H. W. SMITH.
Reed-Organ.

No. 207,908. Patented Sept. 10, 1878.

Fig. 1.

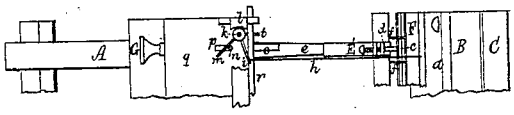


Fig. 2.

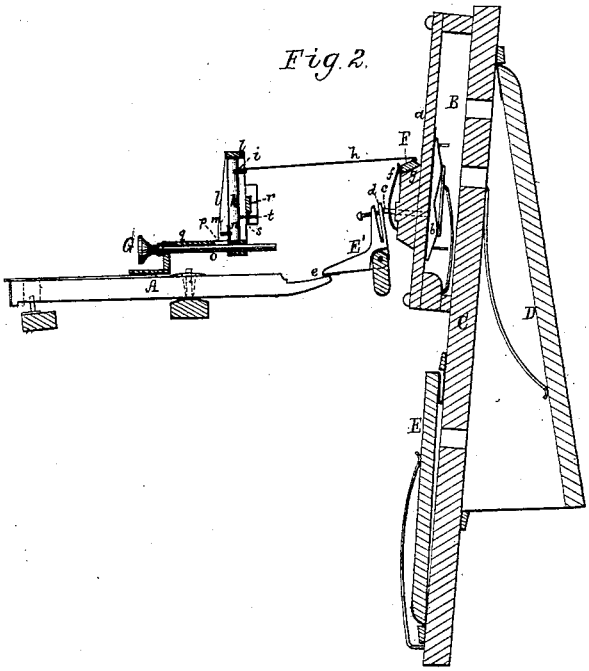


Fig. 4.

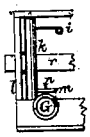
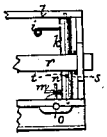


Fig. 3.



Witnesses.
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John R. Snow.

Inventor.
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R. H. Eddy

UNITED STATES PATENT OFFICE.

HENRY W. SMITH, OF WEST NEWTON, MASSACHUSETTS.

IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. **207,908**, dated September 10, 1878; application filed July 8, 1878.

To all whom it may concern:

Be it known that I, HENRY W. SMITH, of West Newton, of the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Reed-Organs; and do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, and Fig. 2 a sectional elevation, of my invention as applied to the stop-valve of the reed of an organ. Fig. 3 is a rear elevation, and Fig. 4 a front view, of the stop-frame and the mechanism applied thereto.

My invention is for moving relatively to their seats the stop valve or valves of a reed-organ or musical instrument, it being a new and useful or improved mechanism for such purpose. In practice, it has been found to be highly efficient.

It consists, first, in the combination of a stop and its friction devices with a vertical shaft provided with two arms and a cord connecting one of such arms with the stop-valve of a reed; second, in the combination of a slide-bar provided with a stud with the shaft having two arms and a cord to one of them, all as hereinafter explained; third, in the combination of the slide-bar provided with a stud with the shaft having three arms and a cord, and with a stop and friction devices thereof, all essentially as explained.

In the drawings, A denotes the key; B, the wind-chest, and C the intermediate or support board of the two movable flies D E of the bellows.

The reed-board *a* has the valve *b* and its push-pin *c* applied to it in the usual way, they being arranged as represented. The push-pin, at its outer end, abuts against the elastic tongue *d* of the lever E′, disposed as shown, and having its lower arm lapped on the rear arm, *e*, of the key.

The reed stop-valve is shown at F, it being provided with one or more springs, *f*, to press it toward or on its seat *g*. This valve, by a cord, *h*, I connect with an arm, *i*, extending horizontally from an upright shaft, *k*, pivoted at its ends in a frame, *l*, arranged as represented.

From the said shaft, and below the arm *i*, another arm, *m*, is projected in a direction at about forty-five degrees to the arm *i*, and against and across a stud, *n*, extending vertically from the shank *o* of a slide or stop, G, arranged within and so applied to the frame *l* as to be capable of being moved or slid longitudinally therein. The stud *n* extends up through a slot, *p*, in the base *q* of the frame.

The slot and stud serve to limit the movements of the stop, and, as friction devices, to hold the key in either of its two positions against the pressure of the spring or springs of the stop-valve.

Arranged to slide lengthwise in the frame *l* is a bar, *r*. From this bar a stud, *s*, projects downward across and against an arm, *t*, extending horizontally from the shaft *k*.

On moving the bar in one direction the stud, acting against the arm, will cause the shaft to be turned, so as to effect the opening of the stop-valve or its movement off its seat.

The said bar, when in an instrument, is to extend across several or all of the vertical shafts of the stop mechanism of the series of stop-valves, and to be provided with studs, as described, to act against arms extending from such shafts, whereby, by the movement of the bar, all such valves may be caused simultaneously to be moved off their seats.

The bar may be operated or moved in by the knee of the performer pressed against a suitable mechanism applied to the bar for such purpose.

The stop, as applied to the upright shaft, enables the stop-valve to be moved either way independently of the bar, which serves, as described, to open all the stop-valves or only those not opened by the stops.

I claim as my invention as follows:

1. The combination of the stop G and its friction devices *n p* with the vertical shaft *k*, its arms *i m*, and the cord *h*, connected with the stop-valve, all being arranged and applied substantially as set forth.

2. The combination of the slide-bar *r* and stud *s* with the shaft *k*, its arms *t i*, and the cord *h*, connected with the stop-valve, all being essentially as shown and described.

3. The combination of the slide-bar *r*, provided with the stud *s*, with the shaft *k*, its arms *t i m*, and cord *h*, and with the stop G and its friction devices *n p*, all being arranged to operate essentially as explained.

HENRY W. SMITH.

Witnesses:

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