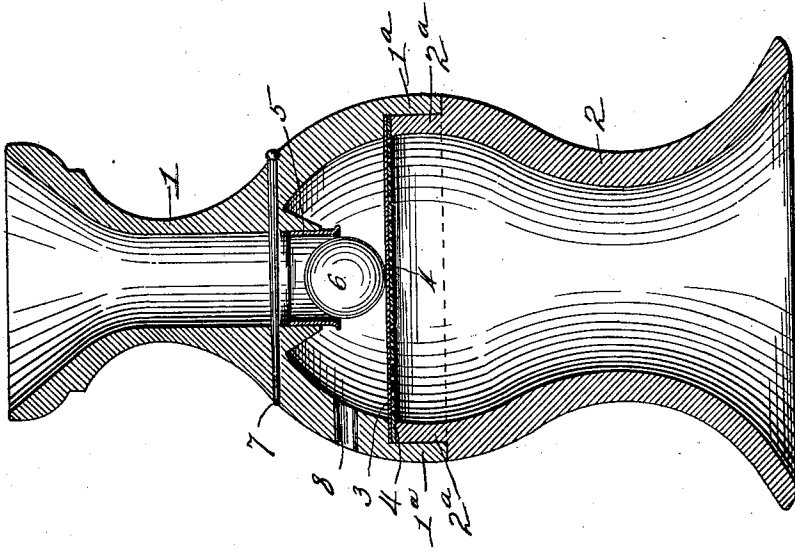
(No Model.)

J. A. IRVING.  
MUSICAL TOY.

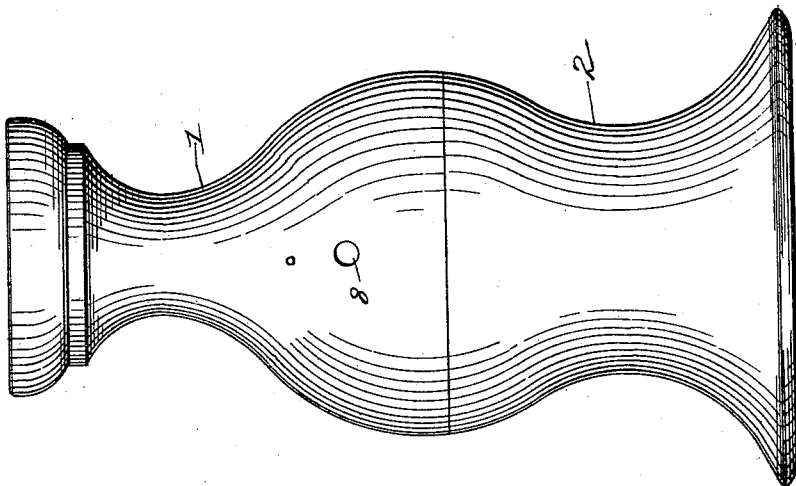
No. 591,476.

Patented Oct. 12, 1897.

*Fig. 2.*



*Fig. 1.*



Witnesses

*Grant Burroughs.*

*L. D. Hinrichs.*

Inventor

*James A. Irving,*  
By *Attorneys,*  
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# UNITED STATES PATENT OFFICE.

JAMES A. IRVING, OF COLUMBUS, OHIO, ASSIGNOR OF ONE-HALF TO  
MERLIN JENKINS.

## MUSICAL TOY.

SPECIFICATION forming part of Letters Patent No. 591,476, dated October 12, 1897.

Application filed November 3, 1896. Serial No. 610,983. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. IRVING, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Musical Toys; 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 appertains to make and use the same.

My invention belongs more generally to the class of wind instruments; and its object is to provide a musical toy of simple and economical construction, which may be used by any one capable of uttering sounds.

The invention embodies a horn-like structure, substantially as hereinafter set forth, in which are arranged two or more diaphragms of peculiar construction, the sound emitted into the instrument being peculiarly and interestingly modified by the diaphragms and other parts.

The invention also embraces other details of construction, all of which are hereinafter particularly set forth and claimed.

In the annexed drawings, Figure 1 is an exterior elevation, and Fig. 2 is a longitudinal sectional view.

The body of the horn is made of two pieces of wood turned to substantially the form shown, the part 1 having its lower edge interiorly rabbeted, as shown at 1<sup>a</sup>, and part 2 having its upper edge exteriorly rabbeted, as shown at 2<sup>a</sup>, so that the two parts may be fitted together to form the complete horn. Between the upper edge of the part 2 and the interior shoulder of the rabbet on the part 1 are secured diaphragms 3 and 4, the diaphragm 3 being preferably of thin stiff, but elastic, material—for example, celluloid, mica, or gutta-percha—the diaphragm 4 being of rigid foraminate metal.

Within the bore of the part 1 of the horn is fitted a metallic thimble 5, and lodged freely movable within this and resting when the large end is held downward upon the up-

per diaphragm is a small spherical body, preferably a common "marble" 6, so called.

To secure the marble against escape, a pin 7 is driven diametrically through the bore of the horn above the same.

A small vent 8 for the breath is made in the side of the part 1 above the diaphragm.

The instrument is operated by placing the lips within the upper end of the horn and singing or otherwise emitting a tone into the instrument. This tone causes the upper diaphragm to vibrate against the lower diaphragm, thus modifying the sound originally produced by the voice. The spherical body further modifies the sound by its vibrations upon the diaphragms and against the thimble.

The tones produced with the aid of the instrument are peculiar and interesting and the pitch thereof may be varied *ad libitum*. The quality of the tones may also be indefinitely varied by varying the quality of the tones emitted against the diaphragm.

Any one capable of singing or humming an air may reproduce the same, imparting to the qualities obtainable in the instrument.

What I claim, and desire to secure by Letters Patent, is—

A musical toy consisting of a horn-like body, a rigid foraminate diaphragm 4 extending across its bore, a vibratory diaphragm 3 also extending across the bore and arranged in close proximity to diaphragm 4 so as to vibrate against the same, a loose body arranged between the mouthpiece and the diaphragms and adapted to vibrate against said diaphragms, and a vent 8 in the side of the horn at a point between the mouthpiece and diaphragms, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES A. IRVING.

Witnesses:

GEORGE M. FINCKEL,  
JOSEPH B. ZIMMER.