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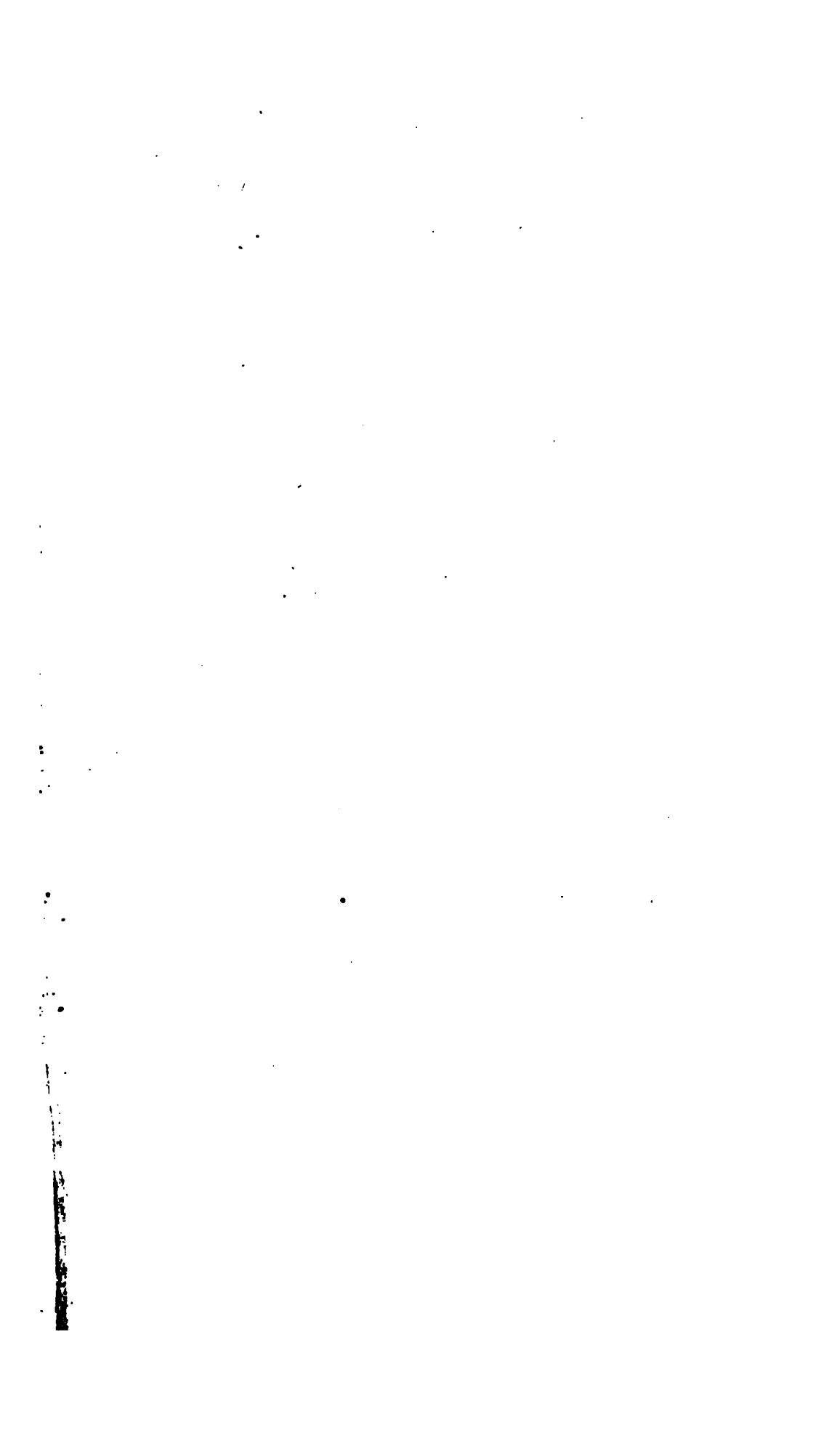
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45 . 1631 .









A

TREATISE

ON

HARMONY.

BY

ALFRED DAY.

LONDON:

CRAMER, BEALE, AND CO.,

201, REGENT STREET, & 67, CONDUIT STREET.





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## P R E F A C E.

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As the Introductions to the Chapters in the following work contain such matter as is usually comprised in a preface, but placed immediately before that part of the subject to which it refers, the preface itself will naturally be short. There are, however, a few points to which it is necessary to call the reader's attention.

It is exceedingly probable that the notation used in the following work will—by players on stringed instruments—be said to be incorrect, because, when playing according to it, they play out of tune. This I have myself experienced; still the fault is not in the notation, but in the false position in which the fingers are placed for the chromatic notes on those instruments. This I shall now prove.

Supposing on the violin, a performer, playing in the key of C, take on the E string the following notes, G, A  $\flat$ , A  $\natural$ , he would play them thus; G, second finger\*; A  $\flat$ , third finger, nearly close to the second finger; A  $\natural$ , third finger in its proper place, (at a distance from the nut equal to a quarter of the distance from the nut to the bridge:) this (if the basses were C, C, F,) would be out of tune, the A  $\flat$  being too flat. In the ordinary method of noting the same passage, G, G  $\sharp$ , A, the G  $\sharp$  would be played with the second finger nearly close to the third, and therefore nearer to the bridge than the A  $\flat$ : this (with the same bass) would be in tune.

The relative pitch of different notes is in proportion to the number of vibrations made by each in a given time, the lower the note the smaller the number of vibrations. The number or ratio of vibrations is in inverse proportion to the length of string.

It is proved in a note to Chap. IX. sect. 18, Part II. of this book, that the diatonic semitone above any note, is larger or sharper than the

---

\* The English method of numbering the fingers is here used, the thumb not being counted.

chromatic; that is, that E  $\flat$  is sharper than D  $\sharp$ , and the same with the other chromatic and diatonic semitones.

If on any stringed instrument (say the violin), two notes, the above-mentioned A  $\flat$  and G  $\sharp$ , be played, the A  $\flat$  being proved to be sharper than G  $\sharp$ —the sharper note making more vibrations in a given time than the flatter—the length of any string being smaller in proportion as the vibrations are more rapid—and the portion of any string the vibration of which forms the note, being that lying between the two points stopping the vibration, (which in this case are the bridge and the finger,) it follows, that the finger should be placed higher up the string or nearer to the bridge for the A  $\flat$  than for the G  $\sharp$ , and the same with all other notes relatively situated, the position of the fingers being now exactly the reverse of what it should be when playing such notes; but even this would not be practically of much importance were the notes always written alike, but from want of any decided system of notation, not only do different composers note the same passages differently, but even the same composer notes them sometimes one way and sometimes another, especially when occurring in different keys, being as often wrong as right, and *vice versa*, so that the performer can never be certain of perfect intonation, and very frequently the reproach of playing out of tune rests with him, when in justice it should be on the shoulders of the composer.

As it is proved above that the position of the fingers on stringed instruments when playing chromatic notes is wrong,—Why should error be perpetuated?—Why should not the composer be taught what is the proper note to write, and the player the exact spot on which the finger should be placed?

Although it is several times observed in the book itself, yet, as I think it cannot be too much impressed on the student, I shall here mention, that the chromatic common chords, and *all the fundamental discords*, more especially those forms of them in which two notes occur, which, counting from the root, form with each other the interval of the ninth, *should be used very sparingly*, and most especially when such ninth is minor.

The Examples are by no means to be looked on as specimens of either composition or melody, but merely of the progression of the

chords treated of to their allowable places; had any examples of such progression, sufficiently lengthy to be intelligible and agreeable, been extracted from the great writers, the expense of the book would have been multiplied at least by four, which certainly would not have been desirable.

Although the following work is the result of immense labour during the leisure time of many years, yet, considering how much in it is new in theory, however old in practice, it is hardly to be expected that it shall be without errors; that not anything essential shall have been overlooked. For such errors and omissions, when occurring, the reader's indulgence is requested; should the book reach a second edition, it will then probably be as free from faults as it will ever be in the power of its Author to make it.

The subjoined Letter from Mr. G. A. Macfarren, (a Professor of Harmony in the Royal Academy of Music of London,) whose opinion, from the extent of his teaching, must necessarily be of some value, will show that *the following Treatise is not a mere Theory, visionary, useless, and incapable of being reduced to practice, but that it has really been found, by him, of considerable practical utility.*

With these few remarks I submit the following System to the musical profession and the public, satisfied that, if true, as I believe it to be, it will at some time make its way.

ALFRED DAY.

15, Margaret Street, Cavendish Square,  
August 4, 1845.

My dear Friend,

73, Berners Street, July 12, 1845.

In giving an opinion of your Theory of Harmony, there are two lights in which I may speak of it; as regards my own comprehension of it—and as regards my explanation of it to others. In the first place, I am happy to own that in becoming acquainted with your principles, I found my ideas of the resources of Harmony greatly to expand; and my facility and confidence in the practical application of them is now much greater than I believe it could possibly be, had I not the advantage of the peculiar view of the subject which is opened by your new System;—above all, I am gratified by it, inasmuch as I find

in it an explanation of, and a rule for, many of the greatest beauties of the best Masters, which formerly appeared to violate all the rules of music, and which were sanctioned as the unaccountable aberrations of genius, but which could only be imitated to be plagiarized. In the second place, since I have become familiar with your System, feeling as I have done that it was true, and that as Truth is single, so none but yours could be true, I have taught upon it, and have found it most easily comprehended by pupils who had no foreknowledge of the subject; and by those who have come to me with a small acquaintance with other works, it has been admitted to explain many points of Harmony which had been to them before quite unintelligible. It is a Theory, in my opinion, of peculiar advantage to the student, as comprising the laws of counterpoint with all those of the chromatic or free style, and, for the first time to my knowledge, distinguishing between these very dissimilar schools of harmony. I firmly believe, that should your Theory be generally read, it will greatly improve and facilitate the study of Harmony.

I am, my dear Friend,

Very sincerely yours,

*To Alfred Day, Esq., M.D.*

G. A. MACFARREN.

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# CONTENTS.

GENERAL INTRODUCTION. Of Thorough Bass	Page	1
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## PART I.

### DIATONIC HARMONY, OR HARMONY IN THE STRICT STYLE.

CHAP. I. Of Intervals		4
II. Scales and Keys		7
III. Of the Progression of Parts in the Diatonic or Strict Style		9
IV. Of Common Chords and their Inversions		14
V. Of Sequence.		17
VI. Of Discords		20
VII. First Species of Diatonic Discords		21
VIII. Second Species of Diatonic Discords		27
IX. Third Species of Diatonic Discords		35
X. Fourth Species of Diatonic Discords		39
XI. Of Pedals in the Strict or Diatonic Style		45
XII. Of Modulation in the Strict Style		46
XIII. Of Diatonic Free Music		49

## PART II.

### CHROMATIC HARMONY, OR HARMONY IN THE FREE STYLE.

GENERAL INTRODUCTION		51
CHAP. I. On Chromatic or Fundamental Harmony, the Intervals used therein, and Chromatic Scales		52
II. Of the Progression of Parts in Chromatic Harmony		56
III. Of False Relation as regards Fundamental Harmony		63
IV. Of Common Chords and their Inversions		67
V. Of the Second Inversions of the Common Chords Major or Minor on the Tonic and Subdominant, and of the Common Chord Major on the Dominant		69
VI. Of the Fundamental Sevenths on the Dominant, Supertonic, and Tonic		72
VII. Of the Fundamental Minor and Major Ninths on the Dominant, Supertonic, and Tonic		78
VIII. Of the Chord of the Fundamental Eleventh on the Dominant		89
IX. Of the Fundamental Chords of the Thirteenth, on Dominant, Supertonic, and Tonic		97
X. Of the Chords of the Augmented Sixth		121
XI. Of the Suspension of Fundamental Chords		127
XII. Mixture of Diatonic and Chromatic Schools		130
XIII. Of Passing Notes in the Free Style, including Chromatic Passing Notes and Arpeggios		132
XIV. Of Pedals in the Fundamental or Free Style		144
XV. Of Modulation		146

## ERRATA.

Page 11, add to the end of sect. 20, "and if any part move a diminished interval, it must return to some note lying within such diminished interval."

„ 15, line 3, *for* "or third," *read* "on the third."

„ 34, the second section of Ex. 27 should stand thus :

the fourth part (that next the bass) being omitted.

„ 36, line 4 of sect. 3, insert a comma after "the fourth."

„ 42, Ex. 8, the semibreve (B) in the last bar but three, should have a  $\flat$  before it; and in the following bar, the  $\flat$  before the D should be omitted.

„ 49, line 3 of sect. 2, *for* "common chord of C," *read* "common chord, C."

„ 58, Ex. 5, last bar but one, the second crotchet should be figured  $\overset{7}{\#}$ , *not*  $\#7$ .

„ 63, line 5 of Introduction, *for* "harmonies," *read* "harmonica."

„ 63, Ex. 1, last crotchet of last bar but one, in letters, *for* C, *read* E

„ 64, in the Example in the Minor, precisely the same error as the preceding.

„ 65, Ex. 4, last crotchet of fourth bar, in letters, *for* A, *read* B.

„ 65, Ex. 4, first crotchet of sixth bar, *for* 7, *read*  $\flat7$ .

„ 68, Ex. 1, first minim, *for*  $\natural$ , *read*  $\flat$ .

„ 72, Ex. 1, beneath second bar, *insert* A.

„ 80, Ex. 12, beneath third bar, *insert* E B.

„ 84, Ex. 24, first crotchet of third bar, *for*  $\flat^9_7$  *read*  $\flat^9_\#$ .

„ 86, Ex. 29, second crotchet of second bar, *for*  $\flat$  *read*  $\natural$ .

„ 86, Ex. 31, beneath second crotchet, *insert* A.

„ 90, Ex. 3, second and fourth bars, *for* 9, *read*  $\flat9$ .

„ 92, Ex. 15, second crotchet of third bar, in the figuring, *insert*  $\flat$ , and below the note, *for* B, *read* A.

„ 96, Ex. 28, there should be only a *single* bar between the fourth and fifth bars.

„ 96, Ex. 29, third crotchet of first bar, in the figuring, *insert*  $\flat7$ .

„ 101, Ex. 5, last crotchet in third part, *insert* B.

„ 102, line 1 of sect. 10, *for*, "thirteenth on the tonic," *read* "thirteenth on *dominant and* tonic."

„ 109, Ex. 33, first crotchet of third bar from the end, take out the  $\flat$  from before the 7.

„ 119, second line of sect. 61, *for* "major ninth," *read* "minor ninth:" and *omit* from the last word of the fifth line to the end of the section.

„ 119, Ex. 66, in the figuring to the first crotchet, *for* 9, *read*  $\flat9$ ; and *insert*  $\flat$  before the A in the Bass.

# GENERAL INTRODUCTION.

## OF THOROUGH BASS.

SECTION 1. Thorough Bass (as it is called) being only a musical short hand, it may be thought of no consequence what the arbitrary signs representing the notes may be, so that those signs are understood; but as the figuring used in thorough bass is taken as the index of all chords written above any given bass in exercises, it is absolutely necessary that the figuring should indicate the real nature and derivation of those chords. The received system of thorough bass has been found utterly insufficient for this purpose, because chords entirely different in their nature are figured the same; as, for example (Ex. 1), in the following all the chords on the seven notes of the scale of C minor are composed of different intervals, or have different resolutions, and are therefore essentially different

Ex. 1.

The image displays three systems of musical notation for Example 1, illustrating chords on the seven notes of the C minor scale. Each system consists of a treble clef staff with chords and a bass clef staff with a single bass note and a figured bass line. The first system shows chords on C, D, E, and F. The second system shows chords on G, A, and B. The third system shows chords on C, D, and E. The figured bass lines use numbers 7 and symbols like ♯5 and ♯6 to indicate intervals and resolutions.





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## PART I.

## DIATONIC HARMONY, OR HARMONY IN THE STRICT STYLE.

## CHAPTER I.

## OF INTERVALS.

## INTRODUCTION.

THIS first chapter, only treating of intervals, contains only one thing new, that is, making the inversion of an octave an octave, (instead of an unison, as is usually done,)—the reason of which is this, to invert does not necessarily mean to move one part an octave up, or the other an octave down, because in that manner of proceeding a ninth could not be inverted, as whichever part were moved it would be a second; but to invert the position of the notes with regard to one another, placing that above which was below, and *vice versd.* This condition is not fulfilled in making the octave an unison, but is perfectly fulfilled in inverting the octave as an octave, as is done in the following chapter.

SECTION 1. An interval is the distance, or space, between any two notes.

2. Intervals are named seconds, thirds, fourths, fifths, sixths, sevenths, eighths, and ninths, according to the distance of the notes composing those intervals on the staff.

Ex. 1.



3. Intervals are reckoned from the lower note to the upper, both inclusive. The interval C E is always to be considered a third, although the pitch is varied by the #, b, or ♮ placed before the notes (Ex. 1), because an interval is reckoned accord-

ing to the relative situation on the staff of the notes composing that interval, without any reference to their positive sound.

4. It may be as well here to observe, that from C to E is considered a third, whether the notes be placed at the distance of a third simply, or of one octave and a third, two octaves and a third, or any greater distance; and the same with all other intervals, with the exception of the second, which differs from a ninth, (or octave and second,) as will be explained hereafter.

5. Either the second or ninth may be taken at (or at a greater distance than) the octave and second, but the uninverted interval of the ninth can never be taken nearer than the octave and second.

6. A semitone is the distance between any one sound and the nearest sound, on an ordinary pianoforte; it follows therefore, that from C to C $\sharp$ , D to E $\flat$ , or C to B, is one semitone (Ex. 2), and not two, as has been sometimes stated.



7. A tone is two semitones.



8. Intervals are divided into perfect and imperfect.

9. The perfect intervals are the fourth, fifth, and eighth.

10. The imperfect intervals are the second, third, sixth, seventh, and ninth.

11. The imperfect intervals may be either major or minor.

12. The second, fourth, and fifth may be augmented.

13. The fourth, fifth, and seventh may be diminished.

14. The intervals in the following table, and which are all the intervals that can occur in diatonic harmony, are all given according to the keys of C major and C minor.

TABLE OF INTERVALS.

Ex. 4.

The minor second is composed of one semitone:



The major second of two:



The augmented second of three:



The minor third is composed of three semitones:



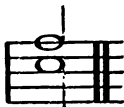
The major third of four:



The diminished fourth is composed of four semitones:



The perfect fourth of five:



The augmented fourth of six:



The diminished fifth is composed of six semitones:



The perfect fifth of seven:



The augmented fifth of eight:



The minor sixth is composed of eight semitones:



The major sixth of nine:

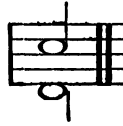


TABLE OF INTERVALS,—*continued.*

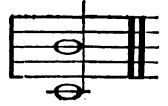
The diminished seventh is composed of nine semitones :



The minor seventh of ten :



The major seventh of eleven :



The octave is composed of twelve semitones :



The minor ninth is composed of thirteen semitones :



The major ninth of fourteen :



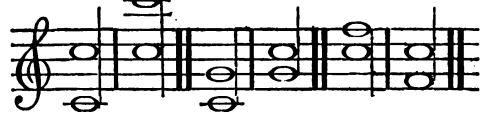
## INVERSION OF INTERVALS.

15. The inversion of an interval is the changing the relative position of the notes composing that interval, either by placing the upper note beneath the lower, or the lower above the upper (Ex. 5).

Ex. 5.



Ex. 6.



16. Perfect intervals, when inverted, remain perfect, the octave an octave, the fifth a fourth, the fourth a fifth (Ex. 6).

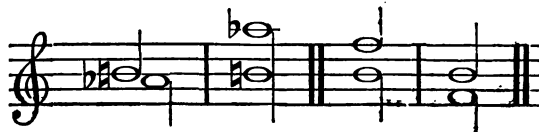
17. Major intervals by inversion become minor, and minor intervals major. In the example, the major second C D, becomes, by inversion, a minor seventh D C; the major third C E, a minor sixth E C; the minor second E F, a major seventh F E; the minor third D F, a major sixth F D; the major ninth C D, a minor seventh D C.

Ex. 7.



18. Augmented intervals, by inversion, become diminished, and diminished intervals augmented; the augmented second A b B ♯, becomes a diminished seventh B ♯ and A b; and the diminished fifth B F, an augmented fourth F B.

Ex. 8.]



## CHAPTER II.

## SCALES AND KEYS.

---

INTRODUCTION.

IN this chapter the scales, major and minor, are written: the minor in a manner which is becoming both practically and theoretically more common than it was some few years back; I mean writing it with a minor sixth and major seventh both ascending and descending. The reason of doing so is this: the foundation of the major scale is, the common chord of the tonic, which supplies the first, third, and fifth of the key; of the dominant, which supplies the major seventh and second; and of the subdominant, which supplies the fourth and sixth. The minor scale is formed in a similar manner: from the minor common chord of the tonic which gives the minor third and fifth; the major common chord of the dominant which gives the major seventh and second of the scale, (the third of the dominant being always major;) and the minor common chord of the subdominant which gives the fourth and minor sixth of the scale. Here no major sixth or minor seventh is to be found; and strictly speaking, no major sixth nor minor seventh should be used, though custom has somewhat sanctioned their use, and the particular instances in which they may be used are noticed in future chapters. The reason which is given against writing the minor scale as it is written in this chapter, *viz.*, that the step from the minor sixth to the major seventh is too great, is no reason at all; if all the other steps of the ladder or scale were at equal distances, there might be some show of sense, but in the mixture of whole tones and semitones, I can see no reason why an augmented second should not be introduced. This scale may not be so easy to some instruments and to voices as the old minor scale; therefore, let all those who like it, practise that form of passage, but let them not call it the minor scale. Even as a point of practice I deny the old minor scale to be the better, as practice is for the purpose of overcoming difficulties, and not of evading them.

---

SECTION 1. A scale is a succession of notes following in regular order; by regular order is meant, that no line or space be skipped: should either a line or space be skipped, the succession of notes ceases to be a scale.

2. Scales are the same both ascending and descending.
3. A key has seven notes.
4. The first is called the key note or *tonic*.
5. The second is called the *supertonic*.

6. The third is called the *mediant*.
7. The fourth is called the *subdominant*.
8. The fifth is called the *dominant*.
9. The sixth is called the *submediant*.

10. The seventh is called the *leading* or sensitive note; it cannot ever be doubled excepting in one of the repetitions of a sequence.

11. Scales are of two kinds, major and minor, which are determined by the third and sixth.

12. In the major scale, every interval is either major, or perfect, when reckoned *upward* from the key note.

Ex. 1.



13. In the minor scale, the third and sixth are minor; the other notes, as in the major, counting upwards from the key note.

Ex. 2.



14. As a scale may be commenced on any note of the gamut, modified in any way by sharps or flats, and as the notes composing the diatonic scales *must* follow in the order above named, therefore it is necessary to introduce sharps in some keys, and flats in others: hence the difference in the signatures of keys.

15. There being more notes in common between the above two keys of C major and A minor, than between C major and any other minor key, or A minor and any other major key, those two keys are therefore called relative major and minor; this is a mere matter of words, and of no practical utility.

## CHAPTER III.

## OF THE PROGRESSION OF PARTS IN THE DIATONIC OR STRICT STYLE.

## INTRODUCTION.

THIS chapter, as the first, contains little that is new, and for the most part, the reason for such novelty is given at the time. With regard to the doctrine of false relations, which has been usually treated of under one law, it is here divided into two; one as affecting the false relations between two consecutive chords; the other between two chords with one intervening: that it is not done so without reason, I think will be evident.

SECTION 1. A chord is two or more notes sounded together.

2. Each note is a separate part, and as the number of notes sounded simultaneously, so is the number of parts.

3. Chords consist of concords and discords.

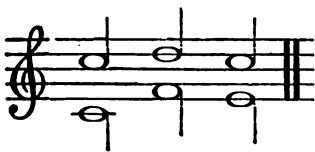
4. The concords are the major or minor third, perfect fifth, major or minor sixth, and eighth: of these the fifth and eighth are called perfect concords, the third and sixth imperfect.

5. The discords are the second, fourth, seventh, and ninth, and all augmented and diminished intervals.

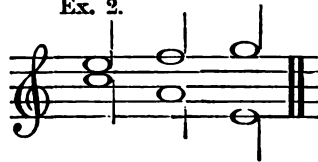
6. In passing from chord to chord, the different parts are susceptible of three motions with relation to each other, the similar, contrary, and oblique.

7. Similar motion is two parts moving the same way, that is, both ascending or both descending (Ex. 1).

Ex. 1.



Ex. 2.



8. Contrary motion is the parts moving contrary ways, that is, one ascending and the other descending (Ex. 2).

9. Oblique motion is one part remaining and the other moving.

Ex. 3.





Ex. 4.



10. No two parts are allowed to move in perfect fifths; the reason of this is, that two perfect fifths following, in most cases, give the idea of two different keys.

11. No two parts are allowed to move in octaves, on account of the thinness thereby produced, the parts lying between the octaves being scarcely heard; in the example (5), the forbidden octaves are between the first and fourth parts of the third and fourth chords.

Ex. 5.



Ex. 6.



12. No two parts are allowed to move in unison, the clearness of the part writing being thereby destroyed; the first and second parts in the example (6), move in unisons at the fourth and fifth chords.

13. Fifths by contrary motion should not be used, (although by most writers allowed,) as the reason given why fifths by similar motion should not be used (sect. 10) is equally applicable to fifths by contrary motion (Ex. 7).

Ex. 7.



Ex. 8.



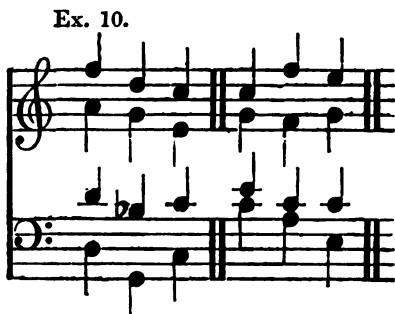
14. Octaves by contrary motion, or what is equivalent thereto, the progression from an octave to an unison, by contrary motion, (though allowed by most writers,) should not be used, as the richness of the harmony would be thereby destroyed (Ex. 8).

Ex. 9.

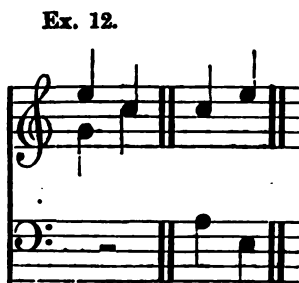
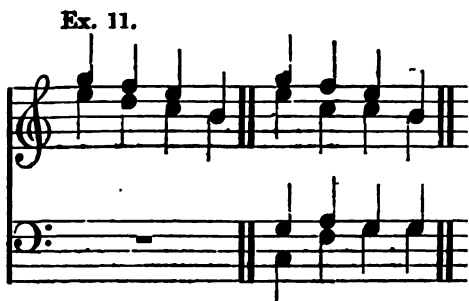


15. It is not allowable to come on a perfect concord by similar motion, in two-part writing.

16. It is not allowable to come on a perfect concord in similar motion, between the extreme parts, whatever be the number of parts.



17. It is not allowable, between any of the parts, to come on an unison by similar motion, whatever be the number of the parts (Ex. 11).



18. It is not allowable, even by contrary motion, to skip to the unison or octave (in two-part writing), when the bass moves (Ex. 12).

19. It is not allowable, even by contrary motion, and whatever be the number of parts, to skip to the octave in the extreme parts, when the bass moves (Ex. 13).



20. It is not allowable to move an augmented interval unless it occur in one of the repetitions of a sequence (Ex. 14).

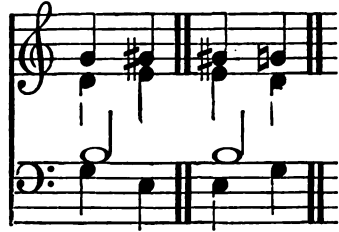
21. It is not allowable for any part to move a seventh, as in the example (15) first and second bars; or a ninth, as in the third and fourth bars; neither ascending, as in the first and third bars; nor descending, as in the second and fourth.





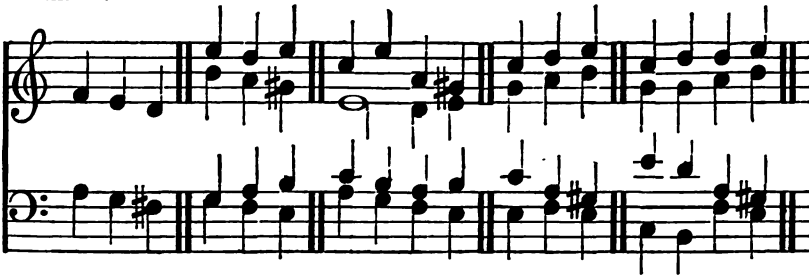
29. Where the note which has to be varied in pitch is doubled, one only of those notes moves to the altered note, as in the first bar; when the converse of this progression is taken, as in the second bar, (that is, where the note when altered is doubled,) not only is the original note allowed to move to the altered note, but also any other note, which does not, by so doing, make false progressions.

Ex. 21.



30. False relation also exists between two notes varied in pitch, if one note intervene, (as in the first bar,) excepting in two instances; one of which occurs in the minor key, in passing from the common chord on the fifth of the scale with a minor third, such third the minor seventh of the scale, falling (as in the second and third bars) to the common chord on the fifth of the scale, with a major third, such third the major seventh of the scale, afterwards rising. The other instance

Ex. 22.



occurs in passing from common chords on the first and fifth of the major scale, or their first inversions, to the common chord on the fifth of the relative minor, as in the fourth and fifth bars, or any of their inversions. The false relations in the second and third bars, occur from the defective manner of writing the minor scale as it is frequently written, with the seventh minor when it falls, major only when it rises; this, though somewhat sanctioned by long use, is by no means recommended. Why those in the fourth and fifth bars are allowable, will be explained in the Second Part of this book; suffice it here to say that they are so.

## CHAPTER IV.

## OF COMMON CHORDS AND THEIR INVERSIONS.

## INTRODUCTION.

THE only thing in which this chapter departs from the orthodox doctrine, is in forbidding the use of the common chord on the third of the major scale in its original position; but be it understood, that although positively forbidden in the text, the student is only *recommended not to use it*. There are numerous instances in which the best writers (Handel especially) use it, but I always think with bad effect, the chord having nothing whatever to do with the key. It would not be in place here, nor would it be understood, were the reasons for its prohibition given; but in the Second Part of this book, in the introduction to the chapter treating of the chromatic scale, those reasons will be found.

SECTION 1. A common chord or triad consists of any bass note and its third and fifth. This bass note is called the root of the chord; it is lettered A.

2. The fifth of every common chord must be perfect.

3. The third may be either major or minor; and as the third, so is the chord called, that is either major or minor.

4. The third of the chord should not be omitted as in the first bar, because it leaves an uncertainty, whether the chord be major as in the second bar, or minor as in the third (Ex. 1).

Ex. 1.

Ex. 2.

5. It is desirable not to double the *major* third of the chord, because the harmonic fifth of that third, (the vibration of which may be distinctly heard,) destroys the clearness of the chord.

6. It is not objectionable to double the major third of the chord, if the third be both approached and quitted by contrary motion, and by step of one degree of the scale in both parts (Ex. 2).

7. The common chord on the mediant or third of the scale, major or minor, is not allowable, excepting in the repetitions of a sequence, and therefore the fifth or third of the scale can never be taken as a concord.

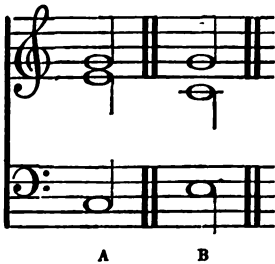
8. No unprepared augmented or diminished interval can be taken, unless in sequence, excepting the augmented fourth, or its inversion the diminished fifth, formed by the third and sixth, taken on the fourth of the minor scale, or on the second of either minor or major.

9. The inversion of a common chord, is the placing either the third or fifth in the bass.

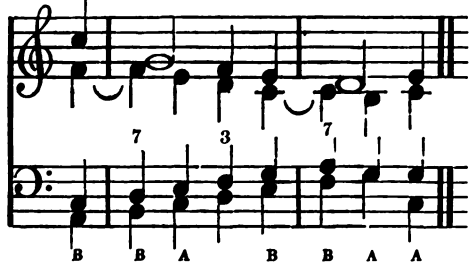
10. The first inversion is when the third is in the bass, when the root becomes a sixth to that bass, and the fifth a third; this is called the chord of the sixth.

11. When this chord occurs, B is placed to the bass, which shows that the bass is the third from the root (Ex. 3).

Ex. 3.



Ex. 4.



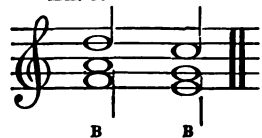
12. In this chord, as in the common chord, the root or fifth of the chord may be doubled.

13. When this chord is an inversion of a major common chord, the bass, the major third from the root, should not be doubled, unless it be both approached and quitted by contrary motion, as in Ex. 4, and by step of only one degree of the scale in both parts.

14. The reason for not doubling the bass of this chord, is the same as that given for not doubling the major third of the common chord, and in this case the reason is even stronger, as the harmonics of a bass note come out so much more strongly than those of any other part. The reason why the passage in Ex. 4 is correct, is that the doubled third, (from the contrary motion of the parts,) sounds more like part of a passage belonging to the fourth species of discords, (Chap. X.,) than an actual major third of a common chord.

15. No form of the common chord of the second of the scale can be followed by any form of the common chord on the tonic, unless both be in their first inversion, as in Ex. 5.

Ex. 5.



16. Though the triads on the third and seventh of the major scale, and on the second, third, and seventh of the minor scale, are not allowed as concords in pure

diatonic harmony, yet the first inversions of these chords are allowed, with the exception of the first inversion of the triad on the third of the minor key; but in that which forms the sixth on the second of the scale either major or minor, the sixth, *being the leading note*, can never be doubled.

17. The chords of the sixth, on the second of either major or minor key, and on the fourth of the minor, (which form the link between the diatonic and chromatic schools,) are the only cases where an augmented or diminished interval can be taken without preparation. The reason will be given in the Second Part of this book, when the chords from which they are derived are treated of.

18. If the chord of the sixth, on the third of the scale either major or minor, (being the first inversion of the common chord of the tonic,) be followed by the sixth on the leading note, (the first inversion of the common chord of the dominant,) as in the first bar of Ex. 6, the bass must fall, or *vice versd*, as in the second

Ex. 6.

The musical notation for Example 6 consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. The music is divided into eight measures by vertical bar lines. The notes in the upper staff are: G4, A4, B4, C5, B4, A4, G4, F#4. The notes in the lower staff are: B3, A3, G3, F#3, E3, D3, C3, B2. Below the lower staff, the letter 'B' is written under each of the eight measures, indicating the bass note for each measure.

bar. If the sixth on the third of either major or minor key, (the first inversion of the tonic major or minor common chord,) be followed by the sixth on the sixth of the scale, (the first inversion of the subdominant major or minor common chord,) the bass must rise as in the third bar, or *vice versd*, as in the fourth bar.

19. The second inversion of a common chord is when the fifth is in the bass, when the root becomes a fourth, and the third a sixth.

20. This chord can never occur in *strict* diatonic music; it will, therefore, not be treated of here.

CHAPTER V.  
OF SEQUENCE.

INTRODUCTION.

THIS chapter, which treats of sequence, will, I think, be enough to decide the writing of the minor scale. In the diatonic school, in the repetitions of a sequence, all idea of the quality of the intervals, that is, whether they be perfect, imperfect, augmented, or diminished, is lost, and all intervals are treated the same; on which principle the sequence in C minor in the following chapter is written; supposing which sequence altered to suit the more common minor scale, as the sixth and seventh of the scale both ascend, they must be major, and the following sequence would be formed, the objections to which are so numerous and

Ex. 1.



palpable, that I think one glance will be sufficient to determine the fate of the old minor scale. How the keys are confused in the above example I shall now proceed to show. The three first chords taken together could only belong to B major in sequence; the third and fourth chords to C major; the fourth and fifth chords to C minor; the fifth and sixth chords, it is utterly impossible to connect in any key, the fifth chord belonging only to C minor, as a diatonic chord, and the sixth chord belonging only to B major, in one of the repetitions of a sequence; the sixth and seventh chords taken together could only belong to B major; the seventh and eighth to C major; the eighth and ninth to C major or minor; and the last two chords only to C minor. It will be seen by this how the old minor scale confuses the key, and in itself entirely refutes all arguments used in its favour. It has been said, that any minor scale, say C minor, is only a portion of its relative, as it is called, major (E major), the minor beginning on the sixth of the major scale; but as the fourth and fifth of such major, when occurring as parts of the ascending minor scale, are uniformly augmented in the old method of writing the minor scale, therefore it cannot belong to that major (E major); it appears to be nearer



to B $\flat$  than to any other key, but as the B, whenever it occurs, is  $\natural$ , it cannot belong to B $\flat$ . The descending scale might be a portion of E $\flat$ , were it never harmonized, but unfortunately the B  $\natural$  is made use of occasionally, even by the greatest advocates for the old form of minor scale. It follows, therefore, that such descending scale of C minor bears a great resemblance to E $\flat$ , so much so as to render it particularly easy to confuse the two keys in such a manner as to make it doubtful in which key any progression may be, and that the old ascending minor scale cannot by any possibility belong, nor does it bear any great resemblance, to any key at all. The real fact is, that any minor key is an arbitrary, not a natural, change of the major third and sixth of the scale into the minor by means of the tonic and subdominant minor common chords, the dominant harmony remaining major, natural, and unchanged; otherwise the key would be undetermined.

SECTION 1. A sequence is the repetition of any progression of harmony on different notes of the scale, the bass rising or falling in equal gradation in each repetition.

2. The progression may consist of two chords, as in Ex. 2; of three chords, as in Ex. 3, or of even more chords.

Ex. 2.

Example 2 shows a sequence of four chords, each labeled 'A' in the bass line. The treble line contains notes that correspond to the chord structure in the bass. The bass notes are A, A, A, A, and the treble notes are G, G, G, G, indicating a sequence of A major chords with a descending bass line.

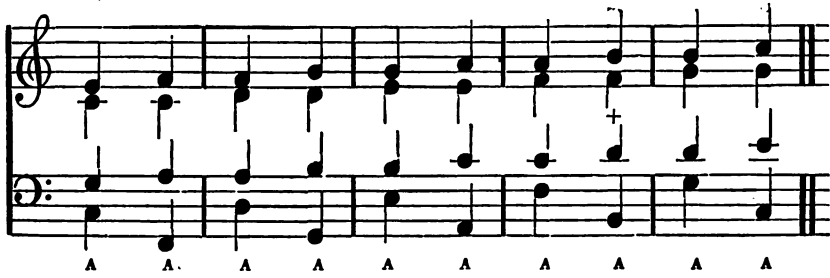
Ex. 3.

Example 3 shows a sequence of six chords, each labeled 'A' in the bass line. The treble line contains notes that correspond to the chord structure in the bass. The bass notes are A, A, A, A, A, A, and the treble notes are G, G, G, G, G, G, indicating a sequence of A major chords with a descending bass line.

3. The chords composing a sequence may be either concords or discords, or a mixture of both. Sequences of common chords alone will be noticed here.

4. In sequence a *diatonic* third and fifth to any note of the diatonic scale, major or minor, may be taken, and the chord so formed may be treated as though it were a common chord; by this means are obtained the triad with a diminished fifth on the leading note of the major key, as in the example in the major; also the triad with a diminished fifth on the leading note and second, and the triad with an augmented fifth on the third, of the minor key, as in the example in the minor, Ex. 4; the + in the example marks the diminished fifth, and the  $\oplus$  the augmented fifth.

Ex. 4.



5. The progression of each part must be in sequence as well as the bass, that is, in whatever part any interval from the bass be found in the original progression, in the same part must the same interval be found in the repetition thereof.

6. In the last example, in the first chord the third of the chord is in the first part, the octave to the bass in the second part, and the fifth in the third part. In the second chord, which completes the original progression, the octave to the bass is in the first part, the fifth in the second part, and the third in the third part. In the third and fourth chords, which form the repetition of the progression, the notes stand precisely in the same position in regard to the bass, as in the original progression.

7. Although the diminished and augmented fifths are allowed as concords in sequence, yet they must not appear in the original progression, but in some one of the repetitions thereof.

8. The same law affects all sequences, that is, that when any chord is allowable only in sequence, it must appear in one of the repetitions, and not in the original progression, therefore the triads on the seventh and third of the major scale, and on the seventh, third, and second of the minor scale, are not allowed as concords in the original progression of any sequence.

CHAPTER VI.  
ON DISCORDS.

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SECTION 1. Discords differ from concords, insomuch as that they cannot be taken indiscriminately, but must be taken either by preparation or transition, and must be resolved.

2. Preparation consists in sounding the note forming the discord previously in the same part.

3. A discord may be prepared by sounding the dissonant note previously as a concord, with the part with which it afterwards forms the discord (Ex. 1).



4. A discord may also be prepared by sounding the dissonant note alone, and bringing in the other part afterwards (Ex. 2).

5. Transition is passing from a concord to a discord, (by degrees only,) which discord must pass on by degrees to the next concord in the same direction, which concord may either belong to the same chord or to any other, or return to the concord whence it came, provided no false progressions be made. These discords are not taken notice of in the figuring.



6. Resolution is the discordant note passing to the consonant note, to which by the laws of the different discords it is compelled to move (Ex. 4).



7. No discord can be sounded at the same time as the note on which it resolves, excepting at the distance of a seventh, such seventh being an inversion of a ninth, the discord being in the lower part as in the first bar, or at the distance of a ninth, the discord being in the upper part as in the second bar (Ex. 5). Or at the distance of a seventh, the discord being in the upper part and rising to the octave. This last occurs when in the second species of discords the third of one chord is suspended as the seventh of the next. This will be explained in treating of the second species of discords; and in all these cases only when the discord is prepared by contrary motion with the part with which it forms the dissonance.

8. No two notes next each other in alphabetical order can ever be allowed to go to the unison or octave by similar motion (Ex. 6).

Ex. 6.



Ex. 7.



9. It is not allowed between any parts to go by similar motion to the unison or octave of any note which resolves a discord (Ex. 7).

10. No discord is allowed to be doubled, disallowed octaves being produced by the resolution, as will be seen hereafter.

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## CHAPTER VII.

### FIRST SPECIES OF DIATONIC DISCORDS.

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#### INTRODUCTION.

WHATSOEVER in this chapter regarding the preparation in the bass of single or double discords being inversions of chords, is heterodox in words and theory, as a matter of notes and practice is perfectly orthodox. The law respecting prepared discords, as deduced from the best writings, appears to be very simple; a discord may be taken in any part, whether top, inner, or bottom, provided that, according to the laws for the progression of parts and preparation of discords, it can be properly prepared in that part, and does not resolve on to another discord, which

is no orthodox resolution. An exception to this is, that in diatonic music the second inversion of a common chord cannot be used, the reason for which appears to me to be a feeling on the part of the old masters that the  $\frac{6}{4}$  was not like any other chord, that it could be taken only on certain notes of the scale, that the resolution of the fourth alone of the chord was not sufficient or satisfactory, and that in any treatment of the chord the difficulty was equally great. In resolving on the common chord on the same note, (the natural resolution,) the sixth and the fourth appear to be equally bound in their progression: if the fourth be a discord, the sixth, being equally fettered, should also be a discord, which is contrary to received ideas: if the sixth be a concord, the fourth, having similar treatment, should also be a concord; this being impossible, it was considered better to let it alone altogether, than to make it in its treatment a contradiction to all the laws respecting the preparation and resolution of discords. This chord will be more fully treated of in the last chapter of the First Part of this book, (on diatonic free music,) as also in the Second Part, to which it more properly belongs.

SECTION 1. There are four species of diatonic discords.

2. That which is here classed as the first species requires to be prepared, and the resolution takes place while the note with which the discordant note forms the discord remains. These are suspended discords.

3. A discord of this species must be taken on a stronger accent than its resolution, as on the first or third division of time having four divisions in the bar, or on the first or second of time having three.

4. The discords which may be taken in this way, are the fourth and ninth, and their inversions, and the augmented and diminished fifths, and the fifth on the mediant of the major key.

5. The fourth resolves on the third on the same bass (Ex. 1).

6. The fourth of the chord of the  $\frac{5}{4}$ , when resolving on the  $\frac{5}{3}$ , it will be seen is a mere retardation of the third of the chord, the bass being the root.

Ex. 1.

Ex. 2.

7. The first inversion of the chord of the suspended fourth, is when the third is in the bass, when the note which was a fourth becomes a ninth. The bass of this inversion is lettered B, with the figures  $\frac{8}{4}$ ; the fourth resolves on the third, the other notes remaining (Ex. 2).

8. The third and fourth (as in Ex. 2) may be taken together, if the third can be approached by single step, and in contrary motion with, and at the distance of a ninth from, the fourth the note which resolves on the third, in accordance with the law (Chap. VI. sect. 7), the same in all the inversions. But it must

Ex. 3.

be observed, that this can only be the case where the third may be doubled, never as the third of the dominant, unless in one of the repetitions of a sequence, and it is always more agreeable if the third be minor (Ex. 3).

9. The second inversion is with the fifth in the bass; this is never used in strict writing, as the inverted root, being a fourth to the bass, is a dissonance.

10. The third inversion has the fourth in the bass. The bass is lettered M, with the figures  $\frac{8}{5}$ ; or if the third and root be in the chord,  $\frac{8}{5}$ , the bass, being the suspended fourth, falls one degree.

Ex. 4.

11. The suspended ninth cannot be prepared by the eighth; the ninth always resolves on the eighth.

Ex. 5.

12. The first inversion of the chord of the suspended ninth, is with the third in the bass. The bass is lettered B, with the figure 9; or if the root be in the chord, which it can only be if approached by single step, and in contrary motion with the ninth, &c. (Chap. VI. sect. 7),  $\frac{9}{5}$  (Ex. 6).

13. The second inversion cannot be used, as the suspended ninth in falling to the eighth, (its resolution,) would form a fourth with the bass, which is no resolution.

Ex. 6.

B B A C B

Ex. 7.

B C N A

14. The third inversion has the ninth in the bass. It has the letter N, and the figures 8,  $\frac{8}{5}$ ,  $\frac{8}{3}$ , or  $\frac{5}{3}$ , as may be: the bass being the ninth falls one degree, and a line is continued from the figures, the lettering of the bass, on its resolution, being changed to A, the indication of the root (Ex. 7).

15. These two suspended discords may be taken together, and if they can be approached by single step and in contrary motion, &c. (Chap. VI. sect. 7), the eighth and third, or either of them, may exist simultaneously with the fourth and ninth; the fourth resolves on the third, and the ninth on the eighth.

Ex. 8.

A A A A A A

16. The first inversion of this double suspended discord has the third in the bass, which is lettered B, with the figures  $\frac{9}{5}$ ; the fourth resolves on the third, and the ninth on the eighth (Ex. 9).

Ex. 9.

A C B

Ex. 10.

N B

17. The second inversion cannot be used. (Chap. VI. sect. 7.)

18. The third inversion has the fourth in the bass; it is lettered M, with the figures  $\frac{9}{3}$ ; the bass, the original fourth, falls a degree, as does the ninth; the root cannot exist in this inversion (Ex. 10), as it cannot be approached by single step.

19. The fourth inversion has the ninth in the bass, with the letter N, and the figures  $\frac{8}{4}$ ; the bass and ninth both fall one degree.

Ex. 11.

20. It will be seen that, in all these inversions, the discordant notes progress exactly in the same way, and to the same places, as in the original positions, each inversion of the discord passing to some inversion of that concord, on which the discord originally resolved.

21. The diminished fifth can be taken on the leading note of either major or minor key; its resolution is on the sixth. As the sixth is the real root, the diminished fifth is a note suspended from the previous chord. The bass will be lettered B, and a line drawn from the figure indicating the suspended note, which rises to the root of the chord.

Ex. 12.

22. The augmented fifth can only be taken on the mediant of the minor scale. It can be accompanied by the third, also by the seventh, (which is an

Ex. 13.



inverted ninth,) or by the ninth, (which is an inverted fourth,) or any combination or variety of them (Ex. 13).

23. The chord of the augmented fifth, accompanied with the seventh, is virtually the first inversion of the chord of the suspended ninth. The augmented fifth, with the ninth and seventh, is the first inversion of the suspended ninth and fourth, the third being in the bass. That this is the case is proved by the following, where the root is in the chord, in place of the ninth.

Ex. 14.

Hand diagram showing fingerings: 1 (thumb), 2 (index), 3 (middle), 4 (ring), 5 (pinky).

Figures: 7, 5, 8, 8

Chords: C, B, A, A

24. A discord of this species may skip to any concord, either above or below it, provided it return to the note which should form its resolution, before the rest of the chord be changed.

Ex. 15.

Figures: 7, 4, 8, 8, 4, 3

Chords: A, C, B, A, A

Figures: 9, 8, 4, 3, 4, 3

Chords: A, A, A, A, A

CHAPTER VIII.

THE SECOND SPECIES OF DISCORDS.

INTRODUCTION.

THE only novelty in this chapter is that part which treats of the suspension of a portion, or the whole, of a chord belonging to the second species of discords over a part, or the whole, of the chord forming the resolution, as the case may be, showing among other things the origin of the chords of the diminished and augmented fifths of the first species. I think, when the whole chapter has been gone through, that it will be seen that there is sufficient reason for what is there advanced; also that it will be found of more benefit to the student to know clearly the origin of the several chords, than merely to learn them, and the treatment thereof, parrot fashion.

SECTION 1. Those discords which are here classed as the second species, are those which are prepared, and which are resolved, on the following chord.

2. The discords which may be taken in this species are the seventh and ninth, and their inversions; the perfect fifth on the third of the major scale; and the diminished fifth on the second, and the augmented fifth on the third, of the minor scale.

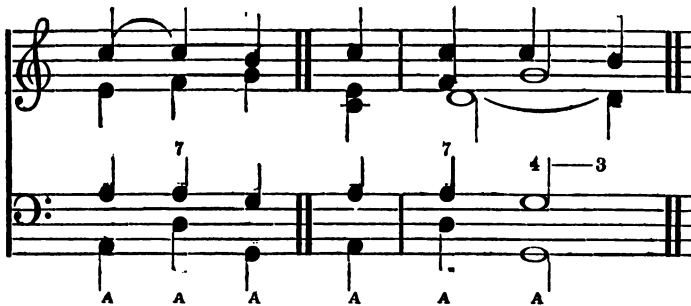
3. Neither seventh nor ninth can be taken on the fourth or seventh of either major or minor key, nor can the seventh be taken on the key note of the minor, nor the ninth on the sixth of the minor.

4. The seventh and ninth however on these notes, may be taken in the repetitions of a sequence.

5. The seventh may be accompanied by the third, fifth, and eighth, or any variety of them.

6. This chord is resolved on a chord, the root of which is the fourth above or fifth below the root of such seventh. The seventh must fall to the third of the

Ex. 1.



next chord, or be suspended as a fourth. The other intervals are limited in their progression only by the rules for the progression of parts.

7. The third of this chord may prepare a seventh, and the fifth a ninth.

Ex. 2.

Ex. 3.

8. The first inversion of this chord has the third in the bass. It is lettered B, with the figure 7; the sixth from the bass is the root, and the fifth is the inversion of the seventh. The resolution of this inversion, is on a chord having the note above the bass for its root.

9. The second and third inversions cannot be used, as they each contain two discords, both of which cannot be prepared; they belong to free and not to strict writing, excepting the second inversion of the seventh on the dominant, in which the root is omitted; this forms the chord of the sixth on the second of the scale. This chord of the sixth is always to be considered and figured as an inversion of a seventh on the dominant, that is C  $\frac{7}{6}$ , the

Ex. 4.

Ex. 5.

root being omitted, when in either major or minor key, it is followed by the common chord on the tonic or its first inversion, or by a suspension over such common chord or such first inversion: when followed by the first inversion of the tonic common chord, or a suspension over it, as may be seen above, the seventh is allowed to rise a degree.

10. The ninth may be accompanied by the third, fifth, and seventh, or any combination of them. It will be seen that this chord is, when accompanied by the seventh, merely a ninth added to the preceding chord; the chord of the ninth

Ex. 6.

is resolved on a chord the root of which is the fourth above; the ninth is resolved on the fifth of the new root; the rest of the intervals are treated as in the chord of the seventh.

11. The first inversion of this chord is the chord of the seventh, the resolution of which is on the common chord on the second above, and not, as in the original chord of the seventh, on the common chord on the fourth above. The ninth of the original chord moves to the fifth, the seventh of the original chord moves to the third, as does also the fifth, to prevent consecutive fifths between that and the ninth. This chord is marked B ♯ (Ex. 7).

Ex. 7.

Ex. 8.

12. When this first inversion of the chord is taken on the dominant, the resolution is known as the interrupted cadence, and any seventh may be treated as a ninth, by taking the bass up a second, instead of a fourth (Ex. 8).

13. The second, (and *only other* inversion which can be used in strict music,) has the fifth in the bass, marked C ♯. This differs from the first inversion of a seventh, insomuch as its resolution is to a common chord whose root is a note below the bass of the inversion, and not a note above, as in the case of the first.

inversion of a seventh, and any seventh or inversion of a seventh may be treated as a ninth or inversion thereof by a similar resolution (Ex. 9).

Ex. 9.

Ex. 9 shows a musical progression in two staves. The upper staff contains a melodic line with notes G4, A4, B4, A4, G4. The lower staff contains a bass line with notes G3, A3, B3, A3, G3. Chord symbols '9 7' and '7 5' are placed above the notes in the lower staff to indicate the harmonic structure.

Ex. 10.

Ex. 10 shows a musical progression in two staves. The upper staff contains a melodic line with notes G4, A4, B4, A4, G4. The lower staff contains a bass line with notes G3, A3, B3, A3, G3. Chord symbols '7 5', '9 7', and '8' are placed above the notes in the lower staff to indicate the harmonic structure.

14. The diminished fifth of this species, can only (excepting in sequence) be taken on the second of the minor scale.

15. It must be accompanied by the seventh, which may have either the third or eighth or both with it. This chord resolves on a chord the root of which is a fourth above or fifth below: the diminished fifth falls to the new root, or suspends a ninth (Ex. 10).

16. The augmented fifth can be taken on the mediant of the minor key only.

17. It may be accompanied by the third, eighth, prepared seventh, and ninth, or any combination or variety of them. This chord resolves on a chord the root

Ex. 11.

Ex. 11 shows a musical progression in two staves. The upper staff contains a melodic line with notes G4, A4, B4, A4, G4. The lower staff contains a bass line with notes G3, A3, B3, A3, G3. Chord symbols '7 5', '9 7', and '7 5' are placed above the notes in the lower staff to indicate the harmonic structure.

of which is a fourth above or fifth below; the augmented fifth rises to the third of the new root; the other intervals progress as in the chords of the seventh and ninth.

18. The only inversion of this chord (with its several accompaniments) which

Ex. 12.

Ex. 12 shows a musical progression in two staves. The upper staff contains a melodic line with notes G4, A4, B4, A4, G4. The lower staff contains a bass line with notes G3, A3, B3, A3, G3. Chord symbols '8', '7 5', and '9 7' are placed above the notes in the lower staff to indicate the harmonic structure.

can be used, is that which has the third in the bass. The fifth on the mediant of the major key, if treated as a discord, is in every respect treated as the augmented fifth on the mediant of the minor key, with the exception that the first inversion is not a discord.

19. Any of the chords of this species, either entire or in part, may be suspended over the root of the resolution, or over the bass of the first inversion, and from these suspensions are produced almost all the suspended discords of the first species, diminished and augmented fifths included, (as will be shown when the suspensions from which those chords are derived are mentioned,) and all these suspensions, as in the case of discords of the first species, must be on a stronger accent than their resolution. The new root or third has the letter indicating that interval, and lines are drawn from the figures indicating those intervals in the preceding chord which are suspended, to the figures indicating the intervals of the new chord on which they resolve.

20. The entire chord of the seventh of this species suspended over the root of the resolution, produces the  $\frac{9}{4}$  to the new root, the seventh to which, the third of the original chord, rises to the eighth, the ninth falls to the eighth, the fourth, the original seventh, falls to the third (Ex. 13).

Ex. 13.

Ex. 14.

21. The third omitted and the rest of the chord suspended, the chord of the  $\frac{9}{4}$  of the first species is produced (Ex. 14).

22. Both third and fifth being omitted, the chord of the  $\frac{5}{4}$  of the first species is produced (Ex. 15).

Ex. 15.

Ex. 16.

23. The suspension of an inversion of this chord of the seventh over the bass of the first inversion of the resolution, is the real foundation of the chord of the diminished fifth (Ex. 16). This is proved by the fact that the same resolution of the diminished fifth, (the seventh counting from the root,) may take place even

Ex. 17.

Example 17 shows a sequence of five chords in two staves. The top staff is in treble clef and the bottom staff is in bass clef. The chords are marked with 'A' below the bass staff. The first chord is a triad (root, third, fifth). The second chord is a triad with a suspension (root, third, fifth, seventh). The third chord is a triad with a suspension (root, third, fifth, seventh). The fourth chord is a triad with a suspension (root, third, fifth, seventh). The fifth chord is a triad (root, third, fifth). Fingerings are indicated with numbers 3, 5, 7, 8.

with the root in (Ex. 17), and also that the seventh from any note in the scale, when taken as a suspension of the third of the preceding chord, may rise to the root if the rest of the chord remains (Ex. 18).

Ex. 18.

Example 18 shows a sequence of eleven chords in two staves. The top staff is in treble clef and the bottom staff is in bass clef. The chords are marked with 'A' below the bass staff. The first chord is a triad (root, third, fifth). The second chord is a triad with a suspension (root, third, fifth, seventh). The third chord is a triad (root, third, fifth). The fourth chord is a triad with a suspension (root, third, fifth, seventh). The fifth chord is a triad (root, third, fifth). The sixth chord is a triad with a suspension (root, third, fifth, seventh). The seventh chord is a triad (root, third, fifth). The eighth chord is a triad with a suspension (root, third, fifth, seventh). The ninth chord is a triad (root, third, fifth). The tenth chord is a triad with a suspension (root, third, fifth, seventh). The eleventh chord is a triad (root, third, fifth). Fingerings are indicated with numbers 3, 5, 8.

24. If the fifth be suspended as well as the third, under the same circumstances, the diminished fifth accompanied with the seventh, is produced. This

Ex. 19.

Example 19 shows a sequence of ten chords in two staves. The top staff is in treble clef and the bottom staff is in bass clef. The chords are marked with 'A' and 'B' below the bass staff. The first chord is a triad (root, third, fifth). The second chord is a triad with a suspension (root, third, fifth, seventh). The third chord is a triad (root, third, fifth). The fourth chord is a triad with a suspension (root, third, fifth, seventh). The fifth chord is a triad (root, third, fifth). The sixth chord is a triad with a suspension (root, third, fifth, seventh). The seventh chord is a triad (root, third, fifth). The eighth chord is a triad with a suspension (root, third, fifth, seventh). The ninth chord is a triad (root, third, fifth). The tenth chord is a triad with a suspension (root, third, fifth, seventh). Fingerings are indicated with numbers 3, 5, 8.





Ex. 24.

A A A

Ex. 25.

A A A

28. The seventh may be omitted and the rest of the chord suspended (Ex. 25).

29. The chord of the augmented fifth itself, with its several accompaniments, may, either in its original position or first inversion, be suspended over the root of its resolution (Ex. 26).

Ex. 26.

A A A A A A B A A B A A

30. It must be perfectly clear, that the discords produced by the suspensions of the concordant portion of the chords of this species of discords over the resolution, are not to be reckoned suspensions of the first species, or essential discords of the second, because in either case the ninth and seventh must fall, which is not necessary when such seventh and ninth are suspensions of the third or fifth of the discords of the seventh or ninth of this species, or the third of the augmented fifth of this species.

31. It may be as well to observe that the discords of this species may resolve, and the concords prepare other discords of this species (Ex. 27).

Ex. 27.

A A A A A A A A A B A A A A

32. As in the first species of discords, any discord of this species also, may skip to either of the consonant intervals of the same chord, provided it return to the note which should form its resolution, which in this species of discords will not belong to the same chord, but to another.

Ex. 28.

Musical notation for Example 28. It consists of two staves. The bottom staff is in the bass clef and contains a sequence of chords, each marked with a '7' below it. The top staff is in the treble clef and contains a sequence of notes that correspond to the chords below. The notes in the treble staff are: G4, A4, B4, C5, B4, A4, G4. The chords in the bass staff are: G4, A4, B4, C5, B4, A4, G4.

33. Discords both of the first and second species may be used simultaneously; thus an essential seventh, or ninth, or both, may be taken at the same time as a suspended ninth, or fourth, or both.

Ex. 20.

Musical notation for Example 20. It consists of two staves. The bottom staff is in the bass clef and contains a sequence of chords, each marked with a figure below it: 7, 9, 8, 9/4, 8. The top staff is in the treble clef and contains a sequence of notes that correspond to the chords below. The notes in the treble staff are: G4, A4, B4, C5, B4, A4, G4. The chords in the bass staff are: G4, A4, B4, C5, B4, A4, G4.

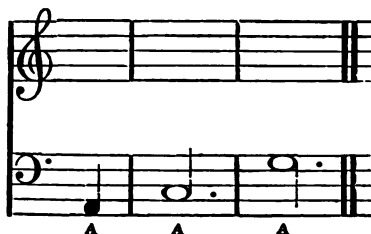
CHAPTER IX.

THE THIRD SPECIES OF DISCORDS.

INTRODUCTION.

In this chapter are contained the laws affecting transient discords, the passing notes of the diatonic school; however difficult it is, under any circumstances, to figure or letter basses for exercises of passing notes, yet probably the method adopted of separating the sections, and numbering them, will be found to facilitate such figuring, &c.

## Sect. 6, Ex. 11.



The bass should be written with the figuring or lettering for the chords where they occur, and the number of the section and example according to which the passing notes are to be taken, marked over the exercise. Thus, were an exercise like that in example 11, of this chapter, having passing notes and suspensions in the descending parts, intended, Sect. 6, Ex. 11, should be marked over with the following bass, &c.

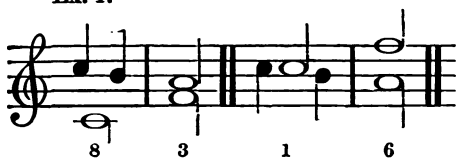
**SECTION 1.** The discords, which are here classed as the third species, are discords of transition, where one or more parts remain while the other part or parts move regularly from concord to concord through the intervening discords.

2. The discords of this species must occur on the weaker parts of the bar; but if there be more than one discord, the first discord of the series must be on the weaker parts.

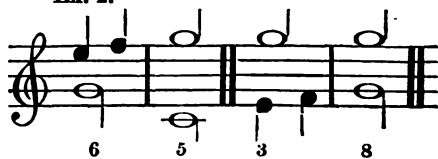
3. The fifth on the third of the major key, not being allowed as a concord, cannot be taken on the stronger part of the bar, unless it follow the fourth on the same note; in which case, in common time, it will fall on one of the stronger accents, the first discord of the series, the fourth being on the weaker.

4. The discords which may be taken in this way, are, the seventh from the eighth, and its inversion, the second from the octave, or unison (Ex. 1); the seventh from the sixth, and its inversion, the second from the third (Ex. 2);

Ex. 1.

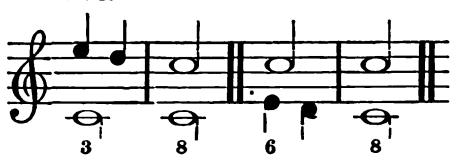


Ex. 2.



the ninth from the third, and its inversion, the seventh from the sixth (Ex. 3); the fourth from the third, the inversion of which is a concord (Ex. 4); the second

Ex. 3.



Ex. 4.



from the octave, or unison, and its inversion, the seventh from the eighth (Ex. 5); the second and fourth, and second and seventh, may be taken simultaneously (Ex. 6); as may the ninth and fourth, and ninth and seventh (Ex. 7).

Ex. 5.

Ex. 6.

Ex. 7.

The concords may be taken at the same time as any of them (Ex. 8).

Ex. 8.

5. The discord may return to the note whence it came; and this it may do, either (as in Ex. 9) while the note with which it forms the discord remains, or return when the note with which it forms the discord moves, (as in Ex. 10,) provided always that it move to a concord.

Ex. 9.

Ex. 10.

6. The descending parts may also make any allowable suspensions with each other; the only limit being, that the moving parts shall not make false progressions with each other (Ex. 11).

Ex. 11.

7. Having progressed, as last mentioned, from concord to discord, in addition to the progression of the discord already named, it is allowable to move by skip

bth  
lta  
71

(of a third only) from discord to discord, (the other part remaining,) provided that the second discord move to the concord lying between the two (Ex. 12); thus,—



If a skip be made from the fourth to the second, or from the second to the fourth, the third must follow. If from the augmented fifth to the seventh, or from the seventh to the augmented fifth, the sixth must follow. If from the seventh to the ninth, or from the ninth to the seventh, the eighth must follow.

8. The same skips may be made when the part, which, by its motion, generates the discord, is beneath that which remains (Ex. 13).



Ex. 14.



9. It is not allowable to skip from a concord to a discord; therefore this example (14), which with the B ♯ would be perfectly correct in C minor, with the B ♭ is inadmissible.

Ex. 15.



10. It is allowable to skip a third, from a discord to a concord, provided that the ascent be to the discord, and the descent to the concord; and provided, also, that the other part moves by degrees (Ex. 15).

Ex. 16.



11. If this species of discords be used in the minor, when a passage passes the sixth in ascending, the sixth is made major, and when a passage passes the seventh in descending, the seventh is made minor; but in all cases it must be understood that the major and minor sixth, or the major and minor seventh, can never be sounded together, and the laws concerning false relations must be strictly observed (Ex. 16).

12. It has been mentioned, when treating of the first and second species of discords, that a discord of either of those species may leap to either of the consonant intervals of the same chord, provided it return to the proper resolution of such discord. In accordance with the rules of this species, any passing notes may be taken between such consonant interval and the note which resolves the discord, either when such discord belongs to the first species (Ex. 17), that is,

Ex. 17.

Figured bass notation for Example 17: A B  $\frac{5}{4}$  A — 3 — 9 — 8 A A

when it resolves on the same chord, or when it belongs to the second species (Ex. 18), that is, when it resolves on the next chord.

Ex. 18.

Figured bass notation for Example 18: A  $\frac{9}{7}$  A 7 A A B A  $\frac{9}{7}$  4 3 A

CHAPTER X.

THE FOURTH SPECIES OF DISCORDS.

INTRODUCTION.

THE method of figuring or lettering basses for exercises in the fourth species of discords will be similar to that used for the third species; the bass being written with figuring for the chords where they occur, and the section and example according to which the passing notes are to be written, marked over.

SECTION 1. The discords which are here classed as the fourth species are, where two or more parts pass by contrary motion and by degrees, from concord to concord, or from a prepared discord to a concord, through all the intervening discords.

2. The discords of this species do not require preparation.
3. They may occur either on the stronger or weaker parts of the bar.
4. The parts must proceed by contrary motion from the discord, and by either contrary or oblique motion to it.
5. A discord of this species may follow any concord (Ex. 1).

Ex. 1.

Ex. 2.

6. It may also follow any prepared discord (Ex. 2).
7. Discords of this species may be used either in two parts, as in Ex. 2, or in more than two parts.

Ex. 3.

8. When obtained, these discords may either proceed by contrary motion until they reach a concord, as in Ex. 3, or they may be treated as belonging either to the first species of discords, in which case the discord must be on a stronger accent than its resolution;

Ex. 4.

9. Or as belonging to the second species, in which case the resolution may be either a weaker or stronger accent than the discord;

Ex. 5.



10. Or they may be treated as belonging to the third species of discords, here the discord passes on to the concord, while the note with which it formed the discord remains.

Ex. 6.



11. Any one of the parts of chords containing discords of this species may (ascending) be suspended over the note to which it should move.

Ex. 7.



12. There is one great peculiarity in this species of discords, which is that, provided the notes reach their proper place at last, the different parts may be either hurried, or protracted at pleasure; thus we will suppose the progression intended to be from the common chord of F to the common chord of G, in four



parts in contrary motion, two in the treble descending, and two in the bass ascending. It is allowable, as in the three following examples, to protract or hurry the movement of any of the parts.

Ex. 8.

Example 8 consists of two systems of two staves each. The first system shows a treble staff with descending chords and a bass staff with ascending chords. The second system shows a treble staff with descending chords and a bass staff with ascending chords. Both systems include a double bar line and a final chord. The letter 'A' is placed below the first and last chords of each system.

13. All the parts moving the same way must move according to the previously mentioned rules for progression of parts, and the laws affecting the other species of discords; therefore, although in the descending parts any suspensions whatever may be made, they cannot in the ascending parts, as such suspensions would require resolution downwards, whereby the motion of the part would be broken.

14. In this species of discords, the discords are supposed in all cases to be in the descending parts, whether those parts be above the ascending, as in the former

Ex. 9.

Example 9 consists of two systems of two staves each. The first system shows a treble staff with descending chords and a bass staff with ascending chords. The second system shows a treble staff with descending chords and a bass staff with ascending chords. Both systems include a double bar line and a final chord.

of the above examples, or beneath them, as in the latter. The progression in the latter example being considered as an inversion of that in the former, therefore

15. When (both parts moving) a discord is produced, it is not allowable to bring up the ascending part or parts to the concord, and then to treat it as any other concord;

Ex. 10.

16. But the ascending parts being raised to concords with the descending, the descending parts must fall to the next concord with the ascending;

Ex. 11.

17. Or both parts must proceed by contrary motion to a concord (Ex. 12); or to a discord, when, as has been before mentioned, such discord may be treated as belonging to any of the four species;

Ex. 12.

18. Or the ascending part or parts may return to the discord, when the motion of the parts will be reversed, the ascending parts becoming the descending, and the descending the ascending, because those which were the descending

Ex. 13.

can no longer descend, on account of the false progressions which would be produced between them, and those parts which, by returning to the discord, had reversed their motion.

19. Any variety of the third species of discords may be introduced into this species, that is, while some part or parts remain, others move from concord to discord, &c.; thus the following and any similar progressions may be used. In

Ex. 14.

the last example, the third species of discords is used all through the descending parts.

Ex. 15.

20. In this species of discords in the minor key no passage can extend upwards, that is ascend, beyond the sixth of the scale, nor descend beyond the seventh.

21. Occasionally the same form of minor scale has been used in this species of discords, as has been mentioned in the third species; but this is not admissible, as false relations of the most disagreeable description are made between the major and minor sixth and seventh of the ascending and descending scales.

CHAPTER XI.

OF PEDALS IN THE STRICT OR DIATONIC STYLE.

SECTION 1. A pedal is one note continued through several harmonies, such pedal not being, and not being treated as, an essential portion of the harmony.

2. In the strict style the pedal note can only occur as the bass.

3. Great care must be taken to distinguish between these "pedal points," as they are called, and the transient discords of the third species. The key note and fifth can alone be used as pedals, but any note of the scale may be held through a series of passing notes in the third species of discords.

4. Any concords, and any of the four species of discords, in fine, any harmonies being strictly in the key, may be taken on a pedal.

5. A pedal may commence on any concord, or on any prepared discord, and it may be quitted at any concord, or on any discord of which the pedal note is essential to the harmony, provided the before mentioned laws for the resolution of discords be observed.

6. All the harmonies through which a pedal is held must be complete in themselves, that is, the pedal is not to be reckoned as any part of them, excepting at the commencement and termination, nor is the pedal figured or lettered as the bass.

7. The minor scale as used in the third species of discords may also be used in the same species on a pedal, but the minor seventh cannot be harmonized separately on a pedal in the diatonic school.

8. In Ex. 1, the first bar contains discords of the first species, the second bar of the second species, the third bar of the third species, and the fourth bar of the fourth species: either the upper or under bass part may be taken as the pedal.

Ex. 1.

The musical notation for Example 1 consists of two staves. The upper staff is in treble clef and contains a sequence of notes and rests, including some sixteenth-note runs. The lower staff is in bass clef and contains a sequence of chords and rests. Below the bass staff, there are figures and letters indicating the harmony: A, M, B, M, B, D, B, D, B, A, A, B, A. The figures are 8/5, 8/5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5. The letters are A, M, B, M, B, D, B, D, B, A, A, B, A.

CHAPTER XII.  
ON MODULATION.

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SECTION 1. In this strict school, modulation can be effected by taking any concords sufficient to determine a key, but that chord which determines the new key, (that is, which has the first note foreign to the previous key,) must have its root in the bass. The + marks the bad chords.

Ex. 1.

The example consists of three systems of musical notation, each with a treble and bass staff. Fingerings are indicated by numbers 3, 4, 5, 7, 8, and 9. Chords are labeled with letters A, B, C, M, and b8. Bad chords are marked with a plus sign (+).

**System 1:** Treble staff has chords A, A, A, A, C, B, A, A, A, B, A, A, A. Bass staff has notes A, A, A, A, C, B, A, A, A, B, A, A, A. Fingerings: 9, 8, 7, 5, 4, 3.

**System 2:** Treble staff has chords A, A, A, A, A, A, C, B, A. Bass staff has notes A, A, A, A, A, A, C, B, A. Fingerings: 5, 4, 3, 9, 8, 7.

**System 3:** Treble staff has chords b8, A, A, A, M, B, A. Bass staff has notes B, B, A, A, A, M, B, A. Fingerings: 5, 4, 3. Bad chords are marked with +.

2. The key cannot be determined by any discords, whether prepared or not, with the exception of the prepared seventh on the dominant or fifth of the new key, and which seventh must be in its original position and not in an inversion, except that the sixth on the second of the new key, the second inversion of the dominant, (Chap. VIII. sect. 9,) may be used. The bad chords are marked +.

## Ex. 2.

Ex. 2. Musical score showing four systems of music. Each system consists of a treble staff and a bass staff. The music is written in a key with one sharp (F#) and a 4/5 time signature. The bass staff includes chord labels (A, B, C) and fingerings (9, 8, 7, 5, 4, 3, 2, 1). The first system shows a sequence of chords: A, A, B, B, A, A, A, B, B. The second system shows: B, A, A, A, A, A, B, B. The third system shows: A, B, A, B, M, B, B, B, A, A. The fourth system shows: A, A, B, A, C, A, A, A, C, A. The letter 'M' is placed under a chord in the third system, and a '+' sign is placed above a chord in the same system, indicating a disallowed chord.

3. In modulating from any key to the dominant of such key, it is not allowable to take the common chord on the sixth of such new key, (the disallowed chord of the mediant of the previous key,) until after the chord of the dominant of the new key has been taken. The + marks the disallowed chord.

## Ex. 3.

Ex. 3. Musical score showing a single system of music. It consists of a treble staff and a bass staff. The music is written in a key with one sharp (F#) and a 4/5 time signature. The bass staff includes chord labels (A, B) and fingerings (7, #). The sequence of chords is: A, B, B, A, A, A, A, A, A, A. The letter '#' is placed above the seventh and ninth chords, indicating disallowed chords.

A B B A A A A A A

4. In modulating from any minor key to its relative major, if the common chord on the fourth of the minor scale be taken it cannot ever be followed by the common chord of the tonic of the new key or its first inversion. The + marks the bad chord.

Ex. 4.

A A A A A A A A A

A A A A A B A A

CHAPTER XIII.  
OF DIATONIC FREE MUSIC.

INTRODUCTION.

THE unprepared discords used in the following chapter, the second inversions of concords, and the third inversions of sevenths, were first brought into use in what may be called the middle ages of music, when chromatic discords were beginning to be felt, but not understood. These chords lead by an easy transition to the chromatic discords, the treatment of which forms the Second Part of this book.

SECTION 1. It is not objectionable to come by similar motion on the fifth or octave of either tonic, dominant, or subdominant, provided the upper part moves only one degree of the scale; and in this case the leading note must always rise.

Ex. 1.

A A A A A A A A A A A A A A B A A

2. The second inversion of the common chord of the tonic in either major or minor keys, may be taken either prepared or unprepared. This chord is not figured as a suspended fourth, but as the second inversion of the common chord of C; it must be followed by the common chord on the same bass note; it must be taken on a stronger accent than the common chord; it cannot be approached by leap from any inversion of a chord, except from the first inversion of the chord of which it is the second. This chord, although a form or inversion of the tonic common chord, can yet follow the common chord on the second of the scale (Chap. IV. sect. 7).

Ex. 2.

7 Good. 7 7 +Bad.

A C A A C A A A C A C C A A



3. This gives the second inversion of the suspended discords of the tonic.

Ex. 3.

Musical notation for Example 3, showing two staves. The top staff contains a sequence of chords: A, A, C, A, B, B, C, A, A. The bottom staff contains a sequence of notes: A, A, C, A, B, B, C, A, A. Fingerings are indicated above the notes: 8-5-4-3 for the first A, 5-4-3 for the second A, and 8-5-4-3 for the C. A horizontal line is drawn above the notes A, A, C, A, B, B, C, A, A.

4. The dominant seventh may be taken unprepared; and that and all other sevenths may be taken in the third inversion, the bass being prepared.

Ex. 4.

Musical notation for Example 4, showing two systems. The first system has two staves. The top staff contains chords: A, A, A, B, A, A, D, B, B, A, D, B. The bottom staff contains notes: A, A, A, B, A, A, D, B, B, A, D, B. The number 7 is written above the first three chords. The second system has two staves. The top staff contains chords: B, A, D, B, D, B, D, B, C, A, A. The bottom staff contains notes: B, A, D, B, D, B, D, B, C, A, A. The number 7 is written above the first three chords.

## PART II.

### CHROMATIC HARMONY, OR HARMONY IN THE FREE STYLE.

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#### GENERAL INTRODUCTION.

THE laws affecting diatonic harmony, however correct and sufficient while such diatonic harmony alone is used, are by no means so when applied to chromatic; the endeavour to force the latter under the same laws which have been found applicable to the former, appears to me the reason why the laws of harmony have been so vague and indeterminate, and so utterly opposed to practice. Diatonic discords require preparation because they are unnatural; chromatic do not, because they may be said to be already prepared by nature. This is practically seen to be true by the comparatively early use which was made of the dominant discords without preparation; these discords in either major or minor, although diatonic, yet being fundamental chords, do not require preparation; after these came the supertonic discords; lastly, those of the tonic, of which the examples, although as yet comparatively few in number, are to be found in the best modern authors.

I shall not here take the trouble to elaborate the subject of the ratios of vibrations, length of string, order of harmonics, &c., as many persons have already taken that trouble; and in the present state of musical mathematics, without a separate treatise on their application, they would be of little practical utility: the only points where they are of use they are noticed, in a note to Chap. IX. sect. 21; also in Chap. X. (on the augmented sixths).

The harmonics from any given note, (without taking the order in which they arise, but their practical use,) are, major third, perfect fifth, minor seventh, minor or major ninth, eleventh, and minor or major thirteenth.

The reason why the tonic, dominant, and supertonic are chosen for roots is, because the harmonics in nature rise in the same manner; first the harmonics of any given note, then those of its fifth or dominant, then those of the fifth of that dominant, being the second or supertonic of the original note. The reason why the harmonics of the next fifth are not used is, because that note itself is not a note of the diatonic scale, being a little too sharp, (as the fifth of the supertonic,) and can only be used as a part of a chromatic chord.

The eleventh is only used on the dominant, because its resolution if taken on either tonic or supertonic, would be out of the key.

It will most probably be objected to the more extreme chords, as the eleventh with the third, or the thirteenth with the fifth, that they are very harsh: when taken unconnected in the examples, and without any regard to

a good position, this may be very true, still it is no reason against their use, as few chords are less pleasant than the chord of the minor ninth, with the root, unconnected with any progression; yet no one doubts its existence or its beauty who has heard the works of the great masters, and no chord can be more extreme than the inversion of the chord of  $\flat^{\flat}13$ <sub>9</sub><sub>3</sub>, used in the G minor symphony of Mozart, mentioned in Chap. III. of this Part, sect. 6, yet in its place it may very well be borne.

It appears to me that the great thing to be avoided, in a treatise on *practical* as well as theoretical harmony is, making the mathematical part of music of undue importance: were the discords always taken as occurring in nature, in the first place, music would be a succession of fifths and eighths; and in the next, the chords could only be taken in one *position*, and they could never be inverted; even the simple first inversion of a common chord could not be used. The great use of mathematics as applied to music, in the present state of our knowledge on the subject, is, to determine whence any chord springs, and to settle any doubtful points of notation in harmony or passage.

## CHAPTER I.

### ON CHROMATIC OR FUNDAMENTAL HARMONY, THE INTERVALS USED THEREIN, AND CHROMATIC SCALES.

#### INTRODUCTION.

THE chromatic scale is written in the manner in which it appears in this chapter for the following reasons.

Every note, whether diatonic or chromatic, must exist before it can be used.

All the notes spring from the key note which is assumed; all the rest are generated.

One note must be assumed as a groundwork; otherwise, on the principle "*è nihilo nihil fit*," there would be no music.

In the diatonic scale of C, no one would think of writing D $\times$ , or A $\flat\flat$ , because those notes are not parts of any chord in the key, the notes being E $\natural$ , and G $\natural$ , the third and fifth of the tonic.

If then in diatonic music no notes are used as parts of the scale but such as exist as portions of some harmony in the key, why in the chromatic scale should notes be used which do not exist as a portion of any harmony in the key?

The three notes which are taken as the foundation of the chromatic scale are, the tonic; the dominant its first harmonic; and the supertonic the first harmonic of the dominant, and the first harmonic which is common to both, it being the fifth of the dominant, and the major ninth of the tonic.

The reasons why these three notes, and these three only, are assigned as roots, are the following:

- 1st. All notes which are used in the scale of any given key, should also be capable of being harmonized in the key.
- 2nd. No two notes of the same name, but of a different pitch, can be sounded together, unless one of them be a passing note.
- 3rd. When the *enharmonic diesis*\* (as it is called) takes place, it always implies a change of key.
- 4th. Notes of the diatonic scale may be formed from diatonic chords; the chromatic notes are formed from chromatic chords.
- 5th. All harmonies being strictly in the key can be taken on either tonic or dominant pedal, or on the double pedal of both combined; therefore

If any harmonic, or portion of the chromatic chords, of any note taken as a root of chromatic chords in the key, contradict a diatonic note of either major or minor scale, and form with it the enharmonic diesis, a change of key takes place, and such note therefore cannot be a root in the key; also,

If any harmonic of a root of chromatic chords, be of the same name as, but of a different pitch to, either tonic or dominant, such root cannot be a root in the key, on account of the false relation.

To prove that no note of the diatonic scale, excepting the first, second, and fifth, as before mentioned, can be taken as a root of chromatic chords, let the double pedal of tonic and dominant be taken, and the different notes of the diatonic scale major and minor, with their several harmonics, up to the minor ninth, be taken above them; there is no occasion to carry the harmonics beyond the minor ninth, that being sufficient for the purpose.

Were the minor third (E ♭) taken as a root, its minor ninth (F ♭) would contradict or form the enharmonic diesis with the major third (E ♮). Were the major third used, its major third (G ♯) would make false relation with the dominant pedal (G), as would G ♭, the minor ninth of the fourth (F), and the minor seventh of the minor sixth (A ♭), were either of those notes used. If the major sixth (A ♮) were used, its major third (C ♯) would make false relation with the tonic pedal (C). Were the major seventh (B) used, its major third (D ♯) would contradict the minor third of the scale (E ♭).

Even the diatonic scales, major and minor, and the use of the common chords in major and minor keys, are in reality dependent on the harmonies of the above three notes and the laws affecting them. The notes of the diatonic major scale

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\* The meaning of this word (*diesis*) is division. I have thought it better to use the Greek word, as being more generally understood by musical mathematicians.

are produced in the following manner: C (tonic) produces G its fifth, and E its major third: G produces all the rest, as D its fifth, B♯ its third, F its seventh, and A♯ its major ninth. The minor scale in a similar manner: the E♭, the minor third, is an arbitrary, not a natural third of C, and as part of the common chord of C cannot be used in the major key; G produces A♭ as its minor ninth; this note is a natural harmonic in the key, and it is dependent on this, that the subdominant chord minor can be used in the major key, which the tonic minor chord cannot.

The common chords, as allowed in the First Part of this book, may be thus derived: tonic common chord, major or minor; minor common chord on the major second of the scale, part of the chord of the minor seventh and major ninth on the dominant; common chord major or minor on the subdominant, part of the chord of the eleventh accompanied with the seventh, and either major or minor ninth; the major common chord on the minor sixth of the scale, part of the chord of the minor thirteenth, accompanied with the eleventh and minor ninth; the minor common chord on the major sixth of the scale, part of the chord of the major thirteenth, accompanied with the eleventh and major ninth. The common chord on the major third of the scale is not allowed, because it appears to belong to another key, this seeming to depend on its not being an allowable form of any chromatic harmony in the key, it cannot have the tonic for its root, the major seventh of the tonic forming part of it, and it not being part of the chord of the augmented sixth: it cannot be part of a chromatic chord having the dominant for its root, because it could only be part of the chord of the thirteenth, which must have either fifth, seventh, or ninth with it; it cannot be part of a chord having the supertonic for its root, as the supertonic cannot have an eleventh.

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SECTION 1. *Chromatic* or *fundamental harmony* differs from *diatonic*, inasmuch as the chords do not require preparation, and their resolution depends on the quality of the intervals and not on the name thereof.



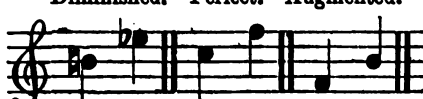
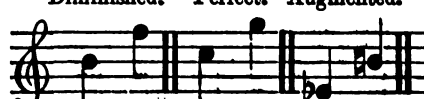




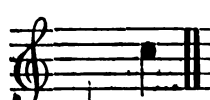

2. Where the note forming the fundamental discord is a diatonic note of the major scale if the passage be in the major key, or of the minor scale if the passage be in the minor key, such discord may be prepared, or resolved, or both, as in diatonic harmony.

3. This class of harmony is called *chromatic* in contradistinction from *diatonic*, because it admits of notes foreign to the diatonic scales without the key being changed; and *fundamental*, because every harmony springs from some one of three certain roots or fundamentals, and can only be taken on certain notes of the key.

4. By root or fundamental, is meant that note being a diatonic note of the scale, which will amongst its harmonics first produce the notes of which any chord is composed.

5. In addition to the intervals which have been used in diatonic harmony, there are several augmented and diminished intervals which occur in chromatic harmony, and in chromatic harmony only, and which therefore have not hitherto been mentioned. The following is a complete table of all the intervals which can be used in music.

Ex. 1.

<p>SECONDS.</p> <p>Minor. Major. Augmented.</p> 			<p>THIRDS.</p> <p>* Diminished. Minor. Major.</p> 		
<p>FOURTHS.</p> <p>Diminished. Perfect. Augmented.</p> 			<p>FIFTHS.</p> <p>Diminished. Perfect. Augmented.</p> 		
<p>SIXTHS.</p> <p>Minor. Major. Augmented.</p> 			<p>SEVENTHS.</p> <p>Diminished. Minor. Major.</p> 		
<p>EIGHTH.</p> <p>Perfect.</p> 	<p>NINTHS.</p> <p>Minor. Major.</p> 		<p>ELEVENTH.</p> <p>Perfect.</p> 		
<p>THIRTEENTHS.</p> <p>Minor. Major.</p> 					

6. These intervals are all written in the key of C, and are formed from the following chromatic scale.

Ex. 2.



\* This interval should never be used in harmony, but only in melody.

7. It will be seen, that the fourth is the only note of the diatonic major scale which has the semitone immediately above it of its own name, that it is the only augmented interval reckoning upward from the key note, and that the key note and fifth are not inflected.

8. In this scale all the imperfect intervals (from the key note), the second, third, sixth, and seventh, are taken both major and minor; the fourth perfect and augmented; the fifth and eighth perfect only.

9. This notation includes both major and minor keys, and in forming the chromatic scale of any key, the notes must stand at the same intervals from the key note, be that note what it may; thus the following chromatic scales of F # and E b:

Ex. 3.



Ex. 4.




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## CHAPTER II.

### OF THE PROGRESSION OF PARTS IN CHROMATIC HARMONY.

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#### INTRODUCTION.

THE principal difference between the progression of parts in chromatic and in diatonic harmony is, that in the former it is allowed to use consecutive fifths, and to come on an octave by similar motion, between certain chords mentioned in the following chapter.

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SECTION 1. As in the diatonic class, no two parts are allowed to move in unison.

2. No two parts are allowed to move to an unison by similar motion.

3. No two parts are allowed to move in octaves by similar motion.

4. The extreme parts may not proceed by similar motion to an octave, excepting in passing from concord to concord, where the chords are either the dominant and tonic, or tonic and subdominant, the octave being either the root or fifth of the chord, and the upper part moving only a second.

Ex. 1.

A A A C A A A A

In passing from discord to concord, the discord must be derived from the dominant, supertonic, or tonic root, and the concord must be either tonic, dominant, or subdominant, common chord, either in their original position or second inversion; in the case of the concord being in its original position, the upper part moving only a second (Ex. 2); in the case of the common chord being in its

Ex. 2.

A A A A C A

Ex. 3.

B C A B C D B

second inversion, the upper part may rise a fourth, the bass, in this case, moving only a second (Ex. 3).

In passing from concord to discord, the concord must be derived from tonic, dominant, or subdominant root, and the discord from dominant, supertonic, or tonic, the upper part moving by skip, and the octave being the root of the chord.

Ex. 4.

A A A A A A C A A A A A C A A



In passing from discord to discord, each discord must be derived from either dominant, supertonic, or tonic root, the octave being the root of the chord.

Ex. 5.

A musical example consisting of two staves. The upper staff contains a sequence of chords, and the lower staff contains a corresponding bass line. Below the staves, the root notes of the chords are indicated by letters: A, A, A, A, A, A, C, A, A, A, C, A, A.

5. Octaves by contrary motion in the extreme parts, are allowable in the same cases as those in which it is allowable to come on an octave from another interval in the extreme parts by similar motion, with this sole difference, that the progression of the upper part is in no case limited to a second.

Ex. 6.

A musical example consisting of two staves. The upper staff contains a sequence of chords, and the lower staff contains a corresponding bass line. Below the staves, the root notes of the chords are indicated by letters: A, A, A, A, A, C, A, A, A, A, A, C, A.

Ex. 7.

A musical example consisting of two staves. The upper staff contains a sequence of chords, and the lower staff contains a corresponding bass line. Below the staves, the root notes of the chords are indicated by letters: B, B, A, B, B, B.

The examples (Ex. 7) are bad, because the chords used are not any of those between which octaves, by contrary motion, are allowed to be taken.

6. Fifths by similar motion are generally to be avoided, but they may (even

Ex. 8. BARTHOVEN.

WEBER.

A musical example consisting of two staves. The upper staff contains a sequence of chords, and the lower staff contains a corresponding bass line. This example illustrates fifths by similar motion.

in the extreme parts) be used between tonic and dominant, as in the two last chords of each section (Ex. 8); and in the inner parts between tonic and supertonic, provided the latter fifth form part of the chord of the eleventh (Ex. 9), which will be explained in Chap. VIII.

Ex. 9.

7. In the extreme parts it is only allowable to come on a fifth by similar motion from another interval, when such fifth is the fifth of the major common chord of the tonic or dominant, or the minor common chord of the tonic, or one of the chromatic chords on the dominant, supertonic, or tonic, hereafter men-

Ex. 10.

tioned; and provided that the chord preceding be one of those chords, or the subdominant chord major or minor; that the upper part move only a second, and that the other rules for the progression of parts be strictly observed.

8. The following examples are bad; the first, because the chord where the fifth is taken is not one of the chords mentioned above; the second, because neither of the chords belong to those mentioned above; the third, for the same reason, in addition to which the upper part moves more than a second (Ex. 11).

Ex. 11.

Ex. 12.

9. Fifths by contrary motion are allowed if either of the chords, or both, be one of the fundamental sevenths (Ex. 12), which will be treated of in Chap. VI.

10. No part may proceed in fourths with the bass, excepting, descending, when the first fourth is formed between the fifth and root of a common chord, and the second fourth between the seventh and third (Ex. 13).

Ex. 13.

A C D B

Ex. 14.

11. No two seconds or sevenths are allowed between the same parts (Ex. 14).

12. No two notes next each other in alphabetical order, can ever go to the unison or octave by similar or oblique motion.

Ex. 15.

13. It is not allowable to proceed by similar motion to the unison or octave of any note which resolves a discord (Ex. 16).

Ex. 16.

A A

Ex. 17.

Bad. Good.

14. It is not allowable to take a discord and the note on which it resolves at the same time, excepting the root and ninth, the root being below the ninth (Ex. 17).

15. No two parts are allowed to move to a second by similar motion excepting (either ascending or descending), in the case of the fundamental sevenths

Ex. 18.

Musical notation for Example 18. The top staff shows a treble clef with a sequence of notes and chords. The bottom staff shows a bass clef with notes and chords. Intervallic relationships are indicated by numbers: 8-7, 7, b7, 7, 4 3. Chord letters are written below the bass staff: A B A A B B B C A B B C A A.

(Ex. 18); or of the eleventh (Ex. 19), which will be explained in Chap. VIII.: in either of these cases, one part must move a second only.

Musical notation for Example 19. The top staff shows a treble clef with notes and chords. The bottom staff shows a bass clef with notes and chords. Intervallic relationships are indicated by numbers: 11, 9, 5. Chord letters are written below the bass staff: A D C A A.

16. In the extreme parts it is not allowable to come by similar motion on two notes next to each other in alphabetical order, whatever be their distance from each other, unless such notes, reckoning in the order of their number from the roots of the chords from which they are derived, form the interval of the seventh; as the root and seventh in the first bar; third and ninth in the second; fifth and

Ex. 20.

Musical notation for Example 20. The top staff shows a treble clef with notes and chords. The bottom staff shows a bass clef with notes and chords. Intervallic relationships are indicated by numbers: 7, 9, 11, 13-5, 9. Chord letters are written below the bass staff: A A A B B A A C C A B D B A A A.

eleventh in the third; and seventh and thirteenth in the fourth; or unless such notes be the root and ninth, the root being in the bass, as in the fifth bar, provided one of the parts move only a second chromatic or diatonic, and that both parts ascend.

17. In this school it is allowable to change the position of chords, provided the characteristic notes of those chords remain; but in the case of discords, if the discord be taken originally in the bass, it cannot ascend to a note of a lower

numbered interval than itself, as from the seventh to the root, third, or fifth; or from ninth to third, as in the first four bars; although it may descend to any of

Ex. 21.

D A D B D C E B D C D B D A E D E B

Ex. 22.

B A B A

them as in the last five; and in these cases, all the above rules for the progression of parts may be broken, with the exception of those against direct octaves and coming on an unison by similar motion, provided that in coming on a fifth by similar motion in the extreme parts, one part do not move to the nearest interval of the chord to itself, while the other moves to one at a greater distance from itself (Ex. 22).

18. It is not allowable to move from an octave, to a ninth, second, or seventh, by similar motion and by step of a second in either or both parts (Ex. 23).

Ex. 23.

Ex. 24.

19. In strict writing it is not allowed to move an augmented interval, and if any part move a diminished interval it must return; this is also the case in free writing, with the single exception, that in a diatonic progression (that is, in the minor key,) it is allowable to move from the minor sixth to the major seventh of the scale, and *vice versa*, provided that such sixth or seventh when occurring in the second chord be not doubled (Ex. 24).

CHAPTER III.

ON FALSE RELATION AS REGARDS FUNDAMENTAL HARMONY.

INTRODUCTION.

FALSE relation is here for the first time divided into, false relation between the first and second chords, and false relation between the first and third chords: in the former will be seen the manner in which chromatic chords derived from the three before-mentioned roots of tonic, dominant, and supertonic, and in the latter, two chords related by having certain harmonies in common, are excepted from the general laws relating to false relation; at the same time it must be observed, however, that this is in strict accordance with the practice of the best authors.

SECTION 1. False relation is considered the same as in the First Part of this book, so long as diatonic harmonies alone are used.

2. In diatonic harmony it is false relation when two notes of the same name at a different pitch occur in two chords in different parts with one chord intervening, from the obscurity of key caused thereby because no chromatic note can be used in diatonic harmony without the key being changed; but as in chromatic harmony all the notes of the chromatic scale can be used, the key is not necessarily changed by using chromatic notes: therefore it is *not* false relation

Ex. 1.

The musical notation for Example 1 consists of two systems, each with a treble and bass clef staff. The notes are represented by letters A, B, C, D, and their chromatic alterations. Figured bass notation is provided below the bass staff of each system.

**System 1:**

- Treble clef notes: A, B, C, B, D, B, B, B, D, A, A, C, C
- Bass clef notes: A, B, C, B, D, B, B, B, D, A, A, C, C
- Figured bass:  $b_9$ ,  $b_5$ ,  $b_8$ ,  $\#$ ,  $b_7$ ,  $7$ ,  $b_9$ ,  $\#$

**System 2:**

- Treble clef notes: C, D, B, B, A, B, D, B, C, B, A, A
- Bass clef notes: C, D, B, B, A, B, D, B, C, B, A, A
- Figured bass:  $\#$ ,  $b_9$ ,  $\#$ ,  $7$

A B C B D B B B D A A C C  
 C D B B A B D B C E A A

when in the same key two notes of the same name but of a different pitch occur in two chords in different parts with one chord intervening, if the chromatic note belong essentially to any one of the fundamental chromatic harmonies, (mentioned in this Part,) and provided the chromatic note in the first of the three chords be not a thirteenth.

3. Neither is it to be considered false relation, when between the first and third chords two notes of the same name, but of a different pitch, occur in dif-

Ex. 2.

A A A A A A A D B A A A  
 A A B B A E A A B A A B A A

ferent parts; if one of them be the fifth of the major key, and the other the seventh of the relative minor, or if one of them be the tonic of the major, and the other the seventh of the minor key of the major second of the scale, no false progressions being made by any of the parts.

Ex. 3.

Chord sequence for Ex. 3: A, A, A, B, A, C, B, C, C, A, A.

4. In diatonic harmony two notes of the same name, but of a different pitch, cannot ever occur in different parts in two consecutive chords, because there is no connexion between those chords, or, in other words, they are falsely related; but

Ex. 4.

Chord sequence for Ex. 4: A, B, A, A, B, A, A, B, A, A, F, C, A.

in chromatic harmony, it is not false relation if the third of the first chord be the root of the second; the alteration of pitch is between the perfect fifth of the first chord, and the major third of the second.



5. Neither is it false relation when in two consecutive chords, two notes of the same name, but of a different pitch, occur in different parts; if the third of the first chord be the perfect fifth of the second, the alteration of pitch is between the root of the first chord and the major third of the second.

Ex. 5.

Example 5 consists of two systems of musical notation, each with a treble and bass staff. The first system shows a sequence of chords: B, B, A, B, B, A, B, B, A, B, B, A. The second system shows a sequence of chords: A, F, C, B, B, B, A, A, A, D, A, A, A, C, C. Various chord symbols like  $b_9$ ,  $b_7$ , and  $13$  are present above the notes.

6. In chromatic harmony as in diatonic, it is a rule that no two notes of the same name but of a different pitch, can be taken simultaneously in the same chord (Ex. 6); whenever this appears agreeably it will be found a specimen of false notation, as in the following progression from the G minor symphony of Mozart

Ex. 6.

Example 6 shows a single chord in treble clef with a double sharp on the third degree, illustrating a false relation.

Ex. 7.

Example 7 shows a progression from G minor to A major. The bass line moves from G to A, and the treble line moves from B to C#.

Ex. 8.

Example 8 shows a progression from G minor to A major. The bass line moves from G to A, and the treble line moves from B to A. The notation is altered to show the progression from the minor ninth and thirteenth on G to the seventh on D.

(Ex. 7), which cannot, as it stands, by any means be rendered into sense; but the notation being altered by the G # being written A  $b$  (Ex. 8), it shows itself to be the progression from the minor ninth and thirteenth on G to the seventh on D.

7. Beneath is a specimen of the allowable occurrence of two notes of the same name, but of a different pitch, in two different parts, in two consecutive chords in the same key, in rather extreme positions.

Ex. 9.

The musical score for Example 9 consists of two systems, each with a treble and bass staff. The first system shows a sequence of chords: A, A, A, A, B, D, B, C, A, A. The second system shows: A, B, B, D, B, B, B, C, A, A. Chord symbols include accidentals such as  $b5$ ,  $b7$ ,  $b9$ , and  $b13$ , and some include the number 5. The music is written in 3/4 time.

CHAPTER IV.

OF COMMON CHORDS AND THEIR INVERSIONS.

SECTION 1. The same common chords are allowed, and the rules affecting the progression of such common chords are precisely the same in the chromatic school as in the diatonic, and the same licences are allowed in sequence.

2. The chord of the tonic is major or minor according to the key.

3. The chord of the subdominant *must* be *minor* in the minor key; it *may* be either *major* or *minor* in the *major* key.

4. The common chord of the dominant *must* be in all cases major.

5. A chromatic common chord or common chord major, may be taken on the supertonic, which chord *must* be followed by the chord of the tonic or some

inversion thereof, or the seventh on the dominant or some inversion thereof. This chord, as may be seen in the example, may be taken with the same intervals

Ex. 1.

A b # 7 b # C A

whether the key be major or minor; and (with one exception) the only instance in which the major sixth can be harmonized in the minor scale is, when it occurs as the fifth of this chord or of some other derived from the same root; the exception is more of a passing than a harmony note; it is when in a passage of semitones the major sixth of the scale as major third of the subdominant of the minor key, occurs in the passage from the minor seventh of the scale to the minor sixth.

6. A major chromatic common chord may be taken on the minor second of the scale. The first inversion of this chord, is the chord usually known by the name of the Neapolitan sixth.

Ex. 2.

b5 7 b8 b5 7

A A A C B A A A B A

Ex. 3.

b5

A A A

7. A major chromatic common chord may be also taken on the minor sixth of the scale, and these two last chromatic common chords are no otherwise limited in their progression than are other concords (Ex. 3).

8. The diatonic common chords, and also the chromatic common chords above mentioned, may be taken in their first inversions, as may also the common chord on the third of the major scale.

9. With regard to doubling the major third of the diatonic common chords, the rules of the diatonic school are to be strictly observed here also; more particularly when the third is in the bass: with regard to the major third of the chromatic common chords, the major third of the supertonic chord cannot ever be doubled; the major thirds of the chromatic common chords on the minor second and minor sixth of the scale, are better doubled than not, even when in their first inversion; this is because the first harmonic of the third of the former of these chords, is the key note, and of the latter, the dominant.

CHAPTER V.

OF THE SECOND INVERSIONS OF THE COMMON CHORDS MAJOR OR MINOR ON THE TONIC AND SUBDOMINANT, AND OF THE COMMON CHORD MAJOR ON THE DOMINANT.

SECTION 1. The fourth, the root of these chords, does not require preparation.

Ex. 1.

Ex. 1. Musical notation showing two staves. The upper staff is in treble clef and the lower staff is in bass clef. The music consists of a sequence of chords and notes. The chords are labeled with letters A, C, A, A, C, B, A, C, A below the bass staff. The notes in the upper staff are mostly quarter notes, while the lower staff has some half notes and quarter notes.

2. The bass of this chord cannot be taken by skip, excepting from roots, as in the first three sections of Ex. 2, or from the third of the chord of which it is an inversion, as in the next three, or (when it is the second inversion of the tonic common chord) from the fifth of the chord of the eleventh, as in the last.

Ex. 2.

Ex. 2. Musical notation showing two staves. The upper staff is in treble clef and the lower staff is in bass clef. The music consists of a sequence of chords and notes. The chords are labeled with letters A, C, A, A, C, A, A, C, A, B, G, A below the bass staff. The notes in the upper staff are mostly quarter notes, while the lower staff has some half notes and quarter notes.

B C A B C A A A C C A

3. These chords must either be followed by some other chord either diatonic or chromatic on the same note, or by some chord either diatonic or chromatic on the next note above or below either diatonic or chromatic.

Ex. 3.

C A C A C A C B A C D B

C B C A C B C E C B

4. The bass of this inversion may go either to the root or third of the same chord, provided it return to the same bass or to some other note to which such

Ex. 4.

C B A C A C A B A C A B C A A

as should progress; in no other case can the bass of this inversion skip, unless be followed by the root of the same chord, such root bearing a discord.

5. The second inversions of the common chords of the tonic and subdominant, either major or minor keys, may be followed by the common chord on the same bass, which the second inversion of the dominant common chord cannot.

Ex. 5.

C A C A C A C A

6. If the second inversion of the common chord on either of these three notes followed by any other chord on the same note, it (such second inversion) must on a stronger accent than the following chord, which is immaterial if it be owed by any chord on the next note above or below.

Ex. 6.

A A C A A B C A A

C A B C A A C B D B

Ex. 7.

C A

7. The fourth in these chords is not to be considered as a discord, for even when followed by the common chord on the same note the fourth is not regarded to fall, but may go to any note of the next chord.

8. The second inversion of the minor common chord of the subdominant, may be followed by the common chord major on the same bass note; yet the second inversion of the major common chord of the subdominant, cannot be followed by the common chord minor on the same bass note.

Ex. 8.

9. The second inversion of one common chord can never be followed by the second inversion of another, excepting when the second inversion of the dominant is followed by the second inversion of the subdominant, and this provided no part move in fourths with the bass (Ex. 8); this progression cannot be reversed.

10. The common chords on the minor and major seconds, and minor and major sixths of the scale, cannot be used in the second inversion, as the key would be thereby changed, and they would no longer be chords of the second or sixth of the scale.

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## CHAPTER VI.

### OF THE FUNDAMENTAL SEVENTHS ON THE DOMINANT, SUPERTONIC, AND TONIC.

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#### INTRODUCTION.

THE following chords of the seventh, both in their form and their resolution, are perfectly well known; the novelties in this chapter are, that the chords which have been generally considered to make modulation, namely, those on the tonic and supertonic, are here treated as strictly belonging to the key, and the proofs of their being so are given; and the peculiar resolutions of the sevenths and thirds, the sevenths ascending and the thirds descending, which, although in accordance with the practice of the best modern authors, are now for the first time reduced to rule.

Ex. 1.

SECTION 1. The chord of the fundamental seventh consists of a major third, perfect fifth, and minor seventh (Ex. 1).

2. These chords consist of precisely the same intervals whether the key be major or minor; thus, if in C minor the fundamental seventh on the tonic be used, the third being major the E will be ♯; or if also in the minor the fundamental seventh on the supertonic be used, the fifth being perfect the A will be ♮.

Ex. 2.

A A A A A A A A C A A

3. Each of these three chords is susceptible of three inversions; the first inversion has the third in the bass, it is lettered B with the figure 7 (Ex. 3).

Ex. 3.

B B B

Ex. 4.

C C C

4. The second inversion has the fifth in the bass; it is lettered C with the necessary figure or figures (Ex. 4).

5. In this inversion the root is frequently omitted, in which case this chord must be lettered C with the figures  $\frac{7}{3}$ , and this is the only inversion of the seventh in which the root may be omitted (Ex. 5); when this form of the chord occurs as the second inversion of the dominant harmony, it produces the chord of the sixth on the second of the scale (Part I. Chap. VIII. sect. 9).

Ex. 5.

C C C

Ex. 6.

D D D

6. The third inversion has the seventh in the bass; it is lettered D (Ex. 6).



7. The root may be omitted only in the second inversion.

8. The fifth may be omitted at discretion, either in the original position or any of its inversions; there is no occasion to indicate the absence of the fifth by any particular figuring (Ex. 7).

Ex. 7.

7   #   b7

A   D   B

Ex. 8.

7

A

Ex. 9.

A

9. The third *should* not be omitted (Ex. 8).

10. The seventh of course *cannot* be omitted; were it omitted, the chord would be no longer a chord of the seventh (Ex. 9).

11. The third can never be doubled.

Ex. 10.

7   7

C   A   B   C

12. The seventh may be doubled when in the second inversion the root is omitted, or when the seventh remains in either one or both of the parts (Ex. 10).

13. In these chords of the seventh and their inversions, the third and seventh which form with each other either a diminished fifth or an augmented fourth are the only notes the progression of which is limited (excepting the fifth when occurring as the bass); and the same limitations exist whether either of these intervals occur in an upper part, or as the bass.

14. The third in these chords must either rise a second, minor or major, or remain, or fall a semitone to a note of its own name.

Ex. 11.

b7   7

B   C   A

15. The third may fall a major second to the fifth of the next chord, (such chord bearing a seventh,) provided the seventh rise a semitone to a note of its own name to the third (Ex. 11).

16. The seventh may fall a minor or major second, or remain, or rise a semitone to a note of its own name, or rise a minor second (Ex. 12).

Ex. 12.

Musical notation for Example 12. It consists of two staves: a treble clef staff and a bass clef staff. The treble staff shows the upper parts of the chords, and the bass staff shows the lower parts. The chords are labeled with their inversions: b7, b7, b, b7, b13, 7, 7. The bass notes are labeled B, A, B, A, A, A, A, A.

17. Whenever the second inversion of a chord containing a seventh is followed by the first inversion of another chord, the seventh is allowed to rise a major second, and in this case the progression from a diminished to a perfect fifth in the upper parts is not objectionable (Ex. 13).

Ex. 13.

Musical notation for Example 13. It consists of two staves: a treble clef staff and a bass clef staff. The treble staff shows the upper parts of the chords, and the bass staff shows the lower parts. The chords are labeled with their inversions: 7, 7, 7. The bass notes are labeled C, B, C, B.

Ex. 14.

Musical notation for Example 14. It consists of two staves: a treble clef staff and a bass clef staff. The treble staff shows the upper parts of the chords, and the bass staff shows the lower parts. The chords are labeled with their inversions: 7, 7. The bass notes are labeled A, B, D, B.

18. The seventh is also allowed to rise a major second to the fifth of the next chord, provided the third fall a semitone to a note of its own name to the seventh of the next chord, the second chord having both a third and seventh coexisting (Ex. 14).

19. The root is unlimited in its progression.

20. The fifth is free in all cases excepting when occurring in the bass, then it must move a second either diatonic or chromatic, or remain, unless it skip to the root of the same chord (Ex. 15).

Ex. 15.

Musical notation for Example 15. It consists of two staves: a treble clef staff and a bass clef staff. The treble staff shows the upper parts of the chords, and the bass staff shows the lower parts. The chords are labeled with their inversions: 7, 7#, 8/7, b9. The bass notes are labeled C, E, C, A, A.

21. The natural resolution of the chord of the seventh on the dominant, is to

any form of the common chord major or minor of the tonic, or to an inversion of the common chords major or minor of the subdominant.

Ex. 16.

A A A A A C A A C A

22. The natural resolution of the chord of the seventh on the supertonic, is to an inversion of the common chord of the tonic major or minor\*, or to a dominant discord.

Ex. 17.

A A C A A A A C A A A A A

23. The natural resolution of the seventh on the tonic is to a dominant or supertonic discord (Ex. 19).

\* This is not a modulation into the dominant as is frequently asserted the second inversion of the common chord of the tonic being merely a suspension over the common chord on the same bass, because, in the first place, the  $\frac{5}{3}$  on the same bass need not follow the second inversion of the tonic; and, in the next place, this may be done on the tonic pedal (C); were the key changed into the dominant (G), the pedal (C) of the example would be the subdominant of the new key, which subdominant is not allowed as a pedal; the key is therefore not changed into the dominant.

Ex. 18.

A A C B

Ex. 19.

Ex. 19. Musical notation showing a sequence of chords in the bass clef: A, A, A, A, B, C. The treble clef contains a melodic line with various accidentals and rests.

24. The seventh on the tonic may also be followed by the common chord of the subdominant, either major or minor\*.

Ex. 20.

Ex. 20. Musical notation showing a sequence of chords in the bass clef: B, A, A, A, A, A, B, A, A, A, A, A. The treble clef contains a melodic line with various accidentals and rests.

\* This is not a modulation into the subdominant, because this can be done on the dominant pedal (G); were the key changed into the subdominant (F), the pedal (G) of the example would be the supertonic of the new key, which supertonic is not allowed as a pedal; the key is therefore not changed into the subdominant.

Ex. 21.

Ex. 21. Musical notation showing a sequence of chords in the bass clef: A, A, A, A, A, A, A, A, A, A, A, A. The treble clef contains a melodic line with various accidentals and rests.

## CHAPTER VII.

OF THE FUNDAMENTAL MINOR AND MAJOR NINTHS ON THE DOMINANT,  
SUPERTONIC, AND TONIC.

## INTRODUCTION.

THE following chords of the ninth are very well known in their inversions; they are less familiar in their original form; it has been therefore thought desirable in the following chapter, to take them occasionally with their roots, to show the real nature of the chords; still, be it observed, in this form they should be used but sparingly. Whenever both ninth and eighth are used together, both must be indicated either by the figures or letters, as the case may be.

Ex. 1.

The musical notation for Ex. 1 consists of two staves, treble and bass clef. Three chords are shown, each with a root note 'A' indicated below the bass staff. The first chord is a minor ninth chord with figures  $b9$  and  $7$  below it. The second chord is a minor ninth chord with figures  $b9$  and  $\#$  below it. The third chord is a minor ninth chord with figures  $b9$  and  $b7$  below it.

SECTION 1. The chord of the minor ninth, is a minor ninth from the root taken above, or in addition to the three last mentioned chords of the seventh (Ex. 1).

2. These chords of the minor ninth may be used indiscriminately in either the minor or major key.

Ex. 2.

The musical notation for Ex. 2 consists of two staves, treble and bass clef. Three chords are shown, each with a root note 'A' indicated below the bass staff. The first chord is a fundamental ninth chord with figures  $b9$ ,  $7$ , and  $8$  below it. The second chord is a fundamental ninth chord with figures  $b9$ ,  $\#$ , and  $8$  below it. The third chord is a fundamental ninth chord with figures  $b9$ ,  $b7$ , and  $8$  below it.

3. These chords of the fundamental ninth differ from the chords of the fundamental seventh, insomuch as one of the intervals, the ninth, *may* be resolved, while the rest of the chord continues (Ex. 2).

4. Like the chords of the seventh they may also be resolved on chords derived from another root (Ex. 3).

5. Either the third or seventh must be in the chord; the fifth may be omitted at discretion if the root or third be in.



13. Either the fifth, or root, may be omitted (Ex. 9).

Ex. 9.

D C

Ex. 10.

C C C

14. With the resolution of the ninth on the third, this chord is susceptible of three inversions.

15. The first inversion has the fifth in the bass; it is lettered C, &c. (Ex. 10).

16. The second inversion has the seventh in the bass; it is lettered D, &c. (Ex. 11).

Ex. 11.

D D D

Ex. 12.

E B E B

17. The third inversion has the ninth in the bass; it is lettered E, &c. (Ex. 12).

18. The root may be taken instead of the seventh, and fall to the seventh, while the ninth remains.

Ex. 13.

A B C A D

E A A A

19. The root may also be taken instead of the seventh, and fall to the seventh while the ninth proceeds to the third.

Ex. 14.

A C A D E B A A

20. Both root and seventh may be taken in the inner parts on the dominant and supertonic, according to the diatonic rule, progressing to the root by step of a second and in contrary motion with the ninth (Ex. 15). The root and ninth cannot be taken in the same way on the tonic, because the only way of approaching them is through the doubled dominant third, which is not allowable.

Ex. 15.

A B A C B D B

21. Both root and seventh may also be taken in the upper parts if the root have been heard in the preceding chord in the same part; in no case in this form can the root and ninth be at a smaller distance than the ninth from each other.

Ex. 16.

A B A B D B A B D B

22. The chord of the major ninth differs in no respect from the chord of the minor ninth, with the exception of the interval of the ninth, which in the former



Ex. 17.

9/7 8    b9/7 #    b9/7 3

A            A            A

chord is major instead of minor (Ex. 17), and that the ninth must be above the third when both are together in the same chord: the inversions are likewise the same, with the same exception of the interval of the ninth, and that the inversion with the ninth in the bass cannot be used, and the same notes may be omitted.

23. The treatment of the major ninth when resolving on a chord having the same root, differs in no respect from that of the minor ninth, with the exception

Ex. 18.

9/7 8    9/7 # 8    b9/7 8    b9/7 8    b9/7 8    b9/7 8    b9/7 8    b9/7 8    b9/7 8    b9/7 8    b9/7 8    b9/7 8

A    A    A    A    A    A    A    A    A    A    A    A

Ex. 19.

b9/7 8    b    7

A            A            A            A

that the chords of the major ninth on the dominant and supertonic, belong exclusively to the major key, the major ninth on the tonic being common to both major and minor keys (Ex. 18), with this limitation, that when the chord of the major ninth on the tonic is resolved on the same root, the chord following must have a major third; Ex. 19 is therefore bad.

24. In resolving on the next chord, the minor ninth may either fall a second, or remain, or rise a semitone to a note of its own name.

25. The progressions of the third and seventh are the same as in the chord of the seventh.

26. This chord, in resolving on a chord having another root, (the root not occurring excepting as the bass,) is susceptible of the same inversions as when resolving on the same root.

27. In the third inversion, when the seventh is in the bass, the third is frequently omitted, and the chord of the sixth is produced, when this chord may

be treated as though not containing any discord, because the notes, which, if retained, would render the original seventh and ninth (the bass, and third from the bass of this inversion,) discords, are removed. The augmented fourth in this inversion differs from the same interval in the second inversion of the chord of the seventh, insomuch as in the latter it is formed by the third and seventh from the root, the progression of both which notes is limited when occurring together; in the former the interval is formed by the fifth and ninth from the root; the progression of the fifth (excepting when occurring as the bass,) is unlimited, as is also that of the ninth and seventh when neither root nor third exist in the chord to bind their motion. When this inversion occurs without the third, it must be lettered D with the figures  $\frac{9}{5}$  (Ex. 20); it is then understood that the third is omitted.

Ex. 20.

Musical notation for Ex. 20. It shows two chords in bass clef. The first chord is labeled 'D' with a figure  $\frac{b9}{5}$  above it. The second chord is labeled 'B'.

28. The natural resolution of the chord of the minor ninth on the dominant, is on the common chord major or minor of the tonic, or on an inversion of the common chord either major or minor of the subdominant.

Ex. 21.

Musical notation for Ex. 21. It shows a sequence of chords in bass clef. The chords are labeled A, A, A, A, A, C, A, A, C, A. Above the first five A chords is the figure  $\frac{b9}{7}$ . Above the C chord is the figure  $\frac{b}{7}$ . Above the final A chord is the figure  $\frac{b}{7}$ .

29. The following are the inversions.

Ex. 22.

Musical notation for Ex. 22. It shows a sequence of chords in bass clef. The chords are labeled B, A, C, B, D, A, B, E, B, C. Above the first five chords (B, A, C, B, D) is the figure  $\frac{b9}{7}$ . Above the A chord is the figure  $\frac{b}{7}$ . Above the B chord is the figure  $\frac{b9}{7}$ . Above the E chord is the figure  $\frac{7}{7}$ .

In the second inversion of the ninth, as in the second inversion of the seventh, if the bass rise to the resolution of the seventh, the seventh is allowed to rise a

major second to the fifth of the next chord, as in Ex. 22; in this case also, as in the seventh, the progression from a diminished to a perfect fifth is not objectionable.

30. The natural resolution of the chord of the minor ninth on the supertonic, is either on an inversion of the common chord major or minor of the tonic, or on a dominant discord.

Ex. 23.

Chord progressions for Ex. 23:

System 1:  $b9\ 7\ \sharp$ ,  $b$ ,  $b9\ 7\ \sharp$ ,  $b$ ,  $b9\ 7\ \sharp$ ,  $b7$ ,  $b$ ,  $b9\ 7\ \sharp$ ,  $b7$

System 2:  $b9\ 7\ \sharp$ ,  $b9$ ,  $b$ ,  $b9\ 7\ \sharp$ ,  $b9\ 7$ ,  $b$ ,  $b9\ 7\ \sharp$ ,  $b7$ ,  $b7$

Bass notes: A, C, A, A, C, A, A, A, A, A, A, A

31. The following are the inversions.

Ex. 24.

Chord progressions for Ex. 24:

System 1:  $b9\ 7$ ,  $b$ ,  $b9\ 7\ \sharp$ ,  $b$ ,  $b9\ 7$ ,  $b7$ ,  $b$ ,  $b9\ 7\ \sharp$ ,  $b7$ ,  $b7$ ,  $b9\ 8$ ,  $b7$ ,  $b9\ 8$

System 2:  $b9\ 7$ ,  $b7$ ,  $b$ ,  $b9\ 7\ \sharp$ ,  $b7$ ,  $b$ ,  $b9\ 7\ \sharp$ ,  $b7$ ,  $b7$ ,  $b9\ 8$ ,  $b7$ ,  $b9\ 8$

Bass notes: B, C, A, C, C, A, D, B, A, E, C, A, E, C

32. The natural resolution of the minor ninth on the tonic, is either on the seventh or minor or major ninth on the dominant, or an inversion of a supertonic discord (Ex. 25).

Ex. 25.

Figured bass notation for Ex. 25:

b9 b7 7 b b9 b7 7 b9 b7 7 b9 b7 7 b9 b7 7 b9 9 b7 7 b9 # b7

Roots: A A A A A A A A A A A A A A A A D B

33. The following are the inversions.

Ex. 26.

Figured bass notation for Ex. 26:

b9 b7 b9 b7 b9 b7 7 b b9 9 b7 b9 b7 b9 7 b9 #

Roots: B D B B D B C E C D B A E C B B E B

34. The chord of the minor ninth on the tonic, or its inversions, may also (without modulation) resolve on the common chord on the subdominant or its inversions, either minor or major in the major key, or minor in the minor key. The proof that this is not a modulation into the subdominant, is contained in the note to sect. 24 of the last chapter.

Ex. 27.

Figured bass notation for Ex. 27:

b9 b7 b. 7 b9 b7 7

Roots: A A A A B A B A

35. The root of these chords of the minor ninth may exist in the upper parts with the ninth, either in the original position or any of the inversions, in which case the seventh cannot exist in the chord in this form, as in all others where the ninth and root exist in the upper parts both notes must be indicated by the figures as in the example (28); the natural resolution of the minor ninth on the dominant under this form, is on an inversion of the common chord either minor or major on the subdominant.

Ex. 28.

Figured bass notation for Ex. 28:  $b9_8$   $b$   $b$   $b9_8$   $\sharp$  8  $b$  7  $b$  8 7

Chord symbols below the bass line: A C A A C A E B B A A A E B B C A A

36. The natural resolution of the supertonic minor ninth under this form, is on an inversion of the common chord minor or major of the tonic (Ex. 29).

Ex. 29.

Figured bass notation for Ex. 29:  $b9_8$   $\sharp$   $b$  7  $b9_8$   $\sharp$   $b$  7

Chord symbols below the bass line: A C A A C A

Ex. 30.

Figured bass notation for Ex. 30:  $b9_8$  7

Chord symbols below the bass line: A A

37. The natural resolution of the tonic minor ninth under this form, is on a dominant discord (Ex. 30).

38. Under this form the root may go to the note on which the seventh would resolve in the next chord.

Ex. 31.

Figured bass notation for Ex. 31:  $b9_8$   $\sharp$  7  $b9_8$   $\sharp$  7  $b9_8$  7

Chord symbols below the bass line: A A A C A A A A A

Ex. 32.

Figured bass notation for Ex. 32:  $b9_8$

Chord symbols below the bass line: A A

39. When the resolution of the seventh is at a greater distance from the root than a second, the root must be above the ninth (Ex. 32), (this progression of the root and ninth is better avoided when possible.)

40. The treatment of the chord of the major ninth, when resolving on a chord having another root, is precisely the same as that of the minor ninth, with the exception that where the minor ninth falls a minor second, the major ninth falls a major second, and where the former rises a semitone to a note of its own name, the latter remains; bearing always in mind as has been before stated, that the chords of the major ninth on the dominant and supertonic belong exclusively to the major key, and must be resolved on major chords (that is, chords having a major third) only, and that although the chord of the major ninth on the tonic is common to either major or minor key, yet it can also only be resolved on chords having a major third; and that the ninth must be above the third when they exist in the same chord.

41. The natural resolutions of the major ninth on the dominant (Ex. 33).

Ex. 33.

Musical notation for Ex. 33. It consists of two staves, treble and bass clef. The treble staff shows a sequence of notes: G4, A4, B4, G4, F4, E4, D4. The bass staff shows notes: C3, G2, C3, G2, C3, G2, C3. Chord symbols are placed below the bass staff: A, A, B, A. The first A chord is a major ninth chord (A, C#, E, G, B). The second A chord is a major triad (A, C#, E). The B chord is a major triad (B, D, F#). The final A chord is a major triad (A, C#, E).

Ex. 34.

Musical notation for Ex. 34. It consists of two staves, treble and bass clef. The treble staff shows notes: G#4, A4, B4, G#4, F#4, E4, D4. The bass staff shows notes: C#3, G#2, C#3, G#2, C#3, G#2, C#3. Chord symbols are placed below the bass staff: A, C, D, B. The A chord is a major ninth chord (A, C#, E, G, B). The C chord is a major triad (C, E, G). The D chord is a major triad (D, F#, A). The B chord is a major triad (B, D, F#).

42. The natural resolutions of the major ninth on the supertonic (Ex. 34).

43. The natural resolutions of the chord of the major ninth on the tonic (Ex. 35).

Ex. 35.

Musical notation for Ex. 35. It consists of two staves, treble and bass clef. The treble staff shows notes: G4, A4, B4, G4, F4, E4, D4. The bass staff shows notes: C3, G2, C3, G2, C3, G2, C3. Chord symbols are placed below the bass staff: A, A, C, E, D, B. The first A chord is a major ninth chord (A, C#, E, G, B). The second A chord is a major triad (A, C#, E). The C chord is a major triad (C, E, G). The E chord is a major triad (E, G, B). The D chord is a major triad (D, F#, A). The B chord is a major triad (B, D, F#).

Ex. 36.

Musical notation for Ex. 36. It consists of two staves, treble and bass clef. The treble staff shows notes: G4, A4, B4, G4, F4, E4, D4. The bass staff shows notes: C3, G2, C3, G2, C3, G2, C3. Chord symbols are placed below the bass staff: A, A, B. The first A chord is a major ninth chord (A, C#, E, G, B). The second A chord is a major triad (A, C#, E). The B chord is a major triad (B, D, F#).

44. Resolution of the major ninth on the tonic, on the common chord major of the subdominant (Ex. 36).

45. Resolutions of the chords of the major ninth, the root being in an upper part, and the seventh not being present in the chord (Ex. 37).

Ex. 37.

46. Progression of the root, in the same form of the chord, to the note on which the seventh would resolve, when such resolution of the seventh is at a greater distance from the root than a second, the root being always above the ninth. The latter form of progression of the root it is perhaps even more desirable to avoid with the major ninth than with the minor.

Ex. 38.

47. The treatment of the inversions of the chord of the major ninth is also the same, as that of the minor ninth, but with the same restrictions as to the key or mode in which they may be used, and the chords on which they may resolve, as in the original positions of the chords of the major ninth.

CHAPTER VIII.

OF THE CHORD OF THE FUNDAMENTAL ELEVENTH ON THE DOMINANT.

INTRODUCTION.

As the eleventh is fully discussed in this chapter there is no occasion to say any more on the subject, except that the chord of the eleventh accompanied with the third, (as also all chords in which two notes next each other in alphabetical order form with each other the interval of either minor or major ninth, counting from the root, as root and ninth, third and eleventh, fifth and thirteenth,) should be used very sparingly; this is more particularly necessary when such ninth is minor, as between the third and eleventh, &c. When two notes next each other in alphabetical order form with each other the interval of the seventh, counting from the root, as third and ninth, fifth and eleventh, seventh and thirteenth, there is no occasion for any economy in their use other than is produced by the consideration that their effect is diminished in proportion to the frequency of their repetition.

SECTION 1. The chord of the eleventh, unlike the chords of the seventh and ninth, can only be taken on the dominant.

2. It can be taken with either a minor or major ninth.

3. This chord with a minor ninth is an eleventh from the root taken above, or in addition to, the chord of the minor ninth on the dominant (Ex. 1).



4. This chord with the minor ninth is common to either the minor or major key.

5. Like the chord of the ninth, it may either resolve on a chord derived from the same root, or on one derived from another root.

6. In resolving on a chord derived from the same root, the eleventh may fall to the third, in which case the third cannot exist previously in the chord (Ex. 2).

7. Under this form the root cannot be taken excepting as the bass.

8. It is susceptible of four inversions; the first inversion has the fifth from



the root in the bass, the second inversion has the seventh, the third the ninth, and the fourth the eleventh.

Ex. 3.

C D \* E F B

\* This inversion is the chord known as the added sixth; it has been much disputed whether the fourth or second of the scale should be assigned as the root. Neither of these two notes can be the root. The fourth cannot, because neither the minor seventh nor ninth to that note can be used with the major third, and the sixth from any given note is never any harmonic but the thirteenth, which in this case it cannot be, as the major thirteenth must be accompanied with either the minor seventh or ninth, or resolve on the minor seventh, which this cannot do. The second cannot, as will be seen a little farther on. It is here assumed that the dominant is the root, and for the following reasons.

Ex. 4.

B A A

It is generally admitted that the unprepared chord of the diminished seventh on the leading note is not a true chord of the seventh, but that the third below the leading note (such third being the dominant of the key) is the real root (Ex. 4). As I am not aware that the reasons for this have yet been given, I shall here state them. It has already been said that the third from any note, such note being the fundamental root of a chord, must be major, the fifth perfect, the seventh minor, (excepting in the two cases mentioned hereafter where secondary harmonics are involved,) the ninth either major or minor, and the eleventh perfect, and that eleventh taken only on the dominant; it follows

therefore, that the leading note cannot be the fundamental root of the chord, the third to that note being minor, and the fifth and seventh diminished. The major third below is assigned as the root, because it is the nearest note which produces the different notes of the chord in the order of its harmonics, the apparent root being its third, &c. As on examining the chord it will be found that the third is major, the fifth perfect, and the seventh and ninth minor, and that in all other respects it fulfils the conditions necessary for a root in the key, it follows that the dominant is the root of the chord. By a parity of reasoning it will be seen that the added sixth (as it is called) on the subdominant, or fourth of the scale, is an inversion, or a portion, of the eleventh on the dominant. This chord taken on F, the subdominant, is an apparent inversion of

Ex. 5.

D C

Ex. 6.

B

Ex. 7.

A

9. Provided the fifth and eleventh be retained, either the seventh or ninth may be omitted, but not both.

Ex. 10.

A sequence of chords in G major: A (11 3, 9 5), A (11 3, 7 5), C (11 3, 7 5), D (11 3, 5 5), E (11 3, 5 5), F (7 5), B (7 5). The bass line consists of single notes: A, A, C, D, E, F, B.

10. The fifth may always be doubled (Ex. 11).

Ex. 11.

A sequence of chords in G major: A (11 3, 9 5), B (11 3, 9 5), A (11 3, 9 5), A (11 3, 9 5), A (11 3, 9 5), A (11 3, 9 5). The bass line consists of single notes: A, B, A, A, A, A.

Ex. 12.

A sequence of chords in G major: A (11 3, 9 5), A (11 3, 9 5), A (11 3, 9 5), A (11 3, 9 5), A (11 3, 9 5), A (11 3, 9 5). The bass line consists of single notes: A, A, A, A, A, A.

11. The root may be doubled if the ninth be not in the chord (Ex. 12).

a chord of the seventh, of which D, the second of the scale, is the root (Ex. 5) : but as the third is minor, and the fifth diminished, the D cannot be the fundamental root of the chord ; the diatonic third below, B ♭, is the leading note, and having also a minor third and diminished fifth, it therefore cannot be the root (Ex. 6) ; the diatonic third below such B ♭ is G, the next note below such apparent root which would produce that root as its primary harmonic, that is, as its fifth (Ex. 7). There not being any third in the chord does not invalidate the argument, because, as the eleventh must either resolve on the third, or on the fifth, the fifth existing in the chord the law which says that no discord and the note on which it resolves shall be sounded together (Part I., Chap. VI., sect. 7), &c., prevents the third being in the chord ; the fifth and eleventh are perfect, the seventh and ninth minor, G is the dominant of the key, therefore can bear an eleventh, and in all other respects it fulfils the conditions necessary for a fundamental root in the key ; this chord is, therefore, an eleventh, the dominant G, of course, being the root.

It is not a diatonic seventh on the second of the scale, because the seventh to such second can be taken unprepared, and when the note on which it resolves is not in the chord, excepting such

Ex. 8.

A sequence of chords in G major: A (11 9 5), A (11 9 5), D (11 9 7), C (11 9 7), C (11 9 7), C (11 9 7), A (11 9 7), A (11 9 7). The bass line consists of single notes: A, A, D, C, C, C, A, A.

Ex. 9.

A sequence of chords in G major: C (9 7), B (9 7), A (9 7). The bass line consists of single notes: C, B, A.

12. If the root be not in the chord, either seventh or ninth may be doubled (Ex. 13).

Ex. 13.

D D

Ex. 14.

A D F B

13. The eleventh may be resolved either with, before, or after the ninth (Ex. 14).

14. The eleventh may be resolved on the fifth, in which case the fifth cannot be in the chord, (Ex. 15, sect. 1,) unless (as in the second section, Ex. 15) it be in the bass and fall to the root.

Ex. 15.

A A A A A B C A A

15. This chord is susceptible of four inversions: the first of which has the third, the second the seventh, the third the ninth, and the fourth the eleventh itself, in the bass.

Ex. 16.

B D E F C

apparent root being in the bass, it may rise a second to its resolution, the fifth of this chord, the minor ninth of the original chord, rising a second also (Ex. 8).

When the same combination of notes occurs in E $\flat$ , there has been no difficulty in assigning B $\flat$ , the dominant, as the root (Ex. 9). Why, when this chord occurs in C, no one has thought of descending a third lower to G I am at a loss to imagine, unless it be ignorance as to the reason why the first descent of the major third below the bass of the diminished seventh is made.

16. In the original position or in any of the inversions, either the seventh or ninth may be omitted.

Ex. 17.

17. The root only can be doubled.

18. The eleventh may be resolved either with, before, or after the ninth.

Ex. 18.

19. It may also be taken without either third or fifth if the root be in the chord, when, as also when taken without either the root or third, the fifth being in the bass and falling to the root the eleventh may rise to the fifth, in which case the ninth *must* resolve on the third (Ex. 19).

Ex. 19.

Ex. 20.

20. An eleventh may also be taken above or in addition to the chord of the major ninth on the dominant (Ex. 20).

21. The eleventh with a major ninth belongs exclusively to the major key, and can be resolved on major chords only.

22. Its treatment is precisely the same as that of the eleventh with a minor ninth, with the exception of the interval of the ninth, the difference being the

same as between the chords of the major and minor ninth. In this, as well as in all cases in which the major ninth and third are used simultaneously, the ninth must be above the third.

23. It may, like the chord of the eleventh with a minor ninth, either be resolved on a chord derived from the same root, or on one derived from another root.

24. In resolving on the same root the eleventh may resolve on the third, in which case the third cannot exist previously in the chord (Ex. 21).

Ex. 21.

A

Ex. 22.

C D \* E † A F B

25. Under this form the root cannot be taken excepting as the bass; the chord is therefore susceptible of four inversions as follow: the first inversion has the fifth, the second the seventh, the third the ninth, and the fourth the eleventh in the bass (Ex. 22).

26. In the original position the same notes may be omitted and doubled as in the chord of the eleventh with the minor ninth.

27. In the inversions no note but the root can be omitted.

28. The eleventh may be resolved either with, before, or after the ninth, unless the ninth be below the eleventh (*Vide* sect. 25, note †).

Ex. 23.

A A A

\* The same arguments apply to this chord when taken unprepared as to the second inversion of the eleventh with a minor ninth, the only difference being, that in the former chord the ninth from the root is major, and in the latter, minor.

† When this inversion is used, the eleventh cannot resolve before the ninth.

29. The eleventh with the major ninth may be resolved on the fifth (Ex. 24), in which case the fifth cannot exist in the chord, unless, as in the second sect. of Ex. 24, it be in the bass and fall to the root.

Ex. 24.

Musical notation for Example 24. The treble clef shows the upper structure of the chords, and the bass clef shows the bass line. Fingerings are indicated by numbers 1-5. Chords are labeled A, A, A, A, A, A, C, A, A.

30. This chord is susceptible of three inversions; the first inversion has the third, the second the seventh, and the third the eleventh, in the bass; this chord cannot be inverted with the ninth in the bass.

Ex. 25.

Musical notation for Example 25. The treble clef shows the upper structure of the chords, and the bass clef shows the bass line. Fingerings are indicated by numbers 1-5. Chords are labeled B, D, F, C.

31. The eleventh may move either with, before, or after the ninth.

Ex. 26.

Musical notation for Example 26. The treble clef shows the upper structure of the chords, and the bass clef shows the bass line. Fingerings are indicated by numbers 1-5. Chords are labeled A, B, D.

32. In the chord of the eleventh, however accompanied, that is, with either fifth, or third, or minor or major ninth, the root may be taken instead of the seventh, and fall to the seventh (Ex. 27).

Ex. 27.

11 3 11 3 11 5 11 5  
 b 9 8 9 8 b 9 8 9 8  
 5 8 7 8 8 8 7 8

A D C A D B

33. In resolving on a chord having another root, the eleventh, accompanied with either minor or major ninth, and either the fifth or third, may be followed by a chord having the tonic for its root.

Ex. 28.

11 11 11 11 11 13 5  
 b 9 9 9 9 9 13 5  
 5 5 5 5 5 9 8 b 7

A A A A D B D B D B

34. If accompanied with the third without the ninth, the eleventh may be resolved on the chord of the minor or major thirteenth on the supertonic.

Ex. 29.

11 b13 11 13 5 7  
 7 7 7 7 7 7  
 7 7 7 7 7 7

A A C A A A A

Ex. 30.

11 7 11 7  
 b 9 7 9 7  
 5 5 5 5

A A A A

35. The eleventh and fifth, accompanied with either minor or major ninth, may also resolve on a discord having the supertonic for its root (Ex. 30).

36. If neither root nor third be in the chord, the seventh and ninth, as in the chord of the ninth, are free notes (Ex. 31).

Ex. 31.

The musical notation for Example 31 consists of two staves. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has one flat (B-flat). The sequence of chords and their notes is as follows:

- Chord 1: E7 (Notes: E, G, B, D, F) - Treble: E4, G4, B4; Bass: E3, G2, B2
- Chord 2: B7 (Notes: B, D, F, A, C) - Treble: B3, D4, F4; Bass: B2, D2, F2
- Chord 3: E7 (Notes: E, G, B, D, F) - Treble: E4, G4, B4; Bass: E3, G2, B2
- Chord 4: A7 (Notes: A, C, E, G, B) - Treble: A4, C5, E5; Bass: A3, C3, E3
- Chord 5: C7 (Notes: C, E, G, B, D) - Treble: C5, E5, G5; Bass: C3, E3, G3
- Chord 6: A7 (Notes: A, C, E, G, B) - Treble: A4, C5, E5; Bass: A3, C3, E3
- Chord 7: A7 (Notes: A, C, E, G, B) - Treble: A4, C5, E5; Bass: A3, C3, E3

37. In resolving on another chord the root may be taken instead of the seventh, and move to the resolution of the seventh, provided such resolution be to the note of the chromatic scale lying between such root and seventh.

Ex. 32.

The musical notation for Example 32 consists of two staves. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has one flat (B-flat). The sequence of chords and their notes is as follows:

- Chord 1: E7 (Notes: E, G, B, D, F) - Treble: E4, G4, B4; Bass: E3, G2, B2
- Chord 2: C7 (Notes: C, E, G, B, D) - Treble: C5, E5, G5; Bass: C3, E3, G3
- Chord 3: A7 (Notes: A, C, E, G, B) - Treble: A4, C5, E5; Bass: A3, C3, E3
- Chord 4: F7 (Notes: F, A, C, E, G) - Treble: F4, A4, C5; Bass: F3, A2, C3
- Chord 5: D7 (Notes: D, F, A, C, E) - Treble: D4, F4, A4; Bass: D3, F2, A2
- Chord 6: B7 (Notes: B, D, F, A, C) - Treble: B3, D4, F4; Bass: B2, D2, F2
- Chord 7: A7 (Notes: A, C, E, G, B) - Treble: A4, C5, E5; Bass: A3, C3, E3

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## CHAPTER IX.

### OF THE FUNDAMENTAL CHORDS OF THE THIRTEENTH, ON DOMINANT, SUPERTONIC, AND TONIC.

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#### INTRODUCTION.

THE chord of the thirteenth although in its simplest form, (that is accompanied with the root third and seventh,) among the sweetest of all chords, yet in some of its more extreme forms, as when accompanied with the fifth, or in any other form in which, as before observed, two notes occur which, counting from the root, form with each other the interval of the ninth, it may, when taken unconnected in the examples, seem harsh. There are two very remarkable points in



which these extreme chords, as allowed in this book, differ from chords which are not allowed; in the former, the more slowly they are played, the more agreeable they sound; they are also more pleasant when, on a piano-forte or any instrument not sustaining the tone, all the chord is struck every time a note is changed; in the latter it is exactly the reverse of this, or, in other words, the less that is heard of the chords the less disagreeable they are.

SECTION 1. A minor thirteenth may be added to either of the above-mentioned fundamental chords on the dominant, supertonic, or tonic; that is, to the major common chords, sevenths, minor and major ninths or eleventh; in all which cases the notes composing those chords are treated precisely as though there were no thirteenth present, provided that none of such notes make false progressions with the thirteenth.

2. The chords of the minor thirteenth may, like the chords of the ninth and eleventh, either be resolved on a chord derived from the same root, or on one derived from another root.

3. In resolving on a chord derived from the same root, of which the supertonic minor thirteenth is not susceptible, the minor thirteenth on the tonic may be resolved on the fifth, seventh, or major thirteenth; on the dominant, in the minor it may resolve on the fifth or seventh; when accompanied with the major ninth, it can only be used in the major key; it may then resolve on the fifth or major thirteenth, but is even then restricted as to the chord following such resolution.

4. If resolved on the fifth, such fifth cannot exist in the chord unless it be in the bass and skip to the root, or unless it be taken according to the diatonic rule by step of a second and in contrary motion, and at the distance of at least an octave from the resolution of the thirteenth.

5. It may be accompanied with the third and seventh; the root cannot be omitted, but the third may.

Ex. 1.

The musical notation for Example 1 consists of two staves. The top staff is in treble clef and the bottom staff is in bass clef. The music shows a sequence of chords and their resolutions. The chords are labeled with figured bass notation:  $b13 \ 7$ ,  $b13 \ b7$ ,  $b13 \ 8 \ 7$ ,  $b13 \ 5$ , and  $7$ . The bass line is labeled with letters A, A, B, D, G, C, indicating the roots of the chords. The notation includes notes, stems, and accidentals (flats) for the thirteenth notes.

6. It may also be accompanied by the minor ninth; the thirteenth must resolve either before or after the ninth, unless when (the third not being pre-

ously in the chord) the ninth rises to the third, in which case both thirteenth and ninth may resolve together.

Ex. 2.

Example 2 consists of two systems of musical notation, each with a treble and bass staff. The first system shows a sequence of chords: A major, A major, A major, A major, A major, C major, B major, and A major. The second system shows: D major, B major, E major, B major, A major, G major, C major, A major, and A major. Chord symbols are placed below the bass staff, and fingerings (e.g., 5, 8, 7, 3, 8, b) are indicated above the notes in the treble staff.

7. It may also be accompanied with the major ninth, in this case either the sixth or third must be in the chord; the thirteenth must resolve either before or after the ninth, unless the ninth rise to the third. The chord which is produced by the resolution of this minor thirteenth on the dominant on the same root, cannot be followed by the common chord of the tonic or any of its inversions, though it may be by a fundamental discord of the tonic. It also, like all other chords on the dominant with a major ninth, can only be used in the major key.

Ex. 3.

Example 3 consists of two systems of musical notation, each with a treble and bass staff. The first system shows a sequence of chords: D major, B major, E major, D major, D major, and B major. The second system shows: D major, B major, E major, D major, D major, and B major. Chord symbols are placed below the bass staff, and fingerings (e.g., 5, 8, 7, 5, 8, 5, 8, 7) are indicated above the notes in the treble staff.

Two systems of musical notation. The first system consists of two staves. The upper staff has notes: A4, B4, C5, B4, A4, G4, F4, E4, D4, C4, B3, A3. The lower staff has notes: A2, D2, B2, C3, A2, B2, D3, C3, C3, A2, A2. Chords are labeled below:  $b13$   $\frac{9}{3}$  7,  $b13$   $\frac{9}{7}$  5, 7, 7. The second system also has two staves. The upper staff has notes: E4, E4, G4, C4, A4, A4. The lower staff has notes: E2, E2, G2, C2, A2, A2. Chords are labeled below:  $b13$   $b7$  5,  $b7$   $\frac{9}{8}$  7, 7.

8. When occurring on the dominant the chord of the minor thirteenth and minor ninth may also be accompanied by the eleventh; in this case if the root and third be not in the chord the seventh may proceed to the root.

Ex. 4.

Musical notation for Example 4. It consists of two staves. The upper staff has notes: A4, B4, C5, B4, A4, G4, F4, E4, D4, C4, B3, A3. The lower staff has notes: A2, A2, D2, A2, A2, A2, D2, B2. Chords are labeled below:  $b13$   $\frac{11}{9}$  5,  $b13$   $\frac{11}{9}$  5,  $b13$   $\frac{11}{9}$  5,  $b13$   $\frac{11}{9}$  5,  $b13$   $\frac{11}{9}$  5,  $b13$   $\frac{11}{9}$  5,  $b13$   $\frac{11}{9}$  5,  $b13$   $\frac{11}{9}$  5.

\* It is not to be considered false relation between the  $E_b$  and  $E\flat$ , as the third chord is a fundamental discord.

† The seventh on the subdominant, as will be seen above, is an inversion, or a portion of the  $\frac{13}{11}$  on the dominant. This seventh and the other inversions of this chord, like the seventh with a minor third, and either a perfect or diminished fifth on the supertonic and its inversions, can be taken without preparation and by skip.

Although the chord containing the subdominant and the sixth and fifth above, has been provided for by calling it an added sixth, and making it an exception to all the rules for the preparation of discords, yet the unprepared chord containing the minor or major sixth of the scale and the sixth and fifth above, or the ninth and minor third on the second of either major or

$b_{13}$   $11$   $7$      $5$   $3$      $b_{13}$   $b_9$   $7$      $5$   $8$      $11$   $3$      $b_9$   $8$      $b$

E E A A F B A G C A

9. The chord of the minor thirteenth and major ninth cannot be accompanied with the eleventh.

minor scale, has never been explained ; therefore, as the laws have hitherto stood, such chords have no right to be used unless prepared or by transition ; but now, being shown to be portions of fundamental harmonies, according to the laws given to regulate fundamental harmonies, they can theoretically be used unprepared, as practically they long have been.

Ex. 5.

$b_{13}$   $11$      $b_{13}$   $11$   
 $b_9$   $b_9$

A D D A

This chord of the seventh on the subdominant is not a diatonic chord of the seventh, because it can be taken unprepared, and it can resolve on the common chord on the note above (Ex. 5).

It is not a diatonic  $\frac{9}{7}$  on the second of the scale, because both ninth and seventh to such second can be taken unprepared (Ex. 6), and when the notes on which they resolve are not in

Ex. 6.

$b_{13}$   $11$   $b$      $b_9$   $b$      $b$

A A D C A

Ex. 7.

$b_{13}$   $11$   $b_9$      $7$   $5$   $3$      $b$

C A A

the chord, excepting such apparent root (being in the bass), such ninth and seventh can rise a second to their resolution, the fifth of this chord, the minor ninth of the original chord, may also rise to the third (Ex. 7). It is not a fundamental ninth on the second of the scale, because the third is minor and the fifth diminished.

The leading note cannot be the root of any fundamental chord, this chord is therefore the  $\frac{13}{9}$  on the dominant ; the same arguments apply to the  $\frac{13}{11}$ , whether either, thirteenth or ninth be major or minor.

10. The minor thirteenth on the tonic may also be resolved on the seventh, in which case the seventh cannot exist previously in the chord, but the fifth may.

11. It may be accompanied with the third and root only.

Ex. 8.

Musical notation for Example 8. The top staff shows a melodic line with a chromatic descent from a minor thirteenth chord to a seventh chord. The bottom staff shows the accompaniment. Chords are labeled as  $b13$  (with 3 and 5) and  $b7$  (with 3 and 5). The bass notes are A, G, and D.

12. It may also be accompanied with the fifth.

Ex. 9.

Musical notation for Example 9. The top staff shows a melodic line with a chromatic descent. The bottom staff shows the accompaniment. Chords are labeled as  $b13$  (with 5 and 3),  $b7$  (with 5 and 3), and  $b9$  (with 5 and 3). The bass notes are A, C, C, A, A, A, C, B, C, G, D.

13. It may also be accompanied with the minor ninth, and it may resolve either with, before, or after such minor ninth.

Ex. 10.

Musical notation for Example 10. The top staff shows a melodic line with a chromatic descent. The bottom staff shows the accompaniment. Chords are labeled as  $b13$  (with 5 and 3),  $b9$  (with 5 and 3),  $b7$  (with 5 and 3), and  $b9$  (with 5 and 3). The bass notes are A, A, A, C, A, B, C, E, G, D.

14. It may also, when occurring on the dominant, be accompanied with the eleventh. If the eleventh resolve on the third, the third cannot be in the chord. If it resolve on the fifth, the fifth cannot exist previously in the chord, (unless it

in the bass and skip to the root,) the thirteenth may resolve either with, before, or after the eleventh.

Ex. 11.

Chord symbols and resolutions for Ex. 11:

- Chord 1:  $b13$  7 11 3  $b9$  8 5
- Chord 2:  $b13$  7 11 3  $b9$  8 5
- Chord 3:  $b13$  7 11 3  $b9$  8
- Chord 4:  $b13$  7 11 3  $b9$  8
- Chord 5:  $b13$  7 11 3  $b9$  8
- Chord 6:  $b13$  7 11 5  $b9$  8
- Chord 7: 11 5  $b9$  8

Letter labels below the staff: A A A A C E A B G D

15. In the first inversion of this chord the eleventh rising to the fifth, the fifth and the eleventh exist in the bass if it skip to the root.

Ex. 12.

Chord symbols for Ex. 12:

- Chord 1:  $b13$  7 11 5  $b9$  8  $b$
- Chord 2:  $b$

Letter labels below the staff: G A A

16. The minor thirteenth on the tonic may in the major key, however accompanied, resolve on the major thirteenth, such major thirteenth being accompanied either seventh or ninth; the minor thirteenth on the dominant, if accompanied with the seventh and major ninth, may also resolve on the major thirteenth while the seventh remains, provided such chord of the major thirteenth be followed by the common chord of the tonic or any of its inversions.

Ex. 13.

Chord symbols and resolutions for Ex. 13:

- Chord 1:  $b13$  7 11 5  $b7$  9
- Chord 2:  $b13$  11 3 9
- Chord 3:  $b13$  11 3 9

Letter labels below the staff: A A A A A D D B C A

17. In resolving on a chord derived from another root, the following are the natural resolutions.

18. If accompanied with the third and root only, the minor thirteenth may rise a semitone to a note of the same name to the major third of the next chord.

Ex. 14.

Ex. 14 consists of two systems of musical notation. Each system has a treble staff and a bass staff. The first system shows a sequence of chords:  $b13_3$ ,  $b13_7$ ,  $b13_3$ ,  $7$ ,  $b13$ , and  $b13$ . The bass staff notes are: \* A, A, A, A, A, A, A, A, A, B, A, B, D, B. The second system shows chords:  $b13$ ,  $8_3$ ,  $8_7$ ,  $8_3$ , and  $7$ . The bass staff notes are: B, A, D, B, G, B, G, B, A, G, B, A, A.

\* The minor thirteenth in this form is the chord usually known and written as the chord of the sharp or augmented fifth (Ex. 15); that it is not an augmented fifth, but a minor thirteenth, I shall now endeavour to prove.

Ex. 15.

Ex. 15 shows a single chord in treble clef, consisting of a root note, a major third, and a sharp fifth.

In the first place, this chord when taken in its last inversion in the minor, as in Ex. 16, is always written as though the original note were a minor sixth and not an augmented fifth; this is probably on account of the extraordinary appearance which the D # in one chord, followed by and rising to E $\flat$ , in the next, would present (Ex. 17). As the major key in no way differs from the

Ex. 16.

Ex. 16 shows a chord in treble clef (notes G, B, D) and bass clef (notes A, G, B). The chord is labeled with  $8_3$  and  $5_3$ .

A G B

Ex. 17.

Ex. 17 shows a chord in treble clef (notes G, B, D) and bass clef (notes A, G, B). The chord is labeled with  $8_3$  and  $5_3$ .

Ex. 18.

Ex. 18 shows a chord in treble clef (notes G, B, D) and bass clef (notes A, G, B). The chord is labeled with  $8_3$  and  $5_3$ .

A G B

minor as regards the second of the scale, but does differ as regards the third, therefore if it be correct in the minor key to write the minor third of the scale, when it remains as the minor third of the tonic common chord, as in Ex. 16, it must be equally correct in the major key to write the minor third of the scale when it rises to the major third of the tonic common chord, as in Ex. 18. When this chord is taken in its last inversion, as in Ex. 19, or with the root in the bass when coming from the same place, as in Ex. 20, it is always written as though in its

19. On the dominant and tonic it may remain to be the minor third or minor ninth, or fall a minor second to the root, or rise a semitone to a note of its own name to the major ninth of the next chord.

Ex. 26.

Chord progression for Ex. 26:

System 1:  $b13_3$ ,  $b$ ,  $b13_3$ ,  $b$ ,  $7$ ,  $b$ ,  $b13_3$ ,  $b9_\#$ ,  $7$ ,  $b13_3$ ,  $b9$

System 2:  $b13_3$ ,  $\#$ ,  $7$ ,  $b13_3$ ,  $7$ ,  $b13_3$ ,  $b9_\#$ ,  $7$ ,  $b13_3$ ,  $b9$

original position it were a minor sixth (or thirteenth); why it should not be written so when coming from other places, as at Ex. 21 and Ex. 22, I am at a loss to conceive. What possible sense could be made of it were it written as a sharp or augmented fifth, as in Ex. 23. It is not

Ex. 19.

Chord progression for Ex. 19:  $b5$ ,  $\natural$

Bass line: A G B

Ex. 20.

Chord progression for Ex. 20:  $b5$ ,  $b13$ ,  $b$

Bass line: A A A

Ex. 21.

Chord progression for Ex. 21:  $\#$ ,  $7$

Bass line: A A G B

Ex. 22.

Chord progression for Ex. 22:  $7$ ,  $b13$ ,  $\#$ ,  $\natural$

Bass line: A B A A

Ex. 23.]

Chord progression for Ex. 23:  $\#$ ,  $7$

Bass line: A A



20. On the tonic it may rise a semitone to a note of the same name to the perfect fifth of the next chord (Ex. 27).

Ex. 27.

Musical notation for Ex. 27. The top staff shows a melodic line with notes: A2 (flat), B2 (flat), C3, D3, E3, F3, G3, A3. The bottom staff shows chords: A (b13), B (b9), C (7), and A (5). The notes are: A2, B2, C3, D3, E3, F3, G3, A3.

Ex. 28.

Musical notation for Ex. 28. The top staff shows a melodic line with notes: A2 (flat), B2 (flat), C3, D3, E3, F3, G3, A3. The bottom staff shows chords: A (b13), B (b7), D (7), and B (5). The notes are: A2, B2, C3, D3, E3, F3, G3, A3.

21. On the supertonic it may remain to be the minor seventh of the next chord (Ex. 28).

generally known that a diatonic semitone, as it is called, is really larger than a chromatic one, which is the case, therefore E<sub>b</sub> is sharper than D<sub>#</sub>, as the following will prove. Take any given note, say C, as 1, the ratio of the octave is 2, that of the fifth  $\frac{3}{2}$ , ergo that of the fourth  $\frac{4}{3}$ ; the ratio of the major third is  $\frac{5}{4}$ , ergo of the minor sixth  $\frac{8}{5}$ , and of the minor third  $\frac{6}{5}$ .

$$D\# \text{ of } \frac{9}{8} \text{ of } \frac{4}{3} \text{ of } \frac{2}{1} = \frac{27}{8}; \text{ octave below} = \frac{27}{16}. \quad E_b \frac{16}{15}.$$

Reduce  $\frac{27}{16}$  and  $\frac{16}{15}$  to common denominator.

$$5 \times 75 = 375. \quad 64 \times 6 = 384. \quad 75 \times 6 = 450.$$

$$\frac{27}{16} - \frac{16}{15} = \frac{405}{240} - \frac{256}{240} = \frac{149}{240} = \frac{1}{1.61} - \frac{1}{2} \text{ (the ratio of the octave)} = \frac{1}{1.61}; \text{ ergo } E_b \text{ is } \frac{1}{1.61} \text{ of an octave sharper than } D\#.$$

To those to whom the above may be unsatisfactory or unintelligible, I recommend the following: tune one piano as follows (Ex. 24), in which the disputed note is tuned D<sub>#</sub>, and play

Ex. 24.

Musical notation for Ex. 24. The top staff shows a melodic line with notes: A2 (flat), B2 (flat), C3, D3, E3, F3, G3, A3. The bottom staff shows chords: A (b13), B (b9), C (7), and A (5). The notes are: A2, B2, C3, D3, E3, F3, G3, A3.

the examples; then tune another piano as under (Ex. 25), in which the disputed note is tuned E<sub>b</sub>, and play the examples.

I think that when the different progressions are played, with the actual notes as written, the mere sound will, independently of all reasoning, set the question at rest (at least with the

22. If accompanied with the third and fifth the natural resolutions are the same, excepting that the thirteenth cannot fall to the root of the next chord.

Ex. 29.

Ex. 29 consists of two systems of musical notation. Each system has a treble and bass staff. The first system includes figured bass notation below the bass staff:  $b13 \frac{5}{3}$ ,  $b13 \frac{5}{5}$ ,  $b13 \frac{5}{8}$ , 7,  $b13 \frac{5}{3}$ , b,  $b13 \frac{5}{5}$ , b. The second system includes figured bass notation:  $b13 \frac{5}{3}$ ,  $b9 \frac{7}{\#}$ ,  $b13 \frac{5}{3}$ ,  $b9 \frac{7}{\#}$ ,  $b13 \frac{5}{3}$ ,  $b9 \frac{7}{\#}$ , 9-8,  $b13 \frac{5}{\#}$ ,  $b7$ . Chord letters A, B, D, and C are placed below the bass staff of each system.

Ex. 25.

Ex. 25 consists of two systems of musical notation. Each system has a treble and bass staff. The first system shows a melodic line in the treble and a bass line in the bass. The second system includes figured bass notation:  $b13 \frac{7}{7}$ ,  $b13 \frac{7}{3}$ . Chord letters A and G are placed below the bass staff of each system.

ers) for ever, and put it beyond a doubt that no augmented fifth can be taken on the inant, but that it is a minor thirteenth or sixth.

The same or similar reasoning and proof, apply to the tonic and supertonic, the tuning ays commencing from the key note; the intervals are not to be tempered, that is, they are to used quite perfect, without a beat.

23. When accompanied with the third and seventh, or third, fifth, and seventh, the natural resolutions are the same as when accompanied with the third

Ex. 30.

$b13$   $b13$   $b13$   $b13$   $b13$   $b7$   
 $\frac{7}{3}$   $\frac{5}{7}$   $\frac{8}{3}$   $\frac{b7}{3}$   $\frac{7}{7}$   $\frac{b7}{8}$

A A A A D B A B C A D B A B D B

$b13$   $b7$   $7$   $b13$   $b9$   $b13$   $b9$   $b9$   
 $\frac{7}{5}$   $\frac{b7}{3}$   $\frac{7}{7}$   $\frac{b7}{3}$   $\frac{b7}{7}$   $\frac{b7}{7}$   $\frac{b9}{6}$

B C A A A A A C D B C A A

$b13$   $7$   $b13$   $\#6$   $7$   $b13$   $b9$   $7$   
 $\frac{3}{3}$   $\frac{b7}{3}$   $\frac{b7}{5}$   $\frac{\#6}{6}$   $\frac{7}{7}$   $\frac{b7}{5}$   $\frac{b9}{6}$

D B A A D B A A D B

Ex. 31.

$b13$   $\#7$   
 $\frac{7}{5}$

A A G B A

\* The only case in which the minor thirteenth and seventh on the supertonic can resolve on the dominant harmony, that is, when the thirteenth can rise to the major third of the dominant, is when the thirteenth is in the bass, in which case, as in the second inversion of the seventh, or  $\frac{7}{2}$ , the bass taking the resolution of the seventh, the seventh rises a whole tone to the fifth of the next chord (Ex. 31).

, with the exception that in these, as in all cases where the minor thirteenth seventh occur together, the thirteenth cannot remain to be the minor third of next chord, because "No discord, &c." (Part I. Chap. VI., sect. 7); nor can it be a semitone to the major ninth of the next chord on account of the progress of sevenths or seconds between the seventh and thirteenth of the first chord, the third and ninth of the second; nor can the thirteenth, if accompanied by the fifth, resolve on the root of the next chord.

24. The minor thirteenth accompanied with the seventh, or third and ninth, on dominant and tonic, (the fifth on any account being in the chord,) skip down a third to the root of the next chord.

Ex. 32.

A A B A A A

25. If accompanied with the third, fifth, seventh, and ninth, or any variety of combination of them including the ninth, the natural resolutions are the same

Ex. 33.

A A C A D B B C A A A A A A A

The chord on the supertonic accompanied with the third and ninth, when resolving on the dominant harmony, at which contains the minor thirteenth and seventh, the resolution of the ninth, can only be taken in that inversion in which it has the thirteenth in the bass.

Ex. 34.

A A G B A

as in similar combinations of those intervals with the thirteenth and without the ninth (Ex. 33).

Ex. 35.

Chord symbols:  $b13$ ,  $11$ ,  $b9$ ;  $b13$ ,  $11$ ,  $b9$ ;  $7$

Roots: A, A, C, C, A, A

26. If accompanied with the eleventh the fifth cannot occur excepting as the bass (Ex. 35).

27. The natural resolutions are either to rise a semitone to a note of its own name to the major third of the next chord, or to remain as the minor ninth, or fall a minor second to the root of the next chord; the fifth may also be taken in the bass with these resolutions (Ex. 36).

Ex. 36.

System 1 Chord Symbols:  $b13$ ,  $11$ ,  $b9$ ;  $7$ ;  $b13$ ,  $b9$ ,  $b7$ ;  $7$

System 1 Roots: A, C, A, A, F, D, A, C, B

System 2 Chord Symbols:  $b13$ ,  $11$ ,  $b9$ ;  $8$ ,  $b5$ ;  $b13$ ,  $11$ ,  $b9$ ;  $7$ ;  $b13$ ,  $b9$ ,  $11$ ;  $8$ ,  $b5$

System 2 Roots: G, A, C, C, A, A, B, D, B

28. The major thirteenth may be taken on the same notes as the minor thirteenth, the major thirteenth on dominant and tonic belonging exclusively to the major key, the major thirteenth on the supertonic being common to both major and minor key.

29. It may be resolved either on a chord derived from the same root or on one derived from another root.

30. In resolving on the same root the major thirteenth under the same restrictions with regard to the notes accompanying it as the minor thirteenth, may resolve on either the fifth or seventh.

31. Resolutions of the major thirteenth on the fifth. In the case of the dominant and tonic the major thirteenth is not a discord if accompanied only with the root and third, but a concord, a sixth; but the major thirteenth on the supertonic is a discord, as the chromatic note, the third of the chord, restricts the treatment of the whole chord.

Ex. 37.

Example 37 consists of two systems of musical notation, each with a treble and bass staff. The first system shows a sequence of chords: A major, A major, A major, and A major. The second system shows a sequence of chords: B major, C major, A major, A major, A major, G major, C major, C major, A major, and A major. Figured bass notation is provided for several chords, such as 13 8 #, 5 7, 7, 8 #, and 7.

32. The major thirteenth accompanied with the seventh.

Ex. 38.

Example 38 shows a single system of musical notation with a treble and bass staff. The sequence of chords is: A major, A major, D major, G major, C major, B major, and C major. Figured bass notation is provided for the first three chords: 13 7, 5, and 13 #.

33. The major thirteenth may also be accompanied with the minor ninth; the thirteenth can only resolve with the ninth when the ninth rises to the third, in which case the third cannot be previously in the chord. In the inversions as

usual with the ninth the root is omitted, excepting in the case mentioned. (Chap. VII. sect. 20.)

Ex. 39.

13 5  
b9 3

13 5  
b9 8

13 5 7  
b9 8

A A B D B D B A

34. When taken on the dominant it may also be accompanied with the eleventh; the thirteenth may resolve either with, before, or after the eleventh (Ex. 40).

Ex. 40.

13 5  
11 3  
b9 8

13 5  
11 3  
b9 8

13 5  
11 3  
7

A A D E A

Ex. 41.

13 5  
11 3  
b9 7

C A

35. The fifth of this chord may exist in the bass if it skip to the root (Ex. 41).

36. The major thirteenth may be accompanied with the major ninth in place of the minor ninth; the thirteenth can only be resolved at the same time as the ninth, when the ninth rises to the third.

Ex. 42.

13 5  
9 3  
7

13 5  
9 8

13 5 7  
9 8

A A B D B D B A

37. The major thirteenth and ninth when occurring on the dominant may also be accompanied with the eleventh; the thirteenth may resolve either with, before, or after the eleventh (Ex. 43).

Ex. 43.

Ex. 44.

38. The fifth of this chord may be used if it be in the bass and skip to the root (Ex. 44).

39. The major thirteenth may also resolve on the seventh, in which case the seventh may not be in the chord but the fifth may.

40. On the supertonic it may be accompanied with the third only (Ex. 45).

Ex. 45.

Ex. 46.

41. It may on dominant, supertonic, and tonic, be accompanied with the third and fifth (Ex. 46).

42. The fifth of this chord when taken in the bass may skip to the root at the same time as, or before, the thirteenth resolves on the seventh; this is perhaps

Ex. 47.



the most agreeable form of the chord. In the example are all three thirteenths with the fifth in the bass skipping to the root: at the first bar the tonic  $^{13}_5$  at the third the supertonic, and at the fourth the dominant (Ex. 47).

43. It may also be accompanied with the minor ninth, and it may resolve either with, before, or after the ninth.

Ex. 48.

Ex. 49.

46. The major thirteenth with this resolution may also be accompanied with the major ninth in place of the minor ninth; the thirteenth may be resolved either with, before, or after the ninth.

Ex. 51.

A A B D B B D B

47. It may also, when occurring on the dominant, be accompanied with the eleventh in addition to the major ninth.

Ex. 52.

A C A A

48. The thirteenth may resolve either with, before, or after the eleventh, and the eleventh either with, before, or after the ninth.

Ex. 53.

A C C C B B B A A

49. In resolving on a chord derived from another root, if accompanied by the third alone, which can only be on the supertonic, the natural resolution is on a dominant discord.

Ex. 54.

A A A A A

50. If accompanied with the third and fifth, which can also be only on the supertonic, it may remain as the major third of a dominant discord.

Ex. 55.

A C D B A C A A B A C B D B

51. If accompanied with the seventh, or third fifth and seventh, on the dominant and tonic, it may remain to be the major ninth of the next chord, or fall a semitone to a note of its own name to the minor ninth, or fall a major second to the root.

Ex. 56.

A A C A A A A A A A C A A A A

52. On the supertonic it may fall a semitone to a note of its own name to the minor seventh of the next chord.

Ex. 57.

A B D B

53. On all three notes it may fall a third to the root of the next chord, the fifth on no consideration being taken with the thirteenth.

Ex. 58.

A A A A A A D B B A

54. On dominant and supertonic it may fall a major third to the fifth of the next chord, but be it remembered, that it cannot be used in those inversions which have either the fifth or thirteenth in the bass (Ex. 59).

Ex. 59.

A C A C A A

Ex. 60.

A D B A

55. On the tonic it may fall a minor third to the major third of the next chord (Ex. 60).

56. If accompanied also with the minor ninth the resolutions are precisely the same, with the exception that the thirteenth on the tonic cannot fall a minor third to the major third of the next chord, as with the seventh only; when the thirteenth on dominant and tonic resolves on the fifth of the next chord, it

cannot be used in those inversions which have either the fifth or thirteenth in the bass.

Ex. 61.

Ex. 61. Musical score showing two systems of treble and bass staves. The first system includes chord symbols:  $13 \begin{smallmatrix} b \\ 9 \\ 7 \end{smallmatrix}$ ,  $9 \begin{smallmatrix} \# \\ \end{smallmatrix}$ , 7,  $13 \begin{smallmatrix} b \\ 9 \\ 7 \end{smallmatrix}$ ,  $b \begin{smallmatrix} 9 \\ 7 \end{smallmatrix} \begin{smallmatrix} \# \\ 5 \\ \end{smallmatrix}$ ,  $13 \begin{smallmatrix} b \\ 9 \\ 7 \end{smallmatrix}$ ,  $\begin{smallmatrix} \# \\ 5 \\ \end{smallmatrix}$ , 7. The second system includes chord symbols:  $13 \begin{smallmatrix} b \\ 9 \\ 7 \end{smallmatrix} \begin{smallmatrix} \# \\ \end{smallmatrix}$ ,  $b \begin{smallmatrix} 7 \\ \end{smallmatrix}$ , 7,  $13 \begin{smallmatrix} b \\ 9 \\ 7 \end{smallmatrix}$ , 8,  $b \begin{smallmatrix} 9 \\ 7 \end{smallmatrix}$ , 8,  $13 \begin{smallmatrix} b \\ 9 \\ 7 \end{smallmatrix}$ , 6, 7. Bass notes are labeled: A A C A A, A A A, A A G A A, C C A A A A, B D B, B C A A.

57. If the seventh be omitted the thirteenth may remain as the major third of the next chord, which it could not were the seventh used, as the thirteenth could not remain to be the third of the next chord at the same time as the seventh fell to it, because no discord, &c. (Part I. Chap. VI. sect. 7.)

Ex. 62.

Ex. 62. Musical score showing treble and bass staves. Chord symbols:  $13 \begin{smallmatrix} b \\ 9 \\ 5 \end{smallmatrix}$ ,  $13 \begin{smallmatrix} b \\ 9 \\ 5 \end{smallmatrix}$ ,  $b \begin{smallmatrix} 9 \\ \end{smallmatrix}$ ,  $13 \begin{smallmatrix} b \\ 9 \\ 5 \end{smallmatrix}$ , 7. Bass notes are labeled: A, A, B, D, B, B, A, C, A, A.

Ex. 63.

Ex. 63. Musical score showing treble and bass staves. Chord symbols:  $13 \begin{smallmatrix} b \\ 9 \\ 3 \end{smallmatrix}$ ,  $b \begin{smallmatrix} 9 \\ 7 \end{smallmatrix}$ , 7. Bass notes are labeled: A, B, C, A, A.

58. If the seventh be omitted, the major thirteenth on the tonic may also remain to be the perfect fifth of the next chord (Ex. 63). In this case both roots cannot be in the bass.

59. With the major ninth, the resolutions are the same as with the minor.

Ex. 64.

13 9/3   9 7   7   13 9/3   9 7   13 9/3   b9 8   13 7/5

D B C A A   D B A D B C A A

13 9/3   7   13 b7 9/5   7   13 8/7   13 9/7   8   13 9/7   8   13 9/7   7

D B A B C A A   A A B D B B C A A

60. The seventh being omitted, the thirteenth, accompanied with the major ninth, may remain either as the major third, or perfect fifth of the next chord; in the latter case, as with the minor ninth, both roots cannot be in the bass.

Ex. 65.

13 9/5   b9 8   13 9/3   b9 7   13 9/5   7 #   11 3/7/8

B D D B A B A D B E C A A

Ex. 66.

61. When occurring on the dominant, the major thirteenth and major ninth may be accompanied also with the eleventh; in this case the third cannot be in the chord, nor can the fifth, excepting as the bass; it cannot be resolved on a chord having the fourth or fifth above for its root, if the root of either chord be in the bass.

13 11 9/7   7

C C A A

62. The natural resolutions are for the thirteenth to remain as the major third or major ninth of the next chord, or fall a semitone to a note of its own name to the minor ninth, or fall a major second to the root of the next chord. It is also susceptible of the same resolutions with the fifth in the bass.

Ex. 67.

Ex. 67. Musical notation showing two systems of chords and resolutions. The first system shows chords C, C, A, A, C, A, A, F, D, F, B, A with various figured bass notations. The second system shows chords A, A, C, A, C, A, A, A.

63. The treatment of this chord when the major ninth is used instead of the minor, is precisely the same.

Ex. 68.

Ex. 68. Musical notation showing a single system of chords and resolutions. The chords are C, C, A, A, A, A, C, A, A, A with various figured bass notations.

64. However accompanied, (except with a seventh,) in resolving on the same root, the root of the chord of the thirteenth may, as in the chords of the ninth and eleventh, be taken instead of the seventh, and fall to the seventh.

Ex. 69.

11 — 3  
 $\flat$  9 — 8  
 8 — 7 — 8

13 — 5 — 8  
 $\flat$  9 — 7 — 8

$\flat$ 13 — 8  
 $\flat$ 7 — 7

G C A A B D B E C B

65. In resolving on a chord having another root, the root of the chord of the thirteenth may be taken instead of the seventh and fall to the resolution of the seventh, provided the resolution of such seventh be on the semitone lying between the root and seventh.

Ex. 70.

11 — 3  
 $\flat$  9 — 8  
 8 — 7 — 8

7 — 7

13 — 5 — 8  
 $\flat$  9 — 7 — 8

$\flat$ 13 — 8  
 $\flat$ 7 — 7

G A A A E B D B E C A A

CHAPTER X.

OF THE CHORDS OF THE AUGMENTED SIXTH.

INTRODUCTION.

ALL the chords which have hitherto been described as derived from the scale of harmonics, comprise only the primary harmonics arising from any given root; of course each of those harmonics would in turn give out a fresh series, which I



will call secondary harmonics, and the note whence they spring, the secondary root.

The harmonies which arise from the fifth are naturally more prominent than any other, as they would arise next to those from the primary root, and they are practically the only secondary harmonics which are available for the purposes of harmony; the application of this series of harmonics accounts for the chords of the augmented sixth.

SECTION 1. The three notes which have been assigned as the only roots to chromatic chords, are still the only notes which can be allowed as either primary or secondary roots; therefore, these augmented sixths can be taken as springing from the dominant and tonic only, and not from the supertonic, because the perfect fifth to such supertonic, namely, the major sixth of the scale, is not allowed as a root.

Ex. 1.



2. The interval of the augmented sixth is formed between the minor ninth of the primary root, and the major third of the secondary root (Ex. 1).

3. The only interval which in the figuring is reckoned as belonging to the primary root, is the lower note of the interval of the augmented sixth (the primary ninth); the other notes are reckoned from the secondary root, and figured accordingly. The notes belonging to the primary root (that is, either the primary root or ninth), whether in the bass or otherwise, will be marked with the ordinary letters and figures; those belonging to the secondary root will be

Ex. 2.

marked with Egyptian letters and figures (Ex. 2). But as this is not available for written exercises, it will be better in writing the letters, &c., to pass

a horizontal line through the letter or figure indicating any secondary root or harmonic; the preceding example will appear when written, thus:

Ex. 2 (bis).

$9 \quad 7 \quad 8 \quad b \quad 9 \quad | \quad b \quad 8 \quad b \quad 9 \quad |$   
 $7 \quad 7 \quad | \quad b \quad 5 \quad 7 \quad |$   
 $3 \quad \# \quad 3 \quad | \quad | \quad 8 \quad |$   
 B E E C B E C

This latter mode would have been carried through this book, but that it could not be set up in type, unless fresh type were cast, and that if engraved on wood, each example would have required a fresh block, either of which modes would have enormously increased the expense of this work.

4. The augmented sixth springing from the dominant occurs on the minor sixth of the scale, and that from the tonic on the minor second (Ex. 3).

Ex. 3.

Ex. 4.

E E

5. This interval should not be inverted, because the upper note, being a secondary harmonic and capable of belonging only to the secondary root, should not be beneath the lower, which can only belong to the primary root.

6. This interval may be accompanied with the third, which is the seventh of the secondary root (Ex. 4).

7. It may be accompanied with the third and fourth, which fourth is the secondary root itself (Ex. 5).

Ex. 5.

E E

Ex. 6.

E E

8. It may be accompanied with the third and perfect fifth, which fifth is the minor ninth of the secondary root (Ex. 6).

9. If in the resolution both notes forming the augmented sixth move, the lower one must fall, and the upper one rise, a minor second, to a note which is either the root or fifth of the next chord (Ex. 7).

Ex. 7.

E C E A

Ex. 8.

E — E C

10. If one note remain, the other may approach it by moving a semitone to a note of its own name (Ex. 8).

11. The third and fifth are to be treated (with these restrictions) as though they were the minor seventh and ninth to the secondary root, and as though the minor ninth to the primary root were not in the chord, provided they make no false progressions with such primary ninth; thus, the third, the seventh to the secondary root, either remains or falls, or, if doubled, one of the two is free in its progression. The fourth, the secondary root, is independent in its motion, provided it make no false progressions with the other parts. The fifth, the ninth to the secondary root, may either remain or fall a minor second, or rise a semitone to a note of its own name.

12. These chords and their inversions may either be resolved on the common

Ex. 9.

E A E A E \* A E C E C E C

Roots.

\* This progression is sometimes used, but by no means recommended, although when resolving on the common chord of the primary root, the consecutive fifths are perhaps less objectionable than in most other places.

$\sharp 7$   $\flat 7$   $\sharp 7$   $\flat 7$   $\sharp 7$   $\flat 7$   $\sharp 7$   $\flat 7$   $\sharp 7$   $\flat 7$   $\sharp 7$   $\flat 7$

$\sharp 7$   $\flat 7$   $\sharp 7$   $\flat 7$   $\sharp 7$   $\flat 7$   $\sharp 7$   $\flat 7$   $\sharp 7$   $\flat 7$   $\sharp 7$   $\flat 7$

E E E E E C E C E C E C

Roots.

chord of the primary root, which chord must in all cases be major, or on the second inversion of the common chord major or minor of the fourth above the primary root, or on the minor ninth of the primary root, or on the minor seventh or ninth on the secondary root, or on their inversions.

13. It has been already mentioned that the interval of the augmented sixth cannot be inverted; but this law does not bind the other intervals of the chord. If accompanied with the third only, there is but one inversion, the third being in the bass.

Ex. 10.

$\flat 9$   $\sharp 5$   $\flat 9$   $\sharp 5$   $\flat 9$   $\sharp 5$   $\flat 9$   $\sharp 5$

$\flat 9$   $\sharp 5$   $\flat 9$   $\sharp 5$   $\flat 9$   $\sharp 5$   $\flat 9$   $\sharp 5$

D B D D D C D A

14. If accompanied with the third and fourth, it is susceptible of two inversions; the first inversion is with the fourth (the secondary root) in the bass; the second inversion is with the third in the bass.

Ex. 11.

$\flat 9$   $\sharp 5$   $\flat 9$   $\sharp 5$   $\flat 9$   $\sharp 5$   $\flat 9$   $\sharp 5$

$\flat 9$   $\sharp 5$   $\flat 9$   $\sharp 5$   $\flat 9$   $\sharp 5$   $\flat 9$   $\sharp 5$

A B A C D B D B

15. When accompanied with the third and fifth it is also susceptible of two inversions. The first inversion has the third in the bass; the second inversion has the fifth in the bass.

Ex. 12.

D B D A E B E C

16. The secondary root may also exist in this chord (as the bass) with both the seventh and ninth above it, provided the diatonic rule of approaching the ninth by step of a second, and in contrary motion, be observed.

Ex. 13.

B A A C A A A A A

17. The secondary root of either of these chords of the augmented sixth may be taken instead of the secondary seventh, and fall either to the seventh itself, or to the resolution of such seventh, provided the resolution be to the semitone lying between the secondary root and seventh.

Ex. 14.

E C E E E B E C E E

18. Whenever it can be done compatibly with the rules for the progression of parts, either of these chords or its inversions may be followed by the other of them or its inversions.

Ex. 15.

The musical score for Example 15 consists of two systems, each with a treble and bass staff. The bass staff contains chord symbols for the progression.

**System 1:**

- Chord symbols: A, D, E, C, B, B, A, A—, D, B, E, E
- Chord symbols with extensions:  $b9 \#3$ ,  $b9 \#3$ , 7,  $b9 \#3$ ,  $\#3$ ,  $\#3$

**System 2:**

- Chord symbols: C, B, E, C, D, C, E, E, B, E—, C, A, A
- Chord symbols with extensions:  $\#3$ ,  $b5$ ,  $b9$ ,  $b8$ ,  $\#3$ , 9,  $b9$ ,  $b9$ ,  $\#3$ ,  $\#3$ ,  $b9$ ,  $\#3$ , 7,  $b9$ ,  $\#3$ ,  $\#3$

CHAPTER XI.

OF THE SUSPENSION OF FUNDAMENTAL CHORDS.

INTRODUCTION.

ALTHOUGH this Chapter contains only the laws affecting suspensions of fundamental chords, yet as all the fundamental chords which can be used have already been gone through, it may not be out of place to observe, that although the *natural* resolutions of those chords have been given, there are many more solutions left than have been detailed; the general rule for all (and in which most all the Second Part of this Book is comprised) is—the rules for progression of parts generally, those for the progression of the particular intervals

of the several fundamental chords and against false relations, being observed, any one of these chords or its inversions may go to any other of them or some of its inversions.

SECTION 1. Either the minor seventh, minor or major ninth, or minor or major thirteenth, in resolving on the next chord, may, like diatonic discords of the second species, be suspended over the root of the resolution, or over the bass of the first inversion, provided the root of the resolution be the fourth above that of the suspended chord.

Ex. 1.

Example 1 consists of two systems of musical notation. Each system has a treble clef staff and a bass clef staff. The first system shows a sequence of chords: A7, A7, Ab9, Ab9, Ab13, and Ab13. The second system shows: A13, A7, D8, B8, A7, A7, A7, and A7. Figured bass notation is provided for each chord, showing the intervals between the bass and the other notes. The bass notes are labeled A, A, A, A, A, A, A, A, D, B, A, A, A, A.

2. The chords of the augmented sixth may also be suspended over the root of the resolution, or the bass of the first inversion, if the root of the resolution be a fourth above the secondary root of the augmented sixth.

Ex. 2.

Example 2 shows a sequence of chords in two systems. The first system has chords: Ab9, Ab9, and Ab9. The second system has chords: Ab9, Ab9, D8, and B8. Figured bass notation is provided for each chord. The bass notes are labeled A, A, D, B.

3. The supertonic discords may also be suspended over the bass of the second version of the tonic chords.

Ex. 3.

Example 3 shows a sequence of five chords: A, A, C, A, A. The first two A chords have a sharp sign above them. The C chord has a sharp sign above it. The bass line consists of notes: A, A, C, A, A. Above the bass line, there are figures: 5 3, 5 3, 5 3, 7, 5 3. The treble clef staff shows the notes of the chords with some notes marked with a sharp sign.

4. In the General Introduction to the Second Part of this book, it is stated that the chromatic discords are already prepared in nature; therefore, if *any* chord, either of the three notes assigned as roots of chromatic chords be taken, the fundamental discords on that note are *understood*. On this principle, if *any* chord on one of these three notes be taken, *not only that particular chord, but any fundamental discord on the same root* may be suspended over the resolution. Where the notes so suspended have not been sounded in the previous chord, of course there will not be any figure indicating that interval to continue into the next chord; it will be better, therefore, to draw a line from the place where such figure *would* occur in the previous chord, were it sounded there, to the figure itself, which should be marked where the note is actually struck, the figuring being that of the previous chord, and not of that over which it is suspended. There is no necessity to figure such concords in the first chord, as are concords in the second.

Ex. 4.

Example 4 shows a sequence of eight chords: A, C, A, A, A, C, A, A. The bass line consists of notes: A, C, A, A, A, C, A, A. Above the bass line, there are figures: 5 3, 5 3, 5 3, b9 7, 5 3, b13 7, 5 3, 5 3. The treble clef staff shows the notes of the chords with some notes marked with a sharp sign and a flat sign.

5. No false progressions must be made in any of the above cases; the suspension must always be on a stronger accent than its resolution, and the chord when suspended must be clearly made out, free from any obscurity.



CHAPTER XII.

MIXTURE OF THE DIATONIC AND CHROMATIC SCHOOLS.

SECTION 1. Analogous to the first species of discords, the diatonic fourth may be suspended over the third of any chromatic chord, even over the third of the secondary root of the augmented sixths; the same through the inversions, provided always that the fourth and third be not ever sounded together.

Ex. 1.

A C A C A A A A C E

A A A A A A A

2. A major ninth may be suspended over the eighth on the minor second of the scale, where also may be suspended together the ninth and fourth; the same also through the inversions.

Ex. 2.

A A A C A A A A B A

3. Analogous to the second species of discords, a prepared diatonic seventh may be taken on the minor second, or minor sixth, of the scale, and the resolution is on a chromatic chord, having for its root the fourth above or fifth below, either chromatic or diatonic.

Ex. 3.

Chord symbols for Ex. 3:  $b7$ ,  $b5$ ,  $\sharp 7$ ,  $\sharp 5$ ,  $\natural 7$ ,  $\flat$ ,  $b7$ ,  $b5$ ,  $b5$ ,  $b7$ ,  $\flat$ ,  $b7$ ,  $b5$ ,  $\sharp 7$ ,  $b7$ ,  $b5$ ,  $\sharp 7$ .

Letter sequence for Ex. 3: A A A C A A A A A C A A A A A A

4. A diatonic prepared ninth or fourth, or both, in the minor key, may be taken on the minor or major second of the scale, either without or in addition to the prepared seventh. The resolution is to the same chord as with the seventh alone.

Ex. 4.

Chord symbols for Ex. 4: 7,  $\frac{9}{4}$ ,  $b8$ ,  $\frac{7}{3}$ , 7, 7,  $\frac{9}{4}$ ,  $\frac{8}{\sharp}$ ,  $\frac{7}{5}$ ,  $\frac{7}{4}$ ,  $\natural$ .

Letter sequence for Ex. 4: A B A C A A A B A A A

5. Either part or the whole of any of the chords mentioned in section 3, may be suspended over the bass of its resolution. These, like all other, suspensions, must be taken on a stronger accent than their resolution.

Ex. 5.

Chord symbols for Ex. 5: 7,  $\frac{9}{b3}$ ,  $\frac{7}{5}$ ,  $\frac{7}{b5}$ ,  $\frac{7}{3}$ ,  $\frac{7}{5}$ ,  $\frac{7}{b3}$ ,  $\frac{7}{5}$ .

Letter sequence for Ex. 5: A A A A A

6. The augmented fifth on the minor second of the scale, moving to the dominant harmony, and the augmented fifth on the minor sixth of the scale, moving to a chord of which either the minor or major second of the scale is the root, may be used, provided the augmented fifth be prepared.

Ex. 6.

A A A D C A A B A A A A B C A A

### CHAPTER XIII.

#### OF PASSING NOTES IN THE FREE STYLE, INCLUDING CHROMATIC PASSING NOTES AND ARPEGGIOS.

##### INTRODUCTION.

IN this Chapter are contained the laws affecting that part of music which has hitherto been the most difficult because the most uncertain, namely, that comprehending chromatic passing notes and arpeggios. The laws affecting double chromatic passing notes in passage and chromatic passing notes in contrary motion are given, not because either one or the other is recommended,—far from it, (as the utter impossibility of rendering either of them very agreeable cannot be too much impressed on the student,) but because they may not be rendered unnecessarily disagreeable. The extreme limits to which they may be allowed to go are set down, and those limits should not on any account be passed.

**SECTION 1.** The passing notes will be divided into two kinds.

2. The first, with all the moving parts (having passing notes) moving the same way.
3. The second, with the moving parts in contrary motion.
4. The first kind, bearing the same relation to chromatic or free music, as does the third species of diatonic discords to diatonic or strict music; and the second, as the fourth.

5. Free passing notes differ from diatonic or strict passing notes, insomuch as they may be taken on any part of the bar, and they may be either accented or unaccented.

Ex. 1.

6. They also differ from diatonic, as they may be taken by skip, although like them they cannot be quitted by skip.

Ex. 2.

7. They differ also from diatonic, as they can be taken not merely as passing notes from concord to concord, but also from any note of a chord whether consonant or dissonant, (if the discord be a fundamental discord,) to any other note of the same chord, or to any note of any other chord to which such note might proceed.

Ex. 3.

8. It is a commonly received opinion, that when a chromatic note is used (if rising), it shall be a minor second beneath the note to which it rises, and not a semitone of its own name; and (if falling) it shall be a minor second above the note to which it falls—this is to a certain extent the truth, but not entirely. Where the same chord continues, the chromatic scale, as written in page 55, sect. 6, is to be strictly observed so long as the passing notes are on the chords of the tonic, subdominant, minor second or minor sixth of the scale; if any other chord be used, the chromatic notes are to have reference to the root of the chord as a new tonic.

Ex. 4.

The image contains two systems of musical notation. Each system consists of a treble clef staff with a chromatic scale and a bass clef staff with chords. The first system shows a rising chromatic scale starting on A. The bass staff chords are labeled A, A, B, B, D, B. The second system shows a falling chromatic scale starting on A. The bass staff chords are labeled A, B, C, A, A, A. Above the second system, there are additional annotations:  $\flat 8$  and  $\flat 5$  above the first chord,  $\flat 5$  above the second chord, and 7 above the third chord.

9. In passing from chord to chord, if a chromatic passing note lie between the last note of one chord and the first of the next, such chromatic passing note has reference to the second chord and not to the first; a chromatic passing note will thus be written two ways when occurring between the same notes; for example: if the key note (say C), being part of the tonic harmony, be followed by the second of the scale, being part of the dominant or supertonic harmony, the chromatic passing note *may* be C #\*; if the progression be reversed, in passing from D to C the passing note *must* be D  $\flat$ , and the same with other notes similarly situated; from the frequent occurrence of the key note followed by the supertonic, and the supertonic followed by the tonic as above mentioned, also of the fifth of the scale being part of the dominant or tonic harmony followed by the major sixth of the scale being part of the supertonic harmony, and *vice versa*,

\* This may also be D  $\flat$ , an essential note of the chord of the minor ninth on the tonic.

in the former of which the passing note *may* be G#\*, and in the latter it *must* be A b; it will, from this and sect. 8, appear that the old system is about as often wrong as right.

Ex. 5.

Example 5 consists of two systems of musical notation. Each system has a treble staff and a bass staff. The first system shows a sequence of chords labeled A, B, C, A, D, B, A, A, A. The second system shows a sequence of chords labeled A, A, A, B, A, A, A. The notation includes various note values, accidentals, and a fermata over the final note of the second system.

10. An apparent contradiction to, though a real coincidence with, these laws, occurs sometimes when the common chord minor on the second of the scale, or its first inversion, is used; the semitone below the fifth from such second being sometimes a minor second, and sometimes a note of its own name, and the note above being sometimes a major and sometimes a minor second; this arises from the chord being susceptible of treatment either as one having for its root the dominant, or the second of the scale. If the former, the fifth from such second is considered as the major ninth of the chord, the semitone below which will be a note of its own name (the minor ninth);

Ex. 6.

Example 6 shows a single system of musical notation with a treble staff and a bass staff. The treble staff contains a melodic line with various note values and accidentals. The bass staff contains a harmonic line with chords labeled B, C, D, C, C, A. The notation includes a fermata over the final note of the bass staff.

\* This may also be an A b if coming from the dominant chord.

11. If the latter, which will have the semitone below such fifth a minor second, the sixth from such second of the scale must be minor to correspond with the third.

Ex. 7.

Musical notation for Example 7. The treble staff contains a sequence of chords: A major (A-C-E), B major (B-D-F), C major (C-E-G), A major (A-C-E), and A major (A-C-E). The bass staff shows the corresponding bass notes: A, B, C, A, A. The word 'Bad.' is written below the bass staff, indicating a false relation between the B in the second chord and the C in the third chord.

12. In Ex. 8 beneath, the G # being used, the B ♭ is bad, as would have been B ♭ had A ♭ been used.

Ex. 8.

Musical notation for Example 8. The treble staff contains a sequence of chords: A major (A-C-E), B major (B-D-F), C major (C-E-G), and A major (A-C-E). The bass staff shows the corresponding bass notes: A, B, C, A. The word 'Bad.' is written below the bass staff, indicating a false relation between the G# in the second chord and the Bb in the third chord.

13. It is allowable to skip to the semitone, either chromatic or diatonic, below any note of a chord, or to the diatonic note below the major third of a chord. Should the semitone below any given note, be of the same name as the note to which it rises, but of a different pitch, it is not to be considered as a false relation.

Ex. 9.

Musical notation for Example 9. The treble staff contains a sequence of chords: A major (A-C-E), B major (B-D-F), C major (C-E-G), and A major (A-C-E). The bass staff shows the corresponding bass notes: A, B, C, A. The word 'Bad.' is written below the bass staff, indicating a false relation between the G# in the second chord and the Bb in the third chord.

14. It is allowable to skip to the diatonic second above any note of a chord, such second not being an augmented second; to the minor seventh of the scale, such minor seventh being a major second above the root of the common chord on the minor sixth of the scale, above the third of the subdominant minor chord,

or above the fifth of the common chord on the minor second of the scale; and to the minor third of the scale, being a major second above the root of the common chord on the minor second of the scale; also to the semitone above, being a minor second above the root and fifth of the chromatic chords, or of the tonic and dominant common chords, or above the third and fifth of the major subdominant chord, such minor second being in all cases a note belonging to the chromatic scale of the key. These last passing notes are not allowed to make false relation with any note of the chords.

Ex. 10.

Example 10 consists of two systems of musical notation. The first system has a treble staff with a melodic line and a bass staff with chords. The chords are labeled A, B, B, C, C, B, B. Above the first B chord, there are markings  $b8$  and  $b5$ . Above the second B chord, there is a '7'. Above the C chords, there is a '7'. Above the final B chord, there are markings  $b8$  and  $b5$ . The second system also has a treble staff with a melodic line and a bass staff with chords. The chords are labeled C, A, A, A, B. Above the first A chord, there is a '7'. Above the second A chord, there is a  $b$  and the word 'Bad.'. Above the final B chord, there are markings  $b9$  and '7'. The piece ends with a double bar line.

15. It is also allowable to skip from either of these notes above, to either of the other below, or *vice versa*, before proceeding to the note of the chord lying between, which, however, *must* follow the second of these passing notes.

Ex. 11.

Example 11 consists of two systems of musical notation. The first system has a treble staff with a melodic line and a bass staff with sustained chords. The chords are labeled A. The second system has a treble staff with a melodic line and a bass staff with sustained chords. The chords are labeled A. The piece ends with a double bar line.

16. When any passing note may be taken by skip, or by step of a second, it is also allowable to take it as an apparent suspension from a previous chord (Ex. 12); that these notes when taken thus, are passing notes, and not suspensions, is



proved by Ex. 13, in which the B  $\flat$  is not allowable, being the major second below the fifth of the chord.

Ex. 12.

A A A A

Ex. 13.

Bad.

17. In passing from any note of a chord to any note of the same or any other chord, if any part move by semitone to a chromatic note not belonging to the chord, or to a diatonic note not being previously a part of the chord, it must move in the same direction, and by semitone, to some note of the same or another chord, or when within a semitone of such note, skip to the allowable note either above or below that note, which, however, must immediately follow, excepting when the passage reaches by semitone the minor seventh, eleventh, minor or major ninth, or minor thirteenth; when those intervals, even although previously not parts of the chord, may be considered and treated as essential, as may also the major thirteenth if taken from the minor thirteenth, provided always that the chord in all these cases be clearly made out, that is, that the essential notes of the chord be there, as the major third or root with the seventh or minor or major ninth; the seventh and either root third or minor ninth with the minor or major thirteenth; and either third or fifth with the eleventh. Ex. 14 is good, because the notes progress by semitone. Ex. 15 is good, because they move

Ex. 14.

A A 7

A D B A B

Ex. 15.

The first system of Example 15 shows a treble staff with a melodic line and a bass staff with chords. The bass staff chords are labeled A, A, C, B, A, A. Above the second and fourth chords, there are labels  $b7$  and 7. The second system shows a treble staff with a more complex melodic line and a bass staff with chords labeled A, C, B, A, A. Above the second and fourth chords, there are labels  $b7$  and 7. A fermata is placed over the second chord in the bass staff of the second system.

to a fundamental discord in the manner above specified. Ex. 16 is bad, because they neither do one nor the other.

Ex. 16.

Example 16 consists of a treble staff with a melodic line and a bass staff. The bass staff features a long, sustained note that spans across several measures, with a fermata above it. The bass staff chords are labeled A, A, D, B.

18. As regards the progression of these passing notes with each other in similar motion, the augmented fifth or diminished fourth formed between the minor seventh and augmented fourth of the scale, can only be used in ascending, and not in descending: it is anything but agreeable at any time.

Ex. 17.

Example 17 shows a treble staff with a melodic line and a bass staff with chords. The bass staff chords are labeled A, B, A, B, D, B. A 7 chord is indicated above the fifth chord (D).

19. The laws affecting the passage of a single part in its relation to the immovable parts, also the laws affecting the progression with each other of parts

moving the same way, being observed, these passing notes may be used double, triple, or even quadruple.

Ex. 18.

Example 18 consists of two systems of musical notation. Each system has a treble clef staff on top and a bass clef staff on the bottom. The first system shows a treble staff with a melodic line containing chromatic passing notes and a bass staff with a harmonic line. Chord labels 'A', 'C', 'C', and 'B' are placed below the bass staff. A horizontal line with '7' and '11' above it spans across the first three measures. The second system follows a similar pattern with more complex chromatic passages. Chord labels 'A', 'A A A', 'A', and 'C A A' are placed below the bass staff.

20. In passing notes in the free school in contrary motion, the laws for progression of parts generally, also the particular laws given in this chapter for parts moving the same way, are to be observed.

21. It is above all things essential, that the passages in contrary motion should be strictly in the same key.

22. It is desirable that not more than two parts move by semitones in contrary motion at the same time. Chromatic passing notes follow the diatonic law,

Ex. 19.

Example 19 consists of two systems of musical notation. Each system has a treble clef staff on top and a bass clef staff on the bottom. The first system shows a treble staff with a melodic line and a bass staff with a harmonic line, both featuring chromatic passing notes. The second system continues the chromatic passages in both staves.

that, provided they reach their proper places at last, they may be hurried or protracted at pleasure (Ex. 19).

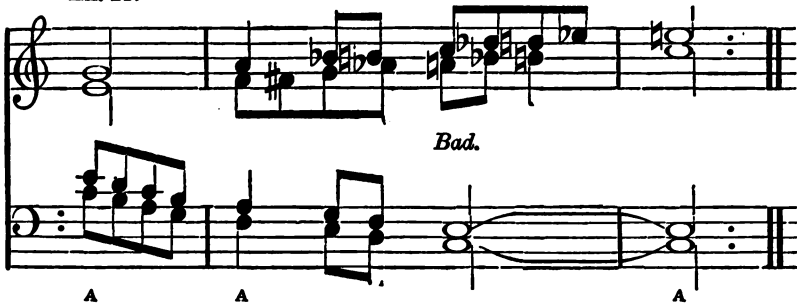
23. It can scarcely be said that any progression by semitones in contrary motion is agreeable, but it will be less disagreeable in proportion to the number of concords, and intervals being part of harmonies in the key, formed by the moving parts. Among the least disagreeable places to start from are the major third and its inversion, and the diminished fifth and its inversion.

Ex. 20.



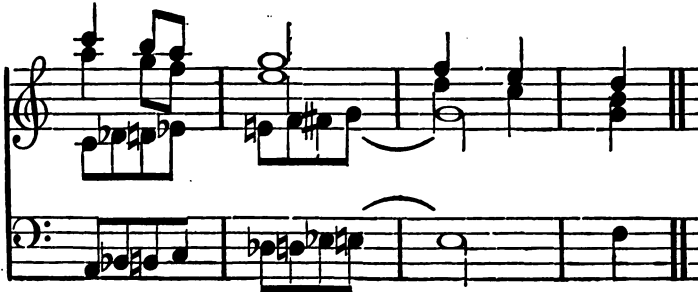
24. In these free passing notes, all the chromatic notes in the ascending parts are reckoned as discords; also, as in diatonic discords, all the descending parts; it is therefore not allowable, whether the chromatic notes be in the ascending or descending parts or both, to bring up the ascending part or parts to concords with the descending, and then to treat them as any other concords.

Ex. 21.



25. But either the descending part or parts must fall to the concord.

Ex. 22.



26. Or the parts must proceed by contrary motion to a concord, or to a discord, when such discord may be treated according to its species or kind.

Ex. 23.

A

27. Or if the ascending parts be raised to a fundamental discord with the descending, it may be treated as though produced in any other way.

Ex. 24.

A C B

28. The passing notes in contrary motion hitherto mentioned have been passing notes in passage, without reference to any particular chords; but, in addition, provided it can be done without making false progressions, passing notes, double, triple, or even quadruple, may be taken both above and beneath notes of chords.

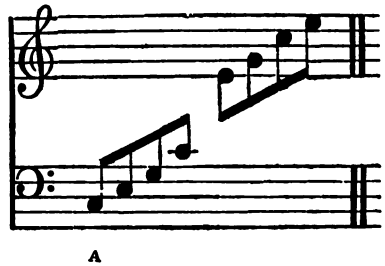
Ex. 25.

A B C A B C A B C

29. Although rules have been given above regulating the progression of double chromatic passing notes in similar motion, also of chromatic passing notes in contrary motion, yet both the one and the other should be used very sparingly, as, however well managed, the effect is rarely agreeable.

30. An arpeggio of a chord is, the notes of a chord sounded successively, instead of simultaneously.

Ex. 26.



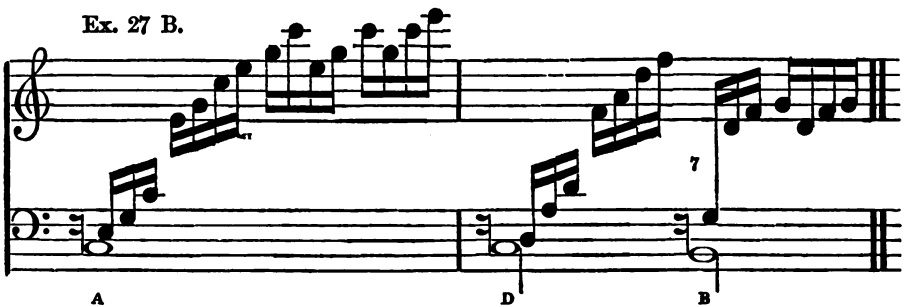
31. Arpeggios may be divided into two kinds; one in which the different notes form real parts.

Ex. 27 A.



32. The other in which they do not form real parts.

Ex. 27 B.



33. In the first kind the parts progress as though the entire chord were struck at once, and not divided; passing notes may be used from one note of a chord to another.

Ex. 28.



34. With regard to the second kind, in which the different notes do not form real parts, the arpeggio may commence and terminate on any note of the chord, provided the lowest note of the chord, whether part of the arpeggio or not, be the actual bass (Ex. 30, *vide* Plate).

35. Any note of a chord, whether it be a concord, or a suspended, essential, transitory, or fundamental discord, may be doubled (Ex. 31, *vide* Plate), provided the *interval* of the augmented sixth is never inverted.

36. It is desirable that the major third be not ever taken above the major ninth.

37. The parts may either all move in similar motion (Ex. 32, *vide* Plate), (in which the inversion of the interval of the augmented sixth is bad;) or in contrary motion (Ex. 33, *vide* Plate); or some parts may remain while the rest move (Ex. 34, *vide* Plate); provided that in coming on a fifth by similar motion, one part do not move more intervals of the chord than another. (Part II: Chap. II. sect. 17, Ex. 22.)

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## CHAPTER XIV.

### OF PEDALS IN THE FUNDAMENTAL OR FREE STYLE.

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#### INTRODUCTION.

THE laws affecting pedals have hitherto been exceedingly lax and ill-defined, which circumstance, joined with false notation,—whereby chords not having, as written, the most remote connexion with the key in which they are used are introduced on any given pedal,—has left regarding pedals only a vague idea that the pedal can be only the key note, or the fifth of the key, in which any piece of music may be; but that on these notes may be taken any chords whatever, whether belonging to the key or not. That this is not the case is endeavoured to be shown in this chapter; and the limits to harmonies on either tonic or dominant pedal, or both, are distinctly marked out. Probably the best way to test the harmonies on a pedal would be to invert the pedal by writing all the roots of the chords used, beneath such pedal note.

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SECTION 1. As in diatonic harmony, a pedal note is one note continued through several chords.

2. Such pedal may either be and be treated as an essential portion of the harmony, or it may not.

3. When it is not an essential portion of the harmony, the part immediately:

Ex: 30.

Ex: 31.

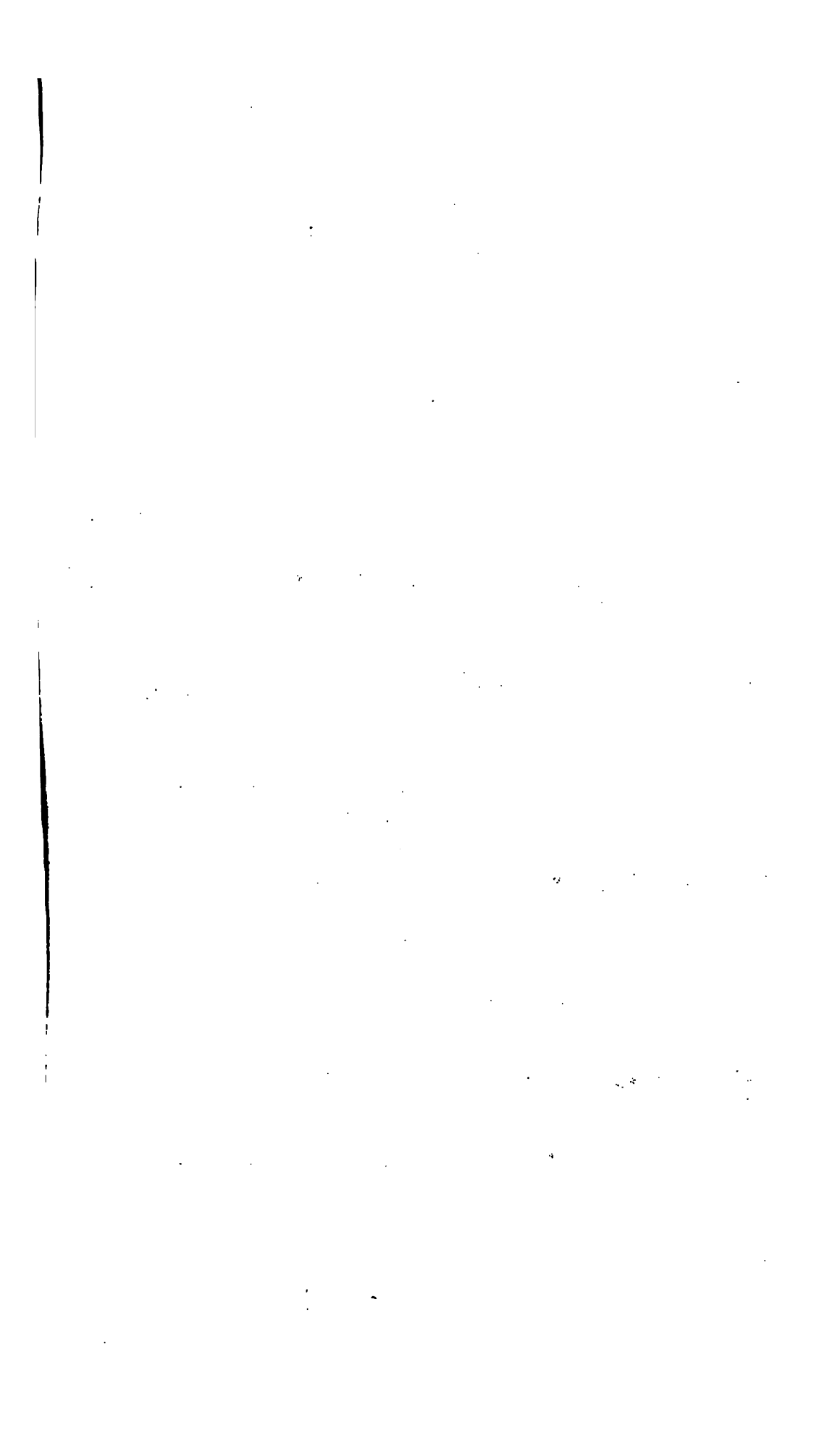
The first system of the musical score contains two examples, Ex: 30 and Ex: 31. Each example is written on a grand staff with a treble and bass clef. Ex: 30 features a melody in the treble clef and a bass line in the bass clef. The bass line includes chords labeled A, A, A, and A. Ex: 31 features a melody in the treble clef and a bass line in the bass clef. The bass line includes chords labeled G, D, D, B, and B. The bass line for Ex: 31 also includes fingerings: 7, 4, 5, 15, 5, and 7.

Ex: 32.

The second system of the musical score contains Example 32. It is written on a grand staff with a treble and bass clef. The bass line includes chords labeled A, D, B, B, B, G, and A. The bass line also includes fingerings: 8, 5, 7, 7, 7, 7, and 7. The bass line for Ex: 32 also includes fingerings: 8, 5, 7, 7, 7, 7, and 7.







Ex: 3.

Chord progression for the first system:  
 A A 9 8 -b7 9 8 A A C D B A G B B  
 A A D

Chord progression for the second system:  
 B D B C D B D B G C A C A E A C B D B  
 A A D 7 C 5 G C # E A 5

Chord progression for the third system:  
 B B C A E B B A D B B C A E C B

Chord progression for the fourth system:  
 D B D A A C A C B A C A  
 A A A C A E



## CHAPTER XV.

## ON MODULATION IN THE CHROMATIC OR FREE STYLE.

## INTRODUCTION.

HOWEVER short this chapter may appear, it will, I think, be found, on examination, to contain all the principles in accordance with which modulation can be made. The variety to be obtained by following these principles through their application is almost endless.

SECTION 1. Modulation in the free style may be effected in several ways;—major or minor common chords, or their first inversions, may be treated as chords, either chromatic or diatonic, in the key *to which* instead of *from which* the modulation is made.

2. Every common chord major may be a diatonic harmony in the major keys of which the root of the chord is either the first, fourth, or fifth; or the minor keys of which it is either the fifth or sixth; or a chromatic chord of the major keys of which it is either the minor sixth or major or minor second; or the minor keys of which it is either the minor or major second.

Ex. 1.

Example 1 consists of two systems of musical notation, each with a treble and bass clef staff. The first system shows a sequence of chords: A, A, B, C, A, A, A, A, C, B, D, B, A, A, A, A. The second system shows a sequence of chords: A, D, B, A, A, A, A, A, A, A, A, A, A, A, A. The notation includes various accidentals and chord symbols such as #, b, and 7.

7 7 #5 # 11 7 7 #

A C B A C A A A A C A A

7 #5 # #8 #5 # 11 7 b8 b7

A A B A A C B A A A D B A A B C A A

#8 #5 #8 #5 7 #5 11 7 #8 #5 9 7 #5

A A B A B A B A A A B B D C A A B A D C A A

7 11 7 b8 b7 b5 11 b8 b7 b

A C B D C A A B C A A D C A A

3. Fundamental sevenths, ninths, and thirteenths, and the eleventh, may be added to each major common chord, and, provided no false progressions be made, the chords may be treated in the same way, that is, as chords in the key *to which*, instead of *from which*, the modulation is made.

4. Every common chord minor may be a diatonic harmony in the minor keys of which the root of the chord is either the first or fourth, or the major keys of which it is either the second or sixth.

Ex. 2.

A A A B A A A A A A B C A A A A C B B A A A

5. Every minor ninth may belong to three major and three minor keys.

6. Enharmonic modulation is when modulation is effected by changing the name of one or more notes of a chord, and then resolving it according to the proper resolution of the chord as newly named, or else resolving the chord (without changing the names of the notes,) as though they had been changed. In Ex. 3 the  $F \natural$  in the chord of the seventh on  $G$  is changed into  $E \sharp$ , the chord forming then the augmented sixth on  $G \natural$ , which is resolved on the second inversion of the major common chord of  $B \natural$ . In Ex. 4 the chord of the seventh on  $G$  resolves at once on the second inversion of the common chord of  $B \natural$ , the resolution being the same as though the  $F \natural$  had been changed into  $E \sharp$  before resolution.

Ex. 3.

A E C

Ex. 4.

A C

Ex. 5.

B C D E

7. By enharmonic change, every chord of the minor ninth without the root may be written four different ways, therefore every minor ninth may resolve into twenty-four different keys.

8. Any one of the notes composing the fundamental major common chords, or the fundamental sevenths, minor or major ninths, eleventh, or minor or major thirteenths, or of either of the chords of the augmented sixth, may remain to

Ex. 6.

7  $\begin{matrix} 9 \\ b7 \\ b5 \end{matrix}$   $\begin{matrix} b8 \\ b5 \end{matrix}$   $b5$  7  $b7$  7 # 7  $\begin{matrix} 7 \\ \#5 \\ \# \end{matrix}$

A B A A C A A D B A E B

7  $b7$   $b8$  7  $\begin{matrix} 7 \\ 5 \end{matrix}$  # 7  $\begin{matrix} 7 \\ \#5 \\ \# \end{matrix}$   $\begin{matrix} \#8 \\ 7 \\ \#5 \end{matrix}$  7  $b8$   $b8$   $b5$

A E B C A A F C B A G B B A G D B

7  $\begin{matrix} b9 \\ b9 \\ 7 \\ \#3 \end{matrix}$  7  $\begin{matrix} \#8 \\ 7 \\ \#3 \end{matrix}$  # 7  $\begin{matrix} b9 \\ 7 \\ \#3 \end{matrix}$

A A A A E C A A B C

7  $\begin{matrix} 8 \\ 7 \\ 5 \end{matrix}$   $\begin{matrix} b8 \\ b7 \end{matrix}$   $b8$   $b7$   $b5$  7  $\begin{matrix} b9 \\ \#3 \end{matrix}$  7  $\begin{matrix} 9 \\ 7 \\ \#3 \end{matrix}$

A C E E C A A A D B A E B

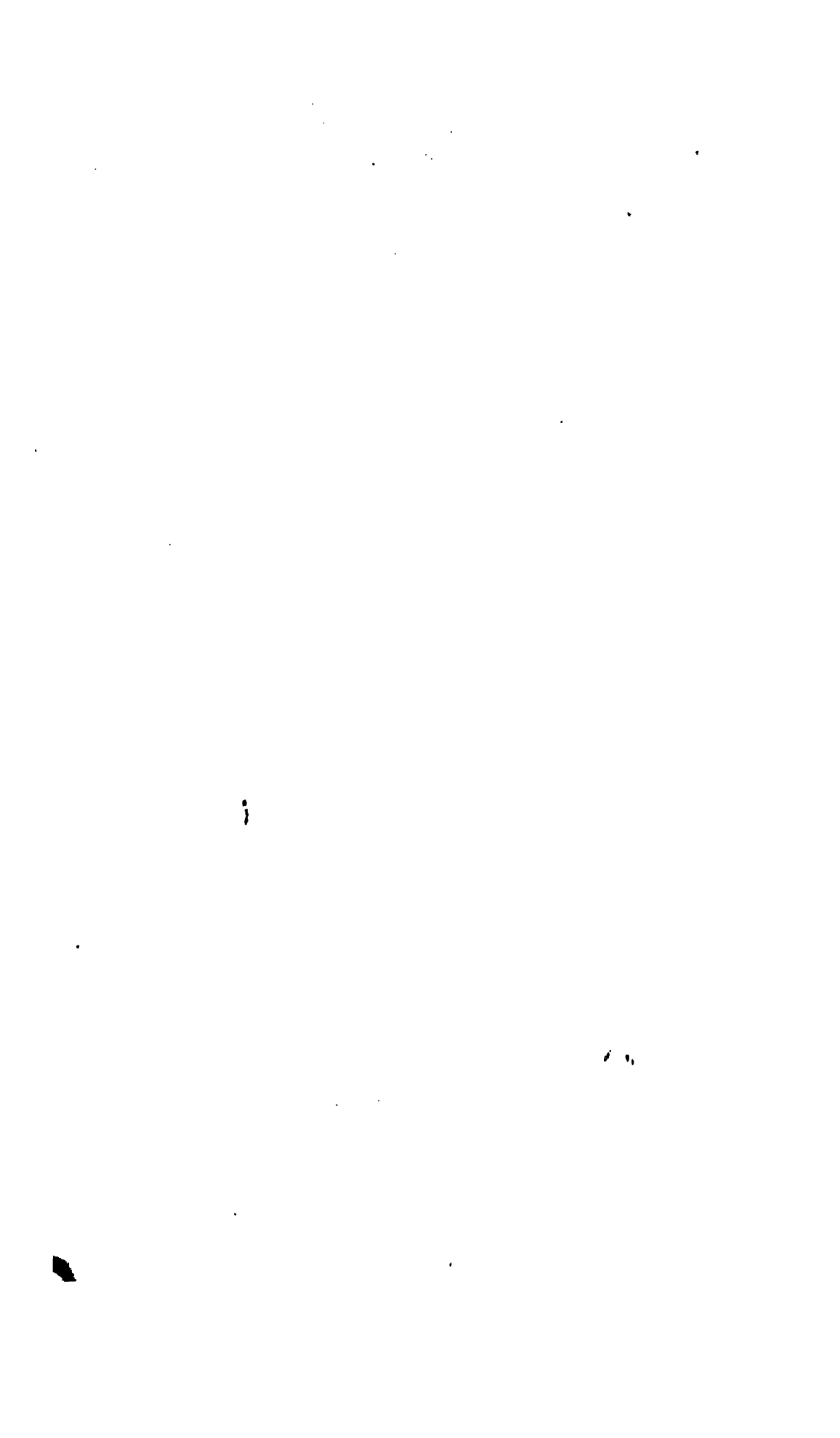


become any other interval of any other of those chords, excepting, that neither the minor or major ninth can ever remain as the primary root of the chord of the augmented sixth; nor can the lower note of the interval of the augmented sixth ever remain as the seventh or as the augmented sixth of the next chord; nor can the augmented sixth ever remain as the root of the next chord, or as the primary root or primary ninth of the chord of the augmented sixth.

9. In the preceding example, G, the root of the first chord of each section, remains to be every interval of every other fundamental chord in the following order: the third, fifth, seventh, minor ninth, major ninth, eleventh, minor thirteenth, major thirteenth; then primary root, primary ninth, secondary root, secondary third, secondary seventh, and secondary ninth, of the chord of the augmented sixth. In the same way, with the restrictions before mentioned, may any other interval of any fundamental chord be treated.

FINIS.











6

