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HARMONICA

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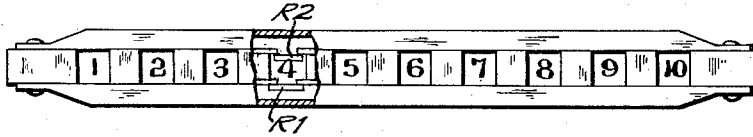


Fig. 1.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
BLOW	C	D	E	F	G	A	B	C	D	E	C DIATONIC SCALE
DRAW	C [#]	D [#]	E [#]	F [#]	G [#]	A [#]	B [#]	C [#]	D [#]	E [#]	C [#] DIATONIC SCALE

Fig. 2.

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HARMONICA

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2 Claims. (Cl. 84-377)

My invention relates to harmonicas or reed instruments actuated by blowing or drawing the breath thereon.

Heretofore, harmonicas have been used wherein the chromatic harmonica is made of two separate ten-hole harmonicas of twenty notes each, placed one directly over the other giving a total of forty notes. The lower instrument is tuned one-half step higher than the upper one. Thus, if the upper section is in the key of C, the lower one will be in the key of C#. Over these twenty openings is placed a sliding metal shuttle with perforations so made that, by a slight shift, either the upper or the lower row of ten-holes may be completely covered by the shuttle. When the shuttle is "out," that is, when there is no pressure on the shuttle knob, the upper ten-holes of the key of C harmonica having twenty reeds are open, and the lower ten-holes of the key of C# having twenty reeds are closed.

Similarly, when the shuttle knob is pressed in firmly, the shuttle slides a fraction of an inch to the left and the lower holes of the key of C# harmonica are exposed, while the openings of the key of C instrument are automatically covered.

Difficulty in learning to play such instrument as above described is a common experience. Furthermore, the chromatic scale can be played only when one blows and draws alternately, which requires considerable skill; otherwise weak notes are played.

It is an object of my invention to arrange all blow notes in consecutive holes in any key.

It is an object of my invention to make the diatonic notes of the scale as blow notes in a harmonica in any key.

Another object of my invention is to teach the reading of music by a simple musical instrument.

This invention enables the ready teaching of music in schools, homes, or clubs. Heretofore, difficulty was encountered when music was taught; the regular music notation was not used because of the blow and draw notes of the harmonica. With my invention regular music notes may be read and the harmonica taught by note reading rather than by the blow and draw method.

Other objects of my invention are to provide an improved device of the character described, that is easily and economically produced, which is sturdy in construction, which is highly efficient in operation, and by which any one can learn to play the harmonica well.

With the above and related objects in view,

my invention consists in the details of construction and combination of parts, as will be more fully understood from the following description, when read in conjunction with the accompanying drawing, in which:

Fig. 1 is a plan view of a harmonica having ten holes therein, wherein each hole contains a blow and a draw reed.

Fig. 2 is a chart indicating the blow and draw notes of each diatonic scale used.

Referring now in detail to the drawing, I show a harmonica, generally designated as A, having ten holes, numbered 1 to 10, inclusive. Within each hole are two reeds, one reed R1 being actuated upon blowing into the hole, and the other reed R2 being actuated upon drawing the breath in the same hole. The blow notes in each of the ten openings are arranged consecutively as one diatonic harmonica, as follows: C, D, E, F, G, A, B, C, D, E notes in holes 1 to 10, respectively.

By drawing or inhaling the breath in the holes 1 to 10, respectively, the reeds form a second diatonic harmonica producing the C# scale wherein the notes upon inhaling or drawing are as follows: C#, D#, E#, F#, G#, A#, B#, C#, D# and E# in holes 1 to 10 respectively.

The combination of these two diatonic scales produces the chromatic scale.

The arrangement of the scales is especially useful to harmonica players, teachers, musicians and music teachers. The harmonica scale permits the playing of any selection in the key in which it is written provided that it, the selection, comes within the musical range of the harmonica. This arrangement of the scale enables players to readily learn to play the harmonica and the musical tones emitted sound better and are easier to teach to both children and grown people.

The diatonic scale consists of the notes do, re, mi, fa, sol, la, ti, do whereas the chromatic scale gives the variations in sharps and flats between the diatonic scale notes.

The number of holes in the harmonica can be extended and need not be any particular number; however, I prefer to use ten holes for the average harmonica.

Although my invention has been described in considerable detail, such description is intended as illustrative rather than limiting, since the invention may be variously embodied, and the scope of the invention is to be determined as claimed.

I claim as my invention:

1. A harmonica consisting of an elongated

body portion having a plurality of aligned holes, a draw reed and blow reed in each hole, the said blow reeds being arranged in said aligned holes in a diatonic scale, and the said draw reeds being arranged in a second diatonic scale one-half tone higher than the respective blow reeds.

2. A harmonica comprising an elongated body portion having a plurality of aligned consecutive

holes, a draw reed and a blow reed in each hole, the consecutive blow reeds in each hole forming a diatonic scale such as C, D, E, F, G, A, B, C, D, E, and the consecutive draw reeds in each hole forming a second diatonic scale such as C $\sharp$, D $\sharp$, E $\sharp$, F $\sharp$, G $\sharp$, etc.

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