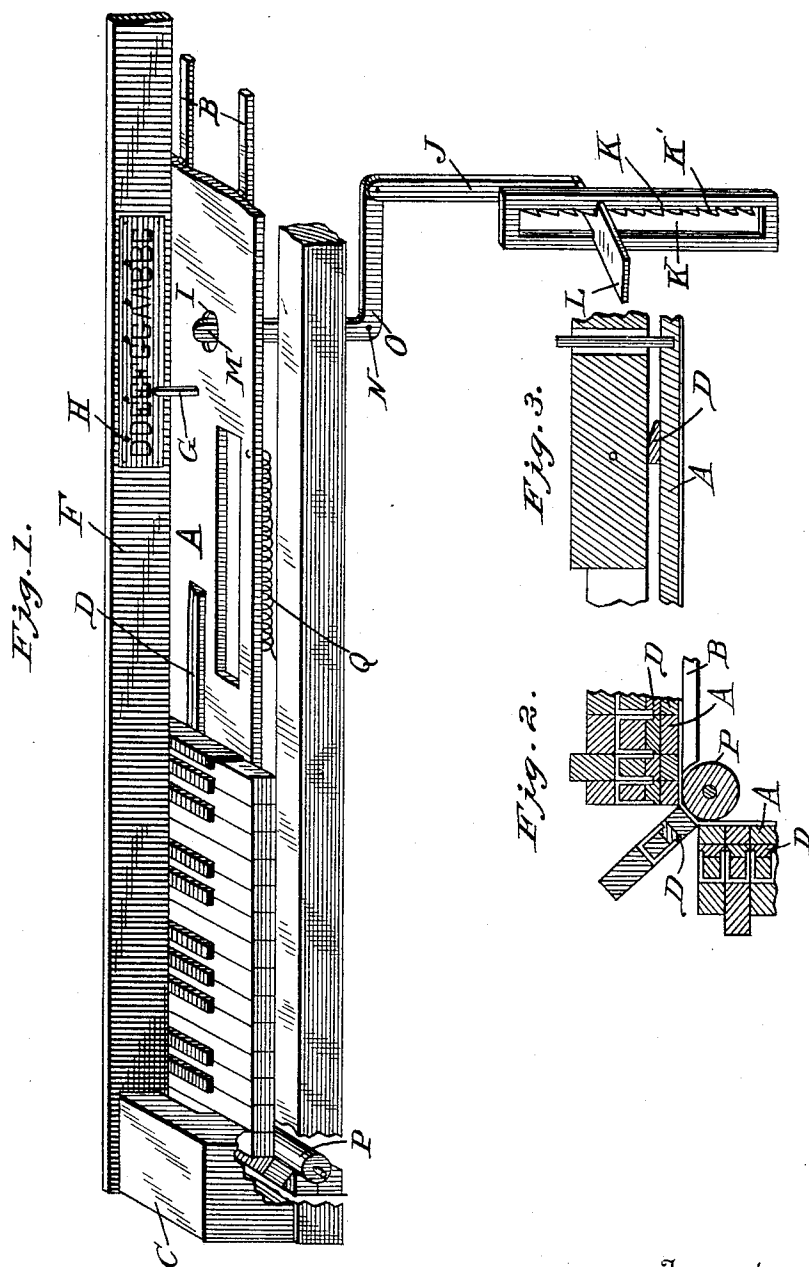


(No Model.)

H. H. STROETER.
TRANSPOSING KEYBOARD.

No. 572,227.

Patented Dec. 1, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY H. STROETER, OF BUTTE, MONTANA.

TRANSPOSING-KEYBOARD.

SPECIFICATION forming part of Letters Patent No. 572,227, dated December 1, 1896.

Application filed October 25, 1895. Serial No. 566,893. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. STROETER, a citizen of the United States, residing at Butte city, in the county of Silver Bow and State of Montana, have invented certain new and useful Improvements in Transposing-Keyboards; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in transposing keyboards, and has for its objects, among others, to provide a simple and cheap attachment for musical instruments of this character, which will enable performers on said instruments to play all the relative pitches of the twelve keys by the use of the white finger-keys, touching the black finger-keys for accidentals only. In other words, all music, by the assistance of this attachment, would be played on the piano or organ as in the key of "C," except that the tones will be higher or lower on the finger-keys as the pitch required would be higher or lower. Among the other advantages resulting from the employment of my attachment may be mentioned the following: Nearly all of the fingering being done on the white finger-keys, the fingering is much easier to learn, all relative pitches of any kind being played exclusively on the white finger-keys, and the performer is enabled to transpose any selection to any key other than the one in which it is written with greater ease. Any player with the same advantages should, by the use of this attachment, become a far better performer than another one. It does away with all the cumbersome and perplexing questions of transposition, since sharps and flats occur only as accidentals. With this attachment the only difference between the keys of "C" and "D" is that the relative pitches of the latter are successively one step higher.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the let-

ters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a diametric perspective view of the parts constituting my invention. Fig. 2 is a transverse section through the roller at the end of the keyboard. Fig. 3 is a vertical detail through the pivot-slat.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates a keyboard, shown in this instance as arranged for the key of "E." In this position the finger-keys "C, D, E, F, G, A, B, C," respectively, play the tones "E," "F#," "G#," "A," "B," "C#," "D#," and "E." This keyboard, which consists of a frame, as shown, upon which the finger-keys are mounted, is itself mounted upon tracks or ways B, by rollers or balls, if desired, to lessen the friction, and is designed to have a lateral motion thereon of one octave's width. To change the key, this keyboard or frame is moved the proper distance in the desired direction, carrying with it all the finger-keys, there being mounted upon said keyboard or frame an indicator G, rising between the finger-keys to the letter-board and indicating the position of the finger-key "C."

D represents the pivot-slat, upon which the finger-keys rest.

F is a board placed edgewise of the rear of the keyboard. To this is fastened a letter-board H in any suitable manner.

Q is a spring attached in any suitable manner to the frame A, and when the pedal is relaxed this spring serves to draw the said frame, with all of the finger-keys, to the left and serves also to raise the pedal. When the pedal is lowered, the board and the finger-keys are moved to the right. The finger-keys, when returning or passing into a passive position, pass under the block C, and when moved still farther pass down over the roller P. The finger-keys which pass over this roller are firmly fastened to a flexible pivot-slat holding the interior ends of the finger-keys in position.

L is the pedal, carried by the depending arm J, which is pivotally mounted on one end of the horizontal arm of the elbow-lever O, pivoted at N, and the vertical arm M of which

works in an opening I in the frame A. A plate K, having a vertical slot k and ratchet-teeth K' on one side of said slot, is adapted to be engaged by the treadle and hold the same in any desired position.

With the parts constructed and arranged substantially as above set forth the operation is, briefly stated, as follows: Place the foot upon the pedal and release the same from its catch by a slight movement to the left, if the indicator is desired toward the left, relaxing the pedal until the spring Q has drawn the indicator to the desired position. If the indicator is desired to the right, then the pedal is forced downward until the frame is moved in the opposite direction and the indicator is in the desired position, in which the parts are held by engaging the pedal with its catch, that is, the proper tooth in the rack on the side of the plate K, as will be readily understood.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

The ends of the keyboard A and the pivot-slat D are sectioned to correspond in number and width to the finger-keys to pass over the roller and down. Each section of the slat D is firmly fastened to its respective section of the keyboard. The several sections of the keyboard are fastened together by a flexible fabric being glued to their under surface, the same fabric extending under small portion of the keyboard, to whose under surface it is also glued, so as to make the sections continuous with the keyboard. This fastening permits the sections to drop downward on passing the roller and hanging by the hinge fabric. The finger-keys required to pass over the roller are first pivotally fastened near the front ends of their corresponding sections of the keyboard; second, by a peg passing through a slot and vertically planted into the rear of the corresponding section of the keyboard.

These two fastenings permit the finger-keys to have a free movement in playing or in tone-producing. When a section of the keyboard passes over the roller, it turns downwardly, carrying with it a finger-key. By this it will be seen that the ends of the keyboard are hinged to bend downward when passing down over the said roller.

What I claim as new is—

1. The combination with a slidingly-mounted frame carrying the finger-keys, of a sectional pivot-slat formed of sections flexibly connected together on which the finger-keys rest, a pedal for moving the frame in one direction, and a spring for actuating it in the opposite direction, and an indicator carried by said frame, substantially as described.

2. The combination with the keyboard, of the pivot-slat in sections flexibly connected together, each section thereof fastened to its respective section of the keyboard, substantially as described.

3. The combination with the keyboard, of the pivot-slat in sections, each section thereof fastened to its respective section of the keyboard, the several sections of the keyboard being fastened together by a flexible fabric, substantially as described.

4. The combination with the keyboard in sections flexibly connected, of the pivot-slat in sections and each section firmly attached to its respective section of the keyboard, and a roller over which the keys pass, the finger-keys being pivotally fastened near the front ends of their corresponding sections of the keyboard, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HENRY H. STROETER.

Witnesses:

C. V. FULTON,
L. I. KNOWLTON.