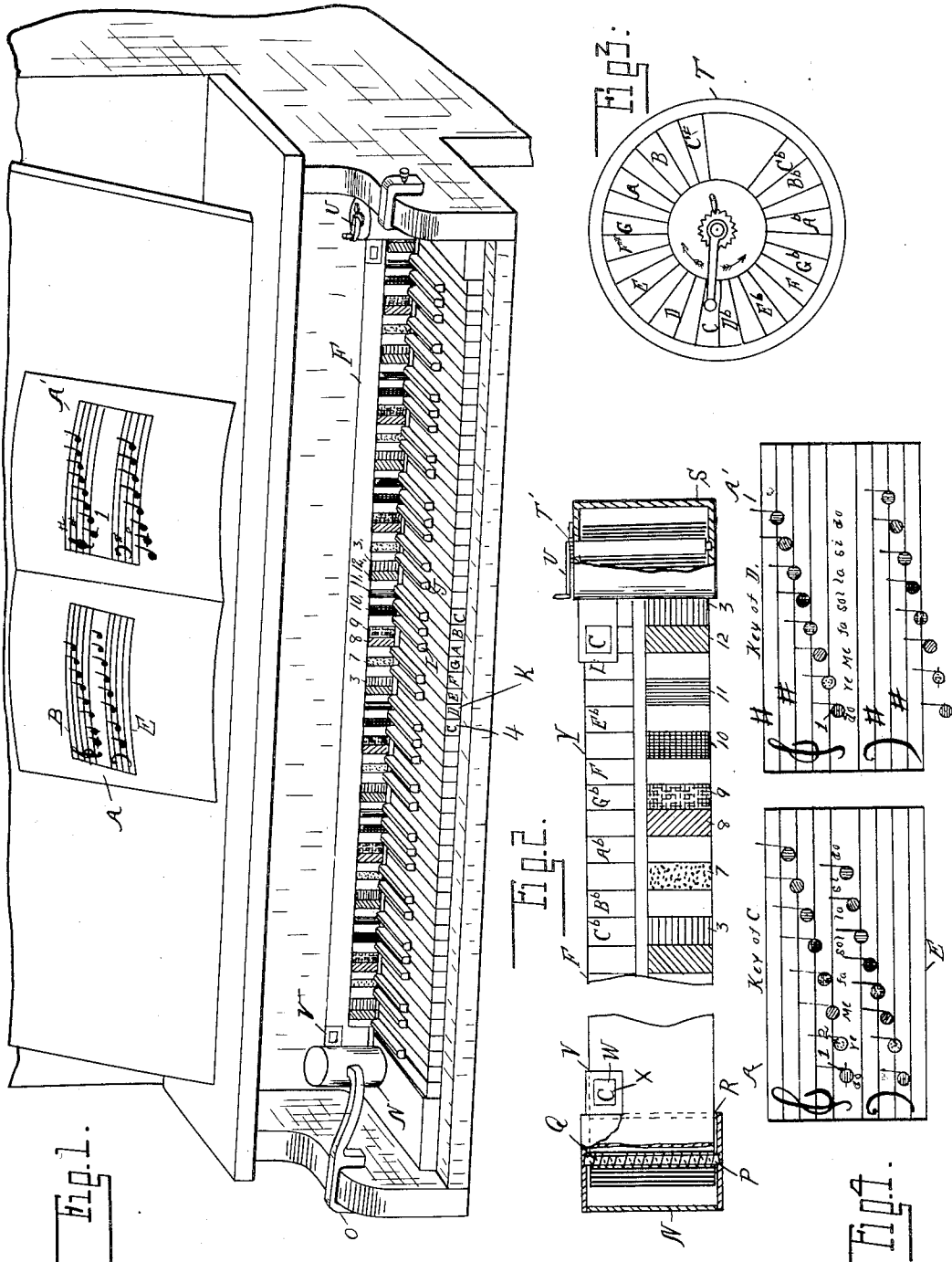


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MUSIC TEACHING APPARATUS.
APPLICATION FILED MAY 25, 1912.

1,100,824.

Patented June 23, 1914.



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UNITED STATES PATENT OFFICE.

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MUSIC-TEACHING APPARATUS.

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To all whom it may concern:

Be it known that I, ROBERT J. GRANT, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Music-Teaching Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to music and has among the objects thereof to simplify the reading of the notes of the written music and to facilitate the location of the keys, strings or the like of an instrument which will produce the tones of the various notes of the written music.

It is fundamental in music that a scale or octave comprises eight (8) notes and in vocal music these notes are designated by do, ra, me, fa, sol, la, si, do, do constituting the basic note. Thus the relation of the basic note to the lines and spaces of the staff changes with the various keys but the vocal designation for the basic note and for the remaining notes of the scale remain the same, irrespective of the key. Likewise the key, string or the like, of an instrument which will produce the basic note changes with the several keys. It is, therefore, necessary in order for one to play or sing by standard music to become perfectly acquainted with the transposition of the various notes, signs, key-boards, etc.

I have greatly simplified both the reading and the playing of music by providing written music which has distinctive indications for the notes thereof and by providing the instrument with indications for the keys, strings or the like, complementary to and preferably identical with the indications of the written music. The notes of the written music have indications arranged in a pre-determined order from the basic note or do, the indications for like notes in different octaves being the same and the basic note of the several keys having the same indication, while the same pre-determined order of indications in the octaves is maintained for the various keys. The indications for the keys of the instrument in an octave also have the same pre-determined order as is employed for the notes in a like octave of the written music and upon a change of key the indication for the key of the instrument which produces the sound of the basic note is changed or shifted to po-

sition the particular indication opposite the proper instrument key.

As a specific embodiment of my invention, I will describe the same in connection with a piano, though it will be understood that my invention is clearly applicable to string instruments, etc. I will, therefore, employ the phrase "instrument key" or a similar phraseology in the specification and claims as including the strings of a string instrument, etc.

In the drawings:—Figure 1 is a fragmentary perspective view of a piano with my invention applied; Fig. 2 illustrates the chart; Fig. 3 is a top-plan view of one of the reel casings illustrating a modification; and Fig. 4 is an enlarged view of the written music.

Referring to Fig. 4, A designates a piece of music written in the key of C, B the treble staff and E the bass staff, each of which is of the standard construction. The notes are arranged upon the staffs in the usual manner; in fact with my improvement, written music may be employed differing from the standard written music only in that the notes are provided with indications. Preferably the indications are colored since not only are colors quickly detected by the eye, but by employing colors, neither the size or configuration of the note is changed. Thus the basic note in the treble cleff or do is blue, re brown, me green, fa yellow, sol black, la red, si purple and do blue, the arrangement of colors for the corresponding notes in the several octaves being the same. In the key of C do falls upon C and the note designated by 1 in the piece A, is blue, re designated by 2 in piece A brown, etc. As before stated, when the key is changed the relation of the basic note upon the staff is also changed; therefore in the key of D do falls upon D, indicated by 1 in the piece A'. This changes the relative position of the blue note to the staff and correspondingly changes or shifts the remaining colors, since the same pre-determined order of colors is maintained for all keys.

The indications for the keys of the piano are properly arranged in relation to the keyboard so that the colors may be changed or shifted upon a change in key. Preferably a chart F is employed which is adapted to be positioned at the inner ends of the piano keys and is divided into sections alining

with the several instrument keys, one section for each instrument key both black and white. These sections are colored in the same pre-determined order as is employed for the notes of the written music and certain of the colored sections are separated by white or uncolored sections. The arrangement of the white sections is such that when the blue section 3 is alined with C indicated by 4 or do, in the key of C, the white sections then alines with the black keys, since in the key of C there are normally no sharps or flats. The brown, green, yellow, black, red and purple sections are respectively designated by the numerals 7 to 12. By employing this relation of sections it is merely necessary to shift the chart along the key-board upon a change in key, until the blue section registers with the instrument key, which will produce the tone of do in a given key and the remaining colored sections will properly register with the instrument keys which will produce the tones of the remaining notes. Thus in the key of D, me and si are sharpened. In playing, it is necessary to strike the black instrument keys, designated by I and J, for me and si. However, upon a shifting of the chart so that the blue section is opposite the instrument key D indicated by K, the green sections will aline with the black key in between the white keys for F and G and the purple section will aline with the black key indicated by J intermediate the white keys for C and D. So also in all the remaining keys for the notes that are naturally sharpened or flattened, by shifting the chart so that the blue section alines with the proper instrument key, black or white, the remaining colored sections will properly aline with the piano keys. For an accidental sharp the section to the right of the section corresponding in color to the note sharpened, indicates the proper instrument key, while for an accidental flat the section to the left of the colored section corresponding to the note flattened designates the proper piano key. The notes of the bass cleff are also similarly colored so that the one chart and the same pre-determined arrangement throughout the chart may be employed for the instrument.

Where a single shiftable chart is employed the chart is made an octave longer than the key-board of the piano, which will permit the necessary longitudinal adjustment of the chart to play in the different keys. It is, however, desirable to provide means for properly positioning the chart in relation to the key-board, otherwise it would require complete knowledge of what notes the various instrument keys represented in the different keys. The chart may be positioned in various ways and may be of numerous constructions, without departing from my invention, but in the drawings I

have illustrated a novel arrangement of parts for accomplishing this result. As shown, N is a casing secured to the piano in proper relation to the key-board by means of a bracket O; P is a reel within the casing provided with a spring Q, normally tending to rewind the reel. The chart F has one end anchored to the reel and extends out through a guide slot R in the casing, the other end of the chart being secured to a second reel S. This latter member is also arranged within a casing T and is provided with a handle U extending without the casing by which the reel S may be rotated. The casing T is attached to the key-board in a manner similar to the mounting for the casing N and is provided with a guide slot through which the chart passes. Extending outwardly from adjacent the top of the casing N at the edge of the guide slot is a projection V which has an opening W formed therein and arranged upon the upper edge of the chart at proper intervals are indications X for the various keys written in sharps. To position the chart for a given key as the key of D, it is merely necessary to turn the handle U until the square containing D registers with the opening W and the blue section will then aline with the instrument key D. Preferably the casing T is also provided with a similar projection and indications Y for the keys in flats are arranged upon the opposite end of the chart adjacent the upper edge of the latter. Any suitable means may be employed for holding the handle in its adjusted position such as a ratchet and pawl T'.

In the modification shown in Fig. 3 instead of the guide projection V the top surface of the casing T is provided with a dial upon one half of which the letters of the sharpened keys are properly arranged and upon the other half thereof the letters of the flattened keys. Thus by turning the handle in the direction of the arrows from the letter C the chart will be longitudinally adjusted to properly aline the blue section with the basic instrument key.

It will be noted that my invention is applicable to the standard construction of piano without in any way equipping the same with special contrivances. Also the standard manner of writing music is employed by merely providing the notes with the desired required indications. This is a highly desirable feature since such an arrangement of parts gradually teaches the pupil the relation of the basic note and the remaining notes of the scale to the staff, and also upon the key-board, for all the keys. Furthermore, my invention permits the music to be readily played in any key and in both the treble and bass cleffs.

What I claim as my invention is:

1. The combination with music written in

different keys with standard notes, each key having the notes in an octave provided with distinctive indications in addition to the usual standard notes, said additional indications being arranged in predetermined order with like indications for the corresponding notes in the several octaves, and the indications of the basic notes of the several keys being the same, of a chart for engaging an instrument having distinctive indications thereon for the instrument keys of an octave, said indications being adapted to aline with the respective instrument keys and corresponding with and being arranged in the same predetermined order as the additional indications for the notes of the written music, and the chart having like indications for the corresponding instrument keys in the several octaves, said chart being longitudinally shiftable whereby a single chart may be used for the various keys of the written music, while permitting the employment of a given indication to designate the instrument key which will produce the tone of the basic note in each key of the written music.

2. A chart for engaging the key-board of a musical instrument, having distinctive indications for the keys of the instrument and being of greater length than the key-board, a reel upon which the chart is wound, means for longitudinally shifting said chart to change the indications on the chart in relation to the key-board, whereby a predetermined indication may be employed to designate the instrument key which will produce the tone of the basic note in any key, and

means for positioning the chart in relation to the key-board.

3. A chart for engaging the key-board of a musical instrument having thereon distinctive indications for the keys of an instrument and being of greater length than the key-board, a reel upon which the chart is wound, a second reel for adjusting the chart longitudinally in relation to the key-board whereby a predetermined indication may be employed to designate the instrument key which will produce the tone of the basic note in any key, and indications associated with one of said reels for positioning the chart in relation to the instrument keys.

4. A chart for engaging the key-board of a musical instrument, having thereon colored sections adapted to aline with the keys of the instrument and being of greater length than the key-board, a reel upon which the chart is wound, a second reel for adjusting the chart longitudinally in relation to the key-board, whereby a pre-determined indication may be employed to designate the instrument key which will produce the tone of the basic note in any key, one of said reels being provided with a portion having an opening therein, and indications upon the chart adapted to be registered with said opening for positioning the chart in relation to the key-board for the several keys.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT J. GRANT.

Witnesses:

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JAMES P. BARRY.