

J. R. LOMAS.  
 Reed-Organ Tremolo.

No. 160,605.

Patented March 9, 1875.

Fig 1.

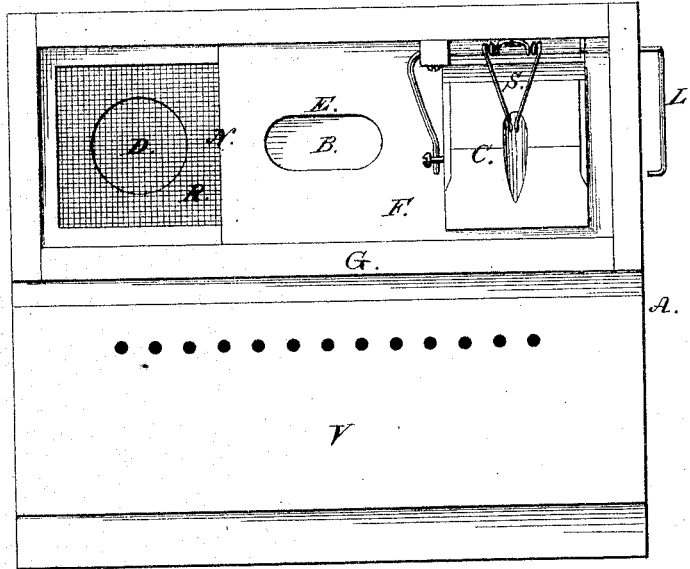
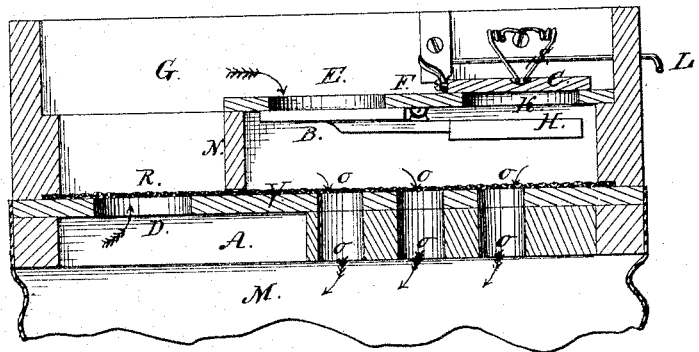


Fig 2.



Witnesses:  
 Siegwart Spier  
 Nathan Spier

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 J R Lomas

# UNITED STATES PATENT OFFICE.

JOHN R. LOMAS, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO BERNARD SHONINGER, OF SAME PLACE.

## IMPROVEMENT IN REED-ORGAN TREMOLOS.

Specification forming part of Letters Patent No. **160,605**, dated March 9, 1875; application filed November 23, 1874.

*To all whom it may concern:*

Be it known that I, JOHN R. LOMAS, of the city and county of New Haven, in the State of Connecticut, have invented a new and valuable Improvement in Tremolo Attachments to Musical Instruments; and that the following specification, taken in connection with the drawings forming a part thereof, furnish a full, clear, and exact description of the same.

Most musical instruments of the class of organs and melodeons are furnished with devices for producing ornamental effects, and among these devices is one known as the tremolo attachment. Its object is to make a tremulousness in the musical note, and it is accomplished in various ways. Some instruments are furnished with revolving fans, which produce tremulous undulations in the air, and others are furnished with valves, which produce the tremulousness by rapidly opening and closing an air-passage. My invention has especial relation to the latter class of devices, viz., valve-tremolo. In reed-organs the air to produce the sound is drawn by the bellows through the reeds and conducted through what are known as the air-passages of the instrument. Valve-tremolos are usually located in one of these air-passages, and so arranged that the air passes through a hole in the tremolo device. This hole is provided with a valve balanced by a weight or spring, so that its gravity is almost equalled by the weight or spring, and only a slight draft of air is required to open the valve. The current of air as it is drawn by the bellows slightly opens the valve, and the weight or spring closes it, and the rapidly-alternating action of air and weight on the valve produces an intermittent or tremulous sound in the note. The fan-tremolos have come into extensive use because of the liability of these valve-tremolos to get out of order. Prior to my invention it was customary to have a stop or handle by which the tremolo-valve was opened and held, so as to allow the air to flow freely through when no tremolo effect was required. This forcible opening of such a delicately-balanced valve tended to impair its accuracy of fitting, and besides particles of dust or foreign matter drawn in by the draft of air would often lodge on the valve

and prevent its closely fitting or perfect action. These objections and the liability to disorder in the valve-tremolo have of late years tended to bring the fan-tremolo into favor and to lessen the use of the valve-tremolo.

My invention has especial relation to the construction of a valve-tremolo which shall be free from the objectionable defects specified.

In the drawings, Figure 1 shows a top view. Fig. 2 shows a longitudinal vertical section of a valve-tremolo attachment containing my improvement.

V represents the reed-board or top board of an organ. The space A immediately below it is known as the valve-chamber. There is always an exhaust force in this chamber whenever the bellows is in operation. The air is drawn through the reeds into the chamber A, and passes up through the opening D into the air-tight box G. In the bottom of this box are other holes, O, which lead down to the bellows M, but these holes are shut off from the aperture D and the rest of the box by the valve-board F and a partition, N. The way in which the air, after passing through the hole D, can get from the box G into the bellows M is by means of the valve B, which is balanced by a weight, H, or spring, so as to oscillate with the draft of air, and let the current flow intermittently through the opening at B and down through the holes O into the bellows. To obviate the danger of disturbing the adjustment of the valve by a sudden or forcible opening by a stop, I provide the valve-board F with an extra valve, C. This valve C is not an oscillating valve. It is held tightly in its place by a spring, S, and its use is to allow a free passage from the box G to the holes O when the tremolo effect is not desired, furnishing a relief for the valve B. The valve C is operated from the outside by a stop, L. In order to prevent the displacement and leakage of the valve B from foreign substances passing up the air-passages, I place a fine wire screen or netting, R, across the bottom of the box covering the hole D and the holes O. This screen serves as a protection to both the valve B and the bellows M.

In valve-tremolos made prior to my invention the valve B was usually placed on the under side of the reed-board itself, and could not be repaired without opening the body of the organ.

In order to have the whole valve mechanism above the reed-board, and thus allow easy removal and adjustment, I place it on top of the reed-board in the box G, raising the valve-board F sufficiently above the reed-board V to allow free action, the air being prevented from passing under the valve-board by the partition N.

Having thus described my invention, I desire it to be understood that I do not claim a tremolo attachment as my invention; nor do I claim a tremolo-valve as my invention; nor do I make any broad claim to tremolo mechanism; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. An air-tight tremolo-box, provided with a horizontal partition, F, on one side of which is a tremolo-valve, B, and on the other a relief-valve, C, substantially as described.

2. The wire-screen R, or its equivalent, in combination with the air-passages of a reed-instrument, substantially as and for the purposes described.

3. In an air-tight tremolo-box a secondary or minor box, adapted to inclose a tremolo-valve, B, by means of the partitions N and F, or their equivalents, acting in combination with the sides of the larger box.

J. R. LOMAS.

Witnesses:

SIEGWART SPIER,  
NATHAN SPIER.