(No Model.)

G. H. HUARD.

APPARATUS FOR TRANSPOSITION OF MUSIC.

No. 363,392. Patented May 24, 1887.

FIG. 1.

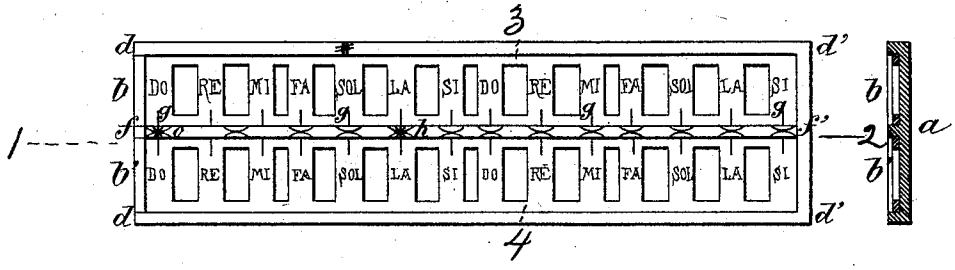


FIG. 3.

FIG. 2.



FIG. 4.

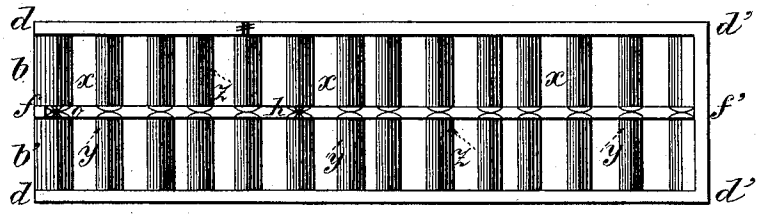
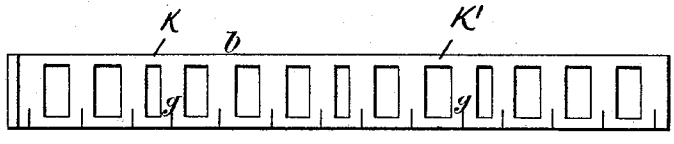


FIG. 5.



Witnesses:

C. Bletzy.

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UNITED STATES PATENT OFFICE.

GEORGES HENRI HUARD, OF PARIS, FRANCE.

APPARATUS FOR TRANSPOSITION OF MUSIC.

SPECIFICATION forming part of Letters Patent No. 363,392, dated May 24, 1887.

Application filed January 22, 1887. Serial No. 225,152. (No model.) Patented in France October 27, 1886, No. 179,286.

To all whom it may concern:

Be it known that I, GEORGES HENRI HUARD, clock-maker, a citizen of France, residing at Paris, in the French Republic, have invented a new and useful Improvement in Apparatus for the Transposition of Music, (for which I have obtained a patent in France, dated October 27, 1886, and numbered 179,286,) of which the following is a specification.

The apparatus is intended for methodically and mechanically transposing music at first sight. It is or may be made of wood or any suitable substance; and it consists, essentially, of a frame and two parallel rulers with openings or windows placed directly one above the other and sliding longitudinally in grooves of the frame, so as to mask by closed parts and unmask by open parts colored divisions on the frame for transposing the notes of a gamut from sharps to flats, and vice versa.

Figure 1 of the accompanying drawings represents an apparatus of the description embodying my invention, seen in front view and closed. Fig. 2 is a longitudinal section made at the line 1 2 of Fig. 1. Fig. 3 is a transverse section at the line 3 4 of Fig. 1. Fig. 4 represents the apparatus minus its two movable rulers, one of which is shown in Fig. 5.

The apparatus consists of a frame, *a*, and two rulers, *b b'*, sliding between the grooves *d d' f f'*. These rulers have thirteen openings or windows, *k k'*, separated by spaces of equal dimensions, on which the notes of two consecutive gamuts are marked do, ré, mi, fa, sol, la, si—do, ré, mi, fa, sol, la, si.

Vertical strokes *g*, marked below the notes for the upper ruler, *b*, and above for those below, *b'*, serve to mark the transposition.

The frame *a*, divided into two equal parts by the longitudinal projections *f f'*, is made with vertical colored or distinctive spaces. The upper ones exactly correspond with those below. The spaces *x* are white, of the same width as those of the openings or windows of the rulers. They are contiguous on the right to a space, *y*, colored in red, and on the left to a black space, *z*, each color occupying half the space between the white spaces. By this characteristic arrangement the two gamuts in do major, placed one above the other, Fig. 1, have their notes separated by spaces showing the importance of the tones, either a semi-tone of mi to fa and si to do, and a tone for all the other notes.

In sliding the rulers *b b'* in one or other direction either red or black spaces appear. The reds indicate flats and the blacks the sharps. Consequently, when the red spaces appear the tone is lowered a half-tone—that is to say, flat; and they are raised a half-tone or into sharps when the black spaces are visible.

Transposition.—Starting from la, if the lower ruler, *b'*, indicates the key of the piece to be transposed, and the upper one, *b*, the key into which it is to be transposed, the instrument is used as follows: To transpose it to a major key it suffices to put the first note of each of the gamuts in front of the guide-mark *o*, Fig. 1, marked at the left-hand end of the separating-projection *f f'*. For instance, to transfer a gamut in ré major to mi flat major, place the ré of the lower ruler in front of the guide-mark *o*, and then place the flat mi of the upper ruler in front of the same mark *o*. It will at once be seen that the ré becomes mi flat, that the mi becomes fa, that the fa sharp corresponds with sol, that sol becomes do, and do becomes ré.

For minor gamuts the relation is indicated by a mark, *h*, on the separation *f f'* corresponding with the note la. When the note is an accidental sharp or flat, it is lowered or raised a half-tone, according as it is sharp or flat.

No mistakes can occur, pupils being compelled to transpose correctly. For instance, when a person wishes to raise a piece in ré half a tone, he places the upper ruler to ré sharp, when the gamut cannot be executed.

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

The apparatus herein described for the transposition of music, consisting of a frame having colored divisions and two parallel rulers having openings and spaces on which are the notes of the gamut, placed directly the one above the other and sliding longitudinally in grooves of the frame, thereby masking by closed divisions and unmasking by open divisions the colored spaces on the frame in transposing the notes of the gamut from sharps to flats, and vice versa, substantially as described.

GEORGES HENRI HUARD.

Witnesses:
ROBT. M. HOOPER,
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