

R. E. LETTON.

Reed-Organs.

No. 134,754.

Patented Jan. 14, 1873.

Fig. 1.

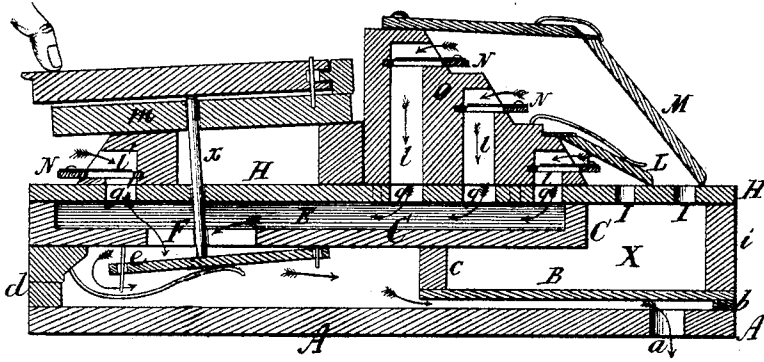


Fig. 2.

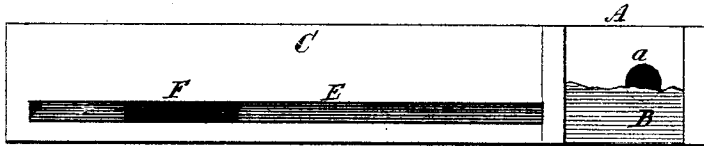


Fig. 3.

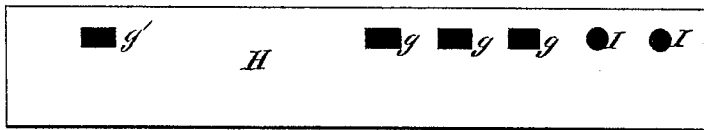
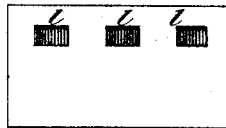


Fig. 4.



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UNITED STATES PATENT OFFICE.

RAPHAEL E. LETTON, OF QUINCY, ILLINOIS.

IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. 134,754, dated January 14, 1873.

To all whom it may concern:

Be it known that I, RAPHAEL E. LETTON, of the city of Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Organs, of which the following is a specification, reference being had to the accompanying drawing.

Nature and Objects of the Invention.

The invention relates to providing an organ, or other musical instrument of analogous construction operated by the action of an exhaust-bellows, with a means of so conducting the current of air operating the reeds into the wind-chest that one or more or all of the sets of reeds may be governed and controlled by one set of valves; also, in providing instruments of the above-mentioned description with a sounding-chamber to produce a free and delicate tone.

Description of the Accompanying Drawing.

Figure 1 is a vertical central transverse section of a device embracing the elements of the invention, being so much of the same as has connection with one key, portions being broken out to exhibit the interior arrangement and show the direction of the currents of air. Fig. 2 is a top or plan view of the lower portion of same, showing the slotted conductor, a part of the sounding-chamber with portion of the sounding-board broken out to show the mouth of the exhaust-orifice. Fig. 3 is a plan view of the lower side of that section of the device which is superposed upon the section shown at Fig. 2. Fig. 4 is a plan view of the lower surface of that part of the device having the banks of reeds and the swells.

General Description.

A in the accompanying drawing is the base-board, having its rear portion provided with the exhaust-orifice *a*, through which the current of air produced by the exhaust-bellows (not shown) is drawn. The upper surface of the extremity of the board A is provided with a cleat, *b*, which supports one end of the sounding-board B, the other end of which is sustained by the depending cleat *c* secured to the conductor C; the opposite end of the board A is furnished with the cleat *d* for sustaining one end of the conductor C. All of the above-

named elements extend laterally across the entire width of the instrument. The wind-chest is that space between the cleats *b* and *d* at each end, and the conductor C and board A, respectively, above and below. The conductor C is, in the present instance, formed of a board, which extends from the cleat *d* to a point or line above and about opposite the center of the sounding-board B, and laterally across the entire width of the instrument, and on its upper surface is provided with the slot E, which extends nearly the whole length of the conductor, a small portion of which is left at each end of the slot. An elongated aperture, F, of proper dimensions, and passing entirely through the conductor, is made in the slot E, adjacent that point at which a line passing vertically through the center of the key would intersect the slot E. The aperture F is closed on the under side of the conductor C by the usual valve *e* and the tracher-pin *x*. The board H extends over the entire internal area of the device, and is provided with the apertures *g g'*, situated directly above the slot E. These apertures are the inlets of the reed-tubes or passages *l l'*. The board H lies in close impact with the upper surface of the conductor C, its rear end being supported by the strip or cleat *i*, which extends across the rear of the instrument. The sounding-chamber X is formed of the space below the rear edge of the conductor C and board H, and above the sounding-board B, and between the inner surfaces of the strip *i*, cleat *c*, and the end of the conductor C. That portion of the board H above the rear portion of the sounding-chamber is furnished with the apertures I, above which are placed the swells L and M, which may be operated in any convenient manner. The reeds N may be mounted in sets upon the block O, through which are passages or tubes, *l*, each of which leads to one of the apertures *g*. A set of reeds may be placed below the keyboard *m*, as shown, which reeds are operated by a current of air drawn through the passage *l'*, connecting with the slot E in the conductor C. The reeds may be provided with stops, to be manipulated in the ordinary manner.

Operation.

The exhaust-bellows being operated, one or both of the swells L M are opened; the key is

depressed, opening the aperture F, through which the current of air is drawn, having previously produced the sound in its passage through the reeds and the apertures I.

It is obvious that a mellow resonant tone will be the result of the passage of the air through the apertures I as the reeds are speaking, since the apertures are situated directly above the sounding-chamber, the floor of which is formed of the sounding-board B; also, from the peculiar construction of the conductor C and its connection with the apertures *gg'* and passages *l l'*, that a large number of sets of reeds may be operated by the action of a single set of valves.

Claim.

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

The combination of the conductor C and sounding-chamber X, arranged and constructed substantially as shown and described.

In testimony that I claim the foregoing improvements in organs, as above described, I have hereunto set my hand and seal this 7th day of October, 1872.

R. E. LETTON. [L. S.]

Witnesses:

EBENEZER B. BARKER.

LUCIUS M. LOCKE.