

(No Model.)

E. HOWARD.
REED PIPE.

No. 555,374.

Patented Feb. 25, 1896.

Fig. 1.

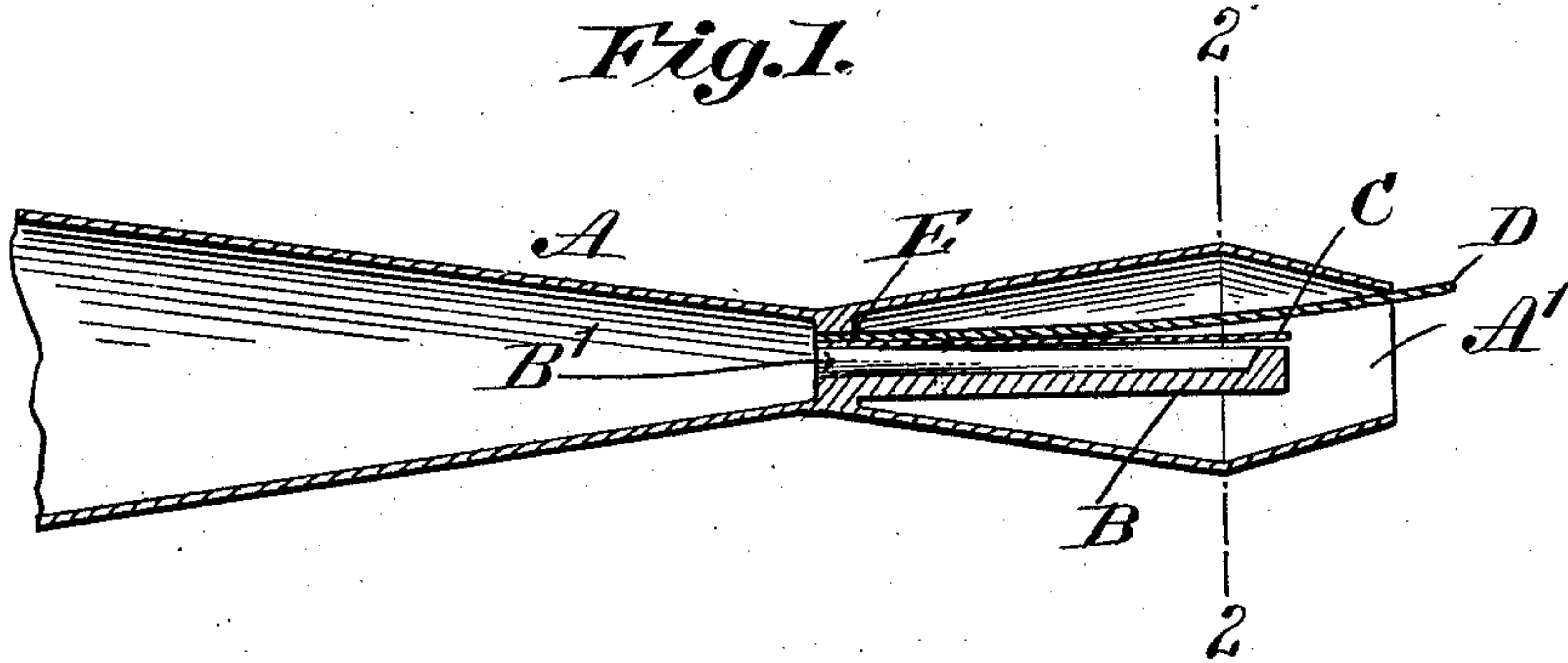


Fig. 2.

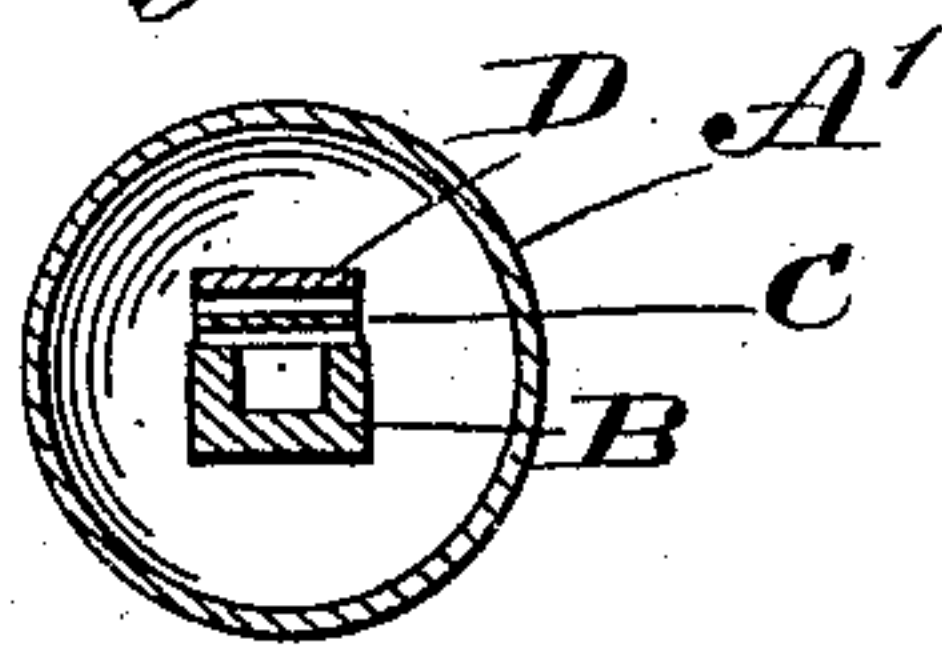


Fig. 3.

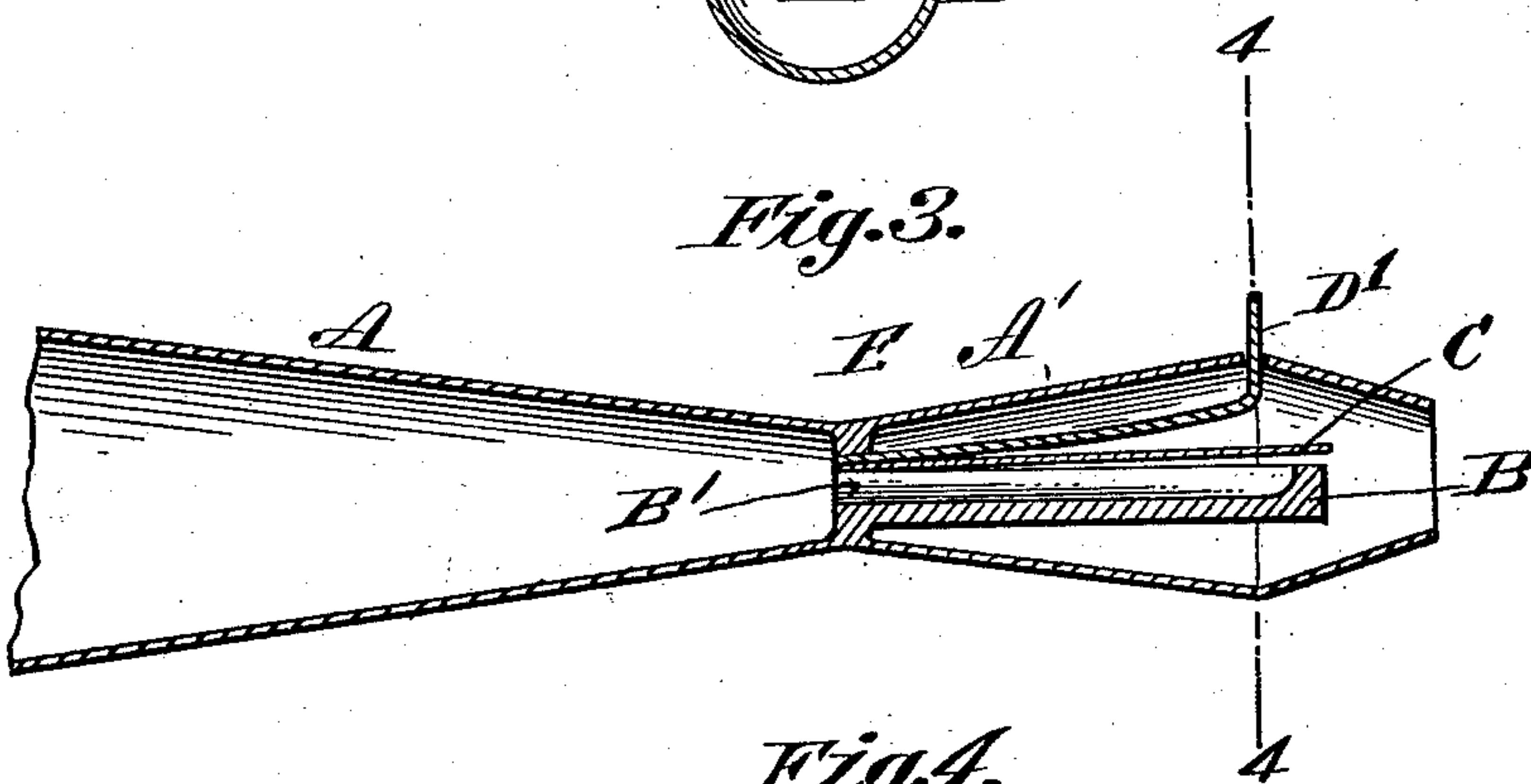
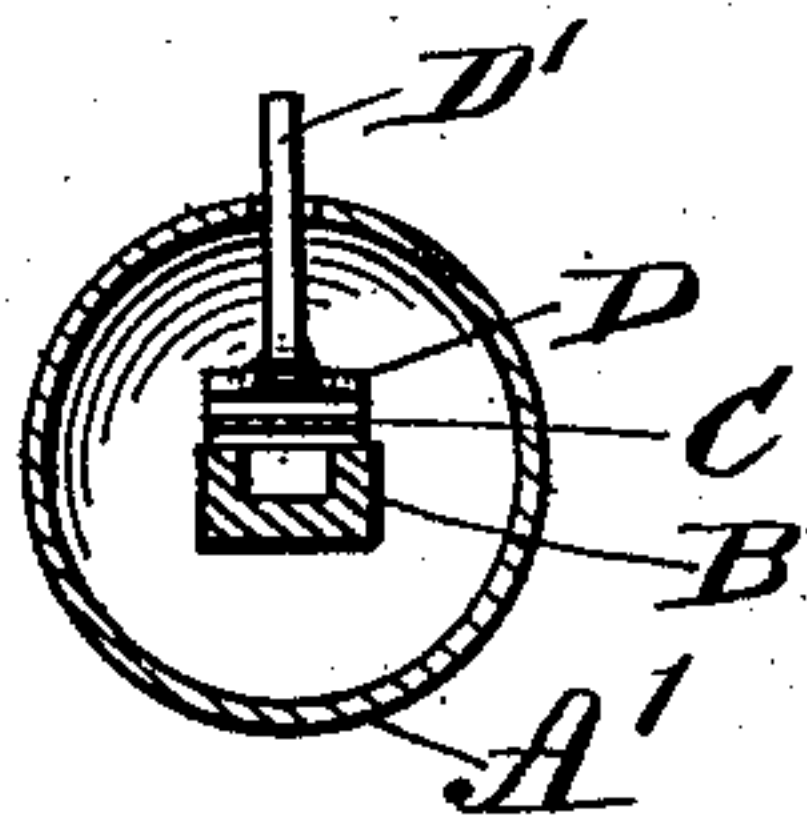


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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REED-PIPE.

SPECIFICATION forming part of Letters Patent No. 555,374, dated February 25, 1896.

Application filed December 21, 1895. Serial No. 572,897. (No model.)

To all whom it may concern:

Be it known that I, EMMONS HOWARD, a citizen of the United States of America, residing at Westfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Reed-Pipes, of which the following is a specification.

This invention relates to improvements in reed pipes or horns, and has for its object the construction of such reed-pipes having a variable tone or note; and it consists in the arrangement of a flexible tone-varying tongue attached to the pipe or horn which is capable of being brought to bear more or less upon the vibratory reed for the purpose of increasing or decreasing the vibratory length thereof, all as hereinafter more fully described and claimed.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a longitudinal section of a pipe or horn, showing the position of the note-controlling lever or tongue. Fig. 2 is a cross-section through Fig. 1 on line 2 2. Fig. 3 is a longitudinal section, showing a different disposition of the spring-tongue from that shown in Fig. 1. Fig. 4 is a cross-section through Fig. 3 on line 4 4.

In the drawings, in which like letters refer to like parts in the different figures, A is the reed pipe or horn having the mouthpiece A', the reed-box B, and reed C applied thereon, and the wind-passage B', all of the usual type and construction. At the point E in Figs. 1 and 3 where the reed is attached to the box B, and projecting within the mouthpiece of said pipe or horn, there is attached to the top of the vibratory reed, by soldering or other convenient means, a tone-varying spring-tongue D. This tongue is slightly curved upwardly from the said point of attachment toward its free end, which, as in Fig. 1, projects somewhat beyond the open end of the mouthpiece A', or, as in Fig. 4, at a point slightly back of the free end of the reed C, the end of said spring-tongue (see Fig. 4, D') is bent upward at substantially a right angle to the curved portion thereof and projects through an opening provided therefor in the top of

the mouthpiece of the pipe or horn A. Thus it will be seen that pressure applied to the end of the tongue D to depress the same brings its under surface to bear more or less, according to the amount of said pressure, upon the upper surface of said vibratory reed, which has the same effect upon its vibrations as though the said reed were more or less shortened—that is, the more said tongue D is depressed the shorter becomes the free vibratory length of the reed C, and hence the more rapid become its vibrations and the higher the note sounded thereby, and, inversely, by relieving the said reed C from the pressure upon it of the spring-tongue D the point of contact between the tongue D and reed C recedes toward the fixed ends of said parts, thereby increasing the vibratory length of said reed and consequently diminishing the number of the vibrations thereof, and the note sounded by it becomes lower.

In the construction shown in Fig. 1 the pressure on said tone-varying tongue D is applied by the teeth of the person using it or by the tongue.

In the construction shown in Fig. 3 the pressure in the tongue D, whereby the note of the instrument is varied, can be applied by the finger, or, if the pipes are arranged in series, said effects would be more perfectly and conveniently produced by any suitable arrangement of keys for working said tongue D for the production of the said variation of the normal note of said pipes, as desired.

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

In a reed-pipe, a tone-reed, a reed-box upon which said reed is fixed by one end, combined with a tone-varying tongue fixed by one extremity over said reed and having its opposite extremity extending outside the mouthpiece of said pipe and free for movement more or less against and from the adjoining side of said reed, substantially as set forth.

EMMONS HOWARD.

Witnesses:

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