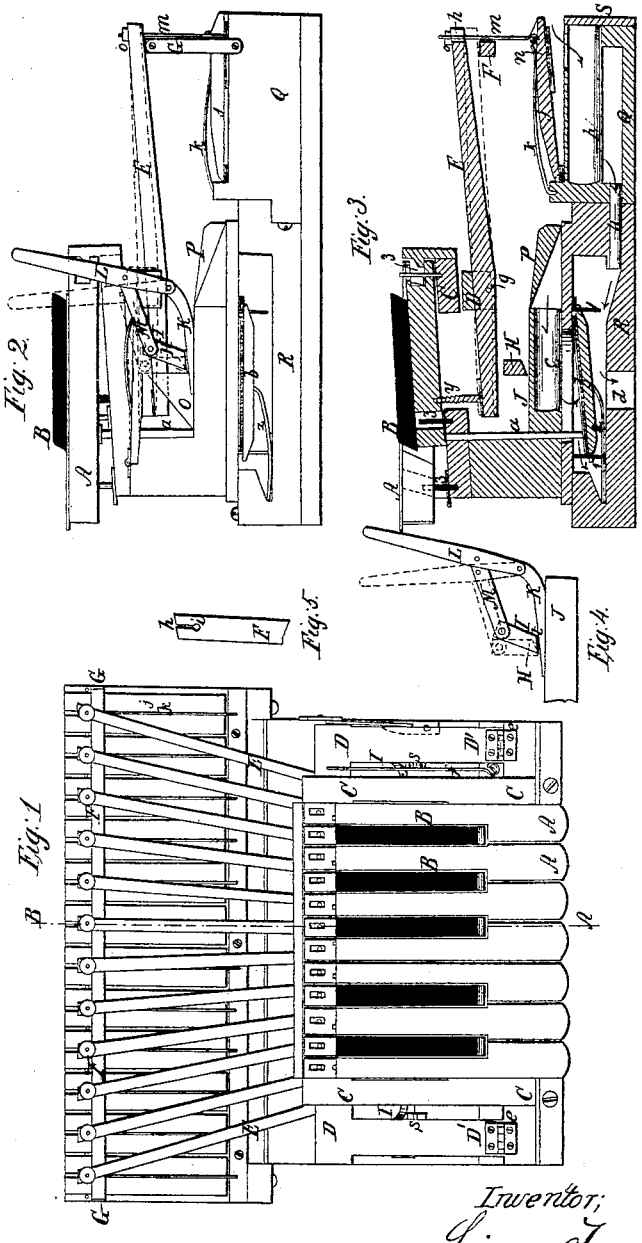
S. Taylor,

Organ Action.

No. 52,623. Patented Feb. 13, 1866.



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UNITED STATES PATENT OFFICE.

SIMEON TAYLOR, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN ORGANS AND MELODEONS.

Specification forming part of Letters Patent No. **52,623**, dated February 13, 1866.

To all whom it may concern:

Be it known that I, SIMEON TAYLOR, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in Organs and Melodeons; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a top or plan view of so much of an organ as is necessary to illustrate my invention. Fig. 2 represents an end view of the same. Fig. 3 represents an end view of the same on line A B, Fig. 1; and Figs. 4 and 5 represent detached sections.

Many attempts have been made to introduce manual sub-bass into organs and melodeons; but prior to my invention it has not been effected in a perfect manner, since in no previous invention has the manual sub-bass been introduced and so combined that the performer could readily throw off the sub-bass key-levers when the sub-bass was not wanted, and thus relieve the manual keys and levers from all connection therewith, so that the latter could be operated with the greatest freedom possible. The musical effect is the same as that produced by the use of pedals, while the performer is relieved of the care necessary to play well upon them, and the sub-bass notes are heard distinctly as if given from pedals.

This improvement brings the sub-bass of an instrument under the hands of the performer, and though he may be unskilled in the art of pedal-playing he can give a sub-bass which could not be given upon pedals, except by the most expert performers, and that, too, without any other practice than is required to play upon the manuals. The valves are so constructed that but little, if any, additional force is required to press down the keys. Consequently what has heretofore been obtained only by the aid of pedals is now brought within the range of the manuals, and is available to all who can play church music. The advantages, therefore, will be apparent to every intelligent musician.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it.

In the drawings, A A and B B represent the keys of an ordinary organ or melodeon. Each key when pressed down forces down a rod, *a*, which in turn forces down a valve, *b*, thus permitting the air to be drawn through the metal reed *c* and opening *d* into the wind or exhaust chest below. The suction principle is used. I now come to my sub-bass. Under the rear of the frame C, which supports the keys A A and B B, is arranged the sub-bass lever-key support D, which has the arms D′ D′ hinged at *e e* to the front of the manual-frame C, as indicated in the drawings. The key-support D is notched out to receive a series of levers, E, which levers are pivoted to the support D, as seen at *g*. The support D and rear end of levers E are held or forced down in this instance by a spring, *f*. The rear ends of levers E have slots *h* leading into circular holes *i*, as clearly shown in Fig. 5, which is a top or plan view of the rear end of one of the levers E.

F is a cross-bar supported by standards G, one at each end. Upon this cross-bar F the rear ends of levers E rest when down. Each lever E is connected with a valve, *j*, which is held down by a spring, *k*, by an adjustable connecting-rod, *m*. The rod *m* is hinged to the valve, as seen at *n*, and has a nut, *o*, on its end, by which the length of the rod can be regulated. Underneath each valve *j* is a reed, *p*. Screws *y* are applied to the under side of the keys A and B of the manual.

The lever-elevating piece H extends under the front ends of the levers E and the middle of arms D′ D′, and is provided at each end with cam-like projections I, and is also hinged at each end to the top of the reed-frame J, as seen at *s s*. Upon the right-hand side of frame J is fastened an arm, K, to which is hinged the lower end of lever L, which in turn is attached to one of the cam-like projections of the elevating-piece H by a connecting-piece, M, so that by drawing lever L forward the elevating-piece H will also be turned forward, whereby the cams I I are forced up under the hinged arms D′ D′, thus raising the sub-bass lever-support D, together with the front ends of levers E, as indicated in red lines, Fig. 2. The lower edge of the cams I I are notched or cut out to fit over the arms K, as seen at *t*, and a stop, O, is also attached to the top of frame J to ar-

rest the forward motion of the elevating-arm H and its cams I I.

In Fig. 3 the sub-bass is shown arranged for use in connection with the manual, and it will be seen that the valves *b* and *j* are both opened. The same would be the case with any other set of keys and valves so long as lever L is drawn forward, as indicated in red lines, Figs. 2 and 4. Valves *j* can be regulated by nuts *o* or by screws *y*. When lever L is thrown back, as shown in black lines, Figs. 2 and 4, the front ends of levers E are so depressed that screws *y* will not operate them when the manual-keys are depressed.

P is the common swell. The valves *b* have guide-pins 1 1 and springs 2 and the keys A and B have guide-pins 3 3.

The frame Q, which supports the sub-bass part, is fastened to the rear of the base R of the manual, so that the same apparatus for exhausting the air is used without change or alteration, holes 4 being made in the rear of base R to permit the air to pass in the direction of the arrows, as shown in Fig. 3. By simply removing the back S, reeds *p* can be withdrawn. By the use of the narrow slots *h* in the ends of levers E the connecting rods or wires *m* can be slipped into place quickly and removed again as readily, and yet will be retained securely in place when in position, as shown in the drawings.

It will be understood that draw-stops are connected with levers L to bring them within reach of the performer when the action is fitted to the case.

The object of this invention, as before stated, is to introduce sub-bass reeds into organs and melodeons that may be used without pedals, so that a sub-bass pitch can be given while the performer is playing on the manuals which shall be one octave below the note or key pressed down at the bass end of the instrument from a reed nearly double the size of those under the manual, which gives a full, round, and deep sub-bass tone of sufficient strength to balance but not overpower the higher notes.

Having described my improvements, what I claim as of my invention, and desire to secure by Letters Patent, is—

1. The combination, with hinged rods *m*, of the slotted levers E, as shown and described, whereby the levers and valves can be readily connected and detached, as set forth.

2. The combination, with frame D, arms D′ D′, and levers E, of the elevating-piece H, with its cam-like projections I I, substantially as set forth.

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Witnesses:
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