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J. A. FRISK

2,052,926

WHISTLE

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Fig. 1.

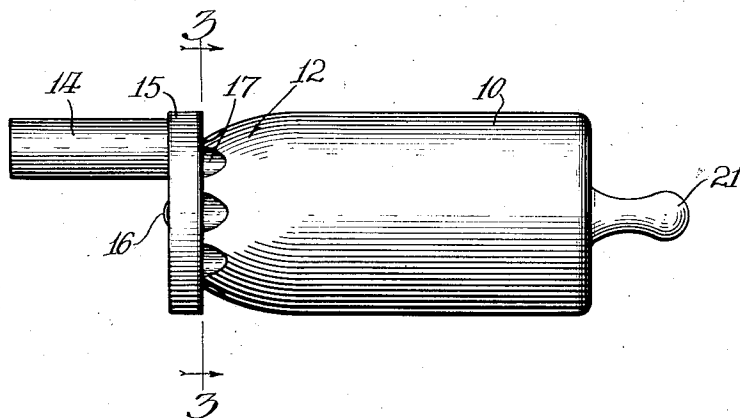


Fig. 2.

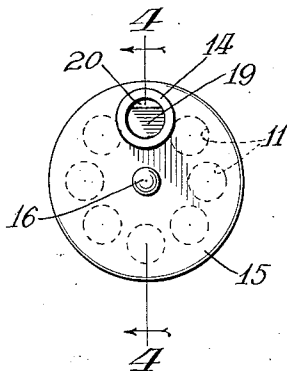


Fig. 3.

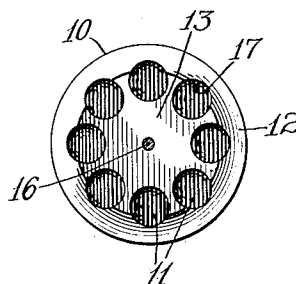
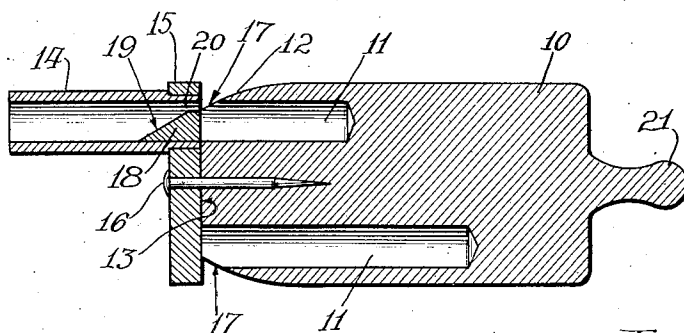


Fig. 4.



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WHISTLE

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7 Claims. (Cl. 84-330)

This invention relates to improvements in whistles, adapted to give two or more tones of different pitch, and one of the objects of the invention is to provide an improved device of this character adapted to produce tunes of various kinds by the skillful manipulation of the parts of the whistle, one with respect to the other.

A further object is to provide an improved, simple and efficient device of this character, which will be compact in construction and effective and efficient in operation.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in substantially the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawing illustrating this invention, and in which

Figure 1 is a side elevation of a whistle of this character constructed in accordance with the principles of this invention.

Figure 2 is a left hand end elevation of Figure 1.

Figure 3 is a detailed sectional view taken on line 3-3, Figure 1.

Figure 4 is a vertical, longitudinal, sectional view of Figure 1.

Referring more particularly to the drawing, the numeral 10 designates the body portion of the whistle which is preferably cylindrical in cross section, and may be formed of any suitable material, preferably wood.

The body is preferably solid and is of a length substantially greater than the cross sectional diameter, and is provided in one end thereof with a plurality of cavities or recesses 11, opening through the end, and these cavities are arranged to encompass the longitudinal axis of the body portion and are of different depths.

Each of the cavities is of a substantial length and the outer periphery of the end of the body through which the cavities extend, is preferably tapered or beveled as at 12, the end terminating in a flat surface 13 of substantial diameter, and the beveled or tapered portion of the end of the body intersects each of the cavities at the ends of the latter to produce a sharp edge for the air which is blown against such edge, and also to provide an opening for the escape of the air which is blown into the respective cavities, to produce a clear but musical sound of different pitch, which varies according to the depth of the cavities in register with the mouth piece.

The numeral 14 designates a mouth piece which is tubular and is connected to a rotatable disc like member 15. The end of the mouth piece extends through the member 15 and is arranged to one side of the axis of the member 15.

The member 15 is preferably comparatively thin and is of a diameter substantially larger than the flat end of the body 10 and rests thereagainst, but is preferably of substantially the same diameter as the remaining portion of the body 10.

The member 15 is rotatably connected to the body in any suitable manner, preferably by means of a pin or fastening device 16 which passes through the member 15 and into the body 10, so that the body 10 and the member 15 will be freely rotatable one with respect to the other.

The mouth piece 14 is so arranged that by a relative rotation of the body 10 and the member 15, one with relation to the other, the cavities will be successively brought into and out of register with the open end of the mouth piece 14, so that air forced through the mouth piece 14 will enter the respective cavities 11 striking the edges of the cavity and will then escape through the opening formed by the beveled or tapered end of the body 10, which openings are shown at 17.

Within the mouth piece 14 is arranged a plug 18 having a beveled or tapered side 19, and the plug is of such a diameter that an opening 20 will be provided for the escape of air into the respective cavities that may be in register with the mouth piece 14.

The tapered or beveled portion of the plug 18 guides and directs the air currents so as to cause them to strike the sharp edge of the cavities that are formed by the beveled or tapered portion 12 of the body 10, resulting in a musical sound resembling that of a pipe organ, as distinguished from the sharp, shrill sound of a whistle.

The mouth piece 14 is of any desired length and of a cross sectional diameter preferably substantially equal to the cross sectional diameter of the cavities 11, and the body 10 is preferably provided with an operating handle 21, formed in any suitable manner, but preferably by shaping a portion of the body to form the same. If desired, however, the handle may be formed separately and then attached to the body.

In use, the mouth piece 14 is gripped between the teeth or held between the lips and the breath is blown through the mouth piece, causing the air currents to be discharged against the edges of the cavities 11.

Any air entering the cavities will escape through

the openings 17. At the same time the body 10 is rotated by the handle 21 about an axis formed by the pin or fastening device 16, with the result that the cavities 11 will be successively brought into register with the mouth piece 14, the body 10 being rotated in either one direction or oscillated about the pivot formed by the fastening device 16.

This will give different tone pitches in the musical scale of one or more octaves, according to the number of and depths of the cavities.

Furthermore, this device may be employed as a health instrument, by reason of the deep breathing required to play a tune thereon, as the tune may be controlled by the control of breathing, and the tune produced will be similar to that produced by a pipe organ.

While the preferred form of the invention has been herein shown and described, it is to be understood that various changes may be made in the details of construction and in the combination and arrangement of the several parts, within the scope of the claims, without departing from the spirit of this invention.

What is claimed as new is:—

1. A device of the character described embodying a body portion provided with a plurality of cavities of different depths opening through one end thereof, a tubular mouth piece, and means connecting the mouth piece to that end of the body through which said cavities open, whereby said body may be rotated with respect to the mouth piece to cause the said cavities to be successively brought into register with the mouth piece when the latter is held in the mouth and against rotation with the said body, the outer periphery of the end of the body in proximity to the said mouth piece being beveled to intersect said cavities to form sharp edges to be contacted by air currents discharged through the mouth piece.

2. A device of the character described embodying a body portion of a length substantially greater than its cross sectional diameter and provided with cavities arranged concentric with its axis and opening through one end thereof, the outer periphery of the said end of the body being beveled and intersecting the cavities to form sharp edges, a disc rotatably connected to and abutting the last said end of the body and of a diameter substantially equal to the diameter of the body, and a tubular mouth piece carried by the disc, one end of the mouth piece opening through the disc, the other end of the mouth piece extending laterally from the disc for a substantial distance, and being substantially parallel with the longitudinal axis of the body, the said cavities being successively brought into register with the said mouth piece when the said disc is held against rotation by the mouth piece and the said body rotated with respect to the disc.

3. A device of the character described embodying a body portion provided with a plurality of cavities of different depths opening through one end thereof, a tubular mouth piece, means connecting the mouth piece to the end of the body through which said cavities open, whereby said body may be rotated with respect to the mouth piece to cause the said cavities to be successively brought into register with the mouth piece when the latter is held in the mouth and against rotation with the said body, and a beveled plug in that end of the mouth piece which is adjacent the entrance to said cavities, to provide a restricted outlet for the mouth piece for directing air currents

into the cavities in lines substantially parallel with the longitudinal axes of the cavities.

4. A device of the character described, comprising a solid body of a length substantially greater than its cross sectional diameter and having a plurality of cavities of different depths opening through one end and arranged concentric to the axis of said body, the outer periphery of the last said end of the body being tapered to intersect the end of the cavities, a disc abutting and rotatably secured to the last said end of the body, means securing the disc and body together for relative rotation one with relation to the other, and a tubular mouth piece secured to and opening through said disc, and to one side of the center of the disc, whereby upon a relative rotation of the disc and body one with relation to the other, the mouth piece will form a continuous passage with any one of said cavities and the said disc will form a closure for the end of the others of said cavities.

5. A device of the character described, comprising a solid body of a length substantially greater than its cross sectional diameter and having a plurality of cavities of different depths opening through one end and arranged concentric to the axis of said body, the outer periphery of the last said end of the body being tapered to intersect the end of the cavities, a disc abutting and rotatably secured to the last said end of the body, means for securing the said disc and body together for relative rotation one with relation to the other, a tubular mouth piece secured to and opening through said disc and to one side of the center of the disc, whereby upon a relative rotation of the disc and body one with relation to the other, the mouth piece will form a continuous passage with any one of said cavities, and a plug in that end of the mouth piece which is adjacent the end of said body, to provide a restricted outlet to said mouth piece, said outlet being positioned to direct air currents against the edge of the cavity and adjacent thereto.

6. A device of the character described, comprising a solid body of a length substantially greater than its cross sectional diameter and having a plurality of cavities of different depths opening through one end and arranged concentric to the axis of said body, the outer periphery of the last said end of the body being tapered to intersect the end of the cavities, a disc abutting and rotatably secured to the last said end of the body, means for securing the disc and said body together for relative rotation one with relation to the other, a tubular mouth piece secured to and opening through said disc and to one side of the center of the disc, whereby upon a relative rotation of the disc and body one with relation to the other, the mouth piece will form a continuous passage with any one of said cavities, the outlet of said mouth piece being positioned to direct air currents against the edge of the cavity that is formed by said tapered portion of the body, and a handle at the other end of said body by means of which the latter may be rotated.

7. A device of the character described, comprising a solid body of a length substantially greater than its cross sectional diameter and having a plurality of cavities of different depths opening through one end and arranged concentric to the axis of said body, the outer periphery of the last said end of the body being tapered to intersect the end of the cavities to form a substantial lateral continuation of the open ends of the cavities through the adjacent portion of the

cavity wall, a disc abutting and rotatably secured to the last said end of the body to substantially close the cavities except the said laterally open portion, means for securing the disc and body together for relative rotation one with relation to the other, a tubular mouth piece secured to and opening through said disc and to one side of the center of the disc, whereby upon a relative rota-

tion of the disc and body one with relation to the other, the mouth piece will form a continuous passage with any one of said cavities, and a plug in that end of the mouth piece which is adjacent the end of said body to provide a restricted outlet to said mouth piece.

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