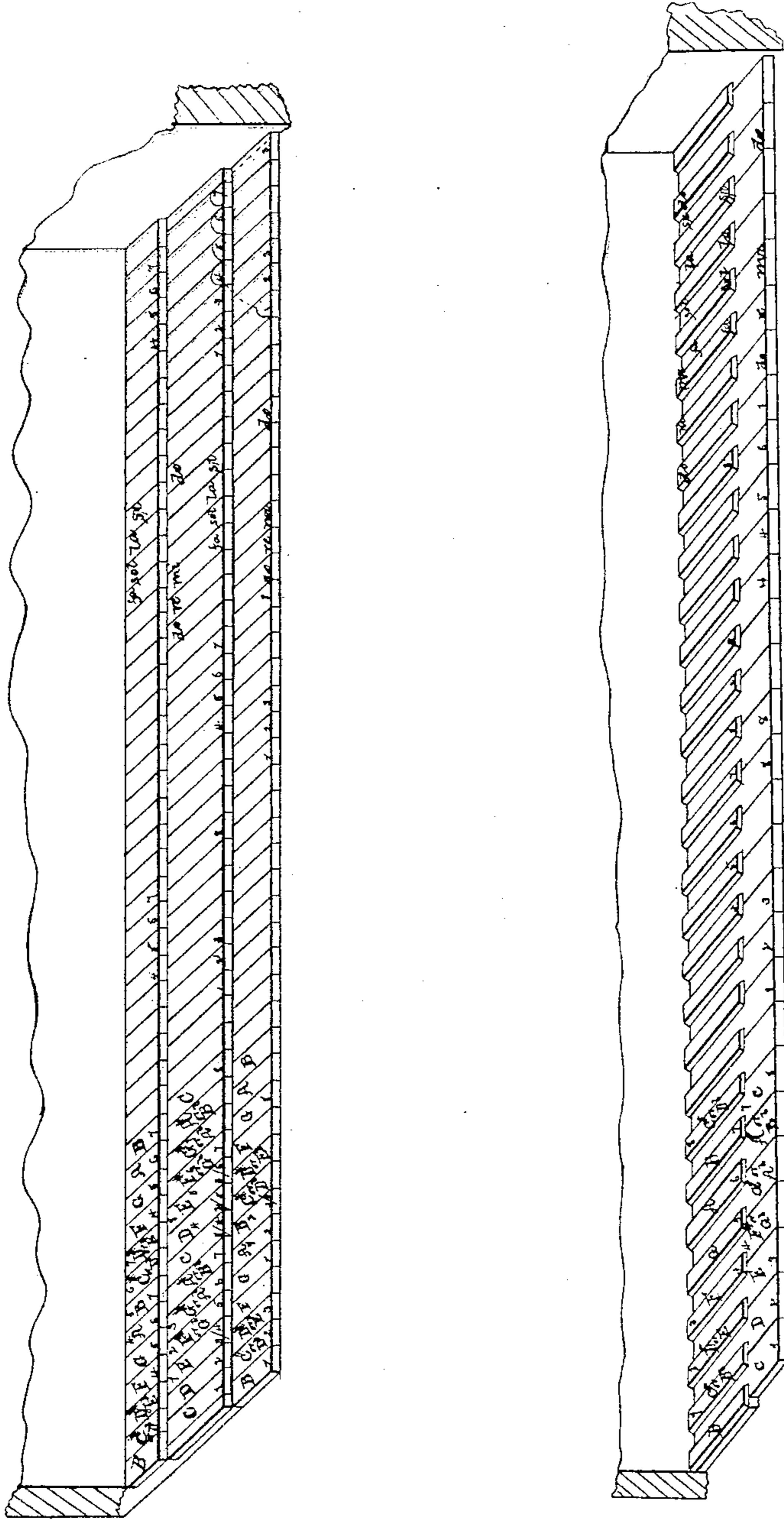


A. GOULD & C. MARSH.
KEYBOARD FOR PIANOS.

No. 24,021.

Patented May 17, 1859.



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ALFRED GOULD AND CYRUS MARSH, OF SENECA FALLS, NEW YORK.

ARRANGEMENT OF KEYBOARD FOR PIANOS, &c.

Specification of Letters Patent No. 24,021, dated May 17, 1859.

To all whom it may concern:

Be it known that we, ALFRED GOULD and CYRUS MARSH, of Seneca Falls, in the county of Seneca and State of New York, have invented a new and Improved Arrangement of the Keyboard of Pianofortes, Organs, Melodeons, and other Musical Instruments Similarly Played; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, Figure 1 being a view, in perspective, of our improved key-board, as we generally arrange it; and Fig. 2, a view, in perspective, of a modification thereof.

Like letters designate corresponding parts in both figures.

Instead of arranging the tones of the diatonic scale in one range or bank of keys, and the intermediate tones which complete the chromatic scale, in another range of keys, as in the common key-board, we employ different ranges of keys so arranged that those of one range uniformly alternate in position with those of the adjacent range or ranges, and the tones of each range are, in order, all at intervals of a whole-step, one above another, while those of one range are, in order, all at intervals of a half-step above or below those of the next alternating keys of the adjacent range or ranges; so that, by the employment of two adjacent ranges of keys, all the tones of the chromatic scale are uniformly produced, in succession. Each range that contains the C, or fundamental tone of the diatonic scale, also contains D, E, F#, G#, A#, C, or in the scales of flat (b) signature, D, E, Gb, Ab, Bb, C; and each range adjacent to the above, contains C#, D#, F, G, A, B, C#, or in scales of flat (b) signature, Db, Eb, F, G, A, B, Db; as indicated in the drawings.

The important advantage to be derived from the above arrangement is, first, if two ranges of keys are used, that only two modes of fingering are required for all the twelve different scales, one for those commencing on the several keys of one range, and the other for those commencing on the respective keys of the other range; and, second, if three ranges of keys are used, only one mode of fingering is required for all the scales,

since (as is apparent in Fig. 1,) the third range of keys bears precisely the same relation to the second range as the second bears to the first range of keys, the fingering in any one scale requiring only two adjacent ranges of keys. Hence, with the three-range key-board, instead of requiring twelve different modes of fingering to be learned, as is the case with the common key-board, when one mode of fingering has been mastered, the player at once becomes able to perform in any scale or key. Thus the labor of learning to play is greatly shortened. The player can at once play any piece of music set in any key, as well in any other, as in the key in which it is set, on the written score.

It is evident that the third range of keys is precisely the same as the first; and it may be connected therewith, or with the same strings, wires, reeds, or pipes, as may be most convenient or desirable; our invention not relating to the mechanism by which the sounds are produced, beyond the keys of the key-board. In performing some difficult pieces, or fingering some intricate chords, it may be convenient and desirable to add a fourth range of keys, a duplicate of the second; and we sometimes thus construct the key-board. But this is not of such essential importance as the second and third range of keys, as above described. Three ranges of keys compose the key-board for general use.

The keys of each range may be situated contiguous to one another; and the range placed, one behind, and raised somewhat higher than, another, as represented in Fig. 1; or one range may be placed, the keys alternately between those of another, and somewhat raised above them, as in Fig. 2, though the raising of one range above another is not essential, but desirable. And the alternate keys of one range may extend forward, the whole length of those of the intermediate range, in which case, two ranges would be in one row; or may be as shown in Fig. 2, similarly to the ordinary arrangement of black and white keys.

In order to guide the eyes in fingering, certain keys in the different octaves may be of different colors from others; or otherwise equivalently marked or designated. An-

other mode would be, to have certain keys in the different octaves raised a little above the others, both to guide the sight and the touch. In this manner, all the advantages now
5 gained by raised, black keys, can be obtained.

What we claim as our invention and desire to secure by Letters Patent, is—

The arrangement of two, three, or more ranges of keys of the key-board in the man-
10 ner and in relation to each other, substan-

tially as; and for the purposes herein specified.

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