

H. R. MOORE.

Operating the Stops of Organs.

No. 136,664.

Patented March 11, 1873.

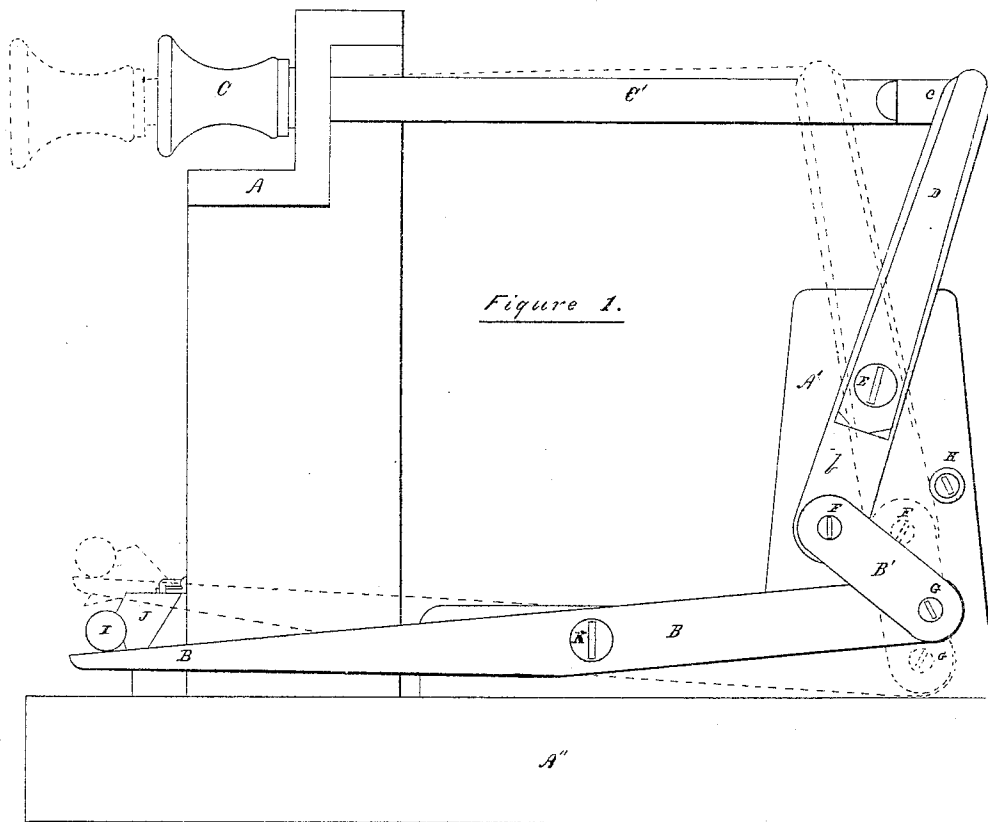


Figure 1.

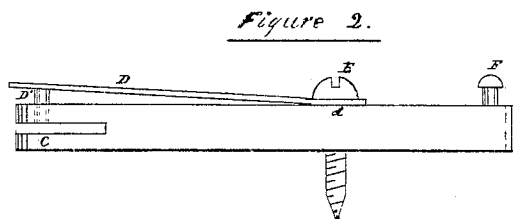


Figure 2.

Witnesses.

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HARTWELL R. MOORE, OF ERIE, PENNSYLVANIA.

IMPROVEMENT IN OPERATING THE STOPS OF ORGANS.

Specification forming part of Letters Patent No. 136,664, dated March 11, 1873.

To all whom it may concern:

Be it known that I, HARTWELL R. MOORE, of Erie, in the county of Erie and State of Pennsylvania, have invented a new and Improved Device for 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, and in which—

Figure 1 represents such an arrangement of parts as is necessary to show the workings of my invention.

In the figure, A represents the stop-board of an organ. C is one of the stop-knobs; and C' is the actuating-rod which connects the knob C with the series of actuating-levers. J is the stop-valve which is to be actuated.

The figure is not intended to represent any particular part of an organ, but is merely a diagram displaying, as before stated, such an arrangement of parts as is necessary to show my invention; and from it it will be seen that my device can be used in an infinite variety of forms.

The actuating-rod C' connects at *c* with the lever *b*. This lever *b* is pivoted on the center-pin E, and oscillates horizontally. Beneath this is a lever, B, which is pivoted on the center-pin K and oscillates perpendicularly. Here we now have motion in two directions, which is necessary in the operation of almost every stop-valve in an organ. The lever B raises the valve J by pressing upon the pin I.

The arrangement thus far described is very common; but my invention lies in the manner of communicating power or motion from the lever B to the lifting-lever B. This is usually accomplished by the lower end of the lever *b* coming in immediate contact with the lifting-lever B, and may be called a "scraping movement." While this movement performs the work of lifting the valve, the operator must exercise the same amount of force and the same amount of time on the knob C to close the valve, because of friction, that he used to open it. Now, to obviate this difficulty I

connect the lever *b* with the lever B by a connecting-link, B', which is loosely pivoted to each of the levers by the center-pins F and G; and I place a stop-pin, H, at the proper place to arrest the movement of the lever *b* when the centers of motion E, F, and G are in line. (See dotted lines showing the position of the parts when the valve is raised.) Now, when the operator pulls the knob C to open the required stop-valve the various parts are thrown into the position shown by the dotted lines. The lever *b* has communicated its motion to the lever B by the connecting-link B', and the stop-pin H has arrested movement at the very point where the work was accomplished. Now, it will be at once seen that when the operator desires to shut the valve J it is only necessary to shove in the knob C back just far enough to throw the center-pin F out of line with E and G, and then the force of the valve-spring will close the valve.

So it will be seen that by my device the return movement of the knob C is almost automatic. It is automatic after a certain point has been reached.

The advantage gained is almost too apparent to need mentioning. The operator desires to close one stop and open another as quickly as possible. By my device all that he has to do is to simply touch the drawn knob with his hand in its way to the knob representing the stop he desires to open; for but a slight pressure on the drawn knob throws the center-pin F past the sticking-point, and then the valve closes automatically. Another advantage gained by my device is durability, for the friction incident to the scraping movement causes great wear and tear.

What I claim as my invention is as follows—

The combination of the connecting-link B' with the actuating-levers B and *b*, and the stop-pin H or its equivalent, for the purposes shown and described.

HARTWELL R. MOORE.

Witnesses:

G. P. DAVIS,
JNO. K. HALLOCK.