

H. W. SMITH.  
Reed-Organ.

No. 220,998.

Patented Oct. 28, 1879.

Fig. 1.

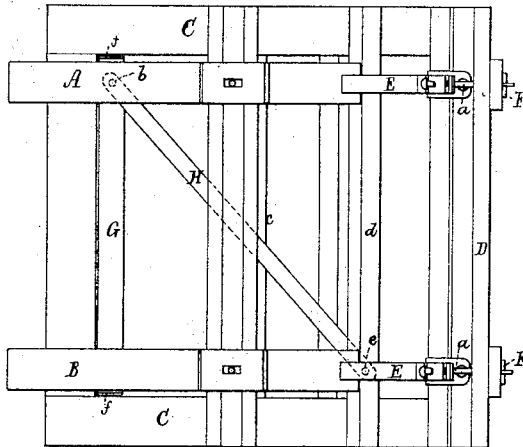


Fig. 4.

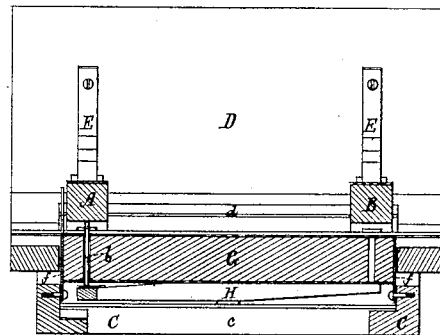


Fig. 2.

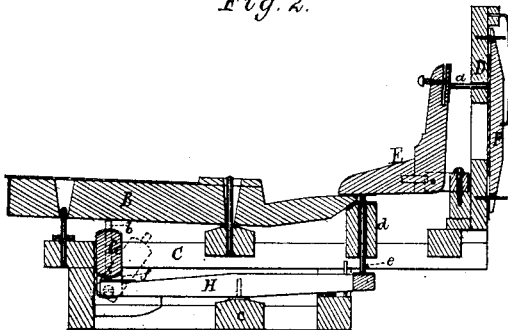
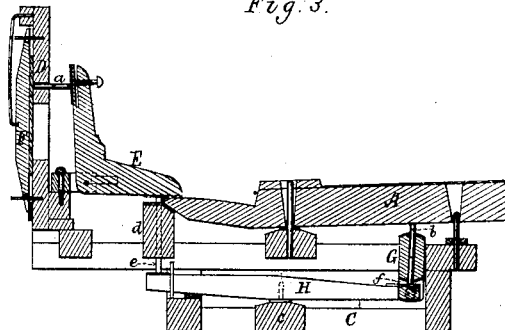


Fig. 3.



Witnesses:  
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# UNITED STATES PATENT OFFICE

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## IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. **220,998**, dated October 28, 1879; application filed June 25, 1879.

*To all whom it may concern:*

Be it known that I, HENRY W. SMITH, of Newton, of the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Reed-Organs; and I 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 of a reed-organ upright sounding or reed board and two octave reed-valves and their actions provided with my improvement or coupling devices. Figs. 2 and 3 are vertical sections thereof, taken, respectively, through the keys. Fig. 4 is a transverse section, taken through the two keys and the swing-bar, to be hereinafter described.

In carrying out my invention, I combine with an upright sounding or reed board and two octave keys and their elbow-levers and reed-valves, arranged and applied as described, a coupler or oblique lever and two push-pins, whereby by depressing one key the elbow-lever thereof and that of the fellow octave key may be simultaneously put in operation and the latter key be at rest.

Furthermore, with such devices I employ a movable or swing bar to carry and support the push-pins of each key, such bar being so applied to the key-support frame as to be capable of being turned down or moved so as to throw the push-pins of the keys either into or out of action with their keys, as occasion may require.

I am aware that it is not new to combine with the keys of a piano-forte a mechanism by which, on one of them being struck, its own hammer, as well as that of an octave key, may be simultaneously operated or caused to strike their strings. Therefore I do not claim such in the abstract or to be my invention, which relates solely to reed-organs having upright sounding or reed boards.

In the drawings, A and B denote the two octave keys; C, their support-frame; D, the upright sounding or reed board; E E, the key elbow-levers; F F, the reed-valves, and *a a* the push-pins, extending from the elbow-levers to such valves, all being arranged so that when either key is struck by a performer

its reed-valve will be opened or forced off its seat.

Extending along underneath the longer arms of the keys, in manner as shown, is a bar, G, down through which there is to be a push-pin, *b*, for and to each key, such pin being adapted to slide vertically in the bar and to rest on one arm of an oblique lever, H, pivoted at its middle on a support-bar, *c*, and extending from the bar G to and underneath the bar *d*, on which the shorter arms of the keys rest.

Within the bar *d*, and adapted to slide vertically therein, is a push-pin, *e*, which at its lower end rests on the oblique lever, while at its upper end such push-pin comes directly beneath the lower arm of the elbow-lever of the key B.

On striking the key A the two elbow-levers E of the octave keys A B will be simultaneously put in movement.

The bar G at its ends is fixed to arms *f f*, that extend down from it and are pivoted to the frame C, all being so as to enable the said bar and its push pin or pins to be swung or moved from vertical down into an inclined position, (as shown by dotted lines,) such as will carry the push-pin of each key out of action therewith, and with the said key and its oblique lever, in order that on the key being struck it shall impart no movement of the push-pin of the said lever, the key, under such circumstances, causing its own reed-valve only to be operated.

There is to be to every two octave keys of the key-board of a reed-organ an oblique lever and its two push-pins arranged with such keys and the elbow-lever of one of them, or with such and the swing-bar, in manner substantially as set forth.

I claim as of my invention—

1. The combination of two octave keys and their elbow-levers E E', arranged with each other and applied to an upright sounding-board and its reed-valves as described, with a coupler or oblique lever and two push-pins, all being adapted so that by striking one key both elbow-levers of the octave keys will be simultaneously operated or moved, so as to cause their valves to be opened.

2. The combination of the bar G, movable in the key-support frame C, as specified, and the push-pin *b*, adapted to such bar in manner as described, with the two octave keys A B, their coupler or oblique lever H and its push-pin *c*, and the elbow-levers E and their push-pins *a*, and reed-valves F and the up- | right reed-board D therefor, all being substantially and to operate as set forth.

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Witnesses:

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