

UNITED STATES PATENT OFFICE.

CHARLES H. CONGDON, OF ST. PAUL, MINNESOTA.

CHROMATIC PITCH-PIPE.

SPECIFICATION forming part of Letters Patent No. 478,570, dated July 12, 1892.

Application filed November 12, 1891. Serial No. 411,655. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. CONGDON, of St. Paul, Ramsey county, Minnesota, have invented certain Improvements in Chromatic Pitch-Pipes, of which the following is a specification.

My invention relates to improvements in pitch-pipes for sounding the notes of the chromatic scale; and it consists in providing a recessed base above which is arranged a reed-plate having top and bottom sets of reeds, a top and a bottom reed standing above each recess, each recess having an outlet-notch through the side or edge of the base, the outlets for adjacent recesses being in different edges of the base. The reed-plate is covered and protected by a cap having one or more air-vents through its top. The outlets or ports for the reeds are arranged around the four sides of the instrument, so that only one at once can be applied to the mouth.

My invention further consists in the construction and combination hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of my improved pitch-pipe, the position of the grooves or recess in the base and the superposed reeds being indicated by dotted lines. Fig. 2 is a cross-section of the same, showing the relative position of a pair of reeds, the grooves beneath, and the cap or cover. Fig. 3 is a detail plan view of the grooved base, showing the ports or inlets thereto. Fig. 4 is an end elevation of the same, and Fig. 5 is a longitudinal vertical section of the same.

In the drawings, 2 represents the base or bed-plate, made, preferably, of wood, of rectangular form, with rounded corners, and provided with a series of recesses. These recesses may be of any desired form, but preferably grooves, one pair of parallel grooves 3 extending nearly across the base, closed at one end, but notched or cut through the side of the base at the other end, an intermediate parallel groove 4 being cut through at the other side, and the parallel grooves 5 closed at both ends, but having inlets through the lateral notches 6 at the respective ends of the base. Upon the base above the grooves or re-

cesses is secured the sheet-metal plate 7, having two series of reeds 8 and 9 secured upon its opposite sides and over slotted openings therethrough in the ordinary mode of construction of reed instruments. These reeds are grouped in pairs, each made up of one reed from each series and so placed that each pair stands above one of the recesses in the base. The reeds are tuned to sound severally the musical notes of the chromatic scale, ten reeds, however, as shown in Fig. 1, being all that is usually necessary. Above the plate 7 is secured the raised sheet-metal cap or cover 10, which fits closely at its edges upon the plate, but is provided with one or more central air-vents 11. As will be seen, with the parts thus arranged the recess under each pair of reeds has a notch or port in the side or end of the instrument, these notches being so arranged on the four sides that it is impossible, in applying the instrument to the mouth to sound at the same time more than one reed, one reed of each pair being sounded by expiring and the other by inspiring the breath through the port, the air passing to and from the reed through the openings 11.

The cover 10 is preferably stamped above the respective reeds with the designating-letters of the scale, so that the operator can determine at a glance at which port to apply the mouth and by the relative position of the mark whether to expire or inspire the breath to sound the desired reed.

I claim—

1. In a device of the class described, the combination of the base having a series of parallel transverse grooves, the adjacent grooves opening to different sides of the base, series of reeds arranged above said grooves, and an inclosing cap above said reeds provided with a suitable vent, substantially as described.

2. In a device of the class described, the combination of the base having a series of recesses, series of reeds arranged, respectively, above said recesses, a cover above said reeds, and notches or outlets respectively connecting said recesses with the different sides of the base in such manner that the outlets of adjacent recesses are upon different sides of the instrument, substantially as described.

3. In a device of the class described, the combination of the recessed base, a reed-plate

arranged thereon having a bottom and a top series of reeds, one of each series standing above each of the recesses in the base, a cover fitted upon said plate above said reeds and
5 provided with a suitable vent, and notches or outlets in the sides of the base communicating severally with said recesses and serving as ports for said reeds, so that the outlets of

adjacent recesses are upon different sides of the instrument, substantially as described. 10

In testimony whereof I have hereunto set my hand this 31st day of October, 1891.

CHARLES H. CONGDON.

In presence of—

T. D. MERWIN,

A. M. WELCH.