

(No Model.)

M. OEFINGER.
Harmonica.

No. 235,281.

Patented Dec. 7, 1880.

fig. 1

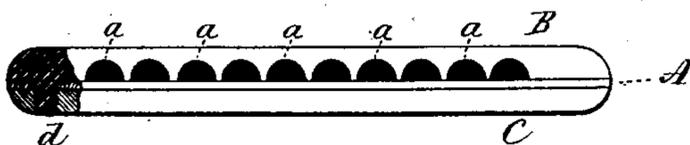


fig. 2

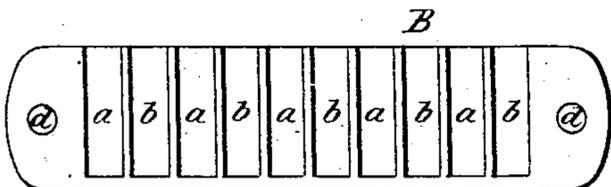


fig. 3

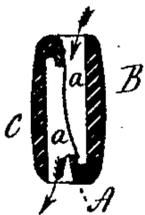


fig. 4

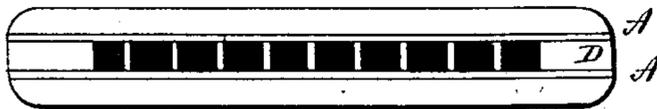


fig. 5

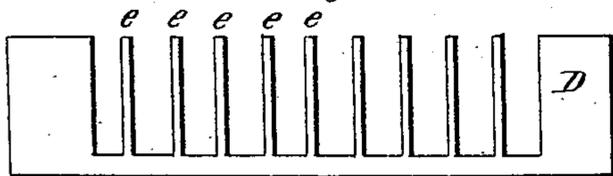
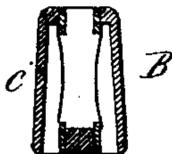


fig. 6



Witnesses:

J. H. Murray.
Jos. C. Earle

Michael Oefinger
By atty. Inventor.
J. C. Earle

UNITED STATES PATENT OFFICE.

MICHAEL OEFINGER, OF WEST MERIDEN, CONNECTICUT.

HARMONICA.

SPECIFICATION forming part of Letters Patent No. 235,281, dated December 7, 1880.

Application filed May 3, 1880. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL OEFINGER, of West Meriden, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Harmonicas; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be
10 a full, clear, and exact description of the same, which said drawings constitute part of this specification, and represent, in—

Figure 1, an edge view; Fig. 2, the inside view of the outer plate; Fig. 3, transverse section; Fig. 4, edge view of a double instrument; Fig.
15 5, the central portion or reed-pocket detached; Fig. 6, transverse section.

This invention relates to an improvement in that class of musical instruments commonly called "harmonicas," the object being chiefly
20 to make the instrument entirely from metal; and it consists in the construction, as hereinafter described, and particularly recited in the claims.

A is the reed-plate, which is of common construction, and the reeds arranged alternately, so that one series of reeds will be sounded from one edge and the other from the opposite edge; B C, the outside plates, one of which, B, is shown detached in Fig. 2. These are fit-
30 ted to respective sides of the plate and each provided with cavities *a b a b*, extending from near one edge to and opening through the opposite edge, preferably of semicircular form in transverse section, and so as to form a parti-
35 tion between the cavities bearing against the surface of the reed-plate and between the several reed-openings. The plate on one side is reversed from that of the plate upon the opposite side, as seen in Fig. 3, so that the open-
40 ings of the plate on one side come at one edge of the reed-plate, and the openings of the opposite side come at the opposite edge, as seen in Fig. 3.

The alternate cavities *a* deliver the wind
45 to the reeds to produce the sound, and the sound will be delivered through the opening in the opposite cavity, as indicated by the arrows in Fig. 3, and if the instrument be re-
50 versed the other series, *b*, become the sound-
5 ing-cavities.

As a means for securing the parts together, one of the plates is cast with a stud, *d*, at each end, which passes through the perforations in the reed-plate and corresponding perforations in the plate in the opposite side, and riveted
55 thereon completes the instrument.

For a double instrument the central section, D, (see Fig. 4 and Fig. 5 detached,) is made from cast metal, the partitions *e* cast as
60 a part of that section. Onto each side of this section the metal reed-plates A are arranged in the usual manner, and outside the reed-plates the covering-plates B C are applied, the plates being the same as those shown
65 in Figs. 1, 2, 3, except that the cavities open upon the same edge, the reed-plates having a double set of reeds opening alternately into the pockets of the section D and into the
70 cavities in the plates B C, so that blowing into the pockets of the section D upon one edge the double set of reeds will deliver the
75 sound through the cavities in the plates B C; or, reversed, the wind may be delivered through the cavities in both plates or the cavities of one only.

It will be understood that the alternate reeds are operated by blowing or drawing, as in the usual construction.

I claim—

1. A harmonica having a metallic plate, B, provided with cavities *a b*, arranged as described, to form partitions between said cavities, combined with a reed-plate, substantially
80 as described.

2. A harmonica having a metallic plate, B, provided with cavities *a b*, arranged as described, to form partitions between said cavities, combined with a reed-plate and studs *d*, cast on said plate B, substantially as described,
85 and for the purpose specified.

3. The combination of the metal central section, D, constructed with the partition *e*, with reed-plates, and the metal covering-plates B C, provided with cavities to form partitions
90 between the reeds in the reed-plate, substantially as described.

MICHAEL OEFINGER.

Witnesses:

FRANK S. FAY,
LEROY C. PARDEE.