

No. 655,109.

Patented July 31, 1900.

R. PITT.
TOY MUSICAL INSTRUMENT.

(Application filed Apr. 21, 1900.)

(No Model.)

Fig. 1.

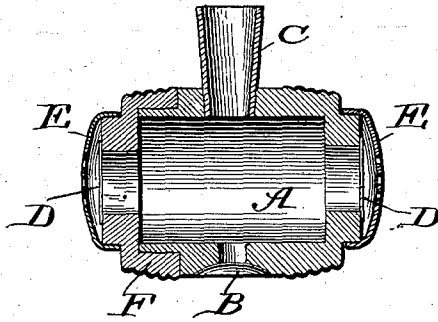


Fig. 2.

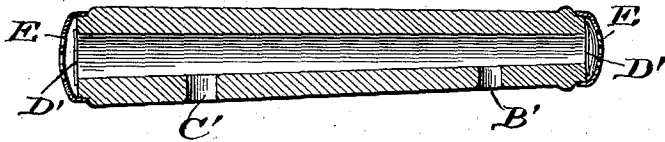
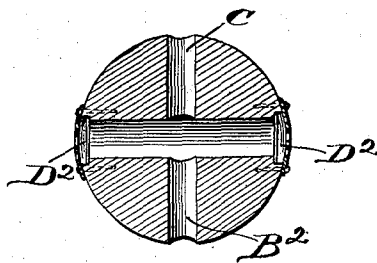


Fig. 3.



WITNESSES:

Jos. A. Ryan
Edw. W. Byrri.

INVENTOR

Robert Pitt.

BY *Munn & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

ROBERT PITT, OF ST. LEWIS, NORTH CAROLINA.

TOY MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 655,109, dated July 31, 1900.

Application filed April 21, 1900. Serial No. 13,743. (No model.)

To all whom it may concern:

Be it known that I, ROBERT PITT, of St. Lewis, in the county of Edgecombe and State of North Carolina, have invented a new and useful Improvement in Toy Musical Instruments, of which the following is a specification.

My invention relates to that class of toy musical instruments in which the tones are produced not by a blast of air simply, but by the principle of vocal vibrations as strengthened and rendered more resonant by a vibrating diaphragm. A familiar illustration is found in the use of a piece of paper on a comb. Instruments operating on this general plan have heretofore been devised in which a tube was provided with a diaphragm of thin flexible, but inelastic, material arranged either transversely or along the sides, so as to increase the vocal vibrations when the tones were sung with a blowing action through the same.

My invention consists in the improved construction and arrangement of parts for making a musical toy on this principle, whereby greater volume of sound and smoother tone are obtained, as hereinafter fully described.

Figure 1 is a longitudinal section of the device, and Figs. 2 and 3 are similar views showing modifications.

A is a short wooden tube made in the form of a small barrel or keg open at both ends and having a diaphragm of paper D or other flexible inelastic material stretched over each of the heads of the barrel and secured thereto by pasting or otherwise. Over each of these paper heads, on the outside of the keg, there is detachably secured in any suitable manner a sheet-metal plate E, both of which are perforated with holes to let the sound through and which are flanged so as to fit in a circular groove around the heads of the keg. These plates protect the paper heads D D from accidental damage. In one side of the barrel or keg there is a hole containing a removable mouthpiece C, and in the other side of the barrel there is another hole B to permit the blast of air which passes in along with the vocal vibrations to pass out without unduly inflating and destroying the sensitiveness of the heads D to vibration. For convenience in boring it out the barrel is made in two sections, the short removable end F being attached to the other section by being

simply tightly fitted over the reduced end of the other section or by being screw-threaded therein; as may be desired.

In using the device the mouth is applied to the tube C, and the tones are produced by a half-singing and half-blowing action. The forcible air-currents pass directly out through the hole B, while the vibrations take effect symmetrically on both the heads D D instead of on one head, as heretofore. The two heads not only greatly amplify the effect, but they by an exactly-opposite position and a combined and symmetrical action produce louder and smoother tones. That this may be better understood I would state that my invention comprehends something more than the mere duplication of a single diaphragm as heretofore used, as there is a coactive relation between the two diaphragms and the two holes between the two diaphragms. It is well known that a slack and inelastic diaphragm is very uncertain and irregular in its vibrations, and this irregularity of a single diaphragm makes the tone harsh and unmusical. By the symmetrical action of two diaphragms arranged as shown in my invention one diaphragm supplements or smooths over the breaks or harshness of the other, so as to not only get a louder tone, but a much more smooth and musical one, on the same principle that a three-stringed piano will give a more perfect tone than a one-stringed piano.

I do not confine myself to the shape of a barrel, as shown in Fig. 1, but may make it in any other shape. Thus, for instance, it may assume the shape of a cannon, as in Fig. 2, in which there are the two diaphragm-heads D' D' at the opposite ends and the two air-holes C' B' between them, to either of which holes the mouth may be applied, or, as in Fig. 3, it may be constructed as a ball, in which a central channel has two diaphragm-heads D² D², one at each end, with two holes B² C² opening into the same between the heads.

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

1. A toy musical instrument consisting of a tubular body portion having oppositely-facing diaphragm-heads of flexible inelastic

material arranged across the opposite end of its bore, and two lateral holes opening into said tube at points between the two heads substantially as described.

5 2. A toy musical instrument consisting of a tubular body portion having oppositely-facing diaphragm-heads of flexible inelastic material arranged across the opposite ends
10 into the tube between the heads, and detachable perforated caps arranged upon the ends of the tube outside of the flexible heads substantially as and for the purpose described.

15 3. A toy musical instrument consisting of a tubular body portion made in two sections united by a separable joint, each section having a flexible inelastic head and a protecting-cap, the said body portion also having two

lateral holes opening into the same between the heads substantially as and for the purpose described. 20

4. A toy musical instrument consisting of a tubular body portion having at each end a flexible inelastic head and a detachable cap covering the same and two holes opening into
25 the tube between the heads, one of said holes having a tubular mouthpiece inserted in the same substantially as described.

In testimony whereof I have signed my name to this specification in the presence of
30 two subscribing witnesses.

ROBERT PITT.

Witnesses:

W. M. MOORE,
J. E. COBB.