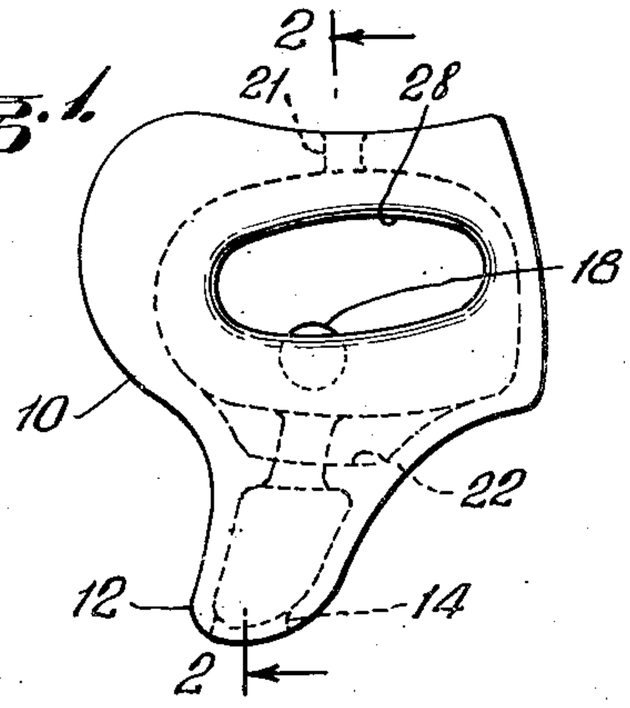
Oct. 25, 1949. B. G. LADD 2,485,749

MUSICAL WIND INSTRUMENT

Filed Dec. 13, 1945

Fig. 1.



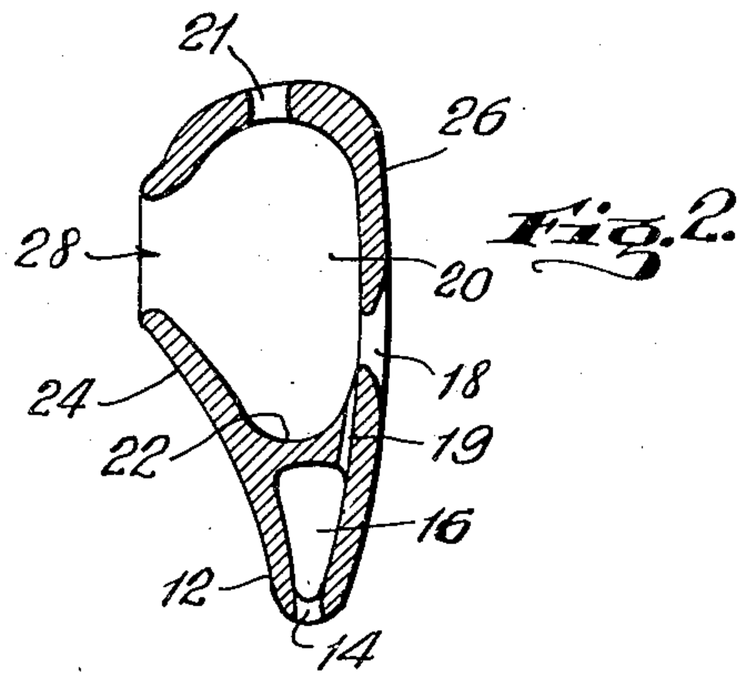


Fig. 2.

Fig. 3.

Fig. 4.

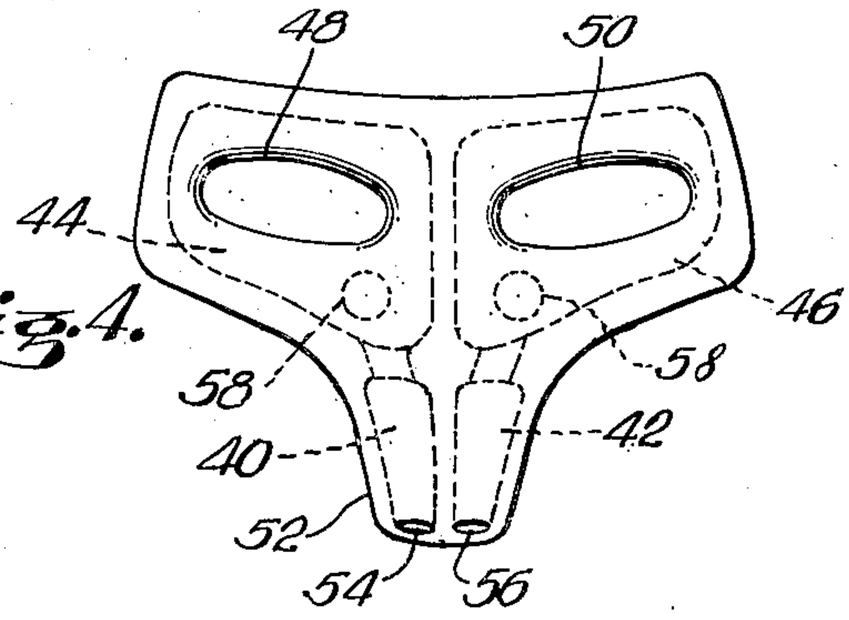


Fig. 5.

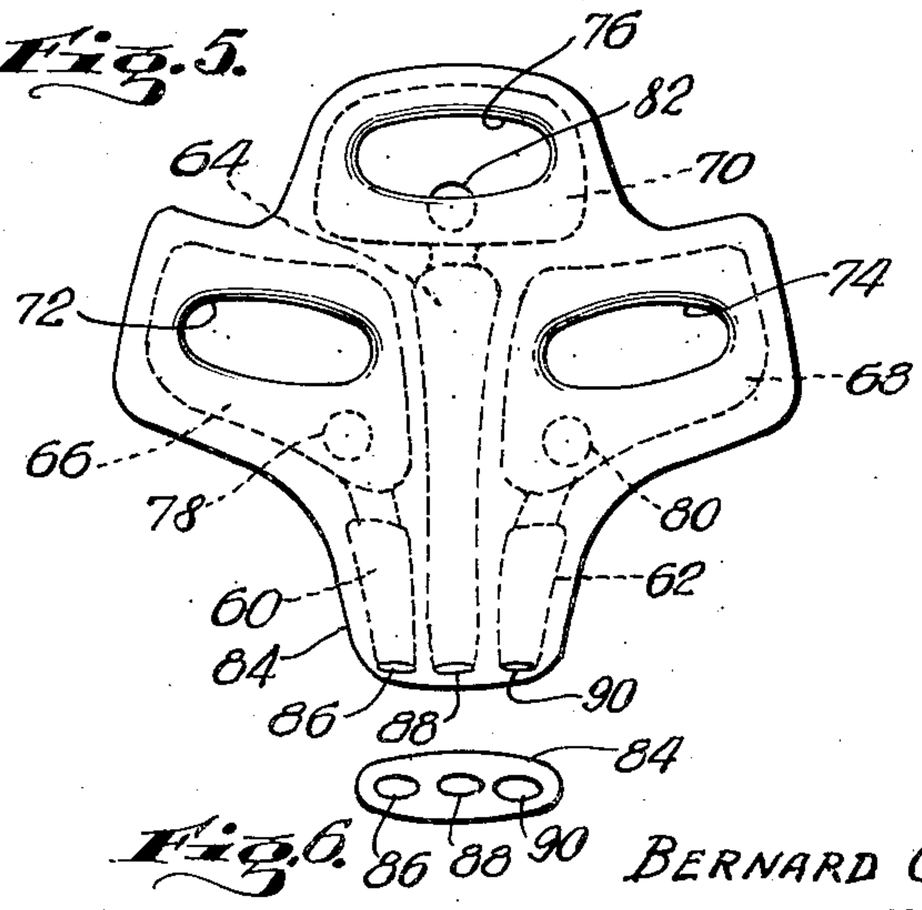


Fig. 6.

INVENTOR
BERNARD G. LADD

BY
Joe C. Montgomery
ATTORNEY

Patented Oct. 25, 1949

2,485,749

UNITED STATES PATENT OFFICE

2,485,749

MUSICAL WIND INSTRUMENT

Bernard G. Ladd, Manhasset, N. Y.

Application December 13, 1945, Serial No. 634,664

3 Claims. (Cl. 84—384)

1

This invention relates to improvements in wind instruments and is particularly directed to an improved whistle on which a tune may be played.

The outward appearance of the whistle of the present invention somewhat resembles an ocarina but its construction and the art of playing are quite different although both instruments may be characterized as wind instruments.

One of the objects of the present invention resides in the provision of a whistle on which by simple manipulation of the player's finger a tune may be played.

Another object of the present invention resides in the provision of an instrument wherein the usual series of finger openings are eliminated.

Another object of the invention resides in the provision of an instrument of the character indicated which is of unitary and rugged construction, which can be manufactured inexpensively and which is durable in use.

Further objects of the present invention will be manifest from the following description and the accompanying drawing.

In the drawing:

Fig. 1 is a perspective view of one embodiment of my invention;

Fig. 2 is a sectional view on line 2—2 of Fig. 1;

Fig. 3 is a front view of the instrument of Fig. 1; and

Figs. 4 and 5 are plan views of modified forms of my improved instrument.

Fig. 6 is a front view of the instrument of Fig. 5.

Referring to the drawing in detail and first of all to Fig. 1 wherein the embodiment illustrated is a single unit instrument 10 which may be made of clay, ceramic, plastic, wood or any other suitable material. This instrument is provided with a mouthpiece 12 having an inlet opening 14 which is preferably elongated in cross section as more clearly shown in Fig. 3. The inlet opening communicates with a whistle chamber or passageway 16 which is provided with a port 19 terminating adjacent an outlet or whistling opening 18 in a tone or resonant chamber 20. The chamber 16 may, if desired, be in the form of a slot extending from the opening 14 to the outlet 18. Air blown into the mouthpiece will enter the chamber and traverse the opening 18 thereby producing a musical or whistling sound.

The tone or resonant chamber 20 is provided adjacent the whistle chamber. The chambers 16 and 20 are separated by a partition 22. This partition extends from upper wall 24 to lower wall 26 and is positioned slightly forward of the outlet opening 18. As will be seen from Fig. 2, the

2

opening 18 is in the bottom wall of the tone chamber 20 and the whistle chamber 16 communicates with this opening by way of a port or kerf 19 formed in the lower portion of the partition 22.

The top wall of the tone chamber is provided with a tone displacement opening 28 which is in the form of an elongated transverse slot. This slot is adapted to receive one finger of the hand of the player which is moved along the slot during the playing of the instrument to produce the different notes of the musical score being played. The length of the slot is equivalent to one octave so that the entire scale may be played as the finger is moved from one end of the slot to the other either intermittently or continuously by reason of the escape of air from the tone chamber through the exposed portion of the slot. This slot may be equivalent to more than one octave if so desired.

If desired a hole 21 may be provided in one of the walls of the tone chamber whereby the pitch may be altered by the player covering this hole with his fingers. Instead of using the player's finger for this purpose an adjustable closure may be provided. While the hole 21 is shown in the rear wall, it is to be understood that it might well be placed in the bottom or side wall, if desired.

It will be seen that with the instrument described a player can play an entire scale in one octave and consequently a tune. It will also be seen that the notes of the scale can be played intermittently as in instruments with separate finger openings and in addition a continuous scale may be played. It will also be seen that the instrument can be played by a novice after a brief lesson, the only skill required being the simple manipulation of the player's finger to and fro along the slot while air is being blow into the mouthpiece.

In Fig. 4 I have shown a modified form of instrument. In this form dual whistle chambers 40 and 42, dual tone chambers 44 and 46 and dual tone displacement slots 48 and 50, whistling openings 58 and a single mouthpiece 52 with two inlet openings 54 and 56 are provided. This instrument is played in the same manner as the instrument of Fig. 1 except that one finger of each hand or two fingers of the same hand are placed on each slot.

In the form illustrated in Fig. 5 an instrument is shown provided with three whistle chambers 60, 62 and 64, tone chambers 66, 68 and 70, tone displacement slots 72, 74 and 76, whistling openings 78, 80 and 82, and a single mouthpiece 84 with three inlet openings 86, 88 and 90 each lead-

ing to its respective whistle chamber. This instrument is played in the same manner as the instrument of Fig. 4 except that three fingers are required for playing the same as will be obvious.

It has been demonstrated that any one can play the instrument of Fig. 1 after a simple lesson, and that after some little practice the instruments of Figs. 4 and 5 can readily be played.

While I have illustrated and described three embodiments of my invention it is to be understood that I do not wish to be limited to the precise construction and arrangement shown, as obviously various changes and modifications may be made therein without departing from the spirit and scope of my invention.

What I claim is:

1. A wind instrument comprising a single hollow molding of plastic material, a partition in said molding in the form of a thin wall integrally united with the inner walls of the molding for separating the same into a whistle chamber and a tone chamber, and a mouthpiece formed as an integral part of the molding provided with an air inlet opening communicating with the whistle chamber, said partition having an opening therein connecting the whistle chamber with the tone chamber, said tone chamber having an outlet opening provided in one of its walls adjacent to the opening in the partition, said tone chamber having a second opening in the form of an elongated finger-receiving tone displacement slot in another of its walls opposite the outlet opening whereby when a finger placed in and is moved longitudinally of said elongated slot produces the different musical notes of the score being played.

2. A wind instrument comprising a single hollow molding of plastic material, a partition in said molding in the form of a thin wall integrally united with the inner walls of the molding for separating the same into a whistle chamber and a tone chamber, and a mouthpiece formed as an integral part of the molding provided with an air inlet opening communicating with the whistle chamber, said partition having an opening therein connecting the whistle chamber with the tone chamber, said tone chamber having

three distinct openings in its walls, one an air outlet opening, adjacent to the opening in the partition, a second opening for pitch regulation controlled by the movement of a finger thereover and a third opening in the form of an elongated finger-receiving tone displacement slot placed opposite the air outlet opening whereby when a finger placed in and is moved longitudinally of said elongated slot produces the different musical notes of the score being played.

3. A wind instrument comprising a single hollow molded body of plastic material having a bottom wall and spaced substantially upright side and end walls forming an elongated tone chamber, the upper edges of said side and end walls defining a longitudinally extending opening for accommodating a finger of the player, said bottom wall having an air outlet therein, and a mouthpiece formed as an integral part of the body and extending substantially at right angles to the elongated tone chamber and having a slot therein providing an air inlet passage communicating with the said tone chamber and terminating adjacent said air outlet, whereby when air is blown into the slot in the mouthpiece and a finger of the player is placed in and moved longitudinally of said longitudinal opening different musical notes of the score being played will be produced.

BERNARD G. LADD

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
394,243	Briggs	Dec. 11, 1888
467,521	Pizzuti	Jan. 26, 1892
504,396	Maher	Sept. 5, 1893
632,184	Johnson	Aug. 29, 1899
641,025	Leech et al.	Jan. 9, 1900
992,487	Ellison	May 16, 1911
1,395,107	Hawk	Oct. 25, 1921
1,722,249	Lazare et al.	July 23, 1929
2,146,179	Fitchhorn	Feb. 7, 1939
2,214,314	Tillery	Sept. 10, 1940