A

COURSE

OF

HARMONY

BY

FREDERICK BRIDGE

MUS.D. (OXON.)

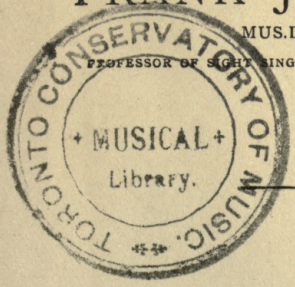
GRESHAM PROFESSOR OF MUSIC

AND

FRANK J. SAWYER

MUS.D. (OXON.)

PROFESSOR OF SIGHT SINGING, ROYAL COLLEGE OF MUSIC.



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SPECIAL PREFACE.

THE present work is the outcome of a request, addressed to me by the Council of the Royal College of Music some years ago (as the Professor responsible for the teaching of Harmony and Counterpoint in that Institution), that I should prepare a Manual of Harmony for use in the College.

Begun then, its completion was unfortunately delayed by my many and growing engagements, and I found it necessary to ask the aid of my pupil and former assistant, Dr. Sawyer, who has had much experience in teaching this subject, in order that the desired task should be completed.

I have thought it right to couple Dr. Sawyer's name with my own on the title-page, as only fair to one who has devoted so much time and rendered so much valuable assistance in the preparation of this work.

FREDERICK BRIDGE.

GENERAL PREFACE.

THIS Harmony Course is designed to provide students with practical instruction, free from all philosophical or acoustical arguments. It is based on existing systems, mainly those of Goss and Macfarren, and advances no new theory.

Believing that the teaching of harmony should not be a purely mechanical and mathematical process, the authors have aimed at a higher and more artistic result—viz., the "creation" of harmony by the student. To this end the exercises in each chapter are divided into three groups—

Firstly, those in which the figured bass is given and in which the student has, therefore, to add the upper parts.

Secondly, those in which the *melody* only is given and in which the student has, from the very outset of his work, to consider the formation of his bass, that most important of all things in music.

Thirdly, those in which *nothing* is given, and he has himself to "create" the whole passage of harmony, choosing his chords and manipulating them accurately in accordance with the instructions given.

It is claimed that by this method more artistic results will be achieved, and also that the student will be more thoroughly equipped.

With regard to the method of using this book, the Harmony Classes at the Royal College of Music are divided into five grades. To conform with this division the book may be thus partitioned :—

Grade 1	.	Chapters I. to VIII.
Grade 2	.	Chapters IX. to XIV.
Grade 3	.	Chapters XV. to XIX.
Grade 4	.	Chapters VI., XI., XII., XV., XX. and XXI.
Grade 5	.	Chapters XXII. to XXIV.

F. B. AND F. J. S.

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HARMONY.

CHAPTER I.

INTERVALS.

1. An INTERVAL is the difference in pitch between two sounds. Intervals are reckoned upwards, unless the contrary is stated.

A UNISON is one note sounded by two or more voices or instruments at the same time. Though not strictly speaking an interval, it is considered as such in the construction of chords.

2. A SEMITONE is the smallest interval used in music.

A DIATONIC SEMITONE is expressed by *two* letters; as A, B flat. A CHROMATIC SEMITONE by *one* letter; as, A, A sharp.

3. A TONE is equal to two semitones; as C to D, or E to F sharp.

4. Intervals have two names :—

a. NUMERICAL NAME derived from the *number of degrees of the scale* between the lower and the upper notes inclusive.

b. QUALIFYING NAME depending upon the absolute *size of the interval.*

5. To find the NUMERICAL NAME.—Count the letters included between the two notes; as, C to F (four letters included: c, d, e, f), a fourth. C to B (seven letters included: c, d, e, f, g, a, b), a seventh.

The Numerical Name takes no cognizance of sharps or flats in the interval thus :—

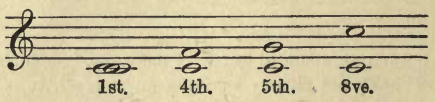
D to F
D to F♯
D♭ to F
D♭ to F♯
} are all thirds.

6. To find the QUALIFYING NAME.—Take the major scale as the standard of measurement. The intervals that arise between :—

The keynote and fourth degree,
The keynote and fifth degree,
The keynote and octave
} are Perfect Intervals.

The unison or prime is also included amongst the Perfect Intervals.

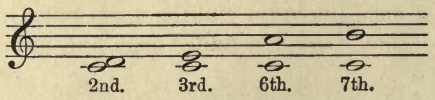
Example of Perfect Intervals in C major.



The intervals that arise between :—

The keynote and second degree,
The keynote and third degree,
The keynote and sixth degree,
The keynote and seventh degree
} are Major Intervals.

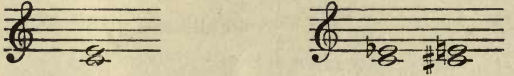
Example of Major Intervals in C major.



All major scales being alike in form, it follows that that which applies to *C major* applies to *all* major keys.

7. If a MAJOR INTERVAL is made a chromatic semitone *smaller* it becomes *Minor*.

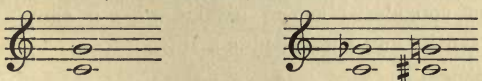
Major 3rd, if made smaller, becomes Minor 3rd.



8. If either a MINOR or a PERFECT INTERVAL is made a chromatic semitone *smaller* it becomes *Diminished.*

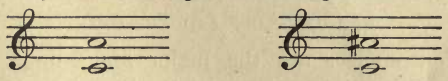
Minor 3rd, if made smaller, becomes Diminished 3rd.

Perfect 5th, if made smaller, becomes Diminished 5th.

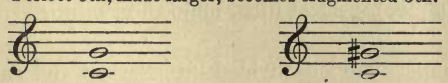


9. If a MAJOR or a PERFECT INTERVAL is made a chromatic semitone *larger* it becomes *Augmented.*

Major 6th, made larger, becomes Augmented 6th.



Perfect 5th, made larger, becomes Augmented 5th.



10. INVERSION of an Interval occurs when the lower note is placed an octave higher, or the upper note an octave lower—

Interval. Inversion.

11. To find the NUMERICAL NAME of INVERSION.—Subtract the interval from 9, since each interval added to its inversion will make up that number. Thus, the interval of a third when inverted becomes a sixth.

12. To find the QUALIFYING NAME of INVERSION.—Perfect intervals remain perfect. Major become minor; minor become major. Augmented become diminished; diminished become augmented.

13. Classification of Intervals.

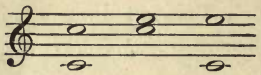
Intervals are classified in three different ways :—

a. Simple and Compound.

Simple Intervals are those within the compass of an octave.

Compound Intervals are those beyond an octave, as they may be considered as an octave, *plus* a simple interval; thus a tenth is an octave, plus a third—

8ve + 3rd = 10th.

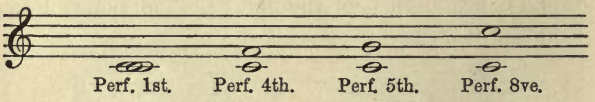


b. Consonant and Dissonant.

The Consonances are the major and minor third, the perfect fourth (with certain restrictions explained at the end of this chapter), perfect fifth, major and minor sixth, and the octave.

Consonances are sub-divided into Perfect and Imperfect—

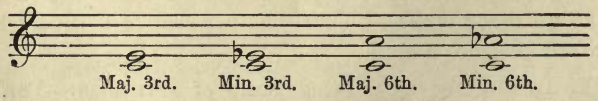
Example of Perfect Consonances.



Perf. 1st. Perf. 4th. Perf. 5th. Perf. 8ve.

These perfect intervals, when inverted, remain perfect.

Example of Imperfect Consonances.



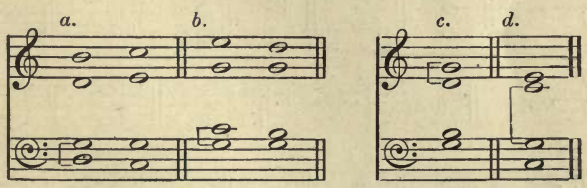
Maj. 3rd. Min. 3rd. Maj. 6th. Min. 6th.

These major and minor intervals change their character when inverted—major become minor and minor become major.

The Dissonances are seconds, sevenths, and ninths, together with all augmented and diminished intervals.

Intervals that have *two* forms, both of which are consonant or dissonant, are described as "major" and "minor" in those two forms. Thus major and minor thirds and sixths are consonant, and major and minor sevenths and ninths are dissonant. Intervals which have only *one* normal form are called perfect; thus fourths and fifths lose their consonant character on being reduced a semitone, and become dissonant.

The chief distinction between consonances and dissonances lies in the fact that the former may be used *without* entailing any further progression; whereas the latter absolutely require to be followed by another chord on which the dissonance may be, as it is termed, "resolved." A chord containing the perfect fourth, between the bass and an upper part, as in *a* or *b*, is not free in its progression as is a concord. In such cases the fourth is a discord. When the fourth is between the upper parts, as at *c* or *d*, the progression is free, as in both instances the fourth is a concord.



c. Diatonic and Chromatic.

Diatonic Intervals are those formed by the notes of the diatonic scale.

Chromatic Intervals are those formed only by the aid of the chromatic scale.

Diatonic Scale.—One ascending or descending alphabetically by tones and diatonic semitones. The harmonic minor scale, though containing an augmented second, is usually classed as diatonic.

Chromatic Scale.—One progressing entirely by semitones—diatonic or chromatic

Exercise 1.

a. Give the perfect consonant intervals in the keys of E major and F major.

b. Give the imperfect consonant intervals in the keys of D major and B flat major.

c. Give examples of simple and compound intervals from the note D.

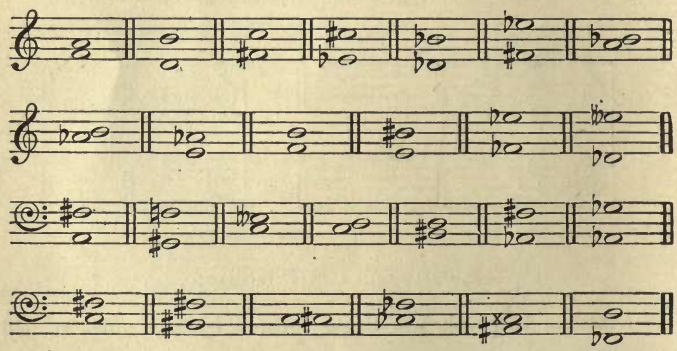
d. Write the consonances from the note A.

e. Write the dissonances from the note E flat.

f. Write the diatonic intervals from the note G.

g. Write the chromatic intervals from the note F.

h. Name the following intervals and indicate those that are consonant and those that are dissonant.



i. Write minor thirds from C, G sharp, B flat, A flat;
Augmented fourths from D, F sharp, A flat, B;
Diminished fifths from G, C sharp, G flat, E;
Augmented sixths from C, E flat, F, A;
Minor sevenths from E, F sharp, D flat, F flat;
Minor ninths from B, D, E flat, F sharp.

j. Invert the intervals in Exercise *h*. Name the inversion, and indicate whether consonant or dissonant.

CHAPTER II.

TRIADS.—MAJOR SCALE.

14. Harmony.—"Two or more appropriate melodies performed together, and said to be in two or more parts, according to the number of melodies used."—*Goss.*

"Melody.—Notes in succession." "Harmony.—Notes in combination.' —*Macfarren.*

15. Chord.—"The simultaneous occurrence of several musical sounds producing harmony" (Sir Hubert Parry, in Grove's "Dictionary of Music and Musicians," Vol. I. p. 352); further called—

Concord.—When consisting entirely of consonant intervals [see Chap. I., par. 13 *b*).

Discord.—When containing one or more dissonant intervals.

16. The Science of Harmony explains the progression of chords.

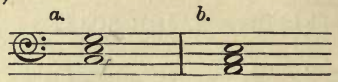
The term "Thorough Bass" was formerly used, but it more appropriately describes "Figured Bass"—*i.e.*, the practice of denoting by figures and other signs, placed over or under the bass, the various chords intended.

17. Rules in Harmony are laid down in order to teach the student to avoid bad progressions, or chords producing unpleasant effects. Rules in harmony must not be regarded as absolute and arbitrary, but as generalisations to which, though true in the main, the experienced musician can find many exceptions.

18. A Triad is a chord consisting of a note with its third and fifth.

a. Triad of C: C, E, G. This is a Major Triad, since it consists of a *major* third (C—E) and a perfect fifth (C—G).

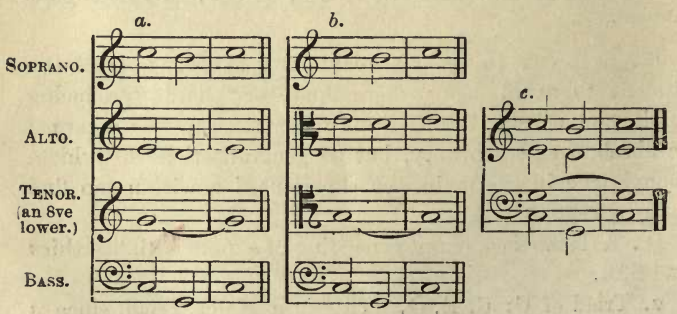
b. Triad of A: A, C, E. This is a Minor Triad, since it consists of a *minor* third (A—C) and a perfect fifth (A—E).



Triad of C major. Triad of A minor

19. A common chord is said to arise when the triad is written in four parts (one note of the triad being doubled). In ordinary use, however, the words "triad" and "common chord" are synonymous. The bass of a triad is best adapted for doubling. Occasionally, instead of the octave of the bass, the octave of the fifth may be added. The third is seldom thus doubled, particularly if it be a major third, and never if it be the leading note.

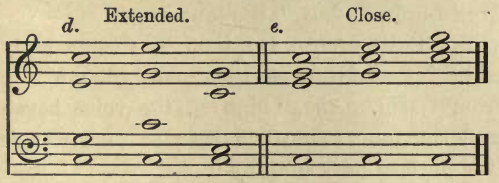
20. There are two methods of writing harmony—viz., in *open score* and *short score*. In open score each voice is written on a separate staff. Three G clefs and an F clef may be used, as at *a*; or a G clef, two C clefs (for alto and tenor), and an F clef may be used, as at *b*. The latter form is preferable. In *short score* the four parts are written on two staves, as at *c*.



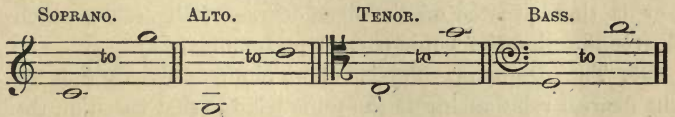
If, in short score, the soprano and alto are written on the upper staff, and the tenor and bass on the lower, the method

of writing is said to be "extended" (see *d* below). In this case, the stems of the notes of the upper part should be turned *up*, those of the lower part turned *down*.

If three parts are placed in the upper and only the bass in the lower, the method of writing is said to be "close" (see *e*)—

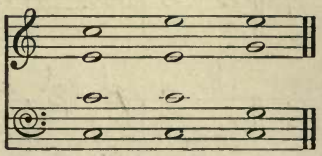


The student is warned that "close position" is not good in vocal writing, since it leads the inner parts out of their proper compass. The following should be regarded as the usual range of the four voices:—



The more equidistant the parts are from each other, the fuller and richer will be the effect. When unequal distances between the notes are necessary, the larger intervals should be between the lower parts.

21. When necessary, the fifth or octave may be omitted and one of the other intervals doubled. The third is never omitted except for some special effect. (See the last chord of Mendelssohn's four-part song, "A cold frost came")—



22. The common chord may be indicated by all or any of the figures $\begin{smallmatrix}8\\5\\3\end{smallmatrix}$; it is, however, usually *un*figured. An unfigured bass note is, therefore, the bass of a triad or common chord.

23. The common chord is usually written for four voices, thus—

Bass (from Latin, *bassus*, "the lowest").

Tenor (from Latin, *teneo*, "I hold"), the next above the bass, so called because it formerly "held" the air.

Alto (from Latin, *altus*, "high"), the voice between the soprano and the tenor, so called because to it was formerly assigned the highest part sung by men.

Soprano (from Italian, *sopra*, "above"), the present highest or upper voice.

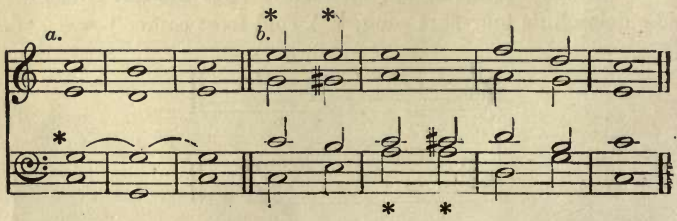
The Primary Triads.

24. The Tonic Triad.—The most important chord in the key is that situated on the first degree of the scale, which degree is called the Tonic (*i.e.*, the "tone-giver").

25. The Dominant Triad.—The chord which stands in the nearest relationship to the tonic triad is that based on the fifth degree of the scale, called the "Dominant," from the dominant or ruling power it exercises over the key.

26. Rules for Chord Connection, to be observed by beginners :—

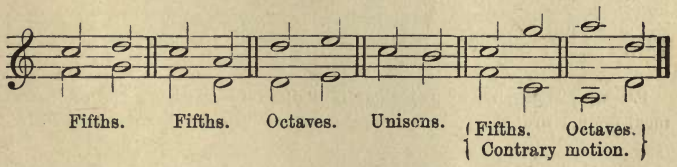
Notes in common between two chords are to be kept in the same part (see *a*). Notes of the same name, but varying in pitch, should be kept in the same part (see *b*).



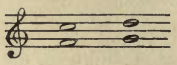
Each note should proceed to the next nearest note in the succeeding chord.

Consecutive perfect fifths and consecutive octaves, or unisons, between any two parts, are strictly forbidden. Consecutive fifths and octaves *by contrary motion*, although allowed by some writers, should also for the present be avoided.

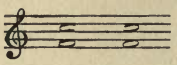
Forbidden Progressions.



Consecutive fifths are two *different* fifths—

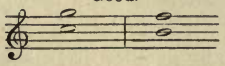


The repetition of the *same* fifth is not wrong—



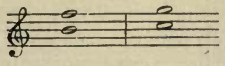
Consecutive fifths between a perfect fifth and a diminished fifth are satisfactory in four-part harmony if the perfect fifth comes first and the diminished last—

Good.



They are unsatisfactory between treble and bass if the diminished comes first and the perfect last, but are frequently used between two upper or two middle parts—

Bad.



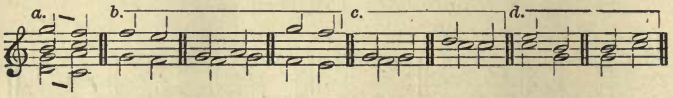
The chief reason for their unsatisfactory sound is that the discord of the diminished fifth is not resolved in the latter example. (See par. 40.)

Consecutive perfect fourths, between the bass and another part, are not good (see *a*). They are allowed if the second fourth is an augmented fourth

Consecutive seconds, sevenths, and ninths, between any two parts, are also bad (see *b*).

A second may not pass to a unison (see *c*).

Parts should not overlap—*i.e.*, a lower part should not pass to a note above that previously heard in a higher part, nor should a higher part pass to a note below that previously heard in a lower part (see *d*) :—



Passages in which a whole melody is doubled by another voice or instrument are not wrong.

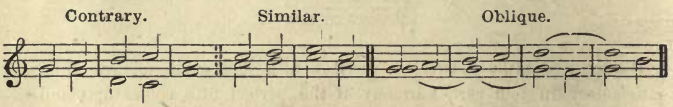
27. Consecutives can best be avoided by making the parts proceed by contrary motion.

Motion is of three kinds :—

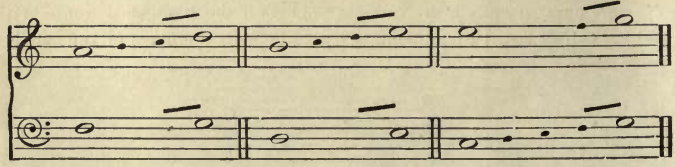
CONTRARY.—One part ascending while the other descends.

SIMILAR.—Two or more parts progressing in the same direction.

OBLIQUE.—One part moving while the other remains stationary.

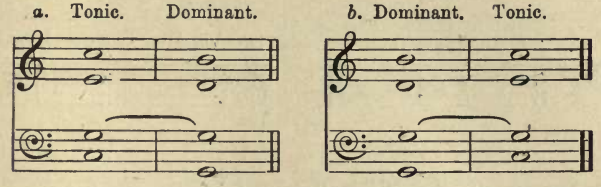


28. Hidden consecutives arise through a progression by similar motion to a perfect concord (octave, fifth, or prime) and should generally be avoided between the extreme parts—



An exception to this rule occurs when the upper part moves one degree and the lower part skips a fourth or fifth.

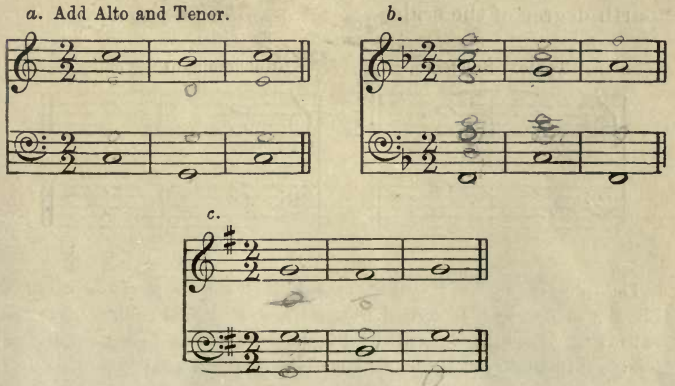
29. Connection of the Tonic and Dominant Triads by the above rules :—



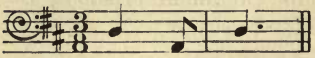
30. Method of Beginning and Ending.—A composition usually begins with the tonic triad and ends with the progression at *b*, which is called the Perfect Cadence (or Full Close), the dominant triad preceding the tonic. The progression at *a* is called an Imperfect Cadence (or Half Close), the tonic chord going to the dominant chord.

Exercise 2.—*On Tonic and Dominant Triads.*

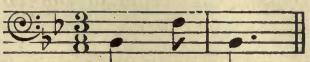
Harmonise the following basses and melodic phrases, using tonic and dominant common chords only :—



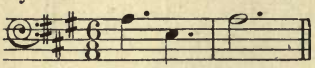
d. Add Soprano, Alto, and Tenor.



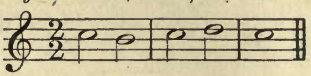
e.



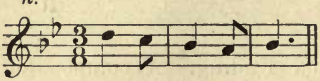
f.



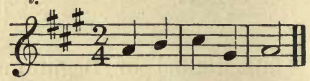
g. Add Alto, Tenor, and Bass.



h.



i.



j. Write perfect cadences in the keys of G, F, B flat, and D.

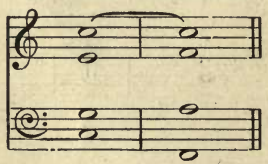
k. Write a passage, similar to one of the above exercises, on tonic and dominant triads in the key of A flat major.

l. Write a passage on tonic and dominant triads in the key of E major.

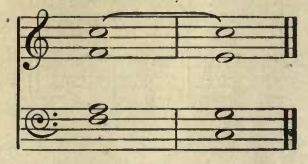
---

31. The Subdominant Triad.—The chord which, next to the dominant, stands in nearest relationship to the tonic is that situated five degrees *below* it on the subdominant, the fourth degree of the scale—

a. Tonic. Subdominant.

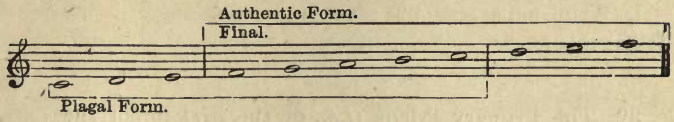


b. Subdominant. Tonic.



The progression at *b*, when used to conclude a piece, is called a Plagal Cadence, as it is derived from the ancient Plagal Scale. Thus the cadence at *b* is derived from the Plagal Form of the Lydian mode (see Grove's "Dictionary of Music and Musicians," art. "Plagal Modes").

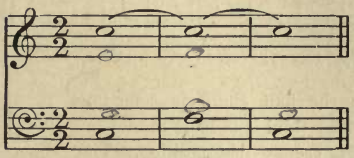
Lydian Mode.



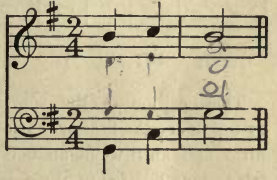
Exercise 3.—*On the Subdominant Triad.*

Harmonise the following basses and melodic phrases, using tonic and subdominant common chords only:—

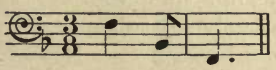
a. Add Alto and Tenor.



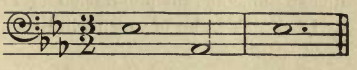
b.



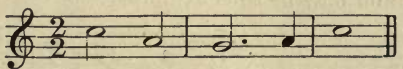
c. Add Soprano, Alto, and Tenor.



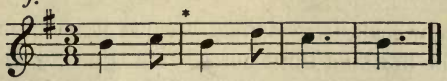
d.



e. Add Alto, Tenor, and Bass



f.



g. Write plagal cadences in the major keys of D, A, B flat and E flat.

* Harmonise both notes in bar 2 with the chord of G.

h. Write a passage on tonic and subdominant chords in D major.

i. Write a passage on tonic and subdominant chords in B flat major.

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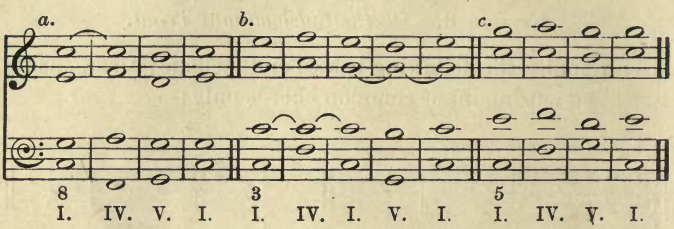
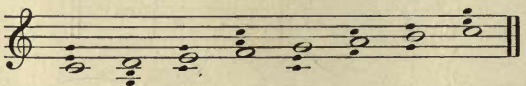
32. The Primary Triads (*i.e.*, of the *first* importance) are those on the tonic, dominant, and subdominant..

33. Connection of the Primary Triads:—



The position of the soprano in the first chord is sometimes shown by a 3 under the first bass note when the third is to be at the top, a 5 when a fifth, and an 8 when an octave is to occupy that position. The primary triads may be used in any order, except that it is seldom satisfactory for the dominant to be followed by the subdominant. Representing the roots by Roman numerals, the progression of Primary Triads are I. V., I. IV., IV. I., IV. V., V. I., all of which will be found in the above example.

34. The three Primary Triads employ all the notes of the major scale, and may be thus exhibited:—



The major scale is so named because it has a major third between the first and third notes. A major key was formerly described as, for instance, "the key of D with the *greater third*," a minor key as "the key of G with the *lesser third*."

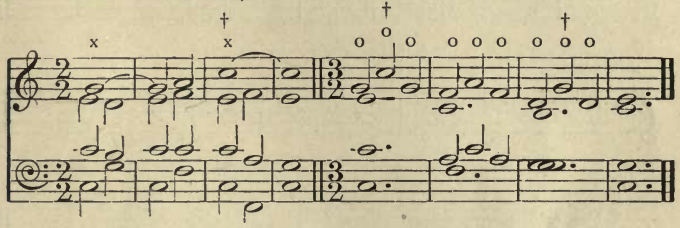
35. In working out the following exercises the student is reminded that the parts must be kept as smooth as possible

notes in common generally remaining in the same part. In harmonising melodies or in composing passages on chords it should be remembered that:—

a. One note may be harmonised by two or more chords (see x).

b. Two or more different notes may, when belonging to the same chord, be harmonised by that chord alone (see o).

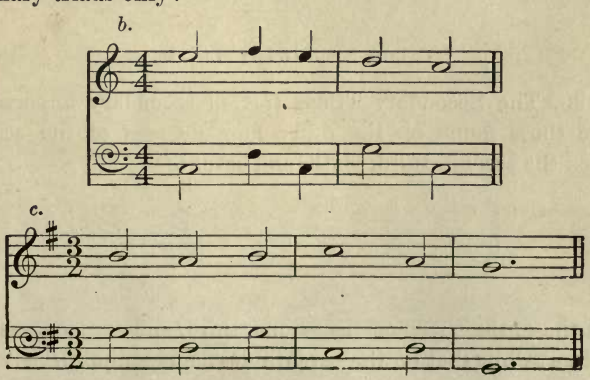
c. The fifth of the chord may occasionally be omitted, but the third never (see †).



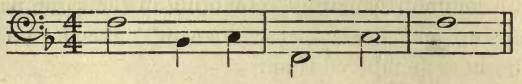
Exercise 4.—*On Primary Triads.*

a. Give the primary triads in the major keys of G, F, D, and B flat.

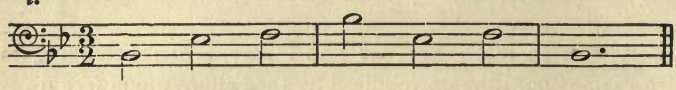
Harmonise the following basses and melodic phrases, using primary triads only:—



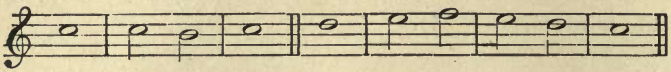
d.



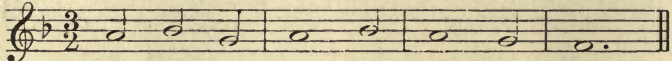
e.



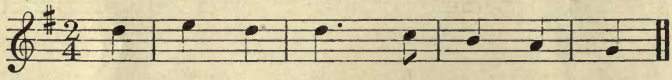
f. Single Chant.



g.



h.

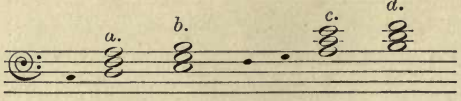


i. Write a short passage on the primary triads in the key of B flat major.

j. Write a short passage on the primary triads in the key of D major.

The Secondary Triads.

36. The Secondary Triads (*i.e.*, of secondary importance) are those found on the other four degrees of the scale—viz., the second, third, sixth, and seventh—



Of these, the triads on the second, third, and sixth degrees are minor, while that on the seventh degree is a diminished triad.

A *minor triad* consists of a minor third and a perfect fifth.

A *diminished triad* consists of a minor third and a diminished fifth.

The second degree of a scale, being the degree *above* the tonic, is called the *Supertonic.*

The third degree, being midway between the tonic and dominant, reckoned upwards, is called the *Mediant.*

The sixth degree, being midway between the tonic and subdominant, reckoned downwards, is called the *Submediant.*

The seventh degree, from its tendency to lead up to the tonic, is called the *Leading Note.*

37. The progression of the bass is the most important part of the harmony.

When the bass ascends or descends a fourth or a fifth there will be one note in common between the two chords. These progressions are generally the most satisfactory.

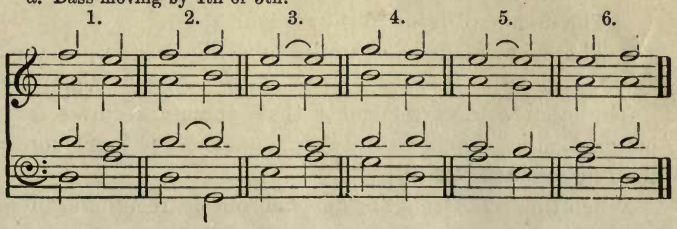
Hence the supertonic triad most naturally leads to the submediant or to the dominant; see following example *a* 1 and 2.

The mediant leads to the submediant (*a* 3).

The dominant leads to the tonic (Par. 30), or to the supertonic (*a* 4).

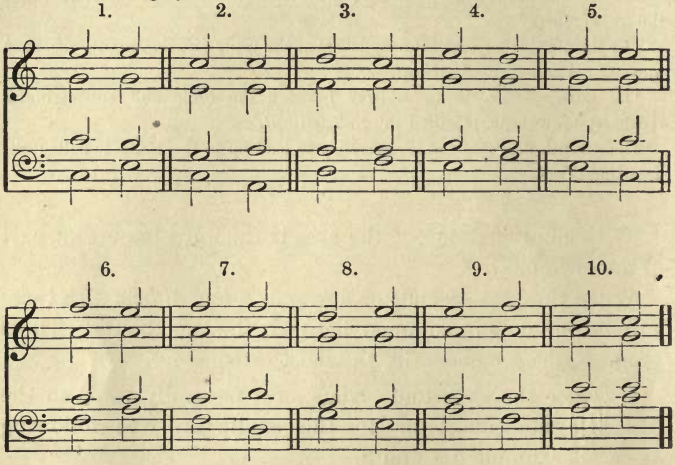
The submediant leads to the mediant (*a* 5), or to the supertonic (*a* 6).

a. Bass moving by 4th or 5th.



When the bass ascends or descends a third there will be two notes in common. Hence there will be less motion, and these progressions are correspondingly less vigorous.

b. Bass moving by thirds.



By movement of a third the tonic can lead to the mediant (*b* 1) or submediant (*b* 2).

The supertonic leads to the subdominant (*b* 3).

The mediant leads to the dominant (*b* 4) or tonic (*b* 5).

The subdominant leads to the submediant (*b* 6) or the supertonic (*b* 7).

The dominant leads to the mediant (*b* 8).

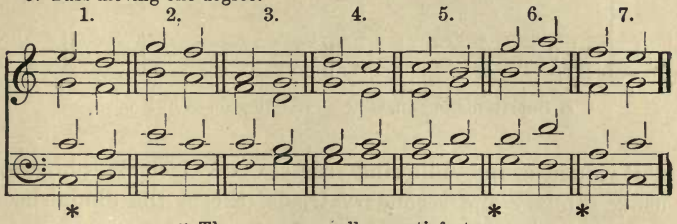
The submediant leads to the subdominant (*b* 9) or tonic (*b* 10).

The student must remember that, though accurate, root progression by skip of a third is less natural and less vigorous than by a fourth or fifth.

When the bass ascends or descends one degree, there will be

no note in common, and therefore contrary motion is advisable in order to avoid consecutive fifths or octaves.

c. Bass moving one degree.



* These are generally unsatisfactory.

In progression by one degree great care is necessary, as, while some such progressions are agreeable to the ear, others are unpleasant.

Ascending one degree.—The most satisfactory are mediant to subdominant (*c* 2), subdominant to dominant (*c* 3), dominant to submediant (*c* 4).

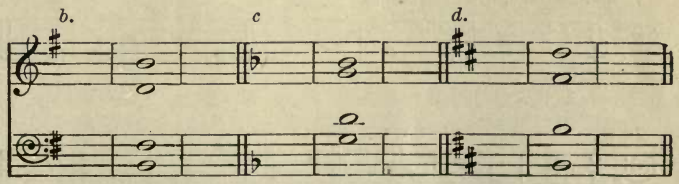
Descending one degree.—The only really satisfactory progression is submediant to dominant (*c* 5).

Other progressions, such as *c* 1, *c* 6, *c* 7, though sometimes met with, are seldom satisfactory.

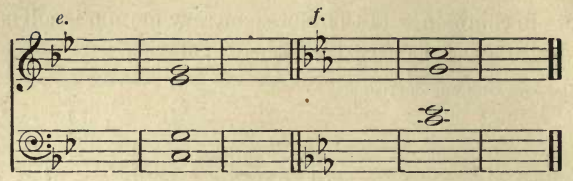
Exercise 5.—*On Secondary Triads.*

a. Write the secondary triads in the major keys of G and F, giving the name of each degree, and stating the species of each triad.

Introduce and follow these secondary triads :—



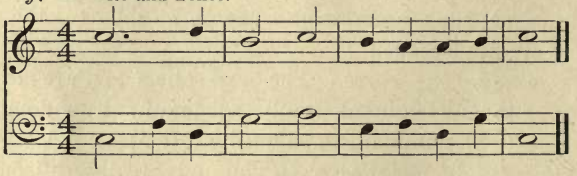
b. Mediant in G. *c*. Supertonic in F. *d*. Submediant in D.



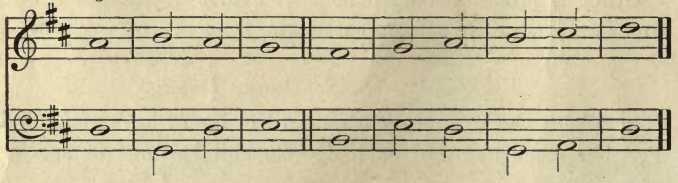
e. Supertonic in B flat. *f.* Submediant in E flat

Harmonise the following basses and melodic phrases using primary and secondary triads (except the diminished triad):—

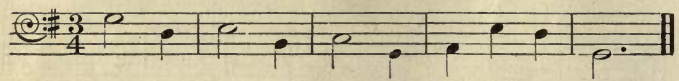
g. Add Alto and Tenor.



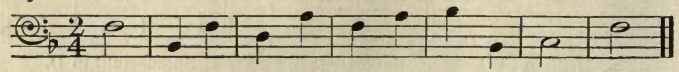
h. Single Chant.



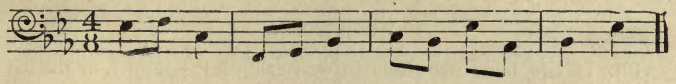
i. Add Soprano, Alto, and Tenor.



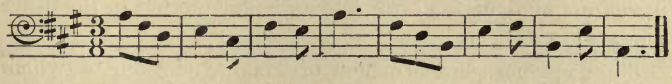
j.



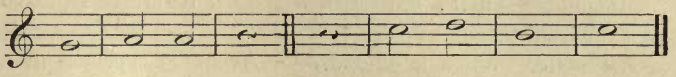
k.



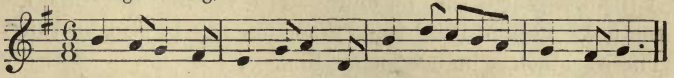
l.



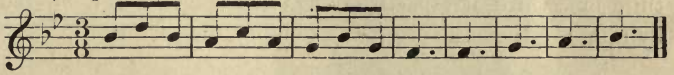
m. Single Chant. Add Alto, Tenor, and Bass.



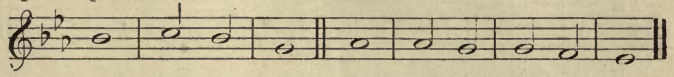
n. Old English Song.



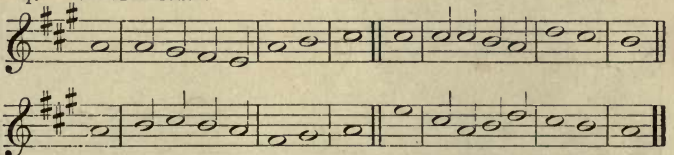
o. (See par. 35.)



p. Single Chant.



q. "Old Hundredth."



r. Write a passage in F major introducing secondary triads and showing various root progressions (by 5th, by 4th by 3rd, and by degree).

s. Write a similar passage in D major.

Sequences.

38. If the bass progress after a regular pattern, a phrase being repeated at a different pitch, such a passage is termed a *sequence*, and necessitates a like regular motion in the other parts.

39. Sequences are Melodic or Harmonic, each of which may be "real" or "tonal."

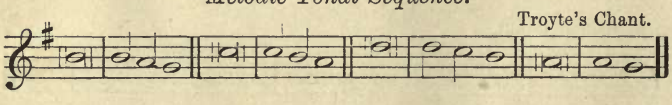
Melodic.—When a phrase of *melody* is regularly repeated at a different pitch.

Harmonic.—When a phrase of *harmony* is repeated at a different pitch.

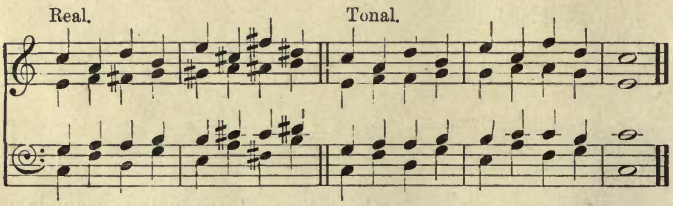
Real.—When the absolute steps of the intervals are repeated, a major third being thus answered by a major third. These sequences induce modulation.

Tonal.—When only the numerical steps are repeated, a third by a third, irrespective of whether it be major answered by minor. Here the original "tonality" is preserved.

Melodic Tonal Sequence.



Harmonic Sequences.

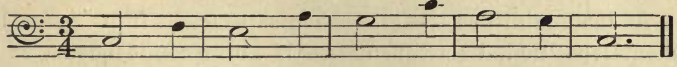


The original phrase to be repeated may be called the "model" (or pattern). In working out a sequence let the student remember that—as is the position of the chord at the beginning of the model, so must it be at the beginning of

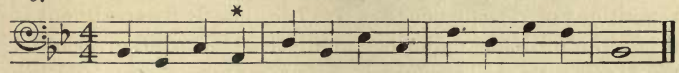
each repetition. He must carefully avoid errors between the *end* of the model and the *beginning* of the repetition.

Exercise 6.—*On Sequences.*

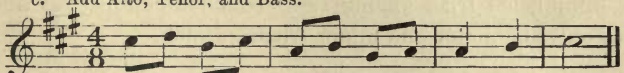
a. Add Soprano, Alto, and Tenor.



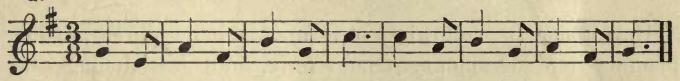
b.



c. Add Alto, Tenor, and Bass.



d.



e. Write a short tonal harmonic sequence in F major.

f. Write a short real sequence starting in C major.

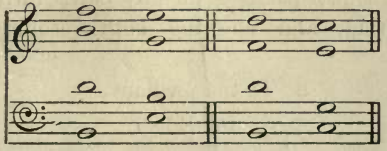
THE DIMINISHED TRIAD.

40. The Diminished Triad on the leading note is usually followed by:—

a. The triad on the mediant, or

b. The tonic triad. (See par. 88.)

a. To Mediant. *b.* To Tonic.



* See par. 40, page 26. line 7.

In each case the fifth, being a dissonant note, is resolved by descending one degree in the next chord. This is called the "resolution" of the dissonance.

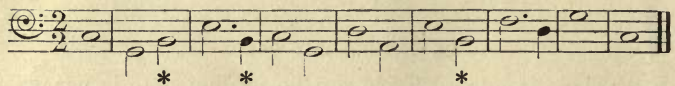
The diminished triad may be approached in many ways from the tonic, mediant, dominant, or supertonic.

As the diminished triad is seldom satisfactory in its fundamental position, its frequent use is not recommended. It should be observed also that when it occurs in one of the repetitions of a sequence (see Ex. 7, *a*, bar 6) its treatment is that of an ordinary major or minor triad—the progression of the dissonant note being free. Some authors do not include the diminished triad among the "common chords," as they treat only the major and minor triads as such.

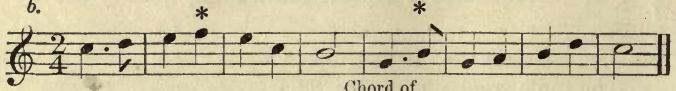
Exercise. 7.—*On the Diminished Triad.*

Harmonise the following bass and melodic phrase, using primary and secondary triads only, and introducing the diminished triad at the chords marked with asterisks:—

a.



b.



Chord of
E minor.

c. Write a short passage in any key, introducing the diminished triad, and showing both resolutions of the chord, viz.:—

a. To the mediant.

b. To the tonic.

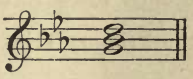
CHAPTER III.

TRIADS—MINOR SCALE.

The Primary Triads.

41. The Primary Triads of the Minor Mode are similarly situated to those of the Major—viz., on the tonic, dominant, and subdominant.

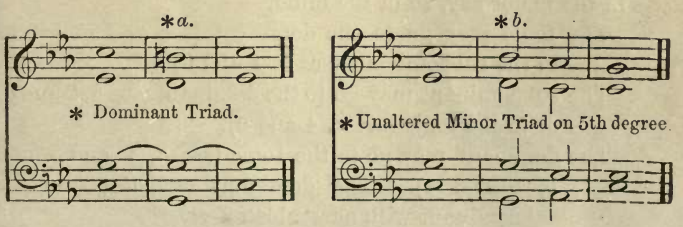
42. In the minor key, the Tonic Triad is *minor*. The Dominant Triad must be *major*, since its third is always the leading note of the scale. According to the key signature the triad on the fifth degree would be minor; thus, in the key of C minor—



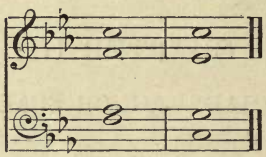
When used as a dominant chord, the third (B flat) must be chromatically raised a semitone to form the leading note (B natural) of the scale.

There are thus two chords on the fifth degree of the minor scale: First, the dominant triad, which is major (see *a*);

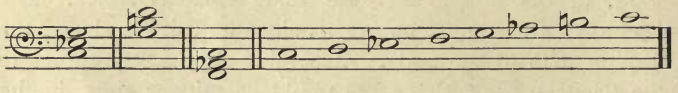
Second, the unaltered triad, which is minor (see *b*):—



The SUBDOMINANT TRIAD is *minor*.
Thus the plagal cadence in C minor is:—

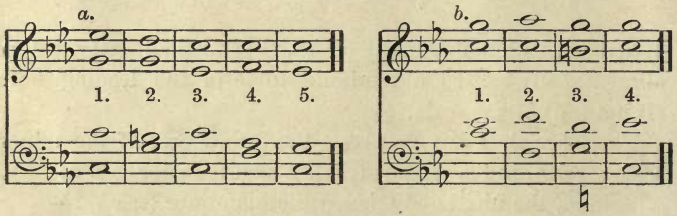


43. The Primary Triads of the minor key are the tonic (minor), the dominant (major), and the subdominant (minor), which together contain all the notes of the harmonic minor scale.



The *minor* scale is so called because of the minor third between the keynote and its third degree. (See par. 34.)

44. Connection of the Primary Triads of the Minor Key:—



As in the major key, so in the minor—

The tonic may go to the dominant (see *a*, 1 and 2) or to the subdominant (see *b*, 1 and 2).

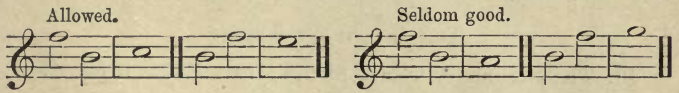
The subdominant may go to the dominant (see *b*, 2 and 3) or to the tonic (see *a*, 4 and 5).

The dominant may go to the tonic (see *a*, 2 and 3, and *b*, 3 and 4). The dominant *cannot* go to the subdominant with agreeable effect.

The third of the dominant chord, being in the minor key chromatically raised, is marked in the figured bass by putting the sign ♯, or ♮, as the case may be, under the bass note. Any accidental standing alone (*i.e.*, not beside a figure) under a bass note applies to the third of the chord.

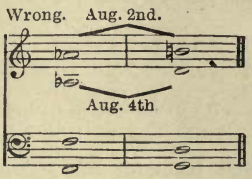
45. Rule for the avoidance of Harsh Intervals of Melody :—

No part should move by any augmented interval, nor by a major seventh or diminished third.* A skip of a diminished interval may frequently be made, provided the following note returns within the interval. The augmented fourth is sometimes allowed in a tonal sequence.



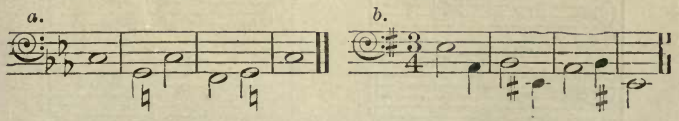
The student is supposed to be writing for *voices;* to singers these intervals would present much difficulty. In instrumental music of course such restrictions would be unnecessary.

The student must carefully avoid the augmented second likely to arise between the dominant and subdominant triads in the minor key; also the augmented fourths between the fourth and seventh degrees, and between the sixth and second.



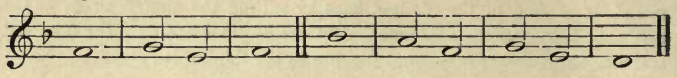
Exercise 8.—*On Primary Triads in Minor Keys.*

Harmonise the following basses and melodic phrases, using only the primary triads of the minor key :—

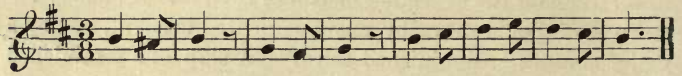


* For an exception to this, see par. 65.

c. Single Chant. D minor.



d.



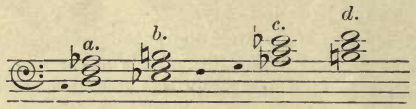
e. Write a short passage in the key of G minor on the primary triads.

The Secondary Triads.

46. The Secondary Triads in the Minor Key consist of:—

On the second degree—a diminished triad, *a*.

On the third degree—an augmented triad, *b*.



An augmented triad consists of a major third and an augmented fifth

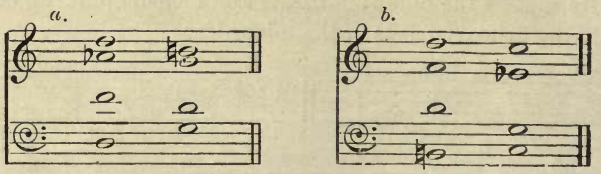
On the sixth degree—a major triad, *c*.

On the seventh degree—a diminished triad, *d*.

47. The progressions of the bass are similar to those in the major key, with the following additions:—

a. The diminished triad on the second degree is usually resolved on the dominant triad.

b. The diminished triad on the seventh degree is usually resolved on the tonic triad.

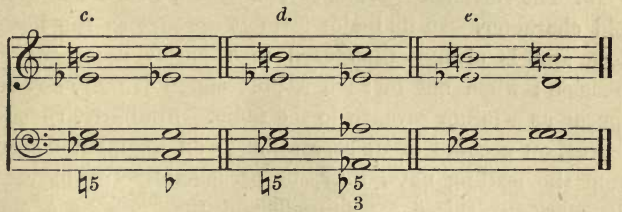


In each case the diminished fifth descends.

c. The augmented triad on the third degree may be resolved—

To the tonic triad, *c.*

To the major triad of the sixth degree, *d* :—



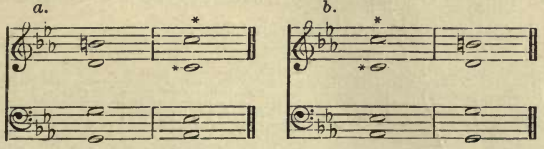
The augmented fifth always rises in its resolution, being the leading note, unless it passes to another chord containing the same note, as at *e* above.

In a figured bass the augmented fifth is marked ♯5, or ♮5, or 5.

48. Rule regulating the Progression of the Fifth and Sixth Degrees in the Minor Key :—

Whenever the fifth and sixth degrees, or sixth and fifth degrees, succeed each other, do *not double the bass* of the sixth degree, *but the third.*

The fifth and sixth degrees of the minor key bear major triads and contain between them the augmented second. It is impossible to double the root of the sixth degree without incurring the forbidden step of an augmented second, or a consecutive octave.

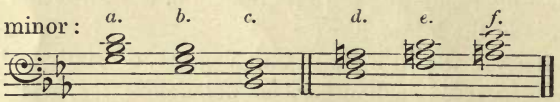


* Shows doubling of the third.

At *a* the B natural cannot descend to A flat because of the augmented second that would thereby arise; the D cannot descend to A flat without causing an augmented fourth; the G in the tenor cannot ascend to A flat without making consecutive octaves with the bass. Hence the A flat, the root of the chord on the sixth degree cannot be doubled.

The Additional Triads in the Minor Key.

49. The Seventh Degree of the Minor Scale has a two-fold character. In its major form it appears as the leading note and is always thus used in a purely dominant progression; when not in such a progression it may, however, appear as a minor seventh to the tonic. Similarly, the sixth degree, on account of its separation by an augmented second from the leading note, may be occasionally (in harmony) chromatically raised a semitone, and thus become a major sixth to the tonic. Two sixth degrees and two seventh degrees are thus used, and we are able to make use in the minor key of the following "*Additional Chords*" :—

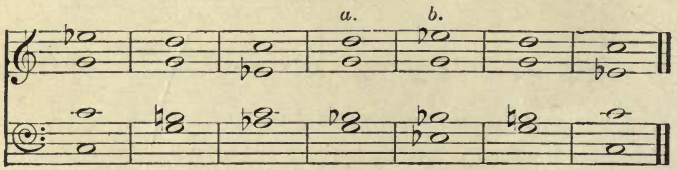


With the flat 7th degree. With the sharp 6th degree.

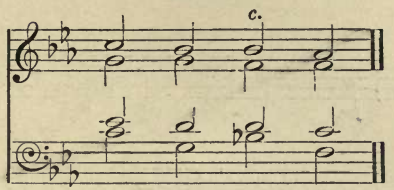
50. The above chords comprise :—

The minor triad on the fifth degree (*not a dominant* triad, since it does not contain the *leading note*), see *a*.

The major triad on the third degree (with the minor seventh of the scale as its fifth), see *b*.



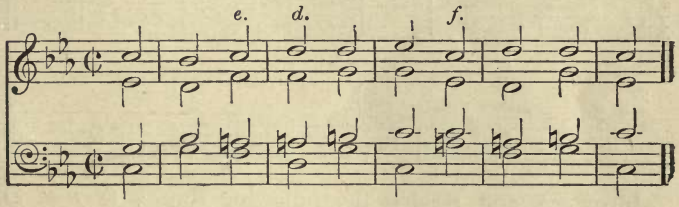
The major triad on the minor seventh (particularly useful in a sequence), see *c* :—



The minor triad on the supertonic, with the major sixth of the scale as its fifth (see *d*).

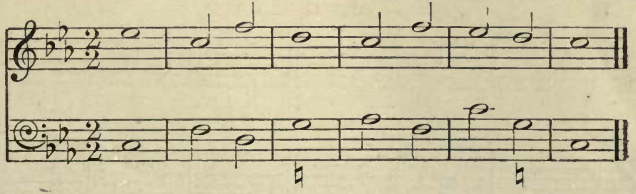
The major triad on the subdominant—difficult to manipulate without incurring modulation (see *e*).

The diminished triad on the major sixth of the scale (see *f*)—seldom used and followed here by a chord of the sixth.

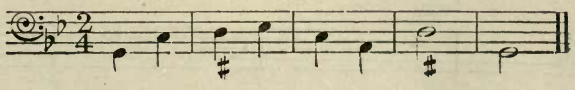


Exercise 9.—*On Secondary Triads in Minor.*

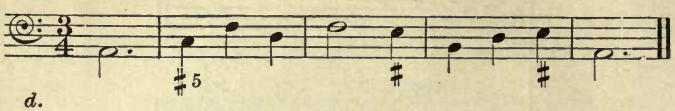
a. Harmonise the following basses and melodic phrases:—



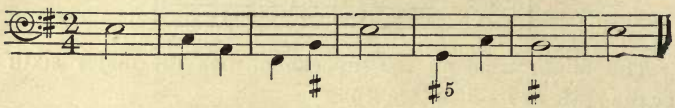
b.



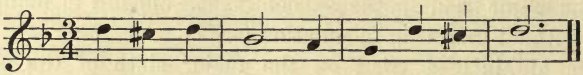
c.



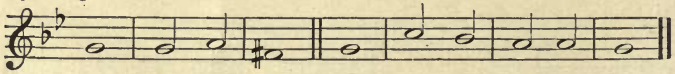
d.



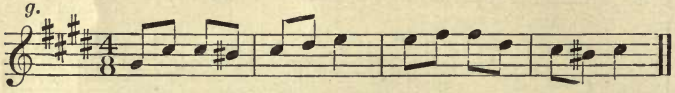
e.



f. Single Chant.

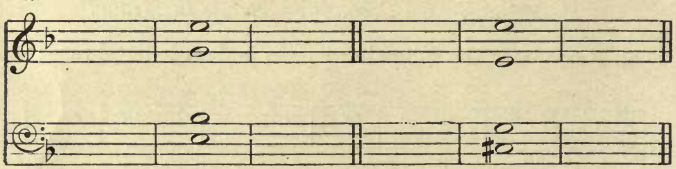


g.

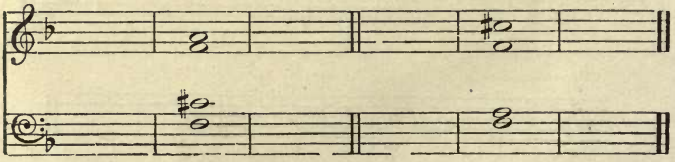


Introduce and resolve the following chords (key of D minor):—

h. *i.*



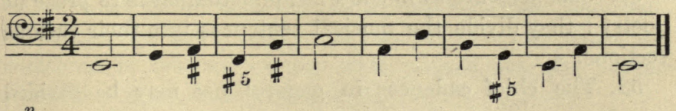
j. *k.*



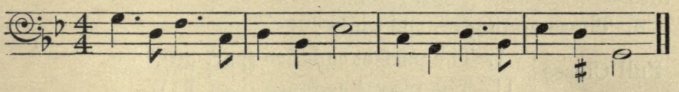
l. Write a short passage on the triads of the minor scale in the key of G minor.

Exercise on the "Additional Triads in the Minor."

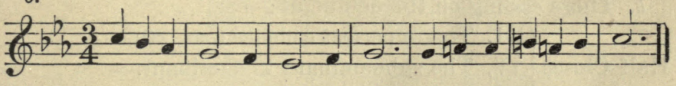
m.



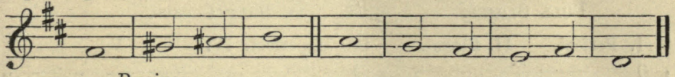
n.



o.



p. Single Chant.



B minor.

q. Write a short passage in the key of D minor, introducing some of the Additional Triads.

CHAPTER IV.

CADENCES.

51. Cadences are to music what punctuation is to prose or poetry: they divide the musical sentences into their various sections.

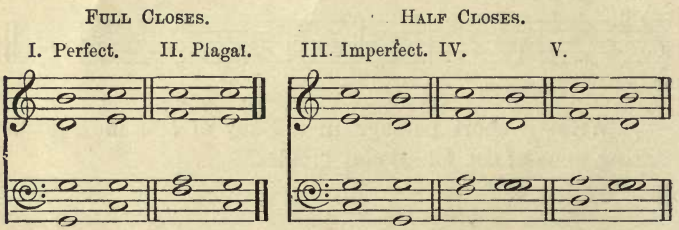
52. The chief cadences in general use may be divided into—

a. Those ending on the tonic :---

Full Closes { I. The perfect cadence (par. 30).
II. The plagal cadence (par. 31).

b. Those ending on the dominant :—

Half Closes { III. The imperfect cadence (par. 30)
IV. The subdominant to dominant.
V. The supertonic to dominant.



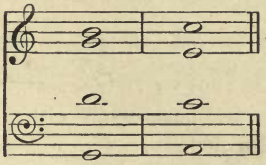
A full close (like a full stop) terminates a (musical) sentence. The perfect cadence is so conclusive—especially when ending with the key-note in the upper part of the final chord—that the student should beware lest its too frequent use break up the continuity of the music.

A half close (like a comma) indicates only a break before the further continuation of the musical sentence.

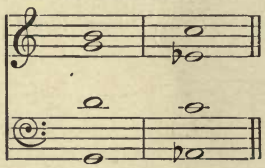
The perfect cadence does not produce so complete a feeling of conclusion if the third or fifth of the tonic chord be in the highest part; while its effect is entirely altered if an inversion

of the tonic chord conclude the cadence, instead of the chord in its fundamental position. Such a progression has been termed an Incomplete Cadence.

53. Deceptive cadences arise when the ear is deceived by some chord other than the tonic following the dominant. Of these, the most used is the False Cadence, when the dominant is resolved on the sixth degree (see the second resolution of the dominant, par. 79)—



Or on the flattened sixth degree (from tonic minor)—



Exercise 10.—*On Cadences.*

a. Write examples of the various cadences mentioned above, in both major and minor keys.

b. Write a single chant in G major, concluding the first phrase with an imperfect cadence, and the last phrase with a perfect cadence (see foot-note).

c. Write a single chant in F minor, making the first phrase end with a deceptive cadence, and the last phrase with a plagal cadence.

d. Write three half closes in the key of D major.

Note. The form of a single chant may be seen in Ex. 9, *f* and *p*.

CHAPTER V.

THE INVERSIONS OF THE TRIAD.

First Inversion.—Chord of the Sixth.

54. Hitherto the root or fundamental note of the chord has been placed in the *bass*, while either the root, third, or fifth, has formed the melody. The chord is then spoken of as being in its *Fundamental Position.*

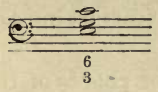
55. If in the triad, instead of the root being in the bass (see *a*), the *third* of the chord is so placed (see *b*)—

the triad is said to be in its *First Inversion*, the root being now inverted (placed an octave higher) in regard to the third of the fundamental chord. The third of the chord being now the bass note, the intervals of which this chord consists are a third and a sixth. This combination is termed a Chord of the Sixth. It is figured 6, the 3rd being always implied, or, where necessary, $\frac{6}{3}$.

When a stroke is placed through a figure it raises the interval represented by that figure a semitone; thus $\not{6}$ means a chord of the sixth with the sixth chromatically raised one semitone.

The fundamental note, or root of the chord, is still C, but E is now the bass, and the student must remember that intervals are reckoned *from the bass*, not from the root. Thus, the intervals in this chord consist of a 3rd (E—G) and a 6th (E—C), reckoned from E (the bass) though

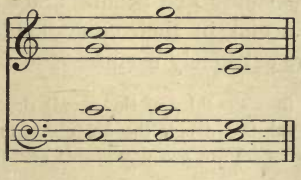
the root of the chord is C, of which chord these notes, E and G, are respectively the 3rd and 5th



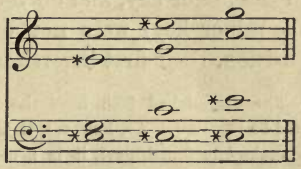
56. Rule for the Treatment of the Chord of the Sixth :—

When derived from a *major* triad, avoid doubling the bass; double the third or the sixth to make the fourth part—

a. Good.



b. Not so good, and generally to be avoided.

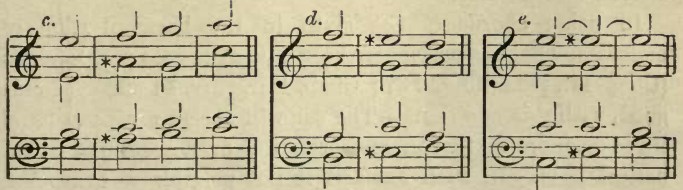


The student will notice that this rule regarding the doubling of the bass in a chord of the sixth derived from a major triad is a reinforcing of the statement in par. 19—"The major third of the chord may seldom be doubled."

57. Exceptions to the Rule :—

I. When two or more sixths succeed each other alphabetically, the bass may be doubled in each alternate chord (see *c*).

II. When the note which doubles the bass is approached and quitted without skip (see *d*), or remains stationary (see *e*).



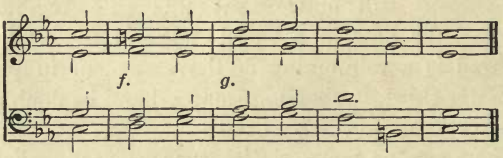
This rule applies to chords of the sixth from *major triads only*. When

derived from minor or diminished triads the bass may be freely doubled, provided the student remembers the general rule:—Avoid doubling any note having a fixed progression (such as the leading note of the scale, which must ascend).

58. In a succession of chords of the sixth, the sixths must be placed in an upper and the thirds in a middle part, otherwise if the thirds are above the sixths, consecutive fifths will thereby result (see *c*, p. 39).

59. Although the diminished triads (on the leading note in the major key, and on the supertonic and leading notes in the minor key) were not very useful in their fundamental position, their first inversions are extremely useful.

The diminished fifth from the root (now the third of the chord) should still be resolved. As, however, it is allowable to double the diminished fifth to make the fourth part, it is necessary to resolve one downwards and the other upwards (see *f*, *g*).



Exercise 11.—*On the Chord of the Sixth.*

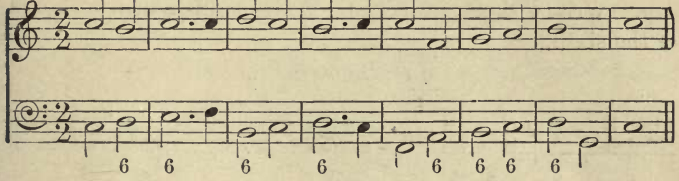
Harmonise the following basses and melodic phrases (*a* to *f* in major keys, *h* to *m* in minor keys), using triads and chords of the sixth.

In using chords of the sixth in the harmonisation of melodies, what has previously been said as to root progressions (Chap. II., pars. 33 and 37; Chap. III., pars. 44 and 47) holds good, with this addition:—The ear will accept a succession of three or more sixths on an ascending or descending alphabetical bass. In such cases it is not possible to grasp the special functions of the various roots through which the bass

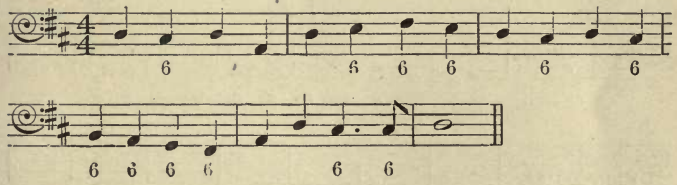
is passing (see *Ex.* 11, *c* and *d*) In the melodic phrases (*Ex.* 11, *e*—last part—*f*, *k*, and *l*) the alphabetical progressions can thus be treated as successions of chords of the sixth.

In Major Keys.

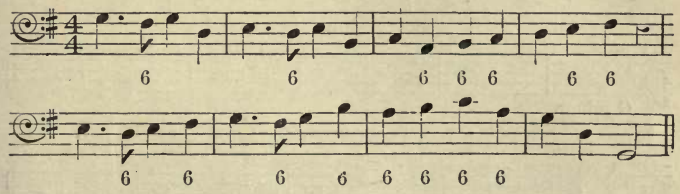
a.



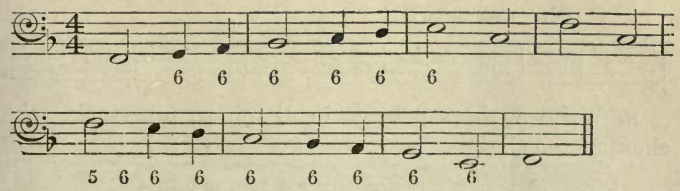
b. From Scarlatti. Goss MS.



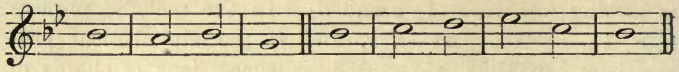
c.



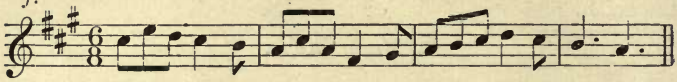
d.



e. Single Chant.



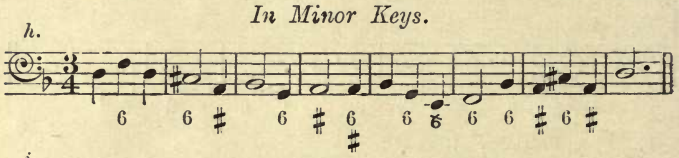
f.



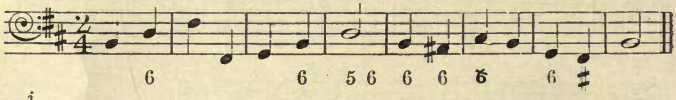
g. Write a short passage in F major, introducing chords of the sixth.

In Minor Keys.

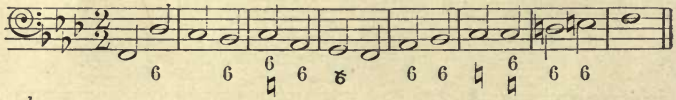
h.



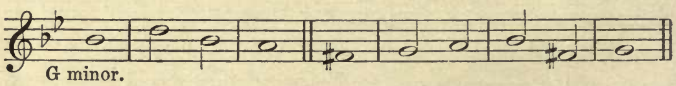
i.



j.

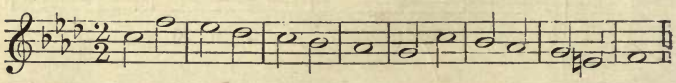


k.

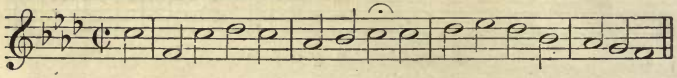


G minor.

l.



m. Chorale. "Aus tiefer Noth." *

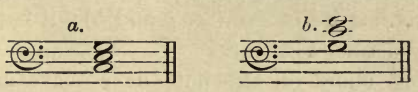


n. Write a short passage in D minor, introducing the chord of the sixth.

* Used in Mendelssohn's Third Organ Sonata.

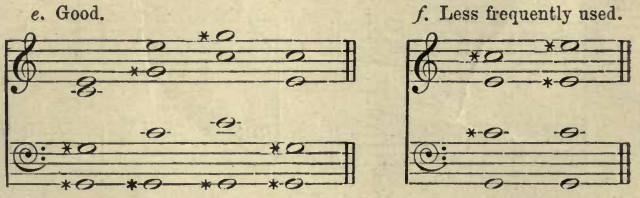
Second Inversion.—Chord of the Six-four.

60. If in the triad, instead of the root being in the bass (see *a*), the *fifth* of the chord is so placed (see *b*)—



the triad is said to be in its *Second Inversion*, the root and third being both inverted (*i.e.*, placed an octave higher) in regard to the original fifth of the fundamental chord. The fifth of the chord being now the bass, the intervals of which this chord consists are a fourth and sixth. This combination is termed a Chord of the Six-four. It is figured always $\frac{6}{4}$. The fundamental note is still C. The G is now only the *bass* of the chord, not its root.

61. The bass is usually the best note to double.



* Indicates the doubling.

62. Rules for the Treatment of the Chord of the Six four :—

I. In approaching a six-four the bass of a *fundamental* chord may leap (see *g* and *h*, p. 44) or move to it by step (see *j*).

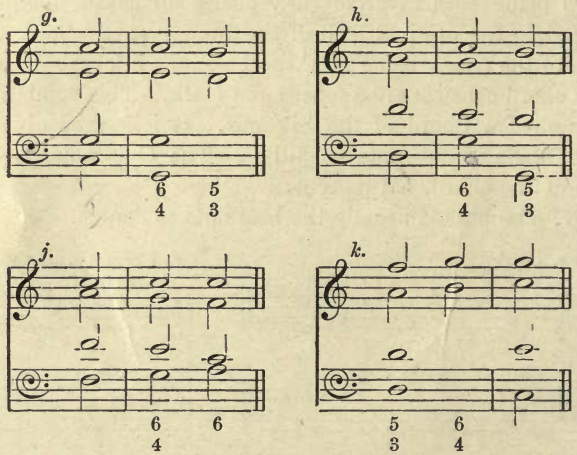
II. The bass may leap from an inversion of the *same* chord, but not from an inversion of a different chord. In the latter case the bass should move to the six-four chord by step.

III. The six-four may be preceded by another chord on the same bass (see *k*).

IV. The six-four is followed by—

i. Some chord (frequently the triad) on the *same* bass note or its octave (see *g* and *h*); it is then called a Cadential Six-four.

ii. Some chord on the note next above or below it—diatonic or chromatic (see *j* and *k*); it is then called a Passing Six-four.



At *g* and *j* the fourth is "*prepared*" (*i.e.*, appears in the same part in the previous chord); at *h* and *k* the fourth is approached by a degree. These are the two usual ways of introducing the fourth in the second inversion; it is seldom advisable to skip to the fourth, since it is a dissonance against the bass (see Chap. I., par. 13, p. 5).

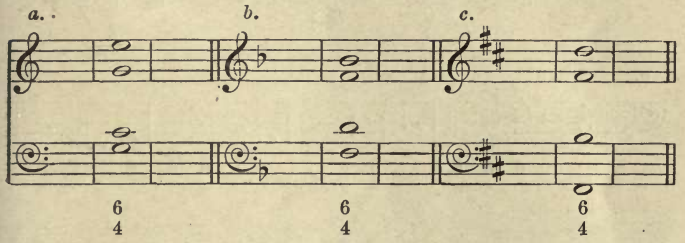
In following a six-four chord.—The bass of a six-four may not leap to another note, except its octave, unless it be to a note of a chord derived from the same root.

Chords of the sixth are found on every degree of the scale.

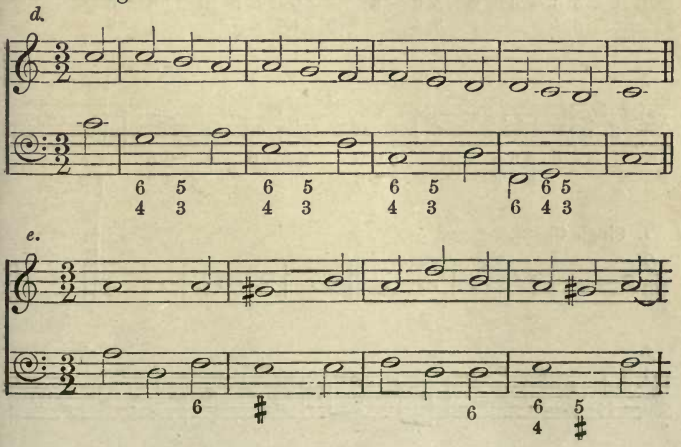
Chords of the six-four are most frequently used on the tonic, dominant, and supertonic. When used on other degrees than the above, the six-four is generally followed by the triad on the same bass note. The inversions of the triad, not being conclusive in their effect, are never used to terminate a composition.

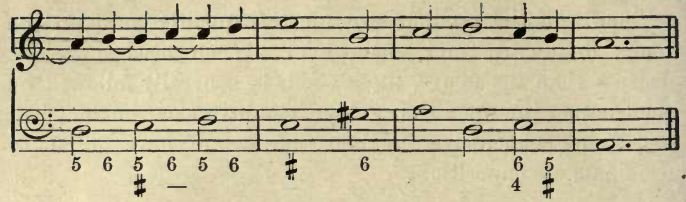
Exercise 12.—*On Chords of the Six-four.*

Introduce and follow each of the following six-four chords in various ways:—

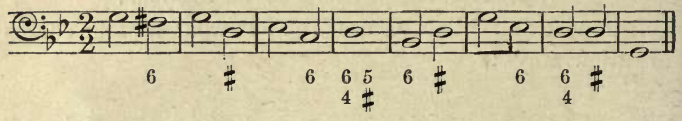


Harmonise the following basses and melodic phrases, introducing inversions of triads into the latter:—

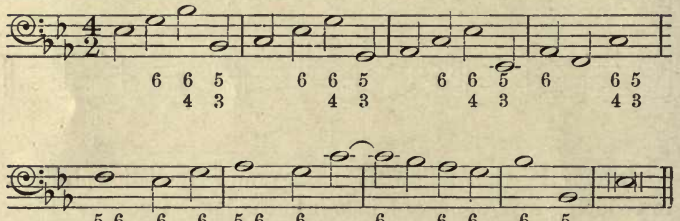




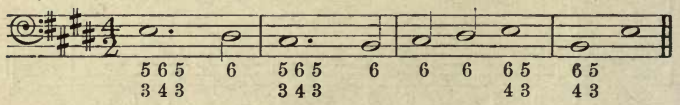
f.



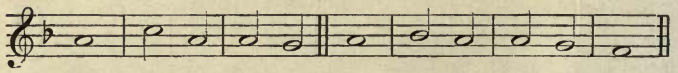
g.



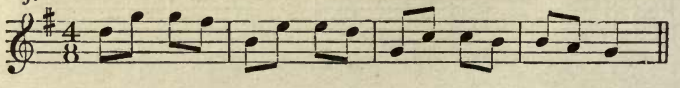
h.



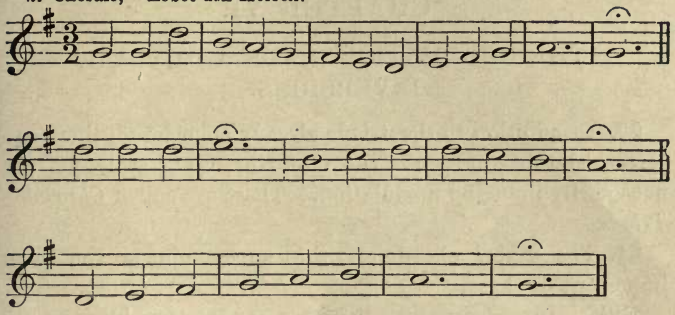
i. Single Chant.



j.



k. Chorale, "Lobet den Herren.



l. Write a short passage introducing various methods of using the second inversion of the triad.

NOTE.—*Teachers desiring to teach the Chromatic Triads after the Dominant Seventh, can omit the next Chapter for the present (Chapter VI.), and take it up after Chapter IX. In that case the Chromatic Triads (or their inversions) used in the Figured Basses of Exercise* 14 (*h, i, and k*) *and Exercise* 15 (*r*) *should be altered to diatonic chords.*

CHAPTER VI.

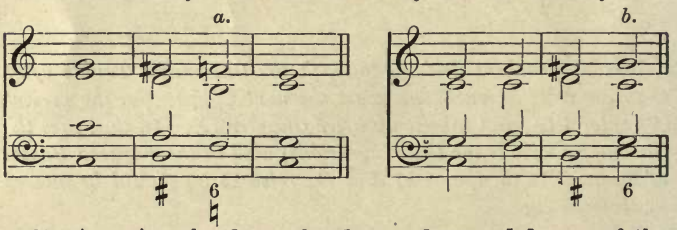
*THE CHROMATIC TRIADS AND THEIR INVERSIONS.

63. In addition to the triads already considered, there are certain chords—foreign to the major or minor scale, yet not necessarily inducing modulation. These are called *Chromatic Triads.*

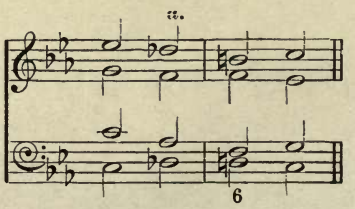
64. The major chord on the supertonic is the most important of these.

Rule.—In order not to induce a modulation into the key of the dominant, this chromatic chord must be followed by a chord containing the diatonic fourth of the key (*a*), or by some form of the tonic triad (*b*).

This chord may be used in both major and minor keys—

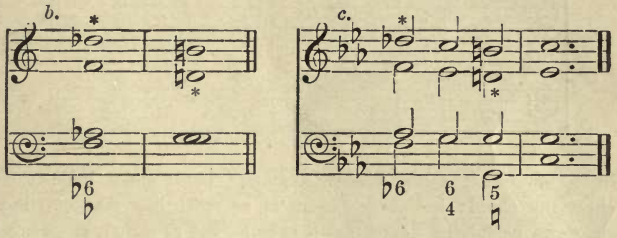


65. A major chord on the flattened second degree of the scale may be used both in the major and the minor keys. In proceeding to the following chord the flattened second degree frequently falls a diminished third.



* See note, p. 47.

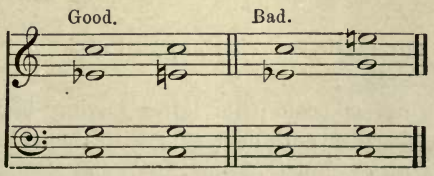
The first inversion of this chord (see following example), the chord of the flattened sixth and flattened third on the subdominant, is sometimes called the Neapolitan Sixth—a meaningless name, though frequently used. When preceding a cadence on the dominant (as at *c*), the whole progression has been termed a "pathetic cadence"—



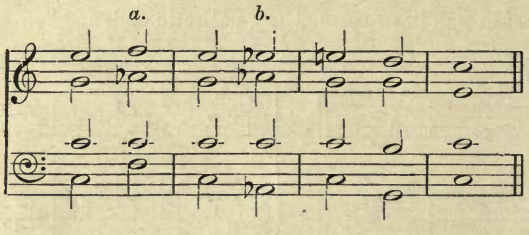
The apparent false relation (at *) between D flat and D natural is permitted here since it produces no ambiguity of key.

66. False Relation "is the occurrence of chromatic contradiction in different parts." (Sir Hubert Parry, in Grove's "Dictionary of Music and Musicians," Vol. I., p. 501.)

Rule.—"When a note occurs in two successive chords, first as a natural and then as a sharp or flat, or the reverse, it should remain in the same part."—Goss. (See also Chap. II., par. 26: "Notes of the same name, but varying in pitch, should be kept in the same part.")

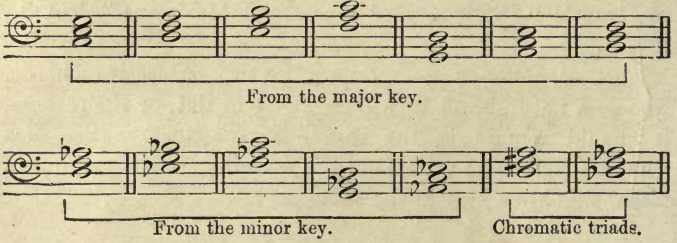


67. It is possible to use, in the major key, without modulation, *all the triads of the minor* key except that on the tonic; at *a* we have the minor triad on the subdominant, and at *b* the major triad on the flattened sixth of the minor scale.



In a minor key some authors designate the "major tonic chord" a chromatic chord; but its treatment is so much like that of either a passing or a modulating chord that it is better not to include it among the usual chromatic triads of a minor key.

68. The student will notice that the boundaries of his major key have now been greatly enlarged. Thus in the key of C major the following chords can be used:—



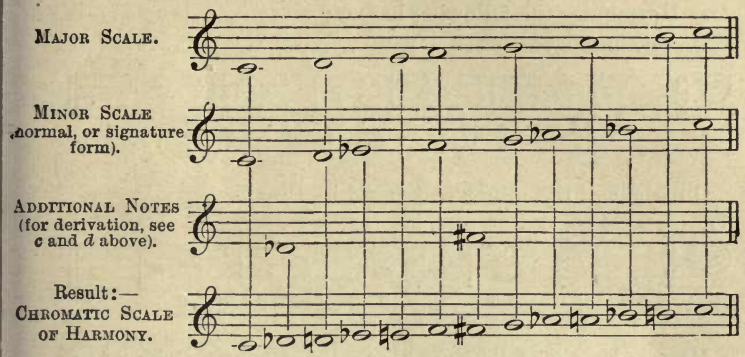
69. The chromatic scale is composed of—

a. The major scale.

b. The minor scale (the latter having both flat and sharp seventh degrees); with the addition of the

c. Sharpened fourth (see par. 64), and

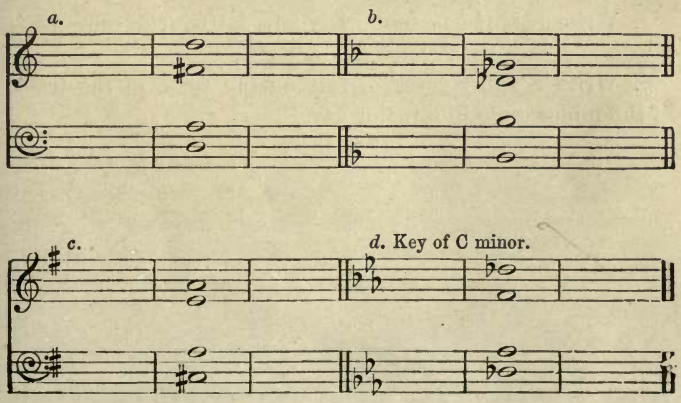
d. The flattened second (see par. 65).



The works of modern composers, such as Dvořák, Grieg, and Wagner, show that it is possible to employ a major triad on *every chromatic degree* of the scale. For the present, however, the student should confine himself to the chords here given.

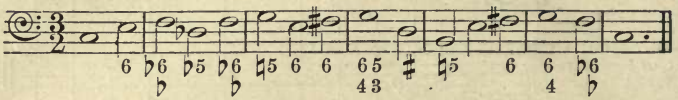
Exercise 13.—*On Chromatic Triads.*

Introduce and follow these chromatic triads in various ways without modulating:—



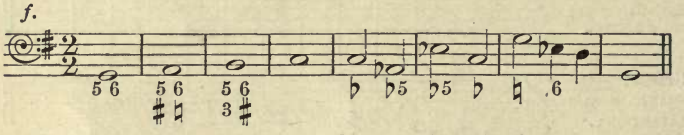
e. Harmonise the following basses:—

On chromatic triads—



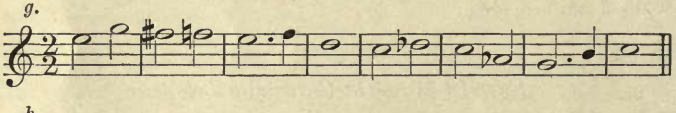
On triads of the minor scale used in a major key—

f.

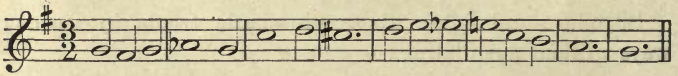


Harmonise the following phrases, introducing chromatic triads, and triads of the minor scale, but making no modulations:—

g.



h.



i. Write a short passage in any key, introducing chromatic triads.

j. Write a short passage, introducing some of the triads of the minor scale in a major key.

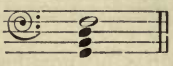
CHAPTER VII.

THE DOMINANT DISCORDS.

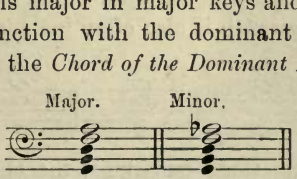
70. On the fifth degree of the scale—the dominant—a most important series of chords is found, which it will be well to place at once in their complete form before the student, although in practice he will only gradually learn the use of the various chords of this dominant series.

71. The importance of the dominant triad, consisting of the dominant, as root, with its major third and perfect fifth, has already been shown, the chord being identical in both major and minor (see par. 42).

72. The fourth note of the dominant chord is the minor seventh from the root, used alike in major and minor keys. Together with the dominant triad it forms the *Chord of the Dominant Seventh.*

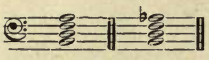


73. The fifth note of the dominant chord is the ninth from the root, which is major in major keys and minor in minor keys. In conjunction with the dominant triad and minor seventh, it forms the *Chord of the Dominant Ninth.*



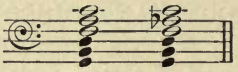
As will be shown later, the root of the chord of the ninth is frequently

omitted. In such cases a chord of the seventh on the leading note results, which, however, is still to be regarded as a part of the dominant chord—



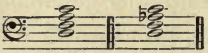
Root G.

74. The sixth note of the dominant chord is the *Eleventh*, alike in major and minor keys—



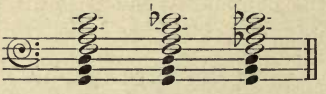
An eleventh is a compound fourth (*i.e.*, 8ve + 4th, see Chap. I., par. 13). This chord is frequently used with the fundamental and third omitted; it then forms a chord of the seventh on the *second* degree of the scale It is still, however, considered as a part of the dominant chord—

In Major. In Minor.

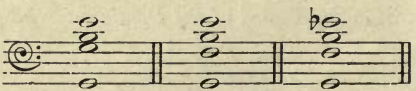


Root G.

75. The seventh note of the dominant chord is the thirteenth, which is major in major keys and minor in minor keys—



The complete chord having now become very large, many of the intervals are necessarily omitted, and therefore the chord is most often found containing only the root, third, and thirteenth; the seventh is also often included—



Notwithstanding these omissions, the chord is still to be regarded as a part of the dominant harmony. All the

dominant discords of the minor key are available in the major key. The dominant *major* discords cannot, however, be used in the minor key.

76. It now becomes necessary to treat of the individual characters of these several notes of the dominant chord beyond the triad, and which form respectively—

a. Chord of the dominant seventh.

b. { I. Chord of the major ninth.
II. Chord of the minor ninth.

c. Chord of the eleventh.

d. { I. Chord of the major thirteenth.
II. Chord of the minor thirteenth.

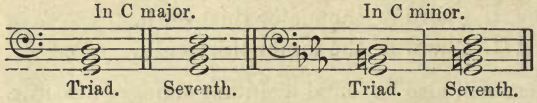
There will also be found a similar series of discords, though of less importance, built up from the supertonic and tonic roots.

CHAPTER VIII.

THE DOMINANT SEVENTH.

77. When to the major triad on the dominant the minor seventh is added, the chord is named the *Chord of the Dominant Seventh*—

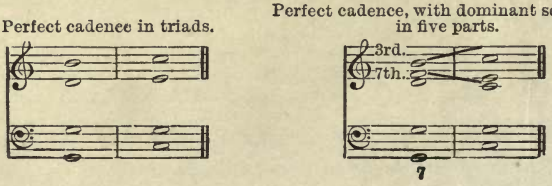
Examples.



The dominant triad in both major and minor keys being major (see Chap. III., par. 42), the chord of the *dominant seventh* is also alike in both modes. It is figured with a 7, to which may be added all or any of the figures of the triad (see Chap. II., par. 22). In minor keys the sharpened leading note has, of course, to be indicated.

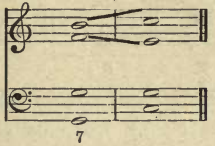
78. As in the diminished triad the dissonant interval (the diminished fifth) was resolved one degree downwards, so now in the dominant seventh chord the dissonant interval, the minor seventh, proceeds *one degree downwards* in its resolution. The third of the dominant chord, *being the leading note*, rises one degree to the tonic.

Examples in C major

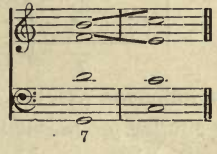


In writing the cadence in four parts, it is desirable (melody permitting) to omit the fifth and double the fundamental note in the dominant seventh. otherwise an incomplete tonic triad (without its fifth) will result :—

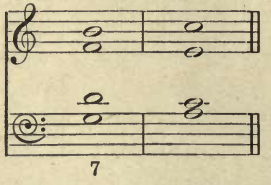
a. Cadence with fifth omitted and root doubled in dominant seventh.



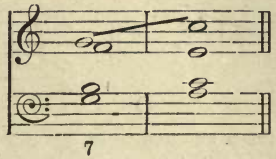
b. Cadence with fifth retained. Incomplete tonic triad (without fifth)



79. The principal and usual resolution of the dominant seventh is (as shown above) to the tonic triad. It is also frequently resolved on the minor triad of the sixth degree. This is sometimes termed the *Second Resolution*.

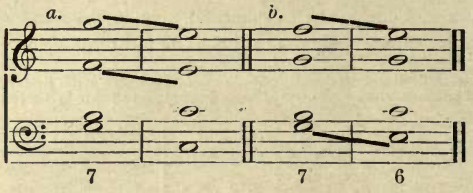


In this progression it is best to write the chord of the seventh in a *complete* form (*i.e.*, with the third, fifth, and seventh). If, however, the root *is* doubled, it should proceed to the third of the chord on the submediant.



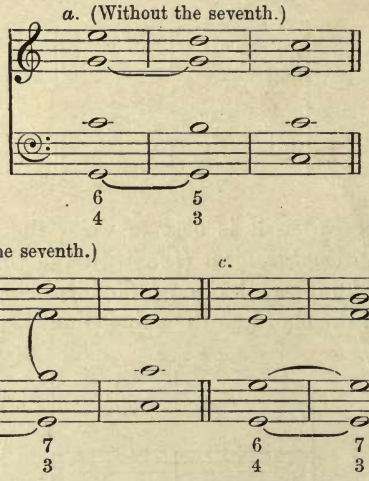
The fundamental can never descend by a third to the same note as the resolution of the seventh. All discords sound better if approached by contrary instead of by similar motion.

IMPOSSIBLE PROGRESSIONS.



The following excellent rule (by Macfarren) covers this and many similar progressions :—"No part may move by similar motion to the octave or unison of the note that resolves a discord."

80. When the $\frac{6}{4}$ is followed by the $\frac{5}{3}$ on the dominant (*a*), the seventh is frequently added to the dominant triad (*b*) :—



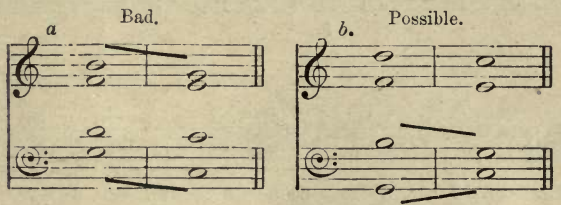
The fifths at *b*, between alto and tenor, are *not* forbidden consecutives because the second fifth is a diminished fifth. In this progression it is better to make the fourth fall to the third, while the sixth falls to the fifth (see *b*) or rises to the seventh (see *c*).

Sevenths derived, like the dominant seventh, from a fundamental, and forming an essential part of a chord, are called Fundamental Discords.

81. The leading note which appears as the third of the dominant chord should, as a rule, rise to the tonic. Some theorists permit it to fall to the fifth of the tonic chord on two conditions, viz. :—

a. That it must be in an inner part.

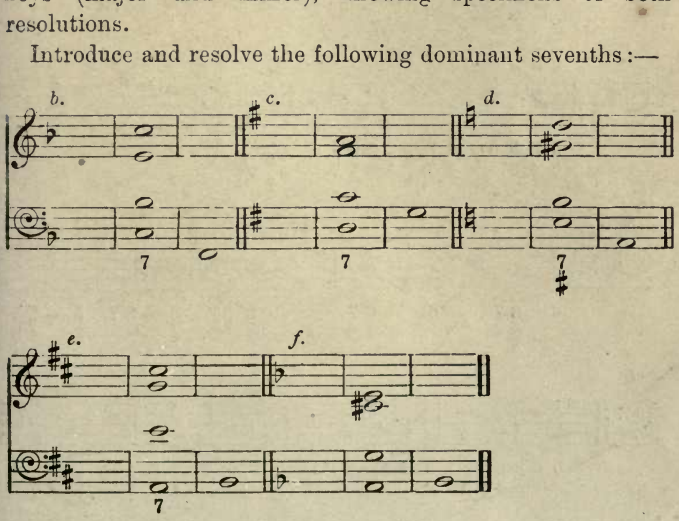
b. That the bass must move in contrary motion to it.



Exercise 14.—*On the Dominant Seventh.*

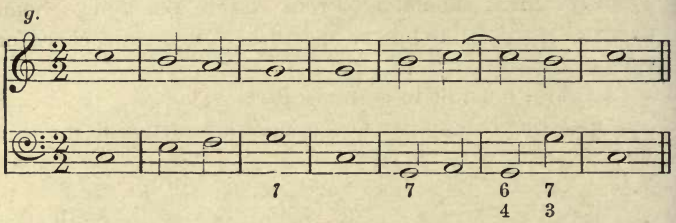
a. Write examples of the dominant seventh in various keys (major and minor), showing specimens of both resolutions.

Introduce and resolve the following dominant sevenths :—

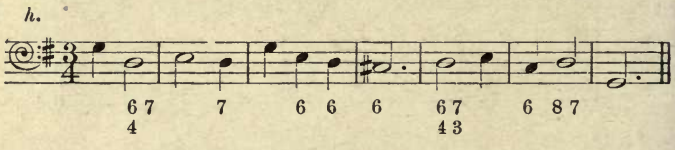


Harmonise the following basses and melodic phrases :—

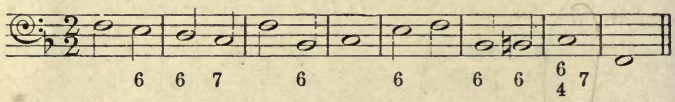
g.



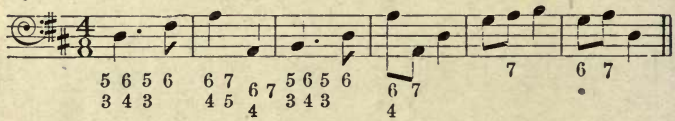
h.



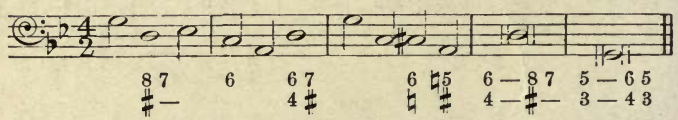
i.



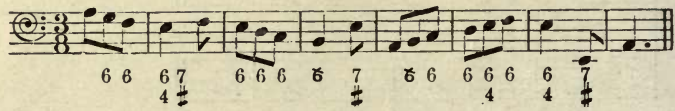
j.



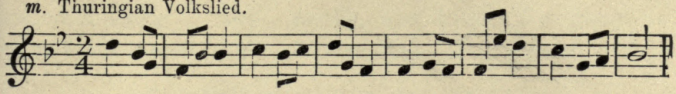
k.



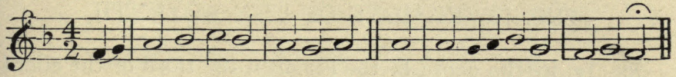
l.



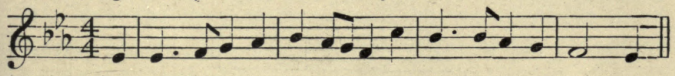
m. Thuringian Volkslied.



n. German Chorale.



o. Old English Song. "Since first I saw your face."



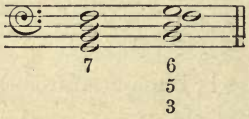
p. Write a passage in D major, introducing both resolutions of the dominant seventh.

q. Write a passage in G minor, introducing both resolutions of the dominant seventh.

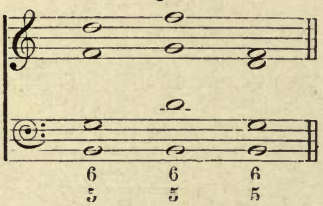
CHAPTER IX.

THE INVERSIONS OF THE SEVENTH.

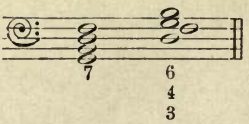
82. If, in the chord of the seventh, the third of the chord (leading note) is placed in the bass, the *First Inversion of the Dominant Seventh* is formed—



The third of the original chord is now the bass note. The intervals being a sixth, fifth, and third, this chord is termed the *Chord of the Sixth and Fifth*, or, more briefly, the *Chord of the Six-five*. It is figured $\frac{6}{5}$ or $\frac{6}{5}$.

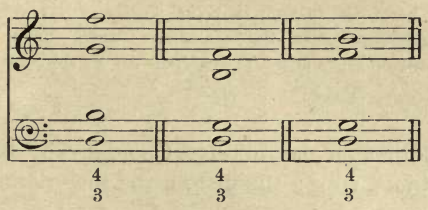


83. If, in the chord of the seventh, the *fifth* of the chord is placed in the bass, the *Second Inversion* of the Dominant Seventh is formed:—

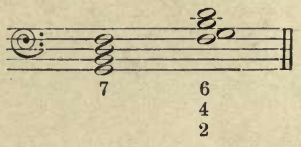


The *fifth of the original chord* is now the bass note. The

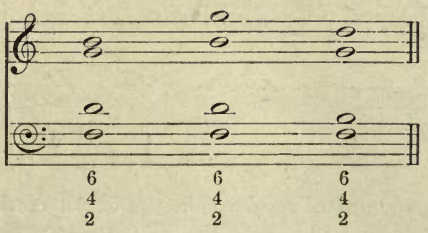
intervals being a sixth, fourth, and third, this chord is termed the *Chord of the Six-four-three*. It is figured $\frac{6}{4}_{3}$ or $\frac{4}{3}$.



84. If, in the chord of the seventh, the *seventh* of the chord is placed in the bass, the *Third Inversion* of the Dominant Seventh is formed :—



The *seventh of the original chord* has now become the bass note. The intervals being a sixth, fourth, and second, this chord is termed the *Chord of the Six-four-two*, or, more briefly, the *Chord of the Four-two*. It is figured $\frac{6}{4}_{2}$, $\frac{4}{2}$, or 2.



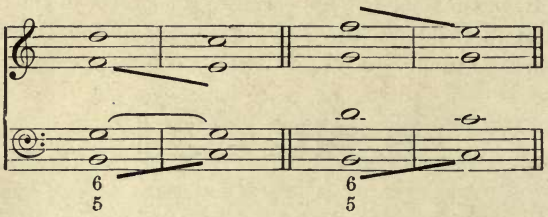
85. Rule for the Resolution of the Inversions of the Seventh :—

"Wherever the original seventh occurs, it must fall." (For exceptions, see par. 87.) The leading note, of course, rises.

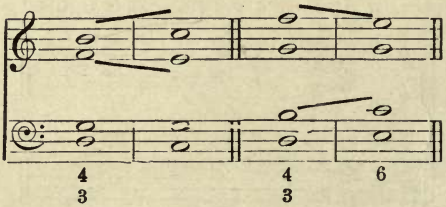
The original seventh will be found as the lower of *two adjacent figures* $\frac{6}{5}$ (the fifth), $\frac{4}{3}$ (the third), $\frac{4}{2}$ (the bass note itself).

It may also be of use to note that *the figures of a triad* $\frac{5}{3}$ *taken in descending succession* show the dissonance which must fall in the various inversions of a seventh. The fifth in the $\frac{6}{5}$; the third in the $\frac{6}{4}$; the first (*i.e.*, the bass) in the $\frac{6}{2}$.

86. Resolution of the Six-five Chord.—The bass, being the leading note, rises; the fifth, being the original seventh falls:—

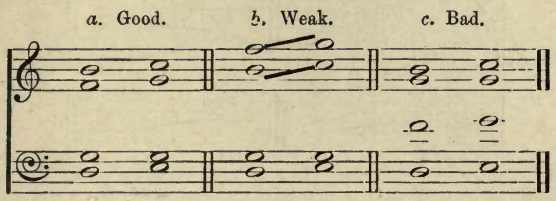


87. Resolution of the Six-four-three Chord.—The third, being the original seventh, falls; the sixth, being the leading note, rises; the bass rises or falls one degree:—

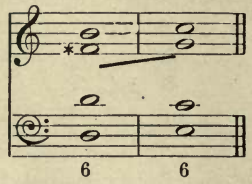


When this chord is resolved on the chord of the sixth on the third degree of the scale, the seventh may *rise*, provided that such seventh lies at a distance from the fundamental note, and provided that the leading note is above it. The progression from a diminished fifth to a perfect fifth, shown at *b*, is in this particular resolution sometimes allowed, but it

is seldom satisfactory. At *c*, the root and seventh lying together, the discord would resolve on a unison, which is also unpleasant.



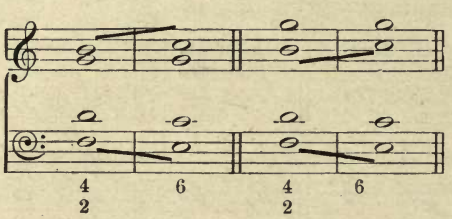
88. Occasionally the fourth of this chord is omitted. It is then called the *Incomplete Six-four-three*—as it contains only a third and a sixth on the supertonic. It then resembles the first inversion of the diminished triad. Here also the third may rise, particularly if the bass rises to the third of the tonic triad.



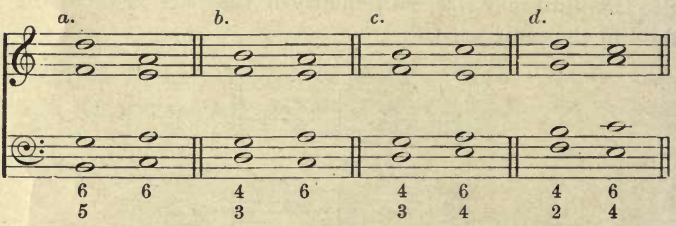
The student should note, that when the diminished triad is thus resolved on the tonic triad it must be regarded as an incomplete seventh, its root being the dominant; but when it resolves on the mediant triad it is a *bonâ fide* diminished triad, its root being the leading note. (See Chap. II., par 40.)

89. Resolution of the Six-four-two.—The bass, being the original seventh, falls one degree; the fourth, being the leading note, rises; the chord of the Six-four-two is

therefore *always resolved* on a chord of the sixth on the third degree of the scale:—



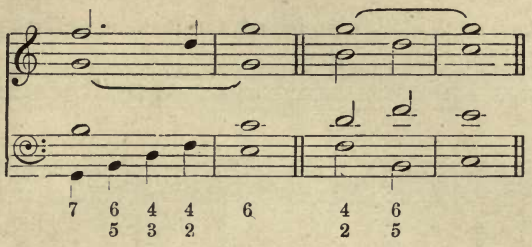
90. The second resolution of the dominant seventh (to the submediant triad) may also be taken with both chords inverted, *a* and *b* being preferable to *c* and *d*. These progressions are, however, exceptional, and should be avoided by the student in the early exercises.



The student should observe the position in the scale of the inversions of the dominant seventh:—

First inversion $\frac{6}{5}$ on the *leading note*.
Second inversion $\frac{4}{3}$ on the *supertonic*.
Third inversion $\frac{4}{2}$ on the *subdominant*.

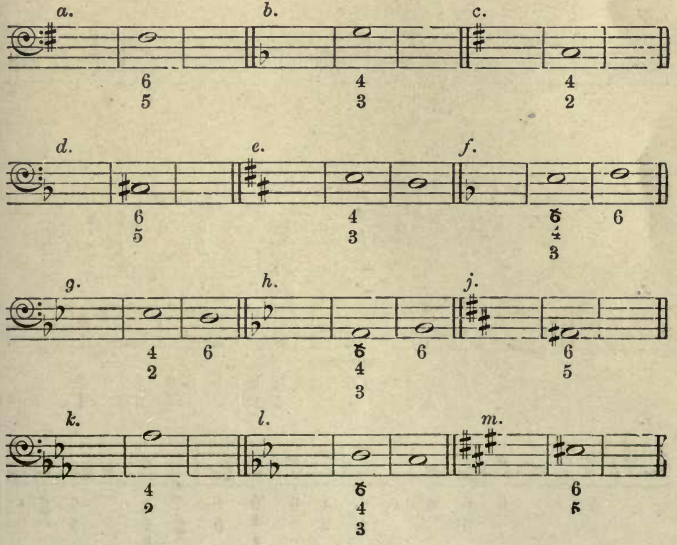
91. "A discord and its inversions may succeed each other in any order before a resolution takes place. In such a case it is only necessary to resolve the last chord" (*Goss*). In this instance the discord is transferred to another part whereby it is duly resolved.



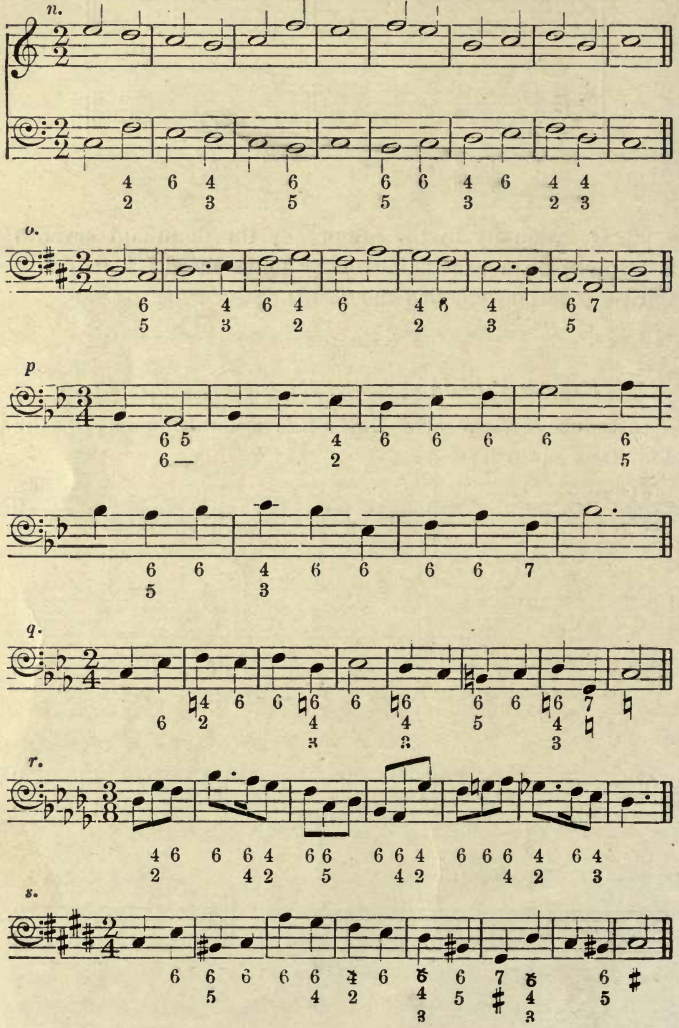
92. Occasionally in the minor key the dominant seventh is resolved on a concluding *major* tonic chord. This major third was formerly called the *Tierce de Picardie.*

Exercise 15.—*Inversions of the Dominant Seventh.*

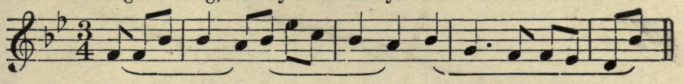
Introduce and resolve the following inversions of the dominant seventh:—



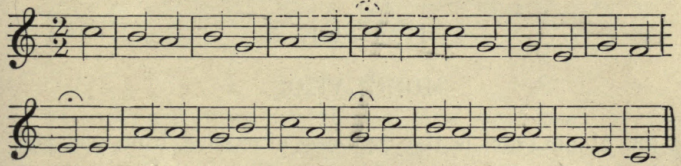
Harmonise the following basses and melodic phrases :—



t. Old English Song, "Sally in our Alley."



u. Chorale, "Vom Himmel hoch."



v. Write a single chant in F major, introducing inversions of the dominant seventh.

w. Write a short passage in C minor, introducing inversions of the dominant seventh.

CHAPTER X.

MODULATION.

93. Modulation is the "process of passing from one key to another." (Sir Hubert Parry, in Grove's "Dictionary of Music and Musicians," art. "Modulation.")

94. Modulation is of two kinds :—

I. *Natural Modulation* arises when passing from a given key to any of its Five Attendants.

The Five Attendant Keys are—the relative key, the dominant and its relative, the subdominant and its relative.

The Attendant Keys to *C major* are its relative, *A minor;* the dominant, *G major*, and its relative, *E minor;* the subdominant, *F major*, and its relative, *D minor*.

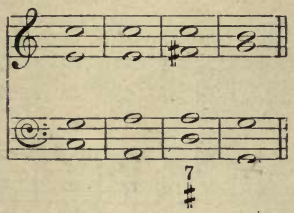
The Attendant Keys to *A minor* are its relative, *C major;* the dominant, *E minor*, and its relative, *G major;* the subdominant, *D minor*, and its relative, *F major*.

II. *Extraneous Modulation* arises when passing to any key other than one of its Five Attendants (see Chap. XVII.).

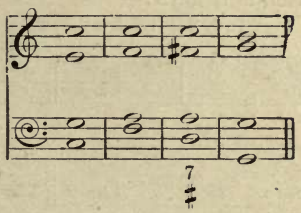
Natural Modulation.

95. This species of modulation is readily effected through some form of the *dominant chord of the new key*. This dominant chord may be preceded by a *chord common to both keys*, in which case the modulation is said to be "Gradual"; or it may be preceded by a chord *distinctly belonging to the previous key*, and not to the new key, in which case the modulation is said to be "Sudden."

a. Gradual Modulation.
C major to G major



b. Sudden Modulation.
C major to G major.

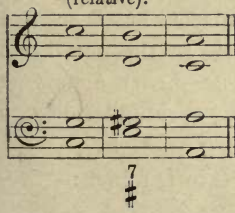


At *a* the dominant seventh on D is introduced by the ambiguous chord of A minor belonging to both keys (C and G), being the submediant of C and supertonic of G; hence the modulation is "gradual."

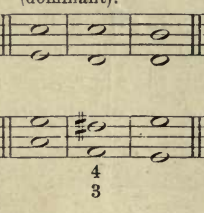
At *b* it is approached through the chord of F major, which, having no connection with the succeeding key of G, renders the modulation "sudden."

96. Examples of Modulation from C major to each of its attendant keys:—

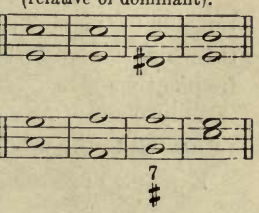
To A minor (relative).



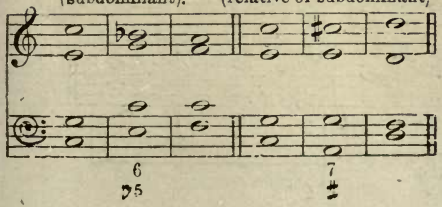
To G major (dominant).



To E minor (relative of dominant).

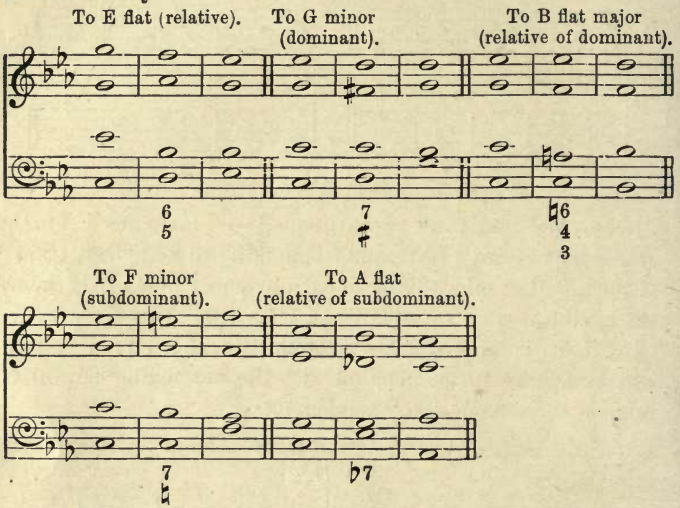


To F major (subdominant).



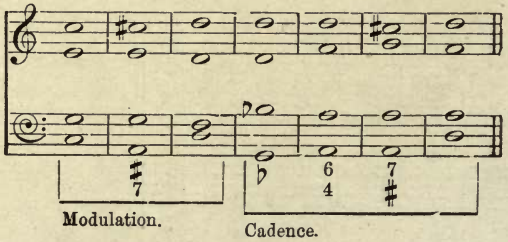
To D minor (relative of subdominant).

97. Example of Modulation from C minor to each of its attendant keys :—

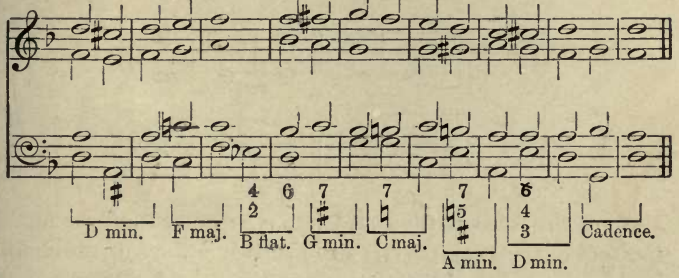


98. Modulation may be *Permanent—i.e.*, when the music remains in the new key to which modulation has been made (in which case a further definite cadence in the new key is frequently added); or it may be *Transient—i.e.*, the new key is only *passed through*, proceeding to yet another key, or returning to the original key.

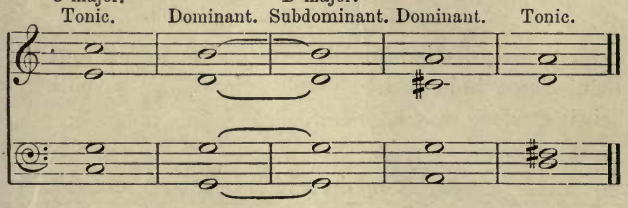
Example of Permanent Modulation, C to D minor :—



Transient Modulations through the attendant keys of D minor :—



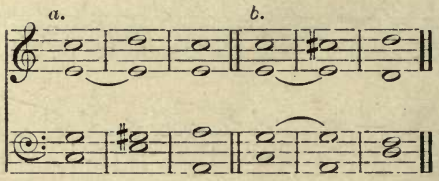
99. Every chord in a key has its own special function to fulfil, its root progressing in the manner peculiar to that particular degree. A means of modulation is effected when the original function of two chords becomes exchanged. Thus, in the following example :—



The chord of G is approached as the dominant of C. Its functions as the dominant of C are exchanged for those of the subdominant of D, the chord of G as a subdominant passing to the dominant of the new key. Thus a ready means of modulation arises.

100. Another frequent and natural means of modulation is a "note in common" between the two chords. Thus any

note of a chord may be sustained and become the root, third, fifth, or seventh of the next modulating chord :—



At *a*, the third of the chord (E) is sustained and becomes the root of the seventh (D); at *b*, the same third of the chord is also sustained and becomes the fifth of the dominant chord on A, while the G, also sustained, becomes the seventh.

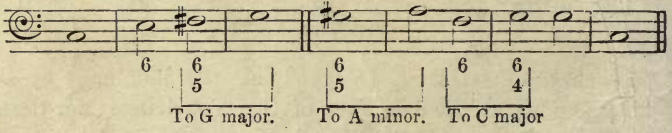
Compare also modulations in the example given in par. 98.

For further information on the subject, see Chap. XVII.; also Higgs' Primer on Modulation (Novello).

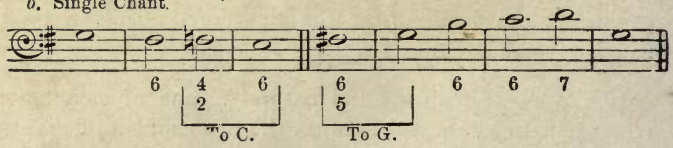
Exercise 16.—*On Modulation.*

Harmonise the following basses and melodies, making the modulations indicated. Triads, dominant sevenths, and their inversions may be used :—

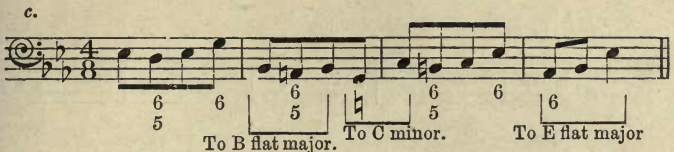
a. Single Chant.



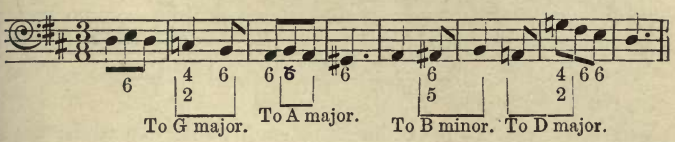
b. Single Chant.



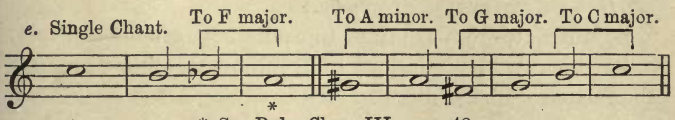
c.



d.

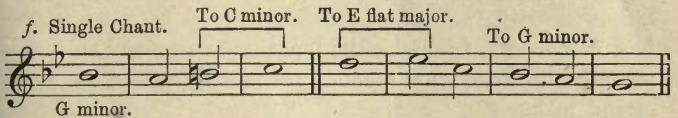


e. Single Chant.

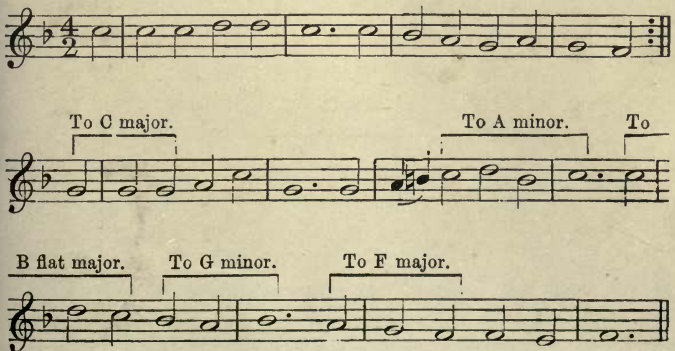


* See Rule, Chap. III., par. 48.

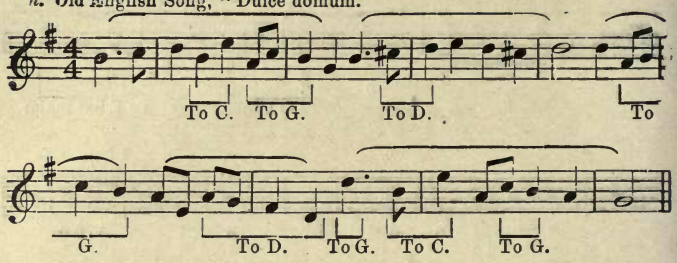
f. Single Chant.



g. German Chorale, "Nun danket."



h. Old English Song, "Dulce domum."



i. Modulate from G major to each of its attendant keys. (*N.B.*—Five separate exercises.)

j. Modulate from D minor to each of its attendant keys.

k. Make two modulations to B minor, the first "gradual," the second "sudden."

l. Write a double chant in E flat, ending the first phrase in B flat, the second in G minor, the third in C minor, and the last in E flat.

A double chant is twice the length of a single chant. The modulation after the second section is generally to an attendant key.

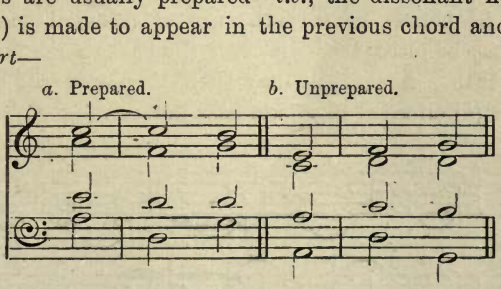
CHAPTER XI.

OTHER CHORDS OF THE SEVENTH.

101. Before proceeding farther with the intervals of the dominant chord beyond the "chord of the seventh," it is necessary to state that "a chord of the seventh may be formed on *any* note of the scale; and when the bass alternately rises a fourth and falls a fifth, we may employ a succession of such sevenths, usually terminating with a dominant seventh' (*Goss*). For example, see par. 105.

These chords are called *Secondary Sevenths*, in contradistinction to the Dominant Seventh (which has been already explained) and the Tonic and Supertonic Sevenths (to be explained later), which are called *Primary Sevenths*. They are also called *Diatonic Discords*, since they are formed by the notes of the Diatonic scale only. For Chromatic Discords see pars. 106 to 109 of this Chapter: also Chaps. XV. and and XVI.

102. Preparation of Secondary Sevenths. — Secondary sevenths are usually prepared—*i.e.*, the dissonant note (the seventh) is made to appear in the previous chord and in the *same part*—



At *a* the secondary seventh on D (*i.e.*, the note C) is properly prepared, since it appears as third of the previous chord of A minor, and in the *same* part (soprano).

At *b* it is not prepared, since C in the first chord in the alto appears in the second chord in the tenor, and therefore, though the *same note*, it is *not* in the *same part*. These chords are now often introduced without preparation. The student, however, should at present adhere to the older method of treatment.

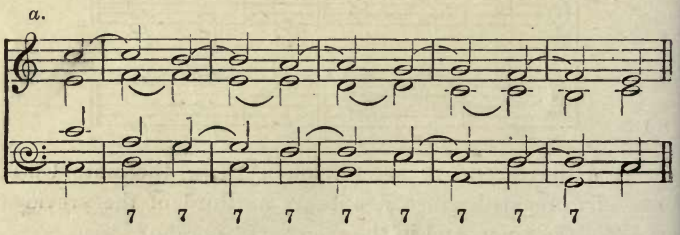
103. Resolution of Secondary Sevenths.—The bass usually rises a fourth or falls a fifth, and the seventh descends. The third being no longer the leading note (as in the dominant seventh), is free in its progression. Provided the seventh falls, there is considerable variety in the chords that may follow secondary sevenths.

104. The treatment of the inversions of secondary sevenths is in every respect similar to that of the dominant seventh, except that (*a*) while the original seventh should be prepared, (*b*) the third is free in its progression. It may be of assistance to the student to refer to Chap. IX., par. 85, note (p. 64).

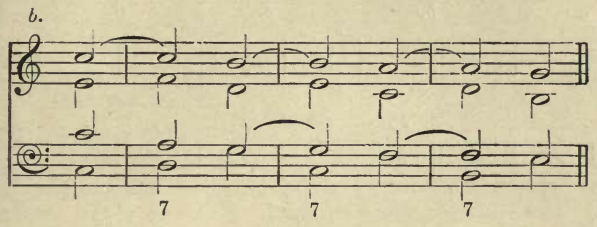
The first inversion of the secondary seventh on the supertonic, consisting of a sixth, a fifth, and a third on the subdominant was formerly called the Added Sixth, since it resembled a subdominant triad with a sixth added.

105. Sequences of sevenths are of frequent occurrence. They may be introduced wherever the bass rises a fourth and falls a fifth. A seventh may then be placed (*a*) on every note, or (*b*) on every alternate bass note—

a.



When a seventh is placed on *every* bass note (as at *a*) each alternate chord necessarily appears incomplete through the omission of the fifth.



THE CHROMATIC CHORD OF THE SEVENTH ON THE SUPERTONIC (THE SUPERTONIC SEVENTH)

106. When to the chromatic triad on the supertonic (see Chap. VI., par. 64) the minor seventh is added, the *Supertonic Seventh* is formed.

The difference between the *chord of the seventh on the supertonic* (derived from the chord of the eleventh—see Chap. VII., par. 74—and consisting of a *minor* triad and minor seventh) and the *supertonic seventh* (derived from the chromatic triad and minor seventh) must be carefully observed. Compare the second chord in the example in par. 105 with the first chord in par. 107.

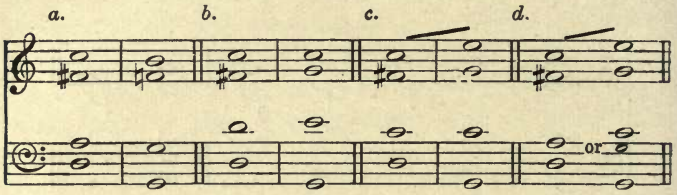
107. The resolution of the supertonic seventh is governed by the same rules as the chromatic triad on that degree of the scale—therefore, in order not to induce modulation, it must be followed by—

a. A chord containing the diatonic fourth of the key (see *a*).

b. Some form of the tonic triad.

Hence, in the resolution of the supertonic seventh, the seventh sometimes remains stationary (see *b*) When this

occurs the seventh may be doubled, and one of the sevenths may leap (see *c*, below).



At *a* the supertonic seventh is followed by a dominant discord. This, of course, contains the diatonic fourth of the key.

At *b* the supertonic seventh is followed by some form of the tonic triad (its second inversion), the seventh remaining stationary.

At *c* the seventh is doubled: one seventh remains stationary and the other moves by leap.

"It is also allowable, without doubling the seventh, to make it leap as a concord, provided the fifth in the chord of the seventh proceed to that note in the following chord, which was the seventh in this" (*Macfarren*) (see *d*).

The Chromatic Chord of the Seventh on the Tonic (the Tonic Seventh).

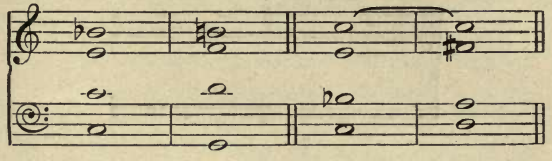
108. When the *minor seventh* is added to the major tonic chord, the *Tonic Seventh* is formed.

In order to avoid modulation, this chord must be followed by a dominant chord (see *a*), a supertonic chord (see *b*).

Hence, in the resolution of the tonic seventh upon the dominant chord a new progression of the seventh occurs, in

which the seventh *rises* a chromatic semitone to the leading note—

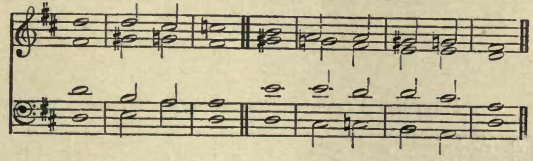
a. To dominant. *b.* To supertonic.



The works of modern composers—*e.g.*, Dvorák, Grieg, and Wagner—furnish examples of many other chromatic sevenths used in a key without modulation. It is well for the student at present to use only those already given.

Neither of these chromatic sevenths require preparation, as they partake of the character of a dominant seventh, which, in the nature of their intervals, they exactly resemble.

Chant containing Chromatic Sevenths.



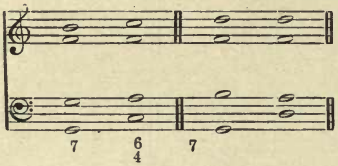
109. Inversions of both the chromatic sevenths (supertonic and tonic) may be formed. These inversions are bound by the same rules of resolution as were the fundamental chords.

It will be well to remind the student that these chromatic chords of the seventh (upon the supertonic and tonic) have greatly enlarged the resources of harmony at his disposal *within the bounds of the original key*. The old way of looking at these chords, as dominant sevenths of *various keys* irregularly resolved, is much more confusing than the method here adopted (in common with most modern theorists) of looking upon them as chords belonging to *one key* and inducing *no modulation*.

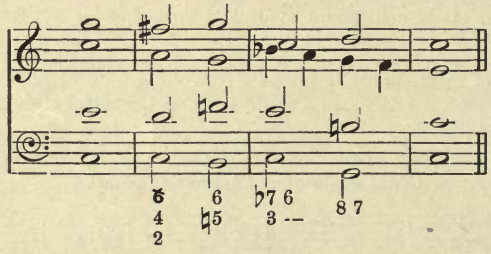
Some of these resolutions peculiar to the chromatic sevenths are sometimes applied to the dominant seventh. Thus the dominant seventh is

occasionally resolved on the subdominant and (less frequently) on the supertonic triad; in both cases the seventh remains stationary.

To the subdominant. To the supertonic.

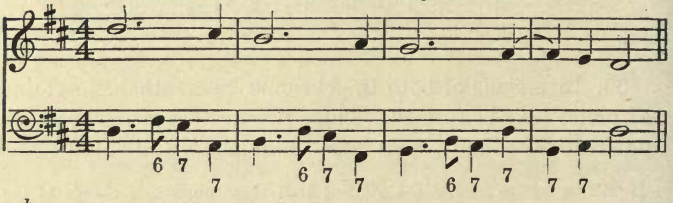


110. False relations that arise from the use of consecutive primary sevenths are allowed, as in the following example:—

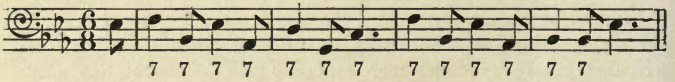


Exercise 17.—*On Secondary Sevenths.*

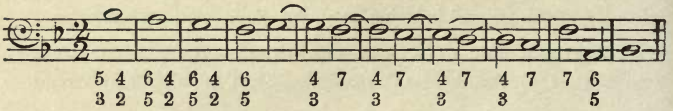
a.



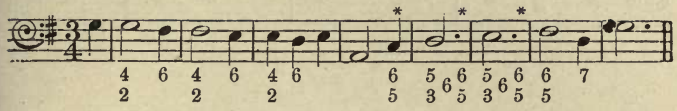
b.



c.



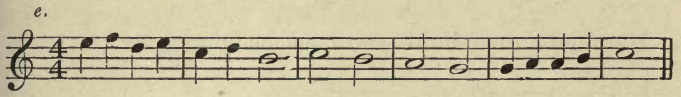
d.



* These three chords ($\frac{6}{5}$) are taken without preparation.

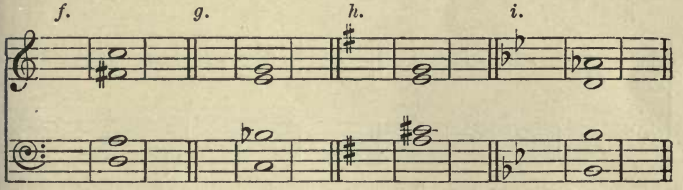
Harmonise the following, introducing sequences of Sevenths or their inversions :—

e.

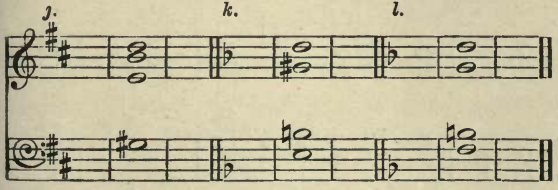


Introduce and resolve the following chromatic sevenths and show their various resolutions :—

f. *g.* *h.* *i.*

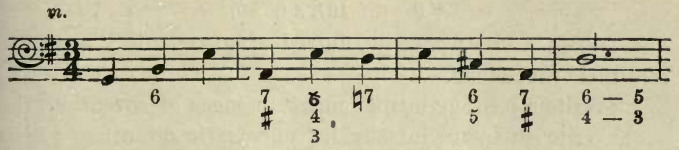


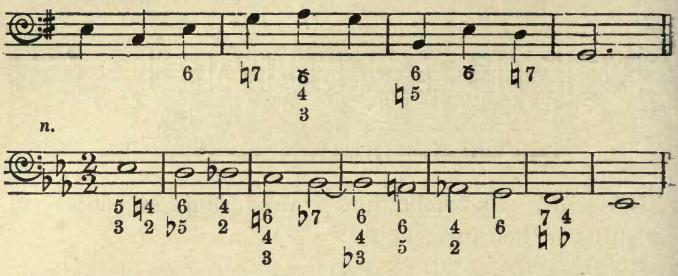
j. *k.* *l.*



On Chromatic Sevenths.

m.

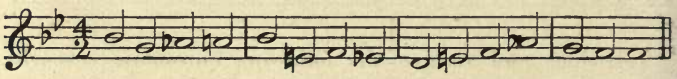




n.

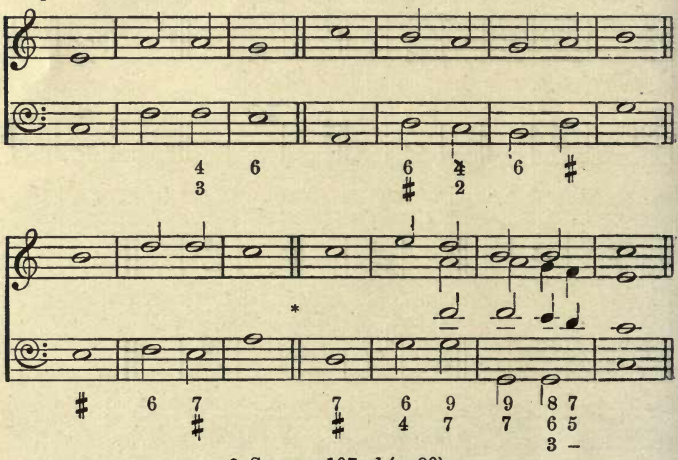
Harmonise the following without modulating :—

o.



Add alto and tenor parts :—

p. J. F. B.



* See par. 107, *d* (p. 80).

q. Write a short passage, introducing secondary sevenths and their inversions.

r. Write a passage introducing sequences of sevenths.

s. Write a passage introducing chromatic sevenths.

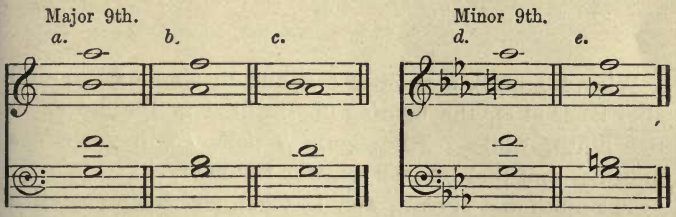
CHAPTER XII.

THE CHORD OF THE NINTH.

111. If to a chord of the seventh a ninth from the root be added, the *Chord of the Ninth* is formed.

The Dominant Ninth.

112. The Chord of the Dominant Ninth consists, therefore, of the dominant seventh with the ninth from the root added, which ninth is major in major keys and minor in minor keys. It is figured $\frac{9}{7}$.



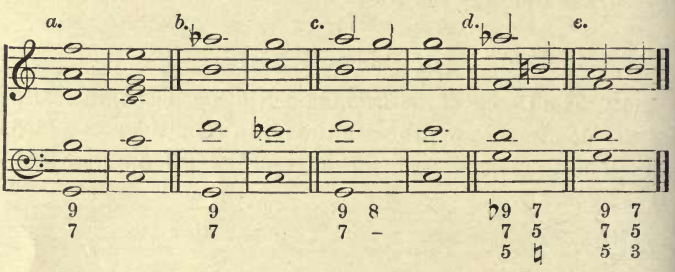
In vocal writing it is seldom satisfactory for the major ninth to be below the leading note (see *c*) unless one of the two notes is prepared. The fundamental note must, of course, be at a ninth, not a second, below the dissonance In four-part writing the fifth is usually omitted.

In Chap. VI., par. 67, it was shown that all the triads in the minor mode (except that on the tonic) may be freely used in the major. This is also the case with the minor ninth, which, although belonging to the minor key, is frequently introduced in the major.

113. The Resolution of the Dominant Ninth is to the tonic triad; the ninth and the seventh, both being dissonant notes

fall one degree in the resolutions, while the leading note (the third) rises. If the fifth is present and is below the ninth, *it must rise*, otherwise consecutive fifths with the ninth will result (*a*).

If resolved while the rest of the chord remains, the ninth may fall to the octave (see *c*), or fall to the third (see *d*), or, in the case of the major ninth, rise to the third of the chord (see *e*), provided that the third is not already present.



When the ninth is resolved first and the dominant seventh after it (as at *c*), the figuring (9 8) will show the descent of the ninth, while 7 (the figure 7 followed by a stroke) indicates that that interval remains stationary.

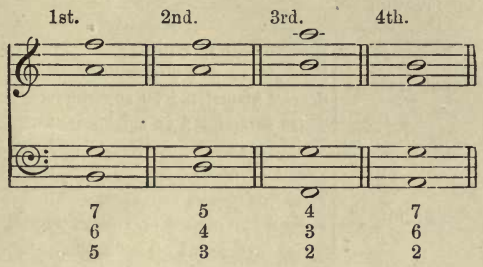
The ninth and seventh may be taken without preparation. It is not advisable to approach the ninth by similar motion. The ninth and the seventh of the dominant chord can readily be found by the student, for the purpose of correct resolution, if he bears in mind that the seventh is always the subdominant degree, and the ninth the submediant.

114. The Inversions of the Dominant Ninth are of two kinds:--

a. Those which retain the root, and are therefore true "Inversions." Chords thus derived are less frequently used.

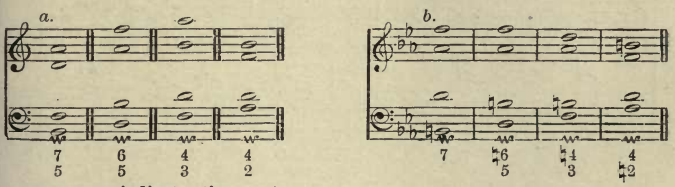
b. Those which have been termed "derivatives," in which the root is omitted. Chords thus derived resemble a secondary seventh on the leading note, with its inversions.

Inversions of the ninth, root retained :—



The first and third inversions of the chord are those most frequently used ; the second is seldom employed, on account of the absence of the leading note, and the fourth very rarely, as the root and ninth, in their original positions, being separated by more than an octave, are really incapable of being inverted in that interval.

Inversions of the dominant ninth, root omitted :—



Note.—w indicates the root.

When derived from the major ninth, the chord is called the *Leading Seventh*, from its position on the leading note of the scale (see *a* above).

When derived from the minor ninth, it is called the *Diminished Seventh*, from its characteristic interval (see *b* above).

The student need not be confused with the similarity of the figuring of the inversions of the leading and diminished sevenths with those of the dominant

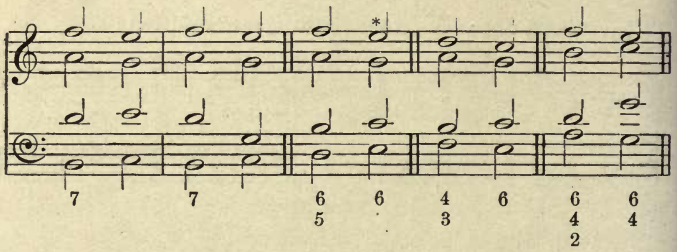
seventh, since their positions in the scale are different, as may be seen by comparing the following:—

Dominant Seventh
- Bass on fifth of scale.
- First inversion $\frac{6}{5}$ on leading note.
- Second inversion $\frac{4}{3}$ on supertonic.
- Third inversion $\frac{4}{2}$ on subdominant.

Leading Seventh
- Bass on leading note.
- First inversion $\frac{6}{5}$ on supertonic.
- Second inversion $\frac{4}{3}$ on subdominant.
- Third inversion $\frac{4}{2}$ on submediant.

115. The Resolution of these Inversions exactly corresponds to that of the original chord of the ninth. The notes which were originally the ninth and seventh fall: the leading note rises.

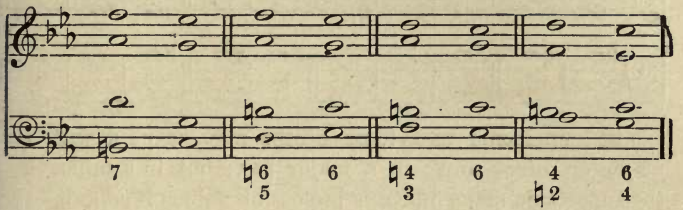
Leading seventh and its inversions:—



As in the resolution of the ninth, so here, if the original fifth is *below* the original ninth it *must rise*, otherwise consecutive fifths will result. Hence, in the resolution of the $\frac{6}{5}$ the bass of the succeeding sixth is necessarily doubled (see * above).

The leading seventh is treated as a derivative from the ninth when it is resolved on the tonic triad, the bass, as the leading note, rising; when it is resolved on the mediant, it is treated as a secondary seventh (see Chap. II., par. 40, and Chap. IX., par. 88).

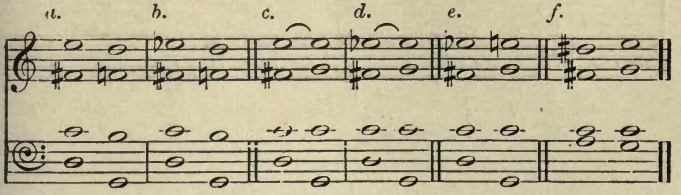
Diminished seventh and its inversions :—



The diminished seventh, though derived from the *minor* ninth, may be freely used in the major key.

The Supertonic Ninth.

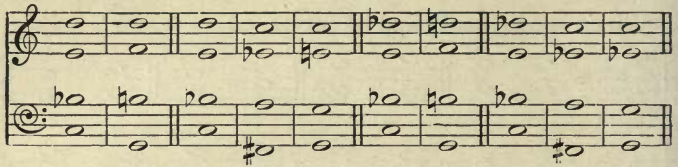
116. To the Supertonic Seventh the major or minor ninth may be added. The resolution is subject to the same rule as the supertonic seventh, the ninth descends (see *a* and *b*) or remains stationary (see *c* and *d*) (see Chap. XI., par. 107); in the case of the minor ninth resolving on a major tonic chord, it may ascend a semitone (see *e*).



In the inversions of the supertonic minor ninth, the minor ninth is frequently written as a chromatic semitone above the root (see *f*, where D sharp should be E flat).

The Tonic Ninth.

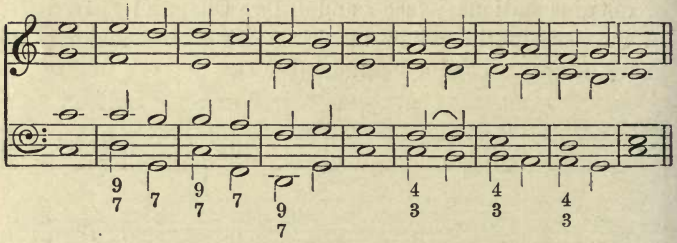
117. To the Tonic Seventh, the major or minor ninth may be added. The resolution is subject to the same rules as the tonic seventh, the ninth descending, or remaining stationary, or, in the case of a minor ninth, ascending a chromatic semitone (see Chap. XI., par. 108).



The supertonic and tonic ninths may be used with the major or minor ninth in a major key; but in a minor key the supertonic major ninth is impossible (since it contains the *major* third of the scale), as is also the dominant major ninth (since it contains the major sixth of the scale).

The Secondary Ninths.

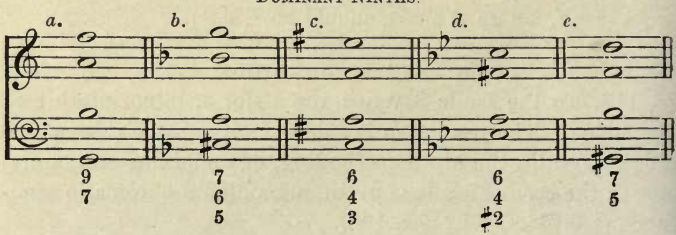
118. A ninth may be added to a chord of the Secondary Seventh, making a diatonic chord of the ninth and seventh, both intervals being prepared.



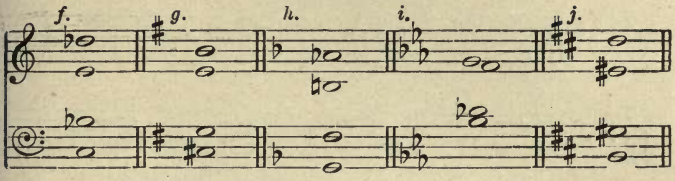
Exercise 18.—*On Ninths.*

Introduce and resolve the following in various ways:—

Dominant Ninths.



CHROMATIC NINTHS.



f. Tonic minor ninth.

g. Supertonic major ninth, first inversion, root omitted.

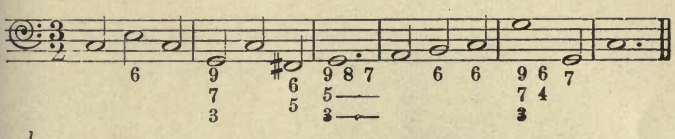
h. Supertonic minor ninth.

i. Tonic major ninth, second inversion, root omitted.

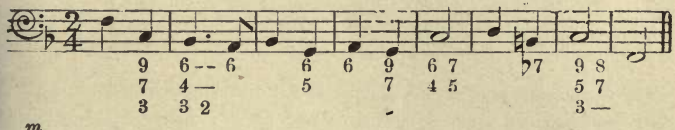
j. Supertonic minor ninth, third inversion, root omitted.

Harmonise the following figured basses :—

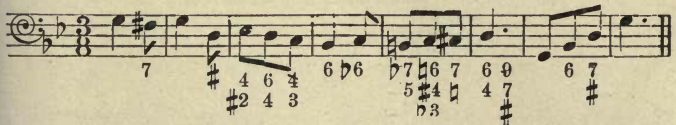
k.



l.

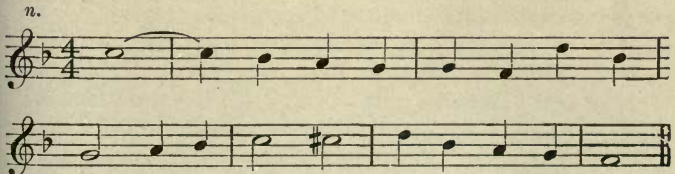


m.

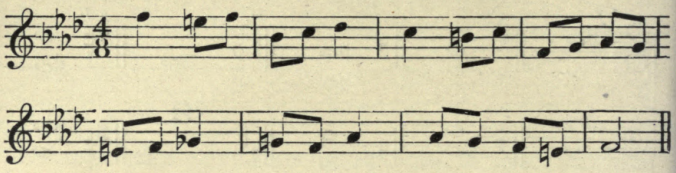


Harmonise the following melodies, introducing ninths and inversions of ninths :—

n.



o.



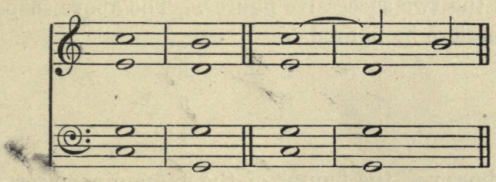
p. Write a passage in C minor, introducing various chords of the ninth and their inversions.

q. Write a passage introducing chromatic chords of the ninth.

CHAPTER XIII.

SUSPENSIONS.

119. A Suspension is formed when a note, which should descend one degree in its progression, is prolonged and suspended over the notes of the second chord, descending afterwards to its normal position :—

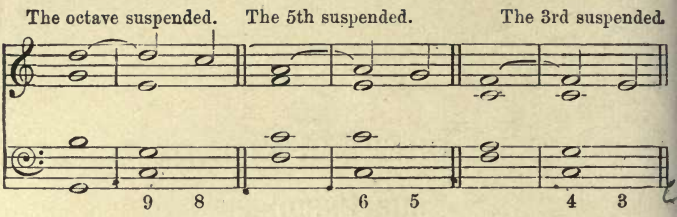


C in the soprano, before descending to B, is suspended over the second chord of G and subsequently passes to its resolution.

120. There are three conditions essential to a suspension :—

The percussion of the note as part of the previous chord is the *preparation ;* allowing it to sound over the succeeding chord, of which it is no part, makes the *suspension* itself ; while its progression a degree downwards is its *resolution.*

121. There are three notes in the common chord (octave of bass, fifth, third), each of which may form the resolution of a suspension.



The octave suspended produces the 9 8.

The fifth suspended produces the 6 5.

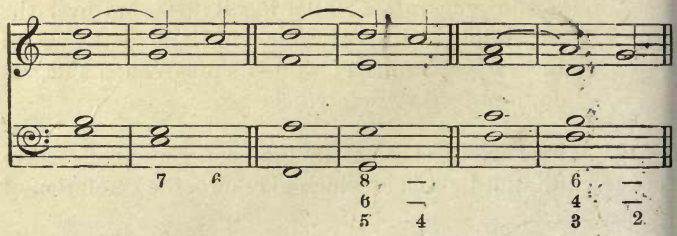
The third suspended produces the 4 3.

The figuring of the other notes of the chord remains the same. The progression of the suspension to its resolution is shown by the two successive figures. The above suspensions might therefore be figured—

9 8	8 —	8 —
5 —	6 5	5 —
3 —	3 —	4 3

Usually, however, the figures of the remaining intervals are omitted, and the suspensions are marked 9 8, 6 5, 4 3. Care must be taken not to confuse 4 with the chord of the six-four, the suspension 4 being always accompanied by the 5 unless otherwise indicated.

122. There are three other intervals found in the inversions of chords (viz., sixth, fourth, and second), each of which may form the resolution of a suspension.



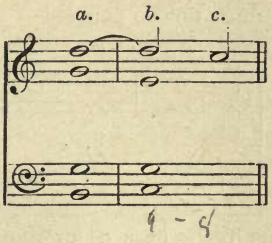
The sixth suspended produces the 7 6.
The fourth suspended produces the 5 4.
The second suspended produces the 3 2.

The figuring of the other notes of the chord remains the same (see par. 121 above). It is, however, very necessary to note the difference between a fundamental seventh that resolves on *another* bass, and a suspension 7 6 that usually resolves on the *same* bass. The latter, being a suspension of a chord of the sixth, can, as a rule, have no fifth.

123. Rules for the use of Suspensions :—

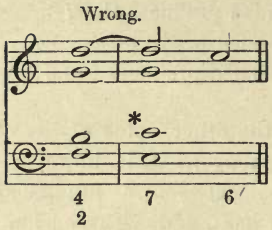
I. The suspension must be prepared—*i.e.*, it must appear as a note of the previous chord and in the same part (see *a*).

The suspension should, as a rule, be prepared by a note at least equal in length to the suspension.

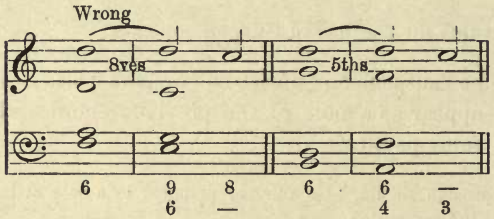


II. The suspension is formed (*b*) when the note is sustained on the next accented part of the bar, and it will descend one degree in resolution (*c*).

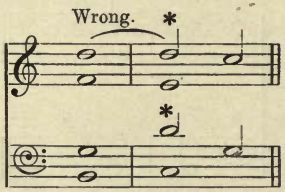
III. The note on which the discord of suspension will resolve must not appear in another part except the bass during the existence of the suspended discord—



IV. Suspensions do not correct consecutive fifths or octaves—



V. The suspension, being a note having a fixed progression, must not be doubled—

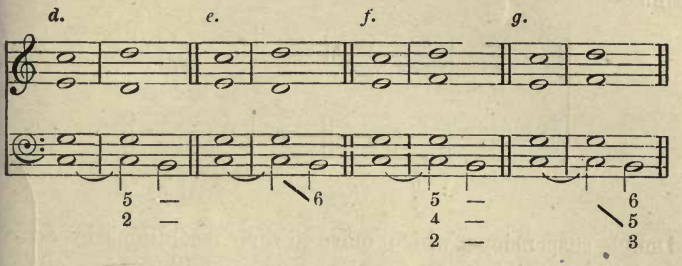


124. Suspensions in the bass occur most frequently before chords of the sixth and $\frac{6}{5}$. These suspensions may be figured in two ways:

a. The figures may be reckoned as from the suspension itself (Examples *d*, *f*), hence a $\frac{6}{3}$ on the note of resolution will become a $\frac{5}{2}$ on the note of suspension. A $\frac{6}{5}$ on the note of resolution will become a $\frac{5}{4}$ on the note of suspension.

b. An oblique stroke descending from left to right may be

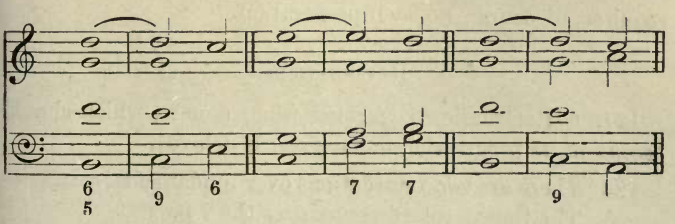
placed under the suspension and the figures under the resolution (Examples *e*, *g*).



It is possible to suspend the bass of a triad, but the effect is not satisfactory if the fundamental appears in an upper part. If this suspension is used, the fundamental in the upper part should be approached by step, and in contrary motion to the bass.

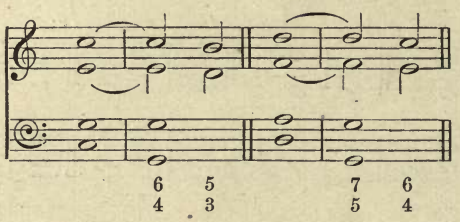
In Goss's "Harmony" the oblique stroke is from right to left (/6), but the method (adopted by Richter) used in this book is preferable, as being more suggestive of the downward progression of the suspension (\6).

125. Other Resolutions.—It is allowable to change from the fundamental position to the first inversion of the chord at the resolution of the suspension, or even to resolve it on a different chord. The chief object to be kept in mind is the resolution of the suspension, which, sooner or later, *must* go to the *note* suspended.

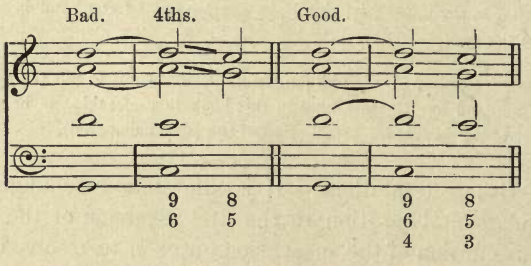


126. Double Suspensions.

Two or more suspensions may be freely used at the same time—



Double suspensions, which move to their resolutions by consecutive fourths ($\frac{9}{6}$ $\frac{8}{5}$), are bad. The addition of another suspension a third below makes the progression good $\frac{9}{6}$ $\frac{8}{5}$ $\frac{}{4}$ $\frac{}{3}$ —



The student will notice the similarity between the double suspension $\frac{6}{4}$ and the second inversion of the triad. Whenever it is thus prepared and resolved it should be regarded as a double suspension; the second inversion of the triad requires, of course, no such preparation.

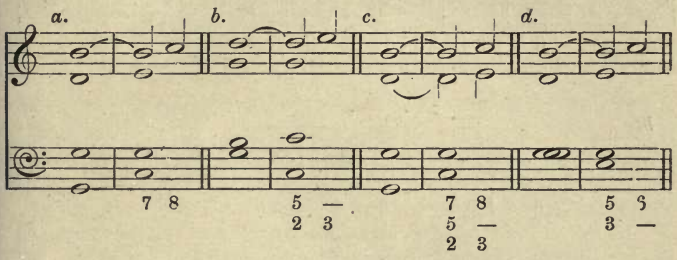
Retardations.

127. A Retardation is formed when a note, which should *ascend* in its progression one degree, is delayed.

128 There are two retardations over fundamental triads:—

a. The Octave retarded produces the 7 8.

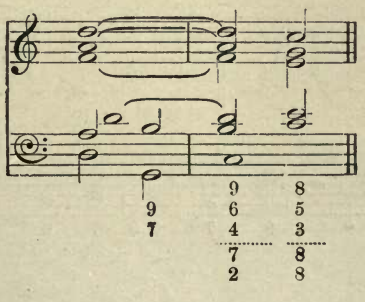
b. The Third retarded produces the 2 3. This latter retardation is not always satisfactory, since the ear frequently realises the 2 as a ninth, and expects it to fall instead of rise.



A double retardation may be used (as at *c*). The above retardations may also appear over inverted chords (as at *d*).

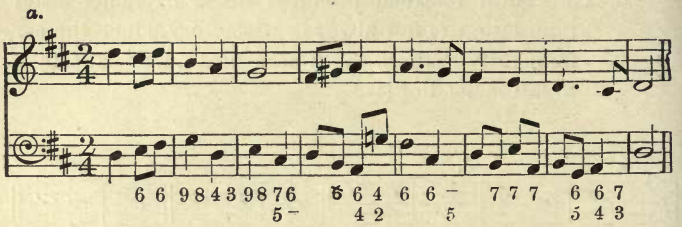
Retardations are prepared and resolved like suspensions, except that their resolution is *upwards* instead of *downwards*.

Example in six parts, showing all the possible suspensions and retardations over the triad in its fundamental position :—

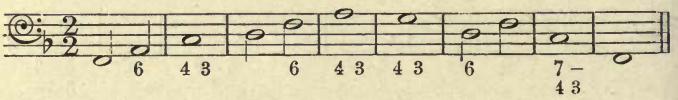


Exercise 19.—*On Suspensions.*

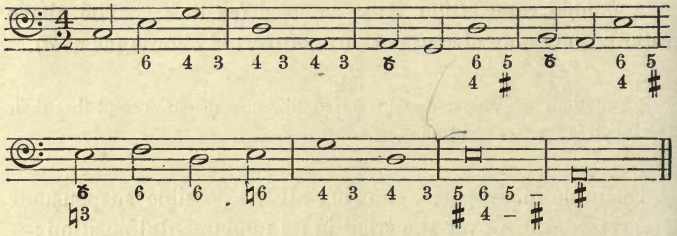
a.



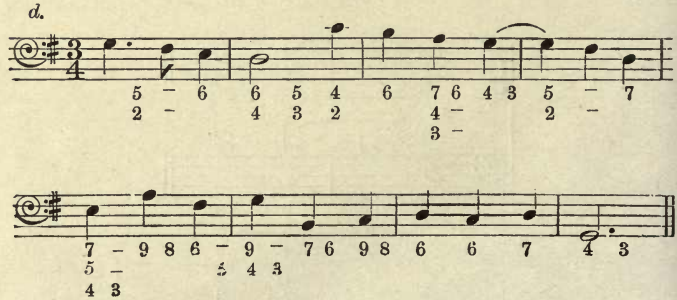
b.



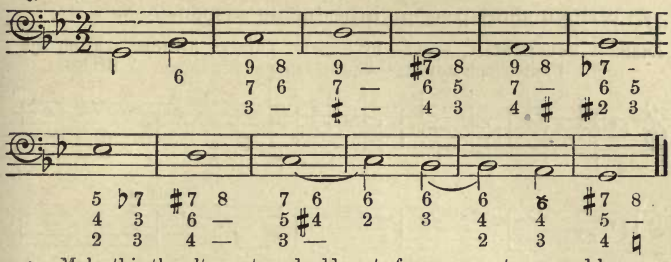
c. Exercise given by Mozart to Thomas Attwood.



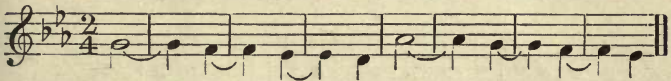
d.



e.

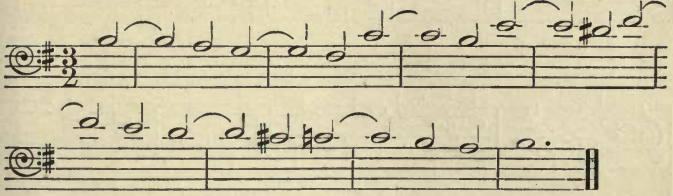


f Make this the alto part, and add parts for soprano, tenor, and bass.



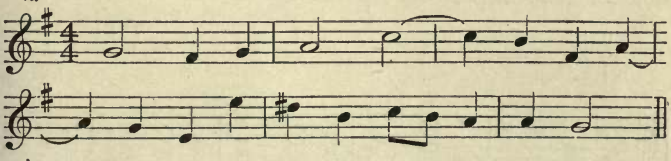
In *Ex. f* and *g* the bass should be first sketched before the upper parts are added, each tied note being treated as a suspension.

g. To this tenor part add parts for soprano, alto, and bass, treating each tied note as a suspension.

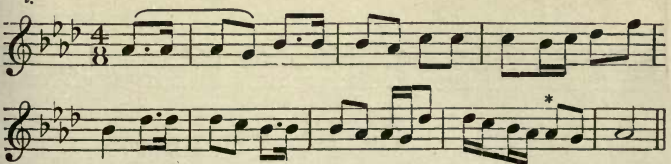


Harmonise the following melodies, introducing suspensions.

h.



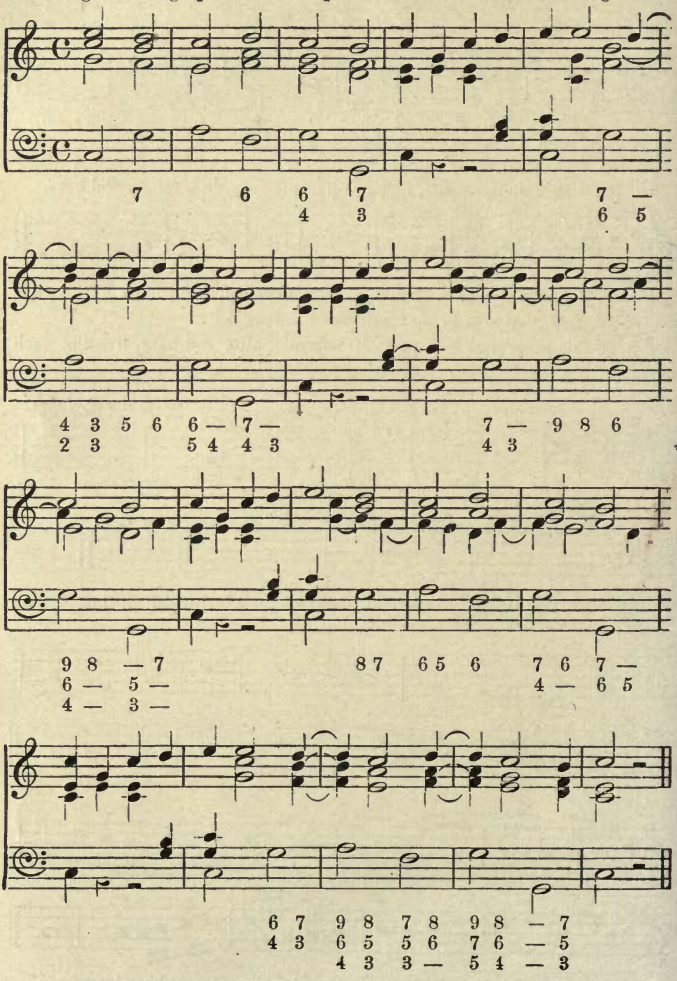
i.



* See par. 123, Note to Rule I., p. 95. An exception is here introduced.

j. Write a short passage introducing suspensions.

Example from Mozart, worked by him for Thomas Attwood. From the original autograph now in the possession of Sir Frederick Bridge.



CHAPTER XIV.

HARMONISING UNFIGURED BASSES.

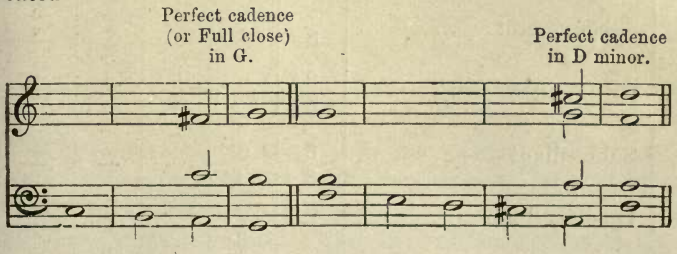
129. General Rules of Chord Progressions.

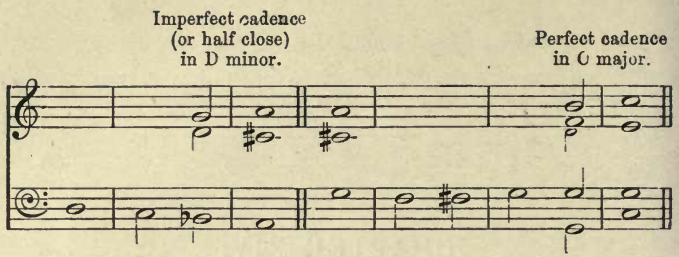
Rule I.—Consider the progression of the *roots*, and remember that the most satisfactory are those in which the root rises or falls a perfect fourth or a perfect fifth. Those in which the root rises or falls a third, though accurate, are less vigorous (having two notes in common between the two chords). Those in which the root moves one degree must be employed with greater caution, having no link of connection in the form of a note in common. The student is advised to refer to Chap. II., pars. 33 and 37.

Rule II.—Use no discord unless the next note to be harmonised permits of its proper resolution.

Rule III.—Use appropriate cadences at the termination of each phrase (see par. 132).

Specimen of bass of a double chant with cadences indicated—





Rule IV.—If the given bass moves in sequence, harmonise it sequentially. (See Chap. II., pars. 38 and 39.)

130. The student must endeavour to *hear mentally* the effect of every chord he writes. The following tables will assist him in the choice of suitable chords for the different degrees of the scale in which he is writing. (See also Appendix.)

Table for Major Keys.

	Triads.	1st Inver.	2nd Inver.	Dom. 7th and Inver.	Secondary Seventh and Inver.
Tonic	5 3	—	6 4	—	—
Supertonic	5 3	6 3	—	6 4 3	7
Mediant	5 3	6 3	—	—	—
Subdominant	5 3	6 3	—	6 4 2	6 5
Dominant	5 3	—	6 4	7	—
Submediant	5 3	6 3	—	—	—
Leading Note	—	6 3	—	6 5 3	—

Table for Minor Keys.

	Triads.	1st Inver.	2nd Inver.	Dom. 7th and Inver.	Dim. 7th and Inver.	Second-ary 7th.
Tonic	5 3	—	6 4	—	—	—
Supertonic	— —	6 3	—	6 4 3	6 5 3	7
Mediant	♯5 3	6 3	—	—	—	—
Subdominant ...	5 3	6 3	—	6 ♯4 2	6 ♯4 3	6 5 3
Dominant	5 5 3 ♯3	—	6 4	7 ♯3	—	—
Submediant—					6	
a. when minor } ...	5 3	6 3	—	—	4 ♯2	—
b. when major }	—	6 3	—	—	—	—
Seventh Degree—						
a. when minor } ...	5 3	6 3	—	—	—	—
b. when major }	—	6 3	—	6 5 3	7	—

The above tables, being intended to assist the early efforts of the beginner in harmonising unfigured basses, have been limited to the chords most easily understood. The student will of course observe that, with experience, all other chords thus far explained can be used.

Where modulation occurs the above tables, applied to the

new key, will still serve. Besides the dominant seventh and the diminished seventh, the only discords included in these tables are :—

a. The secondary seventh on the supertonic and its first inversion the $\frac{6}{5}_{3}$ on subdominant.

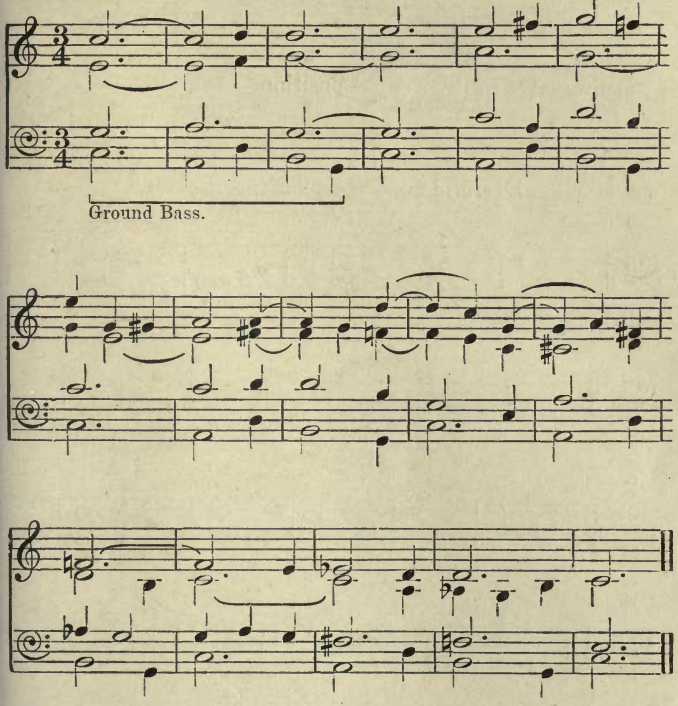
b. The augmented triad on the third degree of the minor scale.

131. The power to *mentally hear* the effect of the chords he writes is invaluable to the student. Where it is not innate in the musician it should be carefully developed by cultivation of the ear, to which end "musical dictation" is of the greatest value and importance. (See Appendix.)

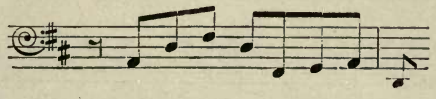
132. The attention of the student is drawn to the construction, or form, the basses may take. The phrases will frequently be either of four or of two bars, necessitating some form of cadence at the end of each phrase. Thus, *Ex.* 20, *c*, at the commencement progresses by two-bar phrases; while the whole terminates, of course, with a perfect cadence. In *Ex.* 20, *e*, the first phrase of four bars ends on the upper B flat (bar 5), making a sort of plagal cadence with the chord of E flat in the previous bar. In *Ex.* 20, *f*, the first phrase (again of four bars) terminates on the low A.

133. A "Ground Bass" is a short phrase repeated any number of times, but with varied treatment, thus partaking of the nature of a set of variations upon a given bass. The simple harmonisations are usually taken first, the more intricate and developed following, in order that the musical interest may grow thereby. The student will frequently find it beneficial to take some definite plan for each harmonisation—*e.g.*, first harmonisation: mostly triads, and their inversions; second: essential discords and their inversions; third: suspensions; fourth: passing notes; fifth: chromatic harmony, &c. The result must, however, on no account become a series of patches, but one continuous whole.

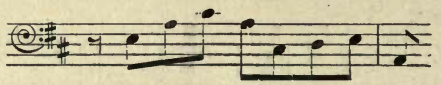
Specimen of a simple Ground Bass.



Purcell and others have frequently transferred the ground bass for a time to other keys, afterwards returning to the original key. An example of this will be found in his anthem "O sing unto the Lord," while in his opera of "Dioclesian" the following is treated as a ground bass—



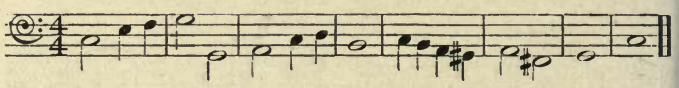
but after twelve bars it appears in the key of the dominant—



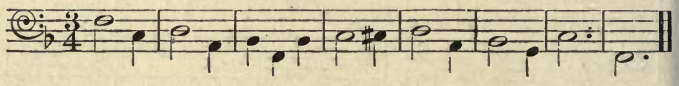
returning later to its original position.

Exercise 20.—*Harmonising Basses.*

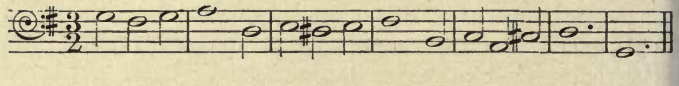
a.



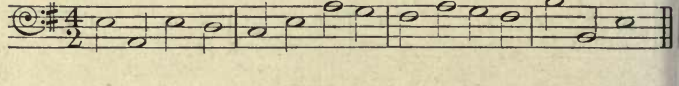
b.



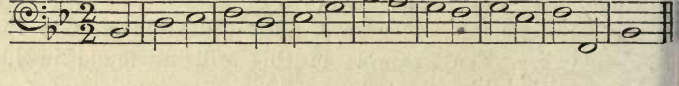
c.



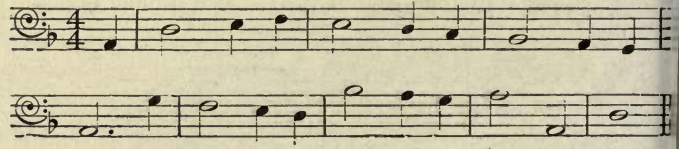
d.



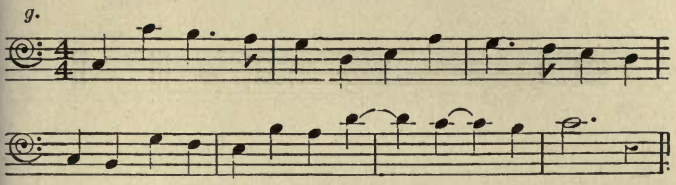
e.



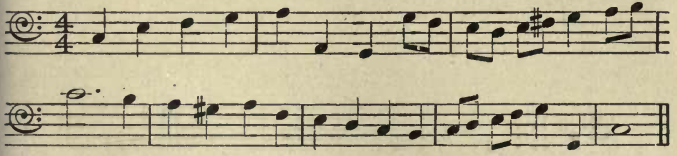
f.



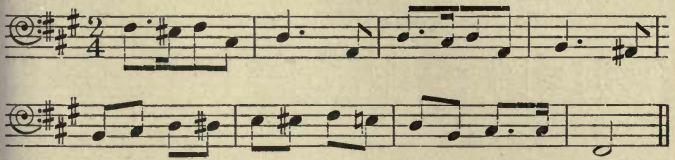
g.



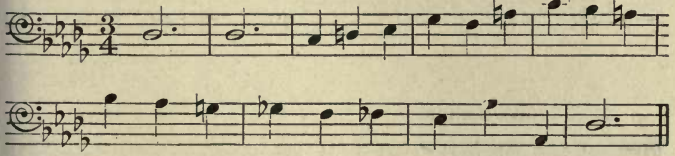
h.



i.



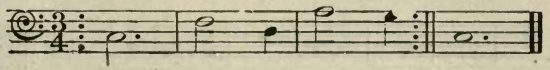
j.



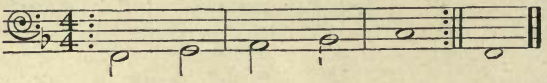
Harmonise the following ground basses, repeating each at least four times (making five in all)—

The result in each case must be a *continuous* piece of music, and not as so many little disconnected sections.

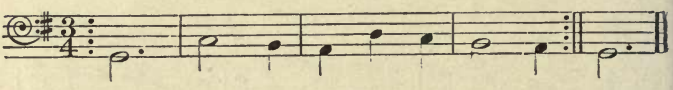
k.



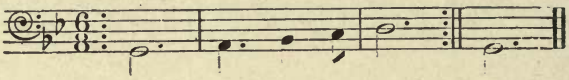
l.



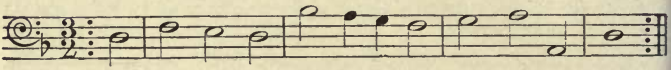
m.



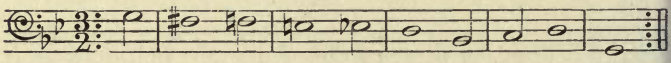
n.



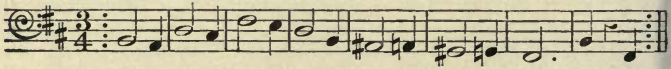
c.



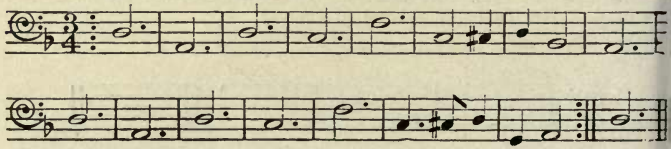
p. Purcell, from "Dido and Æneas."



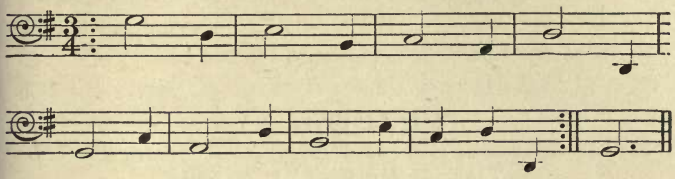
q. Merkel (from Op. 178)



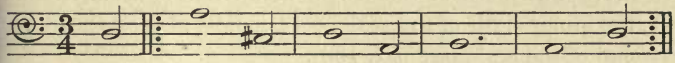
r. Farinelli's Ground (from Corelli's 12th Sonata).



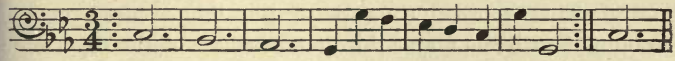
s. Handel, Sonata 4.



t. Buxtehude, "Passacaglio."



u. Purcell (Chaconne, from "Dioclesian," for two flutes in canon).



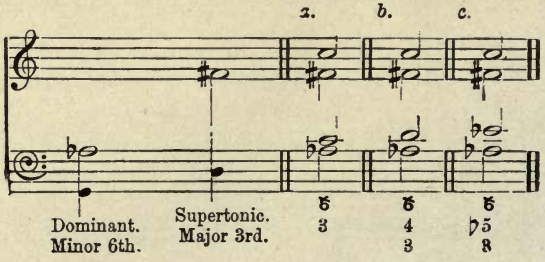
CHAPTER XV.

THE AUGMENTED SIXTH.

134. The Chord of the Augmented Sixth is usually found on the minor sixth of the scale, occasionally also on the minor second of the scale (see par. 138).

Augmented Sixth on the Minor Sixth of the Scale.

135. This chord "consists of the minor ninth of the dominant with the major third and seventh of the supertonic (see example *a*), to which either the root (see *b*) or the minor ninth (see *c*) of this latter chromatic chord may be added."—(*Macfarren.*) It has therefore *two roots*—the dominant and the supertonic. The student should carefully note that from the dominant root, the minor ninth (the flattened note) is derived; from the supertonic root, the major third (the sharpened note) is taken; the other notes in its various forms are the seventh, the octave, or the minor ninth from the supertonic root. The thorough knowledge of the derivation of the various notes of this compound chord will be a valuable guide to the proper progression of each part:—



Each of the various forms of this chord is known by a distinctive name :—

a. The Italian Sixth, which consists of the augmented sixth and the major third, the latter being doubled in four parts (figuring, $\overset{\flat 6}{3}$).

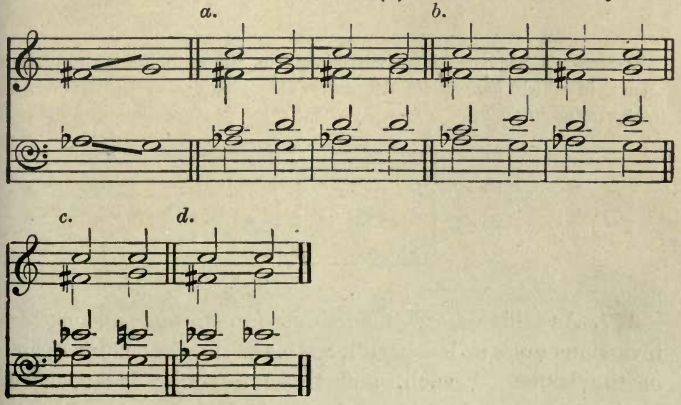
b. The French Sixth, which consists of the augmented sixth, major third, and augmented fourth (figuring, $\overset{\flat 6}{\underset{3}{4}}$).

c. The German Sixth, which consists of the augmented sixth, major third, and perfect fifth (figuring, $\overset{\flat 6}{\underset{3}{\flat 5}}$).

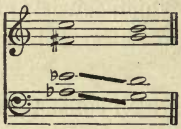
136. Resolutions of the Augmented Sixth :—

First Resolution.—Both notes forming the chord of the augmented sixth may move *away* from each other by a diatonic semitone, the flattened note (the ninth of the dominant) *descending*, the sharpened note (the major third of the supertonic) *ascending;* neither of these notes can be doubled, as they have fixed progressions.

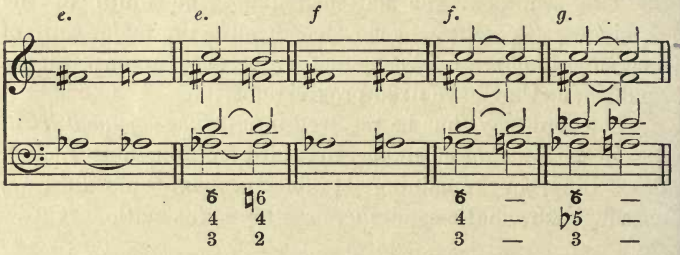
The chord may thus be resolved into (*a*) *the dominant triad*, or (*b*) the $\frac{6}{4}$ *on the dominant*, the third and fourth ascending, descending, or remaining stationary, while the fifth (*c*) ascends a chromatic semitone, or (*d*) remains stationary :—



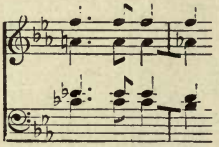
The German sixth cannot resolve direct to the dominant triad without producing consecutive fifths.



Second Resolution. — One note remaining stationary, the other may *approach* that note by a chromatic semitone. The chord may thus be resolved: (*e*) if the *flattened* note remains stationary, on the dominant minor ninth; (*f*) if the *sharpened* note remains stationary, on the supertonic seventh, or the supertonic minor ninth (*g*):—

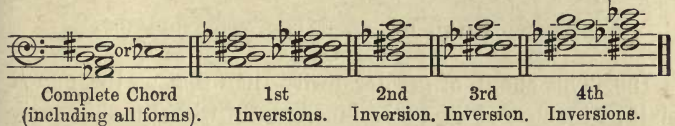


In Mozart's Requiem Mass ("Hostias," No. 10) the following resolution occurs, in which *both* notes descend. This progression is, however, of infrequent occurrence:—

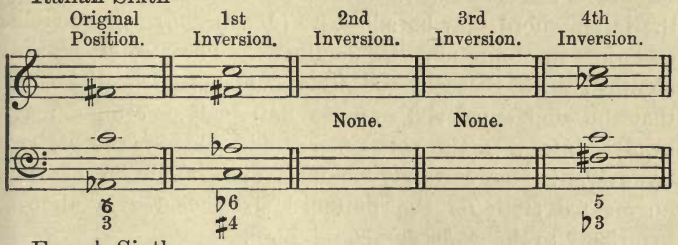


137. As this chord has three forms, and all produce inversions more or less useful, a table of the various inversions of the Italian, French, and German sixths is appended.

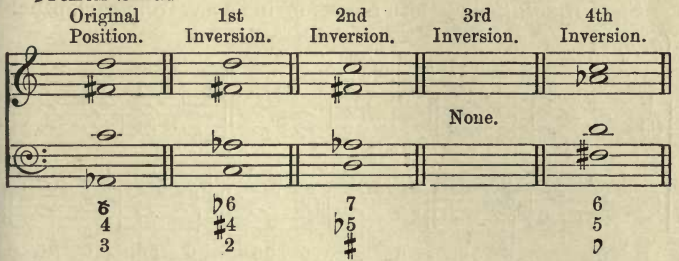
The plan adopted of numbering the inversions is according to the position that the bass note of each occupied in the original chord (see below)—



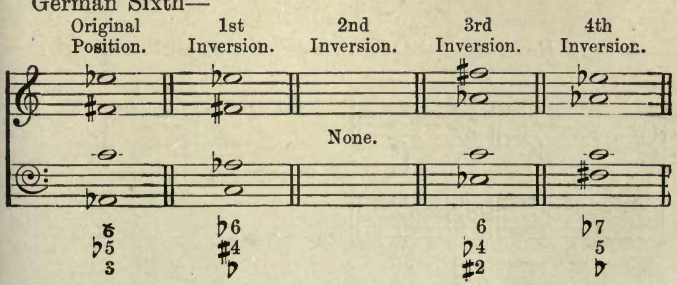
Italian Sixth—



French Sixth—



German Sixth—

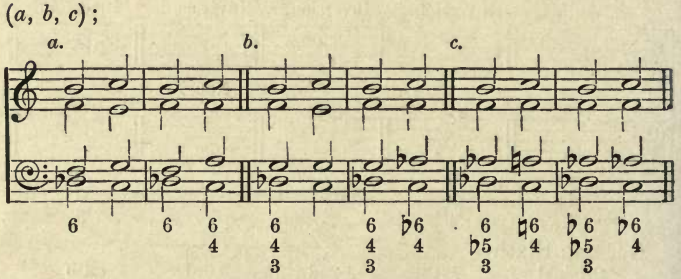


The resolution of the various notes may ensue as in the original chord, while the interval of the augmented sixth may be freely inverted in the first, second, or third inversions

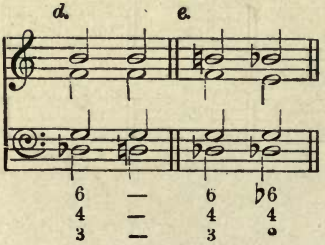
Augmented Sixth on the Minor Second Degree of the Scale.

138. This chord, of greater rarity than that on the minor sixth, "consists of the tonic minor ninth, with the third and seventh of the dominant, to which the root or minor ninth of the latter chord may be added."—(*Macfarren.*) The double roots are the tonic and the dominant. The resolutions are identical with those of the other augmented sixth, except that the augmented sixth of the flattened supertonic may resolve into a major or *minor* tonic chord; the latter, however, is more rarely found. The resolution of the augmented sixth on the flattened sixth degree is almost invariably to the *major* dominant chord.

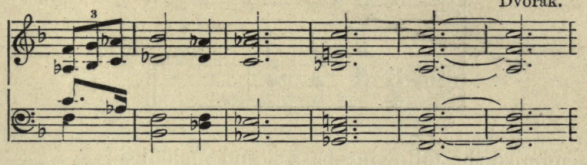
First Resolution.—Both notes moving away from each other (*a*, *b*, *c*);



Second Resolution.—One note remaining stationary (*d*, *e*);—



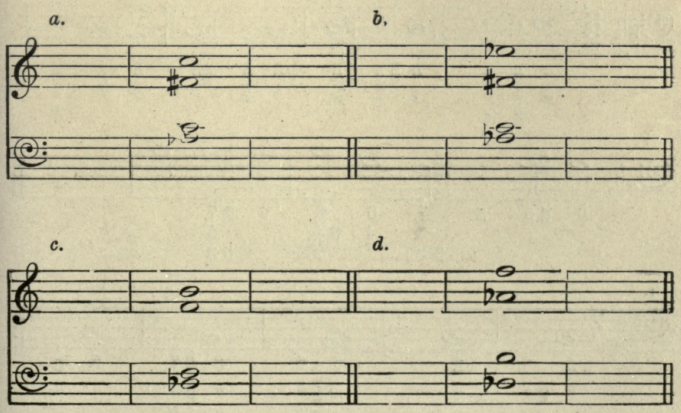
The following beautiful use of this chord forms the conclusion of the duet (No. 4) in Dvorák's "Spectre's Bride":—



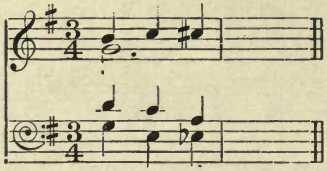
139. There is also a chord of the augmented sixth on the subdominant, for which see "Chromatically altered chords" (Chap. XVI., par. 142).

Exercise 21.—*On Augmented Sixths.*

Introduce and resolve these augmented sixths, showing various resolutions—

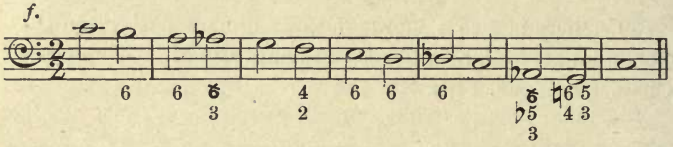


e. Complete this in four different ways—

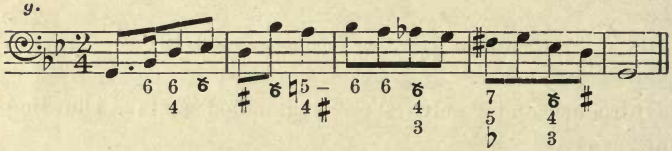


Harmonise the following basses and melodies :—

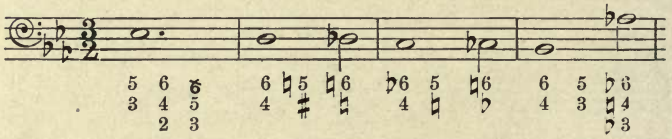
f.

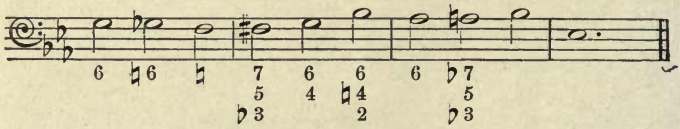


g.

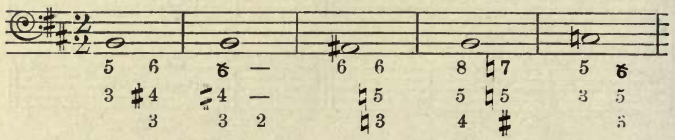


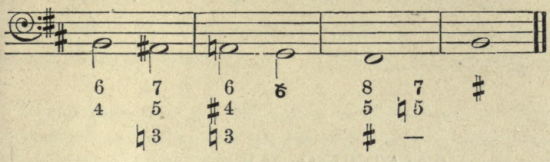
h.



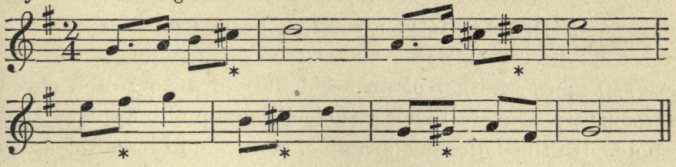


i.

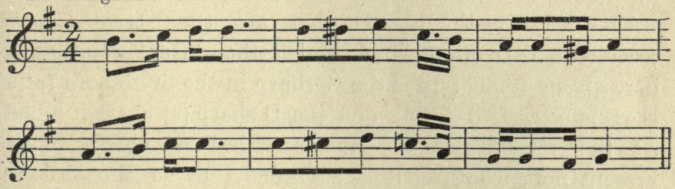




j. Introduce augmented sixths at the notes marked *



k. Hungarian Volkslied.



l. Write a short passage, introducing various forms of the augmented sixth.

CHAPTER XVI.

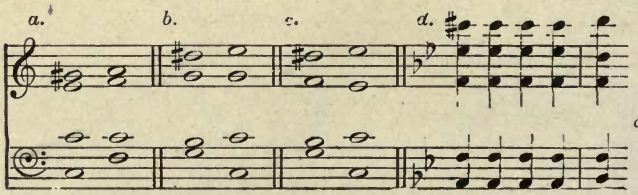
CHROMATICALLY ALTERED CHORDS.

140. The addition of an accidental to a note of a chord frequently appears like a casual chromatic alteration of that note. In the following example, at *a*, the fifth of the tonic triad appears accidentally raised, while at *c* the fifth of the dominant seventh is similarly treated.

Theoretically, the chords that are thus created have received a derivation which makes their usual notation, as here given, wrong; thus the G sharp in the first chord (at *a*) is explained as an A flat, and the D sharp (at *c*) as an E flat. As the student usually meets with these chords in the present nomenclature, it is advisable that he should learn them in the form in which he will almost invariably find them, duly taking note, however, of their theoretical derivation.

141. Augmented Fifth.

In the Triad.—Occasionally the fifth of the triad (chiefly of the tonic and dominant) is chromatically raised, and an augmented triad is the result (*a*, *b*). The sharpened note rises to the next degree above—

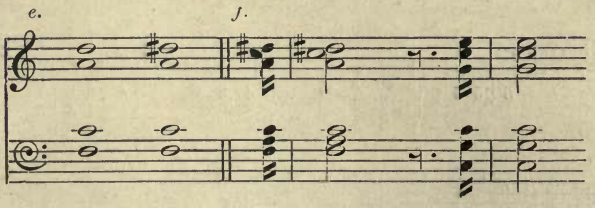


In the Chord of the Seventh.—Occasionally the fifth of the chord of the seventh (chiefly on the dominant) is chromatically raised (*c*, *d*). The sharpened note rises.

The passage at *d* (p. 120) occurs in Mendelssohn's "Hymn of Praise" Symphony, at the return of the first subject in the opening movement. The chord is theoretically explained as an inversion of the minor thirteenth, the notation being changed from D flat to C sharp (see Chap. XXI.).

142. Augmented Sixth on the Subdominant.

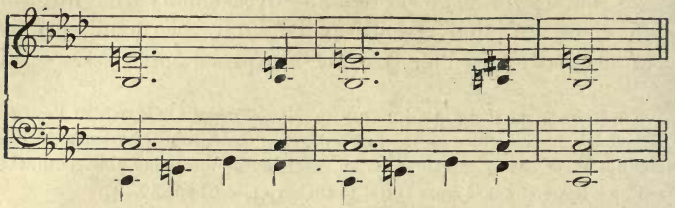
In the first inversion of the seventh on the supertonic (the $\frac{6}{5}_{3}$ on the subdominant) the sixth is occasionally chromatically raised—



The passage at *f* concludes Gounod's motet "By Babylon's wave," and is an example of the augmented sixth on the subdominant. This chord is also theoretically explained as the seventh, major ninth, eleventh, and minor thirteenth from the dominant root G, the D sharp being an E flat. It is, however, always found in the notation as given above. (See Chap. XXI., par. 180.)

This chord is not a fundamental augmented sixth, but only a chromatically altered chord, and, therefore, the bass, not being a minor ninth from a root, does not resolve by descending one degree, as is the case in the fundamental augmented sixth. Another example occurs in the introduction to Gounod's "Faust" (bar 7)—

a.



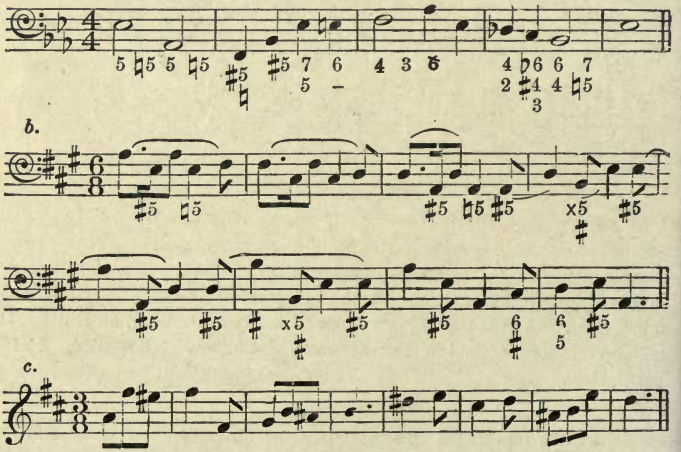
a. The unaltered chord ($\frac{6}{5}$ on subdominant).

b. The same, with the sixth accidentally raised, giving the chord of the augmented sixth on subdominant.

Exercise 22.—*On Chromatically Altered Chords.*

Harmonise the following basses and melody :—

a.



d. Write a passage in the key of A major, introducing various chromatically altered chords.

An interesting example of Augmented Triads will be found in Gounod's "Redemption" (Prologue), at the words "But since he in revolt." (See Chap. XXI., par. 178, in which the passage is quoted).

CHAPTER XVII.

FURTHER CHAPTER ON MODULATION.

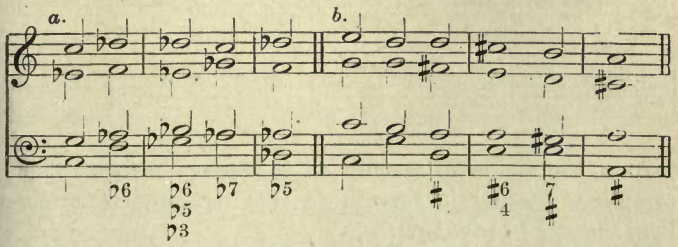
143. Extraneous Modulation occurs when the music proceeds from a given key to any other than one of its five attendant keys. The modulating chord will usually be derived from the new dominant. In the choice of chords leading up to the modulating chord it should be remembered that—

A Major Triad may be treated as the tonic, dominant, subdominant, chromatic triad on the supertonic, or chromatic triad on the flattened supertonic in a *major key;* or as dominant, submediant, chromatic triad on the supertonic, or chromatic triad on the flattened supertonic in a *minor key.*

A Minor Triad may be treated as the second, third, or sixth degree of a *major key*, or as the tonic or subdominant in a *minor key.*

The nature of these chords being interchangeable, intermediate or ambiguous chords are thus readily obtained. (Compare also Chap. X., par. 99.)

Examples :—



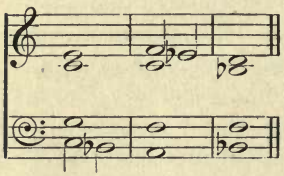
At *a*, the second chord, being the first inversion of the major triad on the flattened second in C minor, becomes the tonic triad of D flat and introduces the modulation to that key.

At *b*, the third chord, being the chromatic triad on the supertonic in C, becomes the subdominant of A, and introduces the modulation to that key.

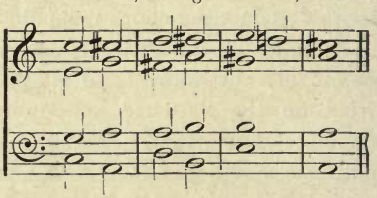
In sudden modulation—*i.e.*, without the aid of an intermediate chord (see Chap. X., par. 95)—it is well that the two chords should have one or more notes in common.

144. *Compound Modulation* occurs when, in order to arrive more agreeably at a distant key, two or more transient modulations are made—

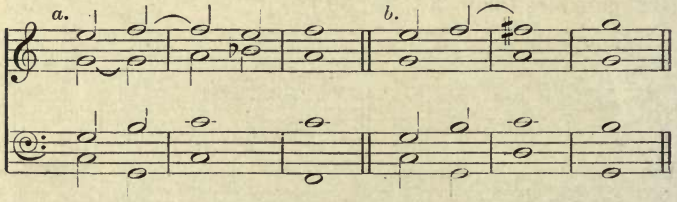
From C, through F, to B flat.



From C, through D and E, to A.



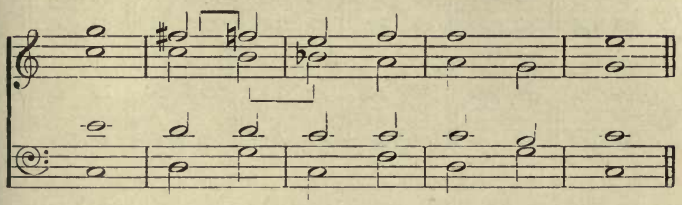
145. The dominant, supertonic, and tonic sevenths, being similar in character, are also interchangeable; thus the dominant seventh gains two other resolutions, in addition to those in the key—



At *a*, the dominant seventh on G becomes the supertonic seventh of F, and the seventh remains *stationary* (see resolution, Chap. XI., par. 107).

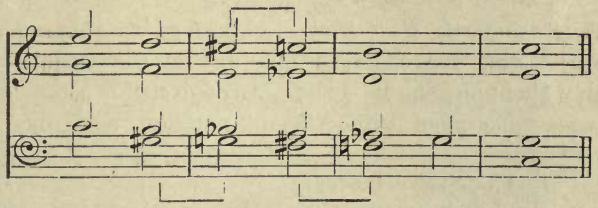
At *b*, the dominant seventh on G becomes the tonic seventh in the key of G, and the seventh *resolves a chromatic semitone upwards* (see Chap. XI., par. 108).

In a succession of fundamental sevenths, the thirds descend—

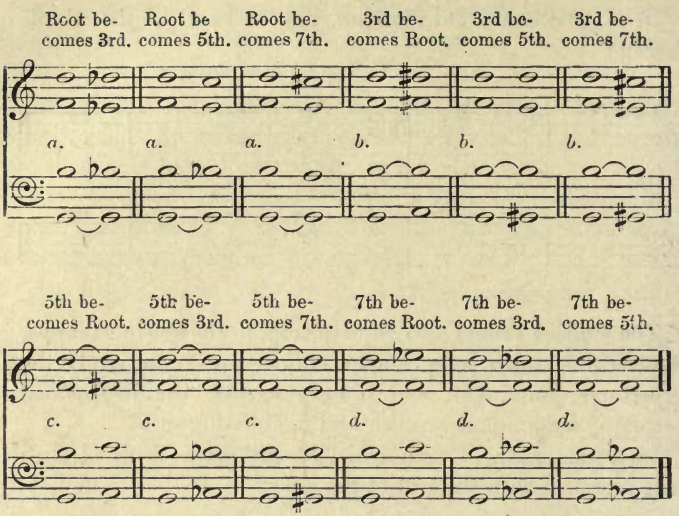


The student should also observe that, in the above example, the second, third, and fourth chords are respectively the supertonic, dominant, and tonic sevenths, the last-named becoming a dominant seventh and modulating to F.

In a succession of diminished sevenths the third of each root descends with the rest of the chord—



146. Modulation by a Note in Common between two chords.—Any note of a fundamental discord, retained as a note in common, may become any interval of another fundamental discord. Thus the root retained may become the third, fifth, or seventh (see *a*); the third retained may become the root, fifth, or seventh (see *b*); the fifth retained may become the root, third, or seventh (see *c*); the seventh retained may become the root, third, or fifth (see *d*). By this simple process a frequent means of modulation is created.



147. *Enharmonic Modulation* is caused by an enharmonic change altering the character and root of the modulating chord, without altering its sound. Any two chords containing the *same sounds*, but with different notation, may thus be interchanged.

This interchanging can occur —

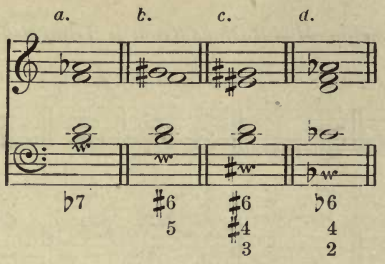
a. Between diminished sevenths.

b. Between a primary seventh and an augmented sixth.

c. Between minor thirteenths.

Enharmonic Modulation by Diminished Sevenths.

148. By enharmonic change of notation, a diminished seventh can be changed into a $\frac{6}{5}$, $\frac{4}{3}$, or $\frac{4}{2}$, the root in each case being different, and each note becoming in turn the major third—



It is well that the student should learn the following simple rule for finding the root of any fundamental discord. For the purpose of comparison, he should arrange the key-signatures in their order, considering that note to be flattest which has the greatest number of flats in its signature, and that to be sharpest which has the greatest number of sharps. By this plan, B flat, having only *two* flats, is sharper than A flat that has four flats; while A, having *three* sharps, is flatter than B that has five sharps.

Rule.—The sharpest note in any fundamental discord is always the third of the chord: hence the root is a major third lower.

At *a* the sharpest note of the chord is B, since A flat has four flats, F one flat, D two sharps, and B five sharps; B is, therefore, the third, and the root is a major third lower—viz., G.

At *b* the sharpest note of the chord is G sharp (since it would have eight sharps). This is therefore the third, and the root is E.

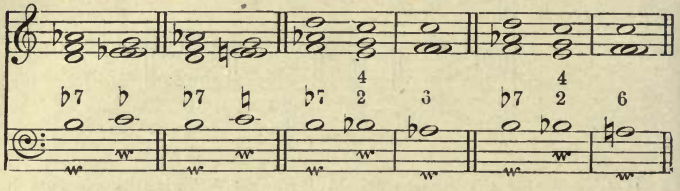
It may be interesting to note that if the minor ninth is present it will be the flattest note; if not present, the minor seventh will be the flattest note. This simple rule for finding the third of a fundamental discord will always prove of use It does not, however, apply to the discord of the eleventh, as, in that case, the third is omitted altogether.

149. Enharmonic modulation by diminished sevenths is well shown in the "Primer on Modulation" by James Higgs (Novello), from which the following has, with the kind permission of the author, been quoted:—

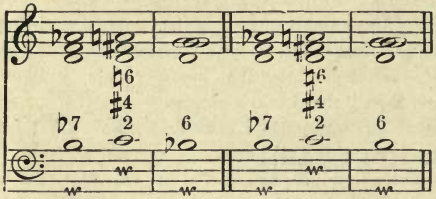
"As each root may be dominant, supertonic, or tonic, of either a major or minor key, we have 4 roots × 3 possible positions of chords × 2 modes = 24; so by this one chord we may modulate directly into every major and minor key, as is shown in the following table:—

Table showing Modulations from a Diminished Seventh.

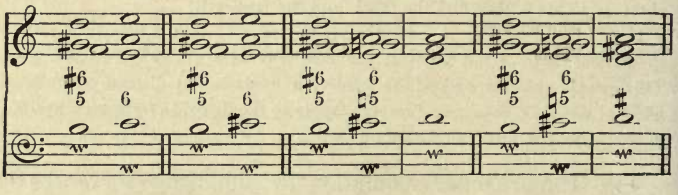
Root as dominant. Root as supertonic.



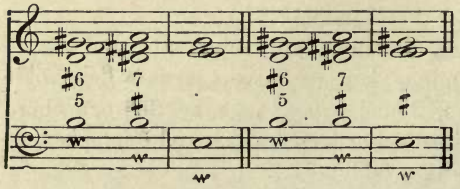
Root as tonic.



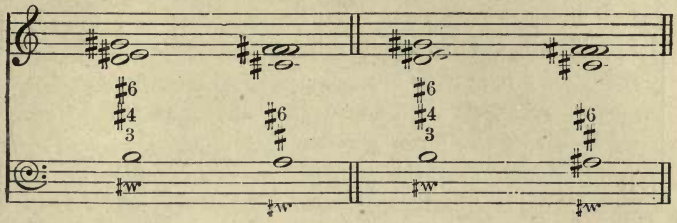
Root as dominant. Root as supertonic.



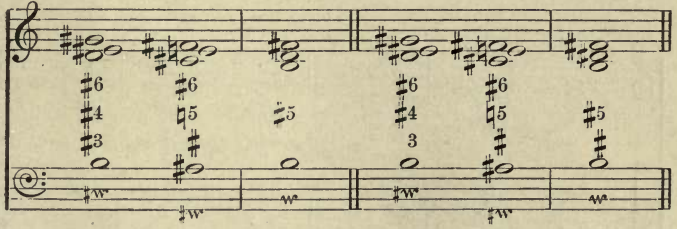
Root as tonic.



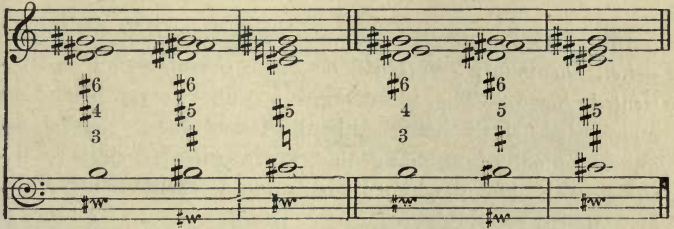
Root as dominant.



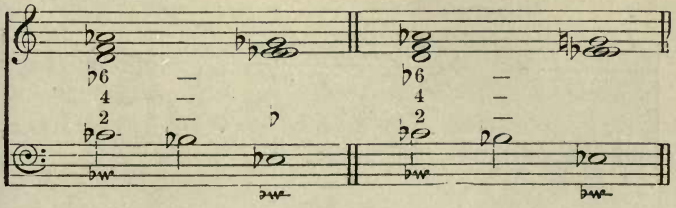
Root as supertonic.



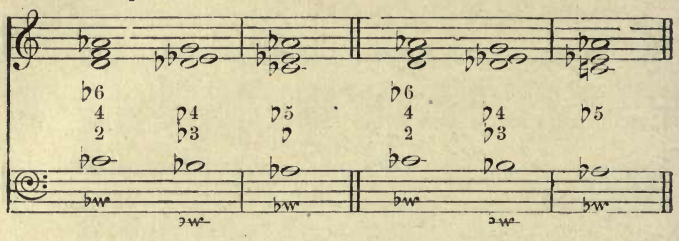
Root as tonic.



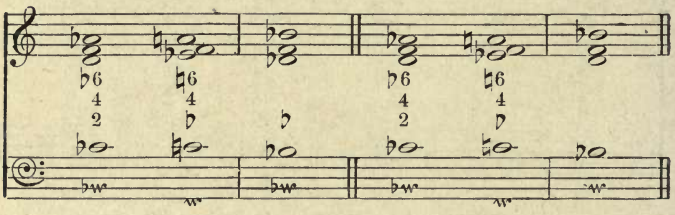
Root as dominant.



Root as supertonic.

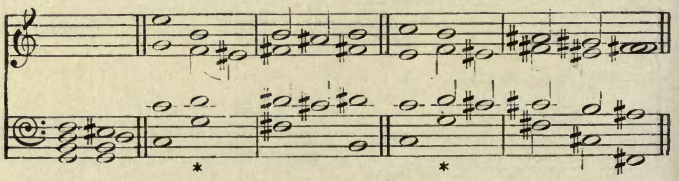


Root as tonic.



150. *Enharmonic Modulation by change of a Primary Seventh —i.e., Dominant, Supertonic, or Tonic Seventh—and an Augmented Sixth.*—The interval of a minor seventh and an augmented sixth being alike in size, these chords are enharmonically interchangeable, the augmented sixth resolving into the key of which its bass note is the flattened sixth, or flattened second degree.

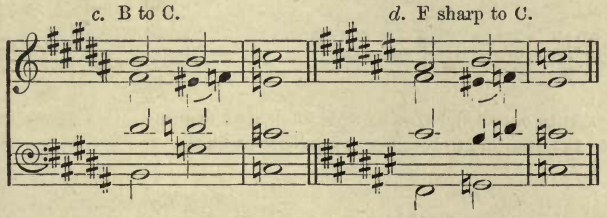
a. C to B. *b.* C to F sharp.



By the enharmonic change of a dominant seventh to an augmented sixth, on the flattened sixth degree, modulation may be made to a key (major or minor) a semitone below (see *a* above; C major to B); or by enharmonic change of a dominant seventh to an augmented sixth on the flattened second degree, to a key (major or minor) a diminished fifth below (see *b*; C to F sharp). Similar modulations may be made by the enharmonic change of a supertonic seventh to an augmented sixth, or a tonic seventh to an augmented sixth.

By the enharmonic change of an augmented sixth to a dominant seventh, modulation may be made to a key (major or minor) a semitone higher (see *c* below; B major to C) or a diminished fifth higher (see *d* below; F sharp to C).

The supertonic seventh and the tonic seventh may be similarly treated.



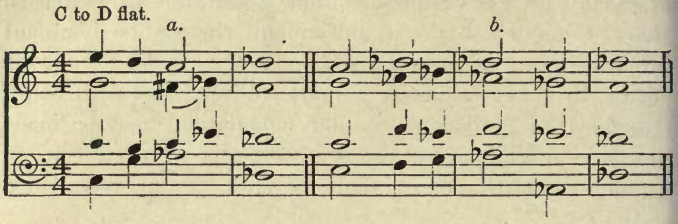
151. Modulation by enharmonic change of minor thirteenths will be explained in Chap. XXI., par. 184.

Tables of Modulation to all Keys.

For the assistance of the student two tables of modulation are here given: the first from C to any degree within a fifth upwards; the second from C to any degree within a fifth downwards.

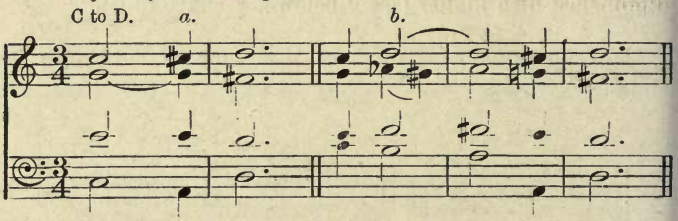
Table I.—Modulation to any key within a fifth upwards:—

To a key a minor second higher.



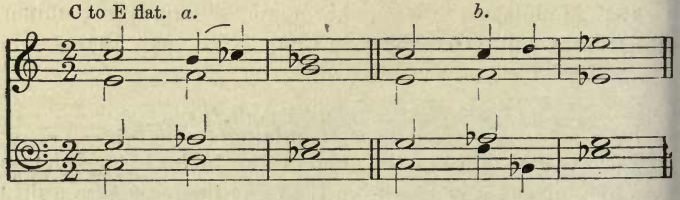
a. Augmented sixth to dominant seventh.
b. Neapolitan sixth becomes new tonic.

To a key a major second higher.



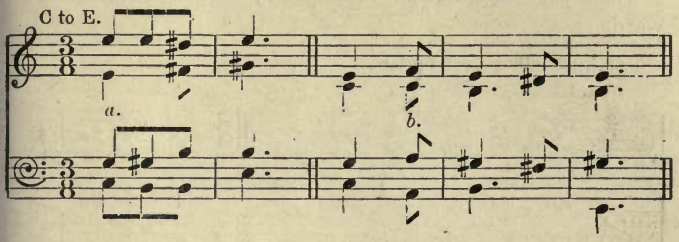
a. Fifth of tonic retained as seventh on sixth degree.
b. Dominant ninth becomes new supertonic ninth.

To a key a minor third higher.



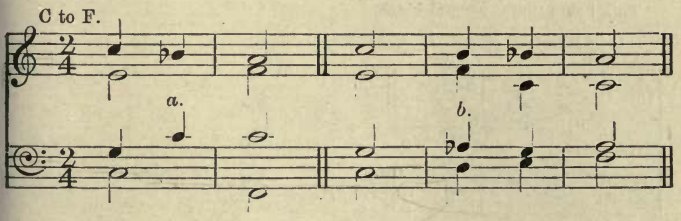
a Dominant minor ninths enharmonically changed.
b. Minor subdominant becomes second degree of new key.

To a key a major third higher.



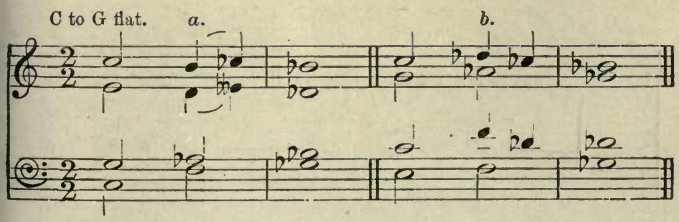
a. Tonic triad becomes flat sixth degree of new key.
b. Subdominant becomes Neapolitan sixth.

To a key a perfect fourth higher.



a. Tonic seventh becomes dominant seventh.
b. Dominant minor ninth becomes supertonic minor ninth.

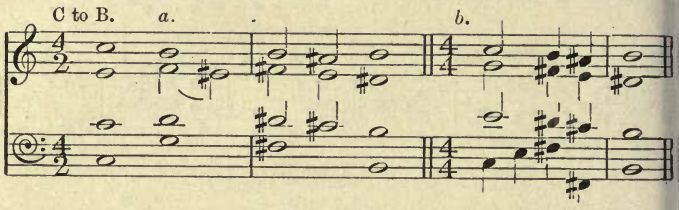
To a key a diminished fifth higher.



a. Dominant minor ninths enharmonically changed.
b. Neapolitan sixth becomes new dominant.

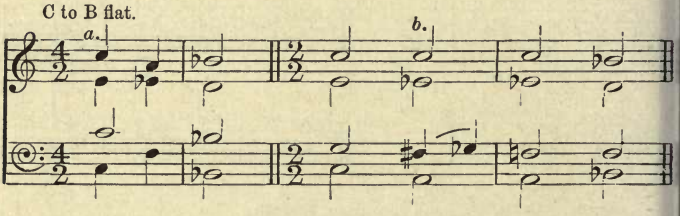
Table II.—Modulation to any key within a fifth downwards :—

To a key a minor second below.



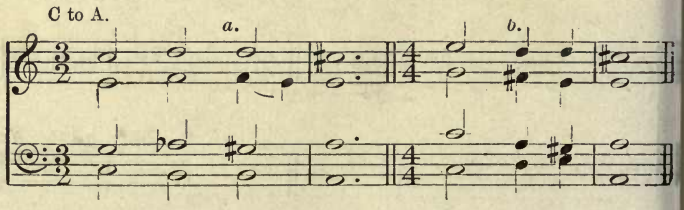
a. Dominant seventh becomes augmented sixth.
b. First inversion of tonic becomes Neapolitan sixth.

To a key a major second below.



a. Tonic triad becomes supertonic triad.
b. Supertonic ninth becomes dominant ninth.

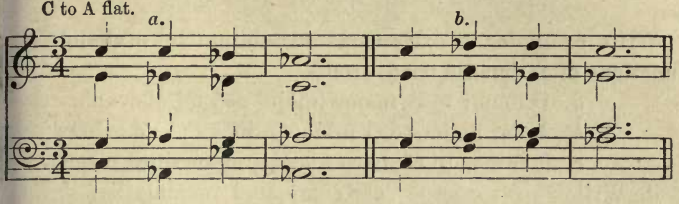
To a key a minor third below.



a. Dominant minor ninths enharmonically changed.
b. Chromatic triad on supertonic becomes subdominant

To a key a major third below.

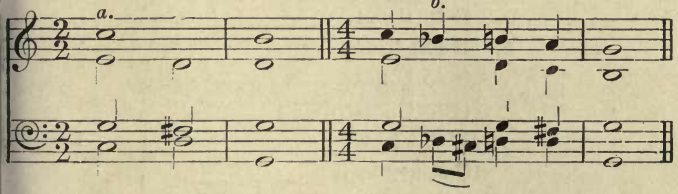
C to A flat.



a. Chromatic chord on flattened sixth becomes tonic.
b. Neapolitan sixth becomes subdominant.

To a key a perfect fourth below.

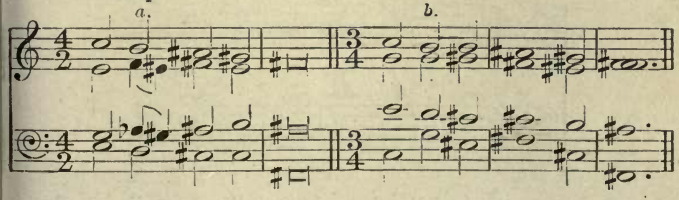
C to G.



a. Tonic becomes subdominant.
b Tonic minor ninth becomes supertonic minor ninth.

To a key a diminished fifth below.

C to F sharp.



a. Dominant minor ninths enharmonically changed.
b. Dominant becomes chromatic chord on flattened second degree.

For the more extensive treatment of this important subject see "Primer on Modulation," by James Higgs (Novello).

Exercise 23.—*On further Modulation.*

Write examples of extraneous modulation by exchange of functions of chromatic triads from—

a. D major to E major (major second above).

b. A flat major to G minor (minor second below).

c. E minor to C sharp major (minor third below).

d. Write an example of compound modulation from G major to B major.

Make the following modulations by enharmonic change, establishing the final key by adding a cadence :—

e. G to A flat.

f. A flat to G.

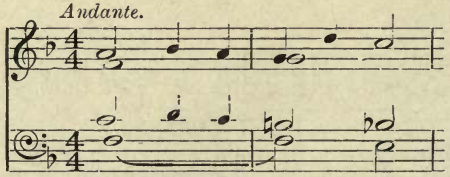
g. G to B flat.

h. B flat to G.

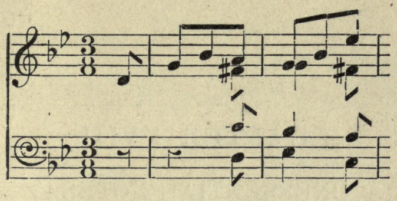
i. { G to D flat. / G to C sharp.

j. { D flat to G. / C sharp to G.

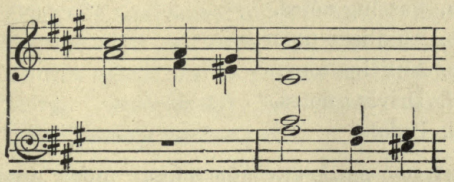
Continue the following passage in a similar style, and make four separate modulations in the following order: *k.* to B flat; *l.* to D major; *m.* to E major, and *n.* to G flat major. Four exercises, each to be about eight bars long.



o. Continue the following in similar style, making modulations to E flat major, G major, A flat major, B minor, F major, D major to G minor. Exercise to be about sixteen bars long—



p. Continue the following in similar style, making modulations to B flat minor, E major, D flat major to F sharp minor, each modulation to be made by retained note of a dominant chord (see par. 146)—



CHAPTER XVIII.

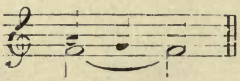
UNESSENTIAL NOTES.

152. The harmonic notes of any chord are *essential notes*, any other notes used to embellish a chord are *unessential notes*.

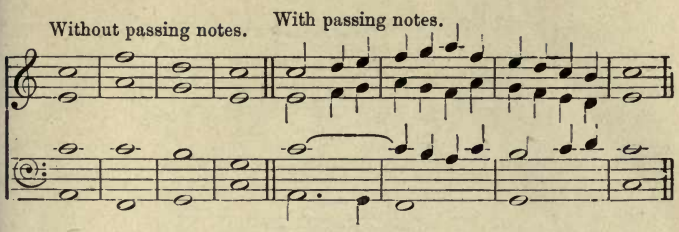
153. Unessential notes are of five kinds:—

a. Passing notes.
b. Auxiliary notes.
c. Anticipations.
d. Driving notes.
e. Pedals.

154. *Passing notes* are unessential notes used between *two different notes* of the harmony for the purpose of *passing* from one essential note to the other. They may appear on the accented or unaccented parts of the bar, and may be diatonic or chromatic. Passing notes should not proceed by oblique motion to a unison.



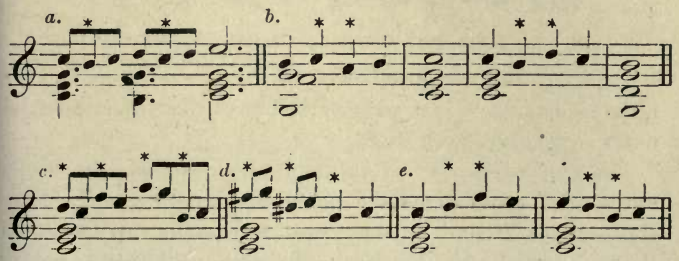
155. Double passing notes move chiefly in thirds, sixths, or by contrary motion. When in three or more parts they frequently form "Passing Chords." When unessential notes form an integral part of the harmony they are fully figured in the bass (see Exercise 24, *e*). When they occur in the bass, as in Ex. 24, *c* and *d*, they are shown by a horizontal stroke under them, the previous chord continuing in the other parts during their existence.



156. *Auxiliary notes* stand on the next degree above or below an essential note. They are of two kinds —

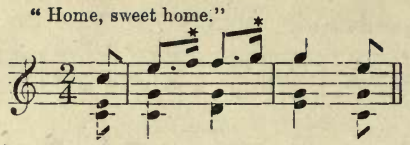
I. Those that appear between repetitions of the same note; they are generally unaccented notes (see *a*). Another form is when *both* notes *above and below* the essential notes are used (see *b*). In this case it will be noticed that the auxiliary note leaps a third. Occasionally, but rarely, this passage is combined with passing notes as at *e*.

II. Those which appear as appoggiaturas before essential notes, and are therefore approached freely by skip. They are generally accented notes (see *c*). When the essential note is approached from below, the appoggiatura is usually only a *semitone* below the essential note (see *d*).

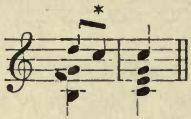


157. An *Anticipation* is a note introduced on the latter part of a chord, although it essentially belongs to the following chord.

"Home, sweet home."



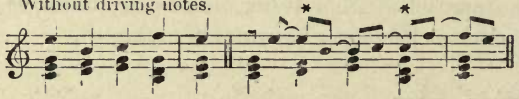
An anticipation frequently occurs in a cadence.



158. *Driving notes* (sometimes called "Lagging notes") are the reverse of Anticipations. They arise when a note belonging to the previous harmony lingers, while the other parts proceed to the new chord. Driving notes differ from suspensions and retardations in that, whereas suspensions and retardations resolve *conjunctly*, driving notes may move by skip, though always to an essential note of a new chord.

"Driving Notes.—Notes driven through the ensuing accent."—Stainer and Barrett's "Dictionary of Musical Terms."

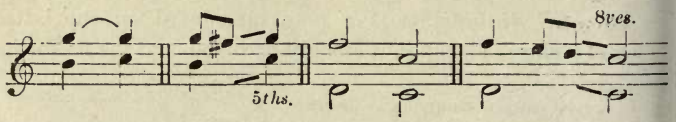
Without driving notes. With driving notes.



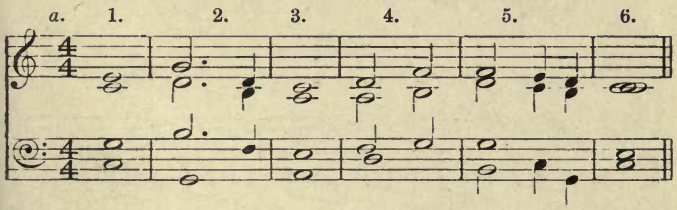
See also Beethoven's Sonata Appassionata, 2nd movement.

159. *Rule.*—Unessential Notes do not remove consecutive fifths or octaves—*i.e.*, a passage incorrect without unessential notes is incorrect with them.

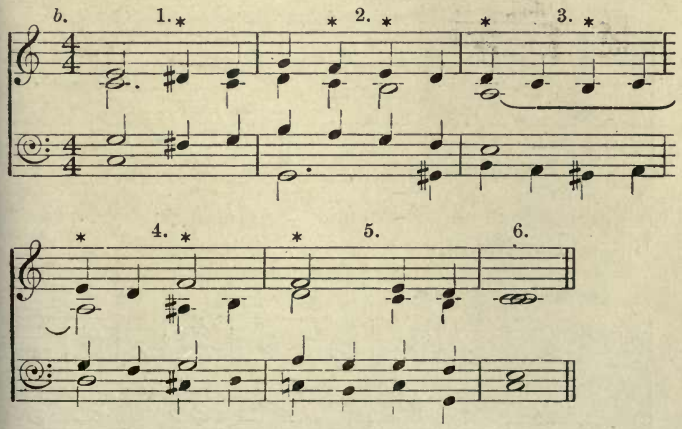
The student is warned that, on the contrary, the use of unessential notes demands increased care to guard *against* consecutives arising by their use, as *passages correct without* the unessential notes are frequently *wrong with* them.



160. Unessential notes may be used in several parts at the same time, provided no harsh intervals are thereby caused and the ordinary harmonic rules are observed. Hence the slight harmonic structure given at *a* may, by unessential notes, be developed into *b*, the chords containing such unessential notes being marked with an asterisk—



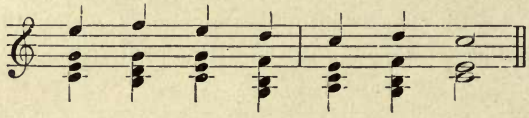
At *b*, bar 1 contains chromatic changing notes; bar 2 contains passing chords, bar 3 appoggiaturas at the first and third chords, bar 4 appoggiaturas at the first chord and chromatic changing notes at the third chord, while bar 5 contains appoggiaturas at the first chord.



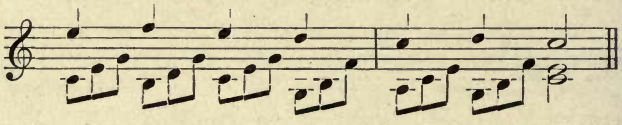
The use of unessential notes is so varied that only general rules can be given.

161. *Arpeggios.*—The notes of a chord, instead of being sounded together, may be struck one after the other—

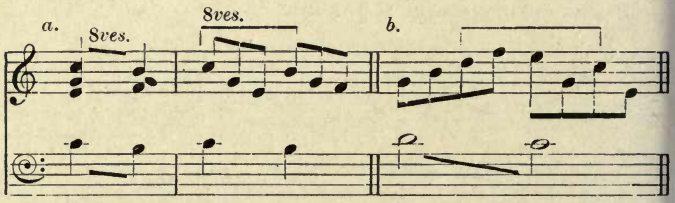
Plain Harmony.



Harmony in arpeggio form.

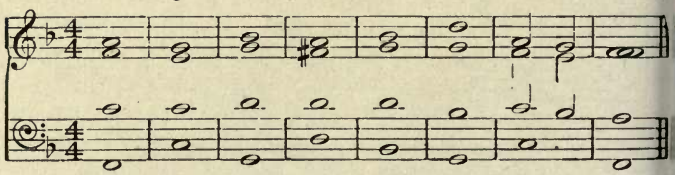


Rule.—If the harmony is wrong in chord-progression, it will remain so when played in arpeggio (see *a*). Consecutives arising from an arpeggio are not good if the time be slow—

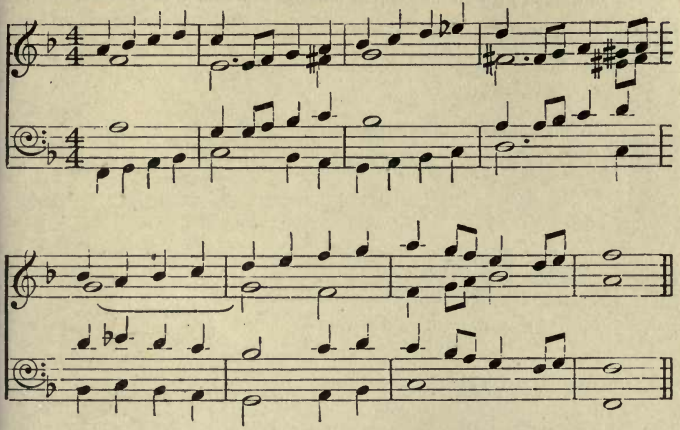


Specimen of a Harmonic Progression developed by Unessential Notes—

Harmonic Progression.

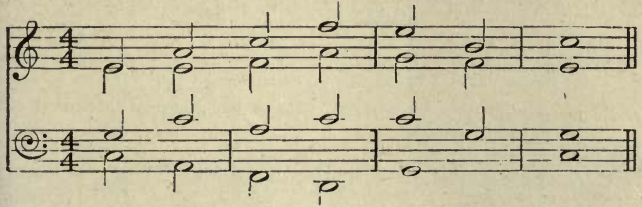


The same, developed with Unessential Notes.

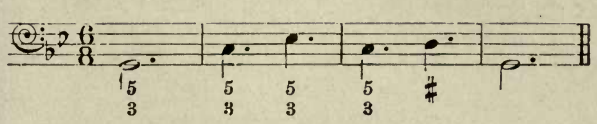


Exercise 24.—*On Unessential Notes.*

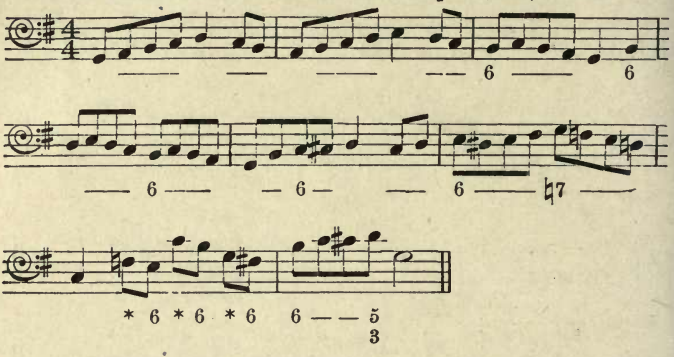
a. Introduce unessential notes into all the parts, making the following passage the foundation of the harmony :—



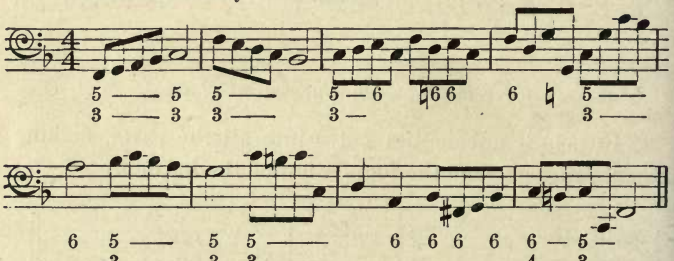
b. Write a passage of four-part harmony, introducing unessential notes in all the parts and making the following the basis of the harmony :—



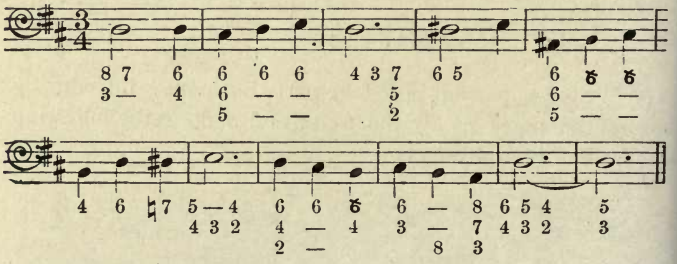
c. To be worked with no unessential notes in soprano, alto, or tenor.



d. Unessential notes may be introduced.



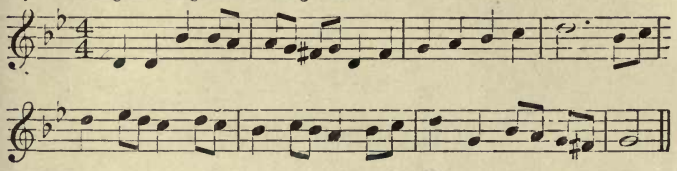
e. No unessential notes in soprano, alto, or tenor beyond those that are given in the figuring.



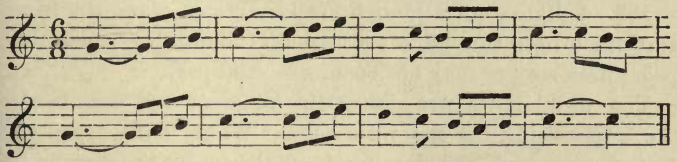
* To be treated as appoggiaturas

Harmonise the following two tunes as part-songs for mixed voices. Unessential notes may be introduced in any part :—

f. Old English song, "Old King Cole."



g. Old English tune called "Sellinger's Round" (Sixteenth century).



h. Write a passage for four voices, introducing unessential notes in all the parts. Key, G major, $\frac{4}{4}$ time.

i. Write a passage for four voices (key, E minor, $\frac{6}{8}$ time) introducing unessential notes in all the parts.

CHAPTER XIX.

PEDALS.

162. A PEDAL (or Organ Point) is created when the bass sustains a note through a succession of chords, of which the pedal note may or may not be an essential part.

The pedal notes are either the tonic or the dominant, the latter being the more common. Where both are used in the same work, the dominant pedal usually appears first, and the tonic pedal last. Other degrees of the scale are occasionally, though rarely, used as pedals.

163. When both tonic and dominant are sustained at the same time, a Double Pedal is created (see the opening of Beethoven's "Pastoral" Symphony).

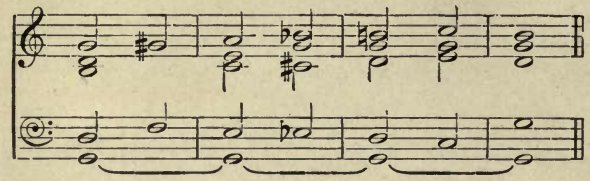
164. *Rule* I.—The pedal note forms an essential part of the opening and concluding chords of the pedal point; cases, however, occur in which the rule is departed from in regard to the opening chord, but at the concluding chord the rule should be strictly observed.

Rule II.—The moving part next above the pedal must form, in every respect, a grammatical bass to the upper parts. This rule is relaxed when the pedal note is an essential note of the harmony.

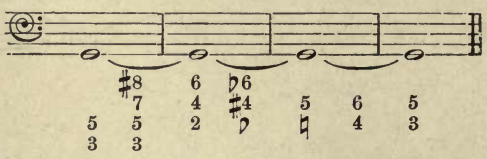
165. The Figuring of a Pedal may be indicated in two ways:—

a. The pedal note may itself be treated as the bass and the figuring made from it

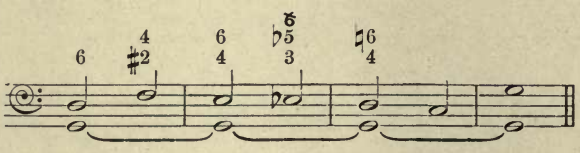
The following pedal passage in five parts—



might, therefore, be figured from the pedal thus—



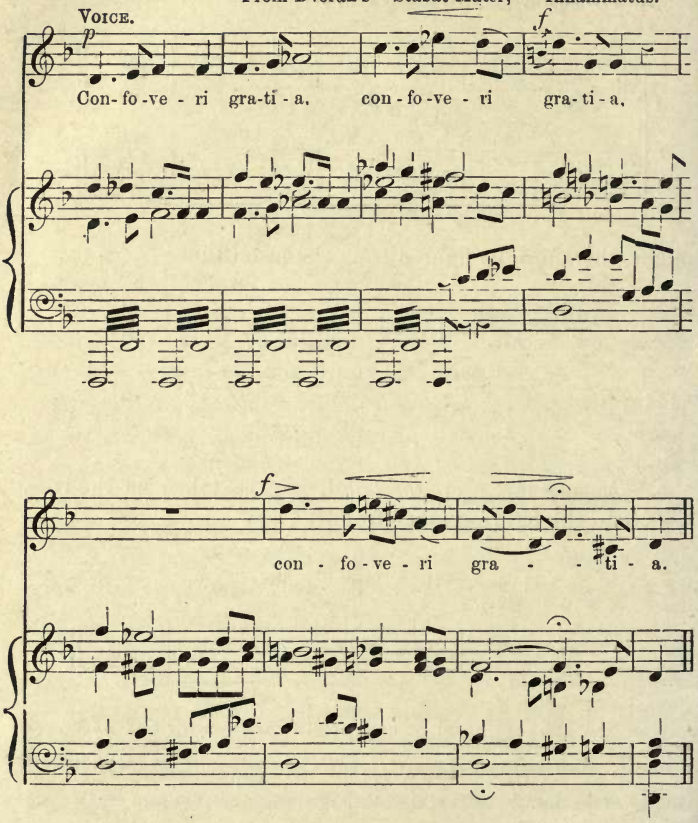
b. The part next above the pedal may be taken as the true bass, and the figuring made from it :—



When the dominant chord is used over a tonic pedal, it is sometimes figured $\frac{7}{4}{}^{5}_{2}$, which does not, of course, imply a new harmony, but only a "pedal chord." Likewise, the leading seventh or diminished seventh used over a tonic pedal produces a $\frac{7}{4}{}^{6}_{2}$. The resolution of these discords follows in the ordinary course, just as though the pedal were not present.

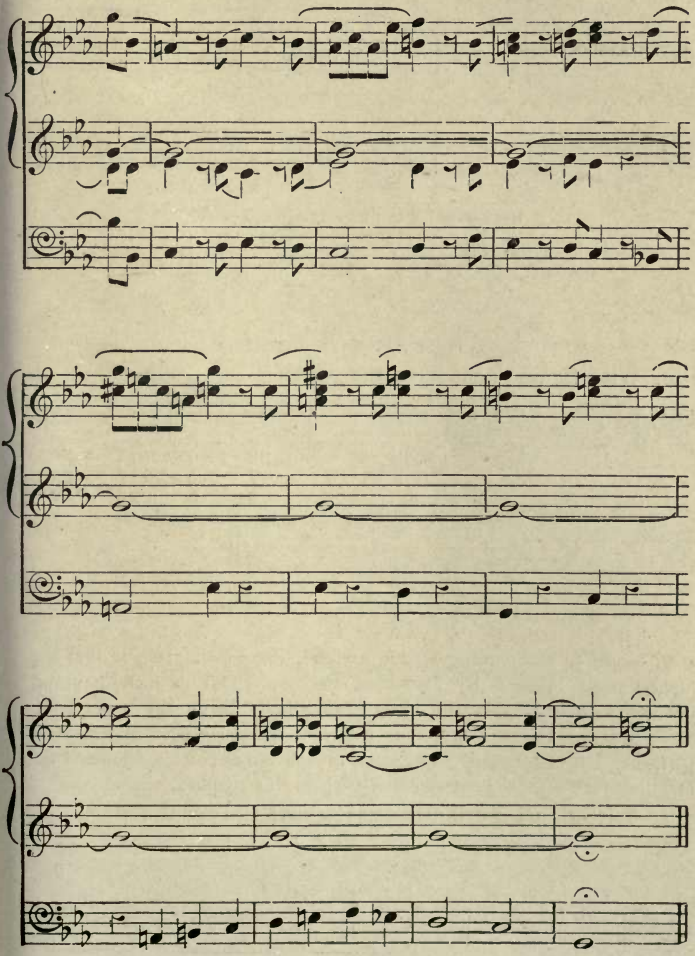
166. Modulation during a pedal is frequently met with, although it is usually only of a transient nature. The following is an example of a tonic pedal, treated with the utmost boldness in regard to modulation.

From Dvorák's "Stabat Mater," "Inflammatus."

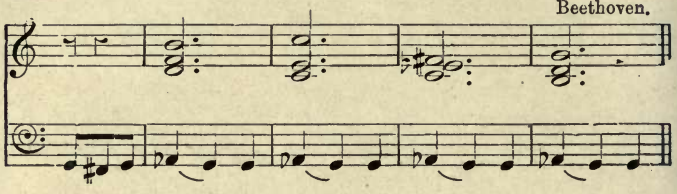


167. An Inverted Pedal is created when the sustained note is placed in an upper or an inner part. In this species of pedal, chords far removed from the original tonality are less desirable, since the influence of the note sustained is much weaker when the pedal is in an upper instead of the lowest part.

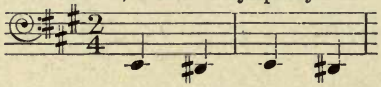
Example of an Inverted Pedal, from Mendelssohn's Organ Sonata, No. 2 (in C minor).



168. A Figured or Florid Pedal is one in which the pedal note is varied by a figure formed generally by auxiliary notes—

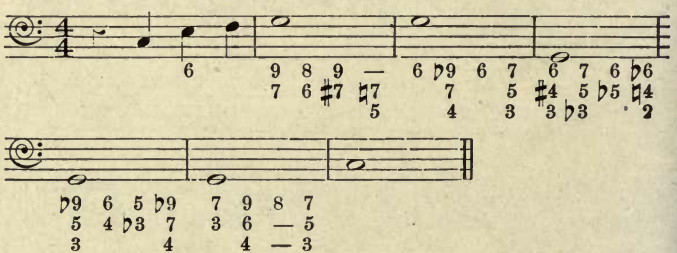


Beethoven, *Finale* to Symphony in A.



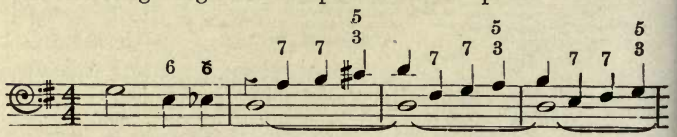
Exercise 25.—*On Pedals.*

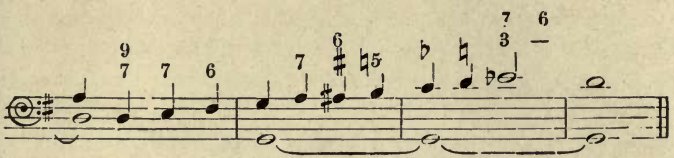
a. With figured bass from the pedal.



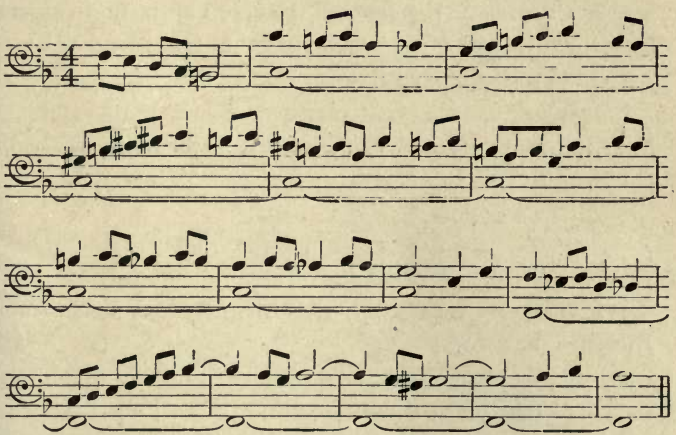
In regard to the figuring of this exercise, the general rule is that the highest figure should be placed at the top. This is not, however, intended to indicate that the upper *figure* is to be in the upper *part*. The figuring in thorough-bass does not show the progression of individual parts, but only the harmonic structure, though it has become somewhat the practice to indicate the progression of parts in this manner.

b. With figuring from the part above the pedal.





c. Harmonise the following pedal, using unessential notes in all parts :—



d. Write an example introducing a dominant and tonic pedal.

e. Write an example containing an inverted pedal.

f. Write a short example of a figured or florid pedal.

Several very fine modern examples of pedals will be found in Brahms's *German Requiem*. No. 1 opens with a tonic pedal; No. 2 closes with a *Coda* mostly on a double pedal; No. 3 concludes with a Fugue written entirely over a tonic pedal.

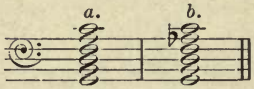
CHAPTER XX.

THE ELEVENTH.

169. Chapter XII. treated of the chord of the ninth arising from the fifth note of the dominant chord (see Chap. VII.)

170. The Dominant Eleventh.

The *sixth note of the dominant chord* is the eleventh from the root. It may be added to a major ninth (see *a*) or minor ninth (see *b*).

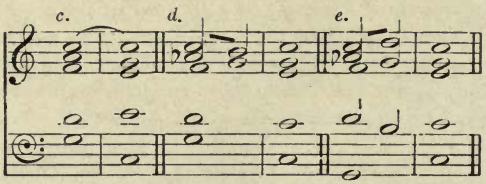


171. The Resolution of the Chord of the Dominant Eleventh may take place—

By the eleventh remaining stationary (*c*), in which case the chord resolves on another root.

By the eleventh descending to the third, while the rest of the chord remains (*d*).

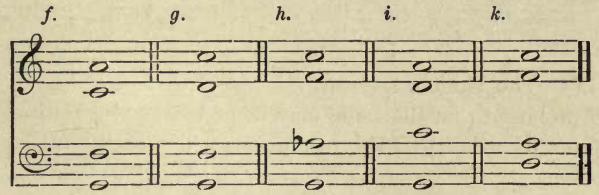
By the eleventh ascending to the fifth (*e*); in these cases the chord resolves on the same root.



In the chord of the eleventh the third is always omitted when the eleventh is present, in accordance with the general

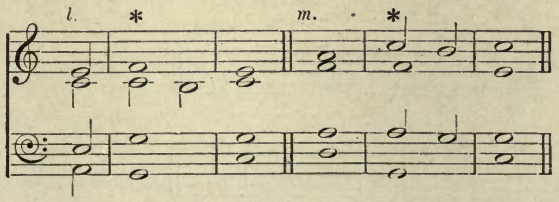
rule that the note on which a dissonance is to be resolved should not be present with that dissonance. The most usual resolution of the eleventh is to fall to the third, hence that interval is omitted.

The fifth, seventh, and ninth in the chord of the eleventh may be omitted when desired; while the eleventh may become a fourth to the bass.



172. There are two important points of distinction in the treatment of this chord. In one case (see *l*) the dissonant eleventh (compound fourth) *is prepared* and resolved on the third, like an ordinary suspension. If the discord is in an inner part, this is the best treatment to adopt.

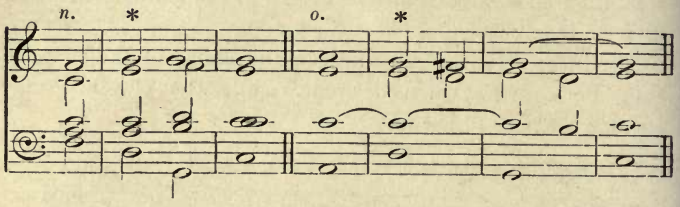
The other case (see *m*) is that in which the discord is placed in the *upper part*, and, having often the form of an appoggiatura, is taken with good effect *without preparation*. In this case it may be explained as a fundamental discord—



173. The Supertonic Eleventh.

An eleventh may be added to the supertonic discord. Its *Resolution* will usually take place by the eleventh remaining

stationary and becoming part of a dominant chord (*n*), or by its proceeding to another form of the supertonic chord (*o*)—

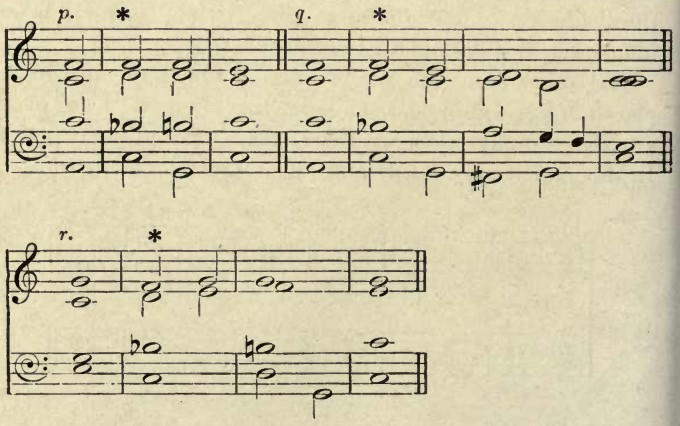


174. The Tonic Eleventh.

An eleventh on the tonic may be added to the tonic ninth (major or minor). Its resolution will usually take place by—

p. The eleventh remaining stationary.

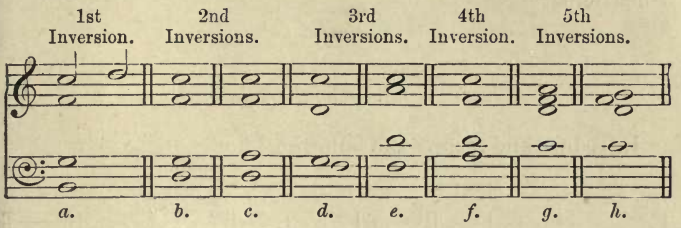
q. The eleventh falling or rising one degree to some other form of the tonic discord (*q*, *r*)—



Supertonic and tonic elevenths are of somewhat rare occurrence.

175. Inversions of the Eleventh.

The chord of the eleventh having six notes is capable of five inversions—



a. First inversion, rarely used; in its resolution the eleventh ascends.

b. Second inversion, root retained.

c. Second inversion, without root; the chord then becomes a secondary seventh on the supertonic.

d. Third inversion, root retained.

e. Third inversion, without root; the chord then becomes the first inversion of the secondary seventh on the supertonic—the so-called "Added Sixth."

f. Fourth inversion with the ninth in the bass, root therefore omitted.

g. Fifth inversion without root.

h. Fifth inversion with root.

In many of the above chords the minor ninth may also be used as freely as the major ninth.

The resolution of the eleventh will ensue as in the fundamental chord—by remaining stationary, ascending a degree, or descending a degree.

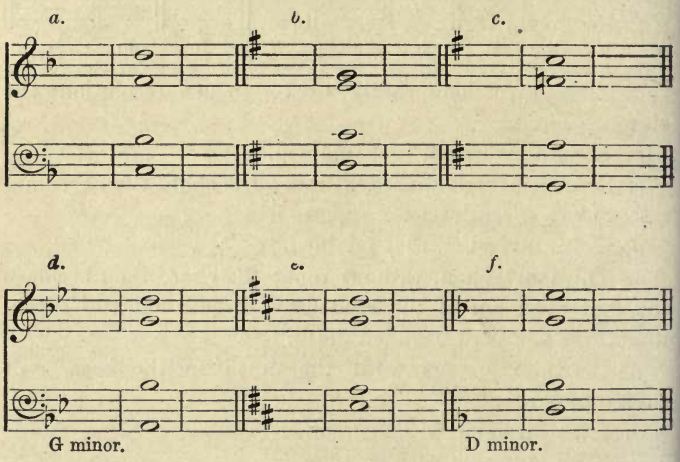
Inversions of the supertonic and tonic elevenths are rare, as are the fundamental chords on those degrees.

176. Some theorists prefer to explain most of the progressions herein termed elevenths as suspensions (see *l*), retardations (see par. 171, *e*), inverted pedals (see par. 171, *c*,

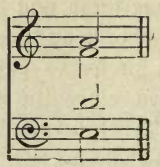
and par. 174, *p*), or appoggiaturas (see par. 172, *m*, and par. 174, *r*). The present method is, however, more consistent.

Exercise 26.—*On the Eleventh.*

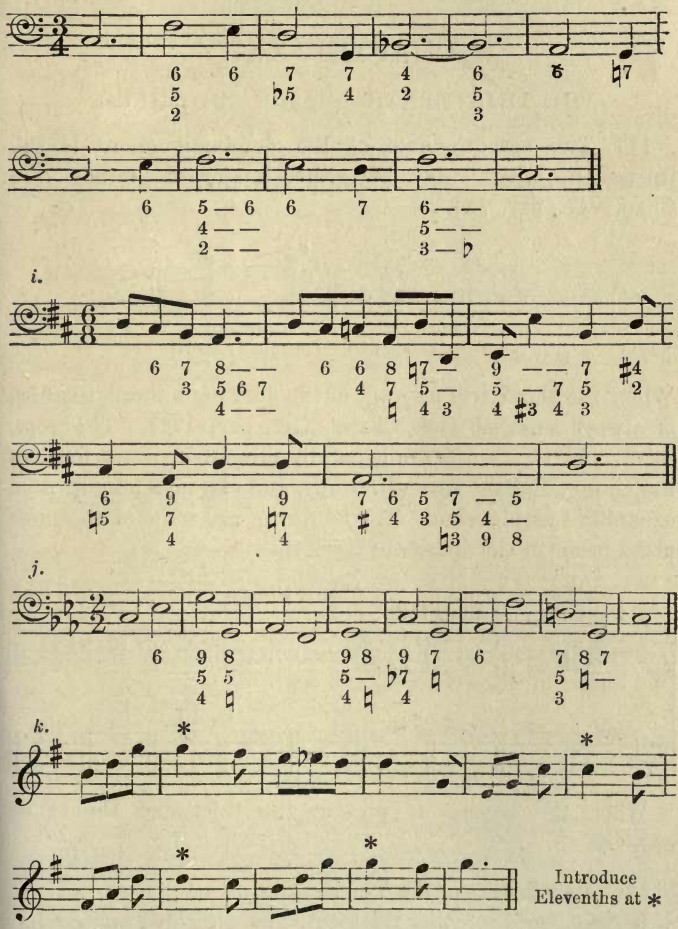
Introduce and resolve the following chords of the eleventh—



g. Resolve this chord—firstly, as a dominant eleventh; secondly, as a supertonic eleventh; thirdly, as a tonic eleventh—in each case adding what is necessary to terminate the passage in the respective key.



h. Harmonise the following:—

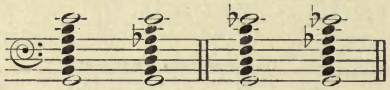


l. Write a passage introducing various forms of the chord of the eleventh.

CHAPTER XXI.

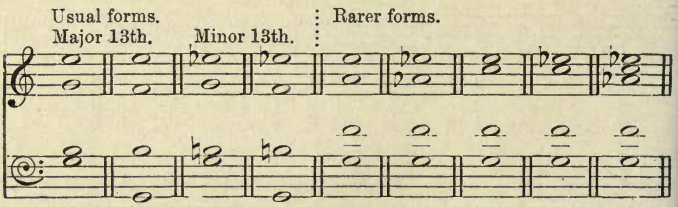
THE THIRTEENTH.—MAJOR AND MINOR.

177. The seventh note of the dominant chord is the thirteenth, which may be either major or minor (see Chap. VII., par. 75).



Major 13th (complete chords). Minor 13th (complete chords).

When the thirteenth appears in the dominant chord the fifth is always omitted (see Chap. XX., par. 171). The root, third, and thirteenth are generally present in every form of the chord; but the seventh, ninth, and eleventh may be used or omitted at pleasure. The following are some of the most usual forms of the dominant thirteenth—



When the seventh is present the thirteenth should be *above* it.

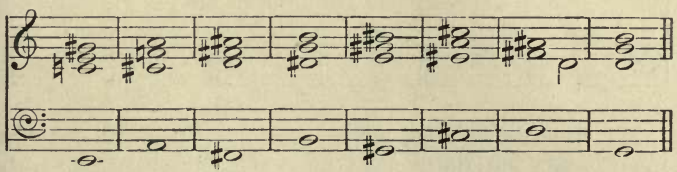
178. Resolutions of the Thirteenth.

I. The chord of the thirteenth may resolve on another form of the dominant chord, by (*a*) the thirteenth descending to the fifth; or (*b*) the thirteenth ascending to the seventh.

II. The chord of the thirteenth may resolve on a chord from another root, by (*c*) the thirteenth descending by the skip of a third to the tonic or remaining stationary; or (*d*) in the minor thirteenth only, by the thirteenth ascending a chromatic semitone to the major third of the tonic.

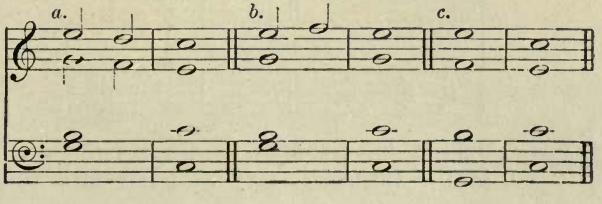
In the latter case the minor thirteenth is more frequently written as an augmented fifth (see Chap. XVI., par. 141, Example *d*, in which the C sharp is really a minor thirteenth (D flat) resolved upwards to D natural).

An interesting example of the resolution of the minor thirteenth ascending a semitone (as at *d*) will be found in Gounod's "Redemption" (vocal score, page 4, letter E), where a passage occurs of which the following is the harmonic outline:—

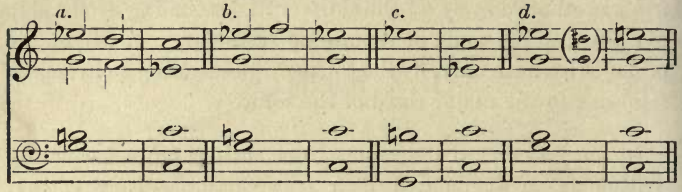


This passage consists of seven consecutive minor thirteenths in the root position, the minor thirteenth in each case ascending a semitone.

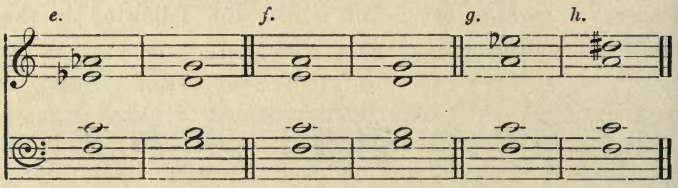
179. Major Thirteenth on the Dominant—



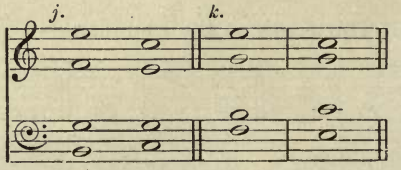
Minor Thirteenth on the Dominant—



180. If the root, third, and fifth are omitted, this chord appears as a seventh on the subdominant (see *e*). It is this chord (see *g*) which, when chromatically altered, becomes the augmented sixth on the subdominant (see *h*). Compare also Chap. XVI., par. 142.



181. Inversions of the major and minor thirteenth may be freely used; but the student must remember that, the fifth being inadmissible, there is no second inversion; and also that if the seventh is present, the thirteenth must be above it (*j*, *k*) in the inversions, as well as in the fundamental position (see par. 177).



182. The Supertonic Thirteenth.

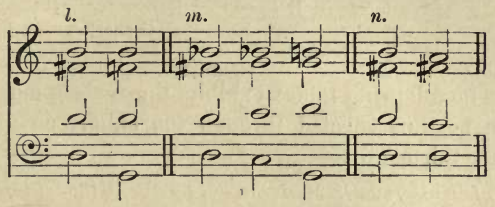
A chord of the thirteenth may be freely used on the

supertonic, both in major and minor keys. Its resolution takes place on—

A dominant discord (*l*).

A tonic discord (*m*).

Another form of the supertonic chord (*n*)—



183. The Tonic Thirteenth :—

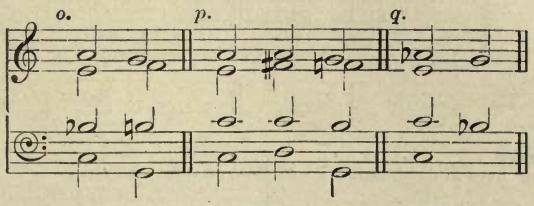
To the discord on the tonic. the major or minor thirteenth may be added.

Its resolution is subject to the ordinary rules for the resolution of a tonic discord, and may take place on—

A dominant discord (*o*).

A supertonic discord (*p*).

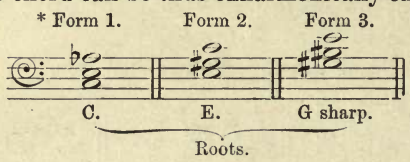
Another form of the tonic discord (*q*)—



Modulation by Enharmonic Change of the Minor Thirteenth.

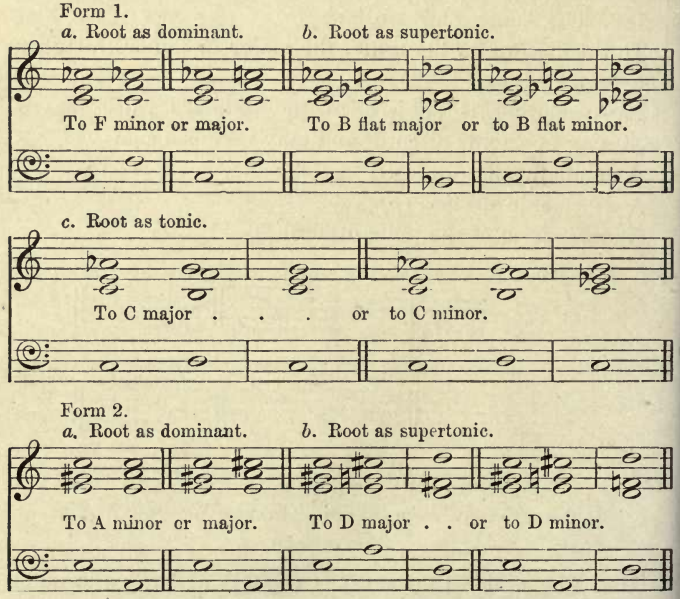
184. The minor thirteenth is capable of two enharmonic changes; and as it may be on either the dominant, supertonic, or tonic, it is possible to modulate to nine major and nine minor keys.

Either note of the chord may become the root, so that the notes of the chord can be thus enharmonically expressed—



185. The following table† exhibits the various modulations that can be thus effected through the enharmonic forms of the minor thirteenth :—

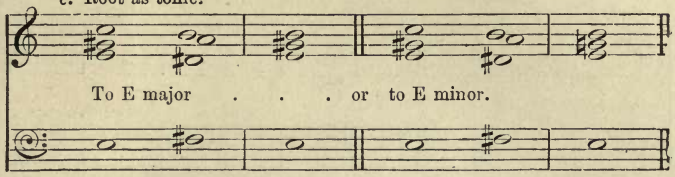
Table of Enharmonic Modulations by the Minor Thirteenth.



* For purposes of reference in the following tables, these are called Forms 1, 2, and 3 respectively.

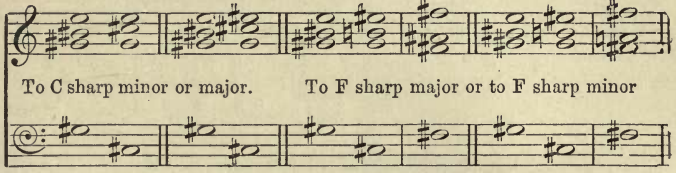
† From "Primer on Modulation," by James Higgs. By kind permission of the Author.

c. Root as tonic.

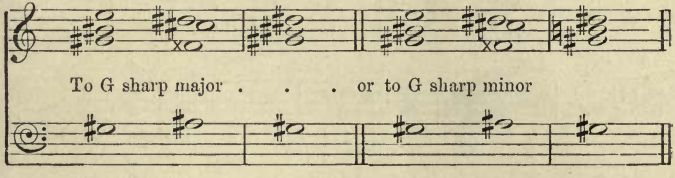


Form 3.

a. Root as dominant. *b.* Root as supertonic.



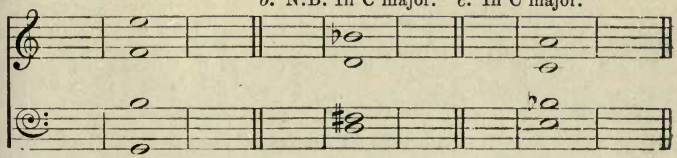
c. Root as tonic.

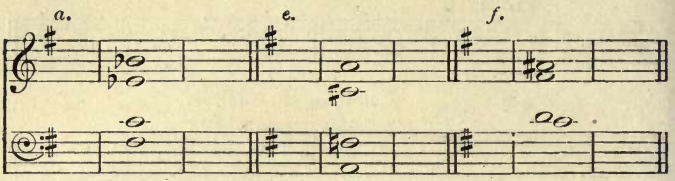


Exercise 27.—*On the Thirteenth.*

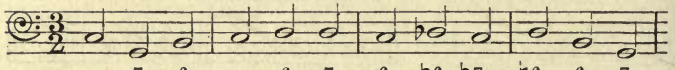
Introduce and resolve the following chords :—

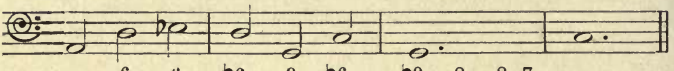
a. *b.* N.B. In C major. *c.* In C major.



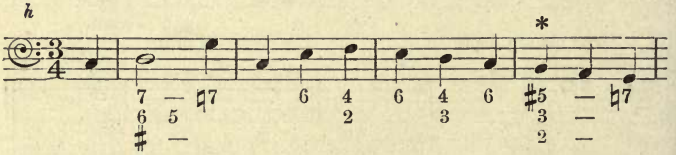


g. Harmonise the following basses :—



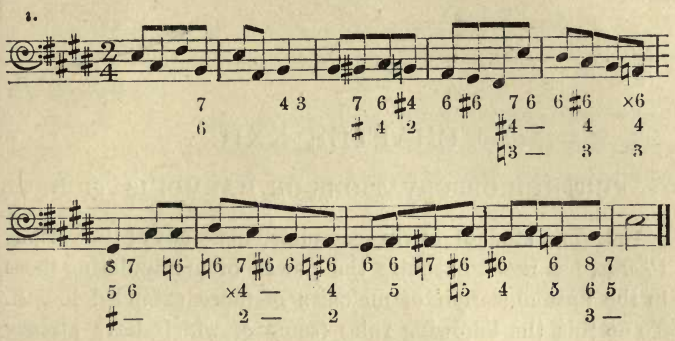


h

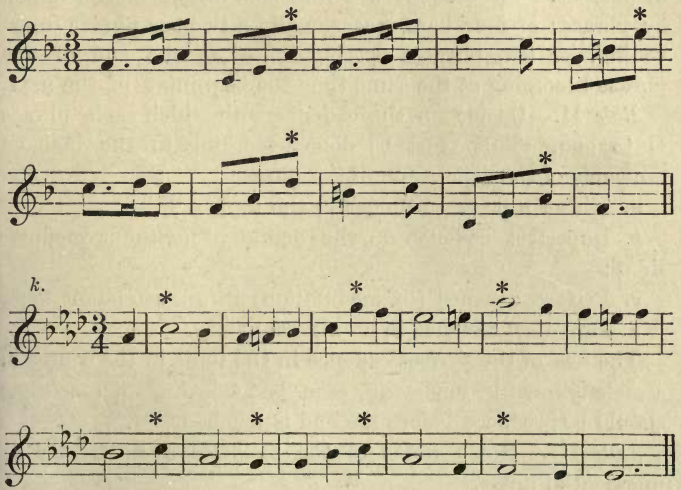


* Last inversion ; thirteenth in bass.

i.



j. Harmonise the following melodies, introducing chords of the thirteenth at the asterisks.



k.

l. Write a passage introducing chords of the thirteenth in the key of D major.

m. Write a double chant containing two inversions of the chord of the thirteenth.

CHAPTER XXII.

FURTHER OBSERVATIONS ON HARMONISATION.

186. The student, having completed his study of the various *Chords*, has now to acquire the power of manipulating these in the harmonisation of melodies of more extended length. To do this the following rules (some of which have already been mentioned) should be observed :—

187. *Rule* I.—Divide the melody into its various sections or phrases. The student will find that music mostly moves by phrases of four bars, occasionally a two-bar phrase intervening, or two phrases overlapping—*i.e.*, the end of one phrase becoming at the same time the beginning of the next.

Rule II.—Decide on the cadence with which each phrase is to end. This must be done according to the melodic tendency of the conclusion of the phrase—

a. Either a perfect cadence in the tonic ;

b. Imperfect cadence on the dominant (without modulation) ;

c. Perfect cadence (by modulation) in an attendant key ;

d. Imperfect cadence in an attendant key.

The use of the perfect cadence in the tonic in the course of a melody must be made with care, lest a feeling of *conclusion* should be produced before the end is reached.

Rule III.—Some notes of the melody may be treated as unessential notes.

Judiciously employed, the student will find this rule of great use, as it will frequently make a simple harmonic progression possible, whereas if the unessential note were treated as a harmonic note, an awkward progression would be the result.

Rule IV.—Never anticipate the entry of a bass note on an accented part of the bar by letting it appear on the preceding unaccented part.

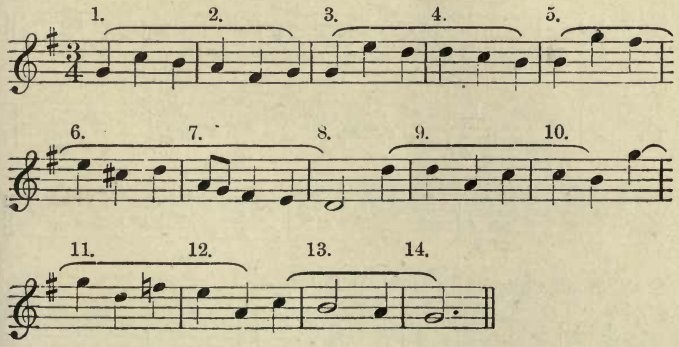
Rule V.—Let all harmony be natural, never straining after the use of extreme chords, but making free use of such chords when they can be easily and simply (*i.e.*, naturally) introduced.

Rule VI.—Let all modulation be definite, avoiding ambiguity of key.

Rule VII.—A single chord may frequently accompany *several* notes of the melody. A single note of the melody may frequently be accompanied by *several* chords.

Rule VIII.—Avoid having too many different chords in a bar; within limits, the fewer the chords in the bar, the broader will be the harmony.

188. Example of a melody analysed for harmonisation—



The phrases divide as follows, the cadences being suggested also:—

Phrase 1, bars 1 and 2. Possible cadence, dominant to sixth degree.

Phrase 2, bars 3 and 4. Possible cadence, dominant to tonic. Here, as the third of the tonic chord is in the

melody, the effect of the perfect cadence is not conclusive (see Rule 2 above).

Phrase 3, bars 5 to 8. Modulation to D with perfect cadence in that key.

Phrase 4, bars 9 and 10. Cadence in E minor.

Phrase 5, bars 11 and 12. Cadence in A minor.

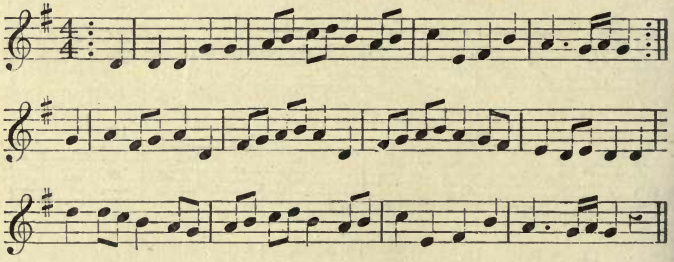
Phrase 6, bars 13 and 14. Perfect Cadence in G.

Modulations might, therefore, be made to D major, E minor, A minor, and back to G.

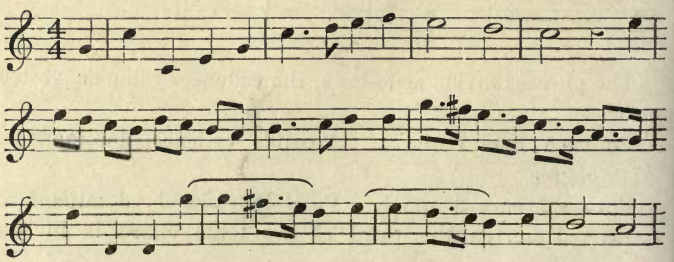
Exercise 28.—*Harmonisation of Melodies.*

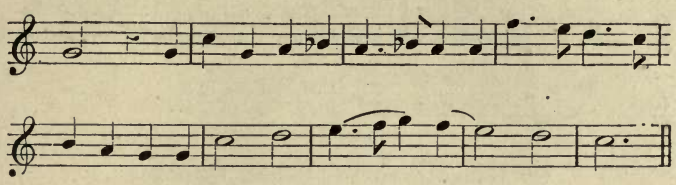
The following melodies are to be harmonised as part-songs for S.A.T. and B.

a. "When the King enjoys his own again" (Seventeenth century)—

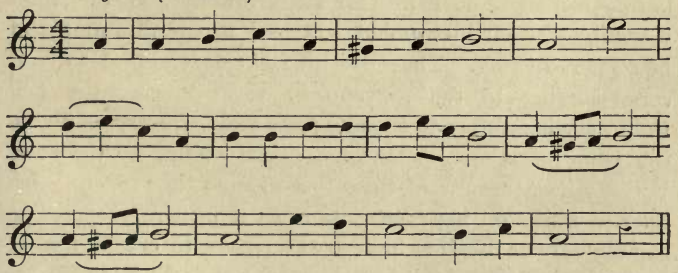


b. "König Christian" (Danish Volkslied)—

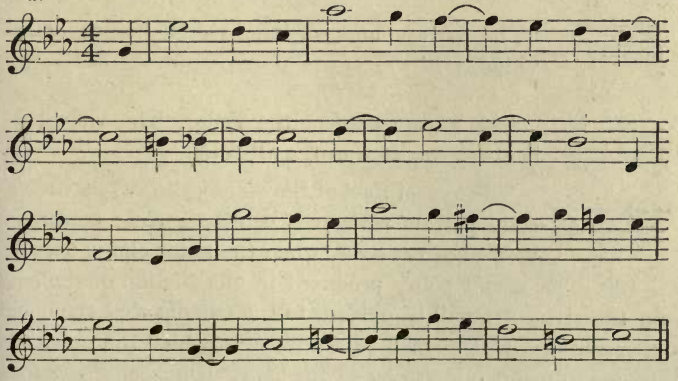




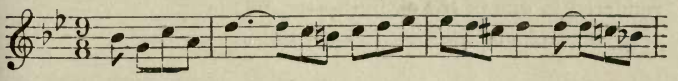
∴ *Adagio.* (Volkslied.)

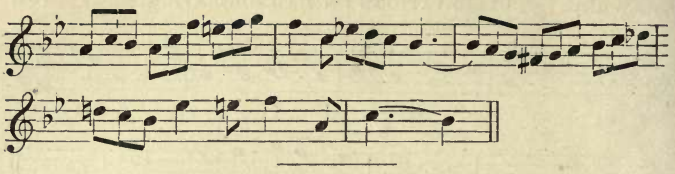


d.



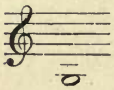
e.



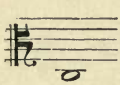


On Harmonising for String Quartet.

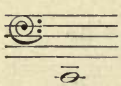
189. It is now advisable that the student should turn to the harmonisation of melodies for string quartet, as the individuality of each instrument will lead to the attainment of better part-writing. The string quartet consists of—1st violin, corresponding to the soprano in vocal music; the 2nd violin, corresponding to the alto; the viola, corresponding to the tenor; and the violoncello, corresponding to the bass. For detailed account of these instruments the student must refer to works on instrumentation, as it is here proposed to explain only as much as may be necessary to enable him to harmonise a melody for string quartet. The downward limit of the instruments must be remembered:—



The lowest note of the violin (hence called "Fiddle G").



The lowest note of the viola. The viola part is always written in the alto clef.



The lowest note of the violoncello. The violoncello part is written in the bass clef; except in very high passages, when the tenor clef is used.

190. The sound being produced by the friction of the bow on the string, it will be evident to the student that the effect of a passage will depend on the way in which the notes are grouped during one stroke of the bow. Supposing the first four notes of the scale of C were to be played, they could be rendered in one of the six following ways:—

a. A stroke of the bow to each note.

b. Two notes to each stroke of the bow. This would be indicated by the slur placed over the two notes, the second note being played without the bow giving a fresh accent.

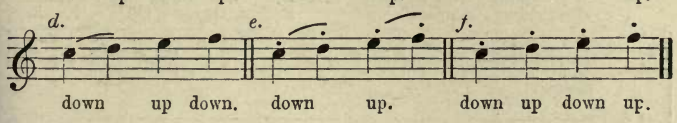
c. Three notes to the down bow and one on the up bow (shown by the slur).

d. Two notes on the down bow and separate strokes of the bow (up, down) for the last two crotchets.

e. Two notes on the down bow, but while the bow is descending a fresh accent given to the second note, thereby detaching it from the other. This is indicated by a slur to show the length of the bow-stroke and a dot over each note to show they are to be thus separated.

f. Each stroke of the bow might be short and rapid, in which case each note, marked with a dot or a dash, would become staccato (called "martelé" if played with firm bow, and "spiccato" or "saltato" if with bow springing up).

A down bow (sometimes marked ⊔ or ⊓) is usual at the beginning of a bar to give the necessary accent, an up bow (sometimes marked ∨ or ∧) usually concluding a bar.

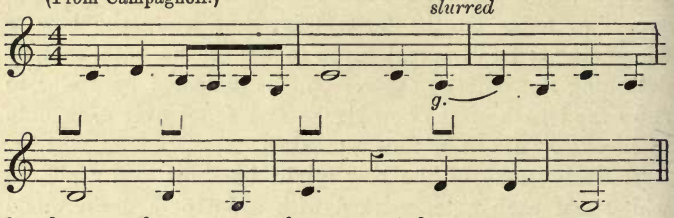


The student should carefully study these examples and consider what the effect in each case would be.

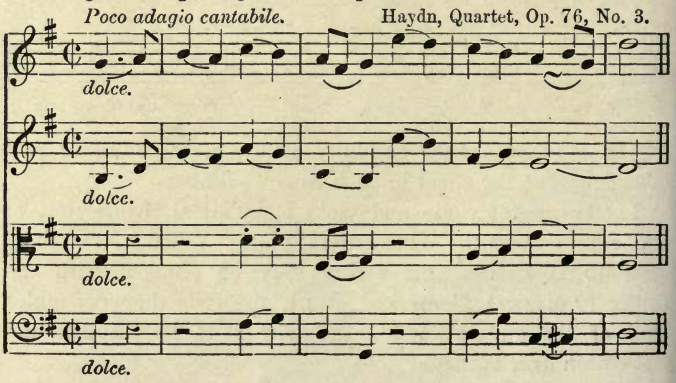
The bowing of violin and viola is identical, while that of the cello follows the same general plan. When a very short staccato is desired the string may be plucked with the finger ("pizzicato," marked *pizz.*), the tone then resembles that of the guitar. When the bow is to be resumed the indication *arco* is made.

191. In order that a down bow may ensue at the beginning of a bar, various plans may be adopted: (*g*) two notes may be slurred (this may occur even between the last note of one bar and the first of the next); (*h*) two successive *down* bows may be used, while after a rest any change of bowing may be adopted (*j*).

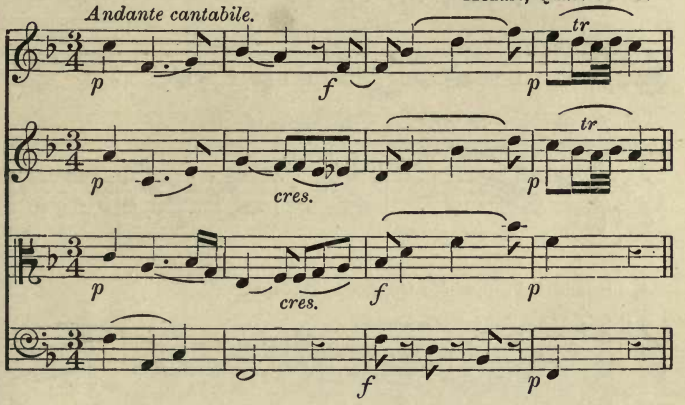
(From Campagnoli.)



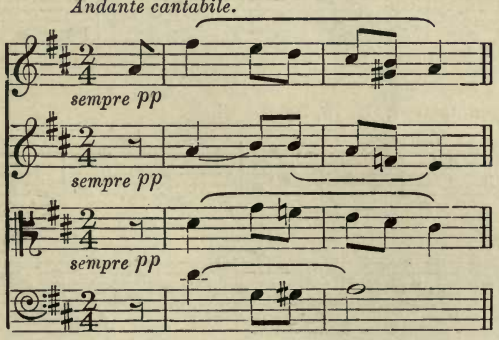
192. In harmonising melodies for string quartet, the student must endeavour to make each part as interesting as possible, giving it individuality. Rests may be introduced, little points of imitation or resemblance may be used to give unity and character to the harmonisation. The general outlines of the bowing should be indicated, special care being taken that the bowing indications represent the phrasing and meaning of the passage. Examples:



Mozart, Quartet in C.



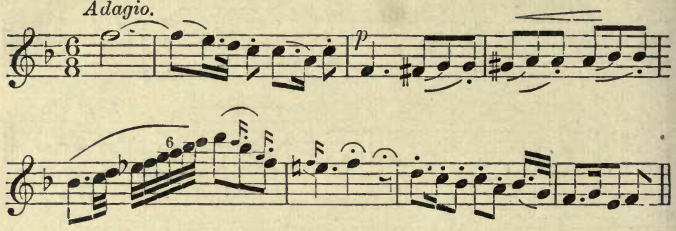
Beethoven, Quartet, Op. 18, No. 5.



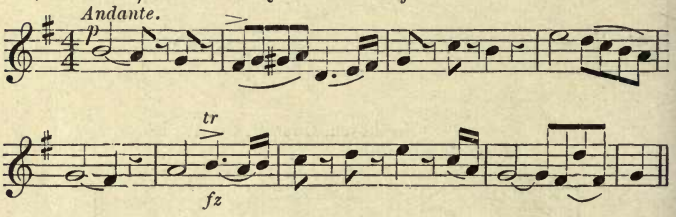
Exercise 29.—*Harmonising Melodies for String Quartet.*

The following melodies are to be harmonised for 1st violin, 2nd violin, viola, and violoncello. The student must remember that he is not to write a stiff "figured bass exercise," but a passage with agreeable parts for all the instruments.

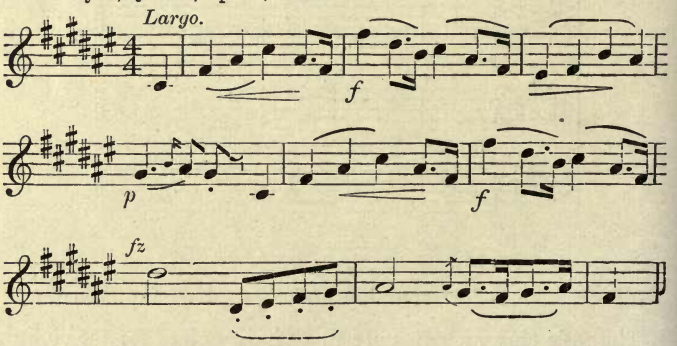
a. Haydn, Quartet, Op. 71, No. 1.



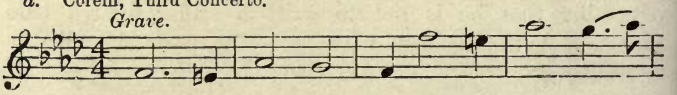
b. Schubert, Posthumous Quartet in D major.

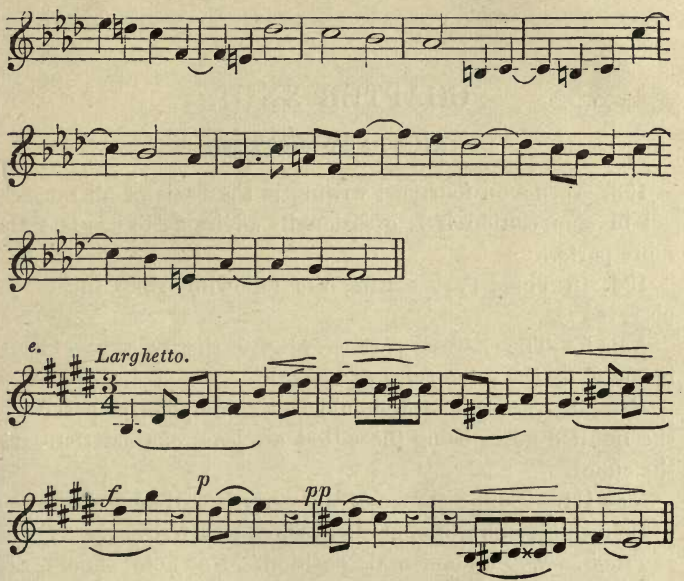


c. Haydn, Quartet, Op. 76, No. 5.



d. Corelli, Third Concerto.




e.
Larghetto.
f
p
pp

CHAPTER XXIII.

THREE-PART WRITING

193. Although four-part writing is the basis of all music, yet in composition it is occasionally advisable to use less or more parts.

194. In Three-Part writing the following rules must be observed :—

Rule I.—The lowest part is always the true bass and is bound by the same rules as hitherto.

Rule II.—Every chord should be as complete as possible, the omitted notes being those that are least characteristic of the chord.

Rule III.—Equi-distance of the parts is still advisable.

195. Omissions from chords in three-part writing :—

Triads.—*a*. Fundamental position. No note should, if possible, be omitted, though the fifth may be occasionally dispensed with (see *aa*).

Inversions.—*b*. No note can be omitted without producing ambiguity (see *b*).

The diminished triads, appearing often like incomplete sevenths, are better in three parts than in four (see *bb*).

Sevenths.—*c*. Fundamental position. Omit the fifth (*cc*), but more rarely the third.

Inversions $\frac{6}{5}$. Omit the third (see *d*), or root (see *bb*).

$\frac{4}{3}$. Omit the sixth or fourth (see *e*).

$\frac{4}{2}$. Omit the sixth (see *f*).

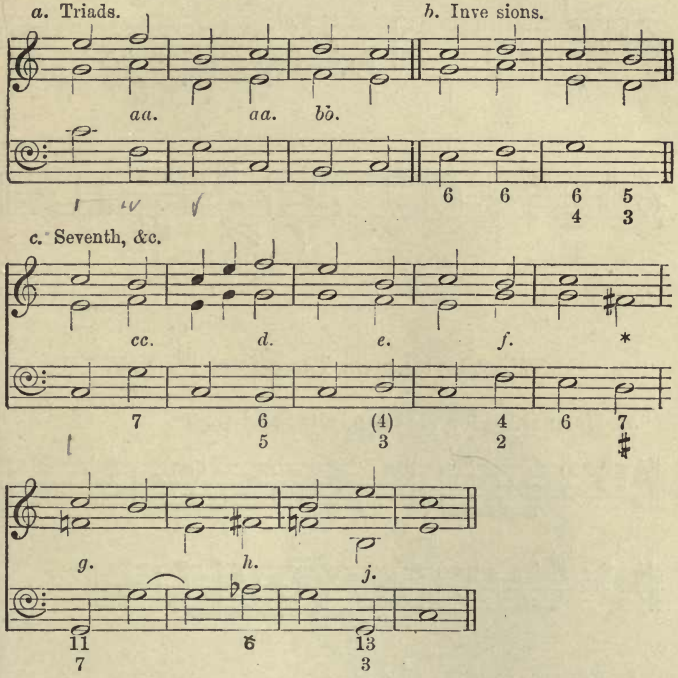
Ninths are not often used in three parts.

An example of a ninth in three parts will be found in bar 5 of the specimen from Sir Hubert Parry's "Judith" given below. Inversions of ninths (leading sevenths) will be found in bars 7, 9, and 12. An eleventh will be found in bar 4 and a thirteenth in bar 12.

Augmented Sixth.—Use the Italian form by preference (see *h*).

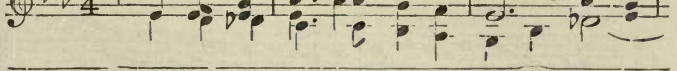
Eleventh.—Omit the third, fifth, and ninth (see *g*).

Thirteenth.—Omit the fifth, seventh, ninth, and eleventh using root, third, and thirteenth (see *j*).

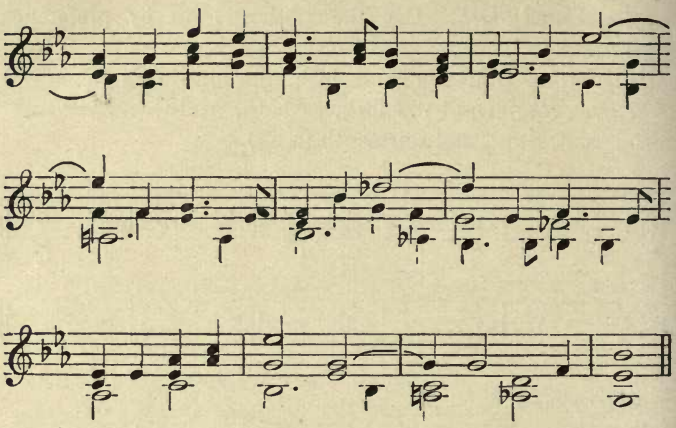


Specimen of three-part writing for two trebles and contralto (unaccompanied)—

From Sir Hubert Parry's Oratorio "Judith." (Vocal score, page 41.)

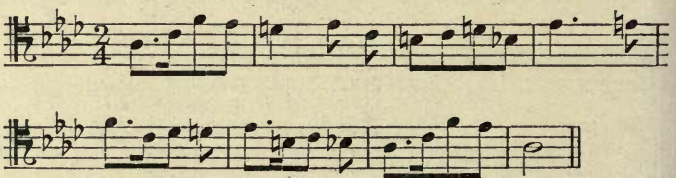


* Supertonic seventh.

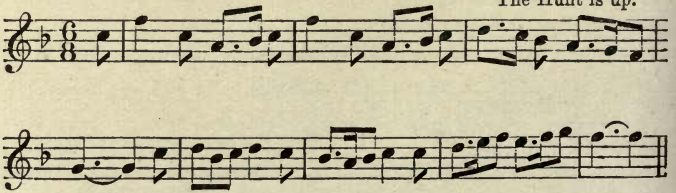


Exercise 30.—*On Three-Part Writing.*

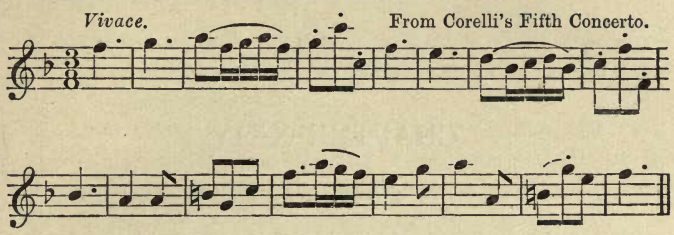
a. Harmonise for soprano, alto, and tenor—



b. For two tenors and a bass.



c. Harmonise for two violins and viola.



d. Write a short trio for soprano, alto, and tenor.

e. Write a short trio for two tenors and a bass.

f. Write a short trio for two violins and viola.

CHAPTER XXIV.

FIVE-PART WRITING.

196. In Five-Part writing a 2nd soprano or a 2nd tenor may be added to the ordinary score for four voices. Occasionally a 2nd alto or 2nd bass forms the fifth part, though this is less frequent. The two usual methods of arrangement are :—

a. 1st and 2nd soprano, alto, tenor, bass.

b. Soprano, alto, 1st and 2nd tenor, bass.

197. All the general rules of four-part harmony will remain in force, subject to the following *relaxations* :—

I. The major third may be doubled, though the doubling of the leading note should still be very sparingly employed.

II. Hidden fifths and octaves between the middle parts, even if the parts move by skip, are often unobjectionable.

With the usual exceptions (see Chap. II., par. 28) hidden consecutives between the extreme parts should still be avoided.

III. Some authors allow *consecutives by contrary motion* in five-part writing, but this device is seldom necessary, and it is frequently weak and ineffective in less than seven or eight parts.

IV. Crossing of the parts may be used in order to obtain good part-writing, but this device should not be resorted to in order to escape from some mistake that would otherwise arise.

198. Rules for Five-Part Writing :—

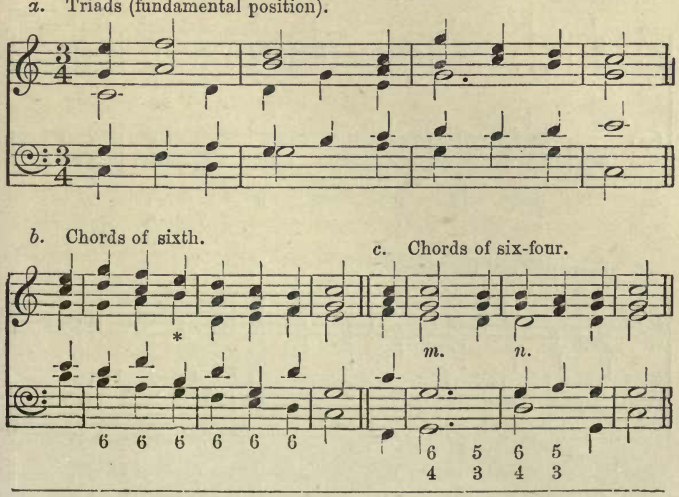
I. Keep the extreme parts well separated from each other in order to allow the necessary room for the three intermediate voices.

II. In doubling a note of a chord to make the fifth part select the note that is most independent in its progression ; or the note that, by its position, will give the greatest resonance to the chord.

III. Equi-distance of parts will give fulness of effect The widest intervals should generally lie between the *lower* parts, and the smaller intervals between the *upper* parts.

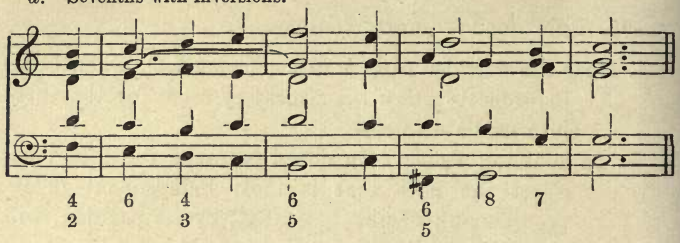
Parts placed close together in the lower section of the harmony will always produce a thick, unpleasant effect.

199. Examples of chords in five parts :—

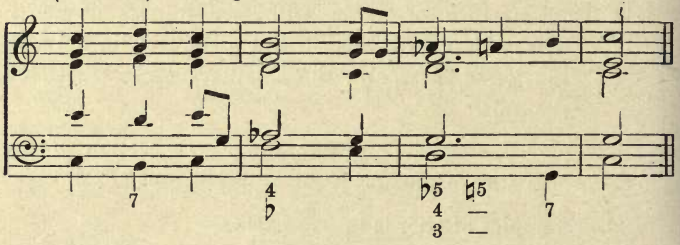


* Octaves by contrary motion

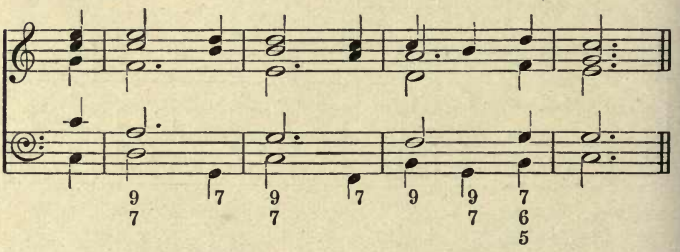
d. Sevenths with inversions.



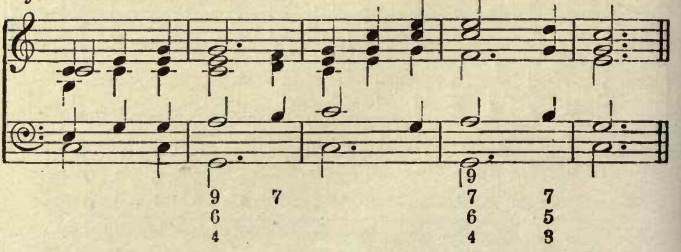
d. (*continued*). Leading and diminished sevenths.

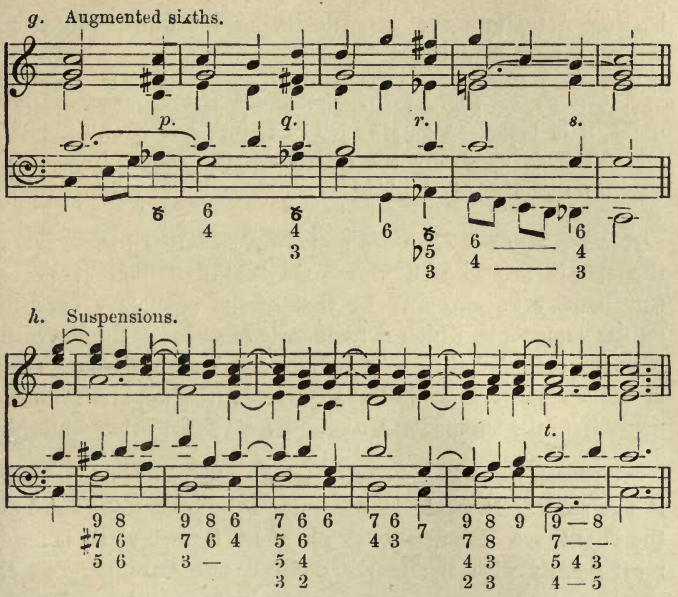


e. Ninths.



f. Elevenths and thirteenths.





a. Triads in Fundamental Position.—Any interval may be doubled (generally excepting the leading note).

b. Chords of the Sixth.—Place the sixth in the upper part, the third in a middle part, and let the other two parts alternately double any of the three notes of the chord. One part will be always less smooth than the others.

c Chords of the Six-four.—Triplicate the bass (see Example *c* at *m*), or double the fourth, letting one ascend and the other descend (see Example *c* at *n*).

d. Sevenths and their Inversions.—Double the root or the fifth, since the other notes, having compulsory resolutions, cannot be doubled.

In the leading seventh and diminished seventh, double the third or fifth of the chord, since the bass (being the

leading note) and the seventh (being the ninth, major or minor) cannot be doubled.

e. Chords of the Ninth.—As these chords possess five notes, it is better to employ *all* of them; but if one note is omitted it is generally the fifth from the root. In such a case the root itself is doubled.

f. Chords of the Eleventh and Thirteenth.—In these cases the chords are so rich in sounds that five distinct notes can usually be chosen. In that of the secondary seventh on the supertonic, which is frequently regarded as the eleventh with the root and third omitted, the treatment becomes that of the ordinary seventh, the supertonic (the apparent fundamental), or the submediant (the apparent fifth) being doubled.

g. Augmented Sixths.—The Italian sixth is seldom used in five parts. It would be necessary to triplicate the third of the chord (see Example *g* at *p*). The French sixth is used most readily with the fourth doubled (see Example *g* at *q*) since, as that note is a root, it is independent in its progression. The German form, when used in five parts, has the third doubled (see Example *g* at *r*). In the resolution both these thirds may remain stationary, or one may leap. In Example *g* at *s*, the French form of the augmented sixth on the flattened second is used.

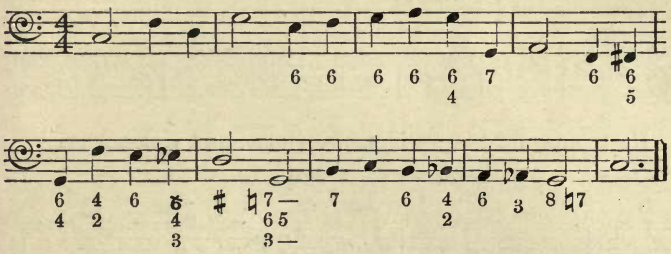
h. Suspensions.—In the resolution of suspensions in five parts, some authors allow the note of resolution to be heard *with* the suspension, provided such note of resolution is approached and quitted in ascending—*i.e.*, in contrary motion to the downward movement of the suspension, but it is rarely effective and often harsh. An example will be found at the end of Example *h*, between the tenor and soprano at *t*. It is, however, frequently possible to double the note of resolution in another part, when such resolution *has* taken

place (see the second bar of Example *h*, between the tenor and alto).

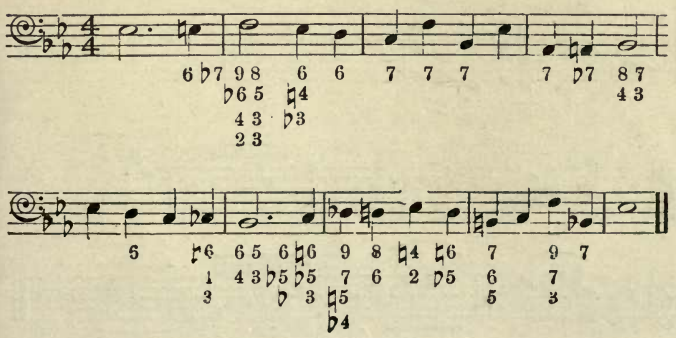
200. It is not proposed to treat of writing in more than five parts, such study being only necessary in the work of advanced students. The object of this Harmony Course will have been attained if it is able to furnish some aid to the fuller appreciation of the study of harmony, not as a series of mere mathematical exercises, but as the groundwork of all that is beautiful in the art of music.

Exercise 31.—*On Five-Part Writing.*

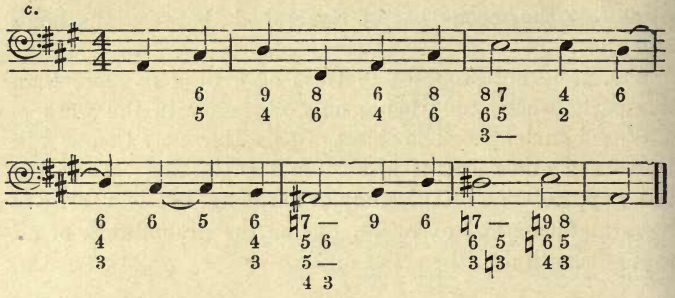
a.



b.

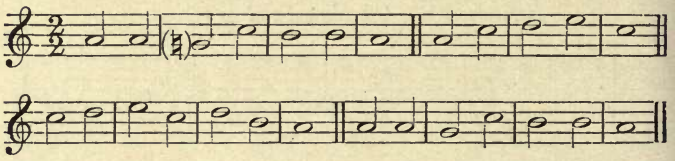


c.



Harmonise for two sopranos, alto, tenor, and bass.

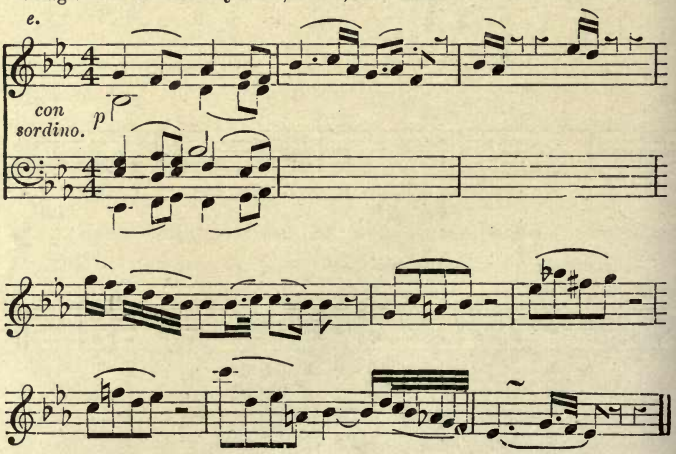
d. Chorale, "Nun komm, der Heiden Heiland." Luther.



Harmonise for two violins, two violas, and violoncello.

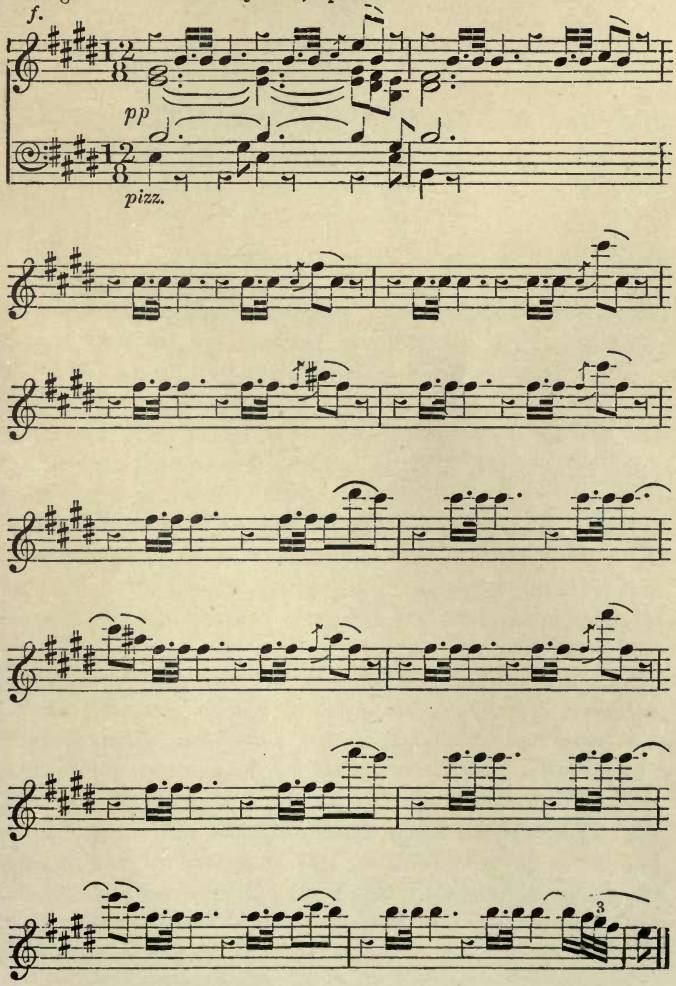
Adagio from Mozart's Quintet, No. 3, in G minor.

e.



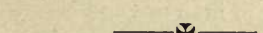
Write for two violins, viola, and two violoncellos.

Adagio from Schubert's Quintet, Op. 163.



APPENDIX.

HINTS ON THE TRAINING OF THE EYE AND EAR IN THE STUDY OF HARMONY.



Unless the student is able to recognise and name those chords which he hears, and also, when reading a succession of chords with his eye, to hear them at once in his mind, the working out of harmony exercises becomes merely like a musical sum, and is of little or no art value. It has rightly been said that he only is a well-trained musician who can "hear with the eye and see with the ear." Though this is a natural gift granted to many, yet the power to acquire it is within the reach of all who will show reasonable assiduity in its acquisition. Towards this result the following few hints are added to the foregoing pages, in order to show the student and the teacher upon what lines it is simplest to work.

Harmony, following the basis of all music, makes all its chords primarily related to *one* note—the tonic of the scale. It gives an abstract form of a scale applicable to all keys, such scale being represented by the terms:—Tonic, Supertonic, Mediant, Subdominant, Dominant, Submediant, Leading-note, Tonic. The student should study the training of the ear and eye by means of this abstract representation, and having thus mastered the degrees of a scale he should apply such abstract knowledge to the various keys—major and minor.

"Hearing with the eye" is the converse action to "seeing

with the ear," and the ability to hear mentally will always go concurrently with the power to analyse and name sounds or chords. The power to name notes or chords by "absolute pitch" is a gift, and where, as in the majority of cases, it is not naturally possessed, it can only with great difficulty be acquired by the gradual location of the pitch of *one sound* in the mind—such, for example, as the note A for instrumentalists (since an orchestra tunes to that sound), or C for vocalists. The naming of intervals and chords "relatively" by their sounds (*i.e.*, in their relationship to their tonic) is a power that can readily be acquired; and when, upon the tonic being given, the ear can detect such actual sounds, it will be easy for the eye, reading from the printed or written paper, also to suggest or reproduce those sounds in the mind.

The student's first step must be to acquire the power to recognise intervals when they are sounded. In regard to the degrees of the major scale, there are two classes of notes. The degrees included in the tonic triad are all so satisfactory to the ear that, in listening to them, the mind can rest satisfied without feeling any necessity for further progression. Of the intervals of the tonic chord, the octave unites the sounds so perfectly that the two notes almost sound as one; and hence the octave is the easiest of recognition by the ear and of reproduction in the mind by the eye. The perfect fifth — between the tonic and dominant — while sounding bare and empty, yet contains an element of brightness peculiar to the fifth degree of the scale. The sound of the major third—between the tonic and mediant—is at once recognisable by its quiet, calm, and restful effect. *On these sounds only*—octave, perfect fifth and *third—can the ear rest satisfied without a desire being awakened for further progression.

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* Major or minor, as will subsequently be shown.

Exercise.—Strike on the pianoforte octaves, perfect fifths, and (at present) major thirds, and try to realise their essential characteristics.

Whenever possible the student should also get someone to play these intervals to him, and he should endeavour to name them as they are played. Finally, he should write them down on paper and try to recall to his mind their exact sounds. These three phases—playing oneself, naming when others play, and imagining the sound in the mind when looking at printed or written music—should be scrupulously carried out in *all* subsequent exercises.

While the three intervals of the tonic chord (octave, fifth, and third) each satisfy the ear, the remaining four intervals of the major scale are *incomplete* in their effect, and require further progression before the ear is at rest.

The major second seems to demand that the lower note should fall one degree, and by this peculiarity its sound can be recognised and reproduced in the mind.

Exercise.—Play major seconds in various positions on the keyboard. Also play their constituent notes, one after the other.

The perfect fourth, when between the bass and an upper part, is a discord (see par. 13, page 5), and hence the ear demands that the upper note should *fall* to the calm mediant. Moreover, the student will notice that the fourth degree—the subdominant—always produces a *dull* effect, in marked contrast to the brightness of the dominant. These two characteristics—a tendency to fall to the mediant and dulness—make the subdominant itself and the perfect fourth (I.—IV.) always easily recognisable.

Exercise—Sound perfect fourths as intervals (sounded together), or as melodic passages (sounded one after the other).

The major sixth, between the tonic and submediant, also sounds incomplete to the ear, and seems to demand that the upper note should fall to the dominant. It can thus be recognised as the *note beyond* the dominant and as requiring to fall to that note (the dominant).

Exercise.—Play sixths in various keys, playing the two notes simultaneously or separately.

The leading note, from the peculiarity that its very name implies, is most easily recognisable by the ear and reproducable in the mind by the eye—since its tendency is to lead home (or upwards) to the tonic. Even when both notes of the major seventh are struck together the same upward tendency is felt.

Exercise.—Play major sevenths as intervals and as melodic passages.

The supertonic has frequently, in melodic passages, a marked tendency to *fall* to the tonic. The student should now endeavour to name (by their degree-names) short melodic passages of four sounds, when played to him, ascertaining each note by means of its mental effect. Having then written down such short passages by their degree-names, he should read them with his eye and reconstruct their sounds in his mind. Lastly, the player should name the key in which he is playing the tests, and the student should name the notes played in that key—*i.e.*, he should adapt his abstract knowledge of degree effect to the definite pitch to which he is listening. Thus, if, in the key of D, the notes D, G, F sharp are played, he will recognise the sounds as tonic, subdominant, and mediant, and, translating that knowledge into the key of D, he will name the notes as D, G, F sharp.

The minor scale includes four more intervals from the tonic. The minor tonic chord contains the minor third. This sound is easily distinguishable from the major third, since, though it

still sounds calm and restful, it possesses a more mournful effect.

Exercise.—Sound major and minor thirds in various positions.

The minor second produces so strong a discord that it is easily recognisable, the lower note wanting to fall a whole tone, while melodically the flattened second degree appeals to the ear as the *nearest* sound above the tonic. The minor sixth is also an easy interval to recognise, since, compared with the major sixth, the flattened sixth has a much stronger tendency to fall to the dominant. As students of harmony know, this flattened sixth of the scale is most frequently the dominant minor ninth of the key, and, as such, it always *falls* to the dominant. Hence the strong feeling of a minor sixth wanting to fall to the fifth degree, by which characteristic it can be readily recognised.

Exercise.—Sound minor seconds at various pitches. Sound minor sixths, marking the tendency of the flattened sixth to fall.

The interval of the minor seventh appeals to the ear by its resolution invoking the *progression of both sounds*, the upper sound requiring to *fall* a degree and the lower sound to *rise a fourth* (like a dominant rising to a tonic).

Exercise.—Sound minor sevenths, recognising the desire of both notes to move in resolution.

There remains one more interval from the tonic—viz., the diminished fifth, from the tonic to the flattened dominant (as C to G flat). This interval—like the minor seventh—is also recognisable through the progression desired by both sounds; but the distinguishing feature here is the desire of the lower note to move a second only. If the ear realises the sound as the flattened fifth, the notes will express a desire to *approach* each other; but if the ear detects the upper note as the sharpened fourth, the notes will want to *move away* from

each other. The student has now the knowledge necessary to appreciate by ear and reproduce to the mind by the eye the usual intervals from the tonic.

TABLE OF INTERVALS, WITH THE EFFECTS WHEREBY THEY MAY BE RECOGNISED.

Octave.—The perfect union of the two sounds so that they almost sound as one. The ear at rest.

Major Seventh.—The upper note, as the leading note, will require to ascend.

Minor Seventh.—Both notes will require to move; the upper down one degree, the lower a *fourth* upwards.

Major Sixth.—The upper note will have a tendency to fall to the dominant.

Minor Sixth.—The upper note will have a very strong tendency to fall to the dominant.

Perfect Fifth.—The interval will sound bright. The ear at rest.

Diminished Fifth.—Both notes will require to move *towards* each other by the interval of a second.

Augmented Fourth.—Both notes will require to move *away* from each other by the interval of a second.

Perfect Fourth.—The upper note requires to fall a degree to the mediant.

Major Third.—A calm, peaceful effect. The ear at rest.

Minor Third.—Peaceful, but more melancholy. The ear at rest.

Major Second.—A close discord, the lower note requires to descend a semitone.

Minor Second.—A fierce discord, the lower note requires to descend a whole tone.

The student should now be able to analyse by ear, or reproduce in his mind, the sounds of short passages in two-part harmony, at first treble and alto, or tenor and bass, and subsequently treble and bass.

TABLE GIVING THE HARMONIC TENDENCIES OF THE SCALE-DEGREES.

Tonic.—At perfect rest.

Leading Note.—Requiring to *ascend* to the tonic.

Submediant.—Requiring to fall to the dominant as the nearest note that satisfies the ear.

Dominant.—A bare, bright note, but satisfactory to the ear (*i.e.*, not like sixth or seventh degrees, demanding further progression to complete its effect).

Subdominant.—A dull sound requiring to fall to the mediant.

Mediant.—A calm, peaceful sound on which the ear may rest.

Supertonic.—Requiring to *fall* to the tonic.

The tonic, mediant, and dominant have been called the "strong" notes of the scale, since each individually satisfies the ear; the supertonic, subdominant, submediant, and leading note, the "weak" notes of the scale, since each desires further progression to complete its effect. Exercise 1, letter *h* (page 6), will afford good practice in this respect.

It is not possible to treat the melodic side of ear and eye training beyond these few hints in this book, but if they are assiduously applied they will greatly assist the student.

The combinations of sounds in chords may be classified into three groups. The first group consists of the chords which satisfy the ear and sound complete in their effect; to this class belong the primary triads and the secondary triads that are minor. The second group contains those chords which, though not complete in their effect, contain no discord to fetter them essentially in their future progression; to this class belong the first inversion of the triads—the chords of the sixth. The third group consists of those chords which contain such dissonances as limit them in their progression, compelling them to pass to certain other chords; this latter class is the easiest of recognition by the ear and of reproduction in the mind by the eye. These three groups will now be treated separately.

Group I. contains those chords which in themselves satisfy the ear. Starting with the tonic chord, the student must first make himself thoroughly acquainted with its sound, and with its three melodic effects—according as the root, the fifth, or the third of the chord is in the treble. The chord, with its root in the melody, partakes of the essential quality of the tonic and typifies perfect rest. If the student plays the tonic and dominant triads as given in Exercise 2 (page 13), he will at once appreciate that as strongly as the tonic typifies *rest*, the dominant typifies *motion* and demands a return to a state of rest.

Exercise.—Let Exercise 2 (*a* to *f*) be played over and written down by the student. He should analyse the chords both by their harmonic and by their melodic effects. Subsequently he should read over his work with the eye and endeavour to reconstruct in his mind the sounds of the chords. These two phases of exercise should be carried out in all harmony ear-and-mind work.

The subdominant chord should next be learnt. Special notice must be taken of the lack of brightness in the chord as in the degree itself. It has been called the solemn chord. Exercise 3 (*a* to *d*) should now be treated similarly in the manner adopted in Exercise 2.

Having now acquired the ability to write down on hearing, and reproduce in the mind on seeing, the notes representing the sounds of the primary triads, the student should test his knowledge by turning to very simple music, such as would be found in an instruction book for the piano, and on reading it with the eye he should find that he has already the power of mentally hearing the music. Exercise 4 (*b* to *e*) will also prove useful.

The primary triads in the minor key will possess no fresh difficulty, since the "sadder" nature of the minor third will distinguish it from the major third, while the flattened sixth degree in the minor subdominant chord will more imperatively demand, than in the case of the major subdominant chord, that such flattened sixth should descend to the dominant. Exercise 8 (page 29).

The secondary triads in the major have now to be similarly learnt—viz., the triads on the supertonic, mediant, and submediant. Here a certain tendency of chord progression sometimes assists the student. Thus (see par. 37) the supertonic frequently leads to the dominant, the mediant to the subdominant, the submediant to the supertonic, mediant, or

downwards, by degree, to the dominant. Exercise 5 (*g to l.*) In the minor, the secondary triad on the submediant should be carefully learnt. All the chords thus far given are complete in their effect on the ear and the mind. The student may note that they are all in root positions.

Group II. contains those chords which, though incomplete in their effect, yet contain no discords which limit their progression. The first inversions of the triads mostly belong to this class. The student should play the triad of C in its root position and it will seem complete; then he should play its first inversion, as a chord of the sixth on E; it will at once sound incomplete, although the ear accepts it as being free in its further progression.

Exercise.—Various chords and their first inversions to be played, the student to name or write them. Afterwards, he should endeavour to read with the eye the passages written, and imagine the sounds in the mind.

The first inversions of the primary triads in the major key produce minor sixths, while those of the secondary triads on the supertonic, mediant, and submediant produce major sixths. This appreciable difference is also of use in ear recognition and mental reproduction of this group of chords. Exercise 11 (*a* to *d* and *h* to *j*).

Group III. consists of those chords which, containing discords, are not free in their progression. Through this compulsory demand made by the ear in regard to their resolution, they are the easiest for the student to learn to recognise and to mentally reproduce.

Those secondary triads which are diminished (on the leading note in the major and on the supertonic and leading notes in the minor) commence this group. The student should note what is stated in pars. 40 and 47, and he

will readily be able to recognise by the ear and mentally reproduce these chords. Exercises 7 (*a*) and 9 (*a* to *d*).

The second inversion of the triad belongs to this class, as it contains the discord of the fourth between the bass and an upper part (compare par. 13, page 5). The way in which the ear naturally demands that the 6-4 may be followed by a 5-3 on the same note (see par. 62) removes all difficulty in distinguishing this chord.

Exercise.—Second inversions to be played and the student to realise the downward tendency of the sixth and fourth. Exercise 12 (*d* to *h*) may also be dictated and afterwards read through by the eye and mentally reproduced.

The dominant seventh must then be acquired by both the ear and the mind. In its fundamental position, the natural tendency of the dominant in the bass to proceed to the tonic will be at once noticed; this will help towards its speedy recognition. In the inversions, the mental effects of the degrees on which they are found will aid in determining their characteristics. Thus the first inversion of the dominant seventh (6-5) is on the leading note, and such leading note will cause the bass note to desire to *rise*. The second inversion is on the supertonic, and hence the bass note will desire to *fall*. The third inversion is on the subdominant, and hence the bass note will desire to *fall* to the *mediant*.

Exercise.—Dominant sevenths and their inversions to be played, and the student to learn to recognise them by ear. Subsequently he should write some of them down and endeavour to reproduce them mentally. Exercise 14 (*a* to *l*) and 15 (*n* to *s*) may also be dictated, and, when written down, may be read through by the eye and reproduced in the mind.

Chromatic sevenths, from their compulsory resolutions, will offer slight difficulty (see pars. 107 to 109); and having

mastered these by ear and eye, the student should take up the ninths, major and minor.

It is only thus, by the gradual and systematic study of the *sounds* of all these chords, that he can possibly hope to be able to reproduce them mentally. It is not necessary to carry these few hints beyond this point, for the student will at once perceive that the same principles that have been suggested here in these initial exercises should be carried out throughout the whole study of harmony.

The teacher is very strongly urged to recognise that old essential maxim of good teaching—the Fact must precede the Sign. If he will make his pupils realise the *sound* of everything that he explains, so that they may adequately associate sound and symbol, then he will find that the hearing of the mind through the eye will be steadily acquired with each section of the work accomplished. A colour-blind painter could not paint a picture, neither could a mentally tone-deaf student write a musical art-work; but while colour blindness is incurable, mental tone-deafness is speedily overcome, if the teacher will work intelligently, never neglecting *in every lesson* to train the student to appreciate the *actual* sound of every chord explained, so that his pupils may be able to detect them when they are heard, and to reproduce them mentally when they are seen.

INDEX.

Bridge, (Sir) Frederick
A course of harmony, by Frederick Bridge and Frank J. Sawyer