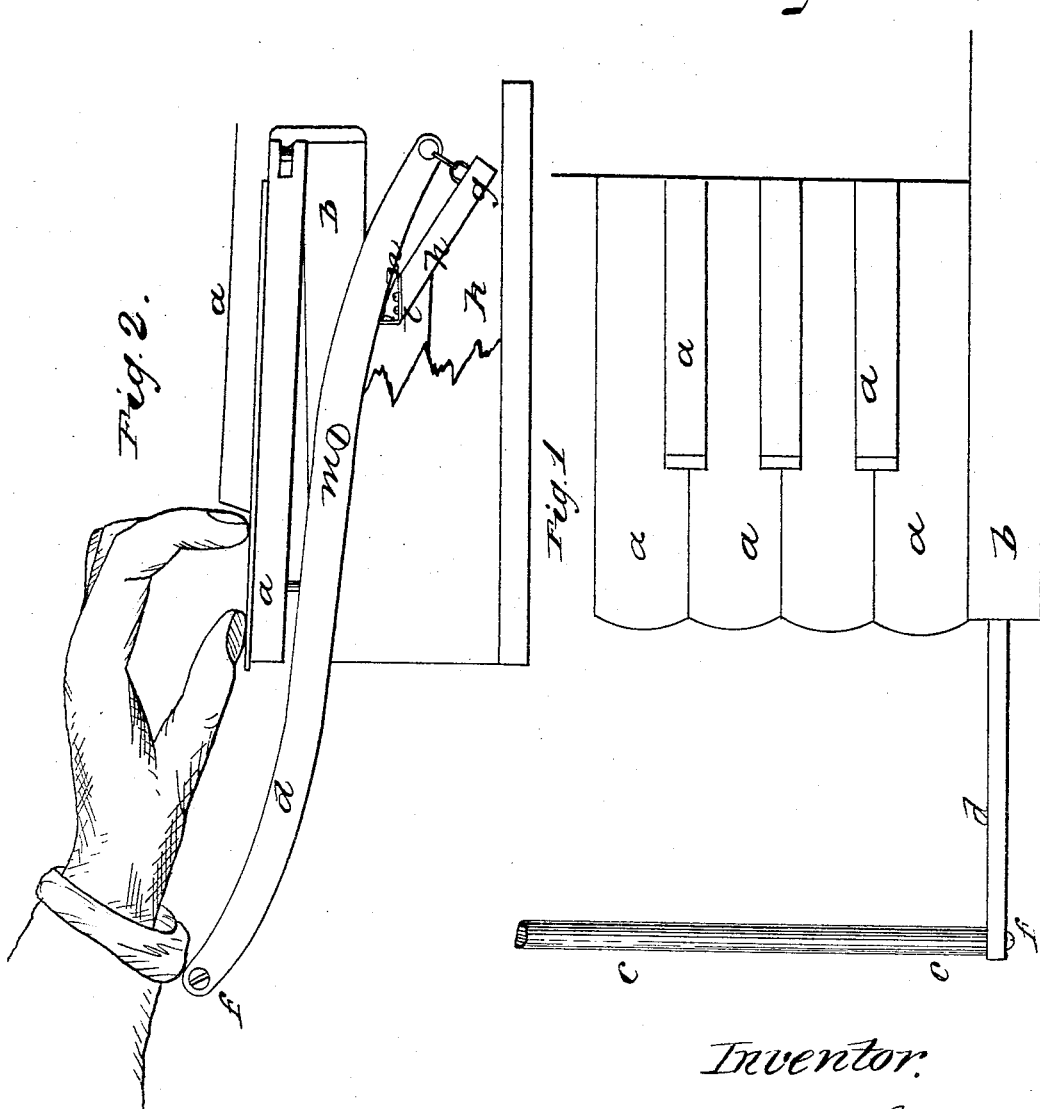


T. Loud,
Organ Swell,
No 49,127, Patented Aug. 1. 1865.



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS LOUD, OF PHILADELPHIA, PENNSYLVANIA.

SWELL FOR MUSICAL INSTRUMENTS.

Specification forming part of Letters Patent No. 49427, dated August 1, 1865.

To all whom it may concern:

Be it known that I, THOMAS LOUD, of the city of Philadelphia, in the county of Philadelphia, and the State of Pennsylvania, have invented a new and useful Improvement in Swells for Musical Instruments; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention consists in the employment, in melodeons, reed-organs, and other similar musical instruments, of a continuous rail placed in front of and parallel to the key-board for the whole of its length, each end of which is so connected by suitable lever-arms to the "swell-board," so called, of the instrument that by simply pressing down the rail with either the hand, wrist, or arm the swell-board will be raised, thus opening the chamber containing the reeds or other devices commonly used for producing musical sounds, and by relieving the pressure upon the rail the swell-board is closed, whereby the power of the sounds can be increased or decreased at pleasure, and the effects of crescendo and diminuendo produced at any moment and repeated as often as may be wished.

There are many advantages in the above mode of opening and closing the swell-board of a musical instrument over those heretofore commonly employed for the same purpose, the most important of which will be hereinafter particularly specified.

In the accompanying plate of drawings my improvement is represented, of which Figure 1 is a plan or top view of a portion of a key-board of a mechanical instrument with my improvement applied thereto, and Fig. 2 an end view of the key-board, showing the mode of connecting one end of the swell-rail with the swell-board of the instrument.

a a in the drawings represent a series of keys of a melodeon, reed-organ, or any other similar musical instrument, arranged therein in the usual manner and upon the key-board; *c c*, a rail, made of any desired shape, size, and material, placed horizontally in front of and parallel to the key-board *b*, and of sufficient length to extend the entire width of the same.

The rail *c* is placed a short distance from the key-board, and, to be in the most convenient position, should be so situated with regard thereto that the wrists of the person playing upon the instrument shall come over the same, as seen in Fig. 2.

To each end of the rail *c* one end of a bent lever-arm, *d*, turning upon a fulcrum at *m* of the main body of the instrument, is securely fastened by means of a screw, *f*, or any other proper fastening device, the other end of which is hung or attached to the lower side, *g*, of the swell-board *h*, fastened over the reed-box *k* by a hinge or hinges, *l l*.

When, in playing upon the instrument, it is desired to produce an increase of the volume or power of the sound emitted therefrom by my improvement above described, it is simply necessary to press or bear down upon the rail in front of the key-board with the wrist, which causes, through its connecting-levers at each end thereof, the swell-board of the instrument to be raised from the reed-box, thus opening the same and giving a free escape for the sounds therefrom, the distance to which the swell-board is opened being in direct proportion to the pressure brought to bear upon the rail, and the swell-board being closed when the wrist is removed from contact with the rail or sufficiently to relieve the pressure thereon by means of a spring or springs, *n*, bearing upon the top portion thereof.

From the above description it is apparent that the increase or decrease of the power and volume of any sound or sounds produced by the instrument, or, using the technical terms of music, the "crescendo" and "diminuendo" effects, are readily and easily obtained, and to any desired degree and graduation to conform to the taste of the performer thereon; and, furthermore, that the same is accomplished independent of the hands and feet, all of which can be employed at the same time in the performance of their respective parts for the production of musical sounds from the instrument.

Among the many advantages which my improved swell has over all others the most important are, first, that the feet are entirely free to be used for the working of the bellows, which is quite a desideratum in melodeons of double bellows; second, that it is not necessary

to remove the hands from the key-board; and, third, that much more beautiful and delicate effects of crescendo and diminuendo can be produced either for a single note, chord, or the whole instrument at any moment, and repeated as often as may be wished.

It may be here remarked that, although I have described my improvement as applied to melodeons, reed-organs, and other similar instruments, it may be as well applied to any other musical instrument having the general arrangement and similar effects thereto—as, for instance, to a church-organ. It is also evident that the lever-arms, in lieu of being made in one piece, as described and represented, may be formed in two parts, hinged together in such a manner that the rail, when not desired to be used, can be swung down under the body of the instrument out of the way, which also renders the instrument much more convenient for transportation and being packed in boxes;

and it is also evident that, in lieu of arranging the swell-board so as to be operated by downward pressure upon the same, it may be as well arranged to produce the same results by an upward movement of the wrist without departing from the principle of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The use of a rail placed in front of the key-board of a reed organ, melodeon, or other musical instrument, and connected with the device or devices usually employed therein for covering the chamber containing the reeds or other devices used for producing musical sounds, arranged and operating substantially as herein described, and for the purposes specified.

THOMAS LOUD.

Witnesses:

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EMMA H. LOUD.