

J. A. SMITH.
Reed-Organs.

No. 141,468.

Patented August 5, 1873.

Figure 1.

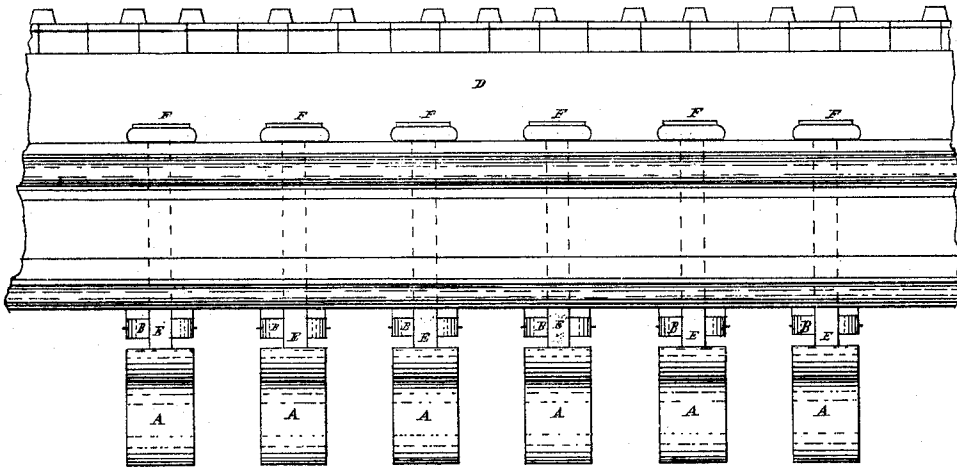


Fig. 2.

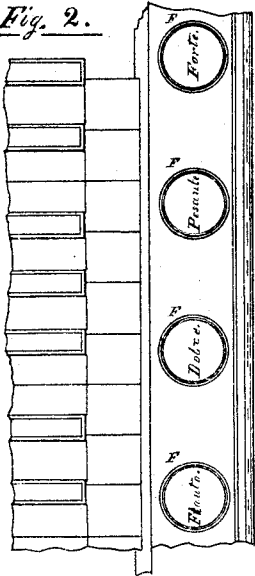
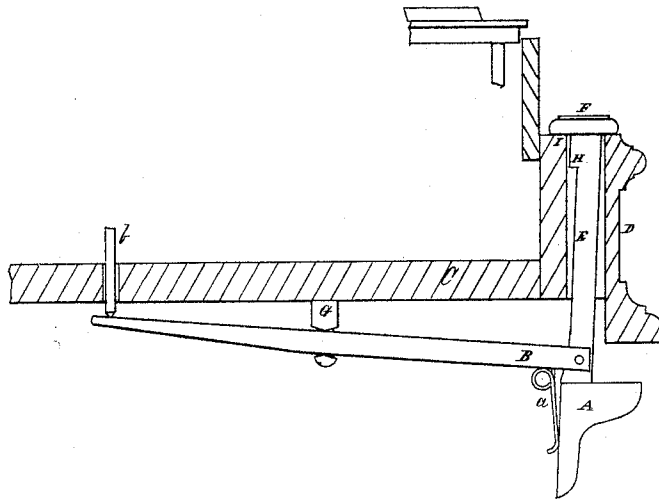


Fig. 3.



Witnesses.

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JOHN A. SMITH, OF ERIE, PENNSYLVANIA.

IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. **141,468**, dated August 5, 1873; application filed October 23, 1872.

To all whom it may concern:

Be it known that I, JNO. A. SMITH, of Erie, in the county of Erie and State of Pennsylvania, have invented a new and Improved Mode of Operating the Stops of Organs; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon, the same forming a part of this specification.

The first part of my invention relates exclusively to a series of levers or plungers arranged beneath and in front of the key-board or front rail of the organ, and in such a manner as to be operated by the knee of the operator. The nature of my invention consists in providing an organ with a series of levers placed beneath the key-board of the same, and so arranged as to be operated by the knee of the operator. Also, in the construction and combination of the various parts of my device. These levers or plungers may be variously constructed; but they must be actuated by the knee. I have already devised various ways of constructing the mechanism by which the movement of the knee upon the levers or plungers is communicated to the stops, and the second part of my invention relates to one mode of construction only.

My device is illustrated in the accompanying drawing, as follows:

Figure 1 is a front view of an organ, showing the front rail D, and my series of levers or plungers A A A A A, &c. Fig. 2 is a plan, and Fig. 3 is a transverse section of the front part of an organ in which the various parts of my device are constructed and arranged.

The different parts, as seen in these figures, are indicated by letters, as follows: C is the base-board of that part of the organ just beneath the key-board. D is the front rail. A is that part of the plunger or lever which comes in contact with the knee of the operator, and which I denominate the knee-piece. B represents the levers; E, the plungers; F, the register-tablet; and G the fulcrum of the levers; and *a* is an actuating spring, and *b* is to represent the connection between the lever B and the stop to be operated.

To enable those skilled in the construction

of organs to construct and apply my device, I will more fully describe its construction.

The front rail D and base-board C are the same as in any organ, except that the front rail is grooved or mortised so as to admit the plungers E. However this may not be done, but the base-board C may be mortised near the front rail, which construction would be essentially the same. The plunger E is made of wood or any other desirable material, and passes from the lever B, to which it is jointed, up through the mortises before mentioned. At its upper end the plunger has a catch, H. The knee-pieces A are really a part of the plunger E, and may be formed by a continuation of the lever B; hence I use the expression "levers or plungers." These knee-pieces are so fashioned as to be conveniently moved by either an upward or a forward movement of the knee, as the case may be. Their form is seen in the drawing. The levers B are of ordinary construction, and are jointed with the plungers, and fulcrumed at G. Motion may be communicated from them to the stops, as the case may require. The spring *a* is attached to the levers B, and presses against the knee-piece or plunger. The effect of this is to engage the catch H of the plunger E at the proper point, as will appear hereafter. The register F is a tablet attached to the top of the plunger, on which is inscribed the name of the stop with which that individual plunger of the series is connected. So when my device is used, the names of all the stops appear along the top edge of the front rail D, and the position of the several stops is known by noting the position of the tablets on which their names are inscribed. Thus, if the tablet bearing the word "flute" is raised, the operator knows that flute-stop is "on."

The operation of my device is as follows: The operator, to put on a stop, lifts the knee-piece of the proper A of the series. This movement raises the plunger E, and when the catch H reaches the top of the front rail D it engages, and the lever B is held up, and the proper stop is left on. To take the stop off, the operator shoves his knee against the knee-piece A, and gives it a backward motion, or against the spring *a*, which disengages the catch H, and the plunger drops, carrying

down the lever B and closing the stop. As before stated, the series of levers or plungers are arranged below and in front of the key-board, and within easy reach of the knee of the operator.

I am well aware that certain levers have been placed in that position on an organ and are operated by the knee, usually by a swinging side movement of the knee; but I believe myself to be the original and first inventor of a series of stop-levers or plungers (which series shall contain all, or as many as may be desired of the stops) beneath the key-board placed in such a manner as to be operated by the knee of the operator, leaving his hands at all times free to operate the keys, said operation of the stops to consist in placing either or all of the stops on or off by like movements of the knee upon either or all of the individual A's of the series A A A, &c. Of course all the stops cannot be operated by one movement of the knees, but more than two may be, and all can be operated in quick succession, and without moving the hands from the key-board, which result I believe can only be accomplished by the use of my series, whatever

be the mode of construction of the individuals of that series; therefore,

What I claim as new, and desire to secure by Letters Patent is as follows:

1. In combination, with the stops of a reed-organ, a series of stop-actuating devices, arranged to be severally operated by a movement of the knee, substantially as and for the purposes described.

2. The front rail D, in combination with the plunger E, as shown, and for the purposes mentioned.

3. The combination of the plunger E, knee-piece A, and lever B, constructed and operating together, substantially as and for the purposes mentioned.

4. The plunger E, constructed as described, in combination with the lever B and spring a, as and for the purposes mentioned.

5. The register F, in combination with the plungers E, and front rail D, as shown and described.

JOHN A. SMITH.

Witnesses:

J. B. MCINTOSH,

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