


RICHTER'S  
TREATISE ON HARMONY.  
BY  
FRANKLIN TAYLOR.



Inglis. 130





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TREATISE

ON

HARMONY.

TRANSLATED AND ADAPTED FROM THE GERMAN OF

ERNST FRIEDRICH RICHTER

(PROFESSOR AT THE CONSERVATORIUM OF MUSIC, LEIPZIG),

BY

FRANKLIN TAYLOR.

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# P R E F A C E .

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THIS work is an adaptation of the Text-book in use at the Leipzig Conservatorium of Music—the “Lehrbuch der Harmonie,” by Ernst F. Richter, Professor at the Conservatorium, and Musical Director of the University of Leipzig. Having found, by personal experience, that the above work not only contains much that is new in its manner of treating certain subjects, but moreover is based upon a more complete and practical system than any other course of harmony with which I am acquainted, it occurred to me while pursuing my studies at Leipzig that a literal translation of it into the English language would be acceptable to English students and teachers, and might occupy a similar position in England to that which the original has for some years held in Germany.

In the course of my labour, however, I have found that certain slight alterations and omissions might be effected with advantage to the practical employment of the work. These alterations I have endeavoured to carry out conscientiously, and to the best of my ability; and the result is the book in its present form.

It differs from the original in the following particulars:—

Firstly.—The progressive order of the book with regard to difficulty has been slightly modified, with a view to the avoidance of all explanatory matter not immediately bearing upon the subject in hand.

Secondly.—The chapters on Elaboration of Melody and of Accompaniment, and on the Harmonic Phrase in two, three, five, six, seven, and eight parts, have been omitted, as belonging rather to the study of Counterpoint than that of Harmony.

Thirdly.—Certain subjects which in the original appear to be inadequately explained, or even not mentioned, but which are nevertheless essential to the completeness of the work, have here been enlarged upon ; and several new examples and exercises, as well as marginal notes for reference, have been added for the better illustration of the various chapters.

With these exceptions, the present work is a nearly literal translation of the original.

I purpose to follow this treatise by a second, on “Counterpoint and Fugue,” which shall contain those chapters of the “Lehrbuch der Harmonie” which have been omitted in the present work, and also a translation of the “Lehrbuch der Fuge,” by the same author.

In conclusion I have to express my thanks to Mr. E. J. Hopkins, organist of the Temple, for his kind advice and assistance during the progress of my work, as well as for many very valuable suggestions.

*London, November, 1864.*



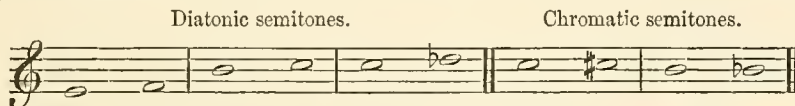
# INTRODUCTION.

## OF SCALES.

BETWEEN any two different sounds a certain difference of pitch must necessarily exist; this difference, which may be greater or less according as the sounds are more or less distant from each other, is called an *interval*.

The smallest interval employed in harmonic combinations is termed a *semitone*.

Semitones are called *diatonic* when they occur between two sounds of different names, *chromatic* when they are formed by the chromatic alteration of any one sound.



The interval next in size to a semitone is called a *tone*, and contains two semitones.

A succession of sounds arranged in alphabetical order and extending to the repetition or octave of the first note, thus—A B C D E F G A—is called a *diatonic scale*.

Formerly, diatonic scales were formed starting from each of the above sounds (except B); at the present time, however, two are found sufficient, viz., those commencing on C and on A.

The diatonic scale commencing on the note C is called the *major scale*, or the scale in the major mode; and the sounds of which it is composed are termed the *degrees* of that scale, the lowest being called the first degree, the next above it the second degree, and so on.

Degrees of the scale.

If we examine the intervals which separate the different degrees of the major scale, we find semitones between the third and fourth, and between the seventh and eighth degrees, and tones between all other degrees. This will be evident from the following example, in which the *tones* separating the different degrees are divided into two semitones by means of the black notes; the intervals between the third and fourth and the seventh and eighth degrees do not, however, admit of such division (since for all practical purposes E# is identical with F, and B# with C): these intervals are therefore semitones.

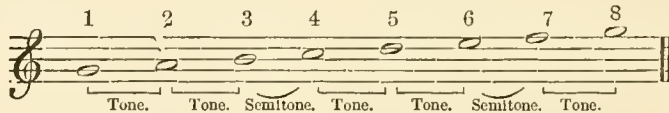
Place of the tones and semitones.



A major scale may then be described as one in which the semitones fall between the third and fourth, and seventh and eighth degrees.

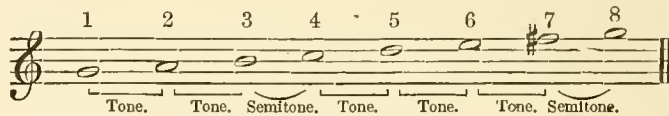
Major scales  
in different  
keys.

If C be taken for the first degree of the major scale, the natural alphabetical succession of notes will, as has been shown, form a correct major scale; if, however, any other note be employed as the first degree, a chromatic alteration of one or more notes will be found necessary to preserve the correct order of tones and semitones. Thus, in the scale of G major, the natural order of notes would give a *tone* between the seventh and eighth, and a *semitone* between the sixth and seventh degrees, as will be seen from the following example:—



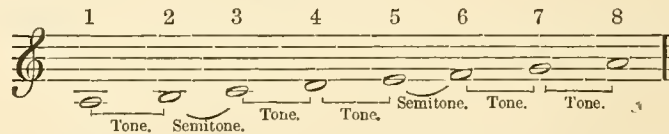
Chromatic  
alteration of  
the seventh  
degree.

It will, therefore, be necessary to raise the seventh degree chromatically, in order to bring it nearer to the eighth, from which it will then be separated by a semitone only, thus:—



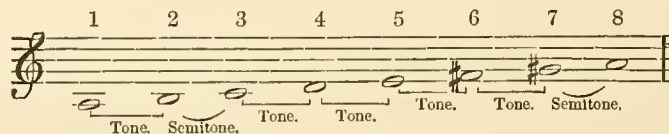
Minor scale.

The diatonic scale commencing on the note A, is called the *minor* scale, or the scale in the minor mode. If formed of the natural alphabetical succession of notes the semitones will be found between the second and third, and the fifth and sixth degrees, as in the following example:—



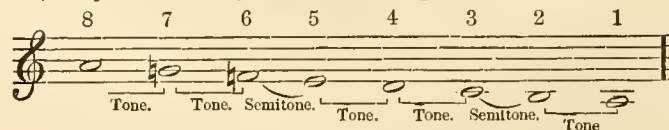
Chromatic  
alteration of  
the sixth and  
seventh  
degrees of the  
minor scale.

This is the normal minor scale. For reasons which will be hereafter explained (see p. 23) it has been found necessary to alter the sixth and seventh degrees, by raising them chromatically one semitone. The ordinary form of the minor scale at the present day is therefore as follows:—



Alterations  
omitted in  
descending.

In the descending scale, the chromatic alterations are usually omitted, and the scale appears in its original form. On this account the alterations are always *accidental*, *i. e.*, they are not expressed in the signature.



The signature of the scale of A minor will therefore be the same as that of C major, namely, it will require neither sharps nor flats. Signature of the minor scale.

A minor scale which bears the same signature as any given major scale is termed the *relative minor* of that scale, which is also called the *relative major* of the minor scale. Relative scales.

The first degree of a minor scale is always the sixth degree of its relative major; thus, in the foregoing examples, A will be found to be the sixth degree of the scale of C; A is therefore the relative minor of C. This will at once be seen if we compare the relative major and minor scales:—

C major:	1 2 3 4 5 6 7 8 C D E F G A B C
A minor:	1 2 3 4 5 6 7 8 A B C D E F# G# A

Or expressed in notes—

The same rule applies to scales commencing on any note whatsoever; thus, the relative minor scale of G major will have for its first degree the sixth degree of the scale of G major (namely, E), and will bear the same signature as that scale.

Scale of G major:	1 2 3 4 5 6 7 8 G A B C D E F# G
E minor:	1 2 3 4 5 6 7 8 E F# G A B C# D# E

A scale composed entirely of semitones, as in the following example, is termed a *chromatic scale*. Chromatic scale.

OF INTERVALS.

The distance which separates any two sounds is reckoned by diatonic degrees, and the interval formed by those sounds is named accordingly. Thus, if G be the lower note, and considered as the first degree, A will be the second degree, and the interval G-A will be that of a second. E will be on the sixth degree, and the interval G-E will therefore be a sixth, &c.

Counting then always from the lower note or first degree, and employing all the notes of the scale as upper sounds, the following intervals will be found :—



The intervals are generally only counted as far as the octave, the same order being repeated for those intervals which lie beyond that compass; thus the ninth degree is considered as the second, the tenth as the third, and so on.

There are, however, reasons which will be perceived hereafter for giving names also to those intervals which are greater than the octave. All such will therefore have two names, as follows :—



It will be seen that the above series of intervals is composed entirely of the notes of the diatonic major scale, and has always the *first* degree of that scale for the lower note of each interval. It is, however, easy to understand that any other degree of the scale would serve as the lower note of an interval, in which case the *numbers* of the two sounds forming the interval will be changed (inasmuch as the lower note of an interval is always considered as the first degree), and other slight differences will occur.

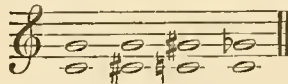
Classification  
of intervals.

In order to obtain a clear insight into these differences, the following principles must be borne in mind :—

(a) The above series of intervals, in which the lower note is the first degree of a major scale, while all the other degrees of the scale are employed as upper notes, serves as the foundation of all intervals.

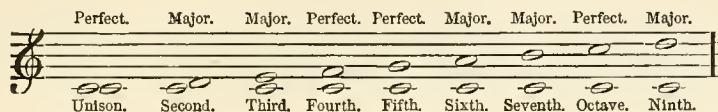
(b) All the intervals therein contained are termed *major*, and some of them *perfect*.

(c) Any chromatic alteration of either of the two notes which form an interval alters neither the numbers of the degree, nor the name of the interval, but necessitates a more exact definition. If, for example, a sharp or flat be added to either of the notes forming the fifth, G-C, it remains a fifth still, but is evidently a very different fifth from what it originally was.

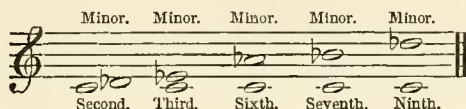


In order then to distinguish between the various chromatic alterations of intervals, the following nomenclature is used :—

(1) Unisons, fifths, fourths, and octaves, which are formed of the notes of the diatonic major scale, and having the first degree of the scale for the lower note, are called *perfect*. All other intervals of the same scale are called *major*.

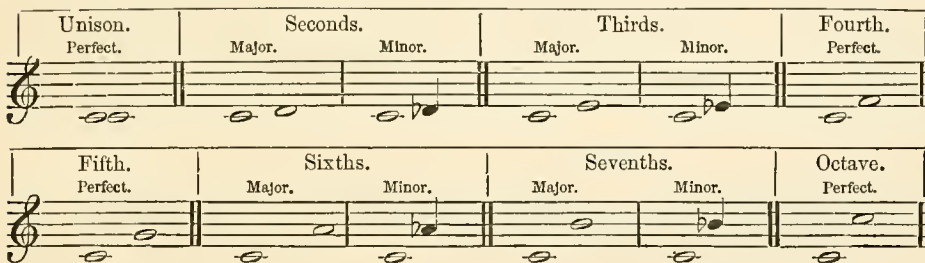


(2) If the upper note of a major interval be chromatically lowered one semitone, a *minor* interval is formed.



Other kinds of intervals may be formed by various other chromatic alterations; of these, however, it will not be necessary to speak at present.

Those which have already been mentioned may be classified as follows:—



DIVISION OF INTERVALS INTO CONSONANT AND DISSONANT.

By the expression *consonant* and *dissonant* intervals we do not understand such as do or do not sound well, as the terms might seem to imply, but by the former is meant those which when heard produce a final and complete effect on the ear by themselves, and by the latter those which require to be followed by another harmony, without which their effect would be unsatisfactory and incomplete.

Of those intervals with which we are already acquainted, the perfect intervals, and the major and minor sixths and thirds are consonances; the unison, perfect fifth, and octave are also termed *perfect*, and the thirds and sixths *imperfect* consonances, as the effect of the former is the more complete of the two; the major and minor seconds and sevenths are dissonances.

Consonant and dissonant intervals.

## INVERSION OF INTERVALS.

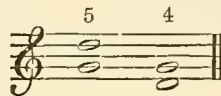
As has already been shown, the interval is usually counted upward from the lower note; should there be reasons, however, for reversing this principle and counting downwards from the upper note, it is always necessary to express this deviation from rule by saying a fifth *lower*, a sixth *lower*, &c. Thus we should say—D is the fifth of G, G is a fifth lower than D, or a fifth below D.



It will readily be seen that the interval itself is unaltered by this proceeding.

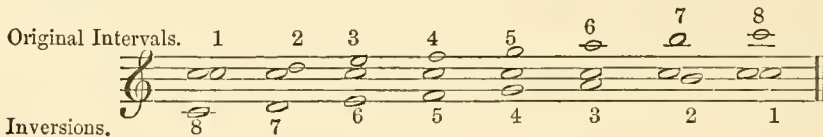
Inversion of  
Intervals.

It is, however, otherwise, when the upper note of an interval is transposed an octave lower, and consequently *below* the note which was originally lowest. If, for example, the upper note D of the fifth G-D be transposed an octave lower, the interval will not remain unchanged, but will become a fourth, D-G.



This transposition of the upper note is termed an *inversion* of the interval.

By means of inversion, the intervals of the diatonic scale will be altered as follows :—



We see, then, that a second becomes by inversion a seventh, a sixth is altered to a third, and so on.

An easy method of finding the inversion of any interval is to subtract the sum of the degrees contained in the given interval from the number *nine*, the sum remaining will then give the name of the inversion.

Thus to find the inversion of a fifth, subtract five from nine, and four will remain; the inversion required is therefore a fourth.

In inverting the various intervals which have hitherto been mentioned we find—

Firstly, that all perfect intervals remain perfect on their inversion; and

Secondly, that all major intervals become minor, and all minor intervals major.

The inversions of the intervals already mentioned are as follows :—

	Unison. Perfect.	Seconds. Major. Minor.	Thirds. Major. Minor.	Fourth. Perfect.
Original Intervals.				
Their Inversions.	Octave. Perfect.	Sevenths. Minor. Major.	Sixths. Minor. Major.	Fifth. Perfect.
				
	Fifth. Perfect.	Sixths. Major. Minor.	Sevenths. Major. Minor.	Octave. Perfect.
				
	Fourth. Perfect.	Thirds. Minor. Major.	Seconds. Minor. Major.	Unison. Perfect.
				

An accurate knowledge of the inversions of intervals is not only important for the study of double counterpoint, but also because it renders the structure of simple harmony much easier, for which reasons the student is earnestly recommended to master them thoroughly before proceeding farther.

From the above table of inversions will be seen why the perfect fourth must be considered as a consonance, notwithstanding that its effect, when heard alone, is far from satisfactory—it is the inversion of a consonance, viz., the perfect fifth, and a consonance can never form a dissonance by inversion.

Perfect fourth to be considered as a consonance.

All the above inversions are called *inversions in the octave*, that is, the upper note is transposed an octave lower. Other inversions, such as those in the tenth and twelfth, which produce quite different results, may be neglected for the present, as they have no influence whatever on our immediate studies.





# HARMONY.

## FUNDAMENTAL HARMONIES AND THEIR DERIVATIONS.

Among the various chords which serve as the harmonic basis of a composition, it is easy to distinguish between those which are *independent*, and those which require a connection with preceding and succeeding chords to render them intelligible. It is precisely the same difference which has been noticed with regard to consonant and dissonant intervals.

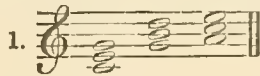
To the first class belong most of the common chords (triads), to the second the chords of the seventh. These two varieties of chords form the fundamental harmonies from which all others are derived. Fundamental harmonies.

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### CHAPTER I.

#### OF THE COMMON CHORDS OF THE MAJOR SCALE.

A common chord is formed by a combination of *three* different sounds (hence the name *triad*, which is, however, rarely used). The lowest of these sounds is called the *root*, to which are added the third and fifth—for example:— Common chord.



These chords, formed on the roots C, G, and A, show a difference in their intervals. While the chords of C and G are formed of major thirds and perfect fifths, that of A has a minor third and perfect fifth.

N.B.—When the word *chord* is used hereafter the *common chord* is understood.

A chord containing a major third and perfect fifth is termed a *major chord*.

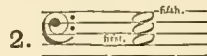
A chord with a minor third and perfect fifth is termed a *minor chord*.

It is of course possible to form a chord on every degree of the diatonic scale, and such chords form the principal harmonic contents of that scale or *key*. In other words, a composition, in whichever key it may be, will be found to be principally composed of the chords which are found on the various degrees of the scale of that key. Different varieties of common chords.

## NATURAL CONNECTION OF THE CHORDS OF A KEY.

That chord which is based on the first degree of a scale is the most important, since it determines the key. There are, however, others which are nearly related and next in importance to it.

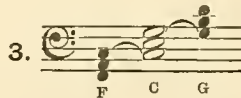
In the natural position of the common chord the root is the first or lowest note, and the fifth the highest. The addition of any new interval would either alter the chord or double some one of its component parts.



Chords which are nearly related to the chord on the first degree.

We have now to find the two chords next in importance to that of the first degree, and most closely related to it. These chords must necessarily lie outside the compass of the first chord, and yet have some connecting link therewith. This link will be found in the extreme boundaries of the chord, namely in C and G. G will therefore form the root of the one chord, while C will serve as the fifth of the other, the root of which will necessarily be F.

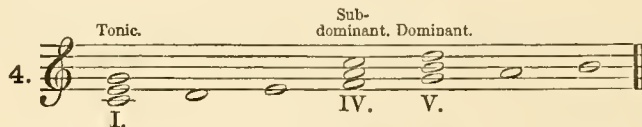
The relationship of these three chords is distinctly shown in the following example:—



It will be observed that these three nearly-related chords comprise all the notes of the scale. They form the foundation of the key, and must be principally employed in practice if the key is to be distinctly recognised.

Names of the principal common chords.

On account of their importance they have received special names. The chord on the first degree is called the chord of the *tonic*, that on the fifth degree the chord of the *dominant*, and that on the fourth degree the chord of the *sub-dominant*. Their place in the scale is as follows:—



N.B.—The Roman numerals under the chords signify, and will continue to do so in this work, the degrees of the scale on which the root is situated.

## APPLICATION OF THE FOREGOING HARMONIES.

In the application of these three chords we will employ the four-voiced or four-part phrase.

The four-part phrase.

The four-part phrase consists of four parts or voices, the upper one of which is called the soprano, and the lowest the bass; the next voice under the soprano

is called the alto, and that which is immediately above the bass is called the tenor. The soprano and bass are also termed *extreme* voices, and the two others *middle* voices.

For the three upper voices separate clefs are employed, which are more suitable to their compass than the violin clef  $\text{G}$ . These will be treated of hereafter. For the present we will not employ a separate staff for each voice, but for greater facility in reading the examples, we will make use of two, such as are used for pianoforte music, thus :—

5.

SOPRANO.	}	
ALTO.		
TENOR.		
BASS.		

In constructing the four-voiced phrase attention must be paid to two things-- firstly, to the progression of each voice as considered *alone*, and secondly, to the relationship of each voice to the three others, so that the whole may form what is termed pure harmonic progression.

Rules for constructing the four-part phrase.

The application of the three chords already found will afford opportunity for several observations and necessitate certain rules and principles.

As the chord is only composed of three notes, one of these must necessarily be doubled when the chord is to be written in four parts. The root is the one generally chosen for this purpose, though the others may be doubled, the fifth but seldom, and there are cases in which the third cannot be doubled at all.

Doubling of one of the parts of a common chord.

As regards the connection of two chords one with another the following rule must be observed.

When any one note is contained in two successive chords it is allowed to remain *in the same* voice.

Harmonic connection of two chords.

6.

<p style="text-align: center;"><i>a.</i>                      <i>b.</i></p>	}	

In example *a*, C is a note which is contained in both chords: it is therefore retained in the same voice in which it appeared in the first chord, viz., the soprano; in example *b*, the note G is retained in the alto of both chords.

The remaining voices proceed to those notes of the following chord which lie *nearest* to them, as in example *a*, the E in the tenor proceeds to F, and the G of the alto to A, &c.

Consecutive  
fifths and  
octaves.

When two consecutive chords are composed of entirely different notes, the parts must proceed in such a manner as to avoid what are termed *consecutive fifths* or *octaves*.

In order to explain this objectionable progression, which is very apt to occur in four-part writing, and on that account cannot be too carefully guarded against, we will now proceed to consider

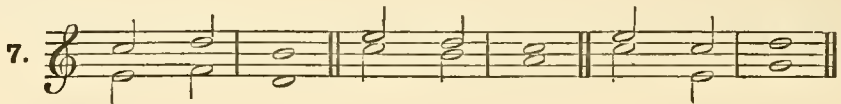
### THE RELATION OF ONE VOICE TO ANOTHER AS REGARDS PROGRESSION.

Different  
kinds of  
motion  
between two  
voices.

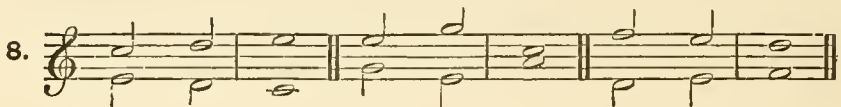
Any two voices may move with respect to each other in three different ways, viz.:—

- (1) In similar motion (*motus rectus*).
- (2) In contrary motion (*motus contrarius*).
- (3) In oblique motion (*motus obliquus*).

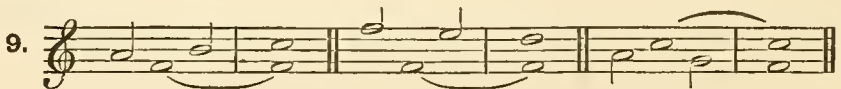
When two voices ascend or descend together they are said to move in *similar* motion.



*Contrary* motion occurs when one voice ascends and the other descends.

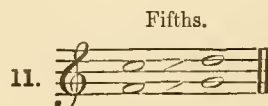
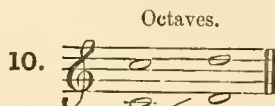


In *oblique* motion one part remains stationary while the other ascends or descends.



In four-part harmony a mixture of these three kinds of motion often occurs, for example, in Ex. 6, at *b*, the soprano and tenor move in similar motion, while contrary motion is found between soprano and bass, or tenor and bass, and oblique motion between alto and all the other voices.

The already-mentioned faulty progression of consecutive fifths or octaves can only occur in similar motion, when any two parts, distant from each other a perfect fifth or octave, proceed simultaneously to such positions in the ensuing chord that they are still separated by the same interval.



The following example contains both faults :—

12.

The forbidden parallels are here indicated by the oblique lines. In example *a* there are consecutive octaves between the soprano and bass, and consecutive fifths between the alto and bass; consecutive fifths are also found in example *b*, between tenor and bass, and in example *c*, between soprano and bass, and soprano and tenor; and octaves are found between alto and bass in example *b*, and between tenor and bass in example *c*.

The best means of avoiding such faults as the foregoing is to employ, in all cases where they are likely to occur, contrary motion between the three upper voices and the bass, or (if there be a convenient note in the ensuing chord) the oblique motion. Thus, in the following example, at *a*, the bass moves in oblique motion with the soprano, and at *b* and *c* in contrary motion with all the upper parts :—

Consecutive fifths and octaves—how avoided.

13.

The musical ear will readily perceive that the foregoing rules are not dictated by caprice, although it is difficult to give any *reason* for the interdiction of consecutive fifths. The prohibition of the octaves is, however, more intelligible, and has its foundation in the fact that the doubling of a note, although it adds one voice to the harmony, does not add any new interval to the chord, and therefore if the same voice be doubled in two successive chords the effect of a *four-part* phrase is lost as far as regards the harmony.

Why prohibited.

14.

15.

In Ex. 14 the tenor forms consecutive octaves with the soprano, and is on this account useless, as the phrase contains precisely the same harmonies as Ex. 15, which is written in three parts.

Hidden fifths and octaves.

Another, though less grave fault occurs when the second interval formed by two voices moving in similar motion is a perfect fifth or octave, thus:—

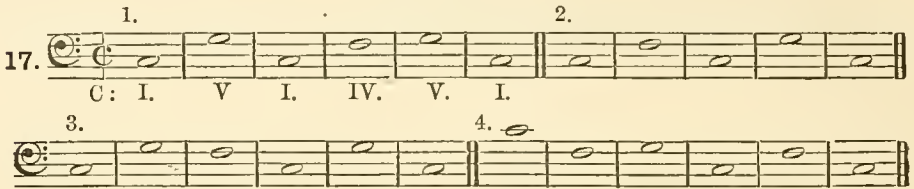


Such progressions are termed *hidden* or *covered* fifths and octaves. They will be more particularly described hereafter, as there are cases in which they are allowable and even advisable. For the present, however, the exercises will, if correctly conceived, offer little or no opportunity for making objectionable hidden fifths or octaves.

Exercise for the employment of the common chords.

Our next exercise will be to employ the three principal common chords in connection with each other, musically and with strict observance of all the foregoing rules. For this purpose we will employ the following (or any similar) bass.

EXERCISES.



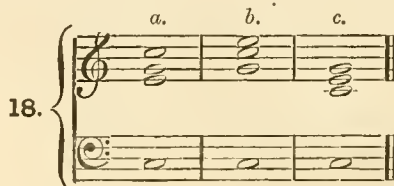
N.B.—These as well as all following exercises are to be continued as long as it is deemed necessary. The exercises given in this book are merely intended as indications of the manner in which the practical studies are to be pursued.

The Roman numerals under the examples signify the degrees of the scale on which the roots of the various chords are situated (see p. 10). They are always to be added by the pupil in all succeeding exercises. The letter followed by a colon, thus, C: indicates that the phrase is in the key of C. (N.B.—It is absolutely necessary for the plan of this work that these signs should be understood and adhered to *from the beginning*).

CLOSE AND EXTENDED HARMONY.

Close harmony.

A chord is said to be in close harmony when the three upper parts are as close to one another as possible, *i. e.* within the compass of an octave, the bass being more or less distant:—



In the above example the same chord is shown in *different positions*, but always in close harmony, there being no room to double or invert any one of the intervals *in the octave*, without overstepping the boundaries of soprano and tenor. If, for example, the tenor of the chord *a* be inverted in the octave, it will pass the soprano, and the chord will be altered as at *b*. If, on the other hand, the soprano be inverted in the octave, the chord will appear as at *c*.

By *extended* harmony is meant an arrangement of a chord in which the soprano and tenor are separated by a greater distance than an octave, and in which there is room for the soprano and tenor to be inverted in the octave without encroaching on each other. Extended  
harmony.

19.

In the first three bars of the above example the chord is shown in extended harmony. If in chords *a* and *b*, the tenor be inverted in the octave, the soprano will not be reached, and the chords will appear as at *d* and *e*. If the soprano of the chord *c* be inverted, the tenor will not be encroached upon, and the result of the inversion will be the chord *f*.

These two kinds of harmony seldom appear alone, a combination of both being generally employed. For the present, however, as the extended harmony presents more difficulties than the close, we will make use exclusively of the latter. The two kinds  
generally used  
in combina-  
tion.

The *position* of the first chord of a harmonic phrase is decided by inclination, that of the succeeding chords is then regulated by it. Nevertheless, for the sake of facilitating the working of the exercises, the best position of the first chord will for the present be indicated as follows:—If the first bass-note be figured with a 5, it is intended that the fifth of the chord should be given to the soprano; a figure 3 over the bass-note shows that the chord requires the third to be placed at the top; and if there be no figure whatever over the bass, the octave should be placed at the top of the chord. This arrangement need not necessarily be adhered to, as almost any example in close harmony might be written in three different positions. The position indicated by the figure of the first bass-note will however be found best adapted to form good progressions, at least until the pupil has gained experience. The position  
of the first  
chord indi-  
cated in the  
examples.

The correct working of Ex. 1, No. 17, will therefore be as follows:—

20.

C: I. V. I. IV. V. I.

The natural relationship of these chords one to another will readily be seen by observing the connections. (N.B.—These connections should always be indicated by the pupil by means of the slur  $\frown$ , as in the above example).

Authentic  
cadence.

From the feeling of rest and satisfaction induced by the concluding progression in the above example (that of V-I), it has been named the *perfect close*, or *authentic cadence*. It is formed, as will be seen, by the chord of tonic, preceded by that of the dominant. Another kind of cadence or close, called the *plagal cadence*, is formed by the chord of the tonic, preceded by that of the subdominant. (N.B.—The last chord of a cadence always falls on the accented part of the bar.)

Plagal  
cadence.

21.

Authentic Cadence.

V. I.

22.

Plagal Cadence.

IV. I.

These and other cadences will be more fully considered in a later chapter.

In order to become well acquainted with the peculiar progression between the fourth and fifth chords in example 20, it would be advisable to write out several similar progressions of IV-V and V-IV in various keys and in close and extended harmony.

## OF THE OTHER COMMON CHORDS OF THE MAJOR SCALE.

Secondary  
common  
chords of the  
major scale.

The common chords situated on the other degrees of the major scale, although they certainly belong to that scale, yet are not so closely related to it as those already mentioned.

To distinguish them from the three principal chords, we will call them secondary common chords. They are found on the second, third, sixth, and seventh degrees of the scale.

23.

II. III. VI. VII.



The chords on the second, third, and sixth degree are *minor chords*, being composed of a minor third and perfect fifth.

In order to distinguish between major and minor chords in the system of Roman numerals under the bass-notes, we will employ a large figure for the former and a small one for the latter. The beginner must beware of mistaking any of these chords for *chords of the tonic*. As long as the key remains C major, as in the above example, the various chords of F, G, &c., are merely chords of the different degrees of C major, and cannot belong to the key of F or G, unless such keys are called forth and substantiated by *modulation*.

Hence it will be easily seen that each chord may have several significations, *i. e.*, it may belong at once to several different keys.

Chords belong to several different scales.

Thus, in the following example,

24. 

the major chord of C is shown as belonging to three different keys, those of C, F, and G.

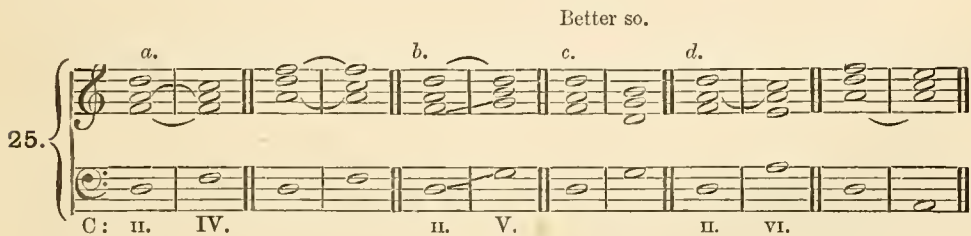
In the first of these keys it appears as tonic chord, in the second as dominant, and in the third as subdominant.

No new rules are required for the connection of the secondary chords with each other, or with the three principal chords. The following remarks may however not be inappropriate:—

The progression of the three upper parts will always depend on that of the bass. This latter may be of two kinds, viz., firstly, by *leaps* of at least a third, in which case a connecting link between two chords will always be found in some note which belongs to both, and which will then be allowed to remain in the same voice, according to the rule given at p. 11; and secondly by *degrees*, when it will generally be advisable to employ contrary motion between the bass and the upper parts as already explained at p. 13.

Progression of the bass.

Better so.

25. 

In the above example the bass proceeds by leaps of various distances, the upper parts being connected by notes which belong to both chords and which

remain in the same voice. A strict adherence to this form of progression between the chords of the second and fifth degrees, shown as *b*, in the above example, occasions hidden octaves between the bass and tenor, which are better avoided by means of the progression given at *c*. The reason why such hidden octaves are objectionable is that the upper voice proceeds a *whole tone*, and their effect would be still more unpleasant if they occurred between the extreme voices, thus :—

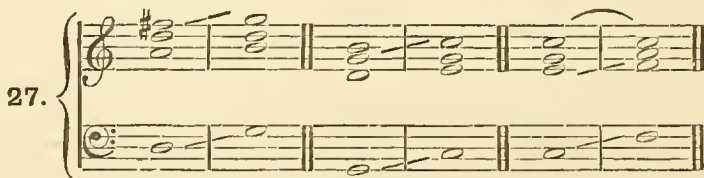
Objectionable hidden octaves.



The progression may be improved by employing contrary motion between the extreme parts as at *b*.

Allowable hidden octaves.

Hidden octaves cease to have any unpleasant effect when the upper voice proceeds only a *semitone*, thus :—

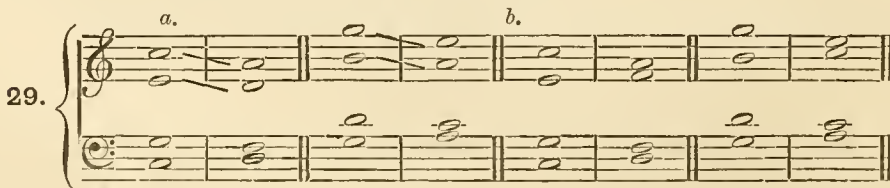


When the bass proceeds diatonically, *contrary motion* will always be employed; in one position, however, shown in the following example at *a*, it will be advisable to double the third in the second chord in order to avoid the hidden fifths which would otherwise occur between soprano and tenor



Hidden fifths.

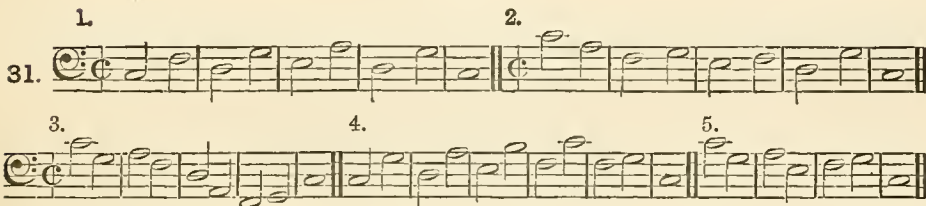
Hidden fifths such as occur at *a* in the above example are still more perceptible when the chord appears in an extended position.



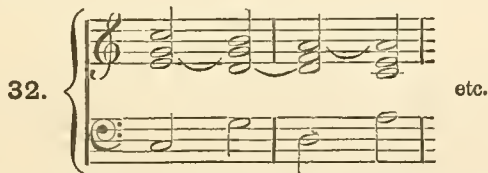
The progression *b* is preferable. If however the hidden fifths are between the middle voices, they are less objectionable. Allowable hidden fifths.



EXERCISES.



The fourth of the above exercises will require some little explanation. It will be observed that the progression of the bass in the first bar is repeated in the three succeeding bars. Any such regular progression is termed a sequence, and demands a like regularity in the progression of the accompanying voices. This regularity could not be obtained by working exactly according to the rules already given, thus :— Sequence.



It will therefore be necessary to make a leap at the end of the first bar, in order to bring the first chord of each bar into the same position, and thus preserve the uniformity of the sequence.



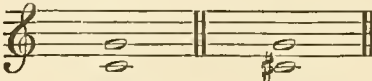
A similar sequence is also contained in the first exercise of Ex. 31. It is, however, one which can be accompanied without any deviation from rule.

In the third bar of the fourth exercise we find a chord which we have not yet considered, but which differs in many important respects from all other chords. This is the chord on the seventh degree. Upon examining it we find that it is composed of a minor third, and a fifth which is *smaller* by one semitone than the Chord of diminished fifth.

perfect fifth. On this account the fifth is termed *diminished*, and the chord itself has received the name of the *diminished common chord*, or *chord of the diminished fifth*.

The interval of a diminished fifth may be formed from any perfect fifth by chromatically raising the root, thus :—


Perfect 5th.      Diminished 5th.

34. 

Inversion of  
the dimin-  
ished fifth.

Since the diminished fifth is *smaller* by one semitone than the perfect fifth, it follows that its inversion will be one semitone *larger* than the perfect fourth. This inversion is therefore termed the *augmented fourth*.

Perfect 4th.      Augmented 4th.

35. 

Require  
resolution.

Both augmented and diminished intervals are dissonances, and as such invariably require to be followed by some other harmony in order to render them intelligible.

Resolution of  
diminished  
& augmented  
intervals.


The progression of any dissonance into the following harmony is called its *resolution*.

It may be accepted as a rule, that the natural resolution of any note forming a diminished interval is diatonically downwards, while that of an augmented interval is upwards.

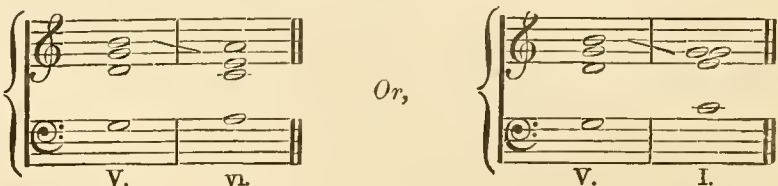
Resolution of  
the leading  
note.

This rule is observed in the resolution of the chord of diminished fifth on the seventh degree of the scale, but in addition to this, the progression of the root of this chord will require consideration. The seventh degree of the scale (which is the root of the chord in question) has always a strong tendency upward, towards the tonic or first degree. On this account it is called the *leading note*.

This upward tendency will be readily perceived in the following example :

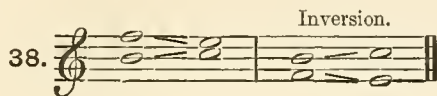
36. 

which is more satisfactory in its effect than—

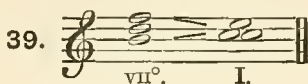
37. 

In accordance, then, with the upward tendency of the leading note, and observing at the same time the rule for the progression of diminished intervals, the natural resolution of the diminished fifth on the seventh degree will be as follows:—

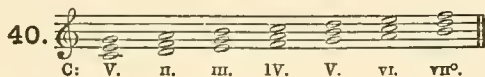
Resolution of the chord of diminished fifth.



The chord of diminished fifth will therefore resolve itself into the chord of the first degree, but in an incomplete form, *i. e.* without the fifth; thus:—

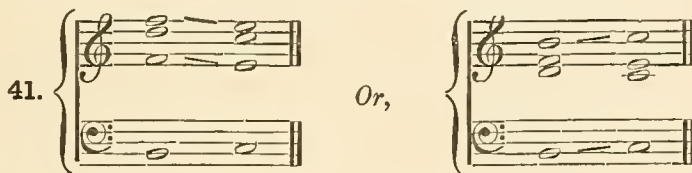


In the system of Roman numerals a small o is added to the number, to denote that the chord is diminished—thus VII°. The correct figuring of all the chords of the major scale will therefore be as follows:—



The resolution of the two notes forming the interval of the diminished fifth being thus determined by rule, it is clear that if either of these notes be doubled both the note and its duplicate must have the same resolution, the result of which would be consecutive octaves.

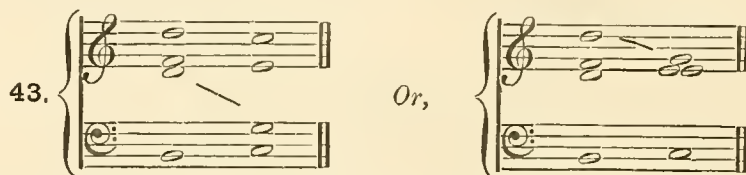
Doubling of one of the intervals of the chord of diminished fifth.



On this account it is forbidden to double either the root or the fifth of this chord; if, therefore, it is used in four parts it will be necessary to double the third, which is then made both to ascend and descend.



The progression of the third of the chord of diminished fifth is not always limited to a single degree; under certain circumstances it may also descend by a leap into the fifth of the ensuing chord.

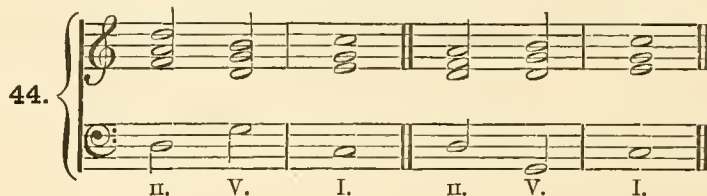
43. 

Free progression of the leading note.

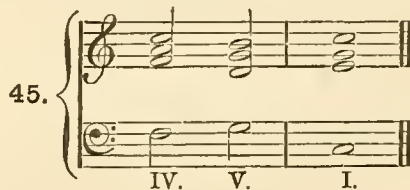
In the third bar of Ex. 33 we have already found an exception to the above rules, both as regards the doubling and progression of the leading note. The exception has its excuse in the necessity for preserving a regular progression of the sequence.

Extended form of the authentic cadence.

The already-mentioned authentic cadence (p. 16) is seen still more distinctly in the preceding exercises. For, while the natural relationship of the chord of dominant to that of the tonic makes these two chords the most suitable for the formation of a cadence, in the first and second exercises of Ex. 31 may be observed a preparation of the cadence by means of the chord of the second degree, which bears the same relationship to the chord of dominant as this latter does to that of the tonic.

44. 

In addition to the chord of the second degree, the chord of subdominant may also serve to prepare the authentic cadence.

45. 

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## CHAPTER II.

### OF THE COMMON CHORDS OF THE MINOR SCALE.

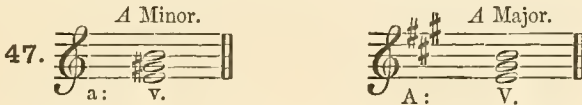
THE three principal chords of the major scale were found on the first, fourth, and fifth degrees. Those of the minor scale occupy the same positions. The principal chords of the minor scale.

The peculiarly *final* feeling induced by the authentic cadence is caused by the fact that the last chord but one contains the seventh degree of the scale, or leading note. According to the signature of the minor scale, however, the seventh degree is distant a whole tone from the tonic, and therefore does not possess the characteristics of the leading note.

In order, therefore, to make the authentic cadence in a minor key, it is necessary to raise the seventh degree chromatically one semitone, by which means it becomes the leading note of the scale. Alteration of the seventh degree of the minor scale.

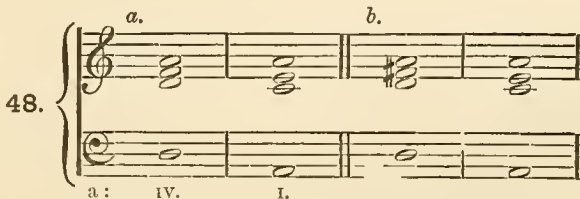


In consequence of this alteration the chord of the dominant is precisely the same in major or minor (*i. e.* it is always a major chord). Dominant chord of the major and minor scales identical.

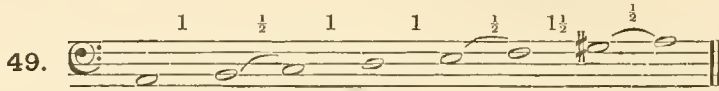


Observe that just as the major or minor chords are expressed by large or small Roman numerals, so are major or minor keys expressed by large or small letters. Thus *a*: signifies A minor, *A*: A major.

As a proof, however, that a similar alteration of the sixth degree is not allowable, it is only necessary to examine the plagal cadence, shown at *a* in the following example, which, it will readily be seen, could not possibly be formed as at *b*. Alteration of the sixth degree not possible.



The minor scale in its correct harmonic form, in which it serves as the groundwork for all the harmonies of a minor key, is therefore as follows :—

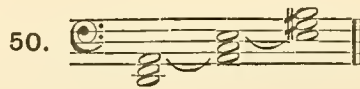


All other forms of the minor scale, such as



have their origin in rules relating to melody, which rules will be duly considered hereafter. It may, however, be here observed that their object is to avoid the progression of an augmented second, *i. e.*, a second which is larger by one semitone than the major second (such as occurs between the sixth and seventh degrees of Ex. 49), which interval, on account of its harshness, and the difficulty of intonation it presents to the singer, ought seldom, if ever, to be introduced.

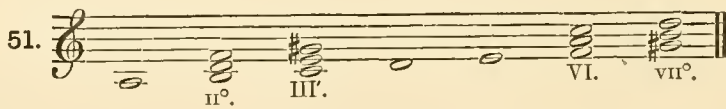
The three principal chords of the minor scale may be thus represented in their relation to each other :—



### OF THE SECONDARY CHORDS OF THE MINOR SCALE.

Secondary  
chords of the  
minor scale.

According to the above explanation of the minor scale the secondary chords will appear as follows :—



Augmented  
common  
chord.

The second degree bears the same chord of diminished fifth, which has already been found on the seventh degree of the relative major scale. A similar chord is also found on the seventh degree.

The chord on the sixth degree is major, and the third degree bears a common chord which has not yet been met with. This chord consists of a major third, and a fifth which is *larger* by one semitone than the perfect fifth, and on this account is called an *augmented fifth*, and the chord itself is known as the



augmented common chord, or chord of the augmented fifth. (In the system of Roman numerals an *augmented* interval is expressed by a dash, thus *III'*; the chord in question would therefore be figured *III'*).

The peculiar nature of this chord renders its combination with other harmonies very difficult. It is on this account very seldom used.

Its combination with other chords.

52.

a.                      b.                      c.                      d.                      e.

a: I. III'. II°.      II°. III'. IV.      IV. III'. VI.      V. III'. VI.      VI. III'. II°.

Of the above progressions, the most serviceable are those at *c* and *d*, the preparation (*i. e.* the progression from the preceding chord) being least harsh at *d*, where the note which forms the interval of an augmented fifth (*viz.*, the G  $\sharp$ ) appears as a consonance in the preceding chord.

The augmented common chord which appears so often in modern music is however not the one just mentioned, but belongs to the class of *chromatically altered harmonies*, and will be explained hereafter in the chapter on Altered Chords.

The rules relating to progression, &c., are all to be observed in the exercises on the chords of the minor scale. Here, too, will be seen the full application of the remarks which were made on the upward tendency of the leading note, since if the leading note of the minor scale were to *descend* to the sixth degree, the result would be the anti-melodic progression of the *augmented second*, which interval, as has already been observed, is better avoided (at least when the two notes of which it is composed belong to two different harmonies).

Progression of the augmented second.

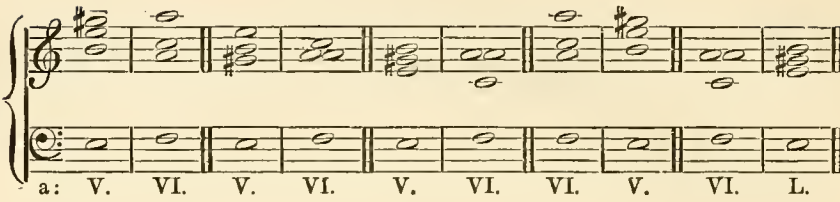
53.

a.                      b.

a: V.      VI.      VI.      V.

In order, then, to form the connection between the chords of the fifth and sixth degrees, it will be advisable to allow the leading note to ascend, which will have the effect of doubling the third in the chord of the sixth degree.

Progression from the chord of the fifth degree to that of the sixth.

54.  etc.

a: V. VI. V. VI. V. VI. VI. V. VI. L.

The only means of correcting Ex. 53 *b* (if it were necessary to have the first chord in the position there given), would be to introduce a note in the soprano between the two chords, thus:—

55. 

a: VI. V.

EXERCISES.

56. 

REMARKS ON THE ABOVE EXERCISES.

Methods of  
figuring  
various  
chords.

A chromatic sign ( $\sharp$ ,  $\flat$ , or  $\natural$ ) over a bass note without any figure (as in the third bar of exercise No. 1) has reference always to the *third* of the chord. The common chord is seldom figured at all; those bass notes, therefore, which bear no figure are always accompanied by a common chord. Sometimes, however, it is necessary to figure the common chord—this is done by means of the figures 3, 5, 8,  $\frac{5}{3}$  or  $\frac{8}{3}$ . In the third and sixth exercises it was necessary to indicate the common chord by means of a 5. Here the augmented common chord has been

introduced, and the sign 5♯ being placed over the bass note signifies that the *fifth* is sharpened. If the sharp had been placed *alone*, it would have affected the *third* of the chord. A figure 3 or 5 is also sometimes used to denote the *position* of the first chord of an exercise. (See p. 15.)

If the rules relating to the progression of parts be strictly observed in accompanying exercise No. 1, the anti-melodic progression of an augmented second will occur in the alto in the third bar.

Progression  
of the  
augmented  
second.

57.

The musical notation for exercise 57 consists of two staves. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has one sharp (F#). The progression is as follows:  
 - Bar 1: Treble clef has a triad of G4, B4, D5; Bass clef has a triad of G2, B2, D3.  
 - Bar 2: Treble clef has a triad of A4, C5, E5; Bass clef has a triad of A2, C3, E3.  
 - Bar 3: Treble clef has a triad of B4, D5, F#5; Bass clef has a triad of B2, D3, F#3. A sharp sign is placed above the bass note F#3.  
 - Bar 4: Treble clef has a triad of C5, E5, G5; Bass clef has a triad of C3, E3, G3.  
 - Bar 5: Treble clef has a triad of D5, F#5, A5; Bass clef has a triad of D3, F#3, A3.

To avoid this, it will be necessary to deviate slightly from rule, and to allow the alto to descend from *f* to *e*, the soprano and tenor also descending to those notes of the succeeding chord which lie nearest to them, namely *g♯* and *b*.

How avoided

58.

The musical notation for exercise 58 consists of two staves. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has one sharp (F#). The progression is as follows:  
 - Bar 1: Treble clef has a triad of G4, B4, D5; Bass clef has a triad of G2, B2, D3.  
 - Bar 2: Treble clef has a triad of A4, C5, E5; Bass clef has a triad of A2, C3, E3.  
 - Bar 3: Treble clef has a triad of B4, D5, F#5; Bass clef has a triad of B2, D3, F#3. A sharp sign is placed above the bass note F#3.  
 - Bar 4: Treble clef has a triad of C5, E5, G5; Bass clef has a triad of C3, E3, G3.  
 - Bar 5: Treble clef has a triad of D5, F#5, A5; Bass clef has a triad of D3, F#3, A3.

It would also be possible to keep the connection of the *b* in the soprano, by giving to the tenor a leap downwards from *d* to *g♯*. In this case the close position will be abandoned, and the two last chords will appear in extended harmony.

59.

The musical notation for exercise 59 consists of two staves. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has one sharp (F#). The progression is as follows:  
 - Bar 1: Treble clef has a triad of G4, B4, D5; Bass clef has a triad of G2, B2, D3.  
 - Bar 2: Treble clef has a triad of A4, C5, E5; Bass clef has a triad of A2, C3, E3.  
 - Bar 3: Treble clef has a triad of B4, D5, F#5; Bass clef has a triad of B2, D3, F#3. A sharp sign is placed above the bass note F#3.  
 - Bar 4: Treble clef has a triad of C5, E5, G5; Bass clef has a triad of C3, E3, G3.  
 - Bar 5: Treble clef has a triad of D5, F#5, A5; Bass clef has a triad of D3, F#3, A3.

Before proceeding to the farther employment of the common chord, we will form a table of all those chords with which we are as yet acquainted.

COMMON CHORDS OF THE MAJOR AND MINOR SCALES.

MAJOR SCALE.

60. MINOR SCALE.

Major chords are found—

In Major.	In Minor.
C: I. IV. V.	a: V. VI.

Minor chords are found—

In Major.	In Minor.
C: II. III. VI.	a: I. IV.

Diminished chords are found—

In Major.	In Minor.
C: VII°.	a: II°.

An augmented chord is found—

In Minor.
a: III.



### CHAPTER III.

#### OF THE INVERSIONS OF THE COMMON CHORDS.

THE employment of the common chords is not confined to the positions shown in the foregoing examples, where the root alone is used as bass. The third or fifth of the original chord may also serve as bass, and thus new chords will be formed, derived from the common chords, and termed *inversions*.

Inversions of the common chord.

Two inversions of the common chord are possible—

(1). When the third of the chord is employed as bass. The chord thus formed is called the *chord of the sixth*. Chord of 6.

Original Chord. Chord of the sixth,  
situated on the *third* of the  
root.

61.

(2). When the fifth of the chord is employed as bass. The chord formed by this means is called the *chord of the sixth and fourth*. Chord of  $\frac{6}{4}$ .

Original Chord. Chord of the sixth and fourth,  
placed on the *fifth* of the root.

62.

These two chords are distinguished by means of the signatures 6 (or sometimes  $\frac{6}{3}$ ) and  $\frac{6}{4}$  placed over the bass thus :—

63.

Observe that the Roman numerals continue to indicate the degree of the scale on which the *root* of a chord is situated, and do not refer to the position of the *bass*. Thus, in Ex. 63, the three chords are all figured I., although the *bass* of each is on a different degree of the scale; because they are all derived from one and the same *root*, namely, C.

Similar inversions may be derived from all common chords.

By means of the employment of the inversions of chords, the harmonic progression obtains greater variety, and the progression of individual parts, and

Doubling of one of the intervals of the chord of sixth.

especially of the bass, becomes more flowing. According to the rules relating to the doubling of one interval of the common chord, (see p. 11) the root of the original chord, that is, the sixth in the chord of sixth, will be best doubled when the chord of sixth is used in four parts. The bass of the chord of sixth must only be doubled when the natural progression of parts renders it necessary, or when by so doing certain faults may be avoided. The leading note should never be doubled, whether it appears as third in the chord of dominant, or as bass of the chord of sixth.

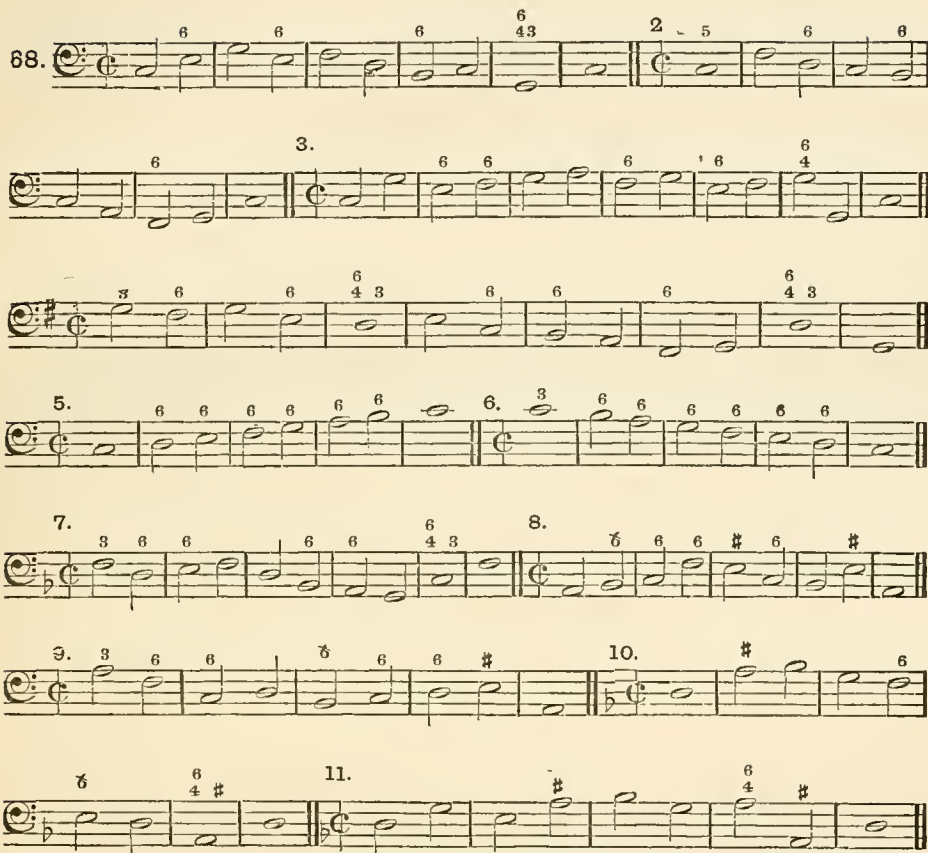
The position of the three upper parts of either of the inversions is determined by the natural progression of parts, and has no influence on the chord itself. The chord of sixth is therefore to be met with in the following forms :—


Employment of the chord of  $\frac{6}{4}$ .

The chord of sixth and fourth occurs less frequently than the chord of sixth, and depends on certain conditions which will be explained hereafter. It is most frequently met with in the formation of cadences (closes). The bass note (the fifth of the original chord) is most suitable for doubling, and the chord will be found in the following and similar forms :—

No new mechanical rules are required for the connection of these chords with the others; we therefore now proceed to show the application of the inversions or derived chords in the following exercises.

EXERCISES.

68. 

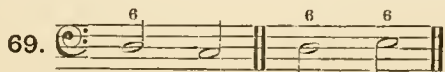
69. 

REMARKS ON THE PRECEDING EXERCISES.

In the first bar of Ex. 2, the position of the chord is indicated by the figure 5 being placed over the bass. The chord is therefore to be written with the fifth in the soprano or upper voice. A similar system is observed in all following exercises. If there is no figure over the bass note, it is understood that the *octave* shall be given to the soprano.

In the second example the chord of diminished fifth appears in its inverted form as chord of the sixth. It is most used in this form. Its resolution always depends on the progression of the bass, which in most cases is as follows :—

Inversion of the chord of diminished fifth.

69. 

The upper parts may then proceed thus :—

70. 

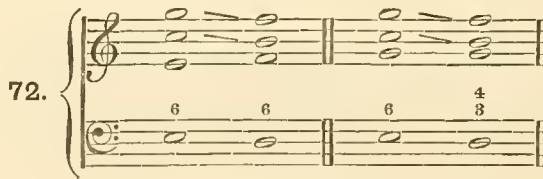
Free resolution of the augmented fourth.

From the above example it will be seen that the inversion of the diminished fifth, *i. e.*, the augmented fourth, does not require so strict a resolution in four parts as was given at p. 21, Ex. 38, for the same interval in two parts. Thus in the first bar we see the fourth *f-b* in soprano and alto proceed in similar motion to the fourth *g-c*. As this chord produces a somewhat similar effect on the ear to the chord of dominant seventh (which will be mentioned hereafter) beginners often feel constrained to resolve the diminished fifth strictly, even when it has become changed by inversion into the augmented fourth. This is, however, only necessary when it appears in its original form as a real diminished fifth. Such a progression as the following is therefore objectionable on account of the consecutive fifths.

71. 

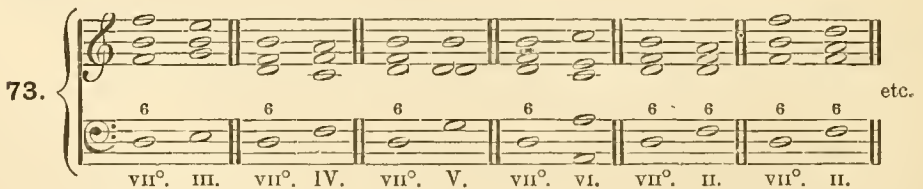
Allowable consecutive fifths.

It may here be observed that consecutive fifths, when one is perfect and the other diminished, are allowable, provided always that the diminished fifth shall follow the perfect, and not *vice versa*. Thus, the following examples are good :—

72. 

Various other resolutions of the diminished fifth.

The progression of the parts of a chord of diminished fifth (or its inversion) is however otherwise, when the bass does not proceed to the chord of the tonic. For example :—

73. 

vii° III.    vii° IV.    vii° V.    vii° VI.    vii° II.    vii° II.    etc.



The chord of diminished fifth found on the second degree of the minor scale is capable of yet other resolutions, as in this chord the *root* may be doubled. For example :—

74.

a: II° I. II° V<sub>7</sub> I.

The succession of two or more chords of the sixth on a bass which proceeds diatonically (as is shown in Ex. 68, No. 3) requires that one or more of the upper parts shall move in contrary motion with the bass. For example :—

75.

The sequence of chords of the sixth in Nos. 5 and 6 of Ex. 68 is best accompanied, when the regular progression of the bass is observed in all the other parts, thus :—

76.

etc.

Covered octaves, such as occur between tenor and bass in the second and third bars, cannot in such cases be avoided. In fact exceptional progressions like the above must sometimes be permitted, when to have adhered strictly to rule would be to mar the unity of the phrase; experience alone will decide where such exceptions are allowable.

In Ex. 68 we find the cadence (already mentioned at p. 16) rendered clearer and more decided by the chord of  $\frac{6}{4}$ ; it may then be accepted as a rule that the second inversion of the chord of the tonic, (*i. e.* the chord of  $\frac{6}{4}$ ) when followed

Authentic cadence prepared by the chord of  $\frac{6}{4}$ .

by the chord of the dominant, has a strong tendency towards an authentic cadence or close.

77.

C: I. V. I.

The chord of  $\frac{6}{4}$  is often preceded by the chord on the fourth or second degree.

78.

C: IV. I. V. I. II. I. V. I.

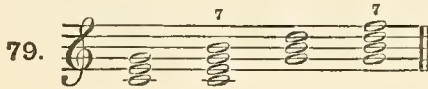
Although the chord of  $\frac{6}{4}$  is very effective in the above position, and also in modulations into foreign keys, yet under other circumstances it is extremely weak, and its employment is therefore subject to certain conditions, which will be treated of later.

A line through a figure thus,  $\frac{6}{4}$ , as seen in Ex. 68, Nos. 8, 9, 10, indicates that the interval is to be raised chromatically one semitone. Sometimes a  $\sharp$  or  $\flat$  is used to express the same chromatic alteration.

CHAPTER IV.

OF THE CHORD OF THE SEVENTH.

THE chord of the seventh is founded on the common chord, and is formed by the addition of a new third to those of which the latter is already composed. The new interval forms a seventh from the root. Construction of the chord of 7.



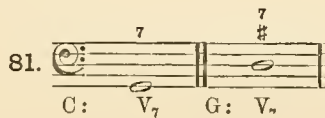
The new chord is not so independent as most of the common chords, but has a distinct tendency towards a resolution. On this account it can never appear except in conjunction with other harmonies. It serves to render the relationship of one chord to another closer and more intimate, and its employment therefore offers considerable advantages with respect to harmonic connections. Its characteristics.

THE CHORD OF THE DOMINANT SEVENTH IN MAJOR AND MINOR.

Of all the chords of the seventh, the most important is that found on the fifth degree of the scale; it is formed of precisely the same intervals in major as in minor, viz., of the major common chord with the addition of a minor seventh. The chord of the dominant 7.



In figured bass it is indicated by a 7 over the bass note, and in our present system of Roman numerals by V7.



The relation which the chord of the dominant bears to that of the tonic has been already demonstrated by means of the cadence ; it will however be rendered still clearer by the use of the dominant seventh.

82.

C: V<sub>7</sub> I. a: V<sub>7</sub> I.

Observe that the chord of tonic which follows that of dominant seventh is incomplete ; in both cases the fifth is omitted, the reason of this will be perceived from the following paragraph.

**Its resolution.** The marked tendency towards a resting-place or close exhibited by this chord and the consequent connection of it with a common chord, is called the

#### RESOLUTION OF THE CHORD OF SEVENTH.

If the chord is resolved into the chord of the tonic as in Ex. 82, it is also called the perfect close (authentic cadence). For the present we shall consider this as the natural resolution of the chord of the dominant seventh.

The resolution takes place as follows :—

The progression of the bass being given, a resolution *upwards* of the seventh will be found impossible, while its *descent* will be in every respect satisfactory to the ear.

83.

Resolution  
of the third  
in the chord of  
dominant 7.

The third of the chord of dominant seventh is always the leading note of the scale ; its natural tendency is therefore upward : thus in the following example *a* is more satisfactory in its effect than *b*.

84.

*a.* *b.*

The latter progression is however less unpleasant when the third appears in a middle part.

85.

The downward resolution of the third is therefore allowable under the following conditions :—

Downward progression of the third.

- 1st. When it is in a middle part, and not at the top of the chord ; and
- 2nd. When the bass moves in contrary motion with it.

86.

The reason of the last rule is that if the two parts move in similar motion hidden fifths will occur.

The progression of the fifth of the chord of dominant seventh is free. It generally *descends* with the seventh ; the progression of parts may however require it to *ascend* as in Ex. 85 at *b*, where the *d* in the soprano proceeds to *e* in the next chord.

Progression of the fifth.

The following then are the rules for the ordinary resolution of the dominant seventh :—

Resolution of the chord of dominant 7.

The seventh descends one diatonic degree.

The root proceeds a fourth upward or a fifth downward.

The third ascends one degree.

The fifth can either ascend or descend one degree.

The relationship of the *third* and *seventh* to one another recalls what has already been said (p. 21) on the resolution of the diminished fifth, this interval being again found and similarly resolved in the chord of the dominant seventh.

87.

The chord of dominant seventh *in its present form* seldom occurs in the middle of a composition, and when so employed the feeling of a perfect close should be avoided.

Its employment.

This result may be attained in two ways: 1st, by giving the 7th to the soprano, which will render the close incomplete;

88.

2nd, by allowing the dominant seventh to enter on the accented part of the bar, while in the perfect cadence this position must be occupied by the chord of the tonic.

89.

Omission of one of the intervals of the chord of 7.

The chord also often appears with omission of one interval, generally the fifth.

The third is seldom omitted, and omission of either the root or the seventh would of course destroy the characteristics of the chord.

90.

In the above example, at *a*, *b*, and *d* the fifth is omitted, at *c* the third, and in every case its place is supplied by doubling the root. The new note then remains stationary, and forms a very intimate connection with the next chord, which then appears in its complete form. This could not be the case if the root of the chord of 7 were not doubled. (See Ex. 82.)

#### EXERCISES.

91.

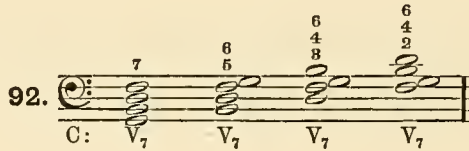
The image displays three systems of musical notation, each consisting of a bass clef staff and a treble clef staff. The notation includes various chord figures and fingerings, with some notes marked with a sharp sign (#). The first system shows a sequence of chords with fingerings 6, 6, 7, 3, 3, 6, 6, 6, 6, 7, 6, 6, 7. The second system shows a sequence of chords with fingerings 4, 5, 6, 7, 6, 4, 3, 6, 4, 7, 5, 3, 6, 7, 6, 4. The third system shows a sequence of chords with fingerings 6, 6, 6, 4, #, 6, 6, 6, 7, #, 6, 6, 7, 4, #. The notation is presented in a clear, black-and-white format on a light background.

CHAPTER V.

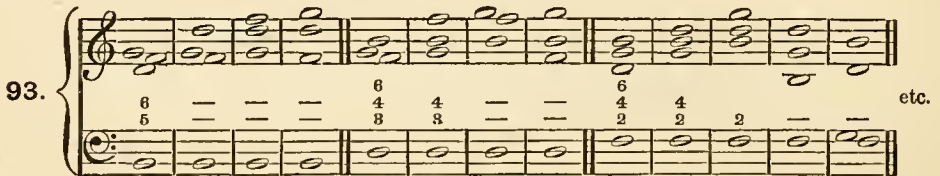
OF THE INVERSIONS OF THE CHORD OF THE SEVENTH.

Inversions of the chord of 7.

THE inversions of the chord of 7 are formed in the same manner as those of the common chord. The first inversion is formed by using the *third* as bass-note, and is called the chord of the sixth and fifth ( $\frac{6}{5}$ ); the second by giving the *fifth* to the bass, this is called the chord of the sixth, fourth, and third ( $\frac{6}{3, 4}$ ); and in the third inversion the original *seventh* becomes the bass-note, the chord is then called the chord of sixth, fourth, and second, or simply the chord of the second. ( $\frac{6}{2, 4}$ ).

92. 

As is the case with the inversions of the common chord, these chords only depend on the position of the bass, the upper parts may then be arranged in various ways, for example:—

93. 

Their resolution.

The resolution of these derived chords is founded on that of the original chord.

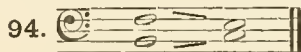
RESOLUTION OF THE CHORD OF  $\frac{6}{5}$ .

Chord of  $\frac{6}{5}$ .

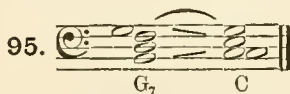
In the chord of  $\frac{6}{5}$  the original seventh still forms a dissonance with the bass,



but in this case it is a diminished fifth (the resolution of which has already been explained).



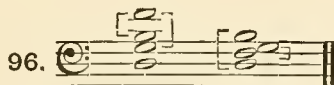
The resolution of the complete chord will therefore be as follows :—



That is, all the parts (except the root G) will have the same resolution as they had in the original chord. The root remains stationary, as it is not in the character of an upper or middle part to proceed by such large intervals as the root did when it appeared as *bass* of the original chord.

RESOLUTION OF THE CHORD OF  $\frac{6}{3}$ .

This chord contains between its component parts not only the interval of a Chord of  $\frac{6}{4}$   
 $\frac{3}{3}$ . seventh (or its inversion, the second) but also that of a diminished fifth (or its inversion, the augmented fourth).



Its resolution is therefore as follows :—



The bass, being the original fifth, is freely resolved.

RESOLUTION OF THE CHORD OF  $\frac{6}{2}$ .

This chord has the peculiarity, that the dissonances of the original chord, viz., Chord of  $\frac{6}{4}$   
 $\frac{2}{2}$ . the seventh and the diminished fifth, can only appear in their inverted form, as second and augmented fourth.

The resolution of this chord is the same as heretofore, it must therefore be followed by the chord of 6.

98. Musical notation for exercise 98. It shows two measures in C major. The first measure contains a dominant seventh chord (V7) with fingerings 2 and 6. The second measure contains its first inversion (I) with fingerings 2 and 6. The notes are G4, F4, E4, D4 in the first measure and F4, E4, D4, C4 in the second measure.

TABLE OF THE NATURAL RESOLUTIONS OF ALL THE INVERSIONS OF THE CHORD OF THE DOMINANT SEVENTH IN DIFFERENT POSITIONS.

THE CHORD OF  $\frac{6}{5}$ .

99. Musical notation for exercise 99. It shows six measures in C major. The first measure is the 6/5 chord (V7) with fingerings 6/5. The following five measures show its first inversion (I) with fingerings 6/5. The notes are G4, F4, E4, D4 in the first measure and F4, E4, D4, C4 in the second measure.

C: V<sub>7</sub> I.

THE CHORD OF  $\frac{6}{4}$ .

 Musical notation for exercise 100. It shows six measures in C major. The first measure is the 6/4 chord (V7) with fingerings 4/3. The following five measures show its first inversion (I) with fingerings 4/3. The notes are G4, F4, E4, D4 in the first measure and F4, E4, D4, C4 in the second measure.

C: V<sub>7</sub> I.

THE CHORD OF  $\frac{6}{2}$ .

 Musical notation for exercise 101. It shows six measures in C major. The first measure is the 6/2 chord (V7) with fingerings 2/6. The following five measures show its first inversion (I) with fingerings 2/6. The notes are G4, F4, E4, D4 in the first measure and F4, E4, D4, C4 in the second measure.

C: V<sub>7</sub> I.

EXERCISES.

100. Musical notation for exercise 100. It shows a sequence of chords in C major: 1. (C4), 6/5 (G4, F4), 6 (E4), 6 (E4), 3 2 (D4, C4), 6 (E4), 6/4 7 (G4, F4), 2. 3 (D4, C4), 4/3 (F4, E4), 6 (E4), 6 (E4), 6/5 (G4, F4).

6 8 7 3. 5 3 2 6 4 3 6 5 6 4 7

4. 5 2 6 4 3 6 4 3 6 6 8 7 5. 6 2 6 6

6 5 6 7 4 # 6. 3 6 5 6 4 3 6 4 3 6 # 7 6 4 3 6

6 5 6 6 7 4 # 8. 6 # 3 2 6 4 3 6 4 3 6 6 7 4 #

---

## CHAPTER VI.

### OF SECONDARY CHORDS OF THE SEVENTH.

Secondary chords of the seventh.

BESIDES the chord of the dominant seventh, other chords of the seventh are possible on every degree of the major and minor scale. These are called secondary sevenths, and are all formed by adding a new note, distant a seventh from the root, to any of the common chords already found. Their relationship to any given key is certainly undeniable, but not so decided as that of the dominant seventh.

101.

In Major.

In Minor.

We find here harmonies which have a somewhat harsh and foreign effect, because, as has already been observed, their relationship to the scale is not so distinct as that of the dominant seventh. They are therefore less frequently employed, but are nevertheless well adapted to give variety to the harmonic progression.

The diminished seventh.

One of the secondary sevenths, that on the seventh degree of the minor scale, contains an interval which has not hitherto been spoken of, namely, the *diminished seventh*. This interval is smaller by one semitone than the minor seventh, from which it may be formed by chromatically raising the root, in the same manner that the diminished fifth was formed from the perfect fifth. (See p. 20.)

102.

Minor Seventh. Diminished Seventh.

Like all diminished intervals it is a dissonance, and therefore requires to be resolved. Its resolution and treatment will be explained hereafter.

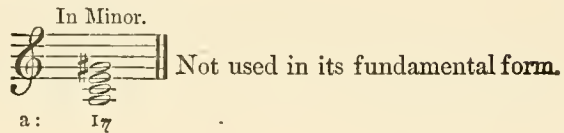
The secondary sevenths may be classified thus:—

1. Major common chords with major sevenths:—

103. 

C: I<sub>7</sub> IV<sub>7</sub> a: VI<sub>7</sub>

2. Minor chord with major seventh:—



a: I<sub>7</sub> Not used in its fundamental form.

3. Minor chords with minor sevenths:—



C: II<sub>7</sub> III<sub>7</sub> VI<sub>7</sub> a: IV<sub>7</sub>

4. Diminished chords (chords of diminished fifth) with minor sevenths:—



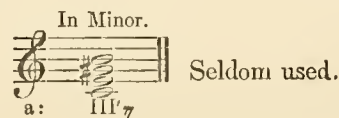
C: VII<sub>7</sub> a: II<sub>7</sub>

5. Diminished chord with diminished sevenths:—



a: VII<sub>7</sub>

6. Augmented chord with major seventh:—



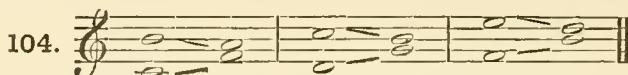
a: III<sub>7</sub> Seldom used.

## EMPLOYMENT OF THE SECONDARY SEVENTHS OF THE MAJOR SCALE.

Resolution of  
the secondary  
sevenths.

Whether the interval of the seventh (or its inversion, the second) be major, minor, diminished, or augmented, it will always form a dissonance with the root, and as such will require a resolution.

This resolution will be the same as that already given to the dominant seventh, *i. e.*, the seventh will descend one degree, while the root proceeds a fourth upwards or fifth downwards. The progression of the principal notes of the chord being thus found :—



the remaining intervals require no new rule ; the third ascends one degree, while the resolution of the fifth is free.

105.

Downward  
resolution of  
the third.

The exceptional progression of the third shown at *b* in the above example is in order to avoid the covered octaves which would otherwise occur between tenor and bass; and which would be the more objectionable that the tenor at *b* proceeds a whole tone, *f-g*, instead of half a tone as at *a*. (see p. 18.)

Whether, however, it will be preferable to double the leading note in the chord which follows the chord of the seventh, as at *c* in Ex. 105, or to employ the following hidden fifths, will depend upon circumstances.

106.

The natural resolution of the secondary sevenths on each degree of the major scale is therefore as follows :—

107.

ON THE 2ND DEGREE. WITH OMISSION OF THE 5TH.

C: II<sub>7</sub> V. etc.

ON THE 3RD DEGREE. WITH OMISSION OF THE 5TH.

C: III<sub>7</sub> VI. etc.

ON THE 4TH DEGREE. WITHOUT THE 5TH. (This resolution is seldom used.)

C: IV<sub>7</sub> VII° etc.

ON THE 6TH DEGREE. WITHOUT THE 5TH.

C: VI<sub>7</sub> II. etc.

ON THE 7TH DEGREE. WITHOUT THE 5TH.

C: VII<sub>7</sub> III. etc.

ON THE PECULIAR RESOLUTION OF THE CHORD OF SEVENTH ON THE SEVENTH DEGREE.

In the above table the same resolution has been given to *all* the chords of seventh, including that on the seventh degree, (*i. e.*, in each case the bass proceeds a fourth upwards or a fifth downwards). A more usual progression, however, of this chord is that founded on the resolution of the chord of diminished fifth, from which the chord of seventh now under consideration is derived.

Chord of 7 on the leading note.

**Its resolution.** The following example will show that the tendency of the chord of diminished fifth towards that of the tonic is not only unaltered, but even rendered more decided, by the addition of the seventh.

108.

C: vii° I. vii°<sub>7</sub> I. vii° I. vii°<sub>7</sub> I.

Observe that when the chord appears in the above position, either the third in the succeeding chord must be doubled (see Ex. 109 *b*), to avoid the consecutive fifths shown in Ex. 109 *a*, or the third in the chord of seventh must take a leap as shown at *b*.

109.

The best position of the chord of 7 on the leading note.

This chord has the peculiarity that the above is its only satisfactory position, and that all others, where the seventh is not at the top of the chord, are uncertain and indistinct in their effect, if not entirely useless.

110.

Free progressions of the third and fifth of the chord of 7.

The intervals of third and fifth in the chord of the seventh can also have other (free) progressions besides those already allotted to them. A free progression of the third will often render the general progression of parts more independent. For example:—

111.

Bad.



The progression of the soprano in the second bar of the above example is not good on account of the interval *f-b* forming an augmented fourth. This interval is also called the *tritone*, because it contains three whole tones. It will be more fully mentioned hereafter.

Progression of the tritone.

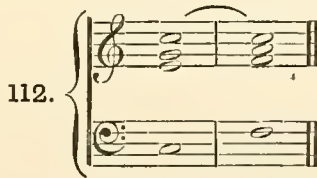
A free progression of the fifth is only possible when the progression of the bass differs from that hitherto employed. Examples of this will be found hereafter.

PREPARATION OF THE SEVENTH.

The harsh effect produced by the sudden appearance of many of the dissonances, and especially of the secondary sevenths, renders a careful introduction of them necessary.

Preparation of dissonant intervals.

This introduction is called the *preparation* of a dissonance. A note is said to be *prepared* when it has already appeared as a *consonance* in the foregoing chord and in the *same* part. The already-mentioned connection of chords is therefore nothing more than preparation, as in the following example it may be said that the *C* in the soprano in the second chord is prepared by the *C* in the first.



The preparation of the seventh may take place in the following or any similar manner :—

Preparation of the seventh.

113.

C: V. I<sub>7</sub> IV. V. I<sub>7</sub> IV. IV. II<sub>7</sub> V. I. II. V<sub>7</sub> I. I. vi<sub>7</sub> II. IV. vii<sub>7</sub> I.

In each of the above examples the note which is bound to the next following by means of a slur  $\frown$ , forms the *preparation* of the seventh.

In the construction of such preparations the following rules must be observed :—

Rules for Preparations.

- (1) The preparation must fall on the unaccented part of the bar (arsis).

(2) It must be of at least equal duration with the seventh by which it is followed. It may also be longer, but never shorter.

114. Good. Bad.

Entrance of the dominant seventh without preparation.

The chord of dominant seventh, however, being less foreign to the key than the other sevenths, does not always require preparation. The note forming the interval of seventh in this chord may be freely introduced, but in this case the root of the chord should be already present in the previous chord, in order to preserve the progression of parts pure and free from harshness.

115.

C: I. V<sub>7</sub> I. I. V<sub>7</sub> I.

In each of the above examples the root of the chord of dominant seventh is present in the preceding chord (in the alto); the seventh is therefore allowed to appear without preparation.

Entrance of the chord of 7 on the leading note without preparation.

The chord of seventh on the seventh degree of the major or minor scale may also be used without preparation.

EXERCISES.

116.

1. 8 7 7 6 6 6 4 7 2. 8 2 6 7

6 6 6 6 4 7 3. 6 7 7 6

6 6 4 7 4. 6 5 7 7 6 6 7

THE CONNECTION OF CHORDS OF THE SEVENTH ONE WITH ANOTHER

Hitherto every chord of seventh has been resolved into the common chord of the fourth degree above its root. A second chord of seventh may, however, serve as its resolution, the root of the new chord being likewise four degrees above that of the first. In this case the third in the first chord of seventh will remain stationary, in order to form the necessary preparation of the seventh in the succeeding chord. For example:—

Resolution of one chord of 7 into another.

117.

C: II. V<sub>7</sub> I<sub>7</sub> IV.

Here the third of the chord of dominant seventh remains stationary, and prepares the seventh in the chord of seventh on the first degree. All the other intervals are resolved as usual. How effected.

The peculiarity of this progression is, that in one of the two chords of seventh the fifth will always be omitted, and in a sequence of sevenths, *i. e.*, when several chords of seventh follow each other, this omission of the fifth will take place in every other chord. For example:—

118.

C: I. II<sub>7</sub> V<sub>7</sub> I<sub>7</sub> IV<sub>7</sub> VI. IV<sub>7</sub> VII<sub>7</sub> III<sub>7</sub> VI<sub>7</sub> II<sub>7</sub> V<sub>7</sub> etc.

EXERCISES.

119.

1. 3 4/3 6 6 6 7 7 7 2. 3 6 7 7 6

6 6 4 4 6 7 7 3. 5 7 7 7 7 7 4 6 6 6 2 6

7 7 4. 7 6 6 5 7 7 7 6 5

## EMPLOYMENT OF THE SECONDARY SEVENTHS OF THE MINOR SCALE

Secondary  
sevenths of  
the minor  
scale.

The chord of  
7 on the first  
degree.

The use of the secondary sevenths of the minor scale is not so general as that of the sevenths of the major scale. Many of them are either uncertain and ambiguous, or in their resolutions produce harsh anti-melodic progression of parts. With these last may be classed the chord of seventh on the first degree of a minor scale, which, as will readily be seen from the following example, cannot well be employed on account of the progression of an augmented second caused by its resolution.

120.

a: 1<sup>7</sup> IV.

On the second  
degree.

The chord of seventh on the second degree is resolved into the chord of the dominant, and is very generally used.

121.

a: II<sup>7</sup> V. etc

On the third  
degree.

A resolution of the chord of seventh on the third degree is not impossible; it is however ambiguous, and belongs rather to C major than to A minor. (See altered chords, p. 68.)

122.

a: III<sup>7</sup> VI.

On the fourth  
and sixth  
degrees.

The chords of seventh on the fourth and sixth degrees are seldom employed, as their resolution occasions harsh progressions. This will be perceived from the following examples:—

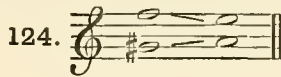
123.

a: IV<sup>7</sup> VII<sup>7</sup> IV<sup>7</sup> V. Good.

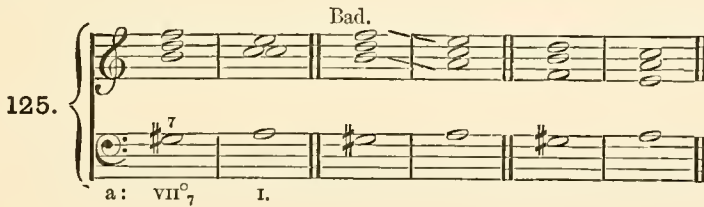


The seventh degree of the minor scale carries a very important chord, known as the *chord of diminished seventh*. Its resolution, as in the case of the chord of seventh on the seventh degree of the *major* scale (see p. 47), is founded on the natural upward tendency of its root, which is the leading note of the scale.

On the seventh degree: diminished seventh. Its resolution.



Thus, while the root rises and the seventh falls one degree, as is usual with diminished intervals, (see p. 20), the third and fifth proceed as in other chords of the seventh, and the resolution of the whole chord takes place as follows:—



It is also possible for the third of the chord of diminished seventh to descend by a leap into the fifth of the ensuing chord, as in the case of the chord of diminished fifth (see p. 22).



The chord of diminished seventh, being the least harsh of all the secondary sevenths, does not require preparation.

The student is here recommended to read over again the rules relating to the chord of diminished fifth (see p. 20, &c.), on account of the great similarity which exists between that chord and the chord of diminished seventh, both as regards its position in the scale and its treatment.

## EXERCISES.

127.

1. 2.

3.

4.

In No. 2 of the above exercises the chord of seventh on the third degree of the minor scale is introduced. It is, however, strictly prepared, and on that account will not appear harsh or unnatural.

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### CHAPTER VII.

#### OF THE INVERSIONS OF THE SECONDARY SEVENTHS.

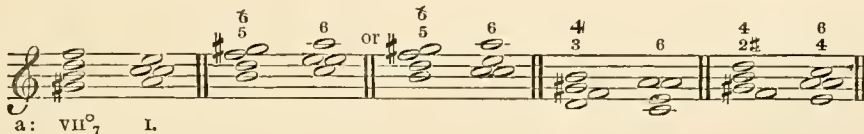
THE inversions of the secondary sevenths in major or minor give the same derived chords as those of the dominant seventh, viz., the  $\begin{smallmatrix} 6 \\ 5, 3, \end{smallmatrix}$  and  $\begin{smallmatrix} 6 \\ 4 \\ 2. \end{smallmatrix}$  Inversions of the secondary sevenths.

128. 

No new rules are required for the resolution of these chords. In the resolution of the inversions of the chord of seventh on the seventh degree, care is necessary to avoid the consecutive fifths which are otherwise apt to occur. Their resolution.

129. 

All the above inversions are available, that of the  $\begin{smallmatrix} 6 \\ 4 \\ 2 \end{smallmatrix}$  being however least used, as its resolution, (the chord of  $\begin{smallmatrix} 6 \\ 4 \end{smallmatrix}$ .) can be employed but seldom, and then only as a *passing chord*. The inversions of the diminished seventh require a similar resolution to the foregoing.

130. 

The unsatisfactory resolution into the chord of  $\begin{smallmatrix} 6 \\ 4 \\ 2 \end{smallmatrix}$  of the inversion  $\begin{smallmatrix} 6 \\ 4 \\ 2 \end{smallmatrix}$  again affords a reason why this chord should seldom be employed (see preceding paragraph).

Best position of the inversions of the seventh on the seventh on the leading note of the major scale.

It has already been remarked (p. 48) that the only satisfactory position of the chord of seventh on the seventh degree in major is that with the seventh at the top of the chord; the following positions of its *inversions* are also more satisfactory in their effect than those given in Ex. 129, because the seventh is here retained in its original position *above* the root instead of being inverted and thus forming a second.

131.

C: VII°<sub>7</sub> I.

Position of the inversions of the diminished seventh.

This is however not necessary in the case of the diminished seventh; in the inversions of this chord the seventh may lie either above or below the root, the effect in either case being similar.

EXERCISES.

132.

132. 133. 134. 135. 136. 137. 138. 139. 140. 141.



### CHAPTER VIII.

## OF THE CONNECTION OF THE CHORDS OF THE SEVENTH WITH CHORDS OF OTHER DEGREES.

THE progression of the interval of the seventh depends entirely on that of the root. Hitherto the latter has always proceeded a fourth upwards or a fifth downwards; under these circumstances the seventh, as has already been shown, descends one degree. The progression of the root may however be such that the seventh shall remain stationary, or even ascend, for example:—

Various free resolutions of the seventh.

133.

The above example proves the possibility of connecting the chords of seventh with other chords than those hitherto employed. The following are examples of a few methods of effecting this:—

- (1). The connection of the chord of dominant seventh with various common chords (excepting that of the tonic,) the seventh always *descending*.
- (a) Connection with the chord of the sixth degree.

The seventh descending.

134.

This progression is very often used.

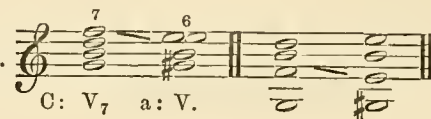
The effect of the inversions of the seventh under similar circumstances is less decided than that of the chord itself; they are therefore seldom used.

135.

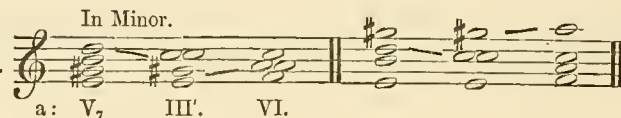
- (b) Connection with the chord of the third degree.

136.

This progression becomes still more effective if a modulation towards A minor be introduced.

137.  C: V<sub>7</sub> a: V.

The dominant seventh may also be connected with the chord of the third degree in minor. The latter chord, however, being itself a dissonance, will also require to be resolved.

138.  In Minor. a: V<sub>7</sub> III. VI.

The seventh remaining stationary.

(2). The connection of the chord of dominant seventh with various common chords, the seventh *remaining stationary*.

(a) Connection with the second degree.

139.  In Major. Not used in Minor. C: V<sub>7</sub> II. a: V<sub>7</sub> II°.

(b) Connection with the fourth degree.

140.  In Major. In Minor. C: V<sub>7</sub> IV. a: V<sub>7</sub> IV.

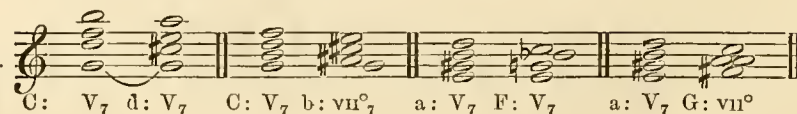
The chord of dominant seventh may also be connected with other chords of the seventh on different degrees, for example:—

141.  C: V<sub>7</sub> vI<sub>7</sub> V<sub>7</sub> III<sub>7</sub> V<sub>7</sub> a: V<sub>7</sub> V<sub>7</sub> etc.

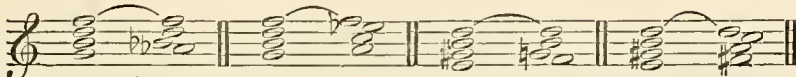
With modulations.

If modulations are introduced, many new connections of chords of the seventh with one another become possible, for example:—

(a) With the seventh descending.

142.  C: V<sub>7</sub> d: V<sub>7</sub> C: V<sub>7</sub> b: VII<sub>7</sub> a: V<sub>7</sub> F: V<sub>7</sub> a: V<sub>7</sub> G: VII°

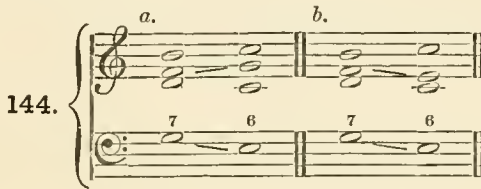
(b) With the seventh remaining stationary.

143.   
 C: V<sub>7</sub> Eb: V<sub>7</sub> C: V<sub>7</sub> Bb: V<sub>7</sub> a: V<sub>7</sub> C: V<sub>7</sub> a: V<sub>7</sub> G: V<sub>7</sub>

(3). The connection of the chord of the dominant seventh with various other chords, the seventh *ascending*. The seventh ascending.

It will be possible for the seventh to ascend—

(a) when the root proceeds to that note into which the seventh would ordinarily resolve itself, for example:—

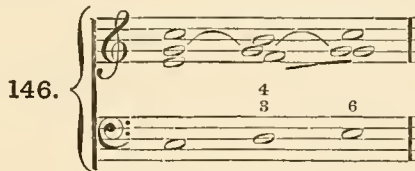
144. 

Here the root of the dominant seventh proceeds to E, which would be the ordinary resolution of the seventh F; this latter must, therefore, ascend, in order to avoid the covered octaves shown at Ex. 144 b.

(b) When the root remains stationary.

145. 

In this case, however, the seventh must lie at a distance from the root; the following progression is therefore faulty.

146. 

(c) When the seventh itself is chromatically raised for the purpose of modulation.

147.   
 C: V<sub>7</sub> G: V<sub>7</sub> C: V<sub>7</sub> G: V<sub>7</sub> C: V<sub>7</sub> e: VII<sup>o</sup><sub>7</sub>

(d) When, in the case of modulation, the bass moves in contrary motion.

148. 

C: V<sub>7</sub> d: v<sub>7</sub> C: V<sub>7</sub> b<sub>7</sub>: vn<sub>7</sub> a: v<sub>7</sub> d: vii<sub>7</sub> C: V<sub>7</sub> F: V<sub>7</sub>

Deceptive cadence (*Inganno*).

In all the above examples, the ear is as it were deceived by the substitution of some other chord for the chord of the tonic, which would be the natural resolution of the dominant seventh. On this account, a progression in which the chord of dominant seventh is followed by some other chord than that of the tonic, is termed the *deceptive cadence* (*Inganno*).

EXERCISES.

149. 

CONNECTION OF THE *SECONDARY SEVENTHS* WITH OTHER CHORDS OF VARIOUS DEGREES OR IN DIFFERENT KEYS.

Connection of secondary sevenths with other chords.

It would be equally impossible and unnecessary to give examples of *all* the connections of the secondary sevenths with other chords. The following are, however, a few of the most useful.

(a) With the seventh strictly resolved.

The seventh descending.

150. 

c: II<sub>7</sub> III. c: II<sub>7</sub> a: V c: II<sub>7</sub> e: V<sub>7</sub> c: III<sub>7</sub> IV.

C: III<sub>7</sub> F: V<sub>7</sub> C: IV<sub>7</sub> G: V<sub>7</sub> a: II<sub>7</sub> III. VI.

(b) With the seventh freely resolved.

151. etc.

c: II<sub>7</sub> c: VII<sup>o</sup><sub>7</sub> c: II<sub>7</sub> a: V<sub>7</sub> c: II<sub>7</sub> a: VII<sub>7</sub>

The seventh ascending.

• This example is objectionable on account of the so-called *false relation* between soprano and bass. The false relation will be explained hereafter.

(c) With the seventh remaining stationary.

152. etc.

c: II<sub>7</sub> IV. c: II<sub>7</sub> VI. c: II<sub>7</sub> I. c: II<sub>7</sub> I. V.

The seventh remaining stationary.

The progression shown in the last bar of the above example is often employed. It can scarcely be considered as a *free* resolution of the seventh, as the real resolution is merely delayed by the introduction of the chord of  $\frac{6}{4}$  and then takes place in its ordinary form in the next chord.

In the same manner the resolution of the diminished seventh is often delayed by the interposition of the chord of  $\frac{6}{4}$ ; thus:—

Delayed resolution of the diminished seventh.

153. etc.

g: VII<sub>7</sub> C: I. V.

EXERCISES.

154. etc.

1.  $\frac{7}{5} \frac{6}{5} \frac{6}{5} \frac{7}{5} \frac{6}{5} \frac{6}{5} \frac{7}{5} \frac{6}{4} \frac{7}{5}$

2.  $\frac{3}{5} \frac{7}{5} \frac{6}{5} \frac{6}{5} \frac{6}{5} \frac{7}{5} \frac{2}{5} \frac{6}{5} \frac{7}{5}$

3.  $\frac{3}{5} \frac{6}{5} \frac{6}{4} \frac{7}{5} \frac{7}{5} \frac{6}{5} \frac{7}{5} \frac{6}{5} \frac{6}{5} \frac{6}{4} \frac{7}{5}$

4.  $\frac{7}{5} \frac{6}{5} \frac{6}{5} \frac{7}{5} \frac{4}{2} \frac{6}{5} \frac{4}{3} \frac{6}{5} \frac{6}{4} \frac{7}{5}$

Many of the above exercises would have been smoother and more melodious had it been allowable to introduce modulations. At present, however, we have not treated of modulations, and on this account many of the progressions exemplified in the foregoing chapter could not be introduced into the exercises.

CHAPTER IX.

OF CHORDS OF THE NINTH, ELEVENTH, AND THIRTEENTH.

Chords of 9, 11, and 13.

Their definition.

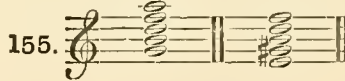
THE views which may be entertained of the above chords are various, but they all tend to one practical result. It may be taken for granted that these are either *real chords*, such as the chord of seventh, in which case they must be considered and treated as such, or that they belong to the list of suspensions, or else occur *accidentally* when one or more parts remain stationary.

In the first case their explanation, and especially that of their inversions, would be extremely prolix, and moreover the chords themselves would often be difficult to recognise, inasmuch as in four-part harmony one or more of their intervals must always be omitted. If, however, considered as suspensions or accidental chords, their explanation becomes very simple. In order to obtain a clear insight into their nature, we will now proceed to examine their construction, &c.

Construction of the chord of 9.

By adding to the chord of dominant seventh a new interval, distant a ninth from the root, a new chord is formed, known as the *chord of dominant ninth*. In the major scale the ninth is major, and in the minor scale minor.

In Major. In Minor.



Its preparation.

In pure harmonic progression it is necessary that either the ninth or the root should be prepared; the following example, therefore, in which both root and ninth enter freely, is objectionable on account of its want of connection.



The preparation may take place as follows:—



Whether the above combinations are to be considered as suspensions, or other accidental chords, will be considered in a later chapter.

Many theoretical works treat also of the formation of other chords of the ninth, called secondary ninths; this is, however, quite unnecessary, for inasmuch as they can never appear without preparation, their treatment, resolution, &c., will be in every respect similar to that of suspensions (see chapter on suspensions).

Secondary  
ninth unne-  
cessary.

Chords of the eleventh and thirteenth are still less worthy to be considered real chords.

Chords of  $\frac{11}{9}$   
13  
and 11  
9.



It is evident that they can never be employed in pure four-part writing, since the necessary omission of some of their intervals would completely alter their nature, and transform them into simple suspension, thus:—

Cannot be em-  
ployed in four  
parts.



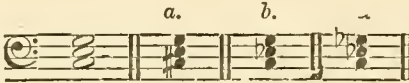
And even in compositions in six or eight parts, where they might appear in their complete form, their character and treatment will still be that of a suspension, while in the free style, where they may also occur without preparation, they must be considered as *passing notes* (see chapter on suspensions).

## CHAPTER X.

## OF THE CHROMATIC ALTERATION OF FUNDAMENTAL HARMONIES (ALTERED CHORDS).

Chromatic alterations producing modulations

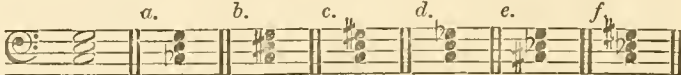
THE chromatic alteration of one or more intervals of a fundamental chord produces one of two different effects: it either causes a modulation into some new key, or gives an entirely new form and construction to the chord itself. If, for example, the major common chord be chromatically altered, thus—

160.  Musical notation for example 160. It shows a treble clef with a common time signature. The first measure is a whole rest. The second measure is a chord of a diminished fifth (F# and C) with a fermata above it, labeled 'a.'. The third measure is a chord of a diminished fifth (Bb and F) with a fermata above it, labeled 'b.'. The fourth measure is a chord of a diminished fifth (Cb and G) with a fermata above it, labeled 'c.'.

modulations will be effected, at *a* (by means of the chord of diminished fifth on the seventh degree) into D major or minor, or (by the chord of diminished fifth on the second degree) into B minor; at *b* into C minor, and at *c* (by the chord of diminished fifth on the seventh degree) into D $\flat$  major or minor.

Chromatically altered fundamental harmonies.

The following chromatic alterations of the same chord will not effect modulations, but the nature of the chord itself will be totally changed.

161.  Musical notation for example 161. It shows a treble clef with a common time signature. The first measure is a whole rest. The second measure is a chord of a diminished fifth (F# and C) with a fermata above it, labeled 'a.'. The third measure is a chord of a diminished fifth (G# and D) with a fermata above it, labeled 'b.'. The fourth measure is a chord of a diminished fifth (A# and E) with a fermata above it, labeled 'c.'. The fifth measure is a chord of a diminished fifth (Bb and F) with a fermata above it, labeled 'd.'. The sixth measure is a chord of a diminished fifth (Cb and G) with a fermata above it, labeled 'e.'. The seventh measure is a chord of a diminished fifth (Db and Ab) with a fermata above it, labeled 'f.'.

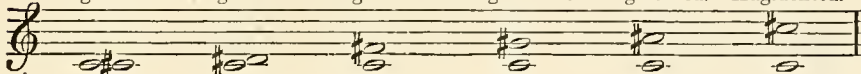
Various kinds of intervals.

The above combinations contain several intervals which have not hitherto been met with. It will therefore be necessary, before proceeding farther, to consider how many different kinds of intervals are possible, and what is their harmonic value. It has been stated in the chapter on intervals (p. 5), 1stly, that unisons, fifths, fourths, and octaves, which are formed of the notes of a diatonic major scale, and which have the first degree of that scale for their lower note, are called *perfect*; 2ndly, that seconds, thirds, sixths, and sevenths, formed in the same manner and under the same conditions, are called *major*; and 3rdly, that *minor* intervals are formed from major by chromatically lowering the upper note one semitone. To these rules may now be added the following:—



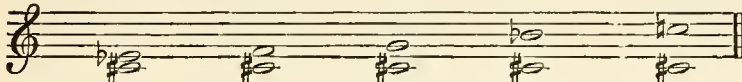
(1). If the upper note of major and perfect intervals be chromatically raised one semitone, *augmented* intervals are formed.

Formation of augmented intervals.

162.  Augmented. Augmented. Augmented. Augmented. Augmented. Augmented.  
Unison. Second. Fourth. Fifth. Sixth. Octave.

(2). If the lower note of most of the perfect and minor intervals be chromatically raised one semitone, *diminished* intervals are formed.

Of diminished intervals.

 Diminished. Diminished. Diminished. Diminished. Diminished.  
Third. Fourth. Fifth. Seventh. Octave.

N.B.—Augmented thirds, sevenths, and ninths, as well as diminished unisons, seconds, sixths, and ninths, have no harmonic value.

Of the augmented intervals given in the above example two have already been met with, viz., the augmented fifth (see p. 24) and (in the form of an inversion of the diminished fifth) the augmented fourth (see pp. 20 and 32).

Two also of the diminished intervals shown above have already been employed, viz., the diminished fifth (see p. 20) and the diminished seventh (see p. 44).

All augmented and diminished intervals, as has already been observed, are dissonances.

They are dissonances.

Augmented intervals, when inverted, become diminished; and diminished intervals, by inversion, become augmented.

Their inversions.

This will be clearly seen from the following Table of Inversions, which will also serve as a recapitulation of what has already been said on this subject at p. 6.

TABLE OF INVERSIONS

S. Aug

163.

Original Intervals.

Their Inversions.

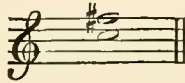
<p>UNISONS. Perfect. Aug.</p>	<p>SECONDS. Major. Minor. Aug. Dim.</p>	<p>THIRDS. Major. Minor. Dim.</p>	<p>FOURTHS. Perfect. Aug. Dim.</p>	<p>FIFTHS. Perfect. Aug. Dim.</p>	<p>SIXTHS. Major. Minor. Aug. Dim.</p>	<p>SEVENTHS. Major. Minor. Dim.</p>	<p>OCTAVE Perfect.</p>
<p>OCTAVES. Perfect. Dim.</p>	<p>SEVENTHS. Minor. Major. Dim. Aug.</p>	<p>SIXTHS. Minor. Major. Aug.</p>	<p>FIFTHS. Perfect. Dim. Aug.</p>	<p>FOURTHS. Perfect. Dim. Aug.</p>	<p>THIRDS. Minor. Major. Dim.</p>	<p>SECONDS. Minor. Major. Aug.</p>	<p>UNISONS. Perfect.</p>

The augmented octave, and the major or minor ninth, have not been included in the above table as they cannot be inverted in the octave, since in them the upper note would never become lower than the lower note. This will, of course, be equally the case with all intervals greater than a perfect octave.

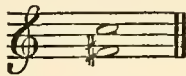
The augmented octave and major and minor ninth cannot be inverted.

It will be remembered that the diminished fifth was formed (at p. 20) by chromatically raising the root of the perfect fifth, and not by lowering the upper note, which would appear to have a similar effect. The reason of this may now be understood from the foregoing table of inversions. For, since the augmented fourth C-F#—

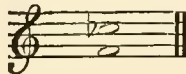
Formation of the diminished fifth.



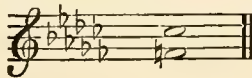
is formed by chromatically raising the *upper* note, F, it follows that its inversion, the diminished fifth, F#-C—



will also contain a chromatically raised F, being in this case the *lower* note of the interval. Any other diminished fifth in which the upper note should have been lowered, such as



will therefore belong to a different scale, that of Cb, and will in reality have been formed by raising the lower note F by means of a # thus:—



We may now return to the chromatically altered chords shown in Ex. 161. Of these combinations, the two marked *c* and *e* can alone be considered as real chords. The others have no harmonic value, and can only be used as *passing chords*.

The chord shown in Ex. 161 at *c* has already been met with on the third degree of the minor scale (see p. 24), and is termed the augmented common chord.

Chord of the augmented fifth.

Its employment is, however, much more general in its present position, as common chord of the first, fourth, or fifth degree, with its interval of fifth chromatically raised.

The resolution of the dissonant interval of this chord (*viz.*, the augmented fifth) is one degree upwards, as is the case with all augmented intervals (see p. 20).

Its resolution.

The following example will show the formation of the augmented common chord by means of the passing note G $\sharp$ , as well as its resolution:—


164. 

Its inversions. The inversions of this chord are also available:—

165. 

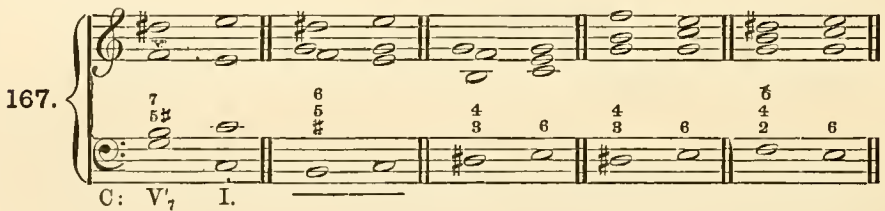
Its appearance without preparation.

Although these chords are generally used either as passing chords (as in Ex. 164 a) or with the fifth strictly prepared, yet in rapid changes of harmony they may also appear *without* preparation.

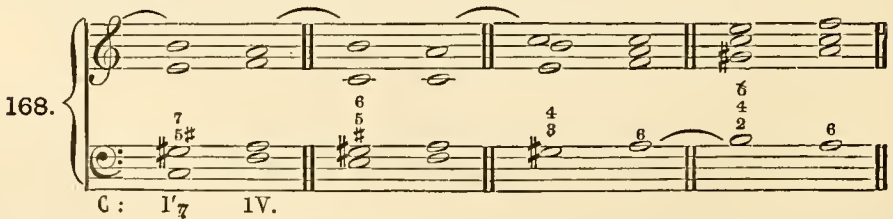
166. 

The chord of augmented fifth with the addition of a seventh.

To the three augmented common chords on the first, fourth, and fifth degrees may be added the respective sevenths belonging to those degrees. Of these combinations the one most used is the dominant seventh with augmented fifth.

167. 

A combination of the chord of seventh on the first degree with the augmented fifth is also possible. (See p. 52.)

168. 

The augmented chord on the fourth degree with the addition of the seventh is, however, very seldom used.

169.

C: IV<sup>7</sup> VII<sup>o</sup>.

In all the above examples the ordinary progression of the bass a fourth upwards or a fifth downwards has been adopted. The following example will serve to show that the chords of seventh with augmented fifth may also be with connected with other chords of various degrees and in different keys.

Its connection with various other chords.

170.

C: V<sup>7</sup> a:V. C: V<sup>7</sup> d: VII<sup>o</sup> I. C: V<sup>7</sup> g: VII<sup>o</sup> I. C: III. I<sup>7</sup> G: VII<sup>o</sup> V<sup>7</sup> etc.

Many of the above combinations and progressions have been introduced in this work merely to show that they are possible; the student is, however, strongly recommended to abstain from employing them until he is thoroughly acquainted the simpler and more important forms of harmonic progression.

EXERCISES.

171.

In the fifth bar of Ex. No. 4 the fifth of the minor chord on the second degree is chromatically augmented. The effect of this combination is in its present position not unpleasant. It will be seen from this that the natural progression of parts will often give rise to new combinations, which, however, are not of sufficient harmonic importance to require separate consideration.

Chord of the augmented sixth.

The chord shown in Ex. 161 at *e* (known as the doubly-diminished chord) gives by means of inversion a chord which is very frequently used, called the *chord of the augmented* (sometimes termed *superfluous*) *sixth*.

Its derivation.

The fundamental chord of which this is the first inversion, is the chord on the fourth degree of the minor scale, with the root chromatically raised.

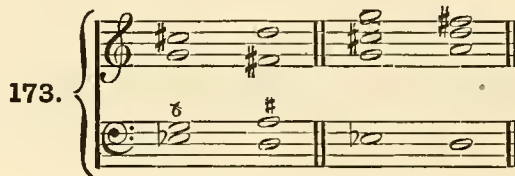


Its resolution.

Its resolution (shown at *b* in the above example) is determined by the rule that all augmented intervals must ascend. This chord is, therefore, always resolved into the chord on the dominant; as in Ex. 172, where the chord of superfluous sixth, being derived from the chord on the fourth degree of the scale of G minor, resolves itself into the chord of the fifth degree, D.

The third of the chord doubled.

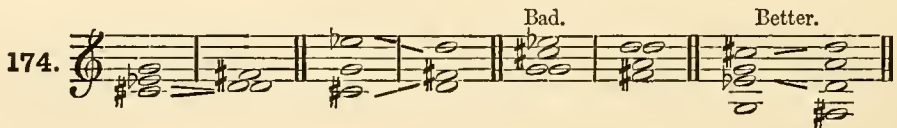
In four parts the third only of this chord may be doubled.



The chord of augmented sixth is sometimes termed the *Italian sixth*.

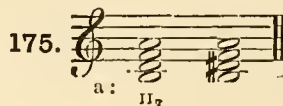
Other positions of the doubly diminished triad.

The other positions of the doubly diminished chord are also available. The second inversion (chord of  $\frac{6}{4}$ ) may be employed in four parts, provided the different parts lie at a distance from each other; the fundamental position, however can only appear in three parts, and is very seldom employed.



The augmented chord of sixth, fourth, and third.

The chromatic alteration of one of the intervals of the chord of seventh has already been noticed at p. 68, where the chord of seventh was found combined with the augmented common chord. Of the remaining secondary sevenths, only one is of any harmonic importance when chromatically altered. This is the chord of seventh on the second degree of the minor scale, which, with the third chromatically raised thus—



gives the following inversions :—

176.

Of these the second inversion (chord of  $\frac{6}{4}$ ) is most used; it is called the *German sixth*. Its resolution is founded on that of the fundamental chord; thus, as the chord of seventh on the second degree resolves itself into the chord of the dominant (see p. 52, Ex. 121), this will also be the case with its inversions, whether the third be chromatically raised or not.

177.

If the root of this chord be omitted, the already mentioned chord of augmented sixth will be found, thus explaining the natural tendency of the latter chord towards the dominant, into which it is always resolved (see p. 70).

Resolution of the chord of augmented sixth.

178.

Or transposed into G minor for the sake of comparison with Ex. 172 b.

179.

To this chord may also be added the ninth of the original root, in which case however the root itself must be omitted.

The augmented chord of the sixth and fifth.

This combination gives by inversion a chord known as the augmented chord of sixth and fifth, and sometimes termed the *French sixth* ( $\frac{6}{5}$ ), the derivation of which is as follows :—

180.

Its derivation.

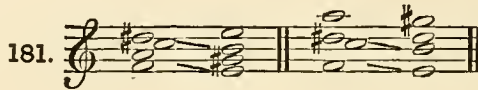
The other inversions (the chords of  $\frac{4}{3}$  and  $2\sharp$ ) are very seldom used.

The natural resolution of the augmented chord of  $\frac{6}{5}$  is again the same as that of the fundamental chord, namely into the chord of dominant.

Its resolution.

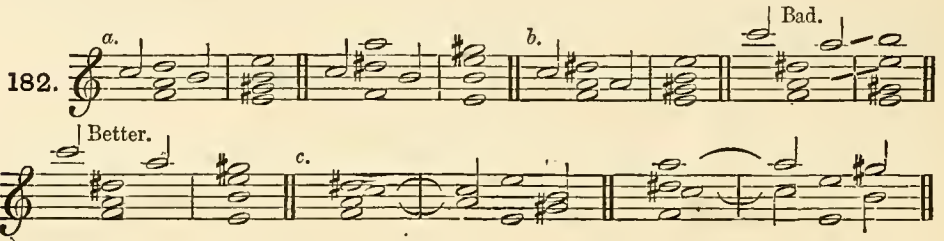
Causes consecutive fifths.

This resolution, however, always causes consecutive fifths.



How avoided.

Such fifths may be avoided in three ways, viz., 1stly, by an anticipated resolution of the fifth (*i. e.*, the original ninth), as in Ex. 182 at *a*; 2ndly, by a free progression of the fifth towards the third of the same chord, as at *b*; and 3rdly, by delaying the resolution of both third and fifth, whereby the chord of  $\frac{6}{4}$  is introduced between the augmented chord of  $\frac{7}{\sharp}$  and its resolution, as at *c*.



Not to be considered a chord of the ninth.

Although in order to form the augmented chord of the sixth and fifth the ninth was added to the chord of seventh on the second degree, yet this combination cannot be considered a *chord of the ninth*, but has the same character of a suspension which always belongs to the interval of a ninth, under whatever circumstances it may be employed.

From this it may be argued that the chord of ninth ought only to have been treated under the head of suspensions; it was, however, necessary to mention it here, since it is often (though incorrectly) considered as a real fundamental chord, and as such must occupy its place in the list of chords. In its correct form as a suspension, the ninth will be more fully explained in Chapter XII.

EXERCISES.





TABLE OF ALL THE CHORDS OF THE MAJOR OR MINOR SCALE.

I. FUNDAMENTAL HARMONIES.

184. *a.* The Common Chord.

*b.* The Chord of Seventh.

A. THE VARIOUS KINDS OF COMMON CHORDS.

(1) Major common chords:—

In the Major Scale.

C: I. IV. V.

In the Minor Scale.

a: V. VI.

(2) Minor chords:—

In the Major Scale.

C: II. III. VI.

In the Minor Scale.

a: I. IV.

(3) Diminished chords:—

In the Major Scale.

C: VII°.

In the Minor Scale.

a: II°. VII°.

(4) The augmented chord of the minor scale:—

III#.

INVERSIONS OF THE COMMON CHORD.

1. Chord of the Sixth.

2. Chord of the Sixth and Fourth.

B. THE VARIOUS CHORDS OF THE SEVENTH.

(a) The chord of dominant seventh.

In the Major Scale.

C: V<sub>7</sub>

In the Minor Scale.

c: V<sub>7</sub>

(b) The secondary seventh.

(1) Major chords with major sevenths.

In the Major Scale.

C: I<sub>7</sub> IV<sub>7</sub> V<sub>7</sub>

In the Minor Scale.

a: VI<sub>7</sub>

(2) Minor chords with minor sevenths.

In the Major Scale.

C: ii<sub>7</sub> iii<sub>7</sub> vi<sub>7</sub>

In the Minor Scale.

a: iv<sub>7</sub>

(3). Diminished chords with minor sevenths.

In the Major Scale.

C: vii<sup>o</sup><sub>7</sub>

In the Minor Scale.

a: ii<sup>o</sup><sub>7</sub>

(4) The chord of diminished seventh.

In the Minor Scale.

a: vii<sup>o</sup><sub>7</sub>

(5) The augmented chord with major seventh.

In the Minor Scale.

III<sub>7</sub>

INVERSIONS OF THE CHORD OF THE SEVENTH.

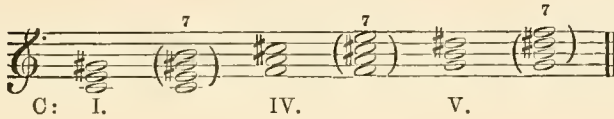
Chord of the Sixth and Fifth.

Chord of the Sixth, Fourth, and Third.

Chord of the Sixth, Fourth, and Second.

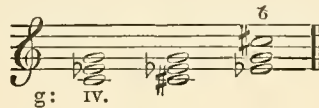
II.—CHROMATICALLY ALTERED CHORDS.

(a) The augmented common chord formed from the major chord.



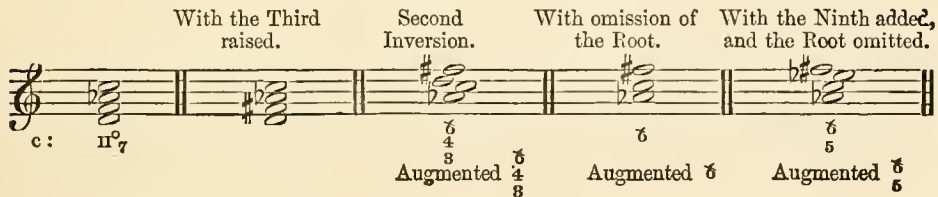
(b) The chord of augmented (or superfluous) sixth (Italian sixth), formed in two ways.

1stly. From the minor chord on the fourth degree of the minor scale, with chromatically raised root (also known as the doubly diminished common chord).



2ndly. From the chord of seventh on the second degree of the minor scale (see the two following chords).

(c) The augmented chord of sixth, fourth, and third (German sixth).  
 (d) The augmented chord of sixth and fifth (French sixth), both formed from the chord of seventh on the second degree of the minor scale.





ambiguous, and may belong to two or more scales at the same time, as was the case with the chord of sixth in the fourth bar of Ex. 185.

This ambiguity often renders it necessary to examine not only the modulating chord itself, but several of the harmonies by which it is followed, before the new key can be distinctly recognised. Very decided modulations can only be effected by means of the chord of dominant seventh or its inversions (see Chapter XIII).

Ambiguity of chord.

Wherever a modulation occurs in the following exercises the new key is to be indicated by the change of the letter under the bass note (a capital letter signifying major and a small letter minor keys, as heretofore). The succeeding chords must then be considered as having their foundation on the various degrees of the new scale, until another modulation takes place.

Indication of modulation in the examples.

EXERCISES.

186.

C: I, G: V<sub>7</sub> I, C: IV, V<sub>7</sub> I, d: vii<sup>o</sup><sub>7</sub> I, C: I, II<sub>7</sub> V, I.

## CHAPTER XII.

## OF SUSPENSIONS.

THE simultaneous progression of all the parts of a chord, especially when, as in the foregoing examples, there is no variety of rhythm, occasions a certain monotony and sameness. Sometimes, however, instead of all the voices proceeding at the same time from one chord to the next following, one or more of the parts will remain stationary, while the remainder proceed to their respective positions in the succeeding chord. The most important of this class of progressions is termed the *suspension*. A suspension occurs when a certain expected or even necessary progression is *delayed*, in such a manner that a part which should *descend* one degree in order to take up its position in the succeeding chord remains stationary, while the other voices proceed independently of it. The delayed or *suspended* part proceeds to occupy its proper position later in the bar. Thus, in the following example—

187.

Musical notation for example 187, showing a suspension in the soprano part. The notation consists of two staves (treble and bass clefs) with three measures. The soprano part (treble clef) has a whole note C in the first measure, a whole note C in the second measure, and a whole note G in the third measure. The bass part (bass clef) has a whole note G in the first measure, a whole note G in the second measure, and a whole note B in the third measure. A '6' is written below the bass staff in the third measure, indicating a sixth chord.

**Suspensions.** the soprano may remain on C, while the other parts proceed to the chord of G in the second bar; the suspended part being then resolved into its proper note B in the second half of the bar:—

188.

Musical notation for example 188, showing a suspension in the soprano part. The notation consists of two staves (treble and bass clefs) with three measures. The soprano part (treble clef) has a whole note C in the first measure, a whole note C in the second measure, and a whole note G in the third measure. The bass part (bass clef) has a whole note G in the first measure, a whole note G in the second measure, and a whole note B in the third measure. A '6' is written below the bass staff in the third measure, indicating a sixth chord. A slur is placed over the soprano part in the second and third measures, indicating that the C in the second measure is a suspension that resolves to G in the third measure.

In the same manner a suspension can be formed from Ex. 187 by delaying the *tenor* :— Definition of the term.

189.

The suspension generally forms a dissonance with the chord in which it appears; that this is, however, not always the case is shown by Ex. 189, in which the suspended note forms a chord of sixth on the bass note G. In this case the unusual appearance of the minor chord of the third degree between the chords of the first and fifth degrees, as well as its peculiar position, together with the delayed progression of the tenor, all combine to give the phrase the character of the suspension. The suspension forms a dissonance.

A suspension may be formed by delaying the progression of *any* voice which would naturally descend one degree, provided the note which forms the suspension be prepared. Suspensions in different voices.

The suspension in its complete form may therefore be divided into three subjects for consideration, viz., the *preparation*, the *suspension* itself, and the *resolution* or progression thereof.

The preparation of a suspension is precisely similar to that of any other dissonance; it may be effected by means of any one of the parts of a common chord, and also (though more rarely) by means of a *seventh*, generally the dominant seventh. Preparation of a suspension.

190.

Preparation by means of the Octave of the Root. By means of the Third.

By means of the Fifth. By means of the Dominant Seventh.

C: I. V. I. I. a: vii<sup>o</sup><sub>7</sub> I. C: I. II. VI. I. G: V. VI.

C: I. IV. I. I. e: vii<sup>o</sup><sub>7</sub> I. C: V<sub>7</sub> I. V. V<sub>7</sub> a: V. IV.

The preparation must take place on the unaccented part of the bar (*arsis*), the suspension itself appearing on the accented part (*thesis*). The rule given on p. 50 for the preparation of a dissonance will also apply to the suspension, viz., that the preparation must be of *at least* equal duration with the note prepared.

Entrance of the suspension

The suspension itself must enter on the accented part of the bar, and may appear in any voice, and proceed to any interval of a common chord, or (though very seldom) to the interval of a seventh.

Suspension proceeding to the Octave of the Root.

191.

C: V<sub>7</sub> I. II. I. V<sub>7</sub> I. V<sub>7</sub> I.

Suspension proceeding to the Third.

C: IV. I. I. V. I. V<sub>7</sub> IV. I.

Suspension proceeding to the Fifth (only admissible in certain positions).

*a.* *b.* *c.* *d.*

C: I. V. F: I. V<sub>7</sub> C: I. V. VI. I.

The remarks on Ex. 189 (see p. 79) will apply to all suspensions proceeding to the fifth. Thus in the above example the progressions *a* and *c* will have the entire character and effect of suspensions, while that shown at *d*, having no dissonant effect, cannot be considered as one. If a seventh be added to the chord into which the suspension is resolved, as at *b* in the above example, the dissonance of the suspension will immediately become perceptible.

Addition of a seventh to the suspension.

Suspension of the seventh.

The reason why the seventh can seldom be suspended, is that the suspension would, in most cases, form a perfect octave, and as such would not have that dissonant character which is essential to a suspension. If, however, the octave be diminished instead of perfect, a suspension of the seventh is possible, as at *b* in the following example:—

192.



The progression *a* in the above example is termed a *passing seventh*, of which more hereafter.

The suspension is resolved, as has already been observed, by descending one degree. Resolution of a suspension.

(Exceptional resolutions will be treated later.)

The note into which a suspension is resolved (*i. e.* the note which has been suspended or delayed) must not appear in any other voice at the same time, except in the bass. The suspended note not to be doubled.

193.

In **Ex. a** the tenor proceeds from *A* to *C*, which latter note is contained in the suspension in the soprano; in **Ex. c** the tenor takes the note *G*, which is already suspended in the alto. Both these cases are faulty, especially because the *third* and *fifth* of the chord are doubled. The effect of doubling the *root*, as in **Ex. d**, is, however, better, particularly when the natural progression of parts requires it, as in the following example:—

194.

It may be here observed, that when the root is doubled it should always be at a distance of at least an octave from the suspended note, and that doubling in the unison is to be avoided. Suspension of the unison.

195.

Between bass and tenor, however, such a progression as the above may be possible.

Other intervals besides the root may, however, be doubled in the *bass* during

a suspension, provided the interval so doubled be introduced by a good progression of parts, for example :—

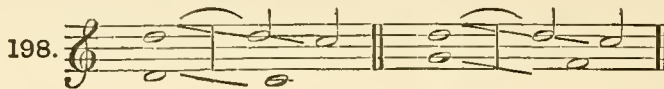
196. 

Consecutive octaves not hidden by the suspension.

The fault contained in the last of the above examples will be readily seen if the suspension be omitted, in which case consecutive octaves will be found between soprano and bass :—

197. 

Hence it will be seen that suspensions do not interfere with the rules against consecutive fifths and octaves :—

198. 

Nevertheless, consecutive *fifths* hidden by suspensions are not unconditionally forbidden.

Suspension in the bass.

The suspension in the *bass*, which usually occurs before the third of the chord (or, which is the same thing, before the chord of 6 or  $\frac{6}{5}$ ) does not allow the note suspended to appear in any other voice.

199. 

Suspensions of the root and fifth are seldom employed in the bass.

200. 

The method of figuring the suspension has already been partly shown in the foregoing examples.

Figuring of the suspension.

When the suspension is contained in one of the three upper parts, the interval found between the suspension and the bass is indicated, together with its resolution; for example:—

4 3, 9 8, 7 6.

Where necessary, other figures are added to indicate the chord into which the suspension is resolved, thus:—

9 8 6 - 7 6  
6 -, 5 4, 4 -.

When the suspension lies in the bass, the *accidental* intervals occurring between the bass and the upper voices are indicated, for example:— $\frac{5-}{2-}$  or  $\frac{5-}{4-}$ , the horizontal lines in each case signifying that the accompanying voices remain stationary during the resolution of the suspension.

A suspension in the bass is also sometimes indicated by an oblique line over the suspending note, the ordinary figuring of the chord into which the suspension is resolved being then placed over the succeeding note; for example:—

201.

EXERCISES.


202.


The image shows five staves of musical notation, each with numerical figures (fingerings) written above the notes. The staves are arranged vertically. The first staff has a treble clef and a key signature of one sharp (F#). The second staff has a bass clef and a key signature of one sharp (F#). The third staff has a treble clef and a key signature of one sharp (F#). The fourth staff has a bass clef and a key signature of one sharp (F#). The fifth staff has a bass clef and a key signature of one sharp (F#). The numerical figures are: 7 6 4 4 3 6 7 7 6 5 4 6 6 6. 5 6; 7 6 6 4 2 7 7 6 5 9 6 7 6 6 6 5 4 4 6#; 7. 8 6 5 4 3 2 6 5 2 4 3 6 2 5# 3 6 4 3; 6 5 8. 3 6 9 6 7 6 6 2 6 6 6 6 5 3 7; 7 6 7 6 4 3 6 5 6 4 3 4 7 6 5 6 5 # 7.

In accompanying the above exercises it will be advisable to write each voice on a separate line or staff, both in order to obtain a clearer view of the progression of every single part, and also as a useful preparatory exercise in reading from score.


Vocal clefs.

Inasmuch as the four different voices are always considered as *vocal* parts, it will also be better to write each part in that clef which originally belonged to it, instead of employing the violin clef as heretofore.

The clef which is used for the three upper vocal parts, viz., the soprano, alto, and tenor, is called the C clef, 

For the lowest vocal part, the bass, the F-clef  is employed.

The C clef—its relation to the other clefs.

In order to show the relationship of the C clef to the violin and bass clefs, we will make use of a large staff of *eleven* lines. Such a staff will be formed of the two smaller staves already employed for the violin and bass clefs, together with an intermediate line, on which is placed the C clef , which thus occupies the position of the first ledger line above the bass or below the treble staves, namely, C.

The image shows a musical staff with eleven lines. A C clef is positioned on the third line from the bottom. Above the staff, the letters F, G, A, B, C, D, E, F, G, A, B, C, D, E, F, G are written, corresponding to the notes on the staff. The notes are: F (first ledger line), G (first ledger line), A (first ledger line), B (first ledger line), C (third line), D (third line), E (third line), F (third line), G (third line), A (third line), B (third line), C (third line), D (third line), E (third line), F (third line), G (third line). The number 203 is written to the left of the staff.

Of these lines the lowest five are used for the bass or lowest voice, while for

the three other voices different staves are selected, each consisting of five lines, as follows :—

Selection of small staves for the different voices.

204.

Hence it will be seen that in consequence of different staves of five lines each having been selected from the large staff for the soprano, alto, and tenor voices, the C clef will necessarily occupy different positions in the various staves ; that is to say, in the tenor staff it will be found on the fourth line, in the alto staff on the third line, while in the soprano staff its place will be on the first line.

Position of the C clef in the various staves.

In all these cases it will, however, be the same C, viz., the C on the first ledger line above the bass staff

The relative positions of the same notes, written in different clefs, will be best shown by the following example :—

205.

The accompaniment of the exercises given in p. 83, will require a somewhat free treatment of the voices with respect to their progression, since in order to obtain a good position of the suspensions it will often be necessary to alter the form of the chords, and to employ the extended position alternately with the close.

In altering the position of the voices the following rules must be observed :—

Variety in the position of voices.

A simultaneous change of position on the part of *all* the voices is not allowable, except in certain cases, when they proceed to different inversions of one and the same chord.

Each voice may abandon its position at any time, provided one or more parts of the chord remain stationary.

The following accompaniment of Ex. 8, p. 84, will show the application of the above rules :—

1            2            3            4            5            6

206.

6 9 8 7    6 5 6 2    6 6 6 6    6 6 5 3 7    7 6 5 3

g: I. IV.  $\text{II}^{\circ}_7$  B $\flat$ : III. V $_7$  I. IV. I. F: V $_7$  I. B $\flat$ : V $_7$  g: V $_7$  I.

7            8            9            10            11            12

7 6 — 4 — 5 — 6 7 6 5 6 # 7

IV. B $\flat$ : V $_7$  I. II. g: I. IV. VI.  $\text{II}^{\circ}_7$  V.  $\text{II}^{\circ}_7$  I.

Description of Ex. 206.

The close position in which the above example commences is abandoned in the fifth bar, and the extended position is adopted, and employed until the eleventh bar, when this is again exchanged for the close position, in which the phrase concludes.

This variety of position is effected in the first place by a free progression of the soprano, which in the fifth bar springs from its natural position into the dominant seventh E $\flat$ , a leap which is perfectly allowable when, as in the present case, the root of the seventh is already present in the preceding chord (see p. 50).

Again, in the seventh bar, the soprano abandons its position and leaps into the fifth, G, *the other voices remaining stationary*, by which means the suspension appears in a better position. Finally, the close position is again attained at the end of the tenth bar by means of a free progression of the tenor.

Although, on account of its occupying less space, we shall continue to employ the violin clef for our examples, the student is strongly recommended to write all

future exercises in score and with the four vocal clefs, in the manner shown in Ex. 206, since an intimate acquaintance with the various clefs is absolutely indispensable to every musician.

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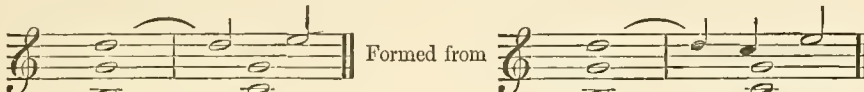


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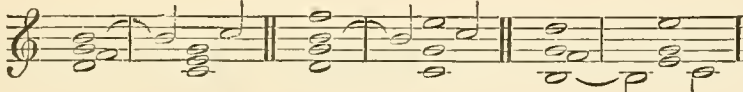
OF RETARDATIONS.

A *retardation* is said to occur when the *upward* progression of a voice is retarded or delayed, in the same manner that a suspension delays its *downward* progression. Retardations.


Most progressions of this kind are caused by a shortening or contraction of an ordinary suspension followed by an upward progression, for example:— Their general cause.

207. 

Real retardations may however be formed by delaying the progression of the leading-note:— Real retardations.

208. 

and also of many other intervals which should have an upward progression of a *semitone*, especially in the case of those chromatically altered chords which contain *augmented intervals*.

209. 

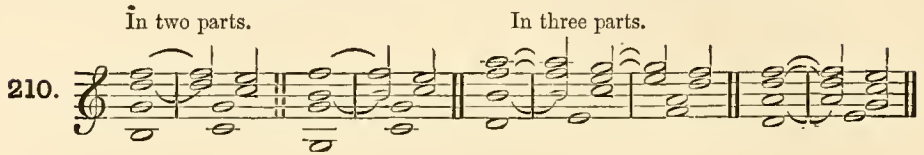
Observe, that as in the case of the suspension, the note into which the retardation is resolved must not be contained in any other voice except the bass. The retarded note not to be doubled.

The last of the above examples gives us the combination which has already been found as a chord of seventh on the first degree of the minor scale (see page 44), and which (as was stated on page 45) is unavailable in its fundamental form. It is however evident that as it appears in the above example, it is not to be considered as a fundamental harmony, but merely as a retardation of the leading-note.

Double sus-  
pensions.

Suspensions may appear in two or more parts at the same time :—

In two parts. In three parts.

210. 

The chord of  $\frac{6}{4}$  often appears as a double suspension :—

211. 


Resolution of  
the suspen-  
sion by means  
of three  
chords.

Hitherto only two chords have been employed for the preparation, entrance, and resolution of the suspension. The progression of parts will however often become richer and obtain more variety if *three* chords are introduced.

How effected.

This is effected by allowing one of the voices (generally the bass), or even several at the same time, to proceed to a new harmony at the same moment that the suspension is resolved. The note into which the suspension proceeds will always form one of the component parts of such new harmony, for example :—

By progression of the bass :—

212. 

By progression of several voices :—

213. 

Chords of the  
ninth treated  
as suspensions  
resolved by  
means of  
three chords.

In illustration of the views advanced in Chapter IX. on the subject of chords of the ninth, it may here be observed, that many cases in which the ninth occurs, and which would be recognized and treated by many theorists as *chords of the*



ninth, may be much more simply explained by considering them as *suspensions* accompanied by three chords, thus :—

Suspension of the Ninth,  
with two Chords.

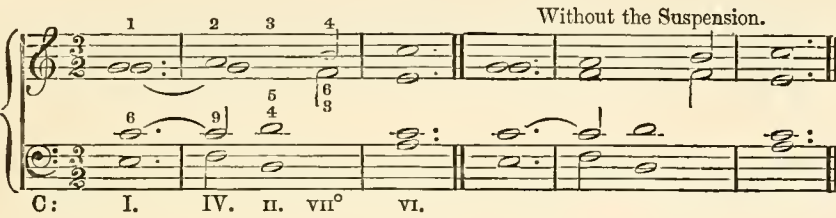
214. 

Suspension of the Ninth,  
with three Chords.



In like manner *four* chords may also be employed for the preparation and resolution of a suspension, provided the note into which the suspension is resolved is not contained in any other voice.

Suspensions resolved by means of four chords.

215. 

Without the Suspension.

C: I. IV. II. VII° VI.

EXERCISES.

216. 

1.  $\begin{matrix} 8 \\ 8 \end{matrix} - \begin{matrix} 9 \\ 9 \end{matrix} \begin{matrix} 6 \\ 6 \end{matrix} \begin{matrix} 5 \\ 4 \end{matrix} \begin{matrix} 6 \\ 4 \end{matrix} \begin{matrix} 5 \\ 7 \end{matrix} \begin{matrix} 6 \\ 6 \end{matrix} \begin{matrix} 7 \\ 7 \end{matrix}$

2.  $\begin{matrix} 8 \\ 4 \end{matrix} \begin{matrix} 2 \\ 2 \end{matrix} \begin{matrix} 6 \\ 6 \end{matrix} - \begin{matrix} 4 \\ 4 \end{matrix} \begin{matrix} 6 \\ 5 \end{matrix} \begin{matrix} 7 \\ 5 \end{matrix} \begin{matrix} 6 \\ 4 \end{matrix} \begin{matrix} 5 \\ 6 \end{matrix} \begin{matrix} 4 \\ 3 \end{matrix} \begin{matrix} 6 \\ 6 \end{matrix} \begin{matrix} 7 \\ 4 \end{matrix} \begin{matrix} 7 \\ 7 \end{matrix} \begin{matrix} 5 \\ 4 \end{matrix} \begin{matrix} 6 \\ 6 \end{matrix} \begin{matrix} 7 \\ 7 \end{matrix}$

3.  $\begin{matrix} 6 \\ 4 \end{matrix} \begin{matrix} 7 \\ 3 \end{matrix} - \begin{matrix} 3 \\ 3 \end{matrix} \begin{matrix} 6 \\ 6 \end{matrix} \begin{matrix} 9 \\ 9 \end{matrix} \begin{matrix} 7 \\ 7 \end{matrix} \begin{matrix} 6 \\ 4 \end{matrix} \begin{matrix} 7 \\ 7 \end{matrix} \begin{matrix} 9 \\ 9 \end{matrix} \begin{matrix} 6 \\ 4 \end{matrix}$

4.  $\begin{matrix} 5 \\ 4 \end{matrix} \begin{matrix} 6 \\ 2 \end{matrix} \begin{matrix} 7 \\ 3 \end{matrix} \begin{matrix} 6 \\ 6 \end{matrix} \begin{matrix} 9 \\ 9 \end{matrix} \begin{matrix} 6 \\ 6 \end{matrix} - \begin{matrix} 5 \\ 4 \end{matrix} \begin{matrix} 6 \\ 6 \end{matrix} - \begin{matrix} 6 \\ 6 \end{matrix} \begin{matrix} 7 \\ 7 \end{matrix} \begin{matrix} 5 \\ 4 \end{matrix} \begin{matrix} 6 \\ 6 \end{matrix} \begin{matrix} 6 \\ 5 \end{matrix} \begin{matrix} 7 \\ 7 \end{matrix} \begin{matrix} 6 \\ 6 \end{matrix}$

Between the suspension and its resolution may sometimes be found notes introduced for the sake of varying the melody.

Notes introduced between the suspension and its resolution.

These notes may be either notes belonging to the harmony, for example :—



or notes foreign to the harmony, for example :—



The above and similar melodic progressions will be explained in the chapter on *passing notes*.

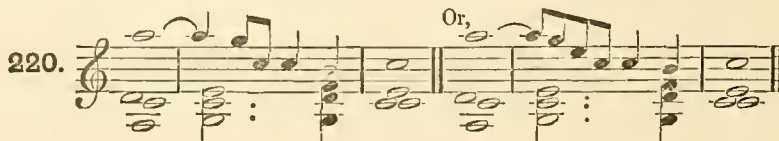
Suspensions  
without reso-  
lution.

Cases may also be met with in which the suspension has no resolution whatever.

Or more frequently.



Such phrases are formed by the omission of one or more notes of the following or some similar phrase :—



OF ANTICIPATIONS.

Anticipa-  
tions.

The *anticipation* of a note, which is not so frequently employed as the suspension, occurs when one or more voices proceed to notes of the following chord *before* they are required to do so by the rhythmical formation of the phrase.

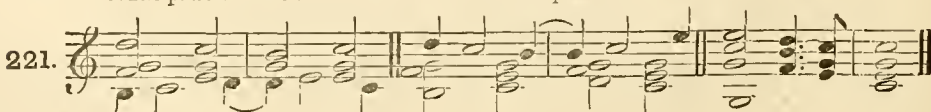
When em-  
ployed.

Progressions of this kind are seldom employed in slow *tempo*, or with long notes.

Anticipation in the Bass.

In the Soprano.

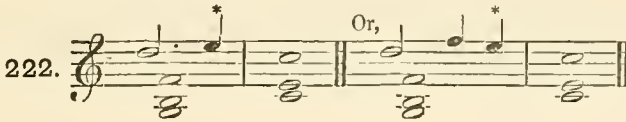
In several voices.





The note which forms the anticipation need not always be exactly the one which is expected on the appearance of the second chord. A different note, if it belongs to the harmony of the second chord, may also be employed as an anticipation, as in the following much-used cadence :—

Other notes of the same harmony used as anticipations.



Another kind of rhythmic variety occurs when one voice does not proceed to its place in a chord until *after* all the other voices have taken up their respective positions. Such progressions resemble suspensions, inasmuch as both preparation and resolution take place, but differ from them in the important particular, that they are formed by rhythmic rather than harmonic variations, and cannot appear singly, but in sequences such as the following :—

Rhythmic retardation of one voice.

223. *Allegro.*



With such progressions must also be classed the *unisono* passage in the "Leonora" overture (No. 3) by Beethoven.



The image displays two systems of musical notation for piano accompaniment. Each system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. The first system contains eight measures of music. The second system contains six measures of music, ending with a double bar line and the text "etc." to the right. The notation includes various chords, some with accidentals (flats and sharps), and melodic lines in both hands.

### CHAPTER XIII.

#### OF THE MEANS OF MODULATION.

THE meaning of the term *modulation* has already been explained in Chapter XI. We have now to treat of the best means of effecting modulations.

The art of modulation consists in finding those harmonies which are related to two or more scales or keys, in order by their aid to proceed satisfactorily from one key to another.

The object of modulation.

Modulations may be of two kinds, and have two different objects in view.

Firstly—They may appear abruptly, and the new key may pass away quickly, or

Transitory modulations.

Secondly—They may be more gradually prepared, in which case the new scale will serve for some time as the foundation of the harmonies employed.

Gradual and permanent modulations.

In the first case the modulation will be introduced by the simplest and quickest means, and although it may be distinct and unmistakeable, the new key will soon be abandoned and a fresh modulation introduced. In the second case the modulation will generally be *gradually* prepared by various means, and the new key will remain long enough to become familiar to the ear, and may even lead to a perfect close.

Thus in the following example, the modulations are transitory, and the key changes rapidly without wandering far from the original key of C major :—

225.

C: I. F: V<sub>7</sub> I. IV. G: V<sub>7</sub> I. IV. a: V<sub>7</sub> I. iv. C: I. V<sub>7</sub> I.

This kind of modulation is most suitable for the more nearly related keys.

In the next example the more distant key of E $\flat$  is sought by degrees, and when it is reached the original key is entirely abandoned. It will be seen how

the transitory modulations are employed as means of introducing the final modulation into  $E_b$ , which is the object of the phrase:—

226.

C: I.  $b$ : VII<sup>7</sup> B $b$ : I. VI. f: V<sub>7</sub> I. E $b$ : V<sub>7</sub> I. II<sub>7</sub> V. I.

In considering the means by which modulations are effected it will not be necessary to distinguish between the above two different kinds of modulation, since the same means will serve for both.

The means of modulation.

The first and most simple means of modulation will be the *chord of the tonic* of the new key itself.

Employment of the chords of tonic and dominant of the new key.

If this chord is identical with one of the chords of the original scale, it will only require the dominant harmony of the new key to make the modulation complete. Thus, in the following example, the chord of G, being already one of the chords of the scale of C, requires no connecting link with the original scale; the modulation will however not be perceptible until the third fundamental harmony of the new key be heard (namely, the chord of the dominant), as shown at *b*:—

227.

The effect in modulation of the *minor* chord of the tonic is certainly more decided, but even this chord requires the chord of dominant of the new key to render the modulation unmistakable.

228.

C: I. e: I. V<sub>7</sub> I. C: I. f: I. V<sub>7</sub> I.

The major chord of the new key, when not followed by its dominant harmony, has itself somewhat of the effect of a dominant chord:—

229.

C: I. a: V. I. C: I. e: V. I.

The chord of the tonic is seldom employed in modulation in its fundamental form, since one of its inversions, the chord of  $\frac{6}{4}$ , has the property of rendering the modulation much more decided than the root chord. In this case also the chord of the tonic is followed by that of the dominant, which completes the modulation.

Employment of the chord of  $\frac{6}{4}$ .

230.

C: I. G:I. V. I. C:I. a:II°. i. V. I. C:I. V. d:i. V. i.

If this chord be employed on the unaccented part of the bar, the modulation will not be so decided.

On the unaccented part of the bar.

231.

A still more effectual means of modulation is the *chord of the dominant*, and especially the dominant seventh, which renders the new key clear and unmistakable.

Employment of the dominant seventh.

According to the principle that the connection of chords one with another is best effected by means of notes belonging to two successive chords, and remaining in the same voice, modulations may be formed through the chord of dominant seventh from the chord of the tonic of the original key to any other key excepting those of the minor and major thirds and the augmented fourth. Thus from the key of C into all keys except  $E\flat$ , E, and  $F\sharp$ , modulations may be formed as follows, the connection being in each case observed by means of notes which remain stationary, and indicated by means of binds:—

Modulations by means of the dominant seventh into nearly all keys.

232.

From C to d. C to F. C to G. C to a.  
C to B. C to  $D\flat$ . C to  $A\flat$ . C to  $B\flat$ .

In order to modulate into the remaining three keys,  $E\flat$ , E, and  $F\sharp$ , another

Modulation into the remaining keys.

chord will be required (generally a common chord) which will supply the desired connection, for example :—

233. 

From C to E $\flat$ .                      C to E.                      C to F $\sharp$ .

Modulations from the minor similarly effected.

Similar modulations may be formed from the *minor*, as follows :—

234. 

From a to b.                      a to d.                      a to e.

a to F.                      a to G.                      a to B $\flat$ .

By means of additional chords, modulations may be formed from A minor to the remaining keys as follows :—

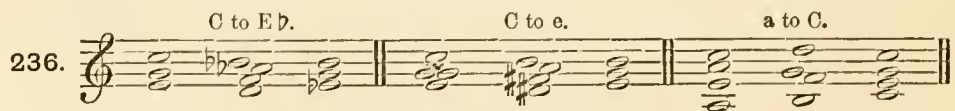
235. 

From a to C.                      a to D $\flat$ .

a to E $\flat$ .                      a to F $\sharp$ .                      a to A $\sharp$ .

The connection of modulating chords not always necessary.

It is of course understood that the above examples merely show the *principle* of modulation, and that it is not necessary for modulations always to be effected in the manner there shown. Nor is the above-mentioned connection of chords always requisite, as will be seen by the following example :—

236. 

C to E $\flat$ .                      C to e.                      a to C.

The student is here recommended to write out modulations from and to all keys, major and minor, and in so doing to employ all the various positions of the chords.


Employment of the diminished seventh.

Another equally important chord with the dominant seventh is the *chord of diminished seventh*, which is often more peculiarly suited for purposes of modulation




than the former, especially in those cases in which the seventh and root of the dominant harmony would be obliged to enter without preparation.

The following examples will show the application of this chord to modulation:—

237. 


This chord also possesses peculiar capabilities for modulation, on account of its *enharmonic* qualities. Enharmonic modulation.

The following chord, being written with a different notation, will belong to *four* different keys, although the sound will in each case be the same:—

238. 

In the first of the above cases, the chord belongs to F minor, in the second to D minor, in the third to B minor, and in the fourth to A $\flat$  minor.

Thus, by means of one chord, four modulations are possible:—

239. 

To these may be added four more modulations into the *major* keys of the same names as the above (for the diminished seventh is often used instead of the seventh on the leading note of the major scale), thus giving eight modulations by means of one chord. The modulation into major by the diminished seventh is shown in the following example:—

240. 

If now we consider the final chord of the above example as a chord of dominant instead of a chord of tonic, new modulations become possible, and such modulations will be rendered still more decided by the introduction of a chord of  $\frac{6}{4}$  (derived from the new tonic) between the diminished seventh and its resolution, in the manner shown on page 61, for example:—

241. 

Progressions similar to the above may be formed from each of the four positions of the diminished seventh shown in Ex. 238; and as in each case the modulation may be either to a major or a minor key, it follows that there are eight more modulations possible by means of the same chord of diminished seventh, making a total of *sixteen* modulations, of which eight are into major, and eight into minor keys.

Enharmonic alteration of a chord.

It will be observed that the alteration of the notation necessarily changes the intervals, though not the sound, of the chord; the different notations will therefore be in reality *inversions* of the chord, for example:—

242.

$\begin{matrix} 7^b & 7 & 6^\# & 6^b \\ 5^b & 5^b & 4^\# & 4^b \\ e_7 & c^\#_7 & a^\#_7 & g_7 \end{matrix}$

Enharmonic modulation by means of the augmented chord of 6.

A similar capability of enharmonic change is possessed, though not to so great an extent, by the *augmented chord of 6*. The resemblance which the sound of this chord bears to that of the dominant seventh permits the one chord to be substituted for the other, and thus certain modulations may be effected, for example:—

243.

c to b. Eb to d.  
 C: V<sub>7</sub> b: II<sub>7</sub> I. V. I. Eb: V<sub>7</sub> d: II<sub>7</sub> I. V. I.

Exercises in modulation.

Hitherto we have considered the means of modulating *quickly* from one key to another. Since, however, it is not always an object to modulate as quickly and distinctly as possible, the following will be a very useful exercise:—

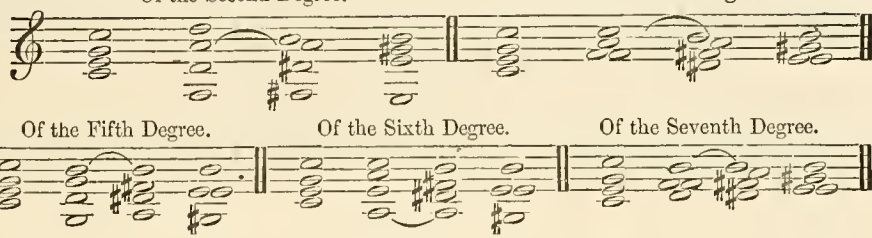
To modulate from one key to another by means of the common chords of the different degrees; for example: from C to D through the common chord—

244.

Of the Third Degree. Of the Fourth Degree.  
 Of the Fifth Degree. Of the Sixth Degree. Of the Seventh Degree.

From C to E through the common chord :—

Of the Second Degree. Of the Fourth Degree.

245. 

Of the Fifth Degree. Of the Sixth Degree. Of the Seventh Degree.

The above examples will be sufficient to indicate the manner in which other modulations may be formed according to the same principles.

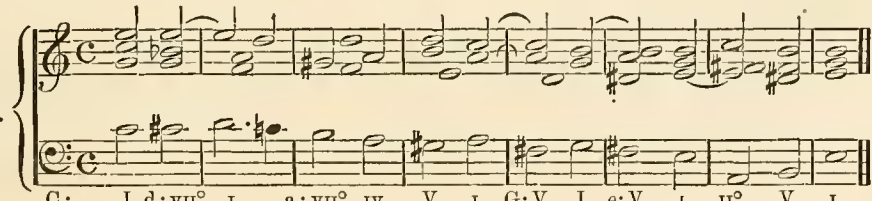
OF THE EXTENSION OF THE MODULATION, AND OF ITS COMPLETION  
BY MEANS OF THE CADENCE.

In order to form a longer and more gradual modulation than any that have hitherto been met with, the same means will be employed, but not in so direct a manner. That is to say, instead of proceeding to the new key by the shortest and most direct means, *transitory* modulations will be employed, and the new key introduced by degrees, and when reached, will be as it were fixed and rendered distinct by means of the cadence.

Gradual and permanent modulations.

Thus, in the following example, the modulation from C major to E minor takes place through D minor, A minor, and G major, and is completed by a cadence in E minor :—

The modulation completed by the cadence.

246. 

C: I. d: vii<sup>o</sup><sub>7</sub> I. a: vii<sup>o</sup><sub>7</sub> IV. V<sub>7</sub> I. G: V<sub>7</sub> I. e: V<sub>7</sub> I. ii<sup>o</sup><sub>7</sub> V. I.

If the modulation be effected by means of the chord of  $\frac{6}{4}$  derived from the tonic chord of the new key (see page 95), such chord of  $\frac{6}{4}$  will only require to be followed by the chord of dominant with its natural progression to complete the cadence. for example :—

The simplest form of cadence.

247. 

The extended cadence.

In other cases the *extended* or *prepared* cadences must be *added* to the modulation in order to confirm the new key. The following are the two simplest forms of the extended cadence :—

a. Or in other Positions

248.

b. Or in other Positions.

The *position* of the chords forming the cadence will be determined by that of the final chord of the modulation.

Addition of the cadence to the modulation.

The following examples will show the addition of the above two cadences *a* and *b* to some of the examples already given :—

Ex. 233. From C to Eb. Cadence a.

249.

Ex. 232. From C to a. Cadence a.

Ex. 232. From C to B. Cadence b.

Ex. 232. From C to D $\flat$ . Cadence  $\flat$ .

Musical score for Ex. 232, showing a modulation from C major to D $\flat$  major. The score consists of two staves: a treble clef staff with chords and a bass clef staff with a bass line. The key signature changes from C major to D $\flat$  major. The bass line includes figured bass notation: 6, 4 $\flat$ , 3 $\flat$ , 6 $\flat$ , 5 $\flat$ .

The following is an example of a modulation from G major to A $\flat$  major, by means of transitory modulations through E minor, C major, and B $\flat$  minor.

250.

Musical score for Ex. 250, showing a modulation from G major to A $\flat$  major through E minor, C major, and B $\flat$  minor. The score consists of two staves: a treble clef staff with chords and a bass clef staff with a bass line. The key signature changes from G major to A $\flat$  major. The bass line includes figured bass notation: 6, 4, 3, 6, 5 $\flat$ , 7 $\flat$ , 5 $\flat$ ,  $\flat$ , 6 $\flat$ , 5 $\flat$ , 6 $\flat$ , 5 $\flat$ .

Cadence.

---

## CHAPTER XIV.

OF THE HARMONIC ACCOMPANIMENT TO A GIVEN VOICE  
(CANTUS FIRMUS).

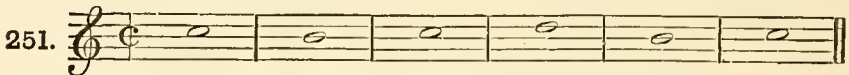
In treating of the harmonic accompaniment to a given voice we shall consider the *simple melodic progression* of each part, and all other elements of a melody, such as metrical and rhythmical variations, will remain for the present out of the question.

## THE HARMONIC ACCOMPANIMENT OF A GIVEN SOPRANO.

Progression  
of bass.

In every harmonic phrase the progression of the bass is the most important. The following simple melodic phrase being given as an exercise—

Cantus  
firmus.



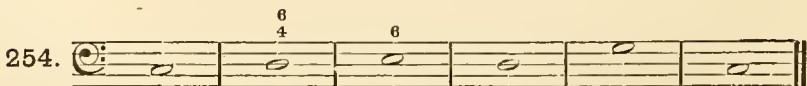
and the *roots* of the various harmonies which may serve as its accompaniment being indicated thus—



we direct our attention in the first place to the progression of the bass, which according to the roots indicated may be as follows:—

253.

or thus:—



The addition of the middle voices will then present no difficulty, they may proceed as in the following example, and the phrase is complete :—

Addition of the middle voices.

255.

SOPRANO. C G C d G C  
 ALTO.  
 TENOR.  
 BASS.

6 6

In order more clearly to explain the principles of a good progression both of the bass and middle parts we shall make use of examples indifferently accompanied.

Exercise :—

256.

C F G<sub>7</sub> C d G<sub>7</sub> C

Defective accompaniment to the above :—

257.

6/4 7 6/4 6 7

The above example does not contain a single violation of any of the rules of progression, &c. hitherto advanced ; nevertheless it is meagre on account of the stiffness, weakness, and insecurity of the bass.

Example of an incorrect bass.

In a good harmonic progression of the bass, no note must remain stationary unless it is required to do so in order to serve as the preparation of some dissonance, or unless it is equalized and counterbalanced by a very decided progression of all the other parts.

Rule for progression of the bass.

Ex. 257 also contains in two places the chord of  $\frac{6}{4}$  ; this circumstance will afford an opportunity to speak of the employment of this very peculiar chord.

General employment of the chord of  $\frac{6}{4}$ .

The use of the chord of  $\frac{6}{4}$  depends on certain conditions. It is most frequently to be met with in the formation of cadences, and also in modulations. (See p. 95.)

In both these cases it may enter without preparation, but always on the accented part of the bar (thesis).

It may also appear under other circumstances—viz., when the fourth is pre

pared, and when the bass proceeds *by one degree* to its place in the next following chord, or remains stationary, for example :—

258.

If used on the unaccented part of the bar (arsis), it may appear under the same conditions as in the above example, and, in addition, may be used with the bass prepared instead of the fourth, for example :—

259.

Its effect under different circumstances.

If the chord of  $\frac{6}{4}$  appears on the arsis it must be considered as a *passing chord*, if on the thesis it will have the character of a *suspension*; its effect will however be very weak if introduced on the thesis with the *bass* prepared (as was the case in Ex. 257) :—

260.

Its appearance as a suspension.

It also frequently appears as a real suspension, in which case the preparation of the fourth is fully explained and justified.

261.



When all the parts proceed by single degrees, and the notes are of short duration, the chord of  $\frac{6}{4}$  may enter without preparation.

Its appearance without preparation.

262.

Musical notation for exercise 262. It consists of two staves. The top staff is in treble clef with a 3/4 time signature. The bottom staff is in bass clef with a 3/4 time signature. The music shows a sequence of chords: a triad of G4, B4, D5; a  $\frac{6}{4}$  chord (G4, B4, D5); a triad of G4, B4, D5; a  $\frac{6}{4}$  chord (G4, B4, D5); a triad of G4, B4, D5; a  $\frac{6}{4}$  chord (G4, B4, D5); a triad of G4, B4, D5; and a  $\frac{6}{4}$  chord (G4, B4, D5). The bass line has figured bass notation: 6, 6/4, 7, 6, 6/4.

The chord of  $\frac{6}{4}$  derived from the diminished common chord is seldom used in four-part harmony.

The second inversion of the diminished common chord.

263.

Musical notation for exercise 263. It consists of two staves. The top staff is in treble clef with a 3/4 time signature. The bottom staff is in bass clef with a 3/4 time signature. The music shows a sequence of chords: a triad of G4, B4, D5; a  $\frac{6}{4}$  chord (G4, B4, D5); a triad of G4, B4, D5; and a  $\frac{6}{4}$  chord (G4, B4, D5). The bass line has figured bass notation: 6/4, 6.

In the three-part phrase, however, it may be employed, and frequently supplies the place of the chord of  $\frac{6}{4}$ . (See the chapter on the three-part phrase in the second part of this work.)

A correct and pure harmonic progression not only requires that the bass shall form a clear and intelligible harmonic foundation to the phrase, but also that each voice shall proceed according to certain melodic rules which we shall now proceed to consider.

Certain progressions have always been considered anti-melodic—for example, two consecutive leaps of a fourth or a fifth in the same direction.

Anti-melodic progressions.

264.

Musical notation for exercise 264. It shows a single staff in bass clef with a 3/4 time signature. The notes are: G4, B4, D5, G4, B4, D5, G4, B4, D5, G4, B4, D5. There are two consecutive leaps of a fourth (G4 to B4) and two consecutive leaps of a fifth (B4 to D5).

The above progressions may be corrected as follows:—

265.

Musical notation for exercise 265. It shows a single staff in bass clef with a 3/4 time signature. The notes are: G4, B4, D5, G4, B4, D5, G4, B4, D5, G4, B4, D5. The leaps are corrected to be in contrary directions.

Even leaps of a sixth are better avoided, and the progression altered to that of a third in the contrary direction.

266.

Musical notation for exercise 266. It shows a single staff in bass clef with a 3/4 time signature. The notes are: G4, B4, D5, G4, B4, D5, G4, B4, D5, G4, B4, D5. The word "Better." is written above the first and third measures.

Progressions of augmented and diminished intervals.

Progressions of augmented intervals are anti-melodic, and as such should not be employed (see page 25); progressions of diminished intervals are however allowable.

267.

Of a major seventh.

The leap of a major seventh is always to be avoided.

268.

Of a minor seventh.

The leap of a minor seventh is allowable in two different positions of one and the same chord, but not when the harmony changes.

269.

Exceptions to the above rules may often be met with; their explanation and excuse will lie in the peculiar character of the composition. Nevertheless, the strict observance of all rules will always be very advantageous in theoretical studies.

Rules of melody equally applicable to all voices.

These few remarks will be found to contain the principles of a good melodic progression, and will suffice for the present simple exercises. It may be observed that the above rules of melody do not refer to the progression of the bass alone, but apply in general to that of all the voices.

The correct accompaniment of Ex. 257 will be as follows:—

270.

EXERCISES.

271. <sup>1.</sup> C. G. C. — F. C. G. C.

2. C. — F. G<sub>7</sub> C. d<sub>7</sub> G<sub>7</sub> C.

3. C. G. a. d. G<sub>7</sub> C. d<sub>7</sub> G<sub>7</sub> C.

4. C. — G<sub>7</sub> C. d<sub>7</sub> G. a. d<sub>7</sub> G<sub>7</sub> C.

5. F. B $\flat$  F. B $\flat$  e<sup>o</sup> F. d. g<sub>7</sub> C<sub>7</sub> F.

6. F. — C. g. C. F. g<sub>7</sub> C. F.

7. F. B $\flat$  g. d. B $\flat$  C<sub>7</sub> F. g<sub>7</sub> C<sub>7</sub> F.

8. F. C. d. C. g. d. F. g<sub>7</sub> C<sub>7</sub> F.

Although the foregoing exercises are written in the violin clef, the student is recommended, for the sake of exercise, to transpose them into the soprano clef, and to write the accompanying voices on separate lines and in their respective clefs.

Exercise—

272. C. F. b<sup>o</sup> C. a. d<sub>7</sub> G<sub>7</sub> C.

Incorrect accompaniment.

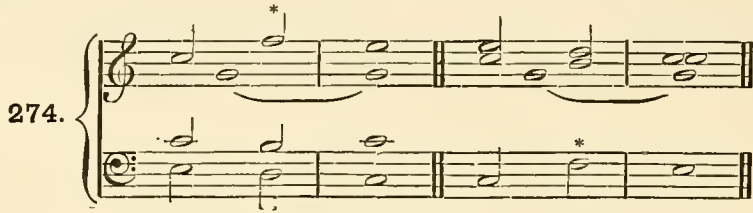
273.

Exercise incorrectly accompanied.

The faults of the above example are three in number—viz., firstly, the doubling of the bass of the chord of sixth in the second bar, which being the third of the original root should seldom be doubled; this is however a slight fault, and one which can easily be corrected. A much graver error is the second in the above example; this is the progression of hidden fifths between bass and soprano in the fourth and fifth bars. The third fault consists of the free entrance of the dominant seventh in the last bar but one.

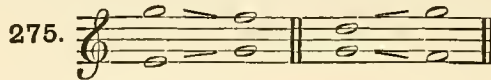
Free entrance of the dominant seventh and its root.

With regard to this last error, it has already been stated on page 50 that the dominant seventh may only enter without preparation when the root is already present in the preceding chord and remains in the same voice.



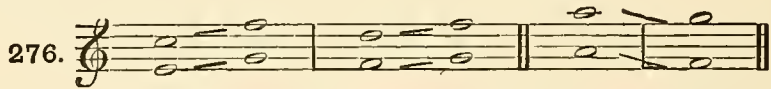
In contrary motion.

The free entrance of both root and seventh is less harsh in *contrary* motion, though still against the rules of harmonic connection.



In similar motion.

In similar motion, however, it is always to be avoided.



The second and most important fault in Ex. 273 will afford an opportunity of considering more fully than has yet been done, the progression of *hidden fifths and octaves*.

Hidden fifths and octaves.

Hidden fifths or octaves occur when two voices proceed in similar motion from any interval to a perfect fifth or octave (see page 14).

Rendered visible.

The fifths and octaves will at once become visible if the leap taken by one or both of the voices be filled up by the intermediate notes, as in the following example:—



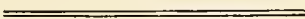
Although certain hidden fifths and octaves should be avoided, yet if such progressions were entirely excluded from the four-part phrase, the choice of chords would become extremely limited, and the progression of parts very much confined.

We shall therefore proceed to make some observations on the employment of these progressions, although positive rules, which should be applicable to all cases, cannot be given.

Hidden fifths or octaves may be caused by various kinds of progressions; for example: one voice may proceed from any one degree to the next above or below it, while the other voice leaps a greater or less distance (in which case the leap may be either in the upper or lower voice); or again, *both* voices may proceed by leaps.

Various kinds of progressions which produce hidden fifths or octaves.

In either case the hidden progressions may occur between the extreme voices, between the middle voices, or between an extreme and a middle voice.



HIDDEN FIFTHS AND OCTAVES BETWEEN THE EXTREME VOICES.

Hidden *fifths and octaves* between the extreme voices are allowable, when the upper voice proceeds from one degree to the next above or below it.

Allowable hidden fifths and octaves between the extreme voices.

278.

Fifths.                      Octaves.

a.                      b.                      c.                      d.                      e.

At the same time, it will be advisable that one of the accompanying voices should proceed in contrary motion or remain stationary, as at *a, b, c*. Ex. *d*, where all the parts proceed in similar motion, is therefore not so good.

We may also here repeat what was said at page 18, namely, that hidden octaves are always preferable when the upper voice moves a *semitone* only.

Preferable when the upper voice moves only one semitone.

In the above examples it will be observed that the progression of hidden octaves is always towards the *root* of the chord. All those cases should be avoided in which the progression is towards the *third*; for example:—

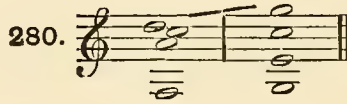
Hidden octaves proceeding towards the third of the chord.

279.

Bad.                      6                      Bad.                      6

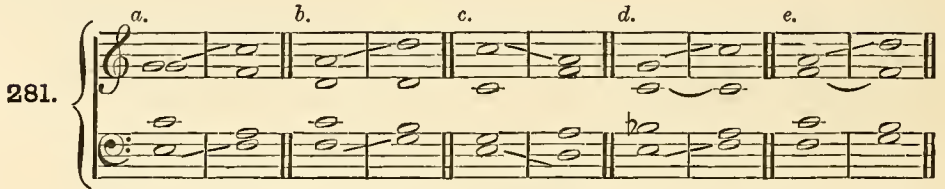
Towards the fifth.

Even the progression of hidden octaves towards the *fifth* cannot be recommended.



Objectionable hidden fifths between the extreme voices.

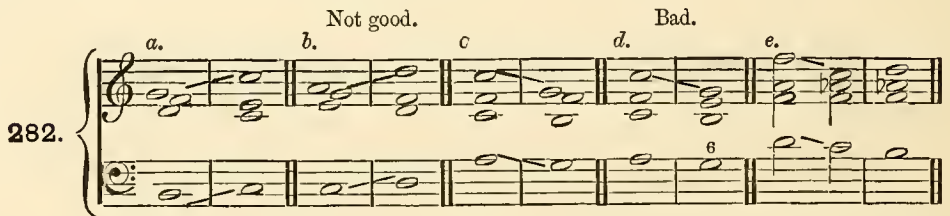
Hidden *fifths* between the extreme voices are to be avoided when the upper voice proceeds by a leap.



Whenever the connection is rendered closer by means of a seventh, as at *b, d, e*, in the above example, the progression of the hidden fifth loses much of its harshness.

Allowable hidden octaves between the extreme voices.

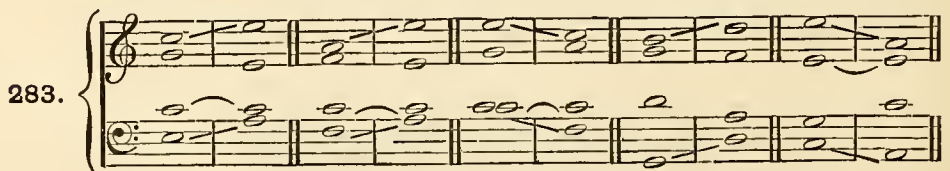
Hidden *octaves* between the extreme voices are not unconditionally prohibited, when the upper voice proceeds by a leap.



Here also those progressions will be preferable in which the bass proceeds a semitone only, as at *a*. The remarks made on Ex. 279 and 280 will apply to examples *d* and *e*.

Objectionable hidden fifths and octaves between extreme voices.

Hidden *fifths and octaves* between the extreme voices are to be avoided when both voices proceed by a leap.



Such a progression as the above is however allowable, when formed by an inversion of the same chord.

Exception to the above rule.

284.

Musical notation for exercise 284, showing two staves with chords and their inversions. The first staff is in treble clef and the second in bass clef. The chords are: C major (C-E-G), F major (F-A-C), C major (C-E-G), and F major (F-A-C). The second staff shows the same chords in first inversion: C major (E-G-C), F major (A-C-F), C major (E-G-C), and F major (A-C-F).

HIDDEN FIFTHS AND OCTAVES IN THE MIDDLE VOICES.

Although the progression of the middle voices ought to be as pure as that of the extreme voices, yet on account of their position, being as it were covered by the extreme parts, they may be allowed a greater freedom of progression, especially with regard to hidden fifths.

Hidden octaves between the middle voices are seldom allowable, on account of the voices becoming separated by too great a distance; and with respect to hidden fifths, their good or bad effect will depend on the good connection of the chords in other respects, and also upon their agreement with the rules relating to hidden fifths between extreme voices.

Hidden fifths and octaves between middle voices.

285.

Musical notation for exercise 285, showing two staves with chords and their inversions. The first staff is in treble clef and the second in bass clef. The chords are: C major (C-E-G), F major (F-A-C), C major (C-E-G), and F major (F-A-C). The second staff shows the same chords in first inversion: C major (E-G-C), F major (A-C-F), C major (E-G-C), and F major (A-C-F). The word "Bad." is written above the second and third measures of the second staff.

HIDDEN FIFTHS AND OCTAVES BETWEEN AN EXTREME AND A MIDDLE VOICE.

Here also the conditions under which such progressions may be employed, cannot be determined by merely mechanical rules, but must depend on a

Between an extreme and a middle voice.

good and natural connection of the harmony. The following are a few examples:—

286.

Not good      Bad.

Hidden octaves passing over the seventh of a chord.

One peculiar kind of hidden octave has still to be mentioned, namely, that which passes *over the seventh* of a chord, when the seventh itself is already present in another voice (see page 59, Ex. 144 *b*). This progression is always to be avoided.

287.

Hidden unisons.

All that has been said of hidden octaves applies equally to *hidden unisons*.

288.

Such progressions are forbidden between soprano, alto, and tenor, but may occur between tenor and bass, where they are to be treated as hidden octaves. We will now return to Ex. 273, in order to correct the faults it contains.

Correction of Example 273.

The hidden fifth which there occurs between the fourth and fifth bar can however scarcely be remedied, since if we make the bass proceed in contrary motion, the same fault will appear in a different position, though it will be less



perceptible on account of its occurring between an extreme and a middle voice, instead of between the extreme voices.

289.

In such a case therefore we have no choice but to alter the harmony itself, and to make use of a different root, thus :—

290.

C F b° C — d<sub>7</sub> G<sub>7</sub> C

Or thus :—

291.

C F b° a C d<sub>7</sub> G<sub>7</sub> C

Exercise.

292.

G C G D<sub>7</sub> G C G a D<sub>7</sub> G

Defective accompaniment.

293.

1. 2. 3. 4. 5.

Exercise incorrectly accompanied.

The faults of the above example have been numbered for reference.

The progression of the three upper voices by a leap upwards at No. 1 is not good, since it deviates from all the rules of harmonic connection, and moreover is not necessary. Progression of voices by a leap.

The progression of one or two voices by a leap is only allowable when a third voice sustains the harmonic progression by remaining stationary or by moving in the contrary direction.

The same fault is perceptible at No. 2, and is rendered still worse by the free entrance of both root and seventh.

Free appearance of root and seventh.

It has already been shown that either the dominant seventh or the root ought to be prepared (see page 108).

The following examples are therefore incorrect:—

294.

Progressions similar to the above may however occasionally find an excuse in more important *melodic* rules.

If the free entrance of root and seventh takes place in contrary motion, its effect, as has already been observed, is less unpleasant; for example:—

295.

Progression by a leap of the bass of the chord of  $\frac{6}{4}$ .

Example No. 293 also contains another fault at No. 2—viz., a leap in the bass from the chord of  $\frac{6}{4}$  (see page 104).

The third fault of Ex. No. 293 lies in the hidden fifth, which occurs between tenor and alto, and which is rendered more perceptible (because less hidden) by the leap of the soprano.

The hidden fifth at No. 4 is objectionable, because it is not necessary; that at No. 5 is, however, better, on account of the progression of both alto and bass being in contrary motion.

The following will therefore be the correct accompaniment of Ex. 293 —

296.

EXERCISES.

297. 1.

2.

3.

4.

5.

6.

7.

8.

The next exercise :—

293.

with the following accompaniment :—

299.

The musical score for exercise 299 consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. Both are in the key of G major (one sharp) and common time. The upper staff contains a sequence of chords: G4-A4-B4, G4-A4-B4, G4-A4-B4, G4-A4-B4, G4-A4-B4, G4-A4-B4, G4-A4-B4, G4-A4-B4, G4-A4-B4, G4-A4-B4. The lower staff contains a sequence of notes: G3, A3, B3, G#3, A3, B3, G#3, A3, B3, G#3, A3, B3. An arrow points from the G#3 note in the bass staff to the G4 note in the upper staff, indicating a false relation.

The false relation.

contains an incorrect progression, known by the name of the *false relation*.

The false relation, which belongs to the anti-melodic progressions, occurs when any note is immediately followed by the same note *chromatically altered* in another voice; as in the second and third bars of the above example, where the G in the alto is immediately followed by the G# in the bass.

How avoided.

In order to avoid this fault the following rule must be observed :—

When any note is to be immediately followed by the same note chromatically raised or lowered, such chromatic alteration must take place in *one and the same* voice.

Exceptions to the rule.

Although this rule is perfectly consistent with all the theoretical principles of harmony, there is perhaps none which admits of so many exceptions. The following are a few of the examples of false relations which have no unpleasant effect :—

300.

The musical score for exercise 300 consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. Both are in the key of G major (one sharp) and common time. The score is divided into five measures labeled a through e. In each measure, the upper staff contains a sequence of notes and the lower staff contains a sequence of notes. In measure a, the upper staff has G4-A4-B4 and the lower staff has G3-A3-B3. In measure b, the upper staff has G4-A4-B4 and the lower staff has G#3-A3-B3. In measure c, the upper staff has G4-A4-B4 and the lower staff has G3-A3-B3. In measure d, the upper staff has G4-A4-B4 and the lower staff has G#3-A3-B3. In measure e, the upper staff has G4-A4-B4 and the lower staff has G3-A3-B3. Arrows point from the G#3 notes in the lower staff to the G4 notes in the upper staff, indicating false relations.

Reason of the exceptions.

In all these cases the false relation is not formed by essential notes of a simple harmonic progression, but is the result of a *contraction* or abridgment of certain natural progressions which, had they been employed in their complete form, would not have agreed with the metrical character of the phrase.

The original progressions, by the contraction of which the above false relations were formed, are as follows :—

301.

The musical score for exercise 301 consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. Both are in the key of G major (one sharp) and common time. The score is divided into five measures labeled b through e. In each measure, the upper staff contains a sequence of notes and the lower staff contains a sequence of notes. In measure b, the upper staff has G4-A4-B4 and the lower staff has G3-A3-B3. In measure c, the upper staff has G4-A4-B4 and the lower staff has G#3-A3-B3. In measure d, the upper staff has G4-A4-B4 and the lower staff has G3-A3-B3. In measure e, the upper staff has G4-A4-B4 and the lower staff has G#3-A3-B3. Arrows point from the G#3 notes in the lower staff to the G4 notes in the upper staff, indicating false relations.

These conditions, under which the false relation is allowable, are however not contained in the following and similar examples, which are therefore incorrect :—

Objectionable false relations.



With the false relations is also classed a progression known as the *Tritone*; this is the progression of an augmented fourth, and is contained in the diatonic scale between the fourth and seventh degrees. It derives its name from the fact that it contains *three* whole tones :—

Progression of the tritone.



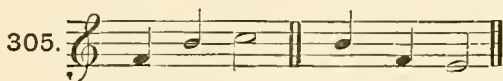
Like all augmented intervals, the tritone should be avoided on account of the difficulty it presents to the singer.

Why it should be avoided.

This difficulty is doubtless caused by the fact that the two notes of which it is composed require two different resolutions—

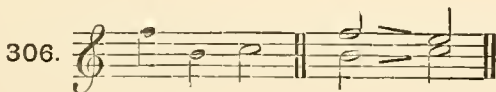


of which one must be omitted if the interval be given to *one* voice, for example :—



That this is however not the only reason of the unpleasant effect of the augmented fourth, is proved by its inversion, the diminished fifth, which would also require a two-fold resolution, but which is nevertheless constantly employed in its melodic form :—

Progression of the diminished fifth allowable.



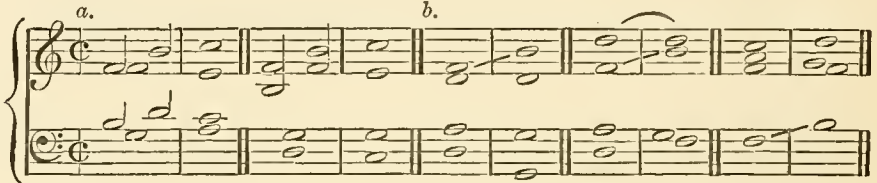
The reason why the tritone has always been specially prohibited is that it was the *only* augmented interval which occurred in the simple harmonic progressions formerly in use. At the present time, however, it is merely classed with

the other augmented progressions, which in pure part-writing should be avoided as anti-melodic, or at least employed with the greatest caution.

Different conditions under which the tritone appears.

If the progression of the tritone is caused by an alteration of the position of one and the same chord, as at *a* in the following example, its appearance is not unexpected, and its effect much less unpleasant than when the notes of which it is composed belong to two different harmonies, as at *b*.

307.

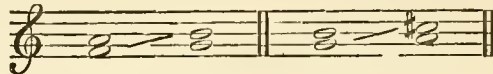


Example 307 shows two staves of music. The top staff is labeled 'a.' and the bottom staff is labeled 'b.'. Both staves show a progression of chords. In 'a.', the tritone is formed by notes from the same chord. In 'b.', the tritone is formed by notes from different chords.

Succession of two major thirds formerly forbidden.

Formerly the prohibition of the tritone was extended to the progression of two consecutive *major thirds*, separated by the interval of a major second, for example:—

308.



Example 308 shows a single staff of music with two chords. The first chord is a major triad, and the second chord is a major triad a major second above the first, forming two consecutive major thirds.

and it cannot be denied that in two parts this progression has the same unpleasant effect as the tritone itself. In three or four parts, however, it is considerably less harsh.

309.



Example 309 shows two staves of music. The top staff has two chords, and the bottom staff has two chords. The progression of the two major thirds is shown in two parts.

Correction of Ex. 299.

We now return to Ex. No. 299, in order to correct the false relation it contains:—

310.



Example 310 shows two staves of music. The top staff has four chords, and the bottom staff has four chords. The progression of the two major thirds is shown in two parts. The second chord in the top staff has a sharp sign, and the second chord in the bottom staff has a flat sign, indicating a false relation. The word 'etc.' is written at the end of the top staff. Below the bottom staff, the numbers '4' and '6' are written under the first and second chords respectively.

THE HARMONIC ACCOMPANIMENT TO A GIVEN MIDDLE VOICE.

This exercise is extremely useful, and cannot be begun too soon. As in the preceding examples, the roots which will serve as the foundations of the accompanying harmonies will be indicated by means of letters. Cantus firmus in a middle voice.

Exercise :—

311. Alto. C G C F G a d<sub>7</sub> G C

In the alto.

The progression of the bass will as usual be the most important, and should be considered first ; at the same time, however, the soprano may be added. Addition of soprano and bass.

312.

The above phrase will be complete in three parts. With the addition of the tenor it will appear as follows :— Addition of the tenor.

313.

A given *tenor* will be similarly treated.

Cantus firmus in the tenor.

Exercise :—

314. C G a F C G<sub>7</sub> C

With addition of bass and soprano :—

315.

Accompanied by bass and soprano.

In four parts:—

Addition of  
the alto.

316.

The student is recommended to persevere in such exercises as the above until the progression of parts becomes perfectly pure and unconstrained.

Position of  
voices.

It may here be observed that in order to form a good four-part progression a good position of the voices is indispensable. The following rule with regard to position will be found serviceable.

The distance which separates any two of the three upper voices must never exceed an octave. This rule, however, admits of exceptions as regards the relationship of tenor and bass to one another.

The harmonic accompaniment of a given *bass* has been fully treated in the foregoing chapters on figured basses; further consideration of this subject will therefore be unnecessary.

### EXERCISES.

Alto given.

317.

1.

2.

3.

4.

5.

6.



7.

g D g d Eb c f# g D z

8.

Eb Ab Eb Bb Eb Ab f Bb Eb Bb - 7 Eb

9.

F C F d Eb g C7 F C d g C F

10.

b f# - G - D - b e a# b F#7 b

Tenor given.

1.

C G7 C G a d G7 C

2.

C G C a d C G7 C

3.

a E a d b7 a E7 a

4.

a d G7 C a b7 E7 a

5.

C G C C F d G7 C F - G - C

6.

a E - a F d g# a F d E a E7 a

7.

Bb F - Bb7 Eb c F7 Bb - Eb F Bb F Bb

8.

c G - c - G - c - f - G7 - c

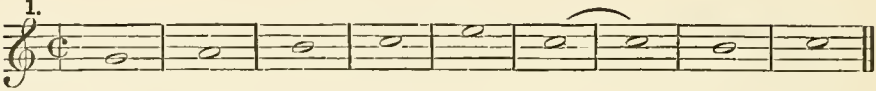
9.

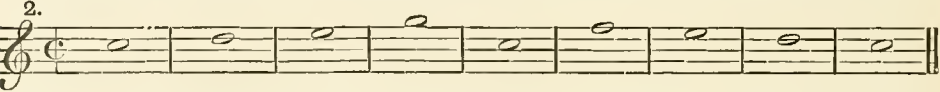
D A7 D G - e A D A D

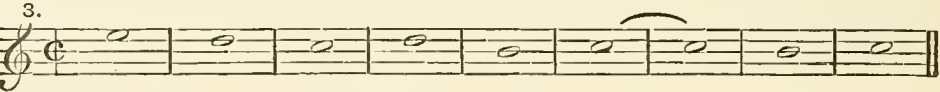
In the following exercises the roots have not been indicated, the choice of harmonies being left to the taste of the student.

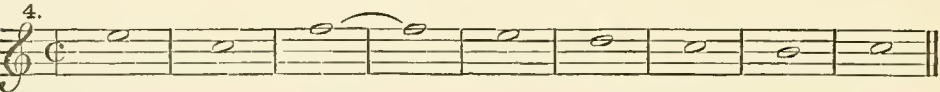
## EXERCISES.

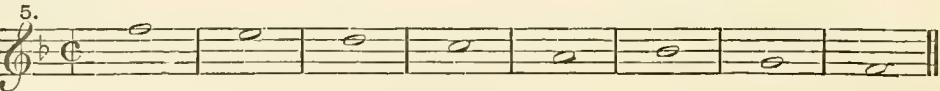
Soprano given.

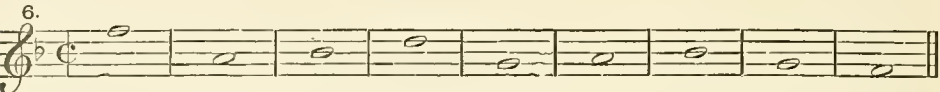
318. 1. 

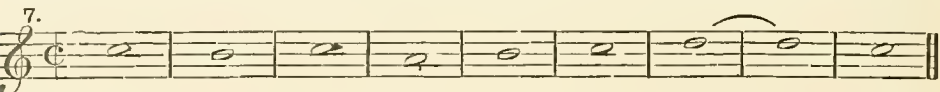
2. 

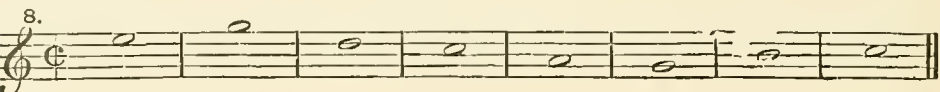
3. 

4. 


5. 

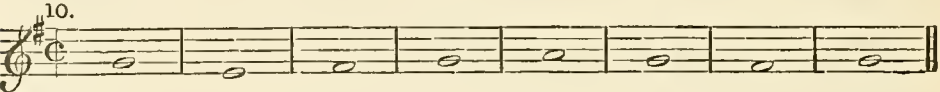
6. 

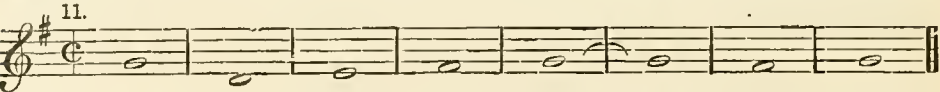
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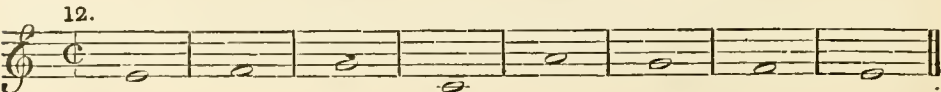
8. 

Alto given.

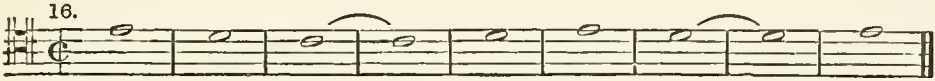
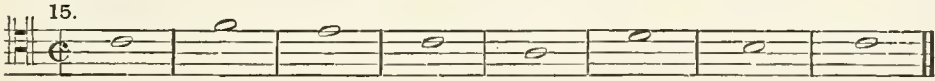
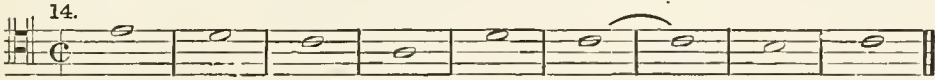
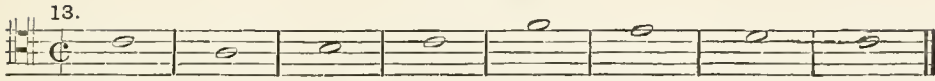
9. 

10. 

11. 

12. 

Tenor given.



## CHAPTER XV.

### OF CADENCES.

VARIOUS kinds of cadences have already been mentioned at different parts of this work, but we have not hitherto had an opportunity of considering them as fully as is necessary. We shall therefore proceed to do so in the present chapter.

Different kinds of cadences.

There are two principal kinds of cadences, the *authentic* and the *plagal* cadence: these are expressed by the following formulæ, the authentic cadence by V-I, and the plagal cadence by IV-I (or in minor by V-I and IV-I), as has already been shown.

Their use.

Both these kinds of cadences are used not only at the end of an entire composition, but also for the close of certain sections thereof, such as periods, phrases, &c.

This part of the subject belongs, however, to the theory of Composition; it will therefore be unnecessary to enter upon it here.

Employment of the plagal cadence at the end of a composition.

When the plagal cadence is used at the end of a composition, it seldom appears alone, but is generally preceded by the authentic cadence, and then introduced by a modulation into the subdominant, thus :—

Authentic Cadence.                      Plagal Cadence.

319.

The plagal cadence often closes a minor composition with the major chord, as in the above example.

Subdivisions of authentic cadences into perfect and imperfect.

Authentic cadences are also subdivided into two kinds, *viz.*, *perfect* and *imperfect*.

The perfect cadence.

The *perfect* authentic cadences are those in which the bass contains the *roots* of both the dominant and tonic chords, and in which the root of the chord of tonic is also contained in the soprano, for example :—

320.

If this is not the case, *i. e.*, if either of the two chords be used in an inverted form, so that the root does not appear in the bass (as at *a* in the following example), or if the root of the chord of tonic be not contained in the soprano (as at *b*), the cadence is said to be *imperfect*.

The imperfect cadence

321.

If the chord of dominant is followed by some other harmony than that of the tonic, the cadence is termed *deceptive* or *interrupted*. (See p. 60).

The deceptive cadence.

322.

Another kind of cadence closing on the dominant, and expressed by the formula I-V, is called the *half-close* or *semi-cadence*.

The semi-cadence.

323.

In the formation of the semi-cadence the chord of dominant may be preceded by other chords besides that of the tonic, for example:—

Other forms of the semi-cadence.

324.

Certain modulations into the dominant, which are *not* effected by means of the dominant seventh, and the effect of which is undecided and transitory, may also be classed with the semi-cadences.

325.

Examples  
of various  
cadences.

In the following four-voiced chorale will be found examples of various cadences. The first line ends with a half-cadence, the second with a perfect cadence, the third with a plagal cadence in the relative major, the fourth with the same cadence in the original key, the fifth with a perfect cadence in the dominant of the relative major, and the sixth with a half-cadence in the original key.

“O Haupt voll Blut und Wunden.”

326.

The musical score consists of six systems of four-voiced chorale. Each system is written for four voices (Soprano, Alto, Tenor, Bass) and a basso continuo. The first system ends with a half-cadence (V7 to IV). The second system ends with a perfect cadence (V7 to I). The third system ends with a plagal cadence in the relative major (IV to I). The fourth system ends with the same plagal cadence in the original key (IV to I). The fifth system ends with a perfect cadence in the dominant of the relative major (V7 to I). The sixth system ends with a half-cadence in the original key (V7 to IV).

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