C. N. RAND.
Organ-Reed.

No. 217,706. Patented July 22, 1879.

Fig. 1.

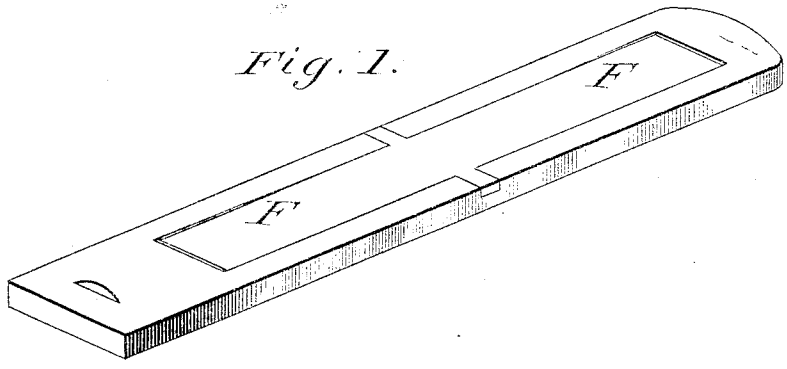



Fig. 2.

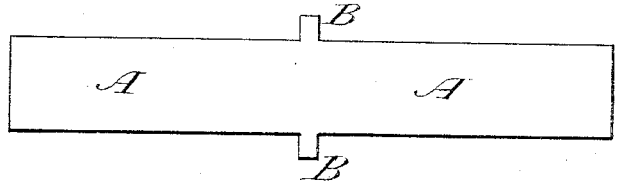
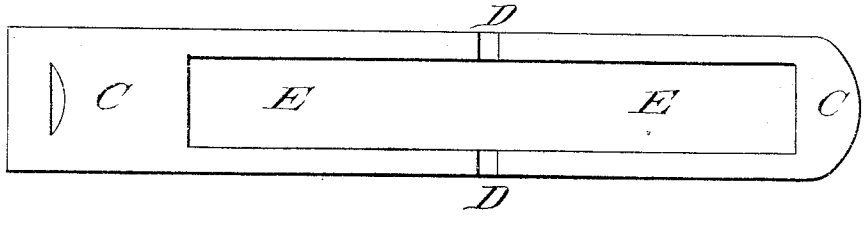



Fig. 3.




Attest:

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# UNITED STATES PATENT OFFICE.

CHARLES N. RAND, OF CEDAR RAPIDS, IOWA.

## IMPROVEMENT IN ORGAN-REEDS.

Specification forming part of Letters Patent No. **217,706**, dated July 22, 1879; application filed November 2, 1878.

*To all whom it may concern:*

Be it known that I, C. N. RAND, of Cedar Rapids, in the county of Linn and State of Iowa, have invented a new and useful Improvement in Organ-Reeds, of which the following is a specification.

The invention relates to reeds used in cabinet and other organs.

The object of my invention is to produce a pipe-tone from a reed.

Heretofore reeds have been used having a thin metal tongue firmly fastened to a socket at one end and the other left free to vibrate through a slot in the socket by a pressure of air. The tone thus produced is metallic, and the vibrations jar and are unpleasant when compared with the smoothness of a tone produced by a pipe.

My invention consists of a reed-tongue with a small projection left on each side, (or these projections may consist of a piece of metal riveted upon the tongue,) by which the center of the tongue is fastened to the socket at or near the middle of the slot, thus leaving both ends free to vibrate through the slot alternately, producing a tone much finer and smoother than can be produced by the former or old method.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a perspective of a device embodying my invention. Fig. 2 is the tongue, a section of the same; and Fig. 3 is the socket, another section.

In Fig. 2, A A represent a piece of metal, called the "tongue," which, being of the required thickness to accommodate the pressure of air, will vibrate at each end. B B represent two small projections left upon the tongue, (or they may consist of a piece of metal riveted upon the tongue, preferably square, but can be made of any size or shape) which hold the tongue in position in the socket.

In Fig. 3, C C represent the socket, upon which the tongue A A is fastened. E E represent the slot or aperture in the socket through which the tongue vibrates. D D represent two grooves, preferably square, (or they may be of any shape necessary for convenience, (in which the two projections on the tongue B B are placed, and which are securely fastened in position by compressing the metal of the socket around the grooves, and thus wedging the tongue in its position; or the two grooves D D may be dispensed with, and the two projections B B may be riveted upon the socket in the same place.

Fig. 1 represents the complete reed.

The pressure of the air upon the tongue F F, which is produced by a bellows or by any other means, is the same at both ends; and the ends of the tongue being compelled to vibrate when one moves in one direction, the sympathy of the particles of metal has a tendency to throw the other end in an opposite direction, thus producing a tone which is much superior to that produced by the former or old method.

I claim as my invention—

1. The method of securing a reed-tongue to the reed-socket by means of projecting pieces or other suitable devices arranged at or about the center of the reed-tongue, substantially as described, whereby the reed-tongue is free to vibrate at both ends, as set forth.

2. The reed-tongue A A, fastened at or about its center B B to the reed-socket C C, whereby both ends of the tongue are left free to vibrate, substantially as described and set forth.

CHARLES N. RAND.

Witnesses:

MARTIN D. STERLING,

O. C. CARPENTER.