Feb. 13, 1940. A. E. FRIEND 2,190,633

CHROMATIC HARMONICA

Filed March 6, 1939

FIG. 1.

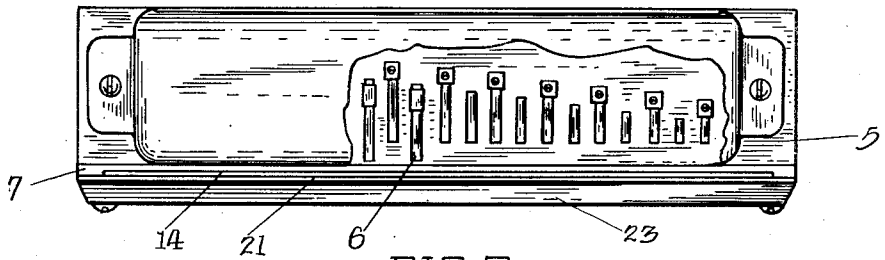


FIG. 2.

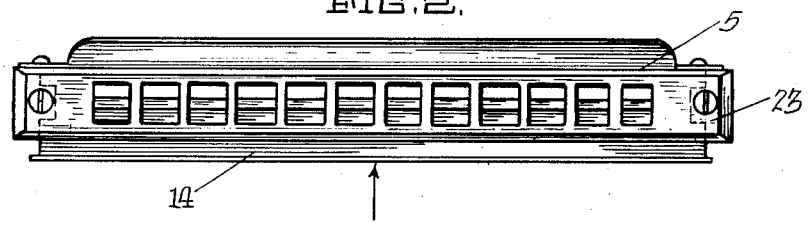


FIG. 3.

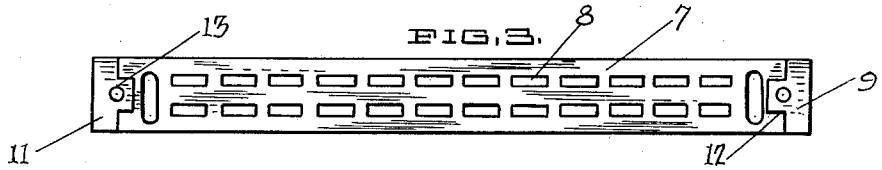


FIG. 4.

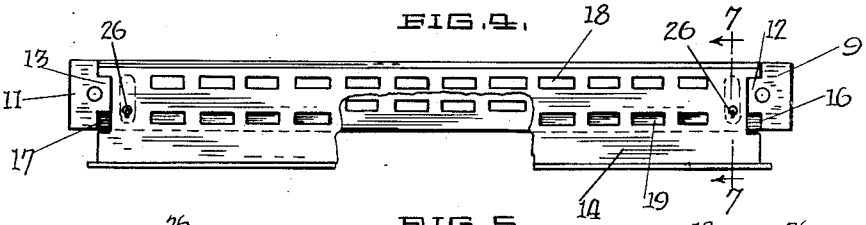


FIG. 5.

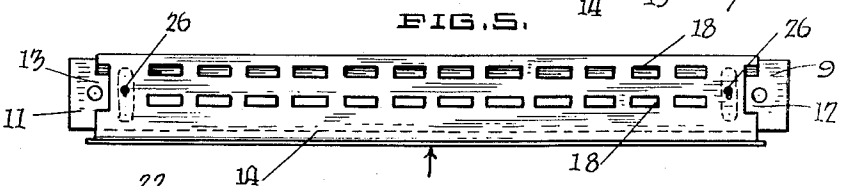
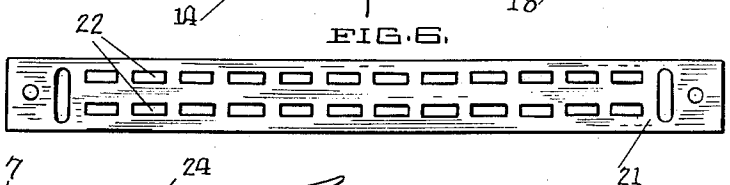


FIG. 6.



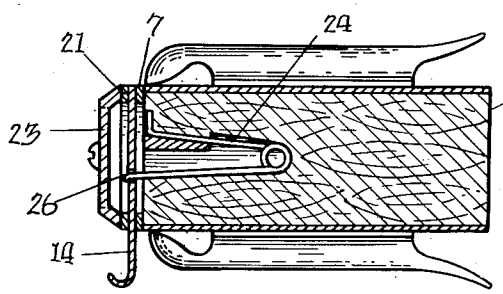


FIG. 7.

INVENTOR.
AUGUST E. FRIEND.

BY Victor J. Evans & Co.

ATTORNEYS.

Patented Feb. 13, 1940

2,190,633

UNITED STATES PATENT OFFICE

2,190,633

CHROMATIC HARMONICA

August E. Friend, Riverside, Calif.

Application March 6, 1939, Serial No. 260,134

2 Claims. (Cl. 84—377)

This invention relates to improvements in musical instruments and has particular reference to means for playing either sharps or flats on a harmonica without employing the hands in making the change.

A further object is to produce a device of this character which may be used in conjunction with any standard harmonica.

A further object is to produce a device which is economical to manufacture and easy to apply.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Fig. 1 is a top plan view of a harmonica having my invention applied thereto;

Fig. 2 is a front elevation of Fig. 1;

Fig. 3 is a front elevation of the guide plate;

Fig. 4 is a front elevation of the guide plate and the valve plate attached thereto and in natural playing position;

Fig. 5 is a view similar to Fig. 4, showing the valve plate placed into sharp playing position;

Fig. 6 is a front elevation of the keeper plate; and

Fig. 7 is an enlarged detailed cross sectional view of a harmonica, showing the arrangement of the plates thereon.

Many harmonica players employ a wire secured around the neck for holding the harmonica so that the hands are free to play another instrument. Therefore, if the user of the harmonica wishes to change from flat to sharps, he is unable to do so for the reason that the hands are employed. I have, therefore, devised a valve arrangement for a harmonica which will permit this change, whereby the player may play any type of music he desires.

In the accompanying drawing wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 5 designates a harmonica as a whole, which harmonica has a plurality of openings along one edge thereof, each of which openings leads to one of the reeds 6 so that when air is blown therethrough, the reed will vibrate. I, therefore, attach to the front of the harmonica a guide plate 7 which has openings 8 therein and of a number suitable to register with the openings in the harmonica leading to the reeds. This guide plate has projections 9 and 11, each of which has extending therefrom offset stops 12 and 13 respectively. At 14 I have shown a valve plate having cutaway portions 16 and 17, into which the offset stops extend when the valve plate is in its proper position upon the harmonica. This valve plate has openings 18 and 19 which are spaced apart a sufficient distance so that only one horizontal row registers with the openings in the harmonica when the plate is in the position of Fig. 4 or in the position of Fig. 5. In order to maintain this valve plate in proper alignment, I employ a keeper plate 21 having openings 22 therethrough; and by viewing Fig. 7 it will be noted that a mouthpiece is shown at 23. Spring elements 24 are positioned in the harmonica and have one end 26 engaging the valve plate 14 so as to normally maintain it in the position of Figs. 2 and 7.

The result of this construction is that when a harmonica is equipped with my device, the player may perform upon the harmonica while the same is secured about the neck, and by pressing the lower lip against the valve plate, the same may be readily shifted from normal to sharp position at will.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same and that various changes relative to the material, size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. In a harmonica of the type having a mouth piece and a guide plate, a valve plate slidable between the mouth piece and guide plate transverse the harmonica and having openings adapted to register with openings in the guide plate, an extension carried by the valve plate and extending beyond the mouth piece substantially the entire length thereof, and spring means for normally holding the valve plate in its extended outward position, whereby the extension of the valve plate may be engaged by the lips of the player for forcing the valve plate inwardly for changing the key of the harmonica.

2. In a harmonica of the type having a mouth piece and a guide plate, a valve plate slidable between the mouth piece and the guide plate transverse the harmonica and having openings adapted to register with openings in the guide plate, an extension carried by the valve plate and extending beyond the mouth piece substantially the entire length thereof and having a rolled outer edge, and spring means for normally holding the valve plate in its extended outward position, whereby the rolled outer edge of the extension of the valve plate may be engaged by the lips of the player for forcing the valve plate inwardly for changing the key of the harmonica.

AUGUST E. FRIEND.