R. LASRICH.

BELLOWS ACTUATING MECHANISM.

APPLICATION FILED AUG. 24, 1909.

956,982. Patented May 3, 1910.

Fig. 1

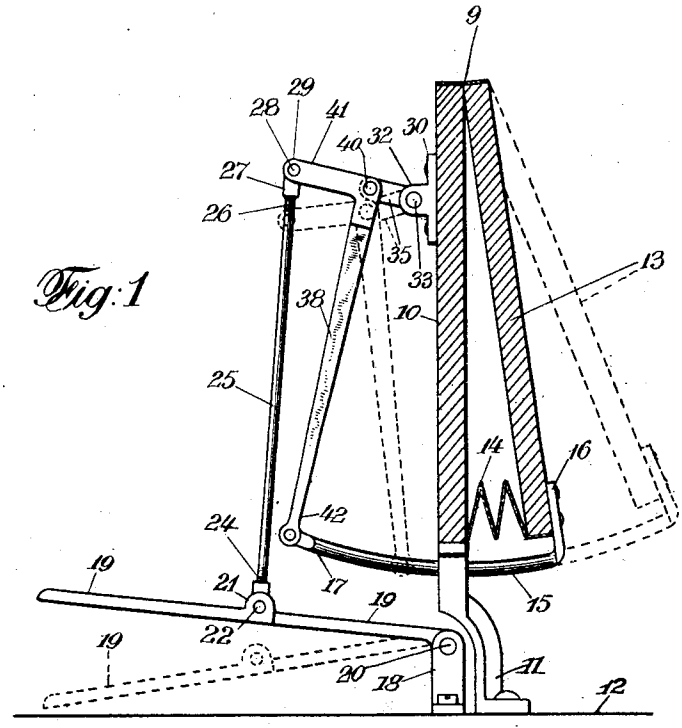


Fig. 2

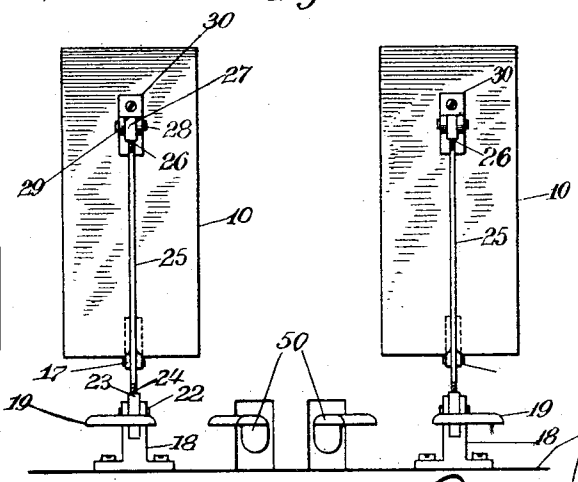


Fig. 3

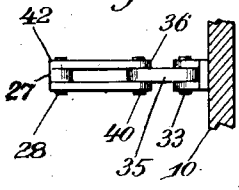
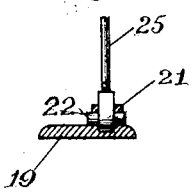


Fig. 4



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UNITED STATES PATENT OFFICE.

ROBERT LASRICH, OF NEW YORK, N. Y.

BELLOWS-ACTUATING MECHANISM.

956,982. Specification of Letters Patent. Patented May 3, 1910.

Application filed August 24, 1909. Serial No. 514,461.

To all whom it may concern:

Be it known that I, ROBERT LASRICH, a citizen of the United States of America, residing in New York, in the borough of the Bronx, county and State of New York, have invented certain new and useful Improvements in Bellows-Actuating Mechanism, of which the following is a specification.

This invention relates to bellows-actuating mechanism and has for its object to provide a mechanism for actuating the bellows such as are used in piano-players, organs, etc., which are intended to be operated with the least possible energy and to be simple in construction and manufacture.

The nature of the invention consists of a mechanism for actuating bellows comprising means in pivotal connection with the stationary and movable parts of the bellows and with a pedal, and more particularly in the combination of a bellows having a fixed and movable part, a pedal, and a bell crank lever pivotally connected with the fixed part of the bellows, with the movable part of the bellows and with the pedal.

The invention consists further in the arrangement of pedals consisting therein that the pedals for actuating the bellows are arranged at the outside of the piano-pedals.

In the accompanying drawings, forming part of this specification, and in which an embodiment of the invention is shown, Figure 1 is a side-view of a bellows, pedal and the improved actuating mechanism containing my invention, Fig. 2 is a front-view of the bellows, bellows-actuating pedal mechanism and pedals, as well as the arrangement of these pedals in respect to the piano-pedals, Fig. 3 is a detail view of the link connection between the fixed part of the bellows and the bell crank-lever, and Fig. 4 is a detail view of the pivotal connection with the pedal.

Similar reference characters indicate corresponding parts throughout the several views.

Referring to the drawings, the fixed part 10 of a bellows 9 is supported by a bracket 11 secured to the base 12 and has at its upper end hinged thereto, the usual movable part 13 connected at the other end with the usual flexible part 14. The movable part 13 is connected at its free end 16 with an angle-iron 15, which extends forwardly beyond the fixed part 10, all of which is well known, and is shown in Fig. 1.

A support 18 is arranged on the base 12 to which a pedal 19 is pivoted at 20, and the pedal 19 is provided with upwardly-extending ears 21 between which a member 23 is arranged pivotally connected with the ears 21 by a pin 22. The member 23 is screw-threaded and is engaged by a screw-threaded end 24 of a rod 25, the other end 26 of which is also screw-threaded and engages the screw-threaded portion of a member 27.

A bell crank lever 38, has one end 41 provided with ears 29 between which the member 27 of the rod 25 enters and through which and the ears 29, a pivot pin 28 passes, while the other end 42 of the bell crank lever 38 is pivotally connected with the end 17 on the angle-iron 15. The corner of the bell crank lever is provided with ears 36 and, to take up the stress of the lever when actuated, is connected with a link 35, entering between two ears 32 of a bracket 30, secured to the fixed part 10 of the bellows by suitable fastening means, as screws, bolts etc.

By the arrangement of the screw-threaded members 24 and 23, and the members 26 and 27, the adjustment of the members is readily effected.

The operation of my improved mechanism is as follows: The rod 25 is rotated so as to bring about the proper adjustment of the pedal 19 relatively to the bellows, whereby the end 41 of the bell-crank lever is either raised or lowered, depending upon the adjustment desired. On the depression of the free end of the pedal 19 the end 41 of the bell-crank lever is lowered, whereby the end 42 is moved inwardly toward the bellows and the movable part 13 of the bellows 9 caused to be moved so as to expand the bellows. By this movement, however, the pivot point of the end 17 of the member 15 and of the end 42 of the lever 38 is caused to be lowered relatively to the horizontal, the link 35 taking up this shifting of the position, whereby the movable part of the bellows may be conveniently actuated. By the arrangement of the mechanism just described a transmission of motion is provided which is without jar and which is positive and easy in movement.

I have also provided a novel arrangement of pedals which consists in placing the bellows-actuating pedals 19 one on each side of the piano-pedals 50, and by this arrangement a very convenient operation of the piano and player is secured.

The invention therefore consists in the mechanism for actuating the bellows, comprising means in pivotal connection with the stationary and movable parts of the bellows and with the pedals.

I have shown and described one embodiment of my invention, but I do not wish to be understood to limit myself to the same, since changes may be made therein without departing from the spirit and underlying principle of my invention.

I claim:

1. The combination with a bellows having fixed and movable parts articulated together at their upper ends, of a bell-crank lever, a link interposed between and pivotally connecting the angular part of said lever to said fixed part near the upper ends of the fixed and movable parts, means pivotally connecting one arm of said bell-crank lever with the lower end of the movable part, a pedal, and means linking the other arm of said bell-crank lever with said pedal.

2. The combination, with a bellows having a fixed and a movable part, of a link pivoted at its inner end to the upper part of said fixed part, a bell-crank lever pivoted at its angular part to the outer end of said link, means pivotally connecting one arm of said lever to said movable part of the bellows, a pedal pivoted at one end, and a rod linking said pedal and the other arm of said lever together, and pivotally connected with the pedal at a point intermediate its pivoted and free ends.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

ROBERT LASRICH.

Witnesses:

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