

M. PROCOPE.

Adjustable Tongues for Organ Reeds.

No. 143,093.

Patented September 23, 1873.

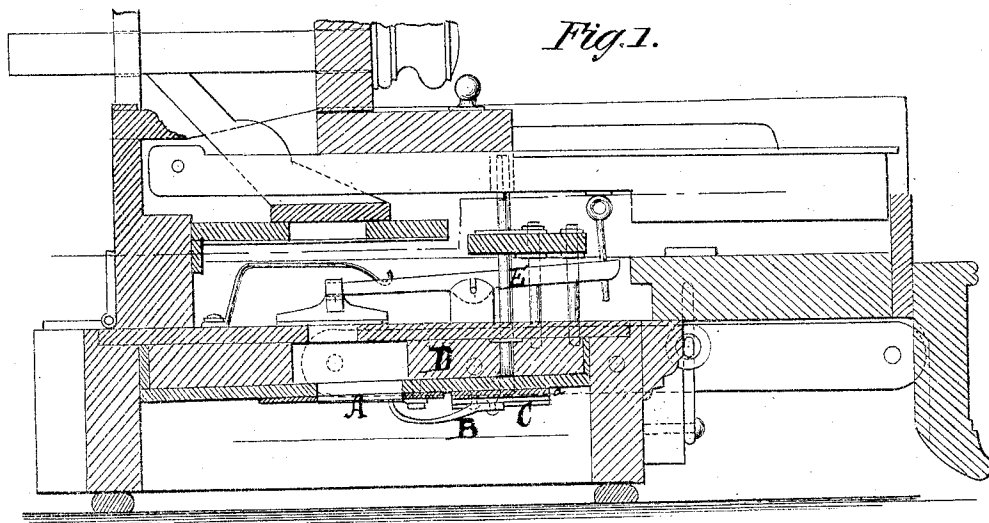


Fig. 2.

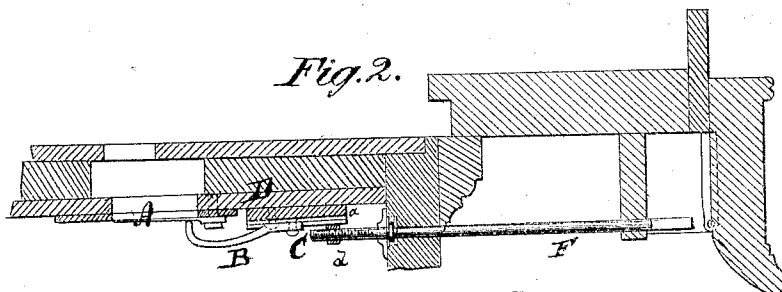


Fig. 3.

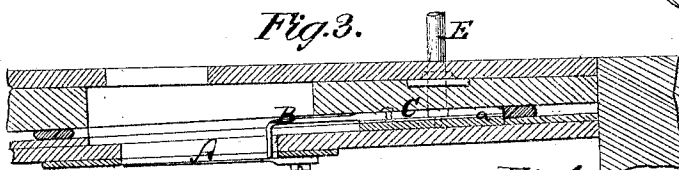


Fig. 5.

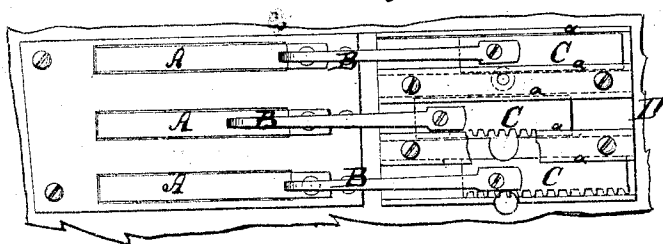


Fig. 7.

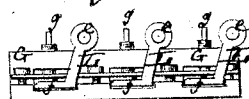
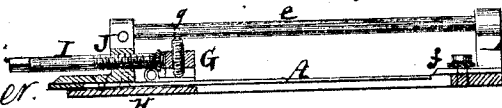


Fig. 4.



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Fig. 6.



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UNITED STATES PATENT OFFICE.

MARIA PROCOPÉ, OF STOCKHOLM, SWEDEN.

IMPROVEMENT IN ADJUSTABLE TONGUES FOR ORGAN-REEDS.

Specification forming part of Letters Patent No. **143,093**, dated September 23, 1873; application filed February 21, 1873.

To all whom it may concern:

Be it known that I, MARIA PROCOPÉ, of Stockholm, in the Kingdom of Sweden, have invented a new and Improved Adjustable Tongue for Wind-Instruments, of which the following is a specification:

Figures 1, 2, 3, and 4 are vertical longitudinal sections of tongues made adjustable according to my invention. Fig. 5 is a bottom view of the invention shown in Fig. 2. Fig. 6 is a detail perspective view of the tuning-key used therein; and Fig. 7 is an end view of the modification shown in Fig. 4.

Similar letters of reference indicate corresponding parts.

The invention consists in the improvement in tuning wind reed-instruments, as hereinafter described and pointed out in the claims.

In the accompanying drawing, the letter A represents the tongue of the instrument. B is a finger-shaped support applied against the under side of the tongue to support the same near its root, as indicated in Figs. 1, 2, and 5. This support B is attached to a slide, C, which is held between guides *a a*, that are fastened to under side of the board D, to which such tongue is secured. The slides C I make with teeth at their sides, as clearly shown in Fig. 5, and I also use for their adjustment a tuning-key, E, having a pinion, *b*, fastened to its lower end.

Whenever it is desired to tune the organ it is only necessary to introduce the tuning-key in one of as many openings as there are tongues in the board D, and thereby to bring its pinion *b* in gear with the plate C to be moved, or with several plates successively.

It will be clear from the above that by turning the tuning-key the slides C and their appendages B can be moved back and forth. It will also be clear that as the finger B applies close to the under side of the tongue the vibrations of the tongue will be increased the farther such finger is from the root of the tongue, and it will be reduced the farther such finger is moved from the open or vibrating end of the tongue. In this manner, therefore, the vibrations can be regulated by shifting the finger B, and reduc-

ing or increasing the vibrating lengths of the several tongues.

Instead of using the tuning-key E, I may apply a screw, F, in a horizontal position, to the front part of the organ, and a projecting end, *d*, on each slide C, for the reception of such screw, so that by turning the several screws F of one instrument the several slides C and fingers B may be adjusted in the desired manner. This modification is shown in Fig. 2.

In Fig. 3 is drawn another modification by which, with either of the two styles of tuning-key connection described, substantially the same result will be insured, and which shows the finger B applied above instead of below the tongue, its connection with the tuning-key E being in every other respect the same as that described with reference to Fig. 1.

Instead of using an adjustable finger, B, above or below the tongue to be tuned, I may make the tongue itself movable, and thereby increase or reduce the length of its vibrating portion. In this case I would also have to move the plates with which the vibrating ends of the tongues are nearly in contact simultaneously with the same, so as to vary their respective distances. This modification is clearly shown in Fig. 4. I attach, according to said figure, each tongue A, at its root, to a sliding block, J, and rest it upon a supporting-plate, H, and I connect the block J with a screw, I, that is swiveled in a block, G, which is immovably secured to the supporting-plate H, but cut underneath to admit the tongue.

The nut for the reception of the screw is formed in the slide J, so that when the said screw is turned the slide J will be moved lengthwise, and will draw the tongue back or forward with it.

By means of a rod, *e*, the block J is connected with another sliding block, L, to which the plate *f*, against which the point of the tongue plays, is secured. Thus it will appear that the plate *f* will be moved, together with the tongue, and that the relative positions of such tongue and plate will never be varied. A small set-screw, *g*, may be fitted through

the block G for the purpose of locking the tongue in any position in which it may be desired to retain the same. It will furthermore be evident that only that portion of the tongue which projects beyond the edge of the supporting-plate H will be able to vibrate, and that the tone of the instrument will be varied by varying the length of tongue that is projecting from plate H.

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

1. The tuning-key E, arranged in combination with the slide C and finger B, as set forth.

2. The combination of the movable tongue A, slide J, screw I, rod *e*, slide L, and plate *f*, all arranged as specified.

The above specification of my invention signed by me this 6th day of August, 1872.

MARIA PROCOPE.

Witnesses:

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A. H. WESTROM.