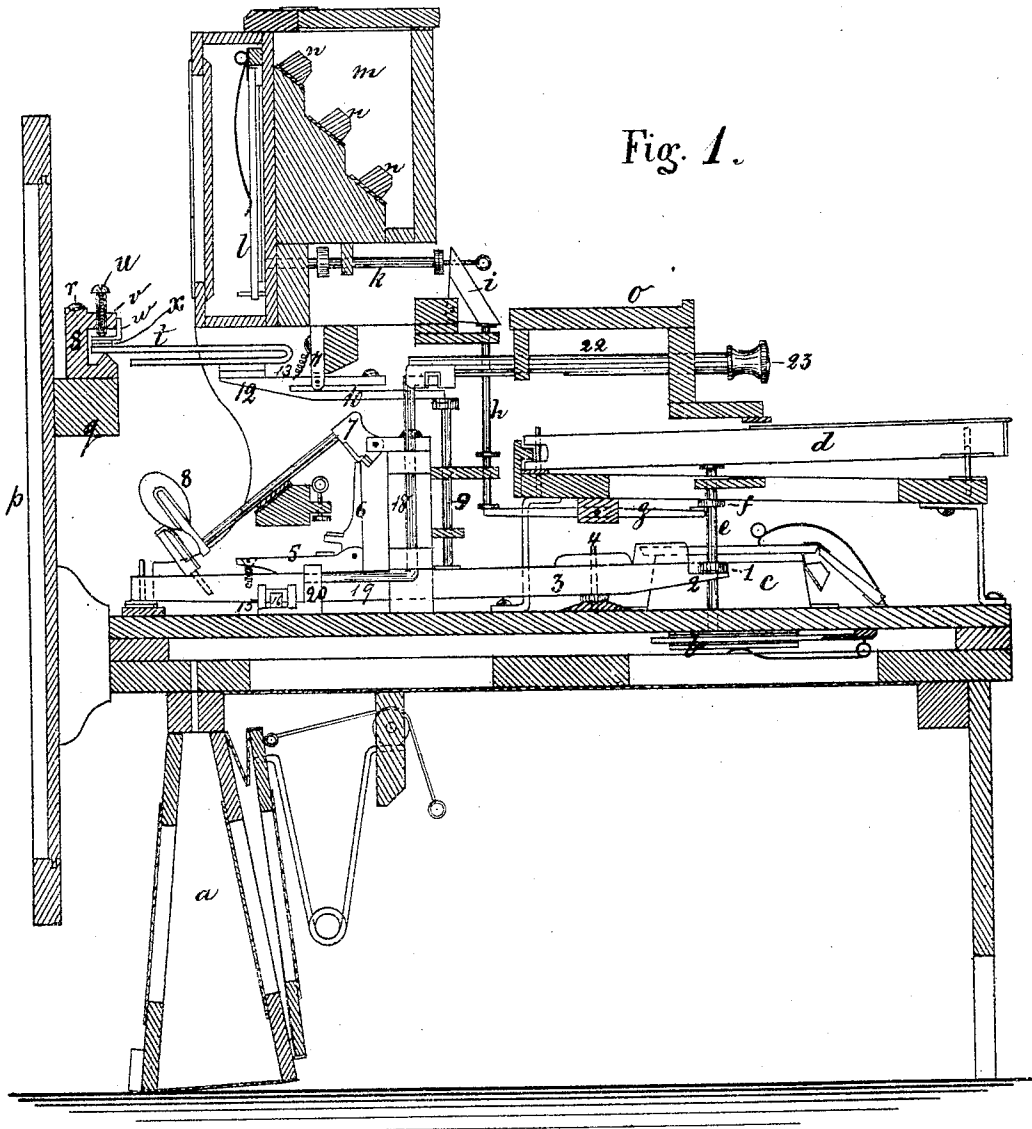


G. WOODS.

Reed-Organs.

No. 134,830.

Patented Jan. 14, 1873.



Witnesses:  
George C. Phelps.  
Wm H. Hutchinson

Inventor:  
George Woods.  
By Alban Andriani, his atty.

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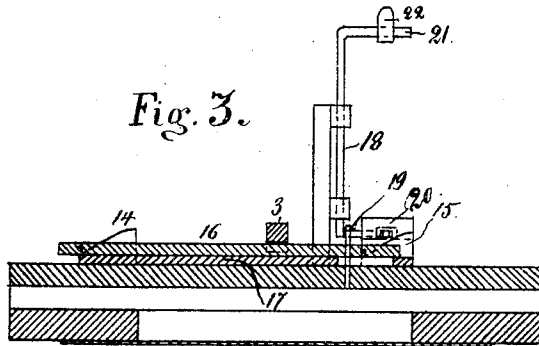


Fig. 3.

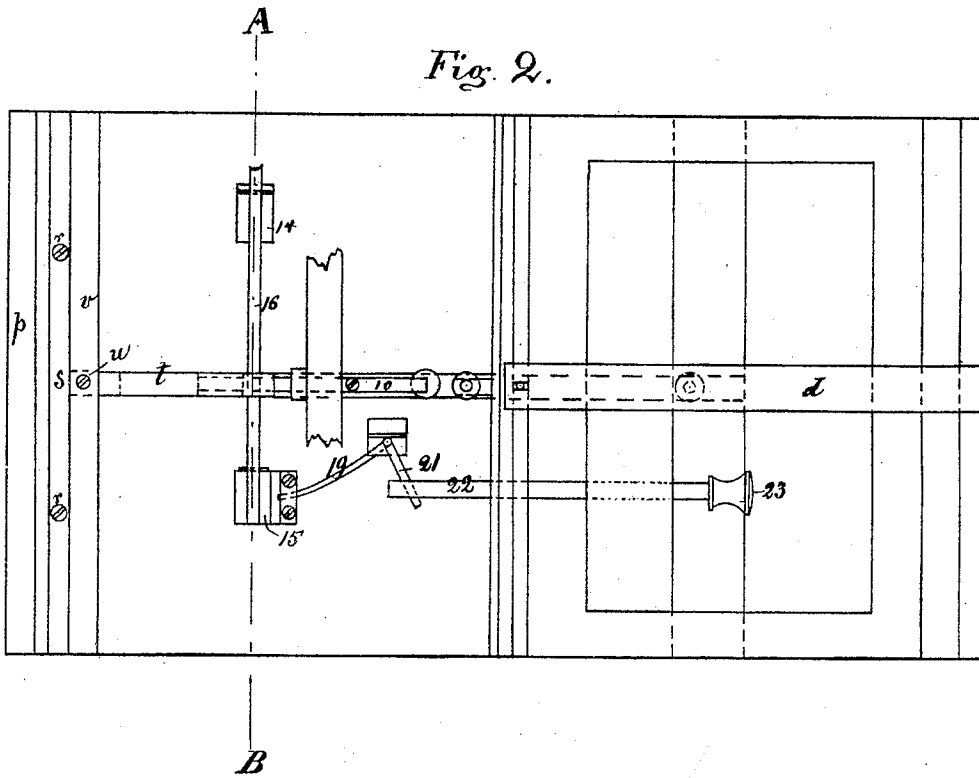


Fig. 2.

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# UNITED STATES PATENT OFFICE.

GEORGE WOODS, OF CAMBRIDGEPORT, MASSACHUSETTS.

## IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. 134,830, dated January 14, 1873.

*To all whom it may concern:*

Be it known that I, GEORGE WOODS, of Cambridgeport, in the county of Middlesex, and State of Massachusetts, have invented certain new and useful Improvements in Organs; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains 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.

My invention relates, first, to a combination, with a reed-organ, of vibratory metallic forks or hooks, actuated by a piano-action in connection with the keys, whereby the advantage is obtained of having an organ and piano combined in the same instrument; and consists, second, in an additional piano-stop, in combination with a reed-organ, by which the piano-action can be disconnected from the keys when not desired for action; third, in the general arrangement of the operating parts of a combined piano-action and reed-organ, as will herein be more fully shown and described.

On the drawing, Figure 1 is a sectional elevation of my combined reed-organ and piano; Fig. 2 is a ground plan; and Fig. 3 is a cross-section over the line A B, taken on Fig. 2.

Similar letters refer to similar parts wherever they occur on the different parts of the drawing.

The combination of a reed-organ with vibratory sounding-hooks or forks is arranged and carried out in the following manner: *a* represents the suction-bellows arranged in the ordinary way, and *b* a valve that covers the passage from a reed placed in the reed-board *c*. The valve *b* is operated, by means of the key *d* and rod *e*, in the ordinary manner. On the rod *e* is a collar, *f*, that operates the rocking lever *g*, the other end of which operates the vertical rod *h*, crank *i*, and horizontal valve-rod *k*, by which the valve *b* is actuated. The said valve *b* governs the inlet of the air from the additional reeds held in the solo-box *m*. *n n n* are stops for the different reeds, operated by means of suitable handles in the key-board *o*. *p* represents the sounding-board, to which is secured the cross-bar *q*, as shown.

To the upper side of the said bar *q* is secured, by means of suitable screws *r r*, the grooved metallic rail *s*. The said metallic rail *s* is provided with a groove on its side, as shown in Fig. 1, which groove has a projecting V-shaped lip on its under side, on which rests the metallic sounding-hook *t*, that is kept in place by means of the screw *u*, screwed through an upper-projecting flange, *v*, and pressing against a metallic washer, *w*, between which and the end of the sounding-hook *t* is placed a small sheet of rubber, *x*, as shown. The advantage of this arrangement is that each sounding-hook is adjusted independently of another, and that each hook can be placed in position or replaced without disturbing the hooks on either side.

The piano-action is arranged and operated as follows: The operating-rod *e* for the valve *b* is also provided with a secondary collar, 1, resting upon the end 2 of the lever 3. The lever 3 is rocked on the fulcrum 4, and is, in its rear end, provided with the ordinary jack-and-lever arrangement 5 6, operating the butt 7, to which is attached the hammer 8. The hammer 8 is made to strike the sounding hook or fork *t* as soon as the key *d* is depressed, whereby a very agreeable piano sound is obtained, thus combining, with an ordinary reed-organ, the advantage of a piano in one and the same case. On the lever 3 rests the vertical rod 9, the upper end of which operates the damper-lever 10 around the fulcrum or flange 11, and relieves the damper 12 from the sounding-hook *t* as soon as the key *d* is depressed; but as soon as the pressure on the key *d* is removed, the damper 12 is immediately placed in contact with the sounding-hook *t* by the action of a small spring, 13, arranged as shown.

The additional piano-stop is arranged and carried out in the following manner: The lever 3 is raised upward in its rear end by means of the inclines 14 15, that operate pins on the bar 16 (Fig. 3) as soon as the inclines 14 15 are moved to the left, as seen in Fig. 3. The inclines 14 15 are connected together by means of a plate, 17, below the bar 16, and operated conjointly by means of the bent-lever 18, the lower end 19 of which projects through a piece, 20, attached to the incline 15, and the upper

end 21 is embraced and operated by means of the rod 22 and stop 23, as fully shown.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. In combination with a reed-organ, the vibratory sounding-hooks and a sounding-board, *p*, when arranged in a manner and for the purpose herein set forth and shown.

2. In combination with a reed-organ, the piano-stop consisting of the rod 22, lever 18

19 21, slotted piece 20, inclines 14 15, and operating-rod 16 as and for the purpose set forth and described.

In testimony that I claim the foregoing, I have hereunto set my hand this 25th day of October, 1872.

GEORGE WOODS.

Witnesses:

ALBAN ANDRÉN,  
WM. H. HUTCHINSON.