J. MacMASTER.

MUSIC INDICATOR.

APPLICATION FILED MAY 22, 1908.

996,935.

Patented July 4, 1911.

2 SHEETS—SHEET 1.

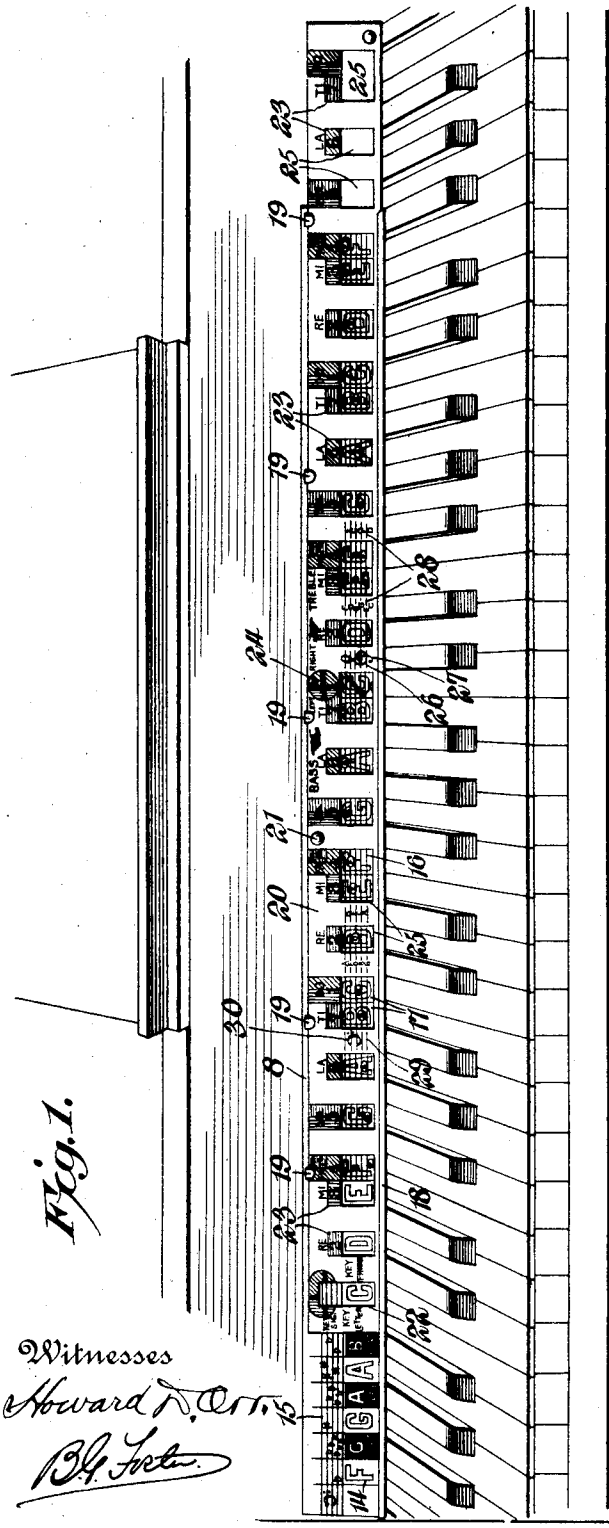

Fig. 1.

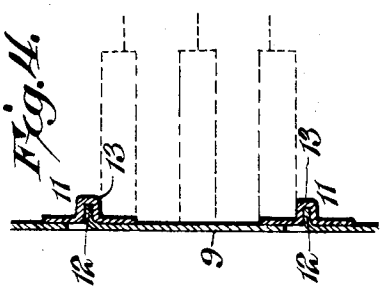

Fig. 4.

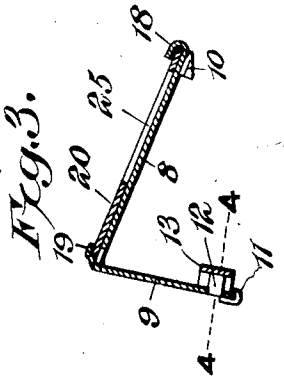

Fig. 3.

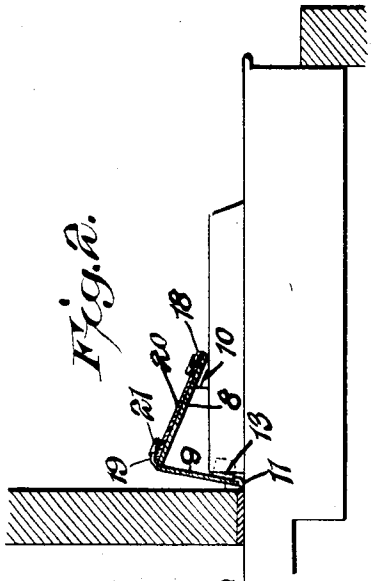

Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 5.

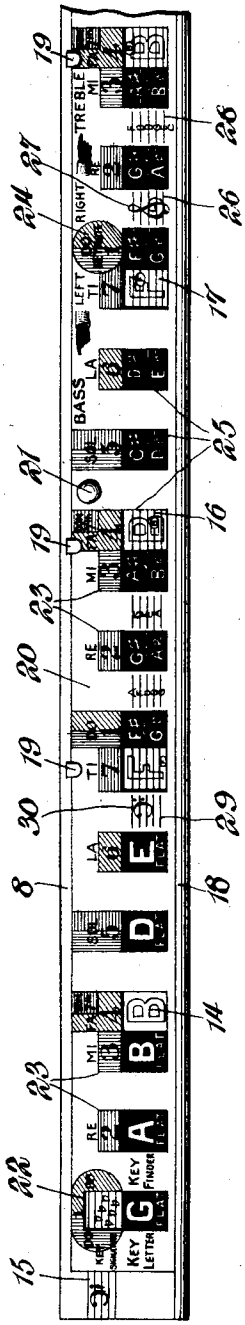


Fig. 6.

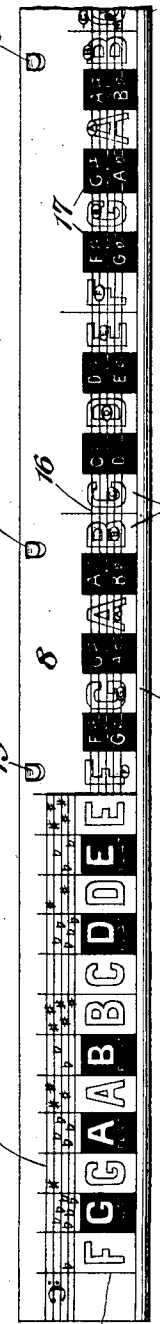
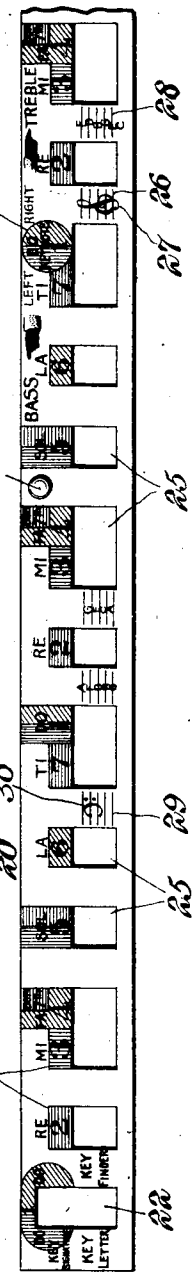


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

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MUSIC-INDICATOR.

996,935. Specification of Letters Patent. Patented July 4, 1911.

Application filed May 22, 1908. Serial No. 434,361.

To all whom it may concern:

Be it known that I, JAMES MacMASTER, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented a new and useful Music-Indicator, of which the following is a specification.

The present invention relates to means for indicating on the key-board of a musical instrument, the meaning of the various designations employed in music, and for setting forth clearly the relation between notes, chords, and the like, as well as to indicate the method employed in playing the same.

One of the principal objects of this invention is to provide a novel device of the above character that is not only simple in structure, but one that can be readily understood, thus making it particularly adaptable for use in connection with instruction by means of correspondence.

A further and important object is to provide means that will clearly disclose to the user the letter names of the different keys of the key-board, the lines and spaces of the bass and treble staffs which represent the particular keys in each octave of the key-board, the theory of the transposition of the scale and chords, the alterations necessary to effect such change and will designate the keys of the key-board used in forming the scales and chords used in each particular key, the mechanism being such that the different designations not in use for any particular key or arrangement are not exposed, thus materially avoiding confusion.

The preferred form of construction is illustrated in the accompanying drawings, wherein:—

Figure 1 is a perspective view showing the indicator applied to a key-board. Fig. 2 is a vertical cross sectional view through the same. Fig. 3 is a detail cross sectional view through the indicator showing the same on an enlarged scale. Fig. 4 is a detail sectional view on the line 4—4 of Fig. 3. Fig. 5 is a front elevation of a portion of the indicator showing the same on an enlarged scale and with the slide in a position to play in six flats. Fig. 6 is a front elevation of a portion of the supporting member. Fig. 7 is a similar view of a portion of the slide.

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

In the embodiment illustrated, a base or supporting member is employed that is formed of sheet metal substantially V-shaped in cross section and comprising a front flange 8 and a rear flange 9. The lower edge of the front flange is arranged to rest upon the black keys of a key-board, as is shown in Fig. 2, and therefore is provided with suitable cushioning strips 10. The rear flange 9 is arranged to engage behind the black keys, and its lower edge is provided with cushioning means 11. The said rear flange, as shown more particularly in Fig. 4, has forwardly extending stop lips 12 cut therefrom, which are covered with cushioning material 13, said lips being arranged to be placed on opposite sides of certain of the black keys of the key-board so as to prevent the longitudinal movement of the support. Said support when placed in position is thus held against movement in a longitudinal or lateral direction.

Upon one end portion of the outer face of the front flange 8 is placed a key finder scale 14 comprising a series of sections equal in number and width to the octave of a key-board, the sections registering with the keys of such octave and being colored in accordance with such keys. Each section is moreover provided with a letter which is the designation of the key with which such section is associated. Above this key finder scale and really forming a part of it, is a longitudinally disposed staff 15 on which are placed the key signatures corresponding to the key designations. Extending longitudinally of the remainder of the front flange 8 is a staff 16 divided into sections 17 that register with the keys of the key-board and are colored to correspond thereto. Each section of this staff contains the designation of the key it represents and on the staff in each section appears the note head corresponding to such key, said note head also preferably having its designation located therein. The section which registers with

middle C of the key-board, is appropriately designated, and preferably has note heads appearing on the lines above and below the staff. The lower note of course corresponds to high C of the bass staff and the upper note corresponds to low C of the treble staff, this being the point at which the staff changes from bass to treble. The lower margin of the front flange 8 is upturned, as shown at 18 over the front face of said flange, forming a guideway, and cut from the upper portion of said flange are outstanding and downwardly turned lips 19 forming an upper guideway. A slide 20 that is capable of a reciprocatory movement on said front flange, has its margins operating in the guideway, and an operating knob or button 21, secured to the slide, constitutes means for limiting its movement by engaging adjacent lips 19.

Formed in the end of the slide which operates over the key finder scale 14, is an opening 22 of a width equal to any one of the sections of such key finder scale and a length that includes said sections and the corresponding sections of the staff. The term "Key letter" and "Key signature" respectively appear adjacent to the lower and upper portions of this opening, and consequently upon the exposure of any key signature, the letter for which it stands is interpreted, while the term "Key finder", also associated with the opening 22, defines the use of said opening as a whole. Printed or otherwise formed upon the upper portion of the slide, are what may be termed "fingering designations," the same comprising suitable fields 23 that are differently colored in a manner well understood to those skilled in the art, these fields or designations being arranged to register with the keys that form the different chords, each set of fields of a corresponding color designating a particular chord. These differently colored fields are successively numbered to make up and point out the intervals of the scale. The singing tones "Do", "Re", "Mi", etc., are also printed in associated relation. With these designations, the fingering designation that is associated with the opening 22 is made particularly prominent, and the corresponding designation 24, which indicates the key note, is also made prominent by being of a different configuration and having the word "Key-note" appearing therein. Formed in the slide below each of the fingering designations and registering therewith is an opening 25, through which the key designations 17 appear. On one of the portions between said openings at the right of the key note designation 24 is a section of a staff 26 on which appears the treble clef 27, and to the right of the same on the spaces between the openings, are other sections 28 of the staff with the designations of the lines and the spaces thereon. In like manner, to the left of the key-note designation 24 appear staff sections 29 having the bass clef 30 and the titles of the lines and spaces. These various staff sections 26, 28 and 29 are alined with the staff 16 beneath the slide.

In using the device, the "middle C" designation is placed over the middle C key of the key-board with the rear flange 9 of the support behind the rear ends of the black keys, so that the stops 12—13 will extend on opposite sides of certain of said black keys, as already explained. This will bring the key signatures and designations of the key finder scale 14 as well as the sections 17 in proper register with the keys of the key-board. When the instrument is in position, the slide can be moved to the right or left, as desired, and consequently the end opening 22 may be moved to any signature. For instance in Fig. 1, the key of C appears, and therefore the fingering designations 23 register with the proper white keys, and the designations corresponding thereto are exposed through the various openings 25, while all the other or black key designations are covered, thus avoiding confusion as will be evident. By this arrangement not only is the proper fingering to produce chords, and the like fully disclosed, but the titles or designations of the keys are shown, and in addition to this, the proper note heads on the musical staff, which correspond to said keys, are likewise displayed. As is well known, the different number of the flats and sharps in the signatures is the source of many difficulties which the student encounters in the study of music. As above shown, with this instrument, in the key of "C", the student is taught that the seven white keys of the octave constitute the scale in that key. When, however, he goes to the key of "G", he is taught that the scale then becomes the six white keys, "G, A, B, C, D, E", and the one black key—F sharp. In the key of "D", he uses five white keys and two black keys—F sharp and C sharp. With the present device therefore, the necessity for the use of flats and sharps in each key can be easily made plain. For instance, all the keys numbered "1" in the fingering designations are key-notes to the several octaves. If there are no flats or sharps, the slide is adjusted to the point where no flats or sharps appear through the opening 22 on the staff 15, whereupon it will be found that the music is to be played in the key of "C", as above explained. If, however, a piece of music is written in six flats, for instance, then the slide is moved until six flats appear through the opening 22, as shown in Fig. 5, whereupon the proper white and black keys to be played, will be exposed through the openings

25, and the key-notes to the several octaves will be distinctly pointed out. If the signature is in sharps, it will of course be understood that the upper designations on the black sections 17 are to be read, while if the signature is in flats, the lower designations are intended.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a device of the character described, the combination with a support arranged to be placed upon the black keys of a musical instrument and including a flange that is arranged to engage behind said black keys, of stop lips cut from the flange, said lips projecting inwardly from said flange and being arranged to be placed on opposite sides of certain of the black keys to prevent the longitudinal movements of said support, and key indicating means carried by the support and properly spaced to register with keys of the key-board.

2. In a device of the character described, the combination with a support arranged to be associated with the key-board of a musical instrument, said support being formed of sheet metal and having one margin overturned at its front face to form a guideway, said support also having ears spaced apart from each other and arranged equidistant from said guideway, said ears being cut from the material and upstanding from the front face to form another guideway, of a slide mounted on said front face and having its margins operating in the said guideways, and key indicating means carried by the slide and properly spaced to register with keys of the key-board.

3. In a device of the character described, the combination with a substantially V-shape support formed of sheet metal comprising a front flange, the lower edge of which is arranged to rest against the black keys of a key-board and a rear flange that is arranged to engage behind said black keys, said rear flange being provided with forwardly extending stops arranged to engage on opposite sides of certain of the black keys to prevent the longitudinal movement of the support, the front flange having an upturned lower margin forming a lower guideway, and ears cut from its upper portion and outstanding therefrom, forming an upper guideway, of a slide movably mounted on the front flange and having its margins engaged in said guideways, and key-indicating means mounted on the front flange and slide and properly spaced to register with keys of the key-board.

4. In a device of the class described, the combination of a single-piece supporting structure constructed of sheet metal bent longitudinally into front and rear plates disposed at an angle to each other, the lower edge of one of the plates being adapted to rest on the tops of the black keys of a key-board and the lower edge of the other plate being adapted to engage behind the ends of the black keys and rest on the white keys, the lower marginal portion of the first-mentioned plate being bent backwardly on itself to form a guideway, outstanding lugs on the first-mentioned plate adjacent the bend between the plates and forming a guideway, and lugs projecting forwardly from the second-mentioned plate to engage between the black keys of the keyboard for preventing longitudinal movement of the supporting structure, with a chart slidably mounted in the guideways.

5. In a device of the character described, a body member adapted to rest upon the keys of a keyboard and divided into spaces in number, width and relative position agreeable to the keys of the keyboard within the range of said body member, said spaces containing the note designations of the keys they match when in normal position on the keyboard, and a slide overlying and movable along said body member, and having passages therethrough spaced to expose only those note designations on the body member representing the notes of the diatonic scale of a chosen signature.

6. In a device of the character described, a body member having produced thereon a staff divided into a longitudinal series of spaces agreeable to a chosen number of successive keys of a keyboard, each space having prominently displayed therein the letter designation of the corresponding key and also a small letter designation of the same key and associated with a note-sign properly positioned on the staff within said space, and a slide overlying the body member and having openings therethrough for exposing only those note designations on the said staff on the body member representing the notes of the diatonic scale of a chosen signature.

7. In a device of the character described, a body member having produced thereon a staff divided into a longitudinal series of spaces agreeable to keys of a keyboard, each space having prominently displayed thereon the letter designating the corresponding key and also a small letter designating the same key and associated with a note-sign properly positioned on the staff within said space, and a slide overlying the body member and

having openings therethrough for exposing at any one time only those note designations of the diatonic scale of the chosen signature, said slide having imprinted thereon in line with the staff on the body member, the bass and treble staff lines with the letter designations on the lines and spaces of the staff.

8. In a device of the character described, a body member having produced thereon a staff divided into a longitudinal series of spaces agreeable to the successive white and black keys of a keyboard, the staff lines contrasting with the spaces traversed thereby, each space traversed by the staff and corresponding to a white key having prominently displayed therein the letter representing the corresponding key and also the same letter but of smaller size associated with the note sign for the same key properly positioned on the staff, and each black space having its appropriate key designation displayed therein, a key finder scale at one end of the body member in line with said staff, said scale comprising a single octave with a staff above the key designations and containing key signatures corresponding to the key designations, and a slide movable along the body member in overlying relation thereto and provided with passages exposing at any one time only those spaces in the first named staff containing designations of notes of the diatonic scale of a chosen one of the signatures of the key finder scale, the slide having thereon differentiating indications designating chords of the diatonic-scale, said indications being closely associated with the passages through the slide.

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

JAMES MACMASTER.

Witnesses:
JOHN H. SIGGERS,
B. G. FOSTER.