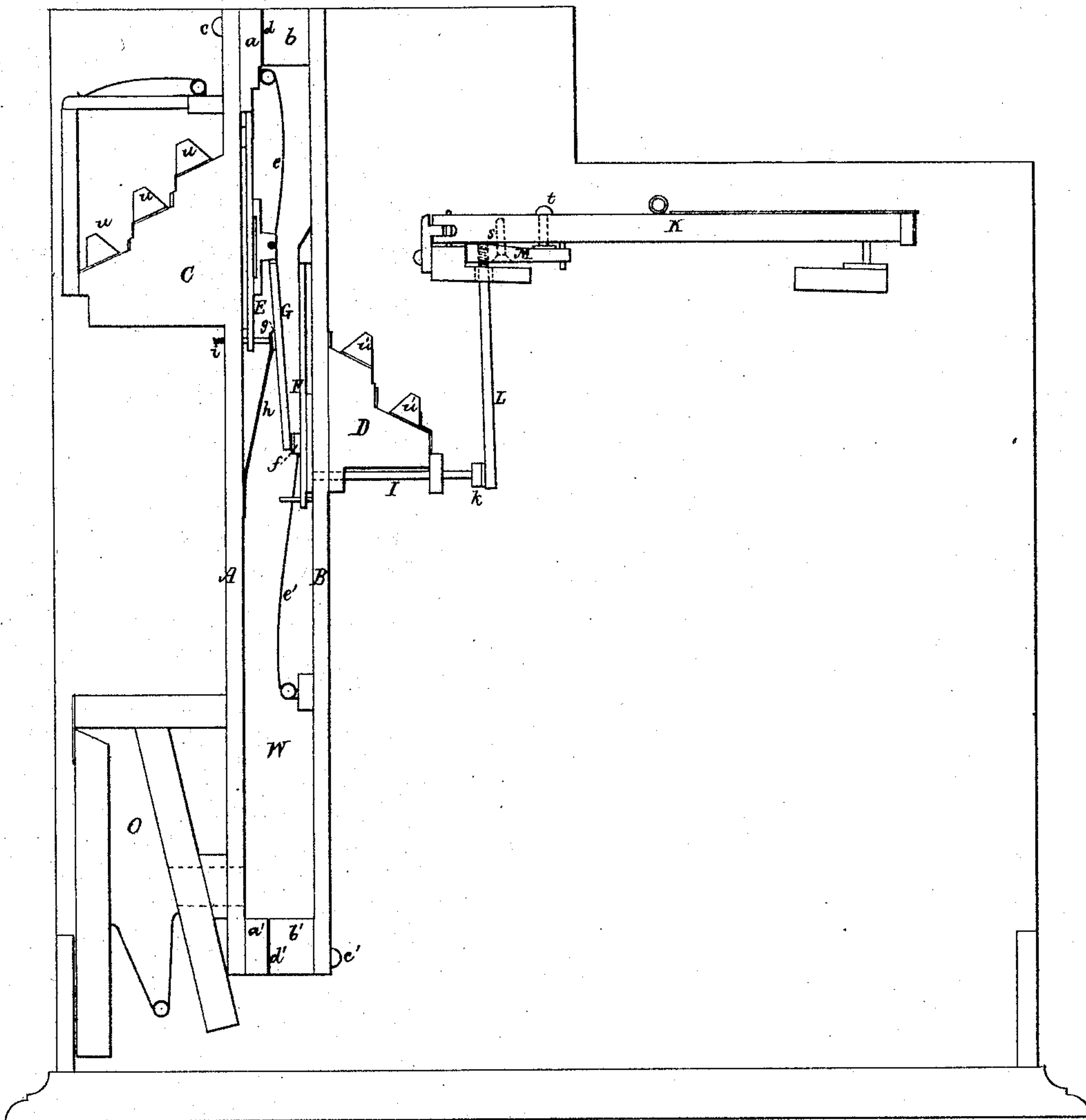


Reed-Organs.

No. 156,040.

Patented Oct. 20, 1874.



Witnesses.

S. N. Piper.

L. N. Hollen.

John P Richardson.

by his attorney.

N. H. Edd

UNITED STATES PATENT OFFICE.

JOHN P. RICHARDSON, OF CAMBRIDGEPORT, ASSIGNOR TO HIMSELF AND
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IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. **156,040**, dated October 20, 1874; application filed
March 11, 1874.

To all whom it may concern:

Be it known that I, JOHN P. RICHARDSON, of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Reed-Organs; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, which denotes a sectional elevation of my invention.

In carrying out the improvement I arrange vertically and parallel, or about so, to each other, two sounding-boards, and connect them at their ends, so as to form a wind-chest or chamber, and I apply to each board one or more reed-chambers or boards to contain one or more full sets of reeds or parts thereof, and within the wind-chest I arrange the reed-valves and connect such together and with the keys, so that each key, when struck, will simultaneously operate two valves, one belonging to a reed on one side of the wind-chest, and the other to a reed on the opposite side thereof.

In the drawings, A and B denote the two sounding-boards, connected at their ends by intervening pieces or strips *a a' b b'*, glued to them, and by screws *c c'*, going through the boards, and such intervening pieces and strips of packing *d d'*, placed in the joints between the pieces *a a'* and *b b'*, as shown, the whole constituting the wind-chest W. The socketed reed-boards are shown at C D, they being made and provided with reeds and swells *u u'*, as usual. Their valves are represented at E and F, they being pivoted to the wind-chest or sounding-boards and provided with closing-springs *e e'*. There is hinged to the upper of said valves a lever, G, which, near its lower end, rests against a cushioned projection, *f*, extended, as shown, from the lower valve. At or near its middle the said lever rests against a cushion, *g*, fixed upon a spring, *h*, arranged with the board A, in manner as shown, and fastened thereto. The spring, near its free extremity, rests against the inner end of a screw, *i*, screwed through the board A and answering as a guide to the valve over it. The screw and spring serve to adjust the fulcrum of the lever with reference to the lower valve. A push-pin, I, arranged to slide horizontally against the lower valve, has its head *k* abutting against an arm, L. The said arm L projects downward from

and at a right angle with a piece of wood, M, arranged underneath the key K, and connected with it by a screw, *s*, which goes upward through the piece M and screws into the key. Another screw, *t*, is screwed through the said key and against the piece M, and serves, with the screw *s*, to adjust the said piece M and its arm L, in order to bring the latter into its due relation with the push-pin. On depressing the key the push-pin will be forced inward, so as to open the lower valve, which, by means of the lever G, will simultaneously open the upper valve. The bellows O, an exhausting one, is to be supposed to be applied to the back board of the wind-chest.

The advantages of my invention over the horizontal wind-chest, with its reeds and keys, as usually arranged, are many. It not only admits of the instrument being made smaller in size, cheaper, and of greater power, but affords greater facilities for the introduction of solo-stops, and, besides simplifying the action, brings the reeds in better location for effect.

The back sounding-board, with its valves and their levers, can readily be separated from the front sounding-board, as occasion may require, for repair or adjustment of any of the operative parts within the wind-chest.

I claim—

1. The combination of the two sounding-boards A B, or wind-chest W, of which they constitute parts, the reed-boards C D, valves E F, and lever G, all arranged and applied substantially as specified.

2. The screw *i* and the spring *h*, arranged and combined with the wind-chest W, the two valves E F, and their operating-lever G, all substantially as described.

3. The piece M, and its operating-screws *s t*, arranged and combined with the key K and the arm L, all substantially as specified.

4. The push-pin I and arm L, in combination with the key K, the wind-chest W, reed-boards C D, valves E F, and lever G, all being arranged substantially as shown and described.

JOHN P. RICHARDSON.

Witnesses:

R. H. EDDY,
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