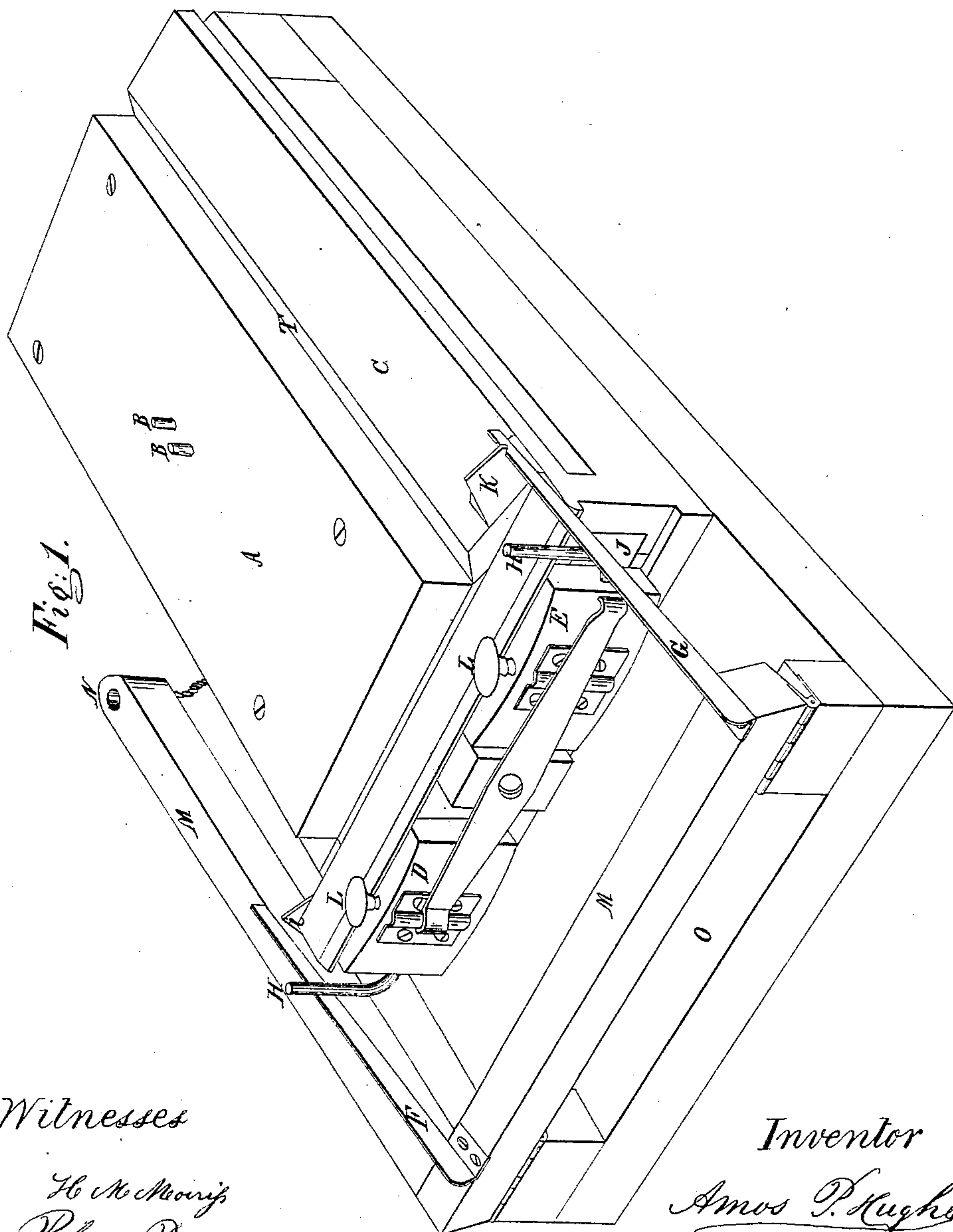
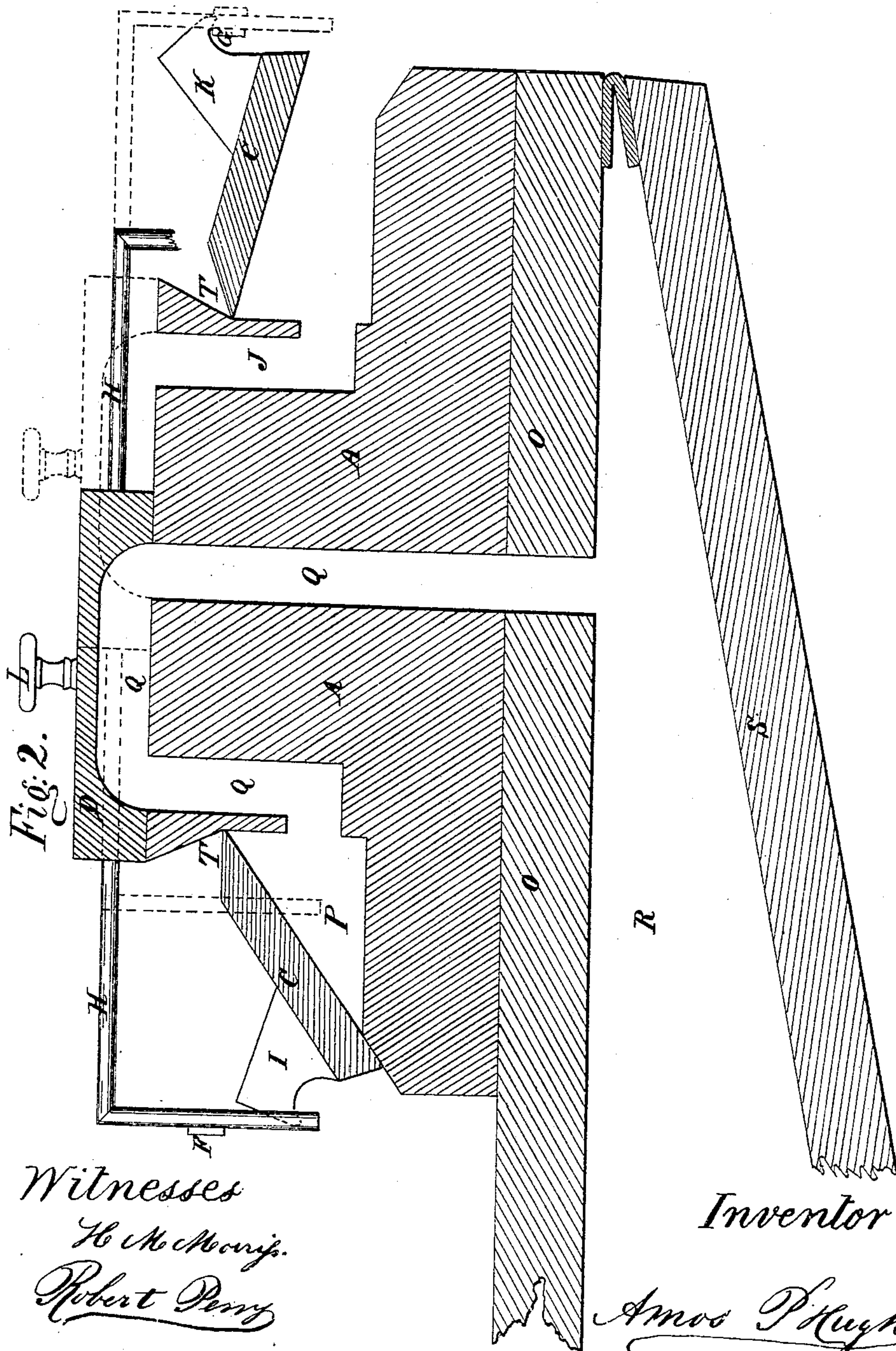


Sheet 1-2 Sheets.

*A. P. Hughes,*  
*Reed Organ,*  
*No 18,284,*  
*Patented Sept 29, 1857.*



*A.P. Hughes,*  
*Reed Organ,*  
*No 18,284,*      *Patented, Sept. 29, 1857.*



Witnesses  
*H. McManis.*  
*Robert Perry*

Inventor

*Amos P. Hughes*



# UNITED STATES PATENT OFFICE.

AMOS P. HUGHES, OF PHILADELPHIA, PENNSYLVANIA.

## REED-STOP FOR MUSICAL INSTRUMENTS.

Specification of Letters Patent No. 18,284, dated September 29, 1857.

*To all whom it may concern:*

Be it known that I, AMOS P. HUGHES, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Reed-Stop, or method of stopping a portion or all of the reeds in musical instruments wherein reeds are used, either wholly or in part; and I do hereby declare that the following is a full, clear, and exact description of the same in construction and operation, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of one arrangement. Fig. 2 is a transverse section of another arrangement, showing the valve and air passage.

The nature of my invention consists in forming an air tight chamber (or one nearly so) with the swell, or by other means, over or outside of the reeds, when it is desirable to stop them. And from the chamber so formed I make a hole or opening, (independent of those in which the reeds are placed) from the inside of this chamber to the interior of the windchest or bellows, thereby rarefying or condensing the air on both sides of the reeds according to the kind of bellows used.

This improvement is adaptable to either of the forms of general construction of instruments of that class known as melodions, seraphines, harmoniums, æolians, or all instruments in which reeds are used.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation as illustrated by the drawings.

Figure 1. A is the board in which the reeds are placed and on the underside of which the pallets are so placed as to cover the openings through which the air passes while the reeds are vibrating. B B, are two of the pins which communicate the motion of the keys to the pallets, the position of the keys being over the pins. C, C, are two swells, covering the reeds, and are used to form the outer chamber when it is desired to stop the reeds. D, E, are two slide valves hollow on one side similar to the eccentric valve of the ordinary steam engine; by moving either of these valves to the position of the one D it covers two openings one from the outer chamber formed by the swell, and the other into the windchest or bellows, thereby opening the passage so that the air will equalize

itself on both sides of the reeds. F, the swell lever detached from the catch I, by the wire H, which is a part of the valve D, this allows the lever F, to rise and fall without affecting the swell on that side while the reeds are stopped. E, one of the valves in position to cover the hole into the bellows only, the hole J, being open allows the air to pass in or out, so that the reeds may speak when the swell is down on that side. G, the swell lever attached to the catch K, showing the swell partly open. M, the rockshaft on which the swell levers F, and G, are fastened and into which the upper end of the pedal stick is inserted at the hole N. L L, are knobs for moving the valves. O, the top board of the receiving bellows. T, the spring for closing the swell, the power is obtained from this spring by twisting the wire more or less, (according to the power wanted) previous to inserting the wire at the end.

Fig. 2, is the transverse section of another method of using the same invention, by using one valve on two sets of reeds, the letters conforming to same parts as in Fig. 1 as near as possible. A, the reed board. D, one valve used for two sets, in position to stop one set and position dotted for stopping the other; when the two sets are to be played the valve is to be placed between the two positions shown. C, C, the two swells, or parts of the outer chamber. F swell lever detached from catch I, by wire H. O, part of top board of the receiving bellows. L, the knob attached to and used for changing the position of the valve D. P, the chamber formed by the swell and from the inside of which the reeds are inserted into the board A. Q, Q, Q, the open passage from the chamber P to the interior of the bellows R. S, part of the lower bellows board. T, T, the two swell springs.

I am aware that reeds are stopped by equalizing the air on both sides of the reeds by closing the communication between the bellows and the wind chest, which will equalize the air on the inside of the reeds with the external air.

I am also aware that reeds are stopped by closing the opening to each separate reed by a stop properly clothed for the purpose which plan is expensive and uncertain owing to leakage caused by the shrinking or springing of the stop. Another method of stopping is by introducing a small stick through

a hole bored over each reed through the reed board and these sticks are pushed down until their ends rest on the tongues of the reeds, this plan is expensive and liable to  
5 disarrangement.

In my plan I do not wish to confine myself to any particular arrangement as there are many ways of accomplishing the same purpose by using different and various  
10 modifications of my invention, the construction will necessarily be different as the number of sets of reeds increase, one valve may be used on a number of sets, or one valve may be used for a portion of a set or a num-  
15 ber of valves may be used on one or more sets, in one of my experiments I used two valves to one set of reeds.

In order to use any number of sets of

reeds to one set of pallets, I make a separate opening from each reed to the pallet 20 seat.

What I claim and desire to secure by Letters Patent, is—

The stopping of reeds by forming an air tight chamber or chambers outside of the 25 reeds, with the swell or by other means, in combination with the open communication between the inside of the chamber or chambers and the interior of the wind chest or bellows, or any other arrangements substan- 30 tially the same and for the purpose herein set forth.

AMOS P. HUGHES.

Witnesses:

H. M. MORRISS,  
ROBERT PERRY.