Aug. 3, 1926. 1,594,977

M. PAYNE

HARMONY CHART

Filed Nov. 7, 1924 5 Sheets-Sheet 1

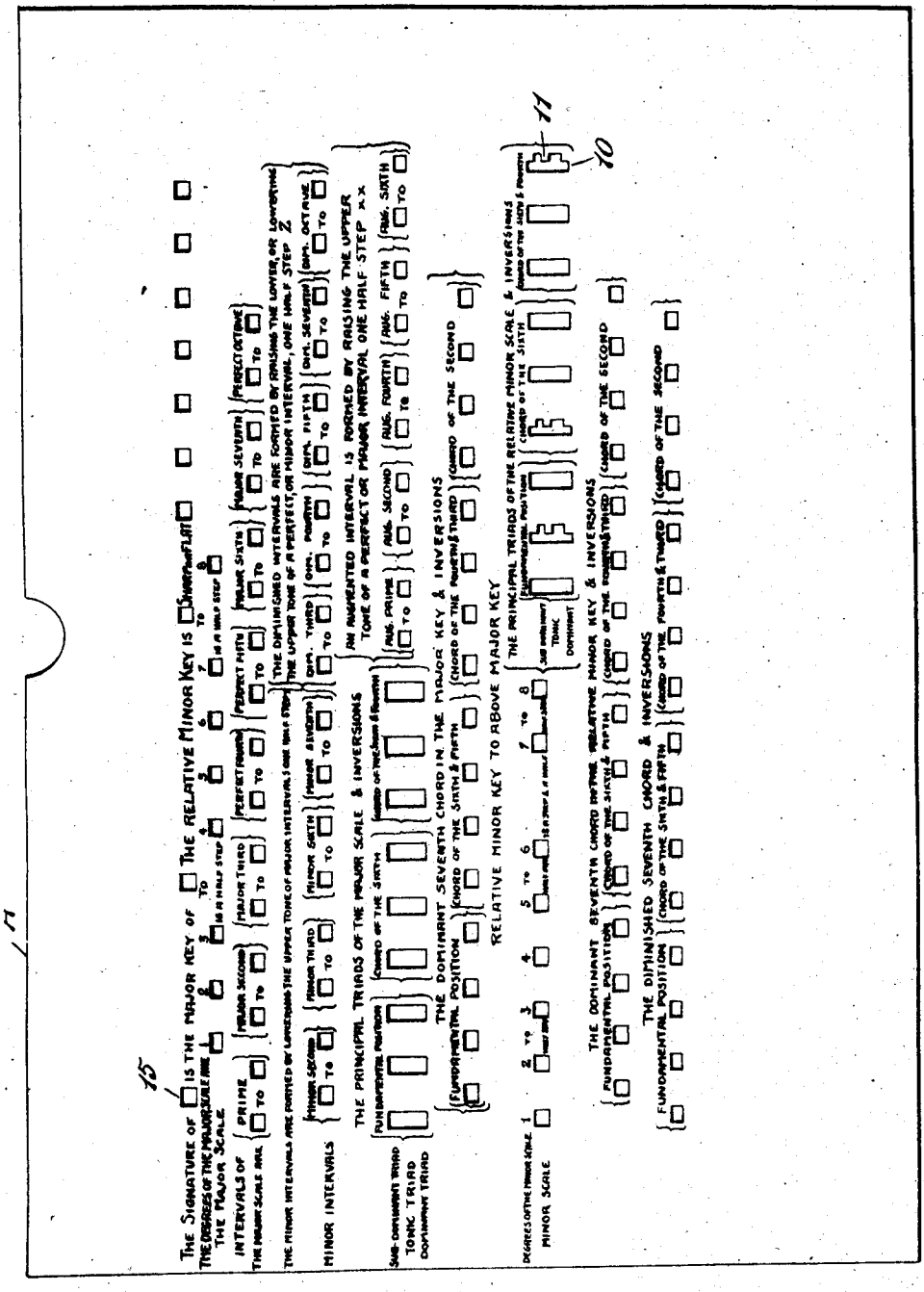


Fig. 1

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Filed Nov. 7, 1924 5 Sheets-Sheet 2

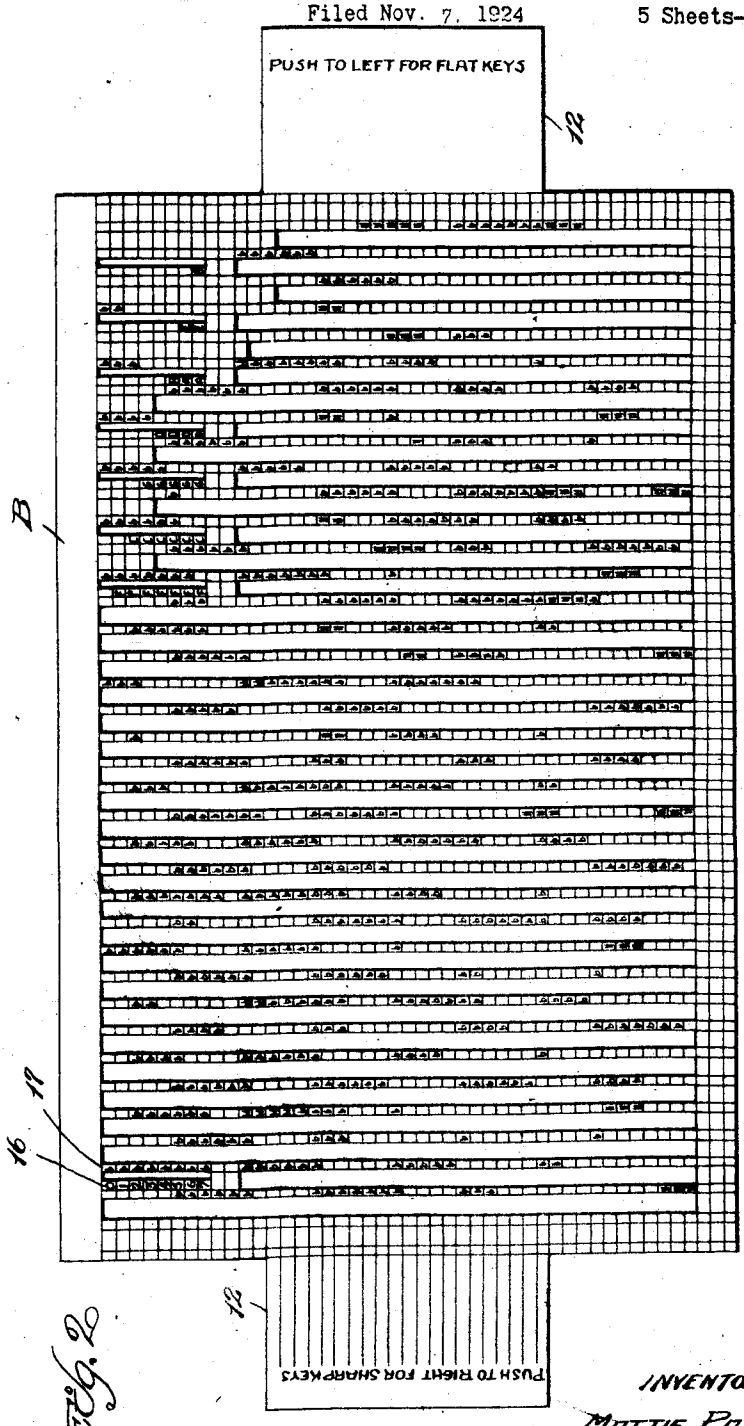


Fig. 2.

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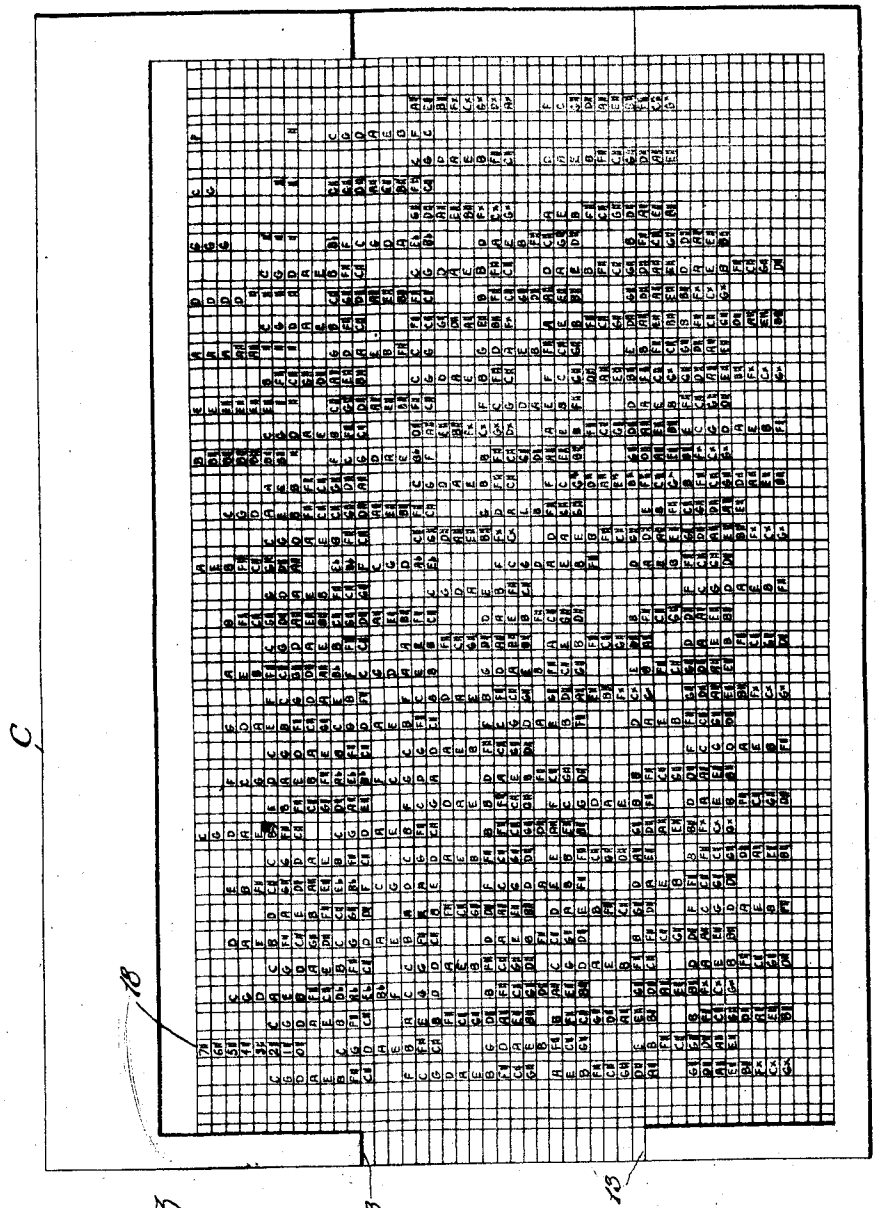


Fig. 5

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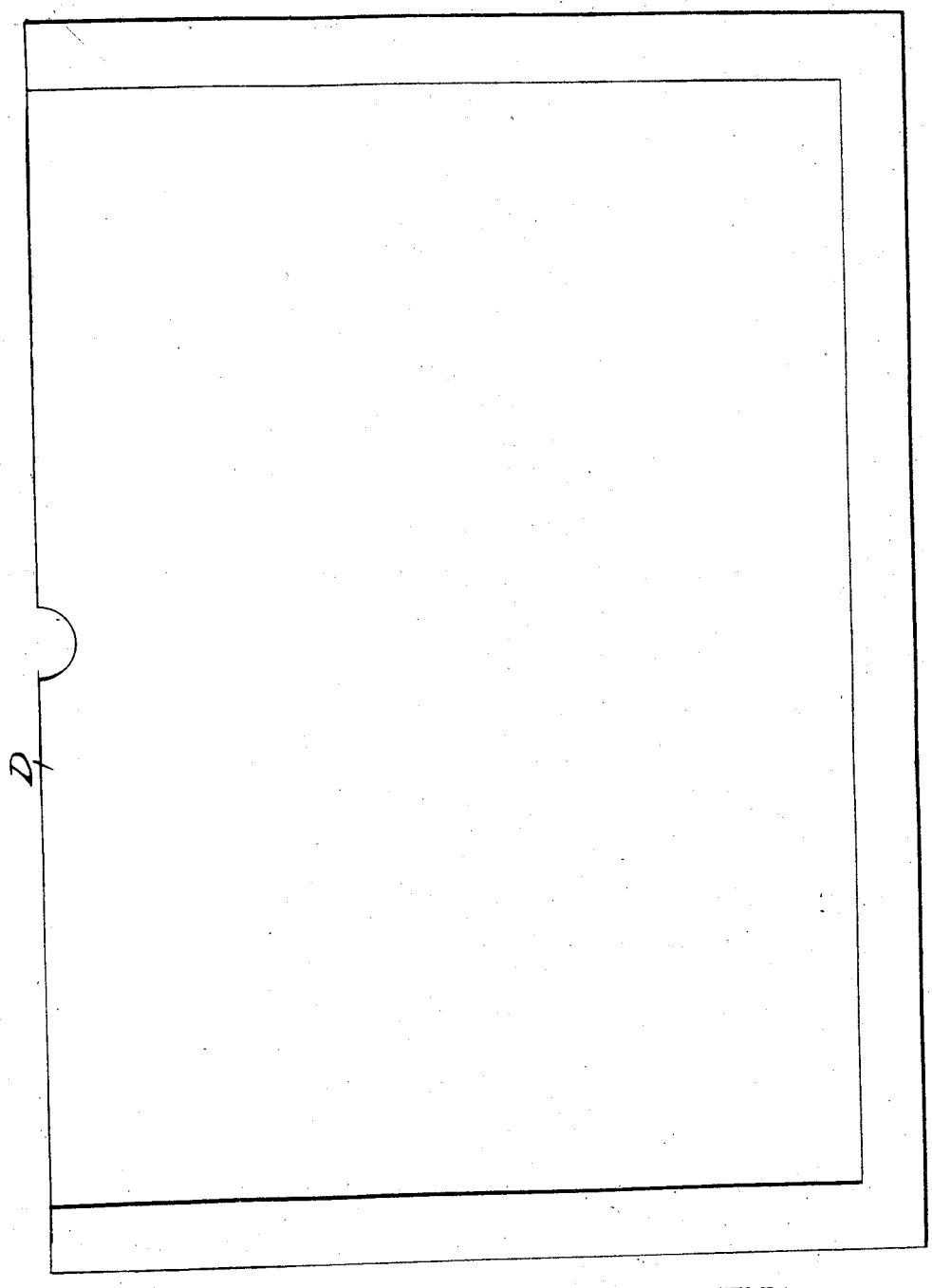


Fig. 4.

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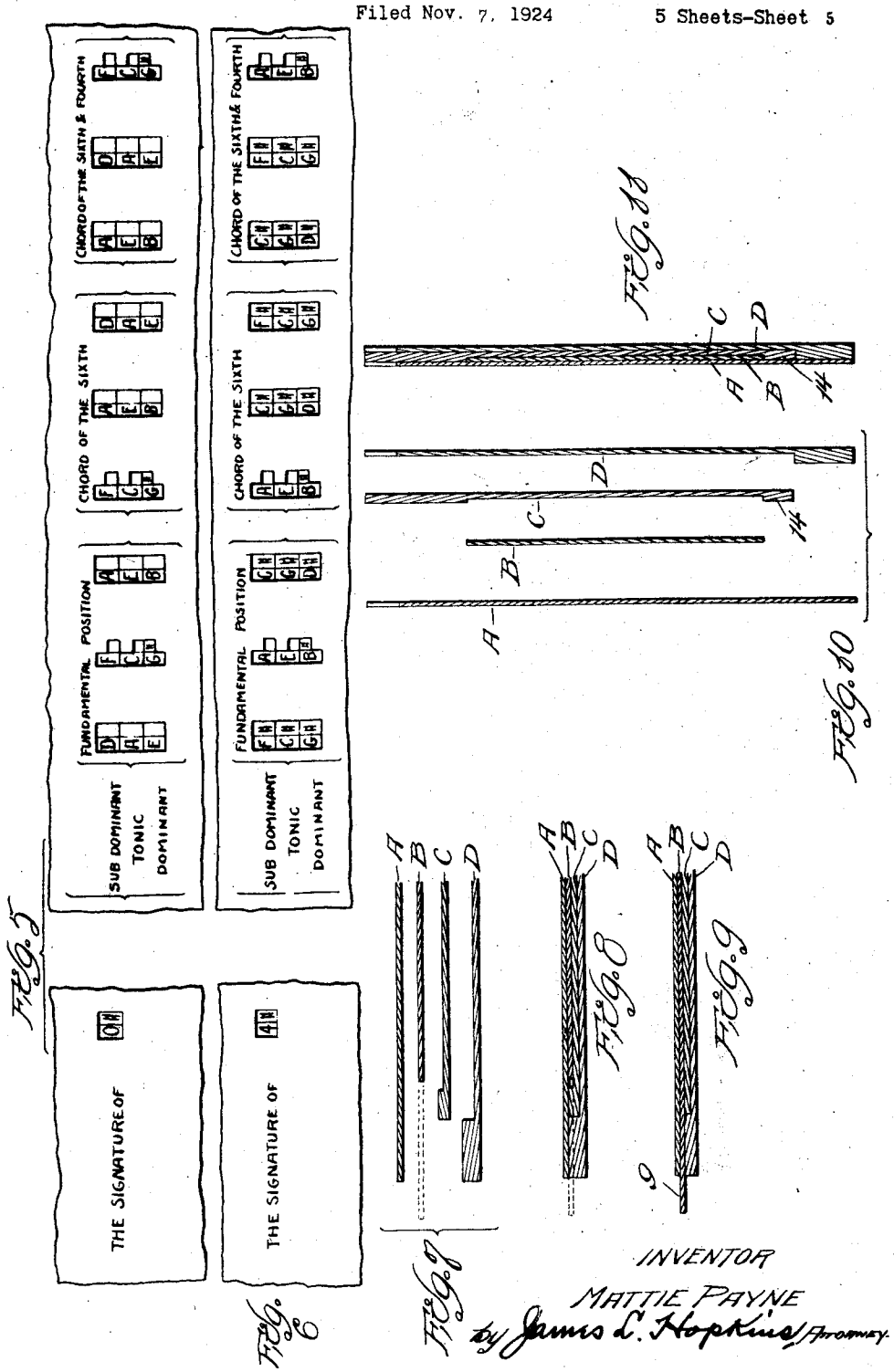


Fig. 5

Fig. 6

Fig. 7

Fig. 8

Fig. 9

Fig. 10

Fig. 11

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Patented Aug. 3, 1926. 1,594,977

UNITED STATES PATENT OFFICE.

MATTIE PAYNE, OF ST. LOUIS, MISSOURI.

HARMONY CHART.

Application filed November 7, 1924. Serial No. 748,305.

My invention relates to improvements in harmony charts, and has for its object to provide a chart enabling the user to ascertain the given chords for any key; in which chart the desired key is obtained by shifts of a reticulated or slotted mask-sheet and an imperforate base-sheet, which are mounted in that order beneath a perforated superimposed sheet (called herein for convenience a view-sheet) on which are indicated the signature-key window and windows through which the corresponding chords are visable.

By the use of my invention it is possible to present to the eye of the user (*a*) any desired signature key; (*b*) the major scale of that key; (*c*) the intervals of said major scale, formed from the different degrees of the preceding major scale; (*d*) the minor intervals formed from said major intervals; (*e*) the diminished and augmented intervals formed from said major and minor intervals; (*f*) the triads constructed from said major and minor intervals, and their inversions; (*g*) and important seventh chords and inversions.

In accomplishing this end each of the three sheets contributes to make the complete display of the desired facts, as to any key, possible in a single organization.

Drawings.

In the drawings—

Fig. 1 is a plan view of the perforated view-sheet employed in the chart of my invention, being the front or uppermost sheet in the assembled chart.

Fig. 2 is a plan view of the slotted mask-sheet employed in my chart and which is mounted immediately beneath the view sheet.

Fig. 3 is the base-sheet employed in my chart, and which is mounted beneath said mask-sheet.

Fig. 4 is a plan view of the frame in which the said view-sheet, mask-sheet and base-sheet are mounted.

Fig. 5 is a plan view of a fragment of the chart when the sheets are in position to display the chords of the signature key of C.

Fig. 6 is a corresponding plan view of the same fragments, taken with the sheets in position to display the chords of the signature key of E.

Fig. 7 is a longitudinal sectional view of fragments of the frame and several sheets in unassembled position.

Fig. 8 is a like view of the same in assembled position.

Fig. 9 is a view similar to Fig. 8, showing the mask-sheet in shifted position.

Fig. 10 is a transverse sectional view of said sheets and frame in unassembled position.

Fig. 11 is a transverse sectional view of the chart.

Description.

The device of my invention comprises a fixed perforated view-sheet A, a slotted mask-sheet B and a base-sheet C.

On the view-sheet A I provide at the upper left-hand corner a perforation or window indicated as showing the signature key. When the sheets A, B and C are in their initial position the key displayed will be 0♯ or C, and displayed through the other perforations in sheet A will be the several chords of that key of C indicated by the lettering on sheet A.

Sheets A, B and C are so mounted in a supporting frame D that sheet B may be shifted laterally to change the signature key displayed as above from sharps to flats, and that shift will also produce the desired changes of chords displayed.

Sheets A and D are in fixed relationship; sheet B is movable right or left solely to the extent of shifting the display of the chart from sharps to flats or vice versa. Sheets B and C are movable vertically together to display in succession through the openings in the view-sheet A all the keys of the musical scale and all the sharps and flats of those keys, with their appropriate chords.

The openings in the view-sheet A may be irregular in form as shown at 10, having an inwardly projecting tongue 11, the use of which is to cover the sharp or flat opposite the key (as shown on sheets B and C,) displaying such key as natural.

The base-sheet C has upon its front face a thickened border 14 forming a receptacle for the mask-sheet B; that border 14 is cut away at its ends to form the slots 13 through which the ears 12 of the mask-sheet B extend; by which means the mask-sheet B is shiftable upon the face of the base-sheet C (see Figs. 8 and 9).

The supporting frame D is open at its top (see Fig. 11); the view sheet A is fixedly mounted on said frame D, while the base-sheet C (carrying with it the mask-sheet

B) is vertically adjustable within the frame D. This vertical adjustment permits in succession the display, through the signature-key-window 15 of view-sheet A, of all of the numerals 0 to 7 which are inscribed in the column marked 16 of the mask-sheet B (see Fig. 2), while that signature-key will be indicated as flat by the exposure of one of the flat characters formed in the column 17 of mask-sheet B (see Fig. 2) or as sharp, by the exposure of one of the sharp characters found in the column 18 of the base-sheet C (see Fig. 3).

With each shift of the signature key, the appropriate chords are displayed through the apertures in the view-sheet A, in the manner illustrated in Figs. 5 and 6.

The manner in which the sheets A and B are apertured, sheet A along horizontal lines and sheet B on vertical lines, to secure alinement with the horizontal and vertical lines of inscription on the base-sheet C is fully shown in the drawings.

I am aware that music-charts or harmony-charts exist in the prior art in which a perforated face-plate is combined with a single imperforate sheet shiftably mounted beneath said face-plate, for the purpose of effecting such key-and-chord variations as may be accomplished by the use of said fixed face-plate and a single imperforate sheet; and I therefore do not claim such a structure as my invention. What I do claim comprises a suitably inscribed front perforated window-sheet or view-sheet, an imperforate suitably-inscribed base-sheet vertically adjustable and mounted so that its markings may be read through the windows of the view-sheet, and a suitably inscribed slotted mask-sheet horizontally adjustable and mounted between the view-sheet and base-sheet; as defined in the appended claims.

As shown in Fig. 2, the mask-sheet B is arranged to carry the sharp and flat inscriptions shown thereon in vertical columns, which are so disposed as to register with the columns of key letters shown on the base-sheet C (see Fig. 3) to indicate such keys as sharp or flat, when viewed through the apertures of the view-sheet A. This transposition of key is effected by the lateral shift of the mask-sheet B upon the base-sheet C. The particular arrangement of inscriptions upon sheets A, B and C and apertures in sheets A and B which I prefer is that illustrated in Figs. 1, 2 and 3; but various alterations may be made therein, and additions thereto may be made, or portions omitted, without departing from my invention as defined in the claims of this specification.

I claim—

1. A harmony chart comprising a view-sheet, a mask-sheet, a base-sheet, and supporting means therefor, and a supporting frame wherein said sheets are mounted.

2. A harmony chart comprising a view-sheet; a supporting frame upon which said view-sheet is fixed; a base-sheet so mounted in said supporting frame as to be vertically adjustable therein; and a mask-sheet so mounted upon said base-sheet as to be shifted laterally thereon.

3. A harmony chart comprising a view-sheet; a supporting frame upon which said view-sheet is fixed; a base-sheet so mounted in said supporting frame as to be vertically adjustable therein; and a mask-sheet so mounted upon said base-sheet as to be shifted laterally thereon, and to be carried vertically by the vertical movement of the base-sheet.

In testimony whereof I have hereunto affixed my signature.

MATTIE PAYNE.