





# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN MUSICAL-NOTE TABLETS.

Specification forming part of Letters Patent No. **211,722**, dated January 23, 1879; application filed October 16, 1878.

*To all whom it may concern:*

Be it known that I, PETER ENGERS, of Dorseyville, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Musical-Note Tablets, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a plan or face view. Fig. 2 is a sectional plan. Fig. 3 is a vertical section in the plane *x x*, Figs. 1 and 2. Figs. 4, 5, 6, and 7 are plan views of the scale-slides when unrolled.

Similar letters indicate corresponding parts.

This invention consists in a tablet containing three double scales of musical notes, a representation of the key-board of a piano-forte or organ, and four slides, (one for each of the double scales and one for the key-board,) so that the various scales can be adjusted to all the major and minor keys, and by the key-board slide the keys of the piano-forte or organ corresponding to the notes required for each major or minor key can be indicated, and the names of the notes in each vocal and instrumental piece can be ascertained, and also the keys of an organ or piano-forte on which these notes are played.

In the drawings, the letter A designates my tablet, on which are shown three different ways to name the notes—either by the figures 1, 2, 3, 4, 5, 6, and 7, or by the syllables do, re, mi, fa, sol, la, si, or by the letters C, D, E, F, G, A, B, with sharps and flats.

On the tablet A are three double scales of notes, B B<sup>1</sup>, C C<sup>1</sup>, D D<sup>1</sup>, and between these double scales are cylindrical slides B<sup>2</sup> C<sup>2</sup> D<sup>2</sup>. On each of these slides are several double rows of figures, the upper rows referring to the scales, B C D, above the slides, which are in the violin or G clef, and the lower rows to the scales, B<sup>1</sup> C<sup>1</sup> D<sup>1</sup>, below said slides, which are in the bass or F clef. On one side of the upper slide, B<sup>2</sup>, (see Fig. 4,) are two rows of the syllables do, re, mi, fa, sol, la, si, the upper row referring to the scale B in the G clef, and the lower row to the scale B<sup>1</sup> in the F clef.

On the lower part of the tablet A is an imitation key-board, E, and a cylindrical slide, E<sup>2</sup>, marked with several rows of figures, Fig.

7, to point out the keys which are used in playing the notes of all major and minor gamuts, (or keys.)

The scales B B<sup>1</sup> exhibit the notes according to the tonic system for the human voice, and whenever one or more of these notes is to be sung or played half a tone higher or lower in any key, the sharp or flat sign is placed on the staff or staves in the beginning of each line. The slide B<sup>2</sup> designates the notes on the scales B B<sup>1</sup>, either by the syllables do, re, mi, fa, &c., or by the figures 1, 2, 3, &c.; and by moving the slide in or out, the key in which the piece is to be sung or played is indicated, as will be presently more fully explained.

The names of the notes according to the letters C, D, E, &c., are ascertained for each major and minor key by the slides C<sup>2</sup> D<sup>2</sup> and the scales C C<sup>1</sup>, D D<sup>1</sup>. The slide C<sup>2</sup> contains four double rows of figures, C<sup>3</sup>, B<sup>3</sup>, D<sup>3</sup>, and No. II, Fig. 5, the double row No. II serving to indicate the names of the notes for the major keys; the double row D<sup>3</sup>, those for the minor keys, fundamental form; the double row B<sup>3</sup>, those for the minor keys, melodic form; and the double row C<sup>3</sup>, those for the minor keys, harmonic form. The slide D<sup>2</sup>, Fig. 6, contains double rows of figures, C<sup>4</sup>, B<sup>4</sup>, D<sup>4</sup>, and No. III, like the slide C<sup>2</sup>; but the double scale C C<sup>1</sup> points out the notes in the succession of fifths, and the double scale D D<sup>1</sup> in the succession of fourths. In the melodic form of minor keys the large figures 6 and 7 are taken in ascending, and the small figures 6 and 7 in descending. The slide E<sup>2</sup>, Fig. 7, contains single rows of figures, C<sup>5</sup>, B<sup>5</sup>, D<sup>5</sup>, and No. IV, to indicate the keys of a piano-forte or organ to be played for each note in the different keys.

For naming and singing the notes according to figures 1, 2, 3, &c., the double scale B B<sup>1</sup> and the slide B<sup>2</sup> are employed. The figure 1 on the slide B<sup>2</sup> points out the first degree of a note or tone of any major or minor key; 2, the second; 3, the third; 4, the fourth; 5, the fifth; 6, the sixth; 7, the seventh. These seven figures are repeated as many times as may be required.

For a vocal piece in the natural key, the first 5 in the upper row of figures on the slide B<sup>2</sup> is placed under the first note in the scale B.

All the figures in the upper and lower row then designate the notes in their proper degree in the key C.

For the key with one sharp, place 1 under the first note; for the key with two sharps, place 4 under the first note; for the key with three sharps, place 7 under the first note; for the key with four sharps, place 3 under the first note; for the key with five sharps, place 6 under the first note; for the key with one flat, place 2 under the first note; for the key with two flats, place 6 under the first note; for the key with three flats, place 3 under the first note; for the key with four flats, place 7 under the first note; for the key with five flats, place 4 under the first note; for the key with six flats, place 1 under the first note.

For singing according to do, re, mi, &c., in the natural key C, place sol under the first note; in the key of one sharp, place do under the first note; in the key of two sharps, place fa under the first note; in the key of three sharps, place si under the first note; in the key of four sharps, place mi under the first note; in the key of five sharps, place la under the first note; in the key of six sharps, place re under the first note; in the key with one flat, place re under the first note; in the key with two flats, place la under the first note; in the key with three flats, place mi under the first note; in the key with four flats, place si under the first note; in the key with five flats, place fa under the first note; in the key with six flats, place do under the first note.

In naming and singing the notes according to the letters C, D, E, &c., in the double scale C C<sup>1</sup>, for the natural key C, place the figure 5 of No. II, Fig. 5, under the first note of scale C; for the key with one sharp, place 1 under the first note; for the key with two sharps, place 4 under the first note; for the key with three sharps, place 7 under the first note; for the key with four sharps, place 3 under the first note; for the key with five sharps, place 6 under the first note; for the key with six sharps, place 2 under the first note.

For the keys with flats, the double scale D D<sup>1</sup> and slide D<sup>2</sup> have to be used, as follows: For the key with one flat, the figure 2 in the row No. III of slide D<sup>2</sup>, Fig. 6, has to be placed under the first note in scale D; for the key with two flats, place 6 under the first note; for the key with three flats, place 3 under the first note; for the key with four flats, place 7 under the first note; for the key with five flats, place 5 under the first note; for the key with six flats, place 2 under the first note.

For minor keys, fundamental form, in the succession of fifths, the scales C C<sup>1</sup> and the double row of figures D<sup>3</sup> on slide C<sup>2</sup> are used.

For A minor, place 7 under the first note G of scale C; for E minor, place 3 under the first note G of scale C; for B-flat minor, place 7 under G-sharp of scale C; for F-sharp minor, place 2 under G-sharp of scale C; for C-sharp minor, place 5 under G-sharp of scale C; for

G-sharp minor, place 1 under G-sharp of scale C; for D-sharp minor, place 4 under G-sharp of scale C.

For minor keys, harmonic form, in the succession of fifths, the double row B<sup>3</sup>, Fig. 5, on slide C<sup>2</sup> is used, as follows: For A minor, place 7 under G-sharp of scale C; for E minor, place 3 under G of scale C; for B-flat minor, place 1 under A-sharp of scale C; for F-sharp minor, place 2 under G-sharp of scale C; for C-sharp minor, place 5 under G-sharp of scale C; for G-sharp minor, place 7 under G of scale C; for D-sharp minor, place 4 under G-sharp of scale C.

For minor keys, melodic form, in the succession of fifths, the double row C<sup>3</sup>, Fig. 5, on slide C<sup>2</sup> is used, as follows: For A minor, place 7 under G-sharp of scale C; for E minor, place 3 under G of scale C; for B-flat minor, place 7 under A-sharp of scale C; for F-sharp minor, place 2 under G-sharp of scale C; for C-sharp minor, place 5 under G-sharp of scale C; for G-sharp minor, place 7 under G of scale C; for D-sharp minor, place 4 under G-sharp of scale C.

For minor keys in the succession of fourths, the scale D D<sup>1</sup> and slide D<sup>2</sup> are used—that is to say, for fundamental form the rows D<sup>4</sup>, Fig. 6, as follows: For D minor, place 4 under G of scale D; for G minor, place 1 under G of scale D; for C minor, place 5 under G of scale D; for F minor, place 2 under G of scale D; for B-flat minor, place 6 under G of scale D; for E-flat minor, place 4 under A-flat of scale D.

For harmonic form, for D minor, place 4 under G of scale D; for G minor, place 1 under G of scale D; for C minor, place 5 under G of scale D; for F minor, place 2 under G of scale D; for B-flat minor, place 6 under G of scale D; for E-flat minor, place 4 under G-flat of scale D.

For melodic form, for D minor, place 4 under G of scale D; for G minor, place 1 under G of scale D; for C minor, place 5 under G of scale D; for F minor, place 2 under G of scale D; for B-flat minor, place 6 under A-flat of scale D; for E-flat minor, place 4 under A-flat of scale D.

In order to ascertain the keys of a piano-forte or organ for all the major and minor keys, the slide E<sup>2</sup> is used in connection with the key-board E, and the figure 1 on slide E<sup>2</sup> is in all cases placed over that key of the key-board which is marked with the respective key-note—that is to say, in the key C place 1 over C, in the key G place 1 over G, and so on.

By referring to Fig. 2 it will be seen that the tablet is provided with an extension, A', to receive the inner ends of the several slides.

What I claim as new, and desire to secure by Letters Patent, is—

1. A tablet containing three double scales of musical notes, a representation of the key-board of a piano-forte or organ, and four slides, (one for each of the double scales and one for the key-board,) said slides being marked with

figures or syllables, all constructed and adapted to operate substantially as and for the purpose shown and described.

2. The combination, with the tablet A, double scales B B', C C', D D', key-board E, and slides B<sup>2</sup>, C<sup>2</sup>, D<sup>2</sup>, and E<sup>2</sup>, of an extension, A', substantially as and for the purpose set forth.

In testimony that I claim the foregoing I hereunto set my hand and seal this 9th day of October, 1878.

PETER ENGERS. [L. s.]

Witnesses:

ADOLPH FEITKNECHT,  
HENRY MAEDER.