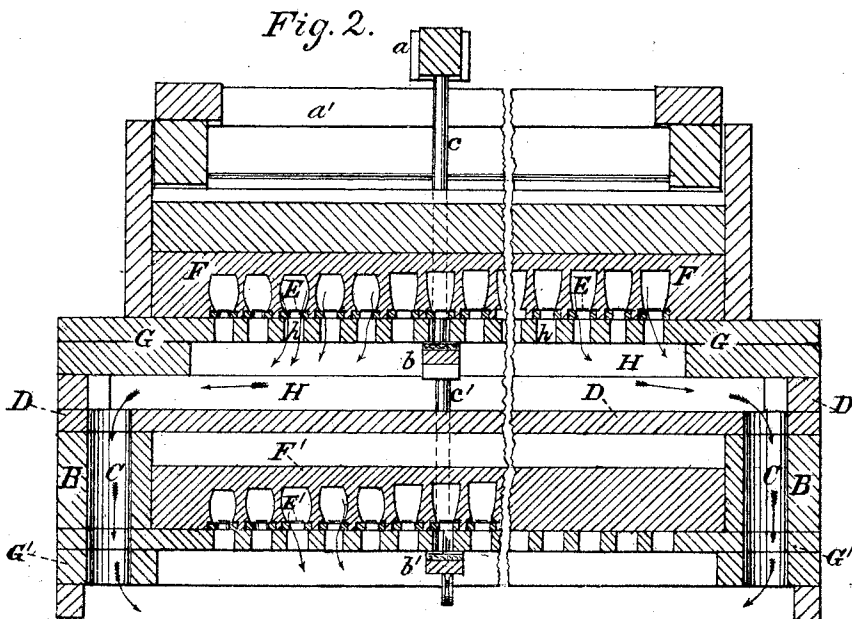
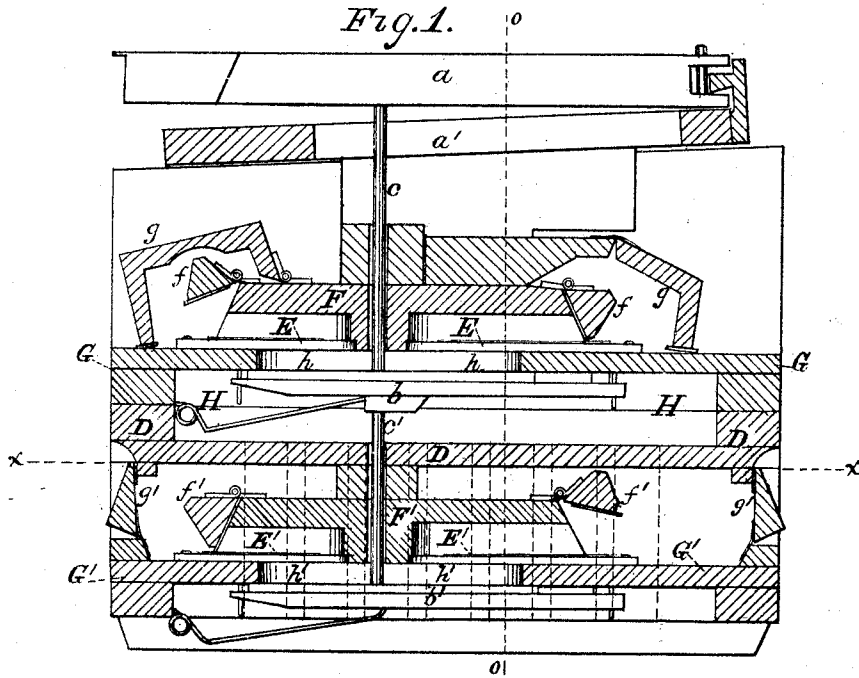


L. K. FULLER.  
Reed-Organs.

No. 142,690.

Patented September 9, 1873.



Witnesses.

Charles M. Higgins  
Arthur C. Fraser

Inventor.

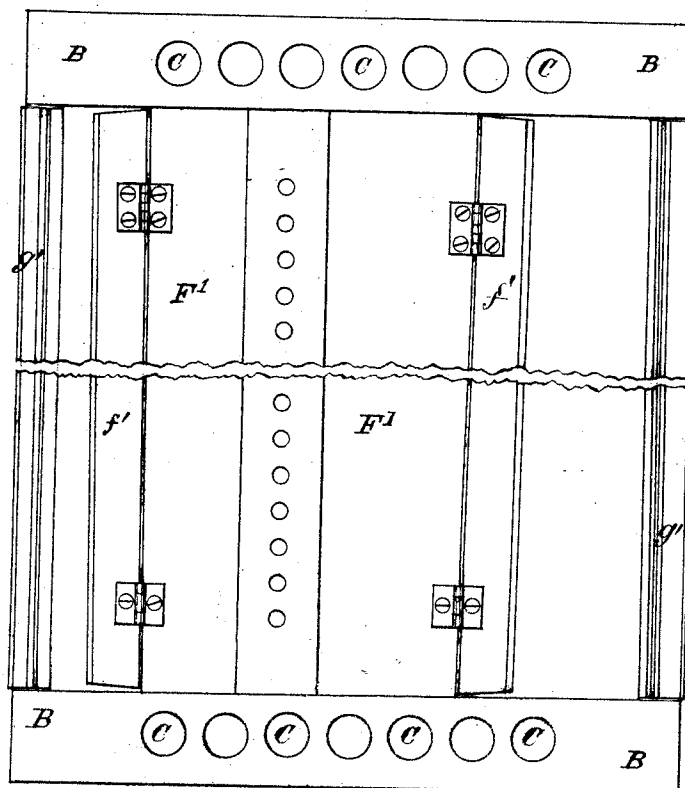
Levi K. Fuller  
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Fig. 3.



Witnesses:

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# UNITED STATES PATENT OFFICE.

LEVI K. FULLER, OF BRATTLEBOROUGH, VERMONT, ASSIGNOR TO J. ESTEY & CO., OF SAME PLACE.

## IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. **142,690**, dated September 9, 1873; application filed March 3, 1873.

*To all whom it may concern:*

Be it known that I, LEVI K. FULLER, of Brattleborough, in the county of Windham and State of Vermont, have invented Improvements in Reed-Organs, of which the following is a specification:

My invention consists in the arrangement of two or more reed-boards below the key-board in vertical series, a partition or diaphragm being interposed between said reed-boards, as hereinafter set forth; and in an improved formation and arrangement of the throats or wind-passages forming the communication between the wind chest or chests and the bellows.

Figure 1 of the accompanying drawings is a transverse section of a series of two actions and reed-boards arranged and constructed according to my invention. Fig. 2 is a longitudinal section on line *o o* of Fig. 1, showing the throats and other parts in sectional elevation; and Fig. 3 is a plan view, on line *x x* of Fig. 1, of the lower reed-board and wind-chest, showing the throats at each end in plan.

As represented in Figs. 1 and 2, *a a'* is the key-board of the instrument, one key only being shown, immediately below which are placed vertically the two actions, with their reed-boards, *F G* and *F' G'*, a partition or diaphragm, *D*, being interposed between them, which forms, in connection with the lower part of the upper action, an open chamber or wind-chest, *H*, in which the valves *b*, one only being shown, have room to move, and the air to circulate from the reeds *E* to the throats *C*, Fig. 2. A tracker-pin, *c*, extends from the key *a* to the upper valve *b*, and a second pin, *c'*, extends from the upper valve *b* to the lower valve *b'*, by which arrangement both valves are actuated by one depression of the key *a*. *G* is the foundation-board of the upper reed-board, and *G'* that of the lower reed-board, on which the reed-boards *F* and *F'* are placed. *h h'* are the valve-openings; *b b'* are the valves; *g g'* are the swells, and *f f'* the dampers, which parts are all of the ordinary construction; well known to makers of reed-organs, and require no further description. The vertical end pieces *B*, Figs. 2 and 3, of the foundation-board *G'* are perforated with a number

of vertical passages, *C C C*, which may be of circular or other form, and are continued through the diaphragm *D*, as shown, seen best and in sectional elevation in Fig. 2, in plan in Fig. 3, and by dotted lines in Fig. 1. These passages or throats form the wind-passage or communication between the several actions and the bellows, and are very simple in construction, perform their function effectively, and occupy very little space.

The course the air takes in passing through the instrument is shown by the arrows in Figs. 1 and 2. Entering through the reed *E* and valve-opening *h*, it passes into the chamber or wind-chest *H*, and from thence passes through the throats *C C*, Fig. 2, at each end of the action, and enters the bellows, which is supposed to be placed immediately below, and is in free communication with, the throats *C C*, but is not shown in the drawings.

As my improved throats occupy such small space and are so simple in construction, they add great compactness and simplicity to the entire instrument, and to a far greater extent than could be otherwise attained.

Any desired number of reed-boards may be thus arranged, one above another, the partition *D* being placed between them, the throats *C C* thus connecting one wind-chest with another, and the lowest wind-chest in the series with the bellows; the motion of the key being communicated to the several valves by a series of tracker-pins *c c'*, extending from one valve to another, as shown in Figs. 1 and 2. These reed-boards may be constructed with one, two, or more sets or partial sets of reeds, as may be desired by the constructor.

In practice they are firmly screwed or otherwise held together, and any one of them may be readily taken apart or separated from the others, without difficulty, for repairs or examination.

This arrangement of the actions and reed-boards, and the construction and arrangement of the throats and other parts, form an extremely compact, neat, and simple instrument, and one in which, with a suitable number of actions and a judicious use of stops, a very great variety of music may be produced.

I claim as my invention—

1. In combination with a series of actions, with their reed-boards, F G F' G', placed vertically below the keys, the interposed partition or diaphragm D, when said parts are constructed and arranged substantially as herein shown and described.

2. In a reed-organ, the throats C, arranged as shown, in combination with the series of actions and their reed-boards, arranged vertically below the keys, substantially as described, for the purpose specified.

3. The series of vertical actions arranged

below the keys, in combination with the throats C and diaphragm D, for operation in respect to a bellows, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

LEVI K. FULLER.

Witnesses:

J. FRASER,

CHARLES M. HIGGINS.