

Patented Dec. 9, 1890.

MAJOR Mode		MINOR Mode	
1	2	1	2
2	3	2	3
3	4	3	4
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98	99	98	99
99	100	99	100

Fig. 4.

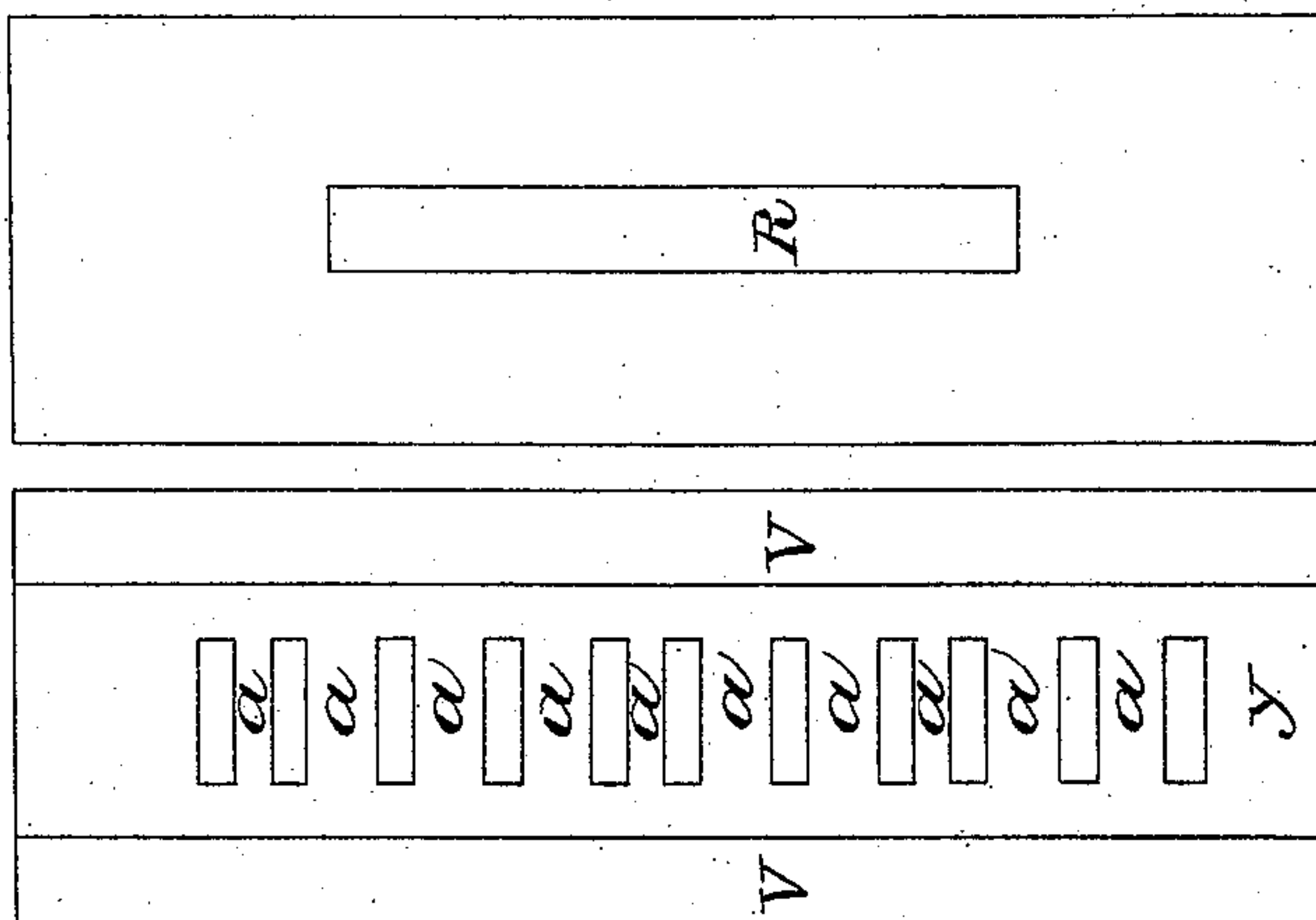


Fig. 3.

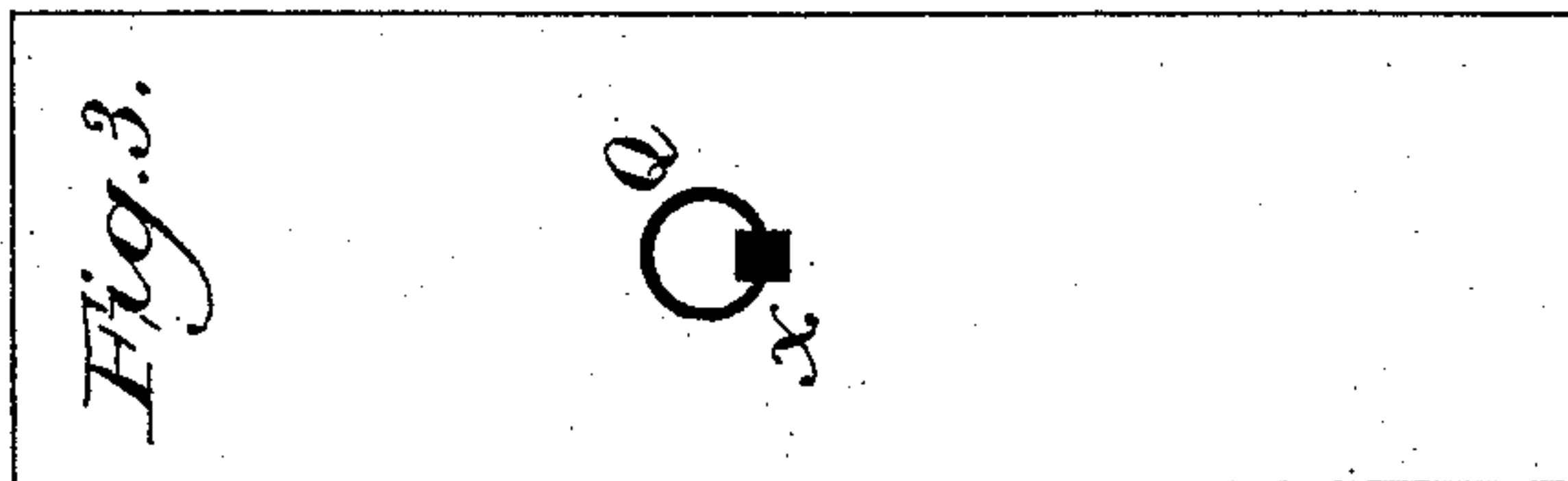
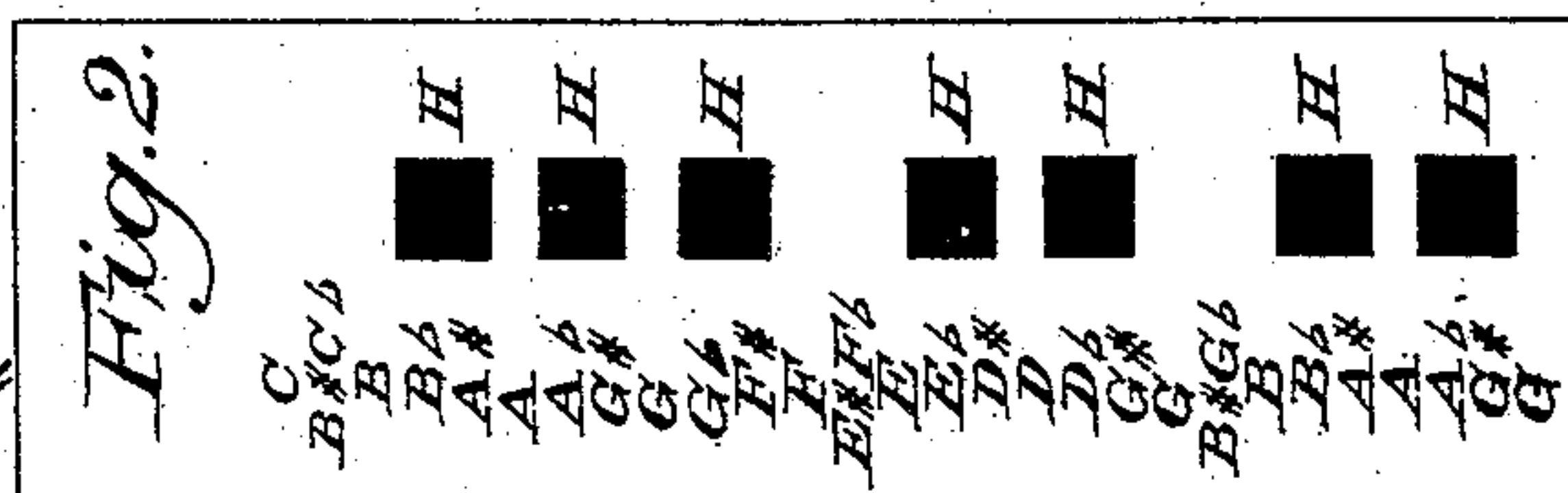


Fig. 2.



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UNITED STATES PATENT OFFICE.

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MUSIC-CHART.

SPECIFICATION forming part of Letters Patent No. 442,303, dated December 9, 1890.

Application filed December 27, 1889. Serial No. 335,162. (Model.) Patented in Canada June 17, 1890, No. 34,542.

To all whom it may concern:

Be it known that I, JOSEPH JAMES BAGULEY, accountant and music-teacher, of the city of Toronto, and a citizen thereof, in the county of York, Province of Ontario, and Dominion of Canada, have invented a Chart for Teaching Music, and called it "Baguley's Combined Mechanical Diatonic Scale, Modulator, Chord-Combiner, and Organ-Key Denoter," or, for shortness, "The Musician's Guide;" and I do hereby declare that the following is a full, clear, and exact description of the same, which will enable others skilled in the art to which it appertains to make and use the same, reference being made to the accompanying drawings, in which—

Figure 1 is a face-plate made of any material, with portions cut out, leaving alternate spaces and bars. The said spaces are numbered from 1 to 8 on the major side, making an octave. The said octave is composed of twelve half-tones, viz., commencing with the space No. 1, then two half-tones or bar *a*, then space No. 2, then two half-tones or bar *a*, then space No. 3, then one half-tone or bar *a*, then space No. 4, then two half-tones or bar *a*, then space No. 5, then two half-tones or bar *a*, then space No. 6, then two half-tones or bar *a*, then space No. 7, then one half-tone or bar *a*, then space No. 8. The lower half-tone or part, of bar *a* marked P, between 5 and 6 is left loose, part of which extends on each end under the plate shown in Fig. 1 and between it and plate shown in Fig. 2, and is for the purpose of being used in the minor mode. Lines D, drawn from the bars *a* to the outer edges of chart, are for the purpose of intersecting other lines drawn from top to bottom for the formation of squares, as at S and T, and for the guidance of the eye from the numbers or symbols in the squares to the letters in the spaces between the bars *a* in line with them. Lines E are drawn from top to bottom for the purpose of intersecting those lines, drawn from the bars *a* outward, to form squares, as aforesaid, as at S and T aforesaid. The squares at S and T aforesaid are for the purpose of receiving the numbers of degree or symbol representing the sevenths in the key. The figures 1 to 8 on the right and left hand sides of the spaces in column *b* on Fig. 1 de-

note the number of degree or interval in the scale or key. The first seven letters of the alphabet and symbols denoting flats and sharps in music are used as described on Fig. 2, also symbols H, as described on same for the purpose of illustrating flats and sharps on the organ key-board. The syllables in column C on the outer right and left hand sides of the bars *a* are to assist the voice to produce the required tones in any key.

Harmonical sounds or degrees are denoted by the following names and order, and the same are to be traced to spaces between the bars on line with them, so as to form the various chords, viz: tonic or key note, as at *f*, and marked in squares in line with it, with $\times 1$, with its attendant accessories $1-1=*;$ supertonic or second degree, as at *i*, and marked in squares in line with it, with $\times 2$, $2-2=\ddagger;$ mediant or third degree, as at *j*, and marked in squares in line with it, with $\times 3$, $3-3=\ddagger;$ sub-dominant or fourth degree, as at *h*, and marked in squares in line with it, with $\times 4$, $4-4=\ddagger;$ dominant or fifth degree, as at *g*, and marked in squares in line with it, with $\times 5$, $5-5=\ddagger;$ sub-mediant or sixth degree, as at *k*, and marked in squares in line with it, with $\times 6$, $6-6=*;$ leading note or seventh degree, as at *e*, and marked in squares in line with it, with $\times 7$, $7-7=\ddagger.$ The various harmonical names of sounds or degrees are repeated in column U, and are in line with spaces between the bars *a*. Major triads and chords of the seventh will be found marked in the squares at S, on the left-hand side of the bars *a*, and minor triads and chords of the seventh on the right-hand side of the bars *a*, inside the squares, as at T, showing clearly their relationship, yet their distinctive character. Root notes or tones are indicated by a cross (\times) before the figure in the squares. Accessory notes or tones are indicated by a dash (—) or double dash (==) after the figure, viz: the third of the triad or chord by a single dash (—) after the figure, and the fifth of the triad or chord by a double dash (==) after the figure in the square. Major sevenths are indicated by the sign * placed in the square. Minor sevenths are indicated by the sign \ddagger in the square. Diminished sevenths are indicated by the sign \odot in the square. An

octave is a repeat of a letter higher in the scale, as from C to C. The chart may contain any number of octaves. The bars, squares, symbols, and figures may be of any color.

Fig. 1 shows the front plate of chart with the plate of Fig. 2 underneath showing in the spaces the letters A B C D E F G. Fig. 2 comprises a plate of any material on which is printed, painted, or marked the letters and symbols, as shown in drawings on face of Fig. 2. The said plate to be placed under the plate of Fig. 1, with the letters and symbols next to the bars *a*, and to the back of which is attached a ring and staple to move said plate, Fig. 2, when required. Fig. 3 shows back view of Fig. 2 with ring Q and staple *x* passing through to front part and clinched, so as to move said plate, Fig. 2; Fig. 4, back view of Fig. 1, showing bars *a* and pieces or ribs *v* for guiding of Fig. 2 when sliding between the said ribs *v*. *y* is the space in which slides the plate of Fig. 2; Fig. 5, a back plate to cover back of chart, showing slot R to allow ring Q to slide in moving plate of Fig. 2. The said back part or plate to be cemented or fastened to pieces or ribs *v*, as aforesaid, as shown on Fig. 4.

Flats and sharps on the key-board of the organ or piano are represented by a dark color upon the plate of Fig. 2, appearing in the spaces between the bars *a* of plate of Fig. 1, indicating the flats and sharps to be played on the organ according to the key in which the slide, Fig. 2, is set or placed under Fig. 1.

In order to facilitate the playing of any triads or chords of the seventh on the organ, place the chart with the top part to the right, then the major triads and chords of the seventh will be found in the squares *S* above the bars *a*, and the minor triads and chords of the seventh below the bars *a* in the squares at *T*, as aforesaid. If four parts are required, then double the root-note in preference to the accessories.

All the characters described in the squares must be traced in line to letters and symbols in spaces between bars *a*.

The chart is used in the following manner: Having fixed upon a certain key—for example, say the key of C major or open key—move the plate, Fig. 2, with ring Q, until the foundation or key note or letter C comes opposite the number one on the major side of the bars on Fig. 1. Then will appear the proper intervals in the diatonic scale in the major mood of C, and also all the triads and chords of the seventh mapped out inside the squares at *S*—viz., the tonic marked $\times 1, 1-1=$ —the letters for which will be found by tracing between the lines to the letters in the spaces between the bars *a* aforesaid, which will be C E G; those constituting the tonic triad in the key of C major, as aforesaid; or, further, take the chord of the dominant seventh in the same key. Then will appear $\times 5, 5-5=\sharp$. Trace these to the letters between the bars *a*

and they will be found to consist of G B D F, those constituting the chord of the dominant seventh in the key of C major, as aforesaid.

To modulate into the relative minor to the foregoing C major, first bring down the loose part, bar P, between 5 and 6 on the major side, and you then have the minor intervals in the key of A minor, and also all the triads and chords of the seventh mapped out in the squares on the right-hand side of the bars *a*, as at T. For example, the tonic triad will be marked $\times 1-1-1=$. Trace these to the letters between the bars and you have A C E, those constituting the tonic triad in the key of A minor; or take the dominant seventh chord in the same key—viz., $\times 5.5-5=\sharp$. Trace these to the letters in the spaces between the bars and they will be found to consist of E \sharp G B D, those constituting the chord of the dominant seventh in the key of A minor.

To form any triad or chord of the seventh, either major or minor, first find the root-note required and add its accessories, trace to the letters in the spaces between the bars *a*, then will appear the desired triad or chord of the seventh.

This chart shows at sight the various intervals in any key according as the slide, Fig. 2, is set under the plate of Fig. 1. It clearly defines the difference and relationship between the major and minor modes; also, all the triads and chords of the seventh in any key, also how easily to pass from a major to its relative minor by simply moving bar P, also the affinity of chords. It is useful in analyzing any piece of music. It is especially useful to the student in learning to play the flute, violin, organ, or any other instrument, making plain the various intervals in the diatonic scale, showing the reason of flats and sharps to be used in the various keys, also showing how to easily pass from one key to another by simply moving slide, Fig. 2, under the plate, Fig. 1; also, it is an index or key to black-board exercises in the diatonic scale, and also shows the various black keys to be used in playing on the organ.

Having described my invention, what I claim is—

A musical chart consisting of a main front part provided with a central row of alternate bars and spaces, the half-bar P, and lines D and E, forming squares in which are symbols and figures arranged in the manner shown, in combination with a sliding plate provided with symbols and characters shown and arranged to slide between ribs V on the rear side of the main plate, all constructed and arranged as and for the purposes set forth.

Toronto, county of York, Province of Ontario, Dominion of Canada, November 27, A. D., 1889.

JOSEPH JAMES BAGULEY.

In presence of—

OCTAVIOUS WHITE,

CHARLES JOSEPH BAGULEY.