(No Model.)

C. H. HAUSCHEL.

MUSIC SCALE AND CHORD INDICATOR.

No. 255,979. Patented Apr. 4, 1882.

Fig: 1.

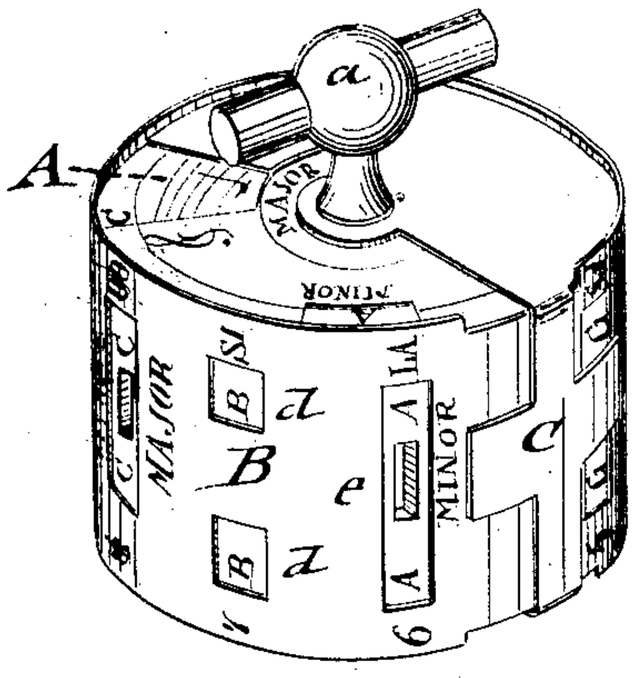


Fig: 2.

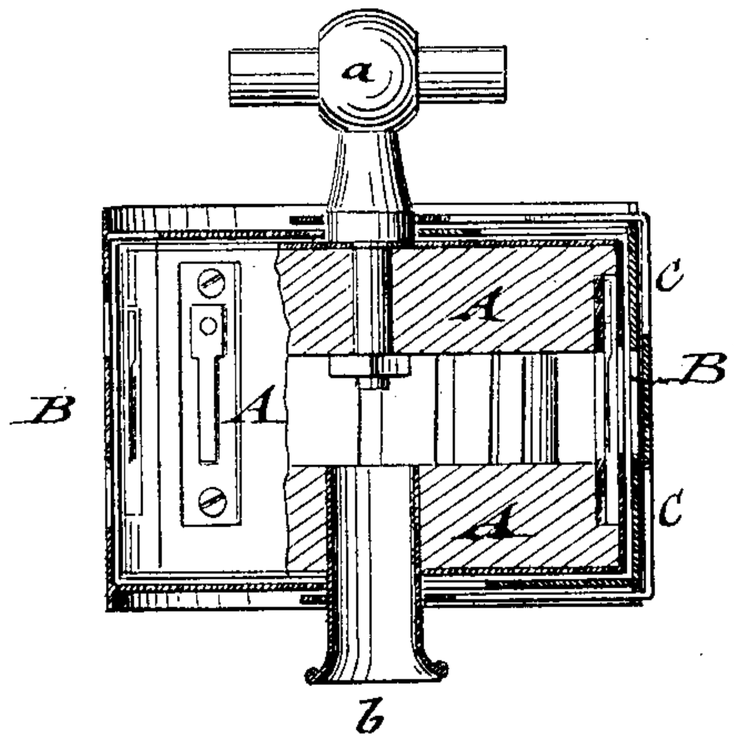


Fig: 3.

Fig: 4.

Fig: 5.

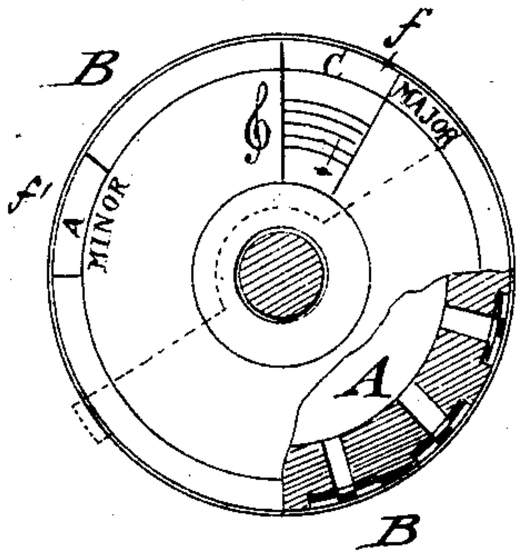
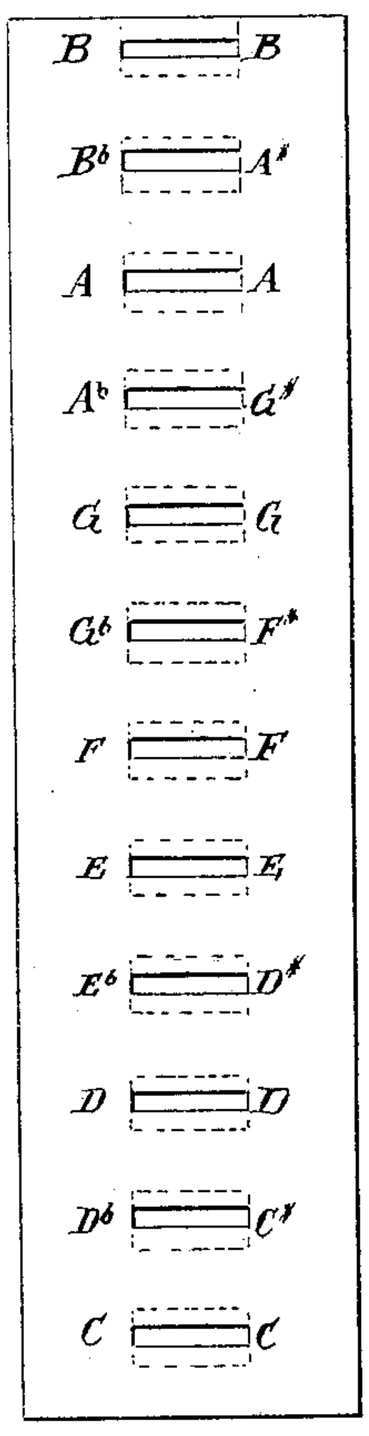
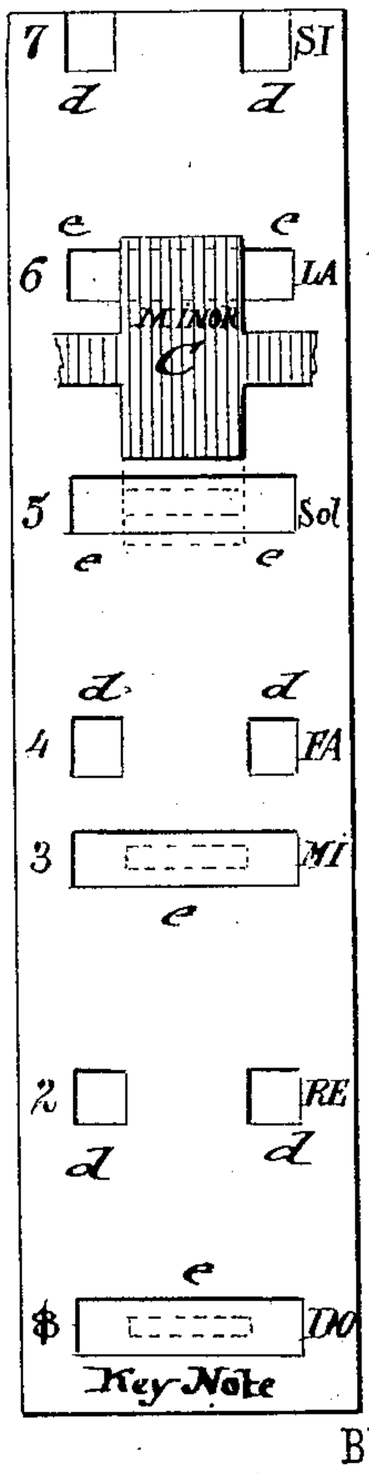


Fig: 6.





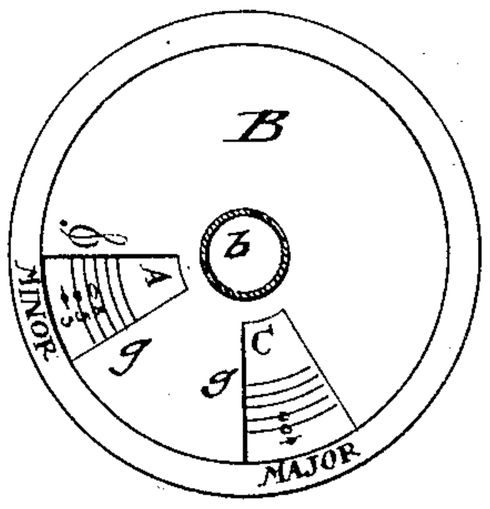
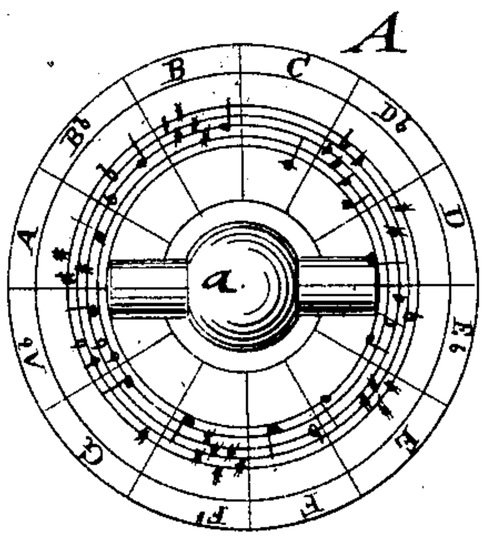


Fig: 8.



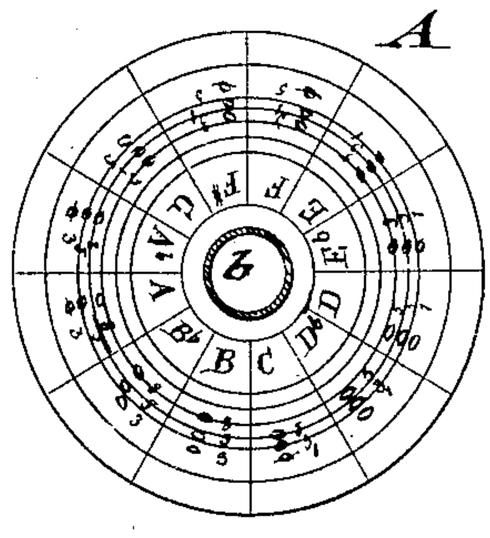


Fig: 7.

WITNESSES:

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MUSIC SCALE AND CHORD INDICATOR.

SPECIFICATION forming part of Letters Patent No. 255,979, dated April 4, 1882.

Application filed September 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. HAUSCHEL, of the city, county, and State of New York, have invented certain new and useful Improvements in Scale and Chord Indicators, of which the following is a specification.

The object of this invention is to furnish to amateurs, advanced pupils, leaders of quartettes and singing societies, vocalists, and others an improved scale and chord indicator, by which, in addition to the audible sounding of the trichord of any key the same trichord is visibly represented in characters; furthermore, the entire scale, with its sharps and flats, the signatures of the keys, and their relative minor keys, indicated, and by a simple mechanism the transposition of one key into another in an instant accomplished.

The invention consists essentially of an interior reed-cylinder and an exterior slotted casing, which latter turns on the shaft of the reed-cylinder and is provided with recesses in its heads for rendering visible the chords and their names at one side and the signatures of the keys at the other side of the reed-cylinder. The circumference of the casing has transverse slots and openings for the exit of the air from the reeds and indicating the sharps and flats. A slide-plate, which is guided in a suitable manner by the exterior casing, admits the sounding of the major or its relative minor chord, according to the relative position of the slide-piece.

In the accompanying drawings, Figure 1 represents a perspective view of my improved scale and chord indicator; Fig. 2, a vertical central section of the same. Figs. 3 and 4 are detail views of the circumferences of the reed-cylinder and of the casing, shown as rolled out for greater clearness. Figs. 5 and 7 are end views, partly in section, showing the indicator from opposite sides; and Figs. 6 and 8 are end views of the interior reed-cylinder with the casing removed.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the interior reed-cylinder, which is arranged at its circumference with twelve reeds representing the sounds of the chromatic scale, said reeds being preferably set into recesses of the cylinder in such a manner as to be readily removed and replaced in case any one of the reeds should require cleaning or give out by use.

The head of the cylinder A is provided in line with its axis with a handle, button, or other device, *a*, by which the cylinder may be turned around its axis within the inclosing casing B, while the other head is arranged with a mouth-piece, *b*, through which air may be blown in for sounding the reeds. One head of the cylinder A is provided with the visible trichords of the different keys and their scale numbers, signatures, and clefs, while the opposite head shows the signature of any key and its key-note. At both sides of the reed-cylinder the notes and characters are arranged on circular staffs. These different characters are preferably stamped in relief into the metal covering of the reed-cylinder, or they may be engraved thereon, or printed on paper and pasted upon the cylinder, or arranged thereon in any other suitable manner.

The circumference of the inclosing casing B is provided with a number of square openings, *d*, which are arranged in pairs and with intermediate transverse slots *e*, as shown in Figs. 1 and 4, respectively. The square openings *d* serve for reading off the entire scale, with its necessary sharps or flats, which is stamped or engraved into the circumference of the reed-cylinder A, as shown in Fig. 3, while the transverse slots *e* serve, in connection therewith, to admit the audible sounding of the chord corresponding to the key to which the indicator has been set. The slots *e* are arranged at such distances from each other as to represent the major chord of any key, there being a fourth slot by which the relative minor chord may be sounded when a covering slide-piece, C, has been properly set so as to open one and close the other of two adjoining slots, *c*, in connection with which the slide-piece C is worked. The slide-piece C is guided in recesses of the casing B and connected by radial arms with the mouth-piece and handle of the reed-cylinder, or it is guided inside of the casing B, as desired, it being stopped when arriving in the proper position in either direction.

The circumference of the outer casing, B, is

further provided along one side of the opening *d* and slots *e* with the scale-number and at the other side with the syllables of the Italian scale, "do, re, mi, fa, &c." The heads of the casing B are provided with a sector-shaped opening, *f*, and a slot, *f'*, at one side, and with two sector-shaped openings, *g g*, at the opposite side of the casing, as shown in Figs. 5 and 7. If, for instance, it is desired to know the key of any piece of music having the signature of four flats, the indicator is turned until the four flats appear through recess *f* of the casing at the end of the reed-cylinder which indicates the key of A-flat, the relative minor of which is F-minor, which will also be visible at the opening *f'*.

The scale at the circumference of the cylinder shows the half and whole steps and indicates which tones are flat, while all tones that do not occur in the respective key are covered. The visible chord, appearing through the recess *g* of the casing both for major and minor, will be readily sounded by properly setting the slide-piece C. In this manner the device is capable of convenient use for a variety of purposes, mainly, however, for self-instruction in music, as it gives the transpositions from one key to the other and furnishes every needed information as to the keys and scales quickly and easily without any trouble.

I am aware that a chord-intonator consisting of a reed-cylinder, slotted casing, and a mouth-piece at one end is a device well known to musicians, and I therefore lay no claim to the same, but simply to the additional features shown by my device.

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

The combination, in a scale and chord indicator, of an interior reed-cylinder, arranged substantially as described, with an exterior cylindrical casing provided with transverse slots for the egress of the air, recessed heads for exposing the entire scale, and mechanism for indicating at pleasure the major and its relative minor chord, all substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 1st day of September, 1881.

CHARLES H. HAUSCHEL.

Witnesses:
PAUL GOEPEL,
CARL KARP.