J. S. ROBINSON.

REED-ORGAN STOP-ACTIONS.

No. 179,959. Patented July 18, 1876.

Fig. 1.

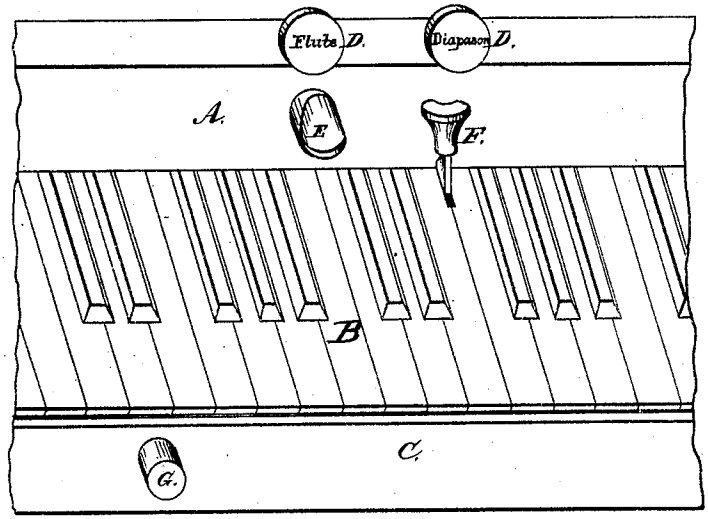


Fig. 2.

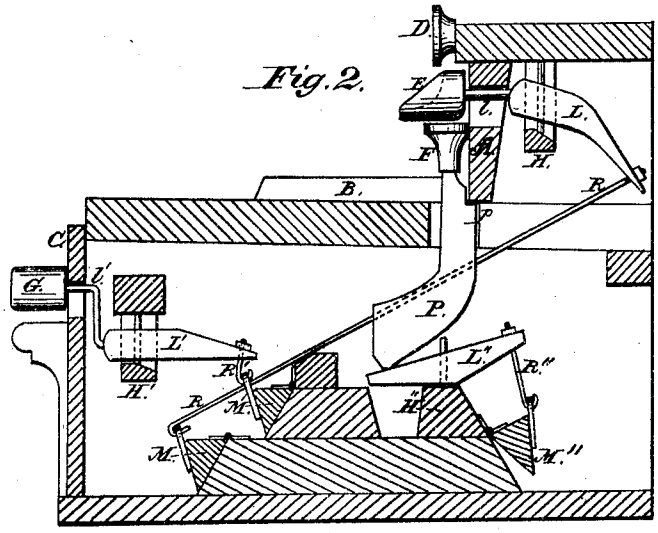


Fig. 5.

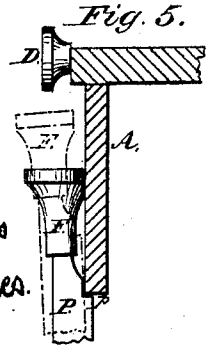


Fig. 3.

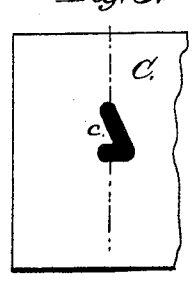
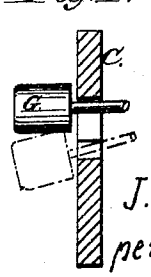


Fig. 4.



Witnesses:
Edwin James
John K. Jones.

Inventor:
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Asso: Atty

UNITED STATES PATENT OFFICE.

JAMES S. ROBINSON, OF NORTH EAST, PENNSYLVANIA.

IMPROVEMENT IN REED-ORGAN STOP-ACTIONS.

Specification forming part of Letters Patent No. **179,959**, dated July 18, 1876; application filed August 17, 1875.

To all whom it may concern:

Be it known that I, JAMES S. ROBINSON, of North East, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Reed-Organs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a method of operating the stops or mutes of organs by means of keys, placed to be conveniently operated by the fingers or thumbs of the operator, in place of pull-knobs. I am aware that the mutes of organs have been operated by keys, as above named, in place of pull-knobs; but my invention consists chiefly in obtaining this result by a more simple arrangement of parts.

My invention is shown in the accompanying drawings, as follows: Figure 1 is a perspective view of a portion of the key-board of an organ, and shows three different methods of arranging the stop-keys. Fig. 2 is a section view across the body of the organ, and shows the arrangement of mutes and my methods of arranging my devices for operating the same. Figs. 3, 4, and 5 are detached views.

The initial part of my invention consists in having one actuating-lever, which I so place as to be acted upon directly by the finger, and which, by a single connecting-rod, acts directly upon the mute. (I also show a modification of this plan.) By my arrangement I avoid compounding levers and parts, and save cost of construction, obviate friction and liability of derangement of parts. I illustrate, by my drawings, various arrangements of these parts; but all are substantially the same, the difference being in the position of the stop-keys.

In the accompanying drawing, A is the name-board; B, the key-board; C, the key-slip. E, F, and G are the stop-keys. D D are the stop-registers. L L′ L″ are the actuating-levers. R R are the connecting-rods. M M are the mutes. H H′ H″ are the lever fulcra or hangers.

In describing my invention I will confine myself to one method of arrangement of parts, and then show how the arrangement may be varied.

E is a stop-key placed in front of the name-board A, and is attached to the rod *l*, which is a part or continuation of the lever L, which passes through a slot in the name-board. The key E is operated on by the finger of the operator. The lever is fulcrumed in the hanger H, which is placed at the proper distance from the name-board, and is attached to the board above. The lever, at the opposite end from the key, is formed to suit the direction which the rod R will take. As in the present showing, when the rod is to run to the front of the instruments the lever is curved down, so as to allow the rod R to pass through it at about right angles. If the rod were to run to the back of the instrument, another form would be given to the lever. As many levers may be arranged in this way as may be desired, and the rods can take as many directions. These rods R pass between the key-levers, as shown, and also between the tracker-pins, and in no way interfere with the action of those parts. The rods, it will be seen, connect directly with the mutes, and no complication of parts exists. The slot in the name-board through which the rod *l* of the lever L works is so formed as to have a catch, *c*, (see Fig. 3,) into which the rod *l* naturally falls, and thus the mute is kept open. When it is desired to close the mute a slight lateral motion or touch on the key will disengage the lever, and the spring on the mute will close it. It will, therefore, be noticed that I use no springs except such as are already in use on the instrument. When the mute is opened the key is seen depressed, as is shown by the dotted lines in Fig. 4, and by this variation of position the operator can tell the position of the mutes. The names of the mutes may be placed on the keys (stop-keys) or on tablets contiguous thereto. When it is desired to place the stop-keys along the key-slip, to be operated by a downward pressure of the thumb, it can be so done. (See stop-key G, lever L′.) In this case the levers will all be below the keys, and the connecting-rods do not have to pass between them. The levers themselves,

however, have to pass between the tracker-pins, and so must be thin enough to do so. The hangers H′ in this case can be attached at proper points, either from parts above or built up from the boards below, (as is H″.) The key-slip in this case will be slotted, the same as the name-board in the other case, and the rod *l′* will engage and disengage with the catch or notch *c* in the same manner.

Another mode of operating the actuating-levers is by a plunger, P, passing down through the keys B in front of the name-board. The plunger P is provided with a finger-key, F, and connects directly with the actuating-lever L″, which is the same as in the other modes of operation described. The levers in this case may be fulcrumed on hangers like H′ or H″. The plunger P is provided with a notch or catch, *p*, which catches under the edge of the name-board A as the lever is depressed, and holds it thus until disengaged by a slight pulling movement of the finger. The position of the stop or mute is shown by the relation of the key to a tablet bearing the name of the stop, which is attached to the name-board above and contiguous to the key. The tablet is stationary while the key is movable; hence, by their relation one to the other, the operator can quickly see the position of the stop. This feature is also used when the other form of key is used in the name-board. When the keys are placed along the key-slip the names of the stops are placed on them, or else on the key-slip beside the keys, and the position of the mutes is shown by the keys being in line or depressed out of line, as before stated.

Now, I am aware that the use of a lever and connecting-rods for operating the stops of an organ is old; but

What I claim as new is as follows:

1. The pivoted lever L, provided with the finger-key E, arranged to project through the name-board, the rod R, and stop M, all constructed and arranged to operate substantially as and for the purposes mentioned.

2. The pivoted lever L′, provided with the finger-key G, arranged to project through the key-slip, the rod R′, and stop M, all constructed and arranged to operate substantially as and for the purposes set forth.

3. The combination of the key F, vertical plunger P, lever L″, rod R″, and stop M″, the said parts being constructed and arranged to operate substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAMES S. ROBINSON.

Witnesses:
JNO. K. HALLOCK,
F. CURBZE.