

J. GALLEAZZI.
OCTAVE COUPLER FOR ACCORDIONS.
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1,051,398.

Patented Jan. 28, 1913.

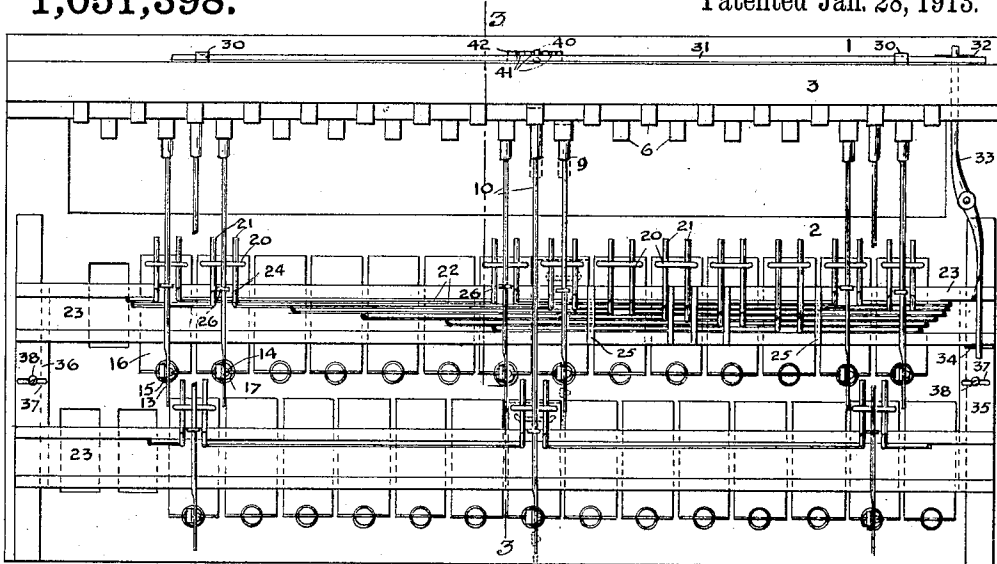


FIG. 1

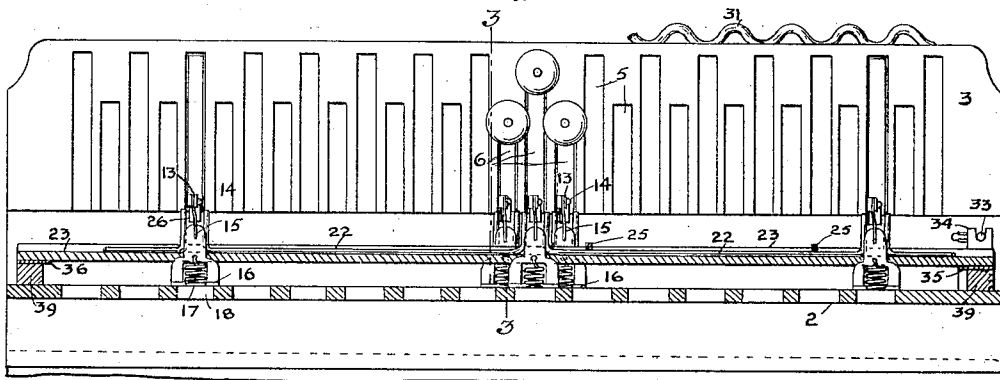


FIG. 2

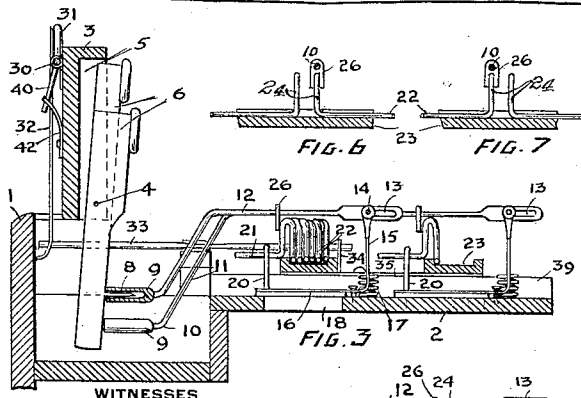


FIG. 3

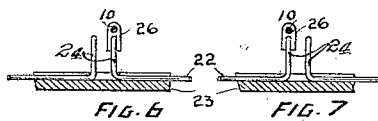


FIG. 4

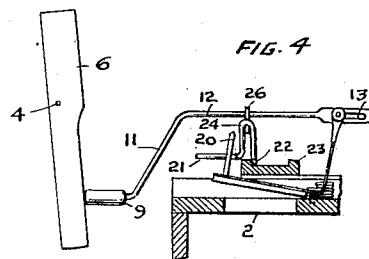


FIG. 5

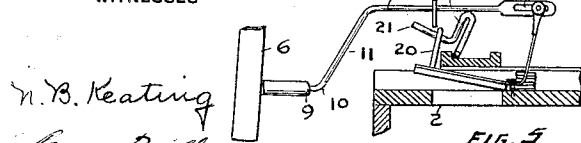


FIG. 6

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OCTAVE-COUPLER FOR ACCORDIONS.

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To all whom it may concern:

Be it known that I, JOSEPH GALLEAZZI, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Octave-Couplers for Accordions, of which the following is a specification.

The present invention relates to improvements in musical instruments, such as accordions, which are played by means of keys, and the object of the invention is to provide, in such an instrument, means whereby, with the depression of any key or keys, there shall be played, simultaneously with the note or notes corresponding to said key or keys, the octaves thereof, either above or below.

In the accompanying drawing, Figure 1 is a plan view of a sounding board of an accordion constructed in accordance with my invention; Fig. 2 is a side view of a key board thereof, the sounding board being shown in section; Fig. 3 is a transverse section on the line 3—3 of Figs. 1 and 2, the parts being shown in the position in which the coupling mechanism is not used; Fig. 4 is a partial section similar to Fig. 3, a key lever operated, but the coupling mechanism not used; Fig. 5 is a view similar to Fig. 4 showing a valve raised by the use of the coupling mechanism; Figs. 6 and 7 are detail sectional views.

Referring to the drawings, 1 indicates a frame of an accordion having attached thereto a sounding board 2 and a key board 3. Pivoted at 4 to move within recesses 5 in said key board are key levers 6, arranged alternately in two rows. From the lower portions of said key levers pins 8 extend toward the sounding board, and enter sleeves 9 secured upon the ends of actuator rods 10, which are first bent outwardly from said sleeves, as shown at 11, and then in a plane parallel to that of said sounding board, as shown at 12. The ends of said rods 10 remote from the keys are flattened and slotted, as shown at 13, and through each slot passes a screw 14, screwed to the upper end of an upward extension 15 from a valve 16, which is depressed by a coiled spring 17 to close an opening 18 in the sounding board, which openings are adjacent to reeds, not shown.

To each valve is secured an upwardly extending yoke or staple 20 and through the staples thus extended from the valves corresponding to notes an octavo apart pass arms 21. These arms are the terminal portions of wire rods, the mediate portions of which form rock shafts 22 contained in two longitudinally movable trough-shaped bearings 23. At the ends of each mediate portion of the wire rod, thus forming the rock shaft, the wire rod is bent, first, at right angles to the plane of said bearings, then back on itself to form abutments 24, and then extended at right angles to itself and the direction of the bearings to form said arms 21. Said rock shafts are suitably secured in said bearings by straps 25. To each rod 10 is secured a lug 26, which lugs, when not required to produce an octave by the depression of a single key, are, as shown in Figs. 1 and 2, each midway between two adjacent abutments 24, but when, by means presently to be described, said bearings, and the rock shafts therein, are shifted in one direction or the other, said lugs are also then opposite each to the abutment on the corresponding side, as shown in Figs. 6 and 7. If, when a lug is in the latter position, opposite to one or the other of said abutments, the corresponding key lever be depressed, then, not only is the valve opened, and the note sounded corresponding to said key lever, but one of the two rock shafts having abutments closely adjacent to said lug, and extending in opposite direction therefrom, is rocked, the arm extending from the other end of said rock shaft parallel with the sounding board then raising the yoke, and also the valve of the octave above or below, as the case may be.

On the back of the key board there are secured bearings 30, in which can slide a slide-frame 31, the end 32 of which is located to actuate a lever 33, the other end of which lever engages a forked standard 34 upon a plate 35 secured to corresponding ends of both bearings 23, the other ends of said bearings being secured to a plate 36. Said plates 35, 36 are formed with slots 37 parallel with said bearings, through which slots pass screws 38 screwed into supports 39 upon which said bearings can move. It will thus be seen that, by moving said slide frame in

one direction or the other, the bearings 23 are likewise so moved. From the slide-frame 31 depends a pin 40, which is adapted to be received in any one of three notches 41, formed on the end of a spring plate 42, secured on the back of the key board. By engagement with any one of the notches said frame is held stationary against accidental displacement. When the pin 40 engages the middle notch, the frame, and the bearings are in such a position that each lug 26 on the rods 10 is midway between the two abutments 24 of the adjacent pair thereof, so that no octave is sounded upon pressing the corresponding key lever. When the slide-frame is moved in one direction, and the key lever is depressed, not only is the note sounded corresponding to the said key-lever, but also the octave thereof, and when in the other direction, the other octave.

The slots in the ends of the rods 10 permit the octave of a note to be sounded, without the rod 10 of the latter note in its turn causing the sounding of the second octave.

I claim:—

1. A reed musical instrument comprising key levers, rods engaged at one end by said key levers, and slotted at the other end, a sounding board having corresponding openings therethrough, corresponding valves for controlling said openings having extensions movable in the respective slots, but arranged to be actuated by said slotted ends to open the respective valves, means, independent of said slotted ends and arranged to be actuated by other than the corresponding keys, for opening said valves.

2. A reed musical instrument comprising key levers, a sounding board having openings therethrough, valves for said openings, operative connections for actuating said valves by means of key levers, upwardly extending staples secured to the respective valves, shafts extending longitudinally of the sounding board, each having at one end an arm passing through a corresponding staple closely adjacent an upper portion thereof, and means operated by the key levers for actuating the other ends of said shafts.

3. A reed musical instrument comprising a sounding board having a row of openings therethrough, valves for controlling said openings, key levers, actuator rods operated by said key levers, said valves being provided with means whereby they can be operated direct by said rods, a lug on each actuator rod, rock shafts one on each side of each actuator rod and extending in a direction transverse thereto, each rock shaft having an arm adjacent to said rod, another arm of each rock shaft being operatively connected to a valve to raise the same upon

the operation of the rock shaft, and means whereby all the rock shafts on one side or the other of said rods can be shifted to bring the corresponding first-named arms into operative relation with the lugs on said rods to be actuated thereby in the operative movement of said rods.

4. A reed musical instrument comprising a sounding board having a row of openings therethrough, valves for controlling said openings, key levers, actuator rods operated by said key levers, said valves being provided with means whereby they can be operated direct by said rods, a lug on each actuator rod, rock shafts, one on each side of each actuator rod and extending in a direction transverse thereto, each rock shaft having an arm adjacent to said rod, another arm of each rock shaft being operatively connected to a valve to raise the same upon the operation of the rock shaft, a longitudinal bearing for said rock shafts, and means for moving said bearing and the rock shafts contained therein in either longitudinal direction as desired, to move corresponding arms into operative relation to the lugs on the rods to be operated thereby in the operative movement of the latter.

5. A reed musical instrument comprising a sounding board having a plurality of rows of reed openings therethrough, valves for controlling the respective openings, key levers, actuator rods for the respective levers, operative connections between said actuator rods and the valves, whereby the operation of the key levers raises the valves, lugs on said actuator rods, lifters on said valves, longitudinally movable longitudinal bearings, rock shafts therein, two for each actuator rod, each rock shaft having at each end a part arranged to be engaged by a lug on an actuator rod, and a part engaging a lifter on a valve to lift the same, said first-named parts of all the actuator rods being normally out of the path of said lugs in the operative movement of said rods, and means for shifting said shafts in either longitudinal direction transverse to said rods to move said first named parts at the corresponding ends of said shafts into the paths of said lugs.

6. A reed instrument comprising a sounding board having a plurality of rows of openings therethrough, valves for controlling said openings, key levers, actuator rods arranged to be operated by said key levers, operative connections between said valves and the actuator rods, lugs on said actuator rods, lifters on said valves, bearings, longitudinal rock shafts therein, each rock shaft having at each end a part arranged to be engaged by said lug to operate the rock shaft, and a part operatively connected to

a lifter on the valve to raise the same, and means for moving said bearings longitudinally in either longitudinal direction to move the first-named parts of corresponding
5 ends on all of said rock shafts into the paths of the lugs on the actuator rods to be engaged thereby.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOSEPH GALLEAZZI.

Witnesses:

FRANCIS M. WRIGHT,
D. B. RICHARDS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
