

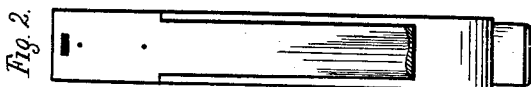
(No Model.)

H. JANES.

VIBRATOR FOR REED MUSICAL INSTRUMENTS.

No. 477,661.

Patented June 28, 1892.



witnesses.

Frances P. James.
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UNITED STATES PATENT OFFICE.

HENRY JANES, OF WATERBURY, VERMONT.

VIBRATOR FOR REED MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 477,661, dated June 28, 1892.

Application filed April 29, 1891. Serial No. 390,999. (No model.)

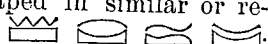
To all whom it may concern:

Be it known that I, HENRY JANES, of Waterbury, county of Washington, and State of Vermont, have invented a new method of Voicing the Vibrators of Reed Musical Instruments, of which the following is a specification.

The object of the invention is to improve those registers producing the stopped diapason, flute, horn, and clarionet qualities of tone by suppressing or diminishing the intensity of the harsh inharmonious overtones. With the thick reeds of the lower octaves this is easy enough by the ordinary method of twisting or bending, but with the thin vibrators of the upper octaves is much more difficult.

Reference is made to the accompanying drawings, which are a part of this specification, similar letters of reference indicating corresponding parts in all the figures.

Figures 1, 2, and 3 are front views of ordinary organ-reeds or reed-tubes, showing the longitudinal corrugations of the free ends of the vibrators, A being the vibrators and B the reed-blocks.

In my improved method the vibrators are corrugated lengthwise, so as to stiffen their free ends to any desired degree. The corrugations may be one or more in number, and may be angular or curved in cross-section. If desired, the reed-block at the end of the eschallot may be shaped in similar or reversed curves, thus . By these means the current of wind is shut off gradually and smoothly and the minute and irregular partial vibrations of the free ends of the thin reeds are prevented or greatly diminished. This is markedly the case with vi-

brators made of aluminum or some alloy of aluminum which, on account of its lightness and toughness, gives a tone less metallic in quality than the heavier brass ordinarily used. Aluminum-bronze being stronger than brass is better than that for the thinnest reeds.

Greater smoothness and purity of tone is obtained in certain registers of my reed-tubes if the vibrators throughout the entire register are made of the same or nearly the same width instead of being made narrower for the higher notes. This does not necessitate undue loudness or waste of wind if the vibrator occupies the whole width of the caliber of the tube and the arc of vibration is made small enough.

What I claim as new, and wish to patent, is—

1. The thin and light vibrator A, formed with one or more longitudinal corrugations of curved or angular cross-section, as shown and described, said corrugations being for the purpose of stiffening the vibrator from its free end throughout a large part of its length, and thus diminishing or preventing the partial vibrations which generate the very high pitched inharmonious overtones so noticeable in the thin reeds of most reed instruments.

2. The vibrators A, made as shown and described throughout the entire register of the same or nearly the same width, for the purpose of giving greater fullness and roundness to the higher notes of the scale.

HENRY JANES.

Witnesses:

GEORGE W. KENNEDY,
F. B. JANES.