J. R. PERRY.

ORGAN BELLOWS.

No. 104,060 Patented June 7, 1870.

Fig 1.

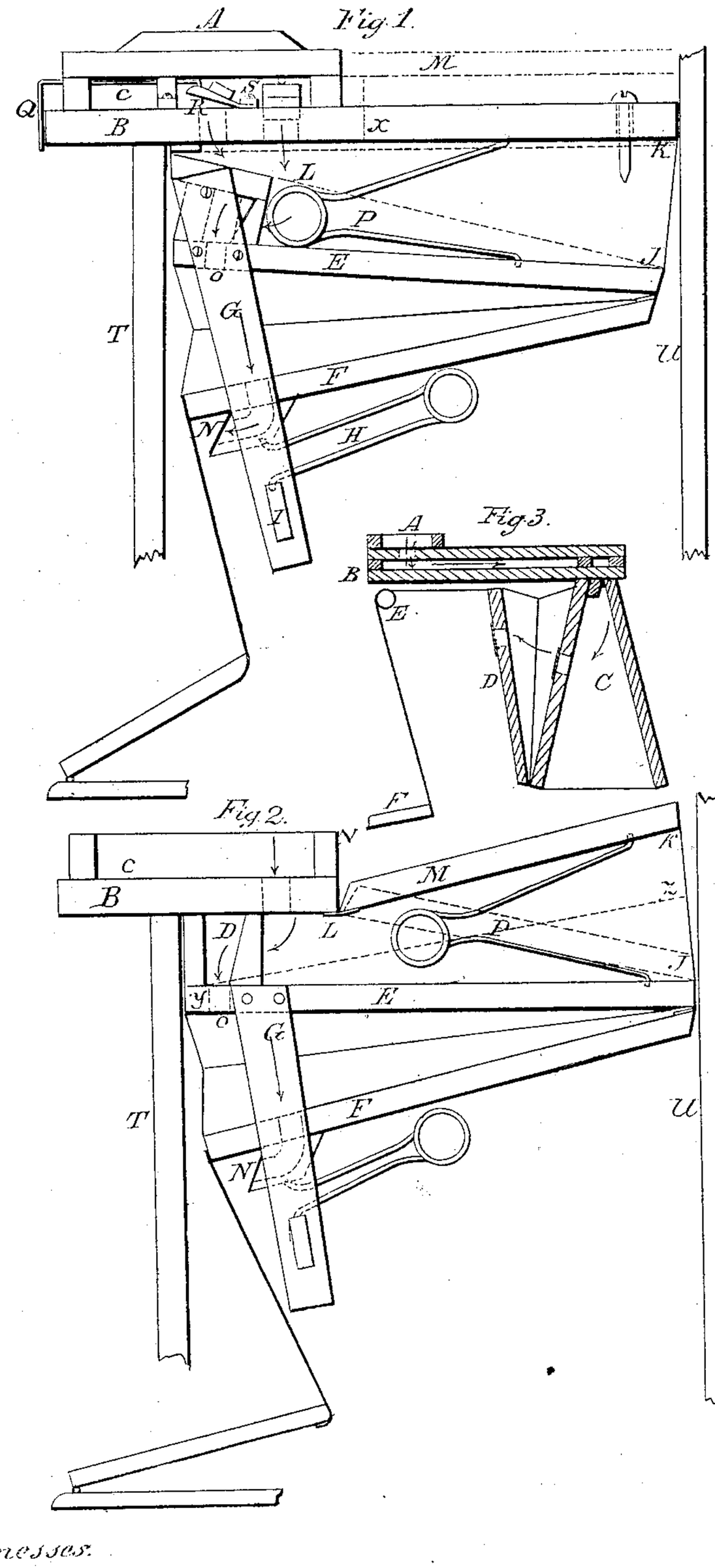

Fig 3.

Fig 2.

Witnesses.

Chas. A. Ziegler.

P. A. Pursel.

Inventor.

J. R. Perry.

United States Patent Office.

JOSEPH R. PERRY, OF WILKESBARRE, PENNSYLVANIA.

Letters Patent No. 104,060, *dated June 7*, 1870.

IMPROVEMENT IN ORGAN-BELLOWS.

The Schedule referred to in these Letters Patent and making part of the same.

I, JOSEPH R. PERRY, of Wilkesbarre, in the county of Luzerne and State of Pennsylvania, have invented certain Improvements in the Construction of Organ Actions and Bellows, of which the following is a specification.

Nature and Objects of my Invention.

It relates mainly to a new method of constructing and operating the vibrating board and valves of organ-bellows, and their manner of attachment to the reed-boards or chambers, thereby simplifying the construction of organs by a saving of materials and labor, as well as making them much more durable.

Figures 1, 2, and 3, are end views of the various parts of construction, which will be readily comprehended.

In fig. 1, A is the reed-board, secured to the horizontal board B, forming the upper part of receiving-chamber.

The space below the reeds is indicated by the letter C, containing the air-passages, and a means of changing its current from one passage to the other by a valve and a crooked lever, Q, which passes under the reed-chamber, and is to be attached to a knee-swell for operating it.

Immediately under the reed-chamber, and attached to the board B, is a piece forming the top of a suspended valve-chamber, D, which chamber is united to the vibrating leaf E, and, thus completed, forms a recessed vibrating board, so that, when the leaf is forced from J to K, it forms an angle of unexhausted air, J K L, as shown by dotted lines.

To this recessed vibrating board are attached the exhaust-boards F, in the usual manner, on which are placed the chambers N, with valve-leather to be operated in the usual manner.

The wooden frame G is attached to the vibrating board, and supports the springs H, which rest on the cross-bar I.

The dotted lines at O indicate the air-ways into exhaust-chambers.

It will be noticed that, if the board B is cut at the dotted line *x*, and raised to the letter M, as shown by the dotted lines, it will greatly increase the capacity of the receiving-chamber, as might be required when a larger number of reeds is to be used, in which case the reed-board would be placed on M.

The spring P is used to expand said chamber.

The letter S may indicate a tremolo-chamber, and

R, the clapper, to close when forcing the air through it.

The letter T shows the front of an organ, and

U, the back board.

It will be observed that only one of each kind of bellows is shown, but in practice either plan adopted will require both ends to be alike.

In fig. 2, the valve-chamber D is attached to the stationary board B, which forms the bottom of the reed-chamber, under the reed-board, and may be permanently attached to the board E, in which case it forms a similar chamber to that in fig. 1, for, if the boards are drawn together, it will leave an unexhausted portion of air, equal to the space shown by the dotted lines J K L, or J L. It may, however, be hinged to board E, thus letting E become a vibrating board, as well as the board M above it. In that case, it will swing from Y to the letter Z, shown by the dotted line, and let a similar unexhausted space for air.

The vibrating leaf M, hinged to the board B at any part from L to V, will materially enlarge the capacity of the receiving-chamber, when found necessary, in supplying a great number of reeds.

The spring P (one or more of which may be used) acts in expanding the receiving-chamber.

The wooden frame G is used in both methods to sustain the pressure needed in throwing up the exhaust-boards.

If the board E is fixed, the frame G, being attached thereto, will remain stationary, but if swinging, as it may, then it will maintain its relative position, and be carried with the vibrating board into any position it may assume.

Fig. 3 is an end view of the ordinary mode of construction; A, reed-chamber; B, air-conductor; C, the receiving-chamber; and D, the exhaust-boards; E, a pulley, to convey the belt to the foot-boards F. The arrows indicate the current of air as it passes from the reeds.

The air-conductor B is liable to split, and as a motion from the foot must remove the air at so great a distance from the reed-chamber, the elasticity of the air is liable to let the reed play reluctantly, or with a disposition to impromptitude, when the key is touched. This disposition is, in part, overcome by filing the reed very thin, but in so doing it destroys the solidity of the tone, and gives it the character of an accordeon sound, instead of the grandeur of the pipe tone.

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

1. The vibrating valve-board E, provided with the chamber D, and combined with the board B, which board forms the bottom of the reed-chamber, when all these parts are arranged to operate substantially as described.

2. The valve-chamber N, on the exhaust-board, combined with the suspended valve-chamber D, as constructed, for the purposes set forth.

J. R. PERRY.

Witnesses:

CHAS. A. ZIEGLER,

P. H. PURSEL.