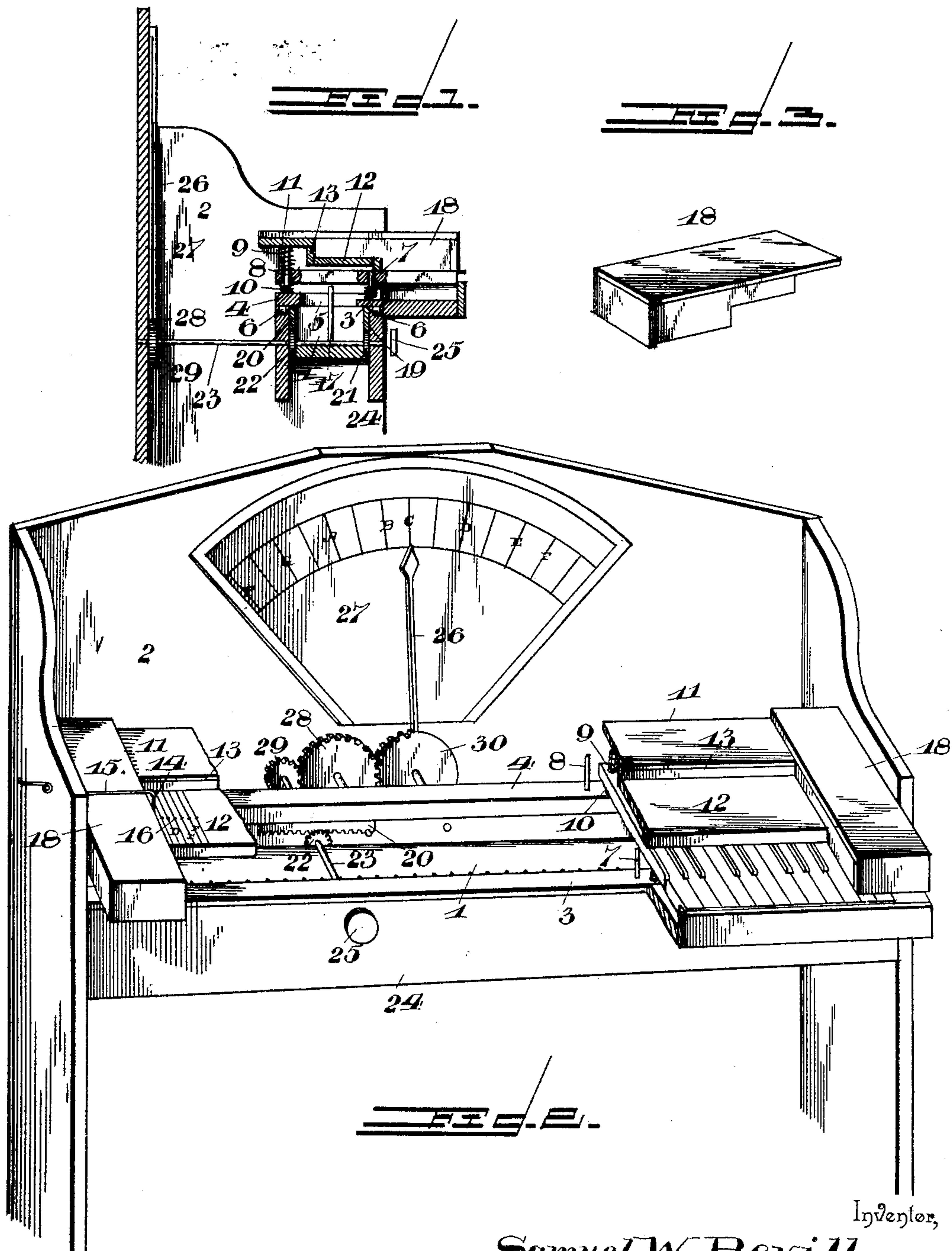


(No Model.)

S. W. BEVILL.
KEYBOARD.

No. 583,449.

Patented June 1, 1897.



Inventor,

Samuel W. Bevill,

By his Attorneys,

C. A. Snow & Co.

Witnesses

H. F. Boyle.
C. E. Dwyer.

UNITED STATES PATENT OFFICE.

SAMUEL W. BEVILL, OF NEW ALBANY, MISSISSIPPI.

KEYBOARD.

SPECIFICATION forming part of Letters Patent No. 583,449, dated June 1, 1897.

Application filed April 30, 1896. Serial No. 589,722. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL W. BEVILL, a citizen of the United States, residing at New Albany, in the county of Union and State of Mississippi, have invented a new and useful Keyboard, of which the following is a specification.

My invention relates to an adjustable or transposing keyboard for musical instruments, such as the piano and organ; and the objects and advantages thereof will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a vertical section of a portion of an organ-action constructed in accordance with my invention. Fig. 2 is a perspective view of the reed-box, movable keyboard-frame, and contiguous parts, showing the indicator whereby the performer is enabled to adjust the keyboard to the desired pitch. Fig. 3 is a detail view in perspective of one of the end blocks.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a reed-box, which may be of the ordinary or any preferred construction, arranged within a frame 2 of the instrument, and mounted for movement parallel with said reed-box is a sliding keyboard-frame having front and rear longitudinal bars 3 and 4 connected terminally by end bars 5 and provided with bearing-rollers 6, which traverse the upper edges of front and rear guiding-walls formed by the reed-box. The keys are mounted upon the usual pins 7 and 8, rising, respectively, from the front and rear longitudinal bars 3 and 4 of the sliding frame, the rear ends of the keys being arranged between upper and lower coiled springs 9 and 10, the former bearing at their upper ends against a holding-bar 11, while the latter rest upon the upper surface of the rear bar 4. The fulcrum of each key is at its rear end where it engages the pin 8, and the upper and lower springs are designed to hold the rear end of the key in an intermediate position without preventing sufficient yielding thereof to insure the proper operation of the sound-producing devices without straining the parts. I have found that the double

spring at the rear end of each key is desirable in connection particularly with a keyboard adapted to be shifted for the purpose of transposing, as herein described. The front springs on the pin 7 are designed to return the key to its normal or elevated position after depression. A horizontal covering-bar 12 is arranged above the plane of the keys and is connected at its rear edge to the front edge of the holding-bar by means of a front bar 13.

Any suitable means for securing the keyboard-frame, including the bars 11, 12, and 13, at the desired longitudinal adjustment may be employed, that illustrated in the drawings, however, consisting of a locking-pin 14, supported by means of a spring-arm 15 from the side of the stationary frame or casing 2 and adapted to engage one of a series of perforations 16 in the covering-bar 12.

The keys are arranged, respectively, over operating-pins 17 of the ordinary construction arranged in the reed-box, and are normally held sufficiently above the extremities of said pins to be out of contact therewith, whereby when the keys are in their normal positions the frame may be freely moved from one position to another. The keyboard is of less length than the interval between the side walls of the frame or casing of the instrument to allow a longitudinal adjustment equal to an octave, and the spaces between the extremities of said keyboard and said side walls are closed to exclude dust by means of blocks 18.

In the construction illustrated the front and rear longitudinal bars 3 and 4 of the keyboard-frame are provided with racks 19 and 20, arranged in contact with the front and rear walls of the reed-box and engaged by pinions 21 and 22, carried by a shaft 23. This shaft is provided at its front end, contiguous to the front board 24 of the instrument, with a thumb-nut or similar handle 25, and at its rear end it is geared to an indicating device consisting of a pointer 26, traversing a scale 27, bearing characters indicating different scales, as shown. In order that the pointer may move in the same direction as the keyboard in adjustment, I preferably interpose a gear 28 between the pinion 29 on the rear end of the shaft 23 and the segment 30, which

carries the pointer, said segment being made of greater diameter than the pinion, whereby it operates through a comparatively small arc.

From the above description it will be seen 5 that when it is desired to transpose a composition from one key to another to suit a voice or another instrument, the keyboard may be shifted by turning the thumb-nut 25 to produce the desired pitch, said composition being 10 played as written. For instance, if a composition is written in the key of C and it is desired to transpose it to a pitch corresponding with the key of F, the keyboard may be shifted to bring the C key of the keyboard 15 into operative relation with the reed or other sound-producing device, which is tuned to produce the sound of F. Thus the entire scale will be elevated in pitch a distance equal to the fourth of a major scale, and while 20 the performer is manipulating the keyboard as though playing in the key of C the performance will be actually in the key of F. Thus all of the various scales now in use may be reduced to the scale of C, and all compositions 25 may be written in the key of C, although they may be performed at any desired pitch. Furthermore, it is my object to provide the keys with distinguishable colors, one for each key in the scale, those keys which 30 are adapted to cause the operation of concordant sound-producing devices having relative colors, whereby a person unacquainted with the art of music will be enabled to play accompaniments embracing the chords ordinarily 35 employed for that purpose.

It will be understood that the applicability of my invention is not limited to any special construction of instrument, inasmuch as it

may be used in connection with either organs or pianos or similar keyed instruments, and 40 that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is— 45

1. A keyed instrument having a keyboard-frame provided near its rear side with parallel upper and lower bars, sound-producing devices including keys arranged at their rear 50 ends between said bars, upon guide-pins disposed perpendicularly therebetween, and upper and lower springs disposed between each key and said bars respectively, substantially 55 as specified.

2. A keyed instrument having sound-producing devices, a keyboard-frame having front and rear bars provided with bearing-rolls, keys mounted at their front and rear 60 extremities upon guide-pins carried by said front and rear bars, means for shifting the frame to bring the keys into operative relation with different sound-producing devices, a holding-bar arranged above and parallel 65 with the plane of the rear bar of the frame, and springs interposed between the rear end of each key and said holding and rear bars, substantially as specified.

In testimony that I claim the foregoing as 70 my own I have hereto affixed my signature in the presence of two witnesses.

SAMUEL W. BEVILL.

Witnesses:

H. MARSHALL,
Z. T. BRIDGES.