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MUSICAL TOY

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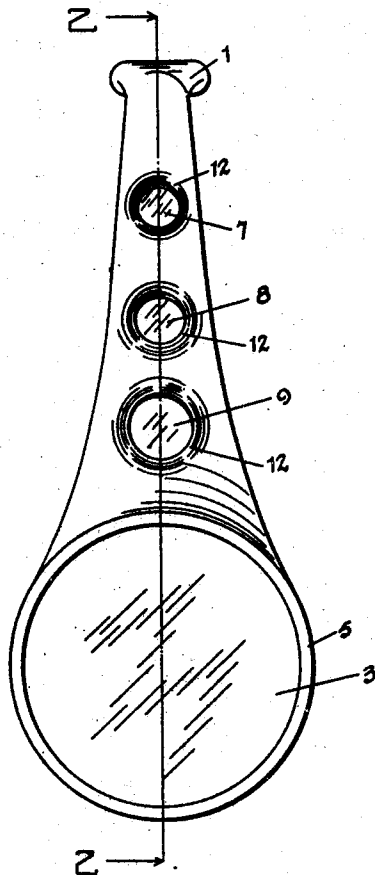


FIG 1

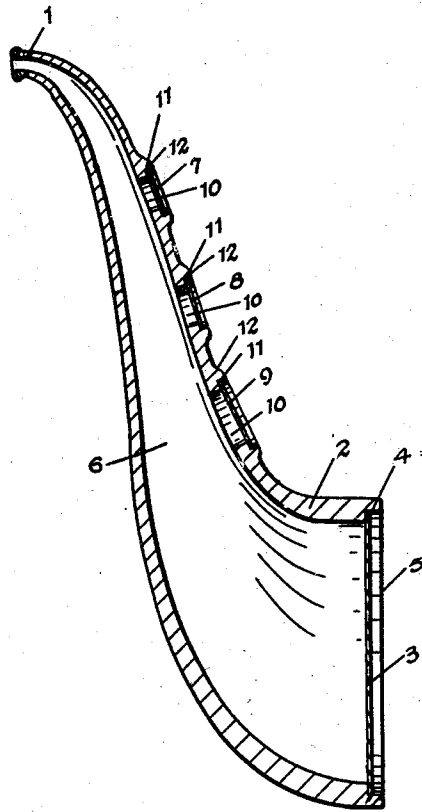


FIG 2

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MUSICAL TOY

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My invention has for its object to provide a novel musical toy of the "kazoo" type which is so constructed that variations of sounds may be produced by the production of various combinations of higher notes superimposed on a materially lower note which may be considered as the "fundamental" tone of the toy. Each of the sounds or "notes" producible by the instrument are vocal sounds of the user modified by limitations set up in one or more diaphragms, more or less tightly, stretched to close or cover openings of a chamber into which the vocal sounds are directed.

The toy may be formed of any suitable material, such as celluloid, phenol resin compound, or the like, or of candy or gum or suitable confection. Preferably, the body of the toy is formed of a moldable material whereby the toys may be readily cast or formed to shape. Thus the toys may be formed of hard candy which makes them particularly desirable for children.

The invention may be contained in toys that vary in their details of construction and, to illustrate a practical application of the invention, I have selected a toy as an example of the various forms of toys that contain the invention. The toy selected is shown in the accompanying drawings and is described hereinafter.

Fig. 1 is a front view of the toy. Fig. 2 is a view of a section taken on the plane of the line 2-2 indicated in Fig. 1.

The toy is, preferably, formed horn shape. It has a mouth piece 1. The body of the toy is curved to provide for dependency of the toy from the mouth of the user. The lower end of the toy is curved from the body of the toy in a direction away from the mouth piece, as at 2. The toy is formed to have an increasing cross sectional area progressively from the mouth piece to the end 2, to produce a volume or air column of progressively increasing area in which the vibrations are established by the vocal sounds produced by the user of the toy. The lower end of the toy is covered with a diaphragm 3 formed of thin paper which is stretched across the lower end to completely close the chamber 6,

formed within the wall of the toy. Preferably, the lower end edge portion of the toy is stepped as at 4, and the diaphragm 3 is located across the stepped portion so as to leave the rim 5 around the lower end of the toy to protect the edge of the diaphragm 3. By reason of the progressively increasing cross sectional area from the mouth piece to the lower end of the toy, the vibrations set up in the column of air, formed within the toy, distributes itself over the area of the diaphragm 3 and produces an increased vibratory pressure on the diaphragm 3, which magnifies the "kazoo" effect of the instrument. Furthermore, the diaphragm 3, being relatively large in area, the effect on the diaphragm is to emphasize or to make more apparent the heavier notes since it is so constructed as to more readily respond to, or so as to be in sympathy or harmony with, the heavier notes. Hence, the large diaphragm corresponds to what might be termed the "fundamental" or the "lower notes" producible by the instrument.

In order to produce variations in the sound of the instrument, I have provided a plurality of diaphragms 7, 8, and 9, that are distributed along the body of the toy between the mouth piece 1 and the lower end 2 which are also stretched across openings 10 that are formed in the front wall of the toy. The openings and the diaphragms have increasing diameters, from those nearer to the mouth piece to those nearer the lower end of the toy. The diaphragms 7, 8, and 9, are also formed of paper, preferably thin, well calendared, paper. The diameters of the diaphragms 7, 8, and 9, however, are very much smaller than that of the diaphragm 3. The edge portions of the openings 10 are also, preferably, formed stepped shaped as at 11 and the diaphragms are set in the steps to leave the protruding rims 12, which not only protect the edges of the diaphragms 7, 8, and 9, as the diaphragm 3 is protected by the rim 5, but also provide a rest, in each case, for the finger of the user of the toy. The fingers may be placed on the rims 12 and in position so that by an increased pressure, or by an inward rolling movement, the diaphragms 7,

8, and 9, may be lightly touched as may be desired. Inasmuch as the diaphragms 7, 8, and 9 are very much smaller than the diaphragm 3, they make more prominent the sharper sounds produced by the voice of the user, and these sharper sounds vary slightly one from the other because of the difference in the diameters of the diaphragms 7, 8, and 9, but they particularly differ from the sound effects producible by the diaphragm 3. The smaller diaphragms, or any number thereof, may be allowed to operate in conjunction with the main or larger diaphragm 3 of the toy, or their respective sound producing effects may be eliminated by tilting the fingers of the user over the rims and against the diaphragms to prevent them from vibrating or, by accurate manipulation, still sharper sounds may be produced by light touching of the diaphragms which increases the tension and limits the movement of the diaphragms and produces further modifications of the sound.

Thus, by my invention, I have provided an instrument whereby children may be amused by the operation of the fingers to produce variations in sound while performing the semblance of playing on the instrument which greatly delights and is highly appreciated by children.

I claim:

1. In a musical toy, the body of the toy having a chamber formed therein, a mouth piece communicating with the interior of the chamber, a diaphragm extending across the chamber for completely closing the chamber, the wall of the chamber and the body of the toy having a plurality of openings of different diameters and diaphragms extending across the said openings for completely closing the said openings, the edge portions of the last named openings having protruding rims.

2. In a musical toy, the body of the toy formed to have a flaring horn shaped chamber and having curved end portions, one end portion forming the mouth piece, the other end portion extending away from the body of the toy in a direction opposite to that in which the mouth piece extends, and having a diaphragm covering the said last named end portion, the said chamber gradually flaring from the end forming the mouth-piece to the diaphragm.

3. In a musical toy, the body of the toy formed to have a flaring horn shaped chamber, one end portion of the body forming the mouth piece, the other end portion having a diaphragm covering the said end portion, the body of the toy having an opening located intermediate the diaphragm and the mouth piece and a second diaphragm covering the said opening, the diameter of the said second diaphragm being materially smaller than the diameter of the first named

diaphragm, the said chamber gradually flaring from the end forming the mouth-piece to the first named diaphragm.

4. In a musical toy, the body of the toy formed flaring horn shaped and having curved end portions, one end portion forming the mouth piece, the other end portion extending away from the body of the toy in a direction opposite to that in which the mouth piece extends and having a diaphragm covering the said end portion, the body of the toy having a plurality of openings located intermediate the mouth piece and the said diaphragm and a plurality of diaphragms of different diameters and materially less in diameter than the first named diaphragm covering the said openings.

5. In a musical toy, the body of the toy formed flaring horn shaped and having curved end portions, one end portion forming the mouth piece, the other end portion extending away from the body of the toy in a direction opposite to that in which the mouth piece extends and having a diaphragm covering the said end portion, the body of the toy having a plurality of openings located intermediate the mouth piece and the said diaphragm and a plurality of diaphragms of different diameters and materially less in diameter than the first named diaphragm covering the said openings, the body of the toy having protruding rims surrounding the said openings for guiding the fingers of the user of the toy in controlling the vibrations of the second named diaphragms.

In witness whereof I have hereunto signed my name to this specification.

HUBERT A. MYERS.