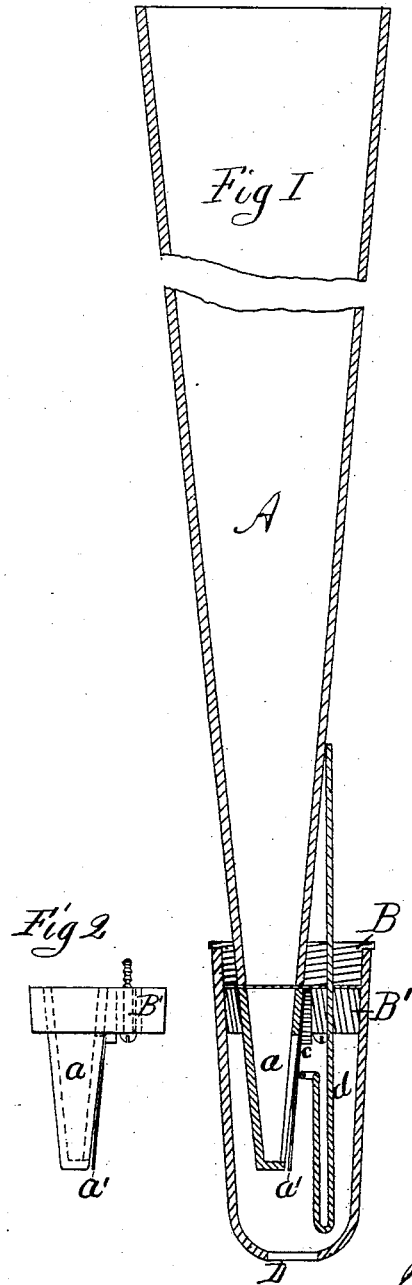


W. A. JOHNSON.

REED-PIPES FOR ORGANS.

No. 191,973.

Patented June 12, 1877.



Witnesses
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IMPROVEMENT IN REED-PIPES FOR ORGANS.

Specification forming part of Letters Patent No. **191,973**, dated June 12, 1877; application filed
May 21, 1877.

To all whom it may concern:

Be it known that I, WILLIAM A. JOHNSON, of Westfield, county of Hampden and State of Massachusetts, have invented new and useful Improvements in Reed-Stop Organ-Pipes, which improvements are fully set forth in the annexed specification and in the accompanying drawing.

The object of my invention is to produce from reed-pipes greater openness and sonority of tone than has heretofore been possible from pipes of ordinary construction, owing to an undue contraction of the air-passage between the wind-opening under the reed and the top of the tube.

Care has not been taken in the construction of such pipes to leave a sufficiently free egress from the eschallot for the sound-waves created by the vibrations of the reed; but, on the contrary, the eschallot, or tube against which the reed is secured and vibrates, has generally been constructed of a less diameter at or near its junction with the main tube of the pipe in the block than that at its base.

I have found by experiment that by constructing the eschallot of a gradually-increasing diameter from its lower end to its junction with the lower end of the tube in the block, and by having the taper of the tube and eschallot correspond, or very nearly so, from base to top, that I obtain a greatly improved tone, one entirely free from the usual cramped or confined sound which is produced from pipes of the old construction.

In the drawing, A is the tube; B B', the block in two parts. *a* is the eschallot. *a'* is the reed. *c* is a wedge. *d* is the reed-spring; D, the bottom tube.

Figure 1 is a view in vertical section of my improved reed-pipe complete. Fig. 2 is an elevation showing the lower half B' of the block, with the eschallot *a*, reed *a'*, and wedge *c*, as arranged preparatory to attaching B' to B by screws.

To the part B of the block may be attached

a tube of a shape differing somewhat from tube A, for the purpose of producing certain other musical effects; therefore I do not confine myself to the employment of my tapering eschallot *a*, block part B', reed *a'*, and wedge *c* in combination with a tube so formed.

In constructing my improved pipes I employ a block made in two parts. To the upper part B I attach, firmly, the tube A; into the lower part B', in a suitable opening made therein, I force the eschallot *a*, inserting and fastening the reed *a'* in the usual manner by the wedge *c*. The part B' I then attach to part B by screws, insert the spring *d*, press the bottom tube D onto the block, and the pipe is complete.

By making the block B B' in two parts I provide a means of conveniently removing the eschallot and reed from the pipe for purposes of repairing or cleaning them.

By reference to Fig. 1 it will be clearly seen that, by reason of the unobstructed and continually-increasing-in-size air-passage from the bottom of the eschallot to the top of the tube, there is a perfectly clear space for allowing the tone-vibrations to produce their greatest possible effects.

What I claim as my invention is—

1. An organ reed-stop pipe, constructed with a gradually-increasing interior diameter from the bottom of the eschallot *a* to the top of the tube A, substantially as and for the purpose set forth.

2. The combination of the bottom tube D, the lower portion B' of the block, the tapering eschallot *a*, reed *a'*, wedge *c*, and spring *d*, substantially as set forth.

3. The combination of the bottom tube D, spring *d*, eschallot *a*, block-pieces B' B, wedge *c*, reed *a'*, and tube A, substantially as set forth.

WILLIAM A. JOHNSON.

Witnesses:

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