

E. Von Heeringen,

Musical Notation,

N^o 6528.

Patented June 12, 1849.



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The intervals from one key to the next of the same name by raising or lowering the white keys A, B, C, D, E, F and G, by single sharps, thus # - double sharps thus x - single flats, thus b - and double flats thus bb - have been the following - from A to A.

Intervals
in
one octave
in
the old
system
152.

The musical notation displays 152 intervals from A to A, arranged in 16 staves of 10 notes each. The notes are labeled with numbers 1 through 152 and various accidentals (sharps, flats, double sharps, double flats). The intervals are as follows:

- Staff 1: 1 (A), 2 (B), 3 (C), 4 (D), 5 (E), 6 (F), 7 (G), 8 (A)
- Staff 2: 9 (A), 10 (B), 11 (C), 12 (D), 13 (E), 14 (F), 15 (G), 16 (A), 17 (B)
- Staff 3: 18 (A), 19 (B), 20 (C), 21 (D), 22 (E), 23 (F), 24 (G), 25 (A), 26 (B)
- Staff 4: 27 (A), 28 (B), 29 (C), 30 (D), 31 (E), 32 (F), 33 (G), 34 (A), 35 (B)
- Staff 5: 36 (A), 37 (B), 38 (C), 39 (D), 40 (E), 41 (F), 42 (G), 43 (A), 44 (B)
- Staff 6: 45 (A), 46 (B), 47 (C), 48 (D), 49 (E), 50 (F), 51 (G), 52 (A), 53 (B)
- Staff 7: 54 (A), 55 (B), 56 (C), 57 (D), 58 (E), 59 (F), 60 (G), 61 (A), 62 (B)
- Staff 8: 63 (A), 64 (B), 65 (C), 66 (D), 67 (E), 68 (F), 69 (G), 70 (A), 71 (B)
- Staff 9: 72 (A), 73 (B), 74 (C), 75 (D), 76 (E), 77 (F), 78 (G), 79 (A), 80 (B)
- Staff 10: 81 (A), 82 (B), 83 (C), 84 (D), 85 (E), 86 (F), 87 (G), 88 (A), 89 (B)
- Staff 11: 90 (A), 91 (B), 92 (C), 93 (D), 94 (E), 95 (F), 96 (G), 97 (A), 98 (B)
- Staff 12: 99 (A), 100 (B), 101 (C), 102 (D), 103 (E), 104 (F), 105 (G), 106 (A), 107 (B)
- Staff 13: 108 (A), 109 (B), 110 (C), 111 (D), 112 (E), 113 (F), 114 (G), 115 (A), 116 (B)
- Staff 14: 117 (A), 118 (B), 119 (C), 120 (D), 121 (E), 122 (F), 123 (G), 124 (A), 125 (B)
- Staff 15: 126 (A), 127 (B), 128 (C), 129 (D), 130 (E), 131 (F), 132 (G), 133 (A), 134 (B)
- Staff 16: 135 (A), 136 (B)

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Thumb 9 9 1 2 3 4 Finger.

No
chromatic
signature
troubled
the mind
and the
eye decides
only two
characters



In the now following little composition the Eye has to decide - written in the old style.

492
Characters

The Eye
has to
read 12
characters
at once.

Chromatic scale in thirds



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Richert's Hornpipe without chromatic signature.

11th.



*The
mind
is
relieved—
The Eye
only
decides
but the
Eye has
to read
characters.*

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In the now following copy of these scales the accidental sharps flats and naturals are dispensed with, and the finger marks are indicated by the shape of the notes in the copy below. The Eye has to decide only 386 characters in this copy.



*386
Characters
The Eye
reads 8
at once.*



*192
Characters
The Eye
reads 4
at once.*



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All the chords necessary in thoroughbass, 1st according to the old system, IInd according to the new system.

1.

IInd

The first system (labeled '1.') consists of two staves. The upper staff contains a series of notes with various accidentals (sharps, flats, naturals) and fingerings. The lower staff contains a series of numbers (figures) corresponding to the notes above. The second system (labeled 'IInd') also consists of two staves, with the upper staff showing notes and the lower staff showing numbers. The notation is dense and covers a wide range of pitches.

Rickert's Hornpipe in the old system with sharps, or chromatic signature.

1st

*The Eye
has to decide
4 characters
and bear in
mind to
change or
make
unnatural
two notes
by the
sharps.*

The section titled 'Rickert's Hornpipe' contains four staves of musical notation. Each staff has a treble clef and a key signature of one sharp (F#). The notation includes notes, rests, and various accidentals. The lower staves feature a series of numbers (figures) below the notes, indicating fingerings or other performance instructions. The music is written in a style characteristic of 19th-century musical notation.

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Major Scales in numbers. Minor Scales in numbers.											
Scale of Doe	1	3	5	6	8	10	12	1	1	3	4
Dee	2	4	6	7	9	11	1	2	2	4	5
Ray	3	5	7	8	10	12	2	3	3	5	6
Ree	4	6	8	9	11	1	3	4	4	6	7
Mei	5	7	9	10	12	2	4	5	5	7	8
Fah	6	8	10	11	1	3	5	6	6	8	9
Fee	7	9	11	12	2	4	6	7	7	9	10
Sole	8	10	12	1	3	5	7	8	8	10	11
Lee	9	11	1	2	4	6	8	9	9	11	12
Lah	10	12	2	3	5	7	9	10	10	12	1
See	11	1	3	4	6	8	10	11	11	1	2
Pa	12	2	4	5	7	9	11	12	12	2	3

Scales by numbers the easiest for the young pupil.

Major Scales in Syllables. Minor Scales in Syllables.											
Scale of Doe	Ray	Me	Fah	Sole	Lah	Pa	Doe	Ray	Ree	Fah	Sole
Dee	Re	Fah	Fee	See	Lee	Doe	Dee	Ree	Me	Fee	See
Ray	Me	Fee	Sole	Lah	Pa	Doe	Ray	Me	Fah	Sole	Lah
Ree	Fah	Sole	See	Lee	Doe	Ray	Ree	Fah	Fee	See	Lee
Me	Fee	See	Lah	Pa	Doe	Ree	Me	Fee	Sole	Pa	Pa
Fah	Sole	Lah	See	Doe	Ray	Me	Fah	Sole	See	Doe	Ray
Fee	See	Lee	Pa	Doe	Ree	Fah	Fee	See	Lah	Doe	Ree
Sole	Lah	Pa	Doe	Ray	Me	Fee	Sole	Lah	Lee	Ray	Ray
Lee	See	Doe	Doe	Ree	Fah	Sole	Lee	See	Pa	Ree	Ree
Lah	Pa	Doe	Ray	Me	Fee	See	Lah	Pa	Doe	Me	Me
See	Doe	Ray	Ree	Fah	Sole	Lah	See	Doe	Doe	Fah	Fah
Pa	Doe	Ree	Me	Fee	See	Lee	Pa	Doe	Ray	Fee	Fee

Scales in Syllables answers best for teaching vocal and instrumental music together.

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Nomenclature of the old system.

Nomenclature of the new system.

29 Names and 66 Characters for 13 Keys from E to C.

12 Names and 12 Characters.

do di re ri mi fa fi sol si la li pa do
 doe dae ray ree mee fah fee sole see lah lee pa doe

IV.

Keyboard

Terms for the degrees.

Presidents.

Old Names.

New Names.

C white or C natural
 C black or C sharp D flat
 D white or D natural
 D black or D sharp E flat
 E natural
 F white or F natural
 F black, F sharp, G flat
 G white, G natural
 G black, G sharp, A flat
 A white, A natural
 A black, A sharp, B flat
 B natural
 C white, C natural

37 Washington prima
 38 Adams, secunda
 39 Jefferson, 3. tertia
 40 Madison, 4. quarta
 41 Monroe, 5. quinta
 42 J. Q. Adams, sexta
 43 Jackson, 7. septima
 44 Van Buren, 8. octava
 45 Harrison, 9. nona
 46 Tyler, decima
 47 Polk, undecima
 48 Taylor, duodecima
 49

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All this 152 Intervals, at least the most of them have brought confusion, and in reality no more than 12 have existed and can exist between 13 Keys.

The following Intervals are all that we need, and no confusion will take place using them.

*Intervals
in the new
system
one octave
12*



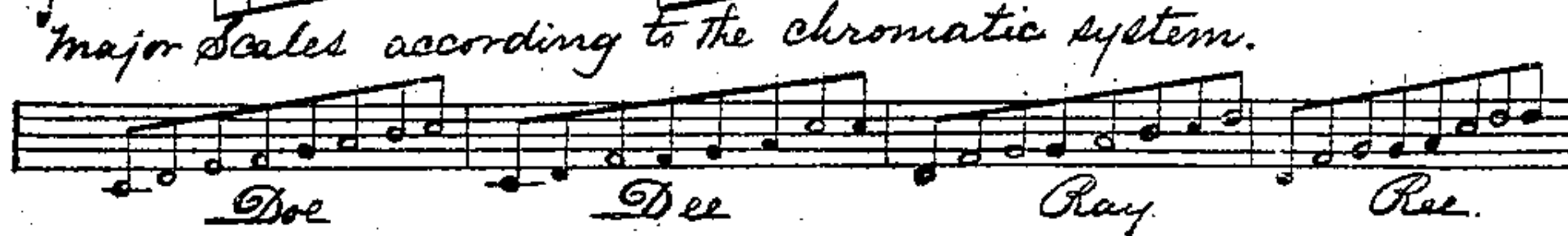
The Scales according to the old system are the following:

1. Major Scales:

*Major
Scales
old system
15
imaginary
12 in nature.*



*Major
Scales
new system
12*



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me *Fah* *Fee* *Sole*

Lee *Lah* *Lee* *Pa*

Minor Scales according to the old system.

old system

15.

12 in. nature

Minor Scales according to the chromatic system.

new system

12.

UNITED STATES PATENT OFFICE.

ERNEST VON HEERINGEN, OF PICKINSVILLE, ALABAMA.

MUSICAL NOTATION.

Specification of Letters Patent No. 6,528, dated June 12, 1849.

To all whom it may concern:

Be it known that I, ERNEST VON HEERINGEN, of Pickensville, in the county of Pickens and State of Alabama, have invented certain new and useful Improvements in Musical Notation, of which the following is a full, clear, and exact description, reference being had to the accompanying scores, which show the difference between the old method and my improved notation.

The first portion of my invention is designed to enable beginners to acquire the fingering of any keyed instrument without numbering the notes on the score, as is usually done. To accomplish this I make all notes to be played by the thumb of a circular form thus q, which may be cued in the usual manner to show the length of the note; and to direct the proper finger to the remaining notes I divide this thumb note into four portions by a horizontal and vertical line crossing each other within the circle thus ⊕; each of those portions when taken by itself will form a distinct character, one of which corresponds with each finger of the hand, the lower left hand one ⊔ being touched by the first finger, the upper left hand one ⊕ by the second finger, the upper right hand quarter ⊖ by the third finger, and the lower right hand one ⊗ by the fourth finger. I prefer the circular form to others, but it is evident that any geometrical figure which can be divided into four distinct portions will answer the purpose, thus a square ◊ placed diagonally on the lines might be used to denote the thumb, and the four triangular quarters ◊ ◊ ◊ ◊ the four fingers.

The second portion of my improvement is in the method of counting the musical intervals or notes, taking the chromatic scale, instead of the diatonic for my base. In the usual method the notes are numbered from 1 to 7 in the order in which they occur in the diatonic scale skipping the half tones which fall between the full notes, thus C being numbered 1; D is numbered 2; E, 3; F, 4; G, 5; A, 6; and B, 7. In my method C being numbered 1 C# will be 2; D, 3;

D#, 4 &c. and the two methods will compare as follows:

Usual method.	Improved method.	
C 1	1 0	55
C#	2 0	
D 2	3 0	
D#	4 0	
E 3	5 0	60
F 4	6 0	
F#	7 0	
G 5	8 0	
G#	9 0	65
A 6	10 0	
A#	11 0	
B 7	12 0	
C 1	1 0	

Any appropriate name or letter may be given to each of these twelve notes but as the syllables do, dee, ray, ree, me, fa, fee, sol, see, la, lee, pa, have proved excellent in teaching vocal, and instrumental music combined, I prefer to retain them; and thus all the confusion and trouble experienced by a beginner, in mastering the difficulties, and distinctions between sharps, flats and naturals is entirely avoided. In the third portion of my improved method of notation, the exact sound of the note whether sharp, flat, or natural is shown by the musical characters themselves without the assistance of chromatic signatures. This is accomplished by making all the characters which represent the natural sounds, or those usually denoted by the letters C, D, E, F, G, A, B, of one uniform color, (and making those characters which are to represent the sharps or flats usually denoted by the letters C#, D#, F#, G#, or D^b, E^b, G^b, A^b, and B^b of an other uniform color, distinct from that of the natural sounds). Thus the color of the first may be white, corresponding with the white keys of a piano or organ, and the color of the second may be black corresponding with the black keys of the same instruments. If then the note placed in the third space of the treble stave be colored white, it will represent the sound usually called C (C natural), while if the note in the same space be colored black, it will represent a

sound raised one half tone higher or that musical sound commonly called C[#] or D^b, (C sharp or D flat); the same will be the case with the other notes of the stave, thus
 5 if the note on the uppermost line of the treble stave be white it represents the musical sound commonly called F (F natural) and if it be black it will represent F[#] (F sharp) or G^b (G flat) being one half tone
 10 higher than F (F natural); and the characters on the stave will appear as in AIV of the score hereunto annexed. It is evident that any other colors might be used, but these are most convenient both for
 15 printing and instruction. The value of the notes indicated by the cue attached to them, will be the same as those in the ordinary notation, the only difference being in the head.

20 The advantages of this improved notation will be evident to any one who has had to contend with the difficulties incidental to the old system. First, the fingering of any piece of music is clearly shown by the characters themselves without requiring any ad-
 25 ditional figures above or below the stave to denote what finger is to be applied to each key. Second, all the confusion arising from calling sharps and flats by the same names
 30 as the naturals intervening between them is avoided. Each of the twelve names or letters will represent a distinct musical sound, which will not be confounded with the preceding or succeeding one. Third, chromatic
 35 signatures either at the commencement of the stave or at accidental sharps or flats within the stave are entirely done away with, and much less labor or expense is required to write or print music, and if chro-
 40 matic signatures are desired for the purpose of transposition, no more than five black notes are needed to express any number of flats or sharps. Fourth, the color of the notes corresponds with that of the keys of
 45 the piano, organ, eolian, &c., it is therefore extremely easy to find the correct note on

any such instrument, when the white notes represent the white keys, and the black notes the black keys. Fifth, music written in this manner is much easier to read because the
 50 eye does not become confused by the uniformity in the color of the notes. Sixth, pupils can become performers in less than half the time required by the old system. Seventh, pupils are encouraged by it to at-
 55 tempt pieces that it would be impossible for them to play if written in the old method, where the mind is not only required to recollect the key of the instrument corresponding with the note of the written music, but also
 60 to recollect the signature at the end of the stave and the peculiar method of fingering. Eighth, all old music, or music written in the old style is easily transposed into this new system (the piece No. 3 that accom-
 65 panies this specification having been transposed by one of my pupils.)

Having thus described my improved notation, what I claim therein as new and de-
 70 sire to secure by Letters Patent, is—

1. The arrangement of distinct characters to denote the fingering of music, made and arranged substantially in the manner here-
 in described.

2. Giving the twelve musical intervals dis-
 75 tinct names so that the use of the words flat and sharp is entirely avoided, and with them all the confusion naturally arising in the mind of a beginner.

3. Representing the sounds usually called
 80 natural by one uniform color, and those commonly called flats and sharps by another uniform color so that they may be distinguished from each other by a mere inspection of the musical character representing
 85 the note without the use of chromatic signatures.

ERNEST VON HEERINGEN.

Witnesses:

P. H. WATSON,
 STEPHEN W. WOOD.