

(No Model.)

M. MESSNER.
MOUTH HARMONICA.

No. 548,214.

Patented Oct. 22, 1895.

Fig: 1.

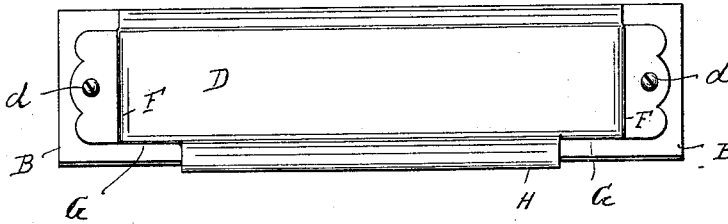


Fig: 2.

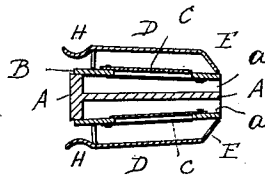
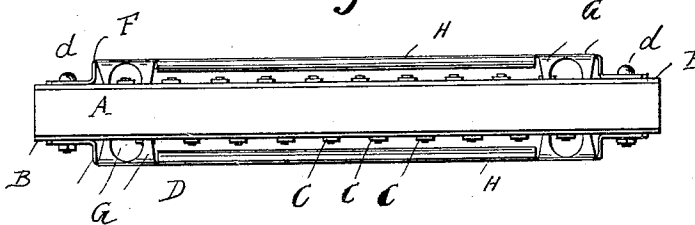


Fig: 3.

Witnesses
S. Petri-Palmes
Clemens F. Lorenz

Matthias Messner, Inventor
By his Attorney
Oscar F. Gunn

UNITED STATES PATENT OFFICE.

MATTHIAS MESSNER, OF TROSSINGEN, GERMANY.

MOUTH-HARMONICA.

SPECIFICATION forming part of Letters Patent No. 548,214, dated October 22, 1895.

Application filed August 24, 1895. Serial No. 560,354. (No model.)

To all whom it may concern:

Be it known that I, MATTHIAS MESSNER, a citizen of Germany, and a resident of Trossingen, Württemberg, Germany, have invented certain new and useful Improvements in Mouth-Harmonicas, of which the following is a specification.

This invention relates to improvements in mouth-harmonicas.

The object of my invention is to provide a new and improved mouth-harmonica with protecting-plates on the sides for protecting the reeds from injury, which protecting-plates are properly stiffened and braced and at the same time leave an open space along their bottom edges for the escape of the sound, so as to obtain the greatest volume of sound possible, and also to guide the same properly, all as will be more fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, forming a part of this specification, and in which like letters of reference indicate like parts in all the views, Figure 1 is a side view of my improved mouth-harmonica. Fig. 2 is a bottom longitudinal edge view of the same. Fig. 3 is a vertical transverse sectional view of the same.

The wooden body A is provided with the usual blow-holes *a*, and on each side of said body A a metal plate B is fastened, in slots of which the reeds C are secured in the usual and well-known manner.

On each plate B a protective metal plate D is held by means of screws *d*, passed through the ends of said plates D and through the wooden body A and metal reed-plates B.

The plates D must be located some distance from the reed-plates B, so as not to interfere with the vibration of the reed and also to give ample space for the vibrations of the air and for the escape of the sounds produced. At the same time they must have a certain stiffness, so as not to be apt to be pressed against the reeds and injure the latter, and said plates D also act as sounding-boards, and for that reason should be fastened to the body of the instrument at the ends of said plates only.

The plates D for this purpose are each provided along the upper edge with the up-

wardly-inclined flange E, the upper edge of which is close to the upper part of the side of the body.

Each plate D is provided at each end with a shoulder F, extending transversely to the length of the plate, and adjacent to each shoulder two spurs G are formed on the bottom edge of the plate and integral with the plate, which spurs extend at right angles to the face of the plate from the bottom edge of the plate toward the reed-plate B, the free edges of said spurs G resting against said reed-plate. The said spurs thus form a bearing or sound-bridge for the plate D, leaving the entire bottom edge of the plate between the ends free and disconnected from the body, thus forming an uninterrupted slot through which the sound can escape freely and also giving the plate all freedom as a sounding-board.

For the purpose of stiffening the bottom free edge of the plate D the same is provided with a flange H between the end spurs G, which flange is curved transversely and extends beyond the bottom edge of the body, so that said flanges, while serving to stiffen the plates, also serve for confining the sound-waves until they have passed the bottom of the body, thus preventing scattering of said waves. The flanges also serve to throw the sound-waves uniformly from the instrument, whereby a materially-increased volume of sound is produced without requiring a corresponding increase in the size of the instrument.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A mouth harmonica, provided with protecting plates at its sides, which protective plates have end shoulders, and spurs on the bottom edges adjacent to said shoulders, which spurs extend at right angles to the plates toward the body of the harmonica and rest against the same, the bottom edge of said plates between the end spurs being entirely free and disconnected from the body of the harmonica, substantially as herein shown and described.

2. A mouth harmonica, provided with protecting side plates, which plates each have a

transverse shoulder at each end, spurs on the bottom edge adjacent to each shoulder, which spurs extend at right angles to the plate against the body of the harmonica and a transversely curved flange on the bottom edge of the plate, between the end spurs, substantially as herein shown and described.

3. A mouth harmonica having protecting side plates each having an inclined flange along its upper edge, a transverse shoulder at each end, spurs on the bottom edge adjacent to each shoulder, which spurs are at right angles to the face of the plate and extend to the body of the instrument and a transversely curved flange along the bottom edge, between

the end spurs, substantially as herein shown and described.

4. A mouth harmonica provided with protecting plates on the sides, which plates each have end shoulders and a transversely curved flange along the bottom edge substantially, as herein shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 23d day of July, 1895.

MATTHIAS MESSNER.

Witnesses:

SELAY DIGISER,
WM. HAHN.