(No Model.)

J. ROHLAND.

PIANO.

No. 552,146. Patented Dec. 31, 1895.

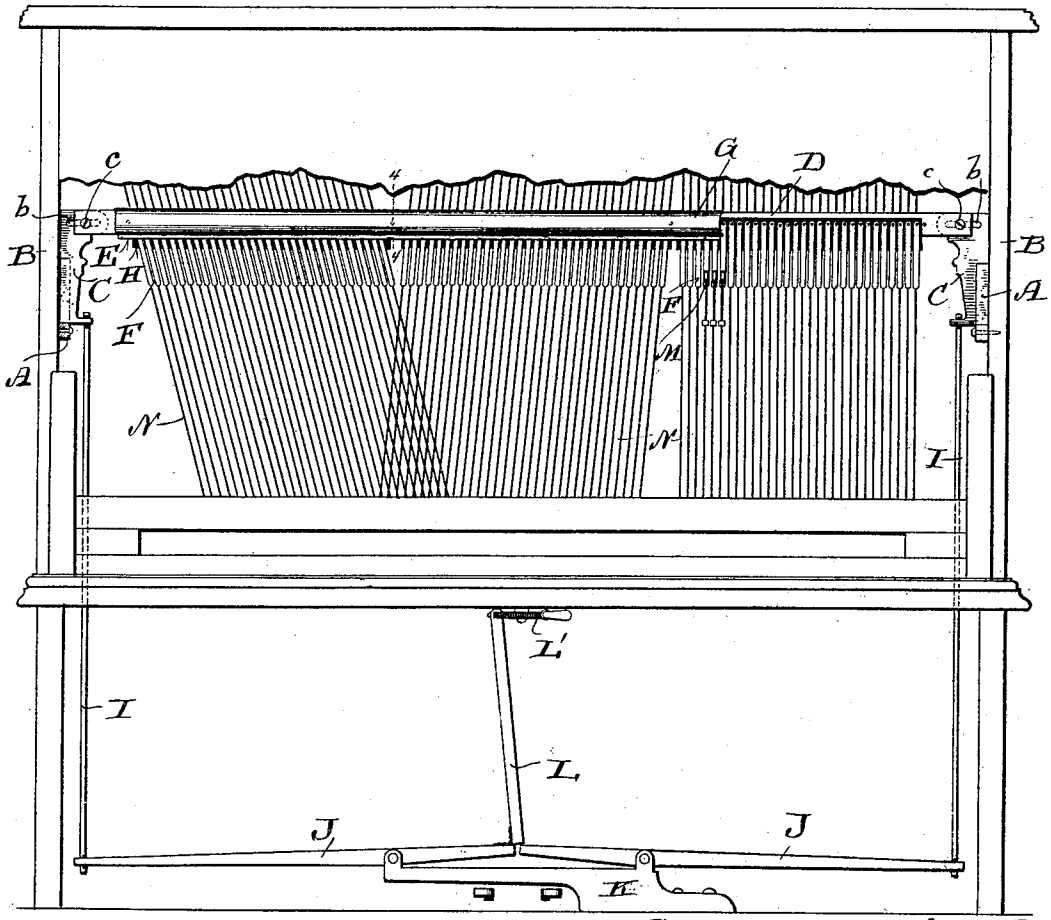

Fig. 1.

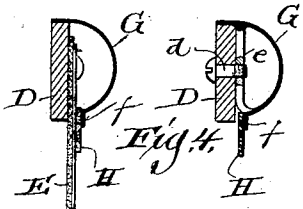

Fig. 4.

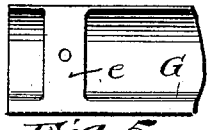

Fig. 5.

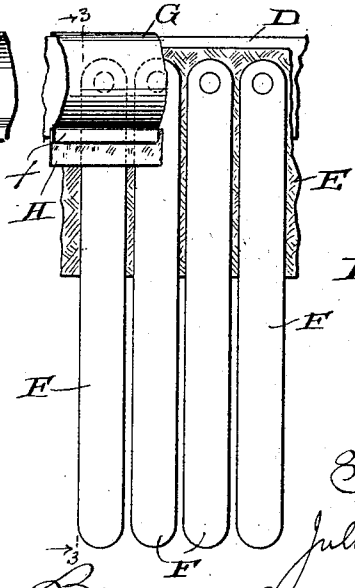

Fig. 2.

Fig. 6.

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

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PIANO.

SPECIFICATION forming part of Letters Patent No. 552,146, dated December 31, 1895.

Application filed April 22, 1895. Serial No. 546,629. (No model.)

To all whom it may concern:

Be it known that I, JULIUS ROHLAND, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Pianos, and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide an upright piano with an apparatus that may be utilized at will to convert the tone of the instrument into that resembling a harp or zither; and it consists in certain peculiarities of construction and combination of parts hereinafter set forth with reference to the accompanying drawings, and subsequently claimed.

In the drawings, Figure 1 represents a front elevation of my tone-changing apparatus in connection with an upright piano; Fig. 2, a similar view of a portion of the apparatus; Fig. 3, a detail sectional view taken on line 3 3 of the preceding figure; Fig. 4, a similar view taken on line 4 4 of the first figure; Fig. 5, a rear view of a portion of a front buffer-sustaining shell, constituting part of said apparatus; and Fig. 6, a detail plan view, partly in horizontal section, illustrating a hand-lever and push-rod embodied in the aforesaid apparatus.

Referring by letter to the drawings, A represents vertically-slotted blocks attachable to end pieces B of an upright piano, and these blocks have the double function of guides and supports for vertically-reciprocative brackets C, to which the ends of a bar D are joined. It is preferable to provide each bracket with a horizontal slot *b* for the engagement of a bolt *c* run through the adjacent end of the bar D, as thereby I am enabled to utilize bars of standard length in pianos of various widths.

Glued or otherwise secured to the front of the bar D is a depending buffer E, of felt or other suitable material, and fast on said bar against the buffer are a series of depending spring-metal tongues F, that extend some distance below said buffer. The tongues may be separate pieces, as herein shown, or they may form parts of one or more comb-like strips, as found most convenient or desirable in practice.

Screws *d* run through the bar D, and from the rear of the same engage cross-braces *e* of a curved shell G that is parallel to said bar, and laps its upper edge. The lower edge of the shell is turned at a right angle to form a flange *f*, to which another buffer H, of felt or other suitable material, is glued or otherwise secured, this latter buffer being in front of the spring-metal tongues F above specified.

Lifting-rods I joined to the lower ends of the brackets C connect with levers J, and hinged to the inner end of one of these levers is a push-rod L, that connects with a hand-lever L′ pivoted to the overhanging front portion of the piano.

By operating the hand-lever L′ in one direction, the push-rod L is exerted against the adjacent inner ends of the levers J, to thereby cauces a lift of the rods I, brackets C, bar D and parts attached to the latter. A reverse action of the hand-lever operates to bring the aforesaid movable parts into the position herein shown, and being in this position the spring-metal tongues F are intermediate of the hammers M and tone-wires N of the piano. The hammers striking the metal tongues against the tone-wires produce sound similar to that given by a harp or zither, and the buffers E H prevent detrimental vibration of said tongues after the action of said hammers. The lift of the bar D brings the spring-metal tongues F up out of the way of the hammers of the piano, and while I have shown and described one means for vertically adjusting said bar, the same result may be obtained by other suitable means, it being practical to actuate the aforesaid bar by a treadle instead of a hand-lever.

Attempts have been made to provide pianos with tone-converters, comprising metal-tipped leather tongues; but such tongues being affected by atmospheric changes are liable to curl out of position, to the detriment of the instruments in which they may be employed, while at the same time the changed tone of said instruments is dull or flat, instead of clear and sharp, as obtained by the employment of the all-metal tongues above specified. In other words, I have found it impossible to obtain the desired effect under all conditions, except by the use of spring-metal tongues.

I also desire to have it understood that my invention is not to be contrasted with tone-mufflers or dampers common in pianos, and

it is also to be understood that "forte" and "pianissimo" actions in a piano may be employed as usual when my apparatus is in position to cause a conversion of tone.

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

1. A structure adapted for vertical adjustment in an upright piano and comprising a series of spring-metal tongues that come between the hammers and tone-wires of the instrument when said structure is in one position of its adjustment, a buffer of felt or analogous material carried with the tongues in rear thereof and a similar buffer in front of the same.

2. A pair of vertically slotted blocks attachable to end pieces of an upright piano inside the latter, vertically adjustable brackets loose in the block-slots, a bar joined at its ends to the brackets, a buffer of felt or analogous material depending from the bar, a series of spring-metal tongues overlying the buffer and extending below the same, a shell joined to said bar, and another buffer depending from the shell in opposition to said tongues.

3. A pair of vertically slotted blocks attachable to end pieces of an upright piano inside the latter, horizontally slotted and vertically adjustable brackets loose in the block-slots, a bar having its ends in bolt-connection with the bracket-slots, spring-metal tongues depending from the bar, and front and rear buffers for said tongues.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

JULIUS ROHLAND.

Witnesses:
N. E. OLIPHANT,
HENRY DANKERT.