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HARMONIC ANALYSIS

BENJAMIN CUTTER

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HARMONIC ANALYSIS

A COURSE IN THE ANALYSIS OF THE CHORDS AND OF THE NON-HARMONIC TONES TO BE FOUND IN MUSIC, CLASSIC AND MODERN

BY

BENJAMIN CUTTER

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HARMONIC ANALYSIS

PREFACE.

THIS book is designed, primarily, for those who have studied Harmony and would apply it in their every-day musical life, — in other words, in their playing and in their teaching. It is planned — although no premium is hereby placed on superficiality — as much for those people who have made poor work of their harmony, so far as turning out a good-sounding product is concerned, as for those to whom the difficulties were as naught. Furthermore, it is planned for him who, living in some place inaccessible to the best performances, would fain review what he has learned, — if possible, in a manner other than that of laboriously writing exercises, — would broaden his musical horizon and thus increase the gift Heaven has given him, and appease, in a measure, that hunger for chords and for things harmonic which characterizes so strongly this present day.

By not a few observers it has often been thought that the ordinary course in harmony ceased before its rightful end, and that there was no connection, or not enough connection, made between harmony and playing; *i. e.*, between harmony and practical musicianship. Harmonic Analysis, it has been held, would give the ordinary non-composing student an opportunity to make his harmony a live thing; and experience has justified this idea.

The Course of Instruction in the New England Conservatory of Music, Boston, Massachusetts, from which this book has grown, was planned for forty class lessons. After canvassing the field, the following representative works were chosen, and have been held to with gratifying success: Schumann, *Scenes from Childhood*, Op. 68; Bizet, Suites, *L'Arlésienne*, Nos. 1 and 2; Chopin, *Preludes*;

Wagner, Selections from *Tannhäuser, Lohengrin, Tristan ;* and, in some cases, Grieg, *Humoresken,* Op. 6. Absence of a text-book made imperative, however, from the beginning, not only the dictation of principles, but also constant discussion, time-robbing, and, because more or less was naturally forgotten, unsatisfactory. A text-book became necessary ; a book comprehensive and up to date. On studying his subject for the recitation and for this book, the writer confesses that he was dismayed by its dimensions and by the very multitude of conditions he was forced to consider and to explain. The number of harmonic phenomena, of tone combinations, complications, which occur in modern music, although they admit of a reasonable classification, goes well-nigh into the infinite. More than this, not a few are extremely subtle in nature. Things which the composer absorbs unwittingly, and accounts for in an off-handed manner, if at all, may to the layman, when he comes to define them, present very considerable difficulties. Furthermore, these subtleties occur in every-day modern music. For these reasons a certain breadth of scope and entrance into detail has been observed from necessity in the general plan of this book.

As will be noted, examples have been drawn from the most varied sources. The page-limits of a work of this sort forbade, however, the use of many quotations which might have been used and which suggest themselves, no doubt, to the connoisseur. But it is thought that this presentation will be found ample enough for practical purposes, — provided the student applies what he has acquired here.

It is believed by men generally, that the understanding of a thing heightens its enjoyment. We read "Hamlet" with care, that not a point of stage-craft may be lost, and our emotions are moved the more powerfully because of our knowledge. In the same way, it is believed that by a careful study of this book, one may learn not only to analyze and to understand anything in the way of harmony that he may chance to meet in musical literature, classical or modern, but — what is far more important — through his heightened powers of comprehension he may be enabled to hear with greater understanding, to read at sight with more facility, to play

and to sing with more intelligence, and consequently may have his musical perceptions — those gifts of delight to man — quickened and made more responsive, whether he act as player, as singer, or as listener.

And, lastly, — and this is not the least consideration, — the author believes, and by experience knows, that the student of composition may be benefited by a study of this subject; that, instead of spending more or less valuable time in finding out the many minutiæ of modern harmony, he may behold them here stated for his examination and possible application.

BENJAMIN CUTTER.

Boston, June 12, 1902.

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HARMONIC ANALYSIS.

PART ONE.

INTRODUCTORY.

Section 1. Definition. Harmonic Analysis is the art of accounting for the various chords and foreign tones which make up the harmonic structure.

Section 2. Requirements. To carry on the study of Harmonic Analysis successfully, the student must have learned enough harmony to be able to write exercises employing all the chords of three and four tones, and to modulate on paper, and, if possible, at the keyboard. It will indeed be found better if the whole course in harmony be finished before taking up this study. In this event the object for which this book was written will be best and most easily realized.

Section 3. On Progressions in General. Harmonic Progressions may be summed up briefly as follows: those of the Fifth-Relationships, up or down — V, I; I, IV; II, VI, etc.; those of the Third-Relationships up or down — V, III; I, VI; II, IV, etc.; and those of the Second-Relationships, up or down — I, II; V, VI; VI, V, etc.

All harmony is composed of the elements of unrest and rest, of the progression of a chord more or less dissonant into a consonance, or into one or more successive dissonances before its final resolution — or, the reverse of this. To these two sound phenomena are attached physical and psychical impressions which, although they exist and are recognized, seem to defy a final analysis and to remain beyond satisfactory examination and explanation. These two elements, of rest and of unrest, repeated over and over, with manifold embellishment, constitute Music. In that form of the Fifth-Relationship in which the root falls, is found the most natural resolution or progression of any chord. Thus, the III goes to the VI,

the VI to the II, the II to the V, the V to the I, in both major and minor, and the nearer the progression approaches the tonic harmony, the more gratifying and reposeful the effect. Hence the name, Normal Progression, sometimes applied to this peculiar succession. To modify any of these chord successions by the addition of a seventh to the first chord — as I_7 IV, or II_7 V — or by the chromatic alteration of the first chord, only heightens the effect; and this effect, to repeat, is the impression of rest, of satisfaction, more or less complete.

All other progressions, especially if they employ the secondary triads, have in them, in varying degrees, the element of suspense, of unrest; of motion, if we may say so. Their use in certain schools of composition is infrequent; in other schools, especially in the form of the Second-Relationships, they are very common. Still, startling and interesting as may be many of these progressions above mentioned, the student will find that the I, IV, V, and II in the Fifth and in the Second-Relationships, form the stock in trade of the composer and the material which in Analysis he will have most often to consider.

Section 4. Plan of Study. In pursuing this course the student is expected to examine carefully the examples given, with due reference to the text; and, in working out the lessons, to indicate by the proper signs the keys as they occur, and the nature — place in the scale, and inversion — of each and every chord; and to give to each foreign tone its own distinctive mark. Also, where required, he is to reduce the tone structure to its essentials, one of the most valuable of exercises, directions for so doing being given at the proper place. To sum up: **He is to account for each and every tone, whatever its duration or location.** All lessons, unless otherwise specified, may be marked in the text-book itself, the signs of expression, etc., having been omitted to make sufficient room.

Section 5. Remarks to the Teacher. This course should be taught at the keyboard, the scholars reading the figurings in turn, or, in a doubtful case, the opinion of the whole class being found before a decision is made. Any tendency toward super-

ficiality which this method would seem to favor, may be offset by written examinations in which the examined must *know — or fail!* The class should enjoy the benefit of general discussion, and scholars should be led to argue for their figurings. But beware of narrow interpretations, of intolerant views; many phrases permit more than one solution.

The teacher is recommended to teach the pupil to argue backward. A doubtful passage often becomes clear if one looks on and finds the principal point toward which the doubtful passage tends.

Furthermore, to each section, beginning with Section 14, has been added a set of References. These the student will do well to look up. For, unless he have studied Composition and thus gone far beyond the bounds of the Harmony Course, it cannot be possible to make him ready and expert by the use of this book alone; and so large is the field to be covered that a fair canvass of it, such as has been attempted here, fills out the bounds of an ordinary sized text-book. More material is thus necessary — as any one versed in teaching can see. And, lastly, he who studies by himself, by looking up these references and marking them, can give himself a liberal education in Analysis — and for him were they first designed.

We have drawn from the following material: Beethoven, the first *Piano Sonatas;* Schumann, *Album for the Young*, Op. 68; Bizet, *L'Arlésienne*, Suites I and II: Chopin, *Preludes* — which we would advise the student to consult constantly; also, Czerny, Op. 299; Cramer, *Fifty Selected Studies* (von Bülow); Chopin, *Nocturnes* and *Polonaises;* Schumann, *Davidsbündler*, Op. 6, and *Fantasiestücke*, Op. 12; Grieg, *Poetic Tone Pictures*, Op. 3, *Humoresques*, Op. 6, *Lyric Pieces*, Op. 12; and, lastly, and of much importance to him who has patience to examine them, Wagner's *Tannhäuser* and *The Flying Dutchman* (Novello Edition).

An explanation of the figures used in making these References will be found in Section 16.

Section 6. Signs Used in Marking. A capital letter shows a major key; a small letter shows a minor key; a large Roman numeral a major triad and a small Roman numeral a minor triad;

the sign $^{+}$ shows the augmentation, and the sign ^{o} the diminution, of a triad.

Triads in major.	Triads in minor.
I	I
II	II°
III	III^{+}
IV	IV
V	V
VI	VI
VII°	VII°

The inversions of triads and of seventh chords, both principal and secondary, will be indicated by the customary figurings: ^{6}, $^{6}_{4}$, $^{6}_{5}$, $^{4}_{3}$, $^{4}_{2}$, attached to the respective Roman numerals. Or, the letters, *a*, *b*, *c*, *d*, meaning root-form, first, second, and third inversions, may be used with these same numerals. Thus: I_{a}, I_{b}, I_{c}, II^{7}_{a}, II^{7}_{b}, II^{7}_{c}, IV^{+}_{b}, III^{7}_{c}, etc. The diminished seventh chord, in its various forms, will be marked: VII^{o}_{7o}, VII^{o}_{5}, VII^{o}_{3}, VII^{o}_{2}, — or VII^{o7o}_{a}, VII^{o7o}_{b}, VII^{o7o}_{c}, VII^{o7o}_{d}.

Chromatic alterations will be discussed in their proper place.

Section 7. Principles of Analysis. (Preliminary Statement.)

No. 1. Spell each chord accurately.

F♯ has one significance, F another. An analysis may be made incorrect by carelessly calling F♯, F. Too great stress cannot be laid on this point.

No. 2. Build up the chords in thirds.

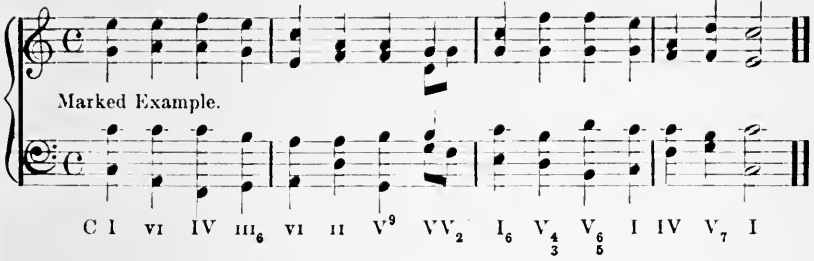
Seize that interval most apparent, third or fifth, and build from it in thirds until the whole chord be found.

Section 8. Triads and Seventh Chords. (No Modulations.)

Write the numerals and the signs of inversion.

(It has been found impossible to divide this book into lessons, as is done in most text-books, and the plan has been followed of numbering the exercises and examples straight through. The amount of work to be assigned to a pupil is thus left to the decision of the teacher.)

Exercise 1.



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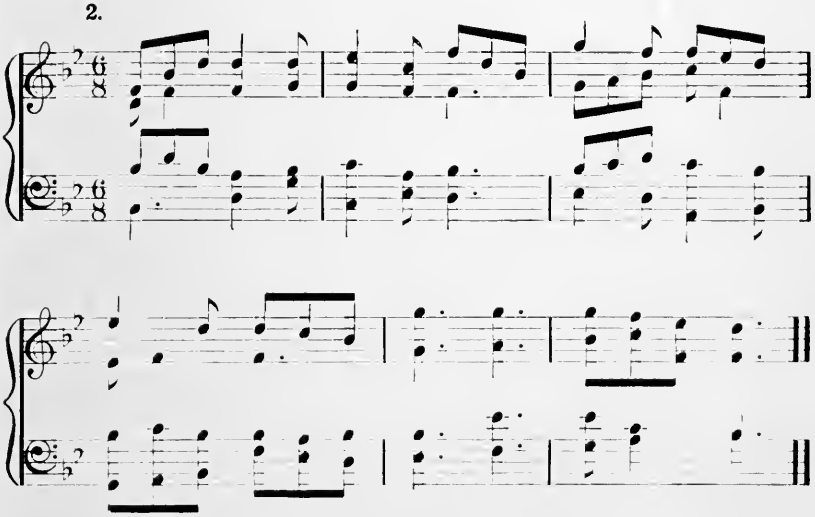

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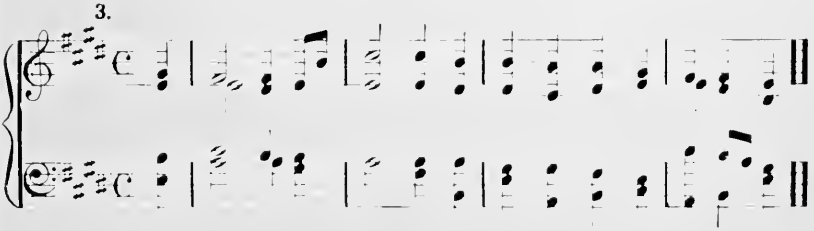

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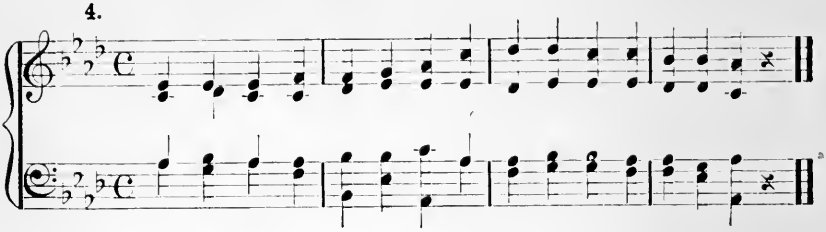

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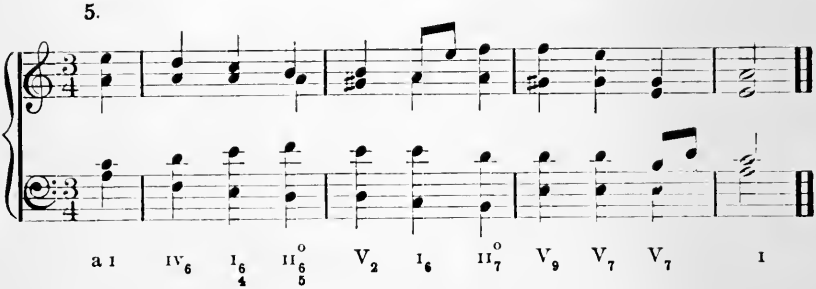

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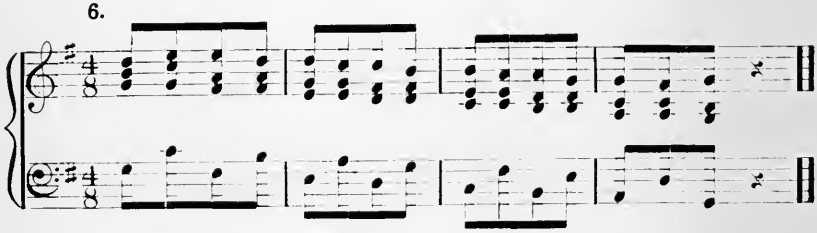

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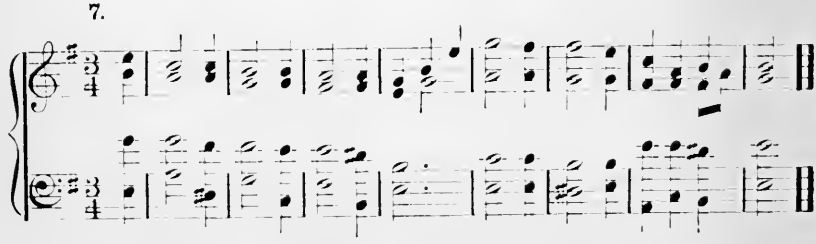

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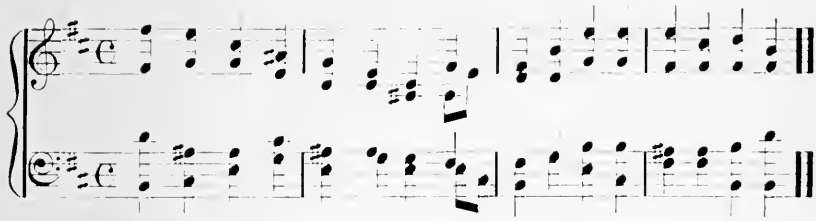

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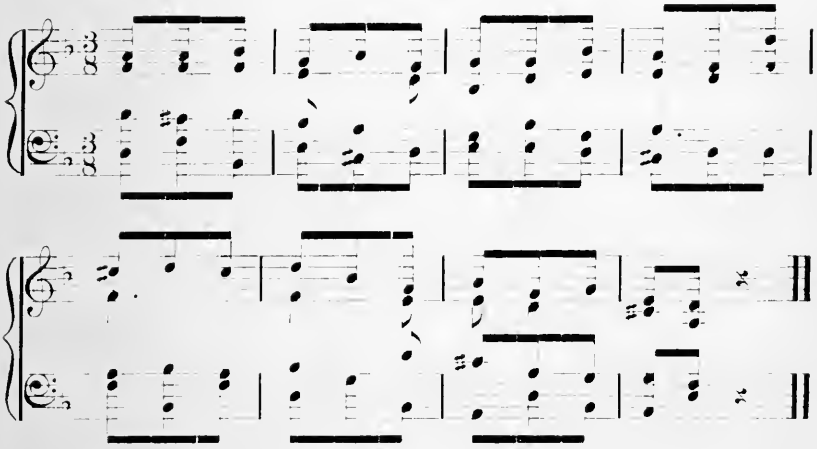

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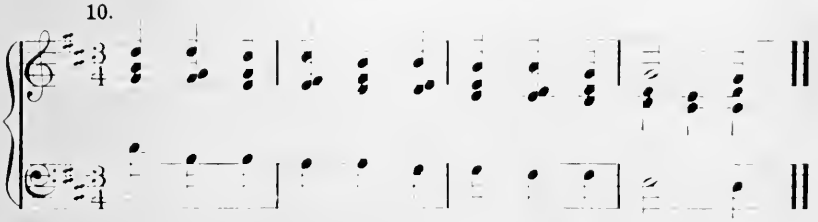

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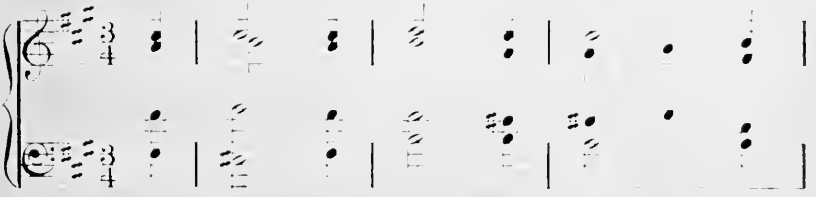
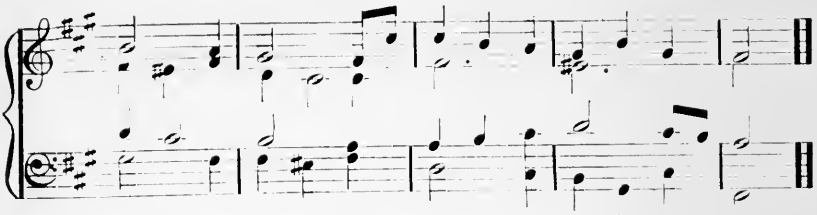
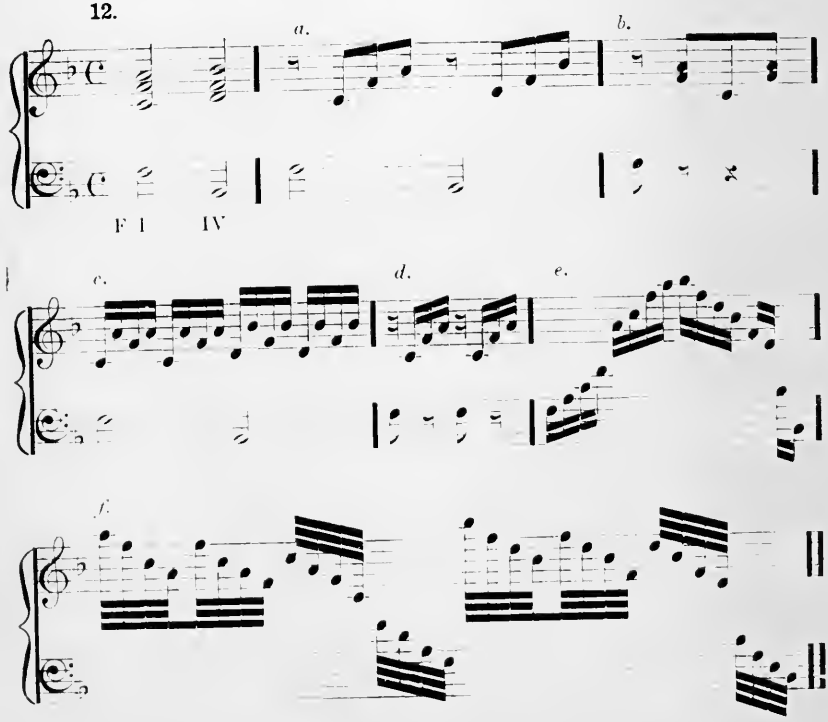




Section 9. The Broken Chord. All music is derived from the scale and the chord, the latter element predominating. The chord may be **plain**, all its tones sounding simultaneously, or **broken** in the many forms of the arpeggio; that is, its members may be sounded one after the other in a great variety of order. For instance, the chord structure given below may be broken in the following and in other ways without making a change of chord.

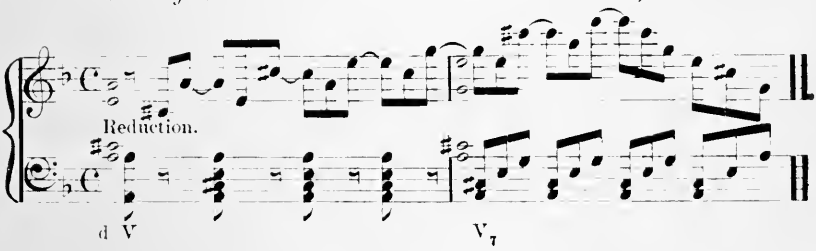
12.



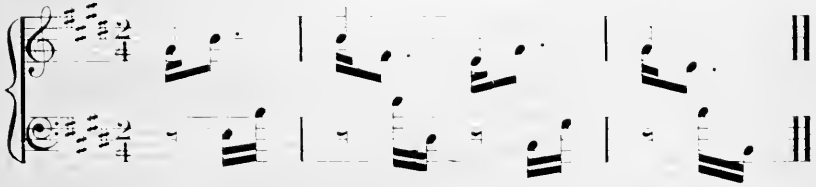
Section 10. Reduction. It will be observed that Examples *e* and *f* show a compass greater than that of the primary chord form; which leads to the General Statement, that **All broken chords may be reduced, with the voices which accompany them, if there be such, to a simple four-part structure.** In making such a **Reduction**, so-called, the extreme notes of the florid phrase must be brought into proper vocal compass, after which the inner parts may be added.

Mark each chord with its key and numeral, and in the case of an extended broken chord indicate by small notes the Reduction to the primary chord form.

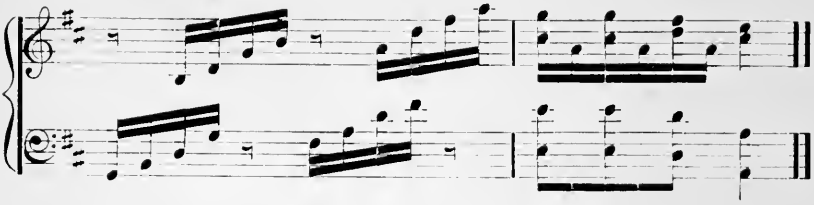
13. *Allegro.* WAGNER, Tannhäuser.



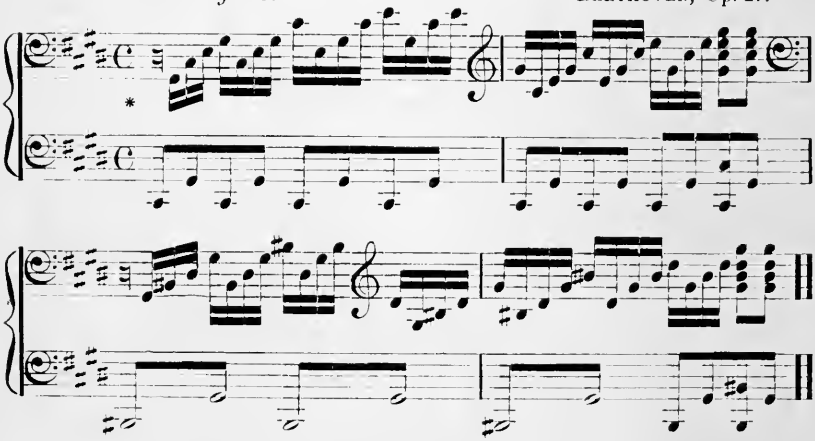
14. *Vivace.* BEETHOVEN, Op. 109.



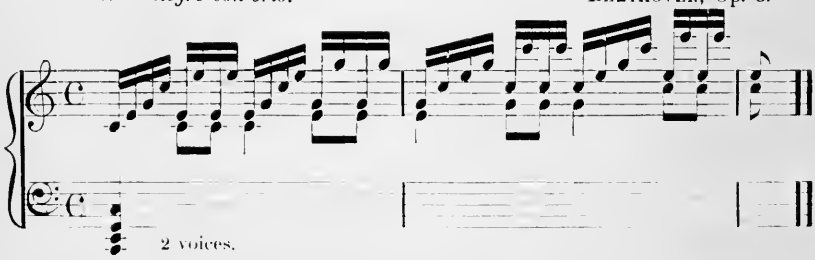
15. *Allegro.* BEETHOVEN, Op. 28.



16. *Presto agitato.* BEETHOVEN, Op. 27.



17. *Allegro con brio.* BEETHOVEN, Op. 3.



Section 11. The Broken Chord, the Appoggiatura, the Passing Tone, and the Embellishment. The tones of a broken chord may be preceded, all or some of them, by tones foreign to the

* The first and the last soprano note of each two-measure section define the upper voice in this case; No. 17 is different.

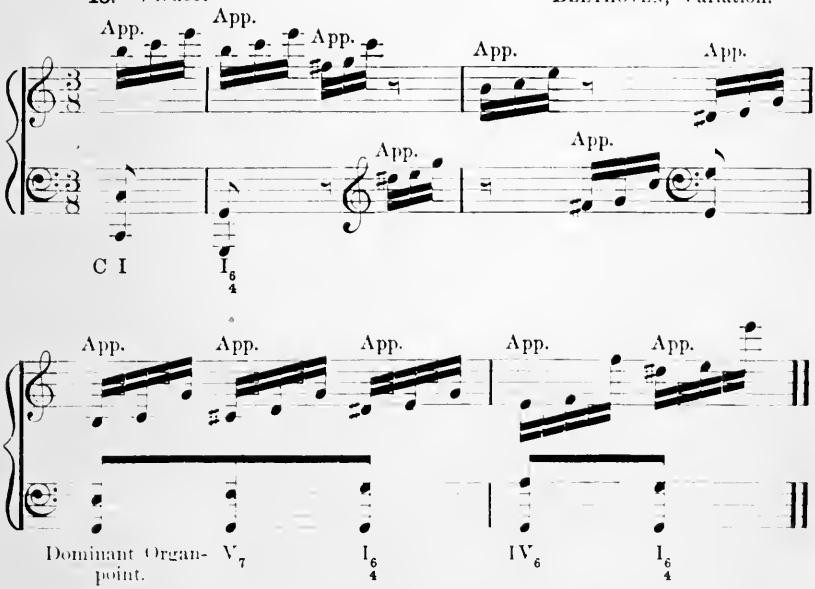
chord. The most common of these foreign tones are those mentioned in the above heading.

The **Appoggiatura** is a foreign tone which enters by a skip. A skip is any interval greater than a major second. The Appoggiatura may enter from above or below, and must move a second, major or minor, up or down. In its simplest form — that here given — it moves into a chord tone, and may have any time value, long or short, and may be on or off the accent. Other varieties will be explained later.

SIGN: App.

Model.

18. *Vivace.* BEETHOVEN, Variation.



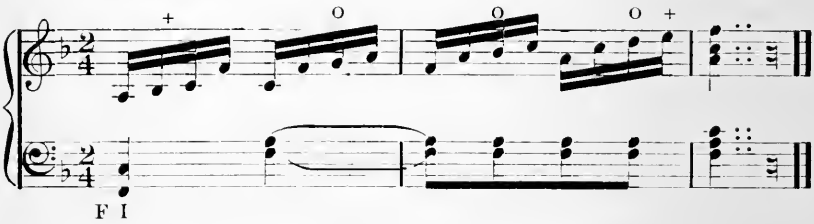
The **Passing Tone** is a foreign tone which stands between two chord tones. These two tones may belong to one and the same, or to two different chords, and the Passing Tone may be diatonic or chromatic, accented or not. The interval to be filled out may be a second, a third, or even a fourth; in the last case more than one diatonic Passing Tone will be required. Other conditions

will be discussed later. **The examples here given will show the Passing Tone used in connection with one chord only.**

SIGNS: Accented Passing Tone, O; Unaccented Passing Tone, +.

Model.

19. *Allegretto.* B. CUTTER, Verset.

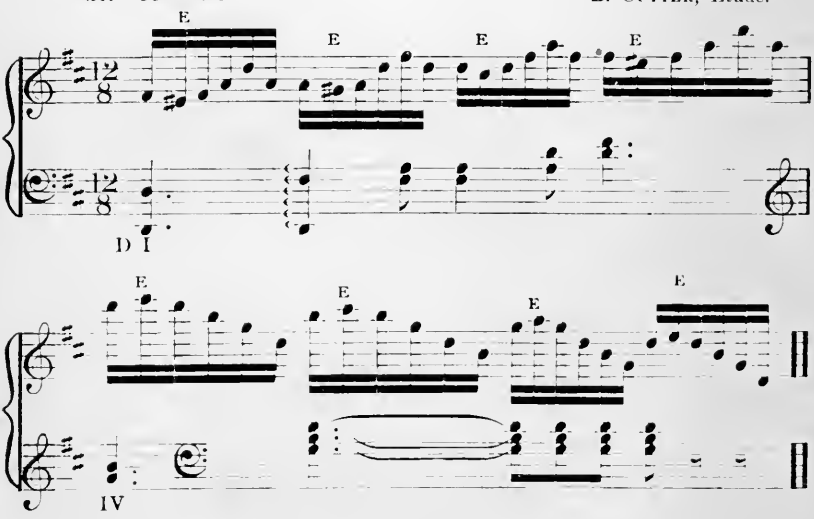


The **Embellishment** is the upper or lower neighbor of a chord tone, and proceeds from its principal, or harmonic, tone, and returns to this harmonic tone. The Embellishment may move a major or a minor second.

SIGN: E.

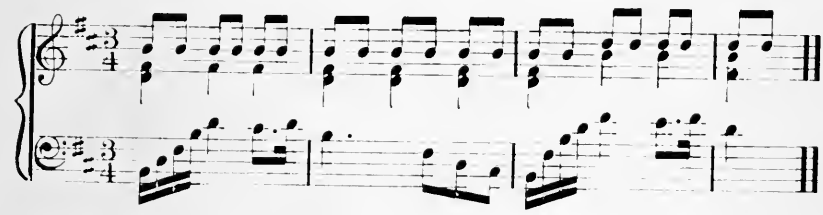
Model.

20. *Con moto.* B. CUTTER, Etude.

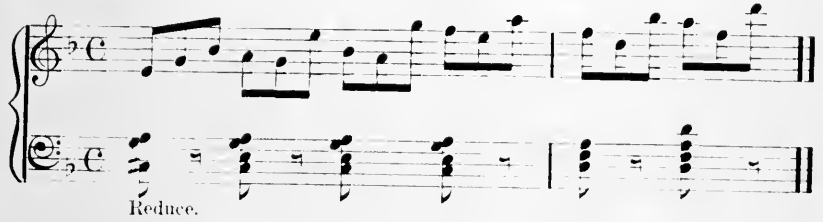


Mark first the chords in an example, then the foreign tones.

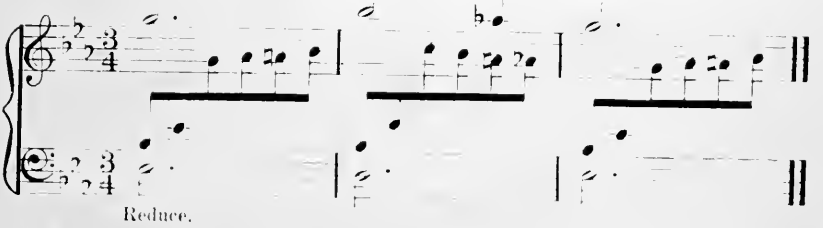
21. *Assai lento.* CHOPIN, Op. 28.



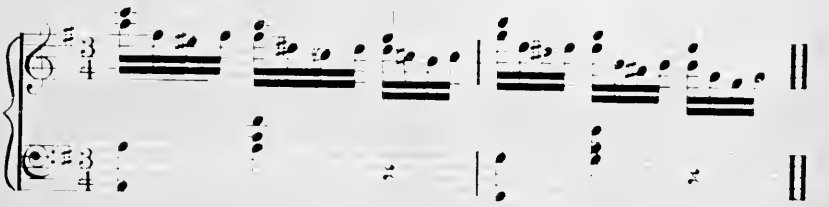
22. *Allegro.* WAGNER, Tannhäuser.



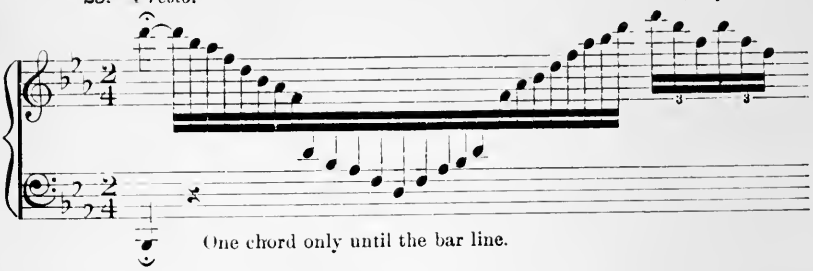
23. *Cantabile.* SCHUMANN, Op. 6.



24. *Moderato.* CRAMER, Study.

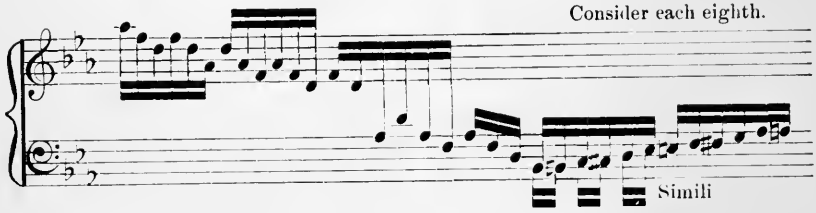


25. *Presto.* BEETHOVEN, Op. 35.

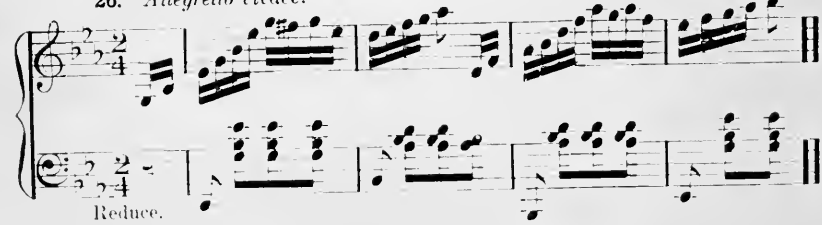


One chord only until the bar line.

Consider each eighth.

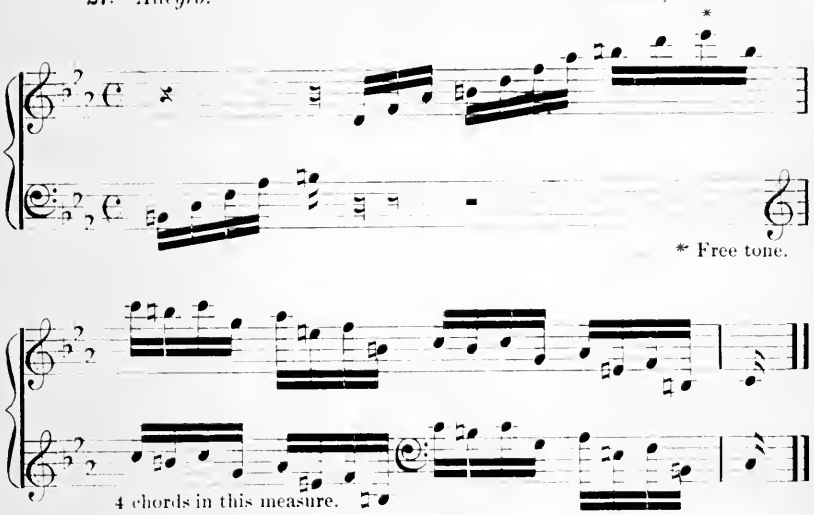


26. *Allegretto vivace.* BEETHOVEN, Op. 35.



Reduce.

27. *Allegro.* HUMMEL, Fantaisie.



Section 12. Modulation is a change of key. It is made ordinarily by a dominant harmony with its resolution, and, according to the older and some recent text-books, the presence of this progression, whenever it occurs and whatever its effect, constitutes a Modulation. In regard to this matter, however, views have become modified very materially, and the theorists, as in many other things, would seem to be, on the whole, behind the practicists, the composers. Indeed there is ground for belief that from the time of Haydn, perhaps from that of Bach, composers have thought it possible to raise and to lower certain scale steps, and to obtain thus non-modulating chromatic harmonies, which sound like modulations but do not leave the key.

In a piece in C major, for instance, we may find the dominant or diminished seventh of D minor, with its resolution, and this followed by C major chords. Some theorists contend that such a progression is a modulation; that any chord which has the intervals of a dominant seventh, and is properly resolved, is an undoubted dominant. Other theorists contend that a real modulation is made

only when the modulatory process is confirmed by a stay in its evident key; that these seeming modulations are only intensifications of triads of the key other than the primary tonic, generally the subordinate triads, accomplished by the use of their seventh chords; and that these chords or progressions in question are only altered chords, or progressions in the primary key, and are to be so marked. They quote that most startling and familiar example — the end of the Lohengrin Prelude, by Wagner — which, while seemingly moving through, or, as they sometimes say, "touching upon" such and such keys, really gives the ear the impression of A major, wonderfully enriched, but A major, all the time; many of them conceding, however, that this is an extreme case. A third party of theorists, acknowledging the difficulties of the matter, holds that while this passage in question may be in A major, to mark the many chromatic harmonies, as chromatic alterations in this key, is to strain the key unwarrantably; they would call each apparent change of key a real change, with a mental reservation as to the correctness of the analysis; would, perhaps, write two figurings, each one tenable, and depending on the point of view.

In opposition to all this, the old-school men say that the modern ear has heard so many modulations that it has become blunted, dazed; that if the ear were fresher and keener, it would call each progression in question an undoubted change of tonality; and they refer their opponents back to the impressions of youth, when each chord change ravished the auditory nerve, and each seeming shift in the seat of key, however fleeting, was felt as a genuine thing. They say, further, that the short and fleeting modulation, the Digression, so-called, is as much a part of the composer's stock in trade as that deliberate modulatory procedure in which the forces of the key are drawn up in array.

In this matter it is difficult to lay down a hard and fast rule. In many instances the analyst must use his own judgment, and the ear, which is plainly the last court of appeal, must be called upon to decide. And as ears do not always hear alike, the validity of more than one interpretation, based on the individual point of

view, is evident. We would, however, add, that while the theory of altered chords may often be the theory most plausible, cases will occur in which the only satisfactory explanation is that of a sudden and passing but unmistakable change of key.

Section 13. Principles of Analysis.

1. **Spell each chord accurately.**

F♯ has one harmonic significance, F another. And an analysis may be made incorrect by carelessly calling F♯, F.

2. **Build up chords in thirds.**

Seize that interval most apparent, third or fifth, and build from it in thirds until the whole chord be found.

3. **The identity of a chord depends on its resolution.**

In other words: judge a chord *by what it does!* Always look ahead. Any chord may be taken as a harmony in one key and quitted as a harmony in another key; or it may belong to one key alone; or it may be an altered chord; it is well to remember these three possibilities.

4. **Reduce harmonies to principal chords, if possible.**

The III and the VI usually occur in sequences. The I, V, IV, and II, with their various derivatives, will generally be found sufficient for both classical and modern music. Hence, in analyzing, *first get out the chord structure, making it as simple as possible, and then go back and mark the foreign tones.*

5. **Place as many chords as possible in one key.**

6. **A major triad used as an opening chord should be regarded as a tonic harmony.**

Instances to the contrary are rare, although they do occur.

7. **The normal chord change falls on the accent.**

The use of this principle will simplify many places otherwise complicated and difficult. If, for instance, the V_7 be before the bar-line or before the third beat of a measure in four-four time, and only one member of the chord of resolution be on the following accent, this one tone, especially if it be the bass tone, defines the chord and causes the other tones to be unessential, —suspensions, appoggiaturas, etc., —provided that the other members of the rightful chord of resolution enter later in the measure.

8. **A six-four on the accent may be regarded, in nearly every case, as a tonic harmony.**

9. **Any scale step may be changed chromatically without causing a desertion of the key, if the chromatic chord be followed by a principal chord of the reigning key.**

The "identity of a chord," then, "depends on its resolution."

10. **Modulation. Made (1) by the V, in its various forms**; (2) **by a $\frac{6}{4}$ on the accent,** the root becoming a tonic and drawing after it a cadence, — a progression which may also follow an unaccented $\frac{6}{4}$, although infrequently; (3) **by the II in its various forms,** this chord, often called a "chord of approach," moving into a cadence through its tendency toward the dominant; (4) **by any of the triads of a key,** even the weakest, the III, in which especial case the establishment of the key may require several characteristic chords, most often the succession, III, VI, II, V, I, altered or diatonic, with or without sevenths, inverted or not; (5) **by taking a tonic, and afterwards establishing it,** the so-called Assumption of a Key; (6) **by enharmonic means**; and (7) by a **change of mode,** the change being usually made from a tonic harmony.

11. **An apparent dominant seventh must be tested as to its resolution and its surroundings.**

A chromatic chord, apparently a dominant seventh — having all its intervals — will often appear and disturb the analysis. Unless it fixes the key strongly on the mind through legitimate resolution and sufficient duration, it may best be regarded as an altered chord, in most cases as a supertonic seventh, chromatically changed. Principle Number 3 must be borne in mind. If an apparent V_7 of G major stands between two strong C major chords, it is an altered chord in C major, and nothing else.

12. **Modulations should be marked as belonging to the next related keys**; *i.e.*, from C one goes to G, e, a, F, d.

If, for example, in C major the D major tonic appears after its dominant, the dominant must be marked as D minor and the major tonic as D major, involving a change of mode.

13. **When a seventh chord does not contain the elements of a V_7 — major third, perfect fifth, minor seventh — nor of a VII^{o}_{7o} — minor third, diminished fifth, diminished seventh — this chord may be regarded as a supertonic seventh.**

In the great majority of cases this interpretation will be found to be correct, for the seventh chords on the other steps of the scale are rarely used save in sequence progressions.

14. When in a rapid tempo a chord is repeated with more than one bass note, that is, with change of inversion, the first appearance of the chord is usually the one to be figured.

15. Any member of a chord may be omitted without causing the chord to lose its identity; an incomplete principal harmony must not be regarded, however, as a secondary chord.

16. Chromatic alterations may be indicated, if necessary, by placing in brackets below the Roman chord-numerals, the figures for the chord accompanied by the proper accidentals.

Thus, $\begin{array}{c} \text{II} \\ 6 \\ 5 \\ \left[\begin{array}{c} \sharp 1 \\ \sharp 3 \end{array}\right] \end{array}$ signifies that the supertonic seventh is in its first inversion with raised root and third.

17. The nature of a major triad — whether dominant or tonic — when standing at the end of a phrase, may often be best decided by ear.

The effect of a Tonic is that of rest, of finality; the effect of a Dominant is that of suspense, of something to come.

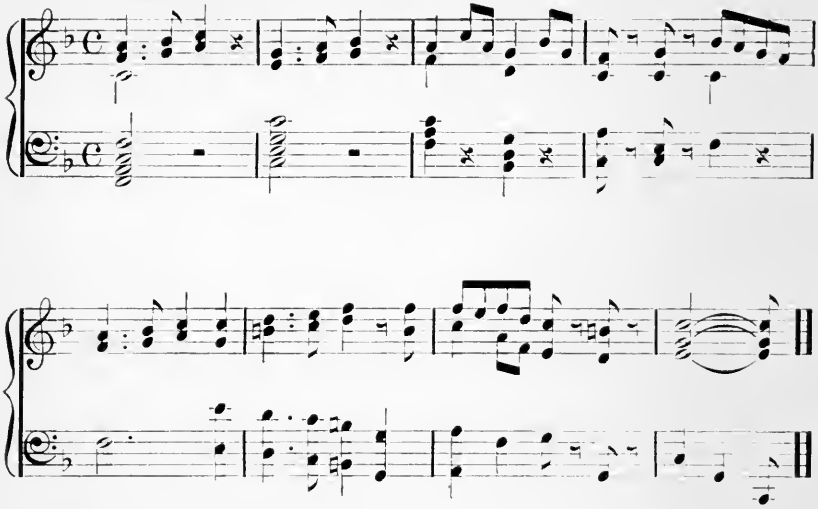
18. The chromatic chord which precedes a modulating dominant seventh or tonic six-four chord — usually a diminished seventh or an augmented chord — is to be placed in the key of this modulating seventh or tonic six-four chord.

This is the natural outcome of Principles Numbers 3 and 5.

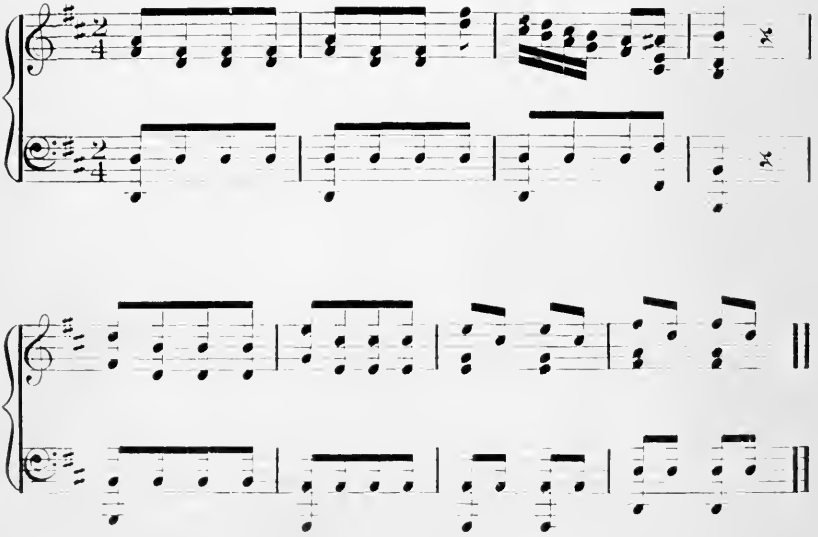
Section 14. Real Modulations.

Shown by an extended and deliberate progression in the new key, or by rapidly shifting key clusters. Mark as before. No further directions would seem to be needful as to this point.

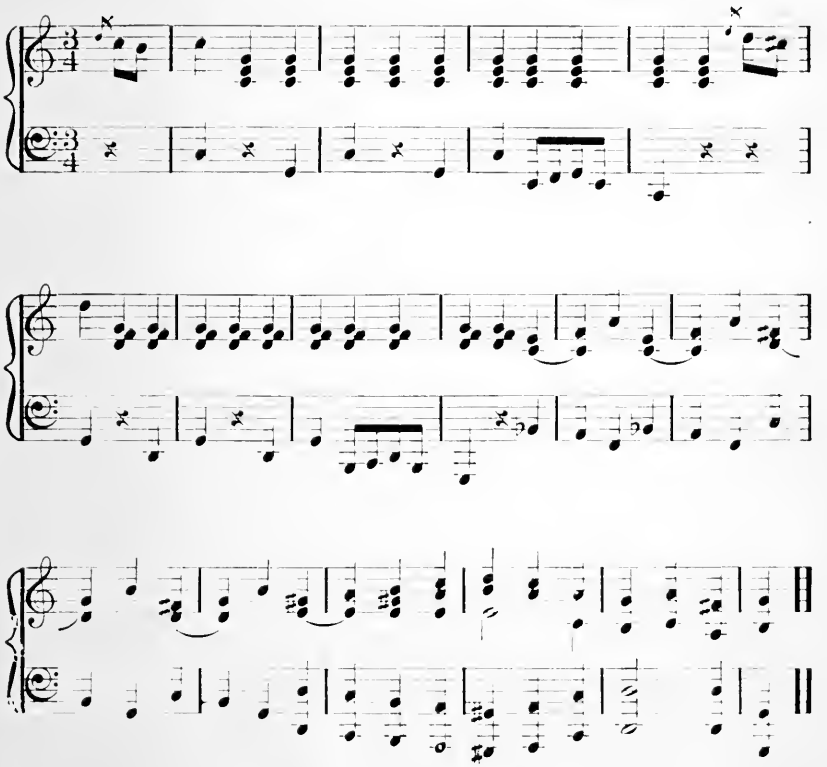
28. *Moderato.* MOZART, March.



29. *Allegro risoluto.* BEETHOVEN, March.



30. DIABELLI, Waltz.



PART TWO.

THE NON-HARMONIC TONES, IN DETAIL.

Section 15. References.

Explanation of Signs. The Roman numeral stands for the movement; the Arabic numeral immediately following stands for the measure. In counting the measures, Measure 1 is the first full measure, the first measure beginning with a down beat; in other words, any fractional part of a measure with which a piece may begin, does not count. More than this — repeat signs have no value.

Thus, Beethoven, Op. 10, No. 2, I, 19, means: Beethoven, opus ten, second sonata, first movement, nineteenth measure.

In some cases, where the movement is short, no measure-figures have been given.

Section 16. The Appoggiatura *(continued)*.

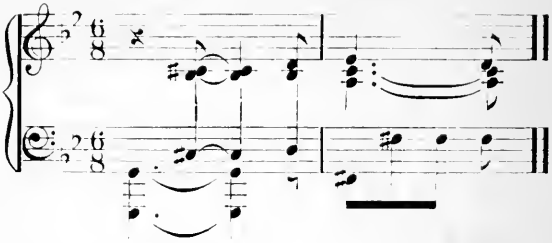
This ornament may move not only into a chord tone, but into some other non-harmonic tone also.

Both neighbors of a chord tone may also be taken immediately before the chord tone itself, forming a Double Appoggiatura, and occasionally one of these tones is repeated, forming a Triple Appoggiatura.

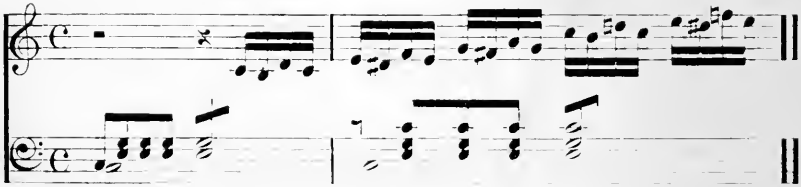
We have also applied the term Appoggiatura to that foreign tone which enters something like an Embellishment, but after a rest; and also, to that foreign tone in a scale passage which is taken by a step or skip of an augmented second.

Signs: Appoggiatura, App.; Double Appoggiatura, D. App.; Triple Appoggiatura, T. App.

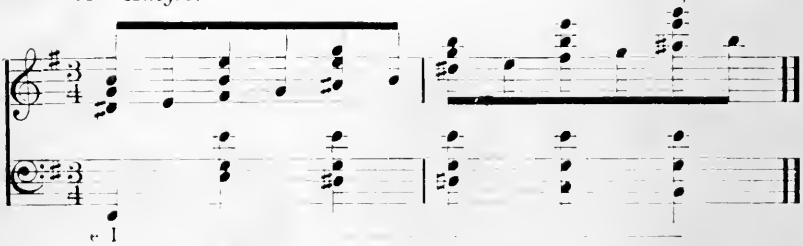
31. *Lento.* SCHUBERT, Song.



32. *Con molto agitazione.* WEBER, Concertstück



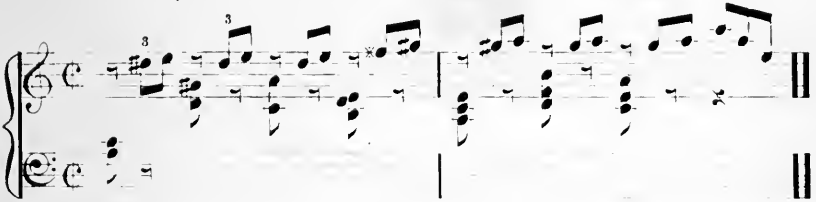
33. *Allegro.* CHOPIN, Etude.



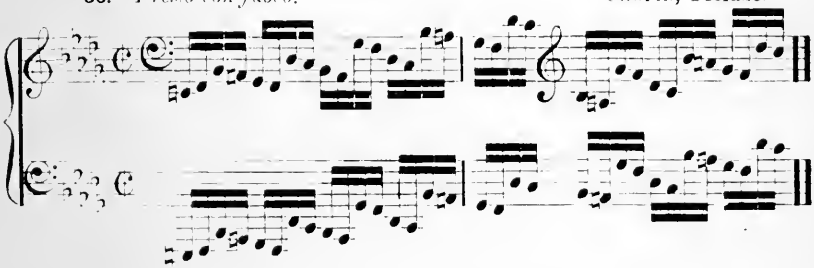
34. *Molto lento.* SCHUMANN, Op. 68.

F IV_7
$\begin{bmatrix} 4 & 1 \\ 2 & 7 \end{bmatrix}$

35. *Allegretto.* B. Cutter, Etude.



36. *Presto con fuoco.* Chopin, Prelude.

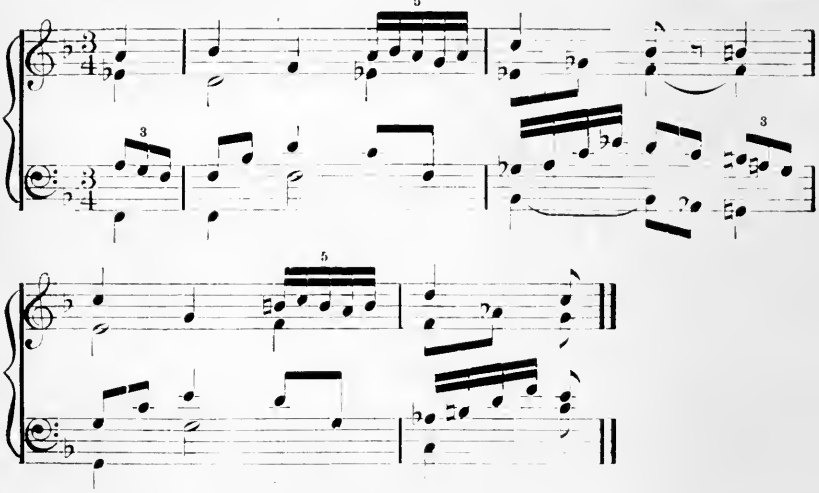


References. **Appogg** : Beethoven, Op. 7, IV, 34; Op. 10, No. 1, III, 43; Op. 10, No. 2, I, 19; Op. 13, I, *Allo.*, 25; Czerny, Op. 299, No. 31, second part; Cramer, Etude 6; Bizet, *L'Arlésienne*, Suite No. 1, *Un poco più lento.* **Double Appogg.**: Beethoven, Op. 7, IV, 48; Op. 2, No. 1, 26; Chopin, Prelude No. 13; Czerny, Op. 299, No. 11; Cramer, Etude 10, Etude 28.

Section 17. The Appoggiatura Chord is a chord, usually chromatic, which has as its soprano tone a genuine Appoggiatura. The inner voices which accompany the soprano tone may be passing tones, suspensions, any kind of foreign tones. Such a chord precedes a principal harmony, and if its tones be stricken out, omitted, this principal chord will appear as one of the harmonic essentials. The Appoggiatura Chord generally appears on the accent.

Sign: A^{pp}_{pt}. *Chd*

37. *Adagio.* BIZET, L'Arlésienne.

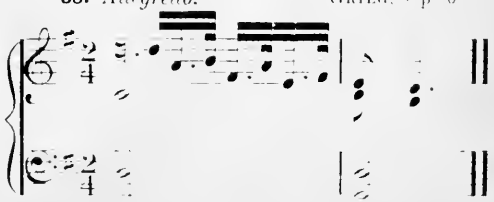


REFERENCES. Beethoven, Op. 2, No. 3, IV; Op. 7, II, 8; Op. 10, No. 2, II, D♭ strain; Cramer, Etude 4, m. 19; Etude 19, m. 18; Et. 14, m. 6; Schumann, Op. 6, No. 9, m. 1; Bizet, *L'Arlésienne*, Suite No. 1, I, *Un poco più lento*, m. 8; Wagner, *Tannhäuser*, 239, m. 1.

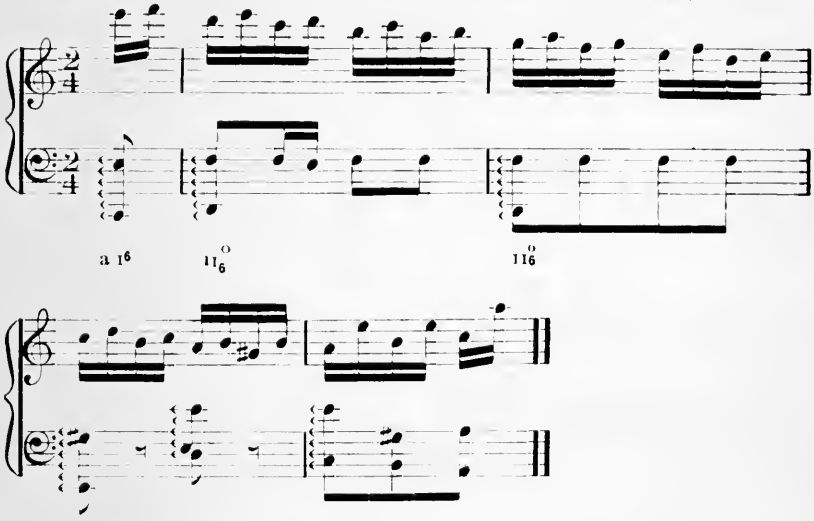
Section 18. The Free Tone is a foreign tone which is quitted by a skip, up or down, and is not a member of the following chord. It may be used after a foreign tone of any kind. It is rare in the classics, but frequent in certain modern works.

SIGN: F. T.

38. *Allegretto.* GRIEG, Op. 6



39. *Veloce.* B. CUTTER, Etude.



REFERENCES. Wagner, *Lohengrin*, p. 10; Bizet *L'Arlésienne*, Suite 1, II, m. 52, etc.; Grieg, Op. 6, No. 1, m. 22.

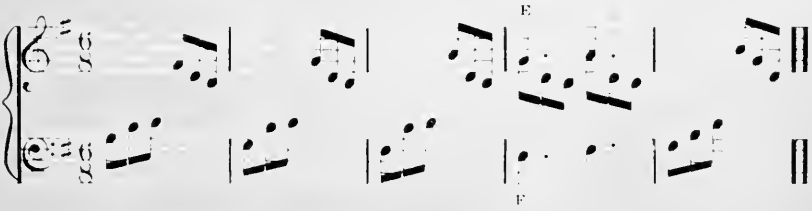
Section 19. The Passing Tone (*continued*).

The Passing Tone may be used when two members of a chord remain stationary.

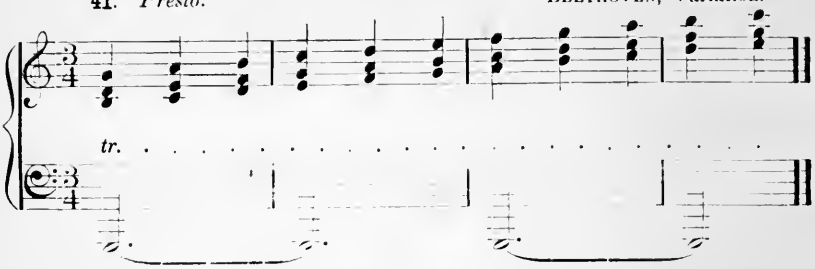
Also, two or three voices, in the latter case forming chords, may move from a principal chord to another principal chord some distance away; those chords which are passed through have no harmonic significance, and only the end chords need to be marked.

Lastly, Passing Tones may be broken, if the tempo be rapid, in the form of thirds or sixths, or even in octaves; see Appendix, Ex. 6.

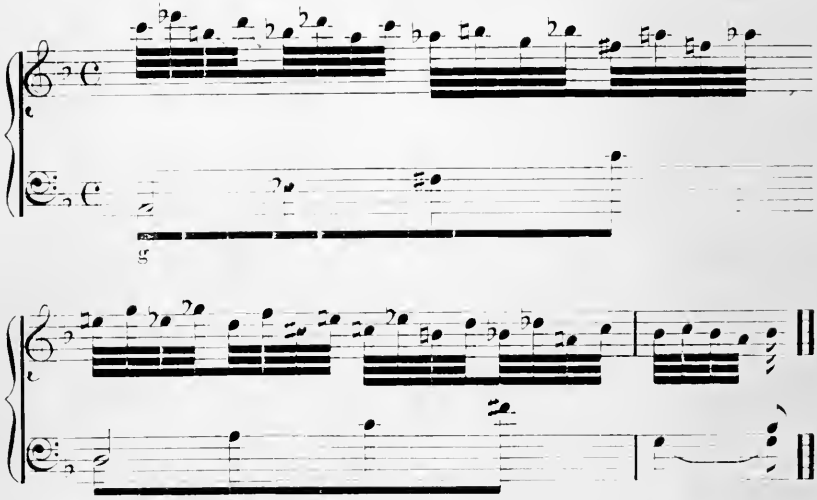
40. *Andantino.* SCHUMANN, Op. 68



41. *Presto.* BEETHOVEN, Variation.



42. *Andantino grazioso.* CZERNY, Op. 365.

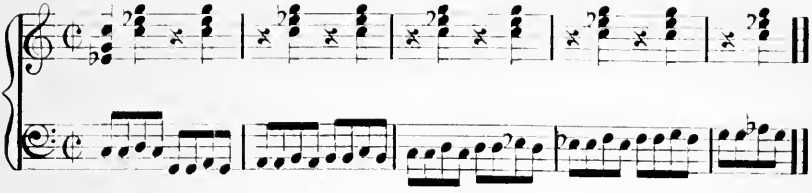


REFERENCES. Wagner, *Tannhäuser*, p. 5 ; *Flying Dutchman*, p. 135, m. 12.

Section 20. The Embellishment (*continued*).

The Embellishment may ornament a foreign tone as well as a chord tone. Also, in carrying out a figure, a chord tone may be used to embellish a passing tone. Furthermore, two voices may be embellished simultaneously, and these voices may be *broken* as are the Passing Tones in Section 19, No. 42.

43. *Allegro molto.* BEETHOVEN, Quartet, Op. 59, No. 3.



REFERENCES. Beethoven, Op. 2, No. 1, II, 17; Czerny, Op. 299, No. 4, m. 14; Schumann, Op. 6, No. 7; Chopin, Nocturne 6, m. 8.

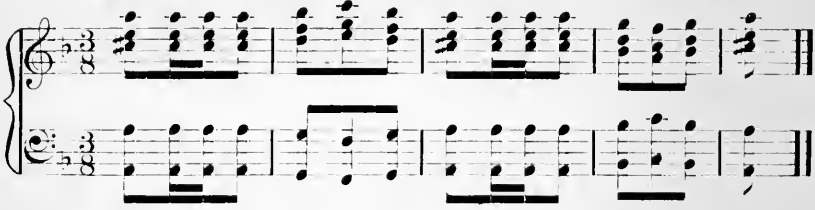
Section 21. The Embellishing Chord is a combination of tones accompanying an Embellishment in the soprano, and may form a definite chord, built up in thirds, or no chord at all. It may be diatonic or chromatic. Omit it and the essential chord will appear, visible to the eye.

More than this, composers very frequently use as Embellishing Chords, altered diminished seventh chords based on different steps of the scale. Most common are those on the *sharp second* and *sharp sixth* steps of the major mode. Thus: C major, d♯, f♯, a, c; a♯ c♯, e, g. Of these the altered supertonic seventh embellishes the tonic harmony, and the altered submediant the dominant harmony. Occasionally an enharmonic notation (see Section 34) of one of these two chords will occur; in C major d♯ being made e♭, etc. These changes result from careless spelling, or from some need of voice writing. Furthermore, either one of these two chords may appear without its third or fifth.

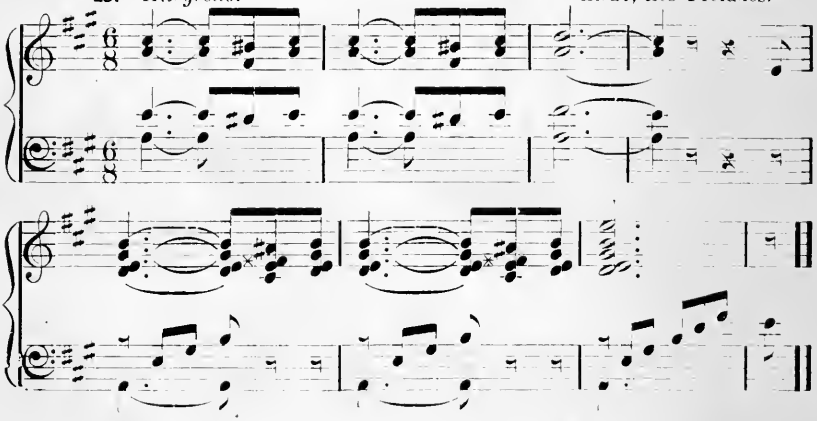
SIGNS: E. Chd., or E. Chd.

$$\begin{matrix} \text{II} \\ {}^{6}_{5} \\ [\sharp 1 \\ \sharp 3] \end{matrix}$$

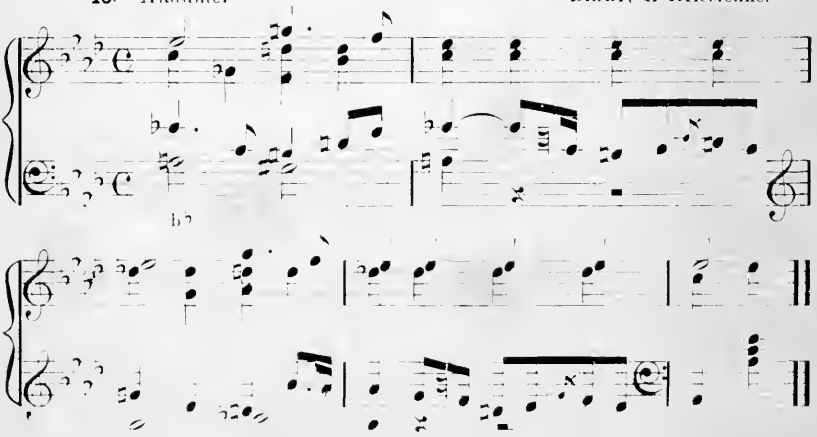
44. *Allegro vivo.* BIZET, Carmen.



45. *Allegretto.* LISZT, Les Préludes.



46. *Andante.* BIZET, L'Arlésienne.



REFERENCES. Beethoven, Op. 2, No. 3, III; Cramer, Etude 11, m. 1, 2, etc.; Bizet, *L'Arlésienne*, Suite No. 1, I, fifth last measure; *ibid.* II, m. 18.

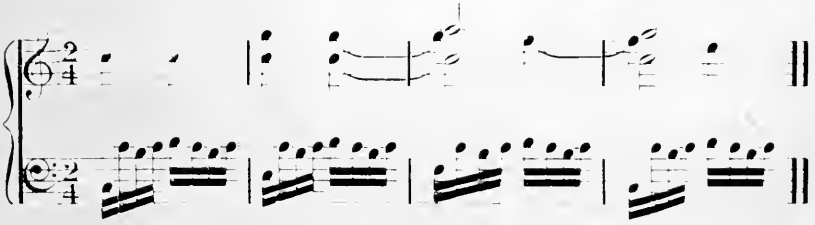
Section 22. The Suspension is the delayed or retarded entrance of a chord tone, or of a foreign tone, and is possible only when a voice moves down a major or a minor second. Suspensions may occur singly or in pairs; three voices may even be suspended at one time, or the whole chord be suspended rhythmically. The Suspension may be plain or ornamented. Double suspensions will often produce combinations which may be regarded as subordinate seventh chords; in analyzing it is well, however, to regard such combinations, when possible, as Suspensions, pure and simple, and to thus carry out one of the first Principles of Analysis — that of making as few chords as possible, and these *principal chords*.

The resolution of the single Suspension, and occasionally of the double Suspension, though rarely, may be made into some chord other than the chord to which the tone of resolution in the first place belonged.

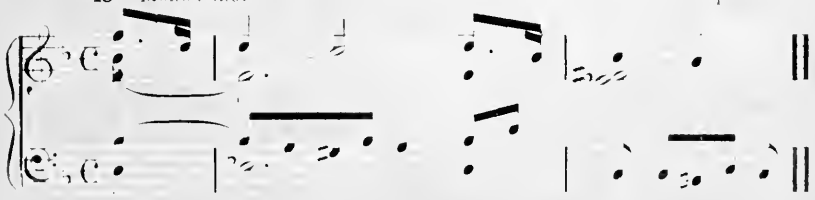
The resolution of the Suspension may be ornamented in a number of ways.

SIGN: S.

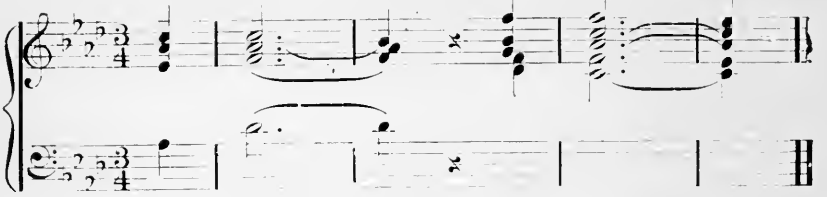
47. *Allegretto.* MOZART, Variation.



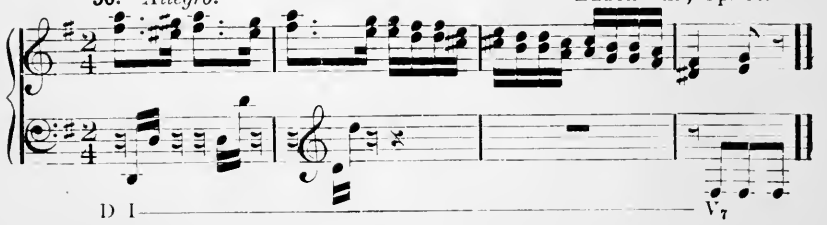
48. *Molto lento.* SCHUMANN, Op. 68



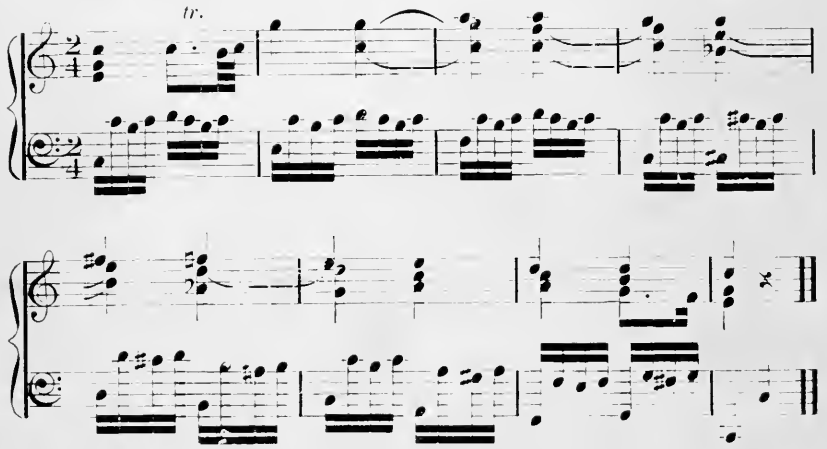
49. *Allegretto.* SCHUBERT, Impromptu.



50. *Allegro.* BEETHOVEN, Op. 14.



51. *Allegretto.* MOZART, Variation.

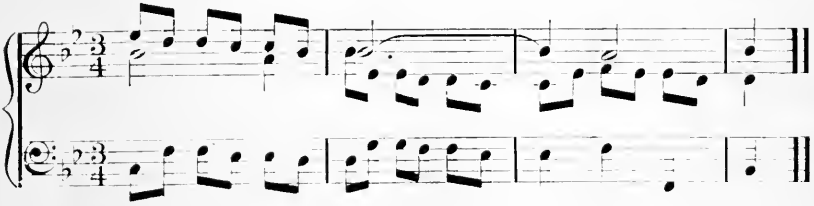


REFERENCES. Beethoven, Op. 7, II, 6; Op. 2, No. 1, I, II; Cramer, Etude 25, m. 2; Schumann, Op. 12, No. 1, m. 2 and 21; Chopin, Prelude No. 2, m. 11, 12; Prelude No. 4 (essential chord at end of each measure); Bizet, *L'Arlésienne*, Suite I, *Andantino*, m. 2, 3; Wagner, *Flying Dutchman*, p. 4 (three chords in two measures).

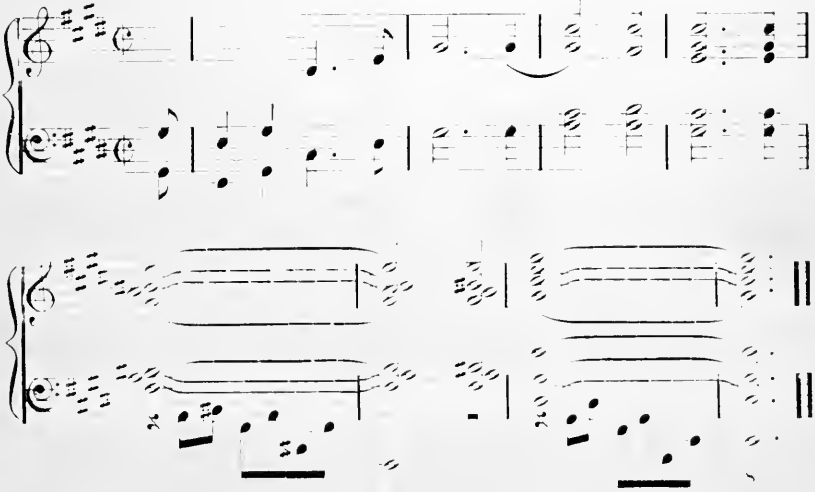
Section 23. The Anticipation is the premature entrance of a tone, essential or foreign, and is the opposite of the **Suspension.** The German term, *Vorausnahme,* roughly translated as the thing-taken-beforehand, explains this phenomenon finely. Principle No. 4 should be borne in mind. The Anticipation may include a whole chord, with a skip in bass. Rather infrequent in occurrence.

SIGN: A.

52. *Lento.* BACH.



53. *Allegro patetico.* B. CUTTER, Sonata.

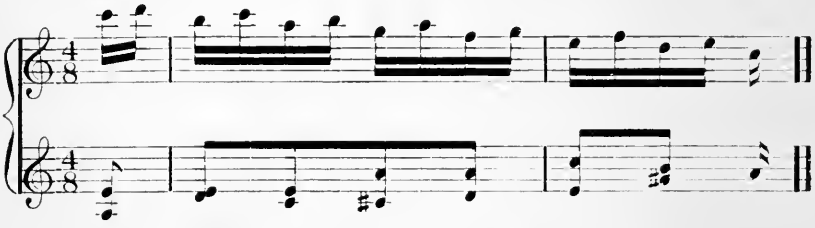


REFERENCES. Chopin, Prelude No. 9, m. 2; Wagner, *Flying Dutchman,* 228.

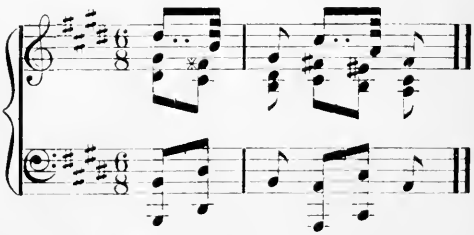
Section 24. The Free Anticipation is a foreign tone, quitted by skip, which belongs to the following chord. In this respect it differs from the Free Tone.

SIGN: F. A.

54. *Veloce.* B. CUTTER, Etude.



55. *Andante.* BRAHMS, Sym. No. 4.

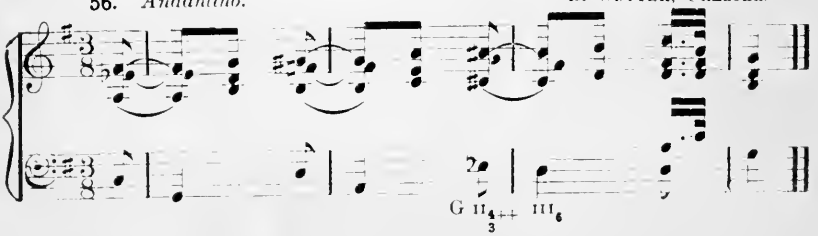


REFERENCES. Beethoven, Op. 13, III, 1; Grieg, Op. 12, No. 5.

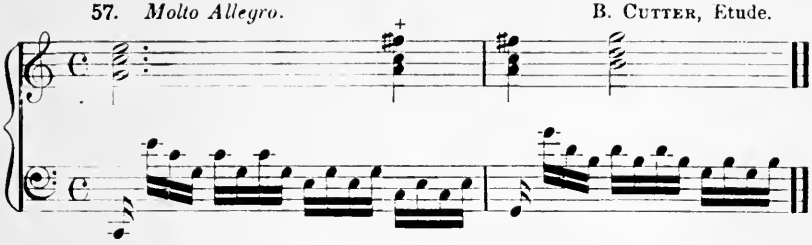
Section 25. The Retardation is a rising Suspension, and is generally accompanied by one or more Suspensions. A whole chord may also be retarded, one single chord tone, or even a foreign tone, or tones.

SIGN: R.

56. *Andantino.* B. CUTTER, Canzona.



57. *Molto Allegro.* B. CUTTER, Etude.



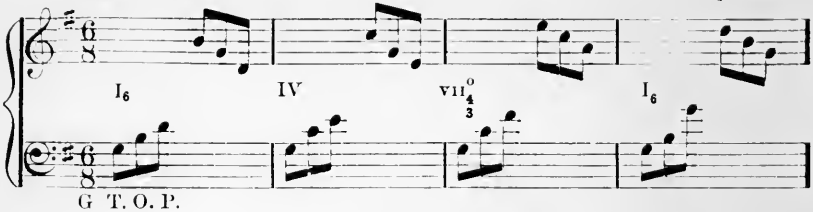
REFERENCES. Beethoven, Op. 10, No. 2, II, 10; Op. 2, No. 2, I, 60; Bizet, *L'Arlésienne*, Suite No. 1, I, *Un poco più lento*, m. 8, etc.

Section 26. The Organ Point; the Pedal. The Organ Point is a held tone, over, or under, or around which move harmonies containing more or less frequently this held tone as a member. The Organ Point may be short — three chords in length — or it may be given great extension; the held tone may be the tonic, the dominant, or both together, the subdominant, or the mediant; and, lastly, and of frequent occurrence, the Organ Point may be broken or interrupted by rests, or may be ornamented by some foreign tone or tones.

The harmonic structure, whether above or below, is to be regarded as a thing by itself, and figured as such; if above, the actual bass is the voice immediately over the held tone, and the figuring should begin from this voice. One reason, and perhaps the best, for this procedure is as follows: if an organ point in C major, and on C, contains the succession $\frac{a}{D}$ $\frac{d}{G}$, and the figuring be made to include the held tone, then the first of these two chords must be a supertonic $\frac{6}{4}_{2}$; which, as the seventh in the bass does not come to a resolution, is absurd; C, then, has nothing to do with the chord.

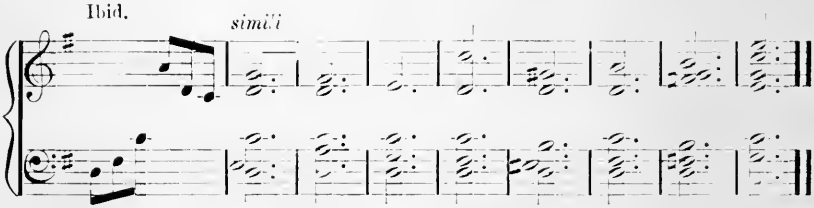
SIGNS: Tonic Organ Point, T. O. P.; Dominant Organ Point, D. O. P.; Mediant Organ Point, M. O. P.; Double Organ Point, Dbl. O. P.

58. *Andantino.* SCHUMANN, Op. 68.

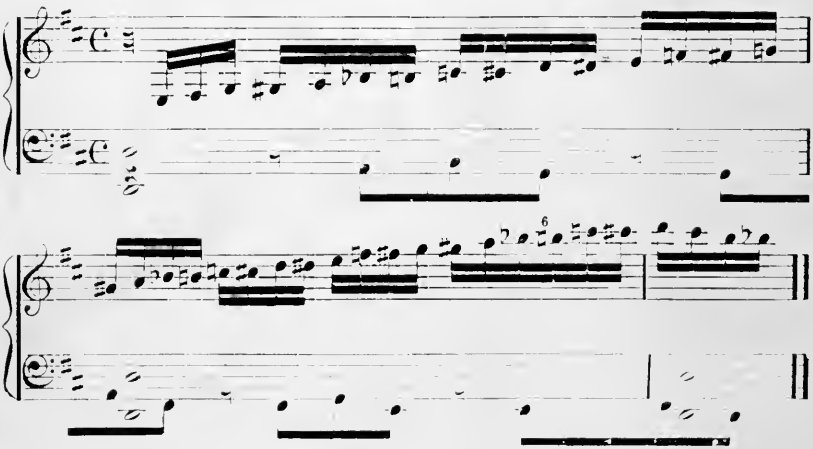


G T. O. P.

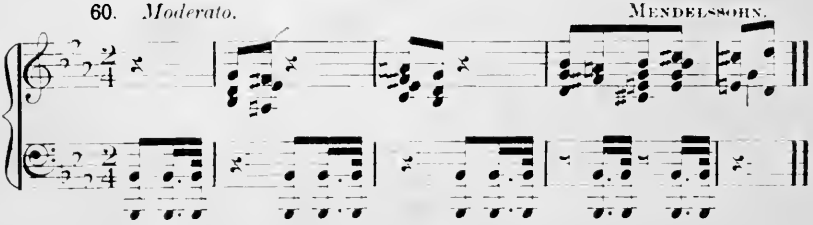
Ibid.



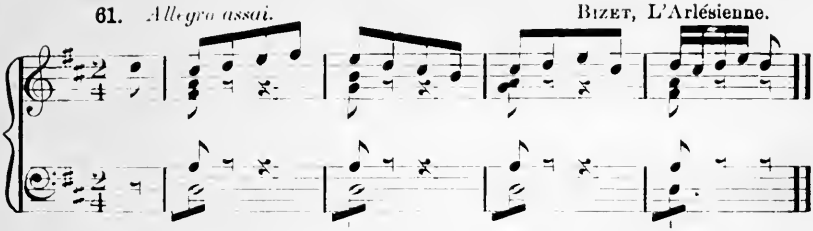
59. *Allegro.* BEETHOVEN, Op. 10, No. 3.



60. *Moderato.* MENDELSSOHN.



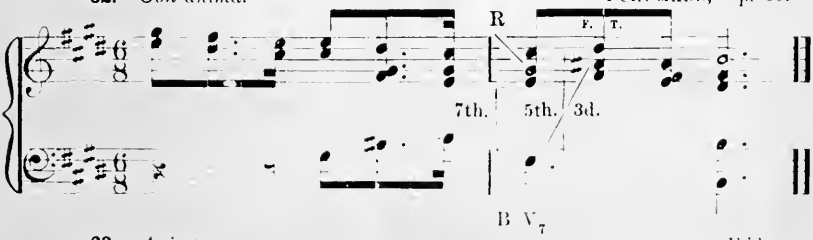
61. *Allegro assai.* BIZET, L'Arlésienne.



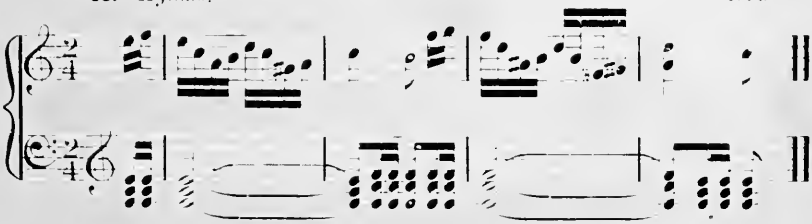
REFERENCES. Beethoven, Op. 2, No. 3, III, 29; Op. 10, No. 3, I, 93; Schumann, Op. 12, No. 8, m. 45; Grieg, Op. 6, Nos. 1 and 4; Op. 19, No. 2; Chopin, Prelude, No. 8, and Nocturne, No. 2, m. 1; Bizet, *L'Arlésienne*, Suite 1, *Le Carillon:* Wagner, *Flying Dutchman*, 125.

Section 27. Dispersion of Chord Members. The normal chord change is a simultaneous one. The members of a chord may, however, enter at different points of the measure, and the harmony must be determined by picking out the various chord tones. Principle No. 4 must be borne in mind. Such irregular entrances are made only on principal chords; for a subordinate chord, used in such a manner, would weaken, perhaps destroy, the key character — which is absurd. These irregular entrances may be caused by any of the foreign tones.

62. *Con anima.* SCHUMANN, Op. 68.



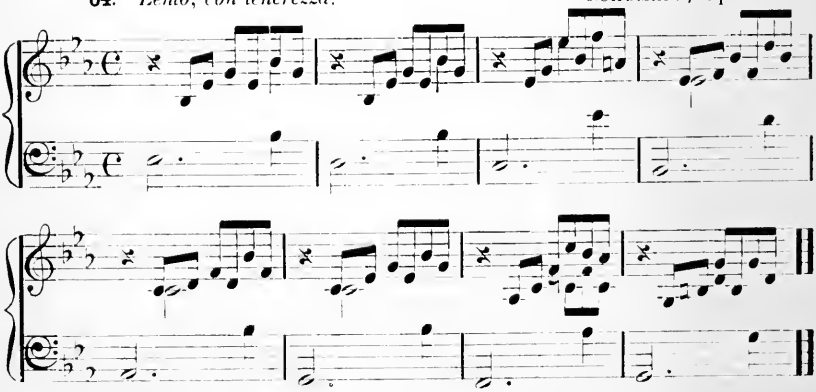
63. *Agitato.* Ibid.



REFERENCES. Schumann, Op. 28, No. 20, m. 23; Chopin, Prelude 5.

Section 28. Tones sustained by Damper Pedal of the Piano. Mistakes are often made in the analysis of piano music by overlooking the continuance of a tone by the damper pedal after the key struck has been quitted by the finger. Neglect of this point will often render an analysis quite incorrect. In music carelessly marked as to the pedal signs — in Schumann, for example — some discretion is called for; it may, indeed, become necessary to supply missing signs. Use the principal chords.

64. *Lento, con tenerezza.* SCHUMANN, Op. 68.



PART THREE.

MODULATION IN GENERAL, THE ALTERED CHORDS, ETC.

Section 29. Altered Chords, which have already been touched upon, may be known by their resolutions. **An Altered Chord moves to a principal chord of the key in which it, the altered chord, is chromatic.**

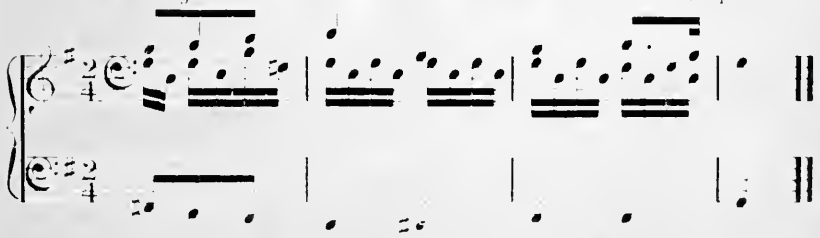
Any step of a scale, major or minor, may be changed chromatically, some of the changes being the result of passing tones, others being chord changes made to heighten the effect of the chord itself. Thus, in the latter case, the natural tendency of the supertonic seventh chord toward the dominant, or toward its chord of introduction, the tonic six-four, is increased in the major mode, if by lowering the fifth of the supertonic chord this supertonic be made somewhat more dissonant.

It must ever be borne in mind that **many chords are definable as Altered Chords only through their surroundings.**

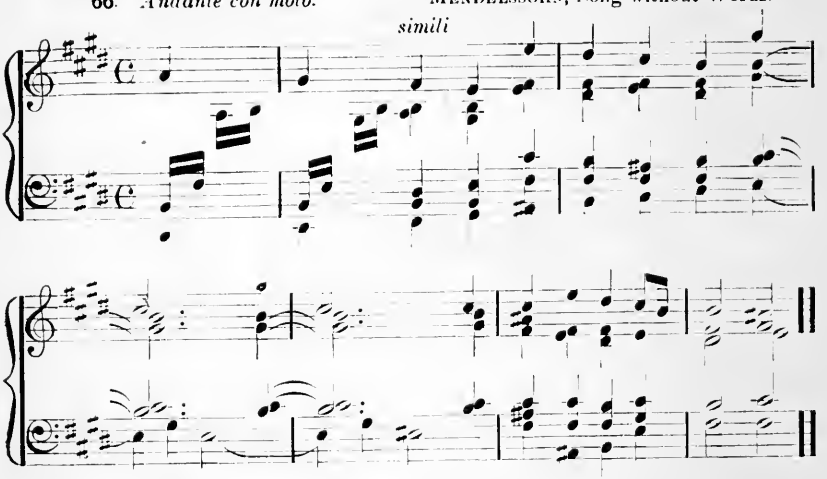
What, for example, might cause the mental effect of a modulation in a slow tempo, must be regarded as a chromatic alteration in a rapid movement.

Section 30. The Supertonic Seventh with Sharp Third.

65. *Allegro.* BEETHOVEN, Op. 14



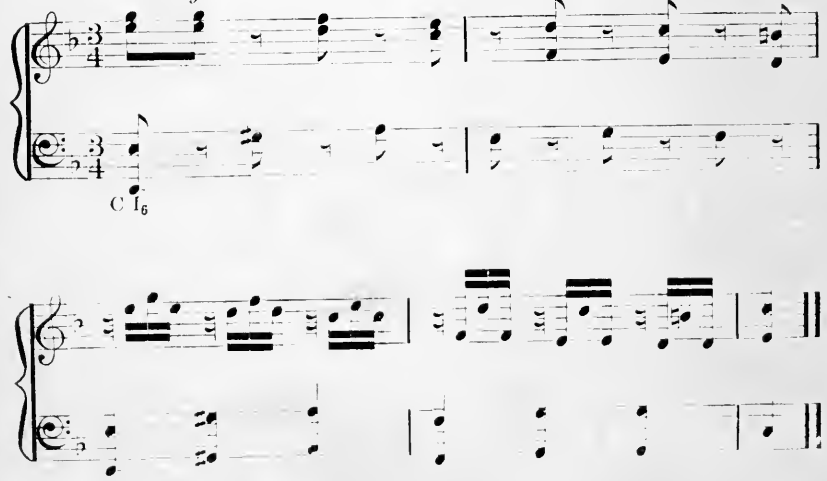
66. *Andante con moto.* MENDELSSOHN, Song without Words.



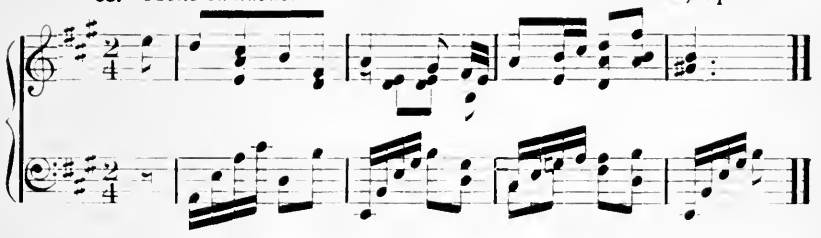
REFERENCES. Beethoven, Op. 7, II, 19, 23; Op. 10, No. 2, I, 57; Op. 10, No. 3, II, 5; Chopin, Prelude 13, *più lento*, m. 7; Schumann, Op. 12, No. 3, m. 1.

Section 31. Other Altered Steps. Made so by their surroundings.

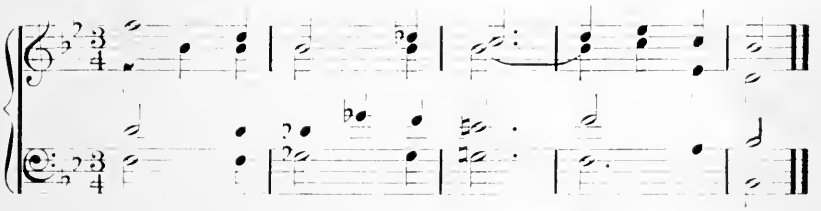
67. *Allegro.* MOZART, Sonata.



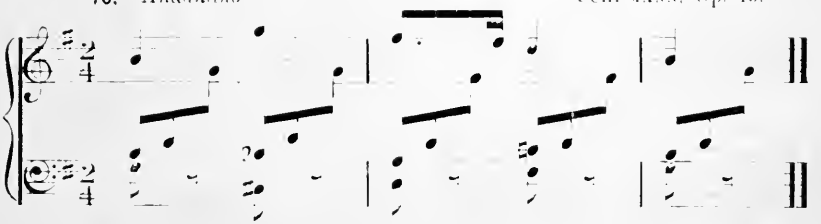
68. *Molto cantabile.* SCHUMANN, Op. 68.



69. *Andante.* BRAHMS, Op. 45.



70. *Andantino* SCHUMANN, Op. 15.

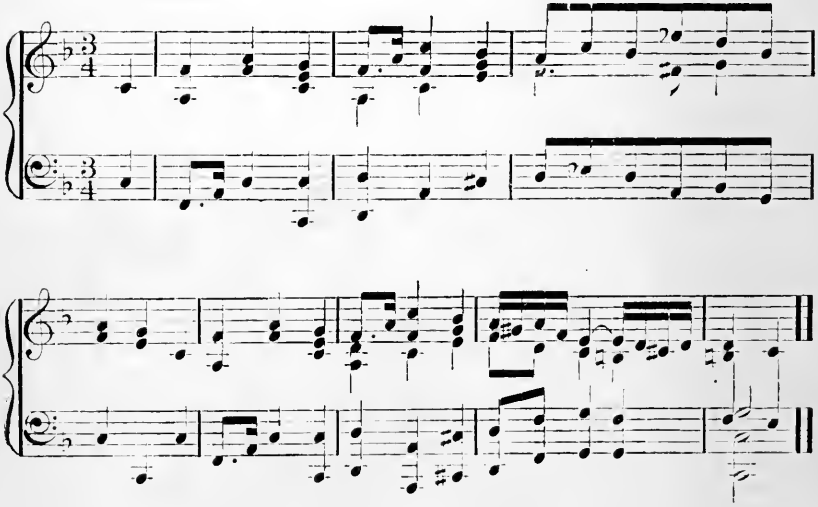


REFERENCES. Beethoven, Op. 10, No. 1, III, 37; Grieg, Op. 6, No. 4, m. 3; Czerny, Op. 299, No. 27; Cramer, Etude 9, m. 50; Etude 19, m. 7; Chopin, Nocturne No. 2, m. 11; No. 6, m. 81; Schumann, Op. 68, No. 17, m. 13 and 17; No. 26, m. 3; No 28, m. 3, 7, 20; No 30, m. 2, 3, 7; No. 38, m. 3; No. 39, m. 27; Bizet, *L'Arlésienne*, Suite I, First Movement, Tempo I; Wagner, *Tannhäuser*, 211, 220, 238, 254; *Flying Dutchman*, 13.

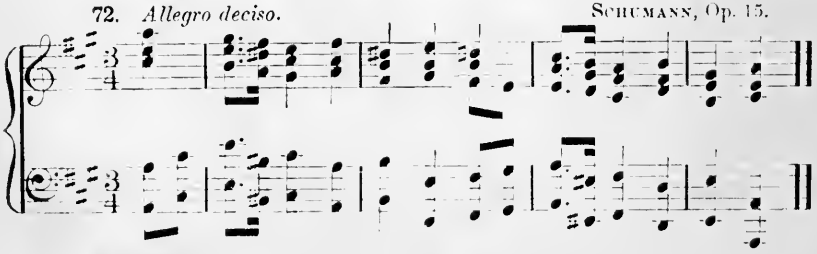
Section 32. Apparent and Real Modulations. These Apparent Modulations may often be regarded as intensifications of secondary scale steps, through the precedent use of their apparent dominant or diminished seventh chords — as has already been stated: or, as a series of dominant seventh chords preceding a cadence, the roots involved being usually the III, VI, II, V, I (see Appendix, No. 1).

Whether or not real modulations are present, each analyst must decide for himself. At all events, the succession III, VI, II, V, with or without sevenths, and in whatever form, is one which confirms the ultimate tonic; it is one in which, however strong these questionable key impressions may be, the total impression is one of pushing on to the close in that final tonic harmony which rounds out the whole. This feature of the thing leads many to say "altered chords" where the man of the old school says "modulation."

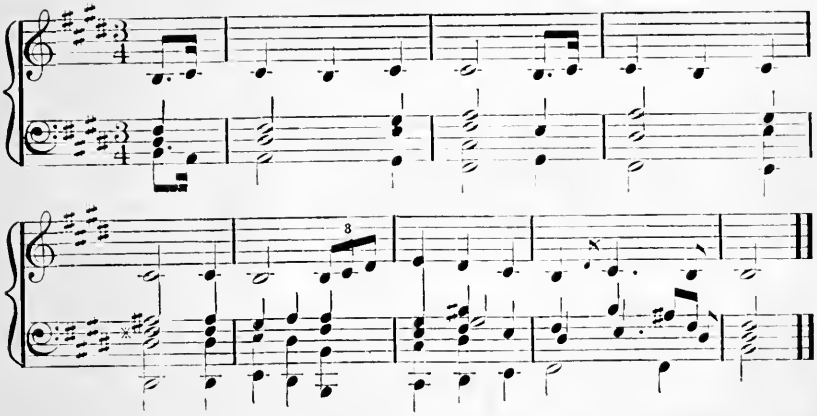
71. *Andante.* SCHUBERT, Violin Sonata.



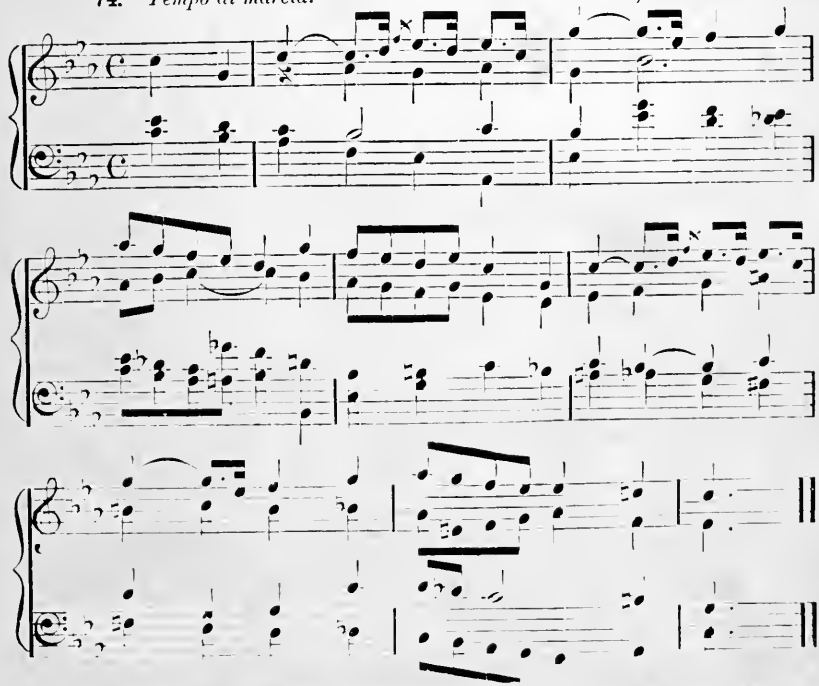
72. *Allegro deciso.* SCHUMANN, Op. 15.



73. *Andante maestoso.* WAGNER, Tannhäuser.



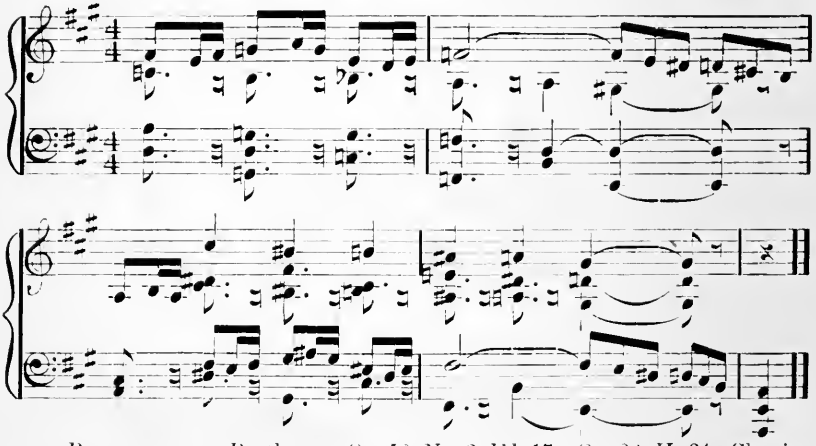
74. *Tempo di marcia.* BIZET, L'Arlésienne.



REFERENCES. Wagner, *Tannhäuser*, 121, 236; *Flying Dutchman*, 75 (*poco ritenuto*), 100.

Section 33. Consecutive Dominant Sevenths. Mark each chord according to its apparent key.

75. *Andante sostenuto assai.* BIZET, L'Arlésienne.



REFERENCES. Beethoven, Op. 10, No. 3, III, 17; Op. 22, II, 34; Chopin, Prelude No. 8, m. 7; Cramer, Etude 18, m. 9.

Section 34. Enharmonics. Enharmonic notation is the use of that double notation which may be applied to any tone; thus F♯ may be written G♭, or E, F♭. Enharmonics are used: —

1. As a means of modulation;

2. As a means of simplifying the reading or playing of a passage, which, if written out logically, would pass through a remote and difficult key;

3. As the result of careless or wilful notation.

It is probable that no feature in Analysis causes trouble equal to that given by Enharmonic Notation, especially by that careless and illogical kind last mentioned, which is remarkably common in modern music. Countless cases exist in which the ear hears one thing, — the impression of a key, an impression consistent and undisturbed, — while on the paper the eye beholds another thing — two contradictory keys. In a passage in sharps, for instance, stands a flat chord, and the mind through the eye is aware of a hitch, unwarrantable and without reason, while to the ear all is smooth

and satisfactory. Such a passage will oblige the student to find and to change mentally the enharmonics to their correct and legitimate notation, if he would account for things satisfactorily.

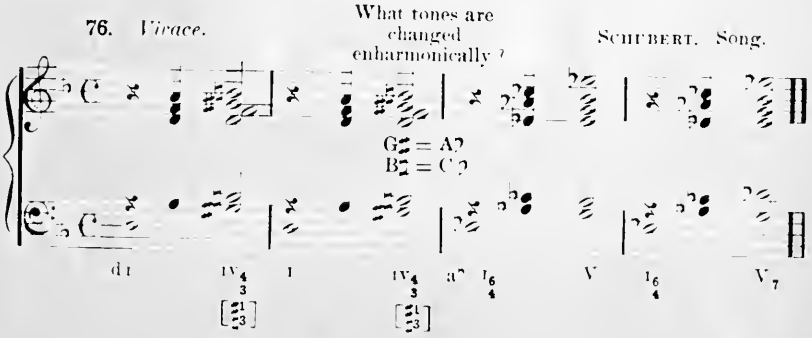
General Rules are these: —

1. When a passage, in flats, for instance, goes into sharps, and stays there permanently, the chord where the change of accidentals occurs will contain the tone or tones enharmonically altered; in such a case a definite modulation is made and is to be recognized as such (see Ex. 76);

2. When, for example, in a passage in sharps, a few measures are written in flats and are followed by sharps again, this passage in flats should be regarded as an enharmonic notation of the sharp strain, and in marking it two methods may be employed: (*a*) the chords may be marked as they appear to the eye, and "Enh. Not. of such and such a key" be added, or, *the better way*, (*b*) the chords may be marked as they sound and hang together, not as they are notated, and "Enh. Not." be added (see Ex. 77);

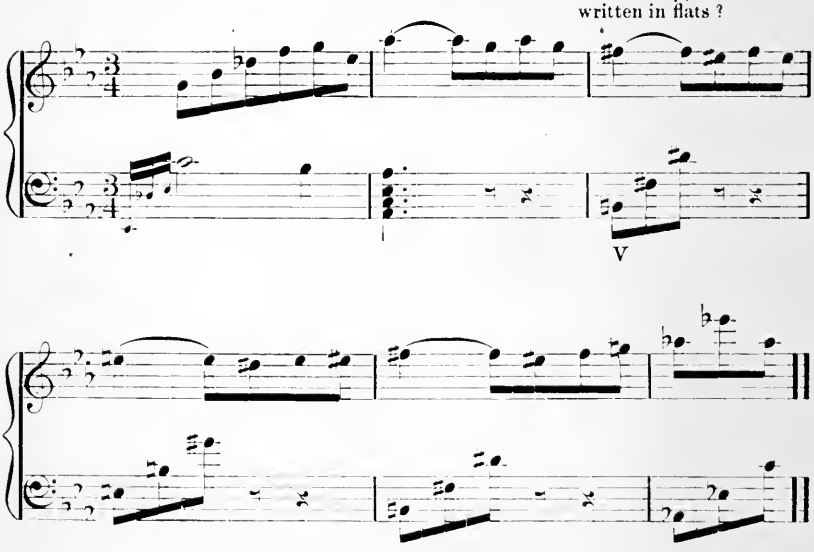
3. When an occasional contradictory chromatic intrudes, it may be readily changed for its rightful equivalent by spelling the chord in question and finding the tone foreign to the scale (see Ex. 79).

In marking the exercises it may be necessary to use words instead of signs. The author has indicated *above* some of the exercises the question the scholar is to ask himself, and *below* the manner of marking.



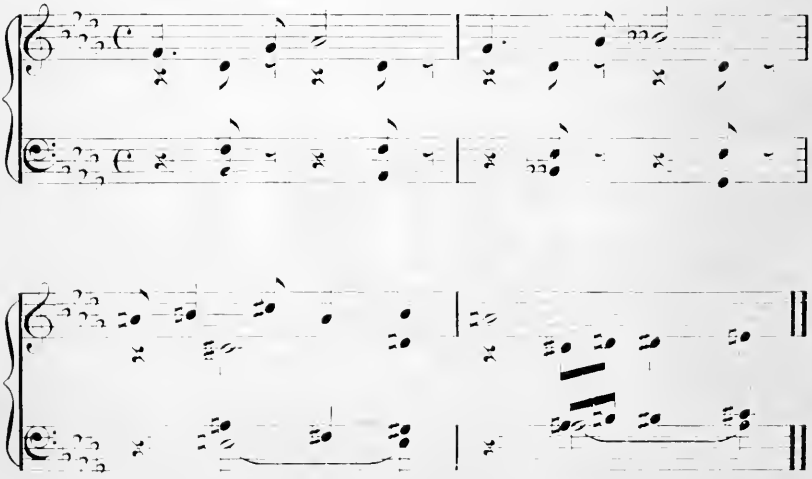
77. *Allegro giocoso.*

BIZET, L'Arlésienne.
What key, if written in flats ?

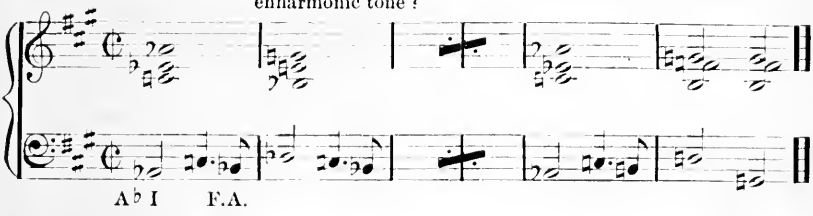


78. *Poco andantino.*

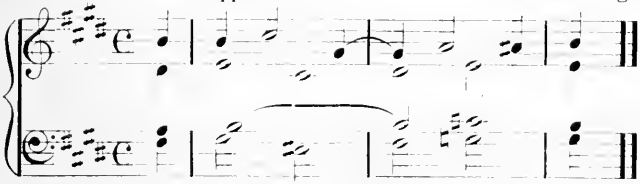
FRANCK, L'Organiste.



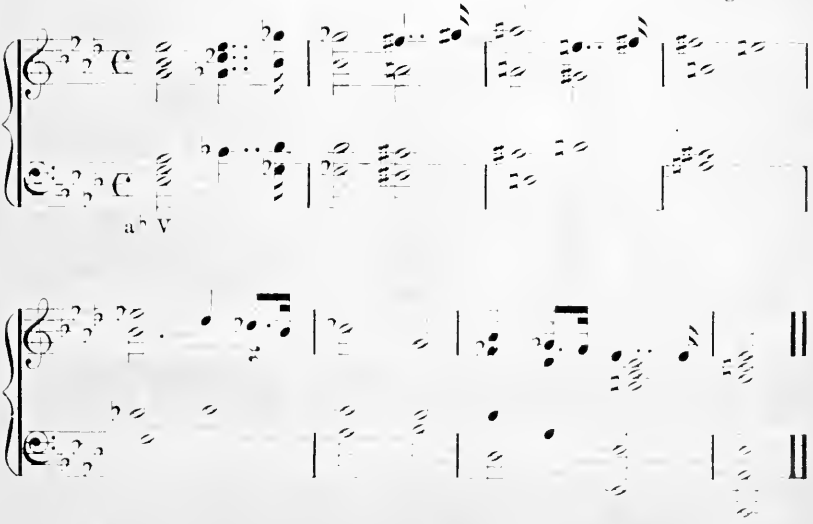
79. *Allegro.* Does this chord belong to A♭? If not, which is the enharmonic tone? GODARD, Violin Sonata



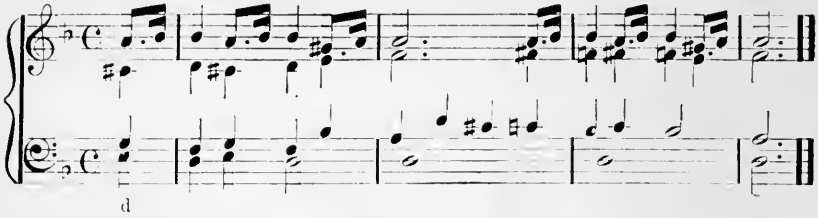
80. *Non troppo lento.* FRANCK, L'Organiste.



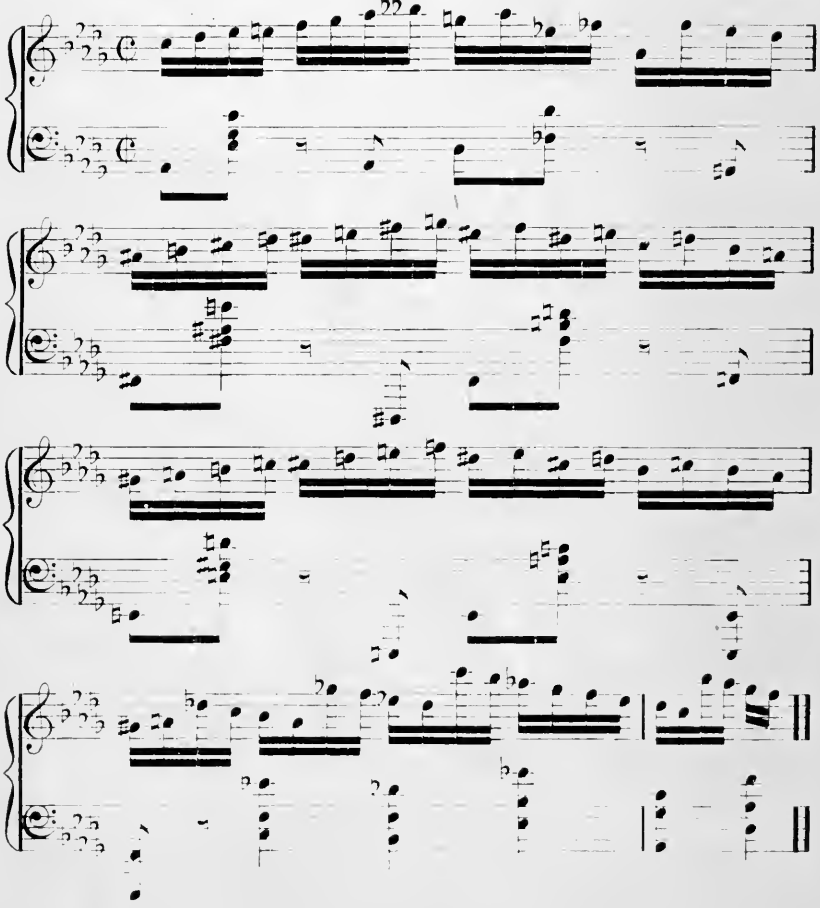
81. *Moderato.* WAGNER, Lohengrin.



82. *Allegretto.* FRANCK, L'Organiste.



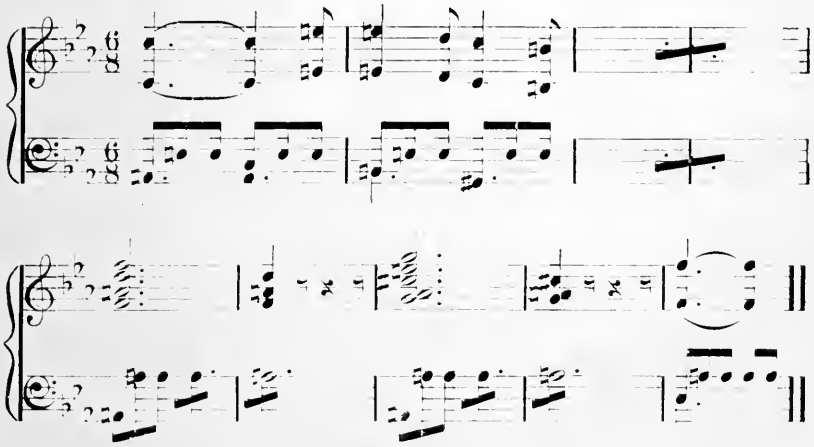
83. *Presto con fuoco.* CHOPIN, Prelude



REFERENCES. Schumann, Op. 12, No. 2, m. 17; No. 8, m. 1; Chopin, Nocturne No. 9, m. 62; Prelude 12, m. 12; Prelude 8, m. 22; Prelude 19, m. 21. Wagner, *Lohengrin*, p. 14, 19, 22; *Tannhäuser*, 144, 246; *Flying Dutchman*, 41.

Section 35. Modulation through the Six-Four.

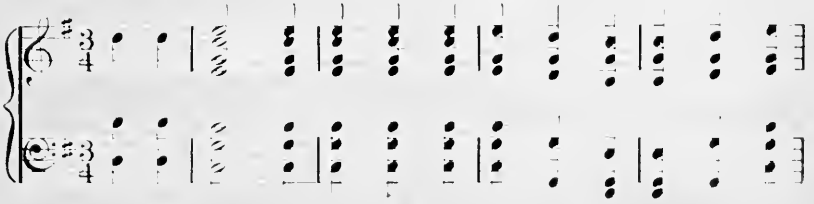
84. *Allegro molto.* BEETHOVEN, Op. 7.

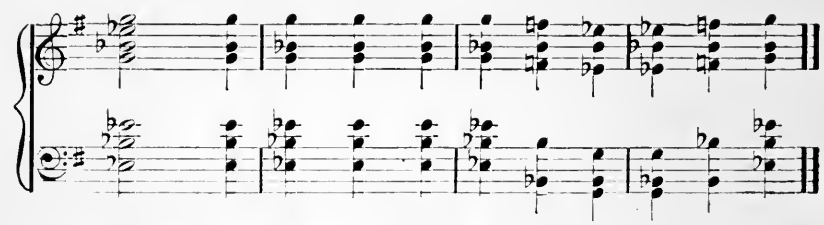


REFERENCES. Chopin, Polonaise No. 3, m. 41; Wagner, *Tannhäuser*, 224.

Section 36. Assumption of Key. A modulation may be made by assuming, taking, a new key. The chord taken may be a tonic or a dominant, preferably the former, and a regular progression will confirm the key effect. This procedure is often made in sequence form, and by hitches of a third.

85. *Allegro.* SCHUBERT, Sonata

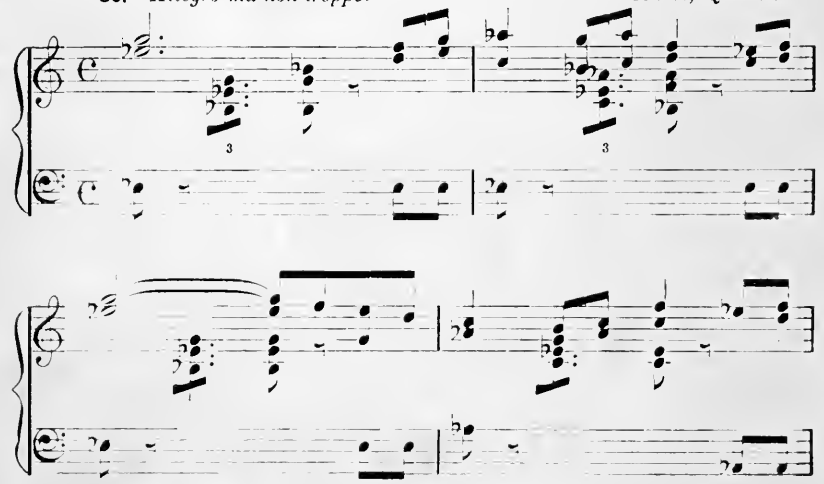


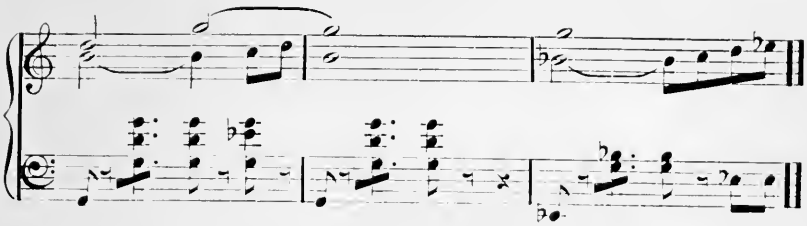


REFERENCES. Beethoven, Op. 10, No. 3, I, second part, m. 92; Chopin, Prelude 9; Wagner, *Tannhäuser*, pp. 7, 49, 245; *Flying Dutchman*, 36, m. 13.

Section 37. Incomplete Modulation. A progression is sometimes made to a foreign major triad, which triad, by reason of its place at the end of a phrase or section, holds the mind in suspense, and thus performs the function of a dominant harmony. Although the apparent modulation be not completed, it is well to mark such a chord as modulatory, including as many of the preceding chords as may rationally belong to the key. This kind of a progression occurs many times in Wagner as a VI V, or IV V. Remember Principle No. 5.

86. *Allegro ma non troppo.* SCHUBERT, Quintet.

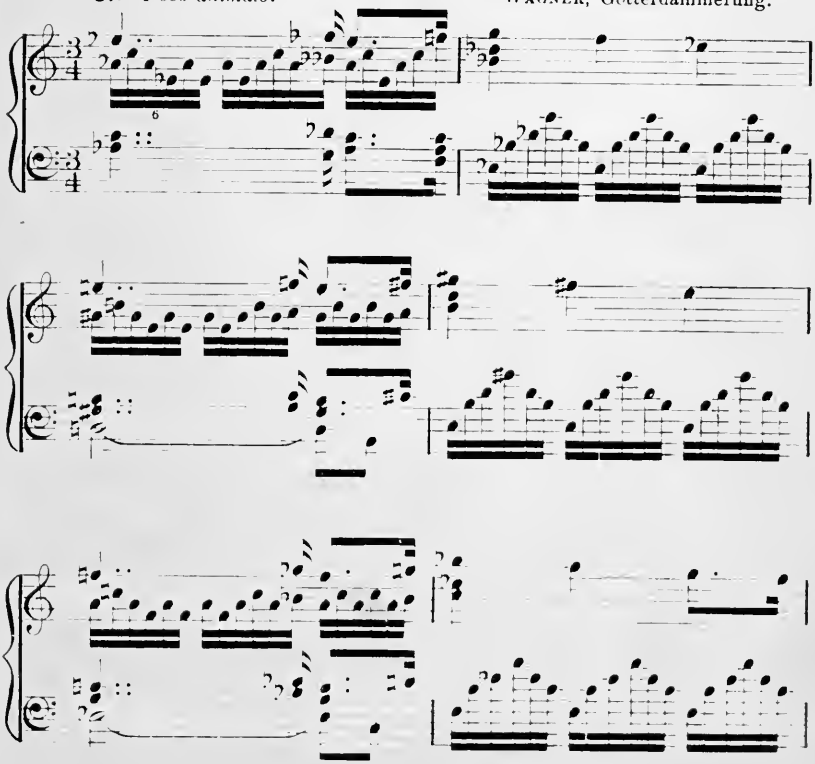


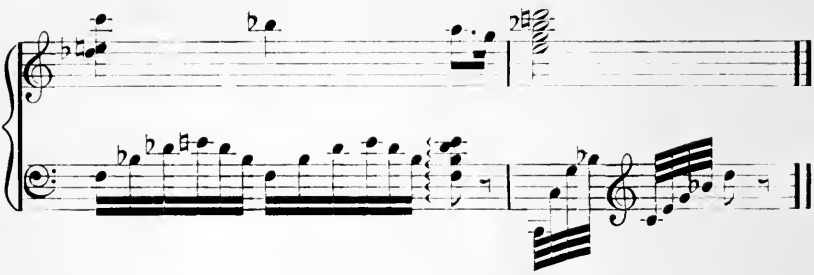


REFERENCES. Wagner, *Tannhäuser*, 124, 233, 234; *Flying Dutchman*, 3.

Section 38. The Deceptive Resolution.

87. *Poco animato.* WAGNER, Götterdämmerung.



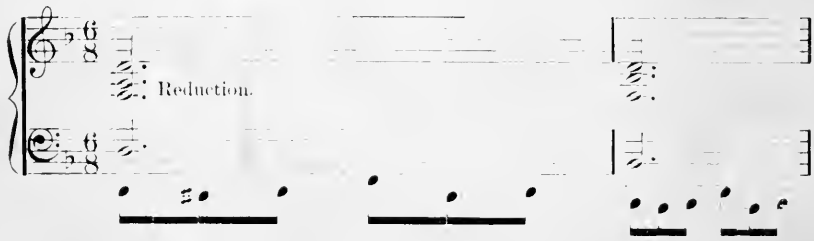


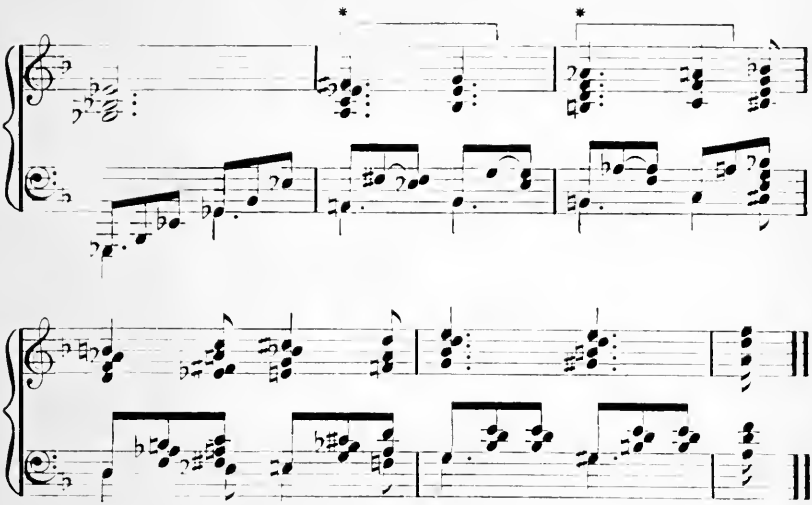
REFERENCES. Beethoven, Op. 7, II, 29; Chopin, Prelude No. 13, m. 15; Prelude, Op. 45; Schumann, Op. 12, No. 8, Coda; Wagner, *Lohengrin*, p. 51, m. 2; also pp. 64, 65; *Tannhäuser*, pp. 4, 37, 146, 157, 256; *Flying Dutchman*, 119, 227.

Section 39. Passing Diminished Seventh Chords. These usually rise or fall by seconds, major or minor, most often the latter. Composers notate them very irregularly. The roots appear here and there, as is shown in the Examples below, and often in a very arbitrary manner. A general rule of notation is as follows: When these chords move along the chromatic scale, every fourth chord should have the same root. This is also shown below. In phrases of this nature, no firm hold is felt of any key, except at the ends of the phrase or section — everything is passing, fleeting, which lies between these bounds.

Mark each and every chord according to its notation, or, what is better, mark the chords at the ends of each phrase or section, and pass over the other chords.

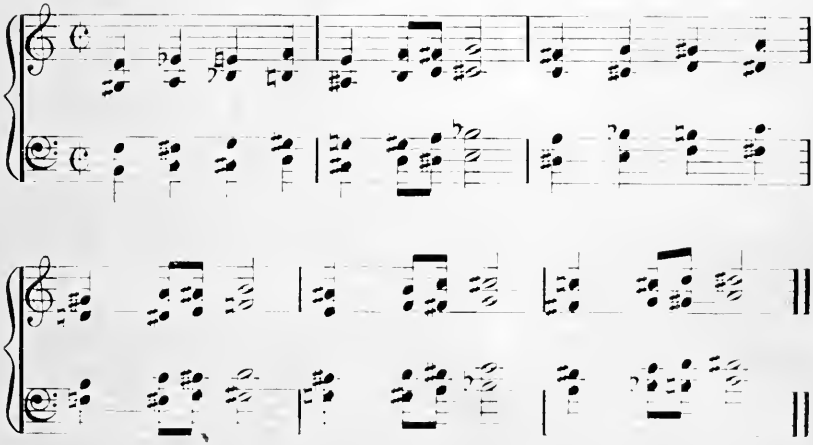
88. *Largo e mesto* BEETHOVEN, Op. 10.





* See Principle No. 5.

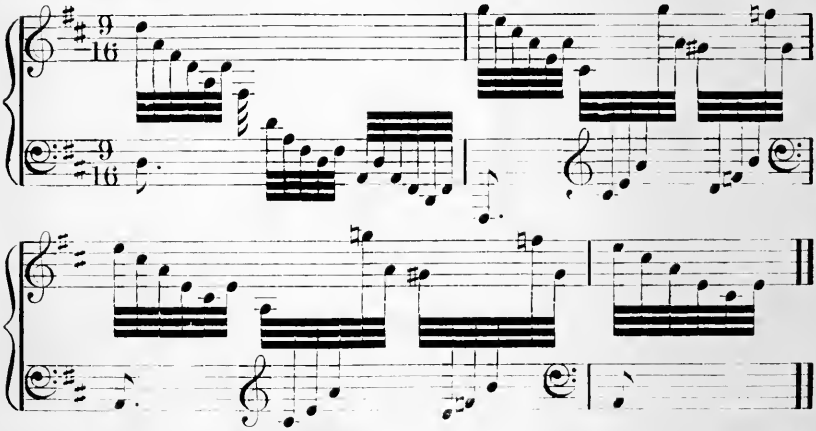
89. *Allegro ma non troppo.* LISZT, Les Préludes.



REFERENCES. Chopin, Prelude 19, m. 29; Schumann, Op. 6, No. 18; Bizet, *L'Arlésienne*, Suite No. 1, 1. *Un poco più lento*; Wagner, *Tannhäuser*, pp. 5, 11, 47, 146, 238, 240; *Flying Dutchman*, 213.

Section 40. The Diminished Seventh on the Raised Fourth Step.

90. *Vivace.* CRAMER, Etude.



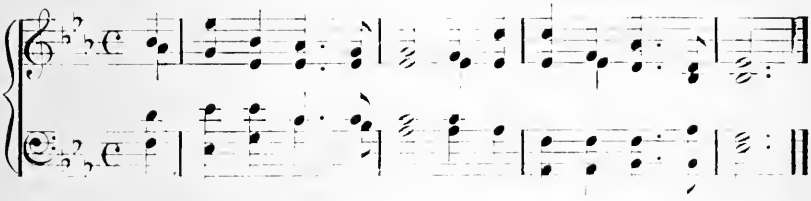
REFERENCES. Beethoven, Op. 10, No. 2, I, 46; Cramer, Etude 1, m. 19; Etude 8, m. 27; Wagner, *Flying Dutchman*, 11, 123.

Section 41. Secondary Seventh Chords in General. Extended successions of secondary seventh chords often give trouble as regards the definition of key. Some passages, as in Exercise 91, when shorn of the passing tones, suspensions, etc., which form many of the apparent secondary seventh chords, present a very simple structure; in which case the analyst must decide whether or not to mark all the combinations as real chords. Other passages, as in Exercises 93 and 94, present a series of secondary sevenths, often unmistakable in key, which turn suddenly, by the fact that any one chord may belong to several tonalities, into another key, possibly into a key quite remote. And, finally, other passages, on close examination, will be found to be made of alternations of supertonic seventh and dominant seventh, a favorite device in the restless music of this day, especially since the advent of *Tristan*.

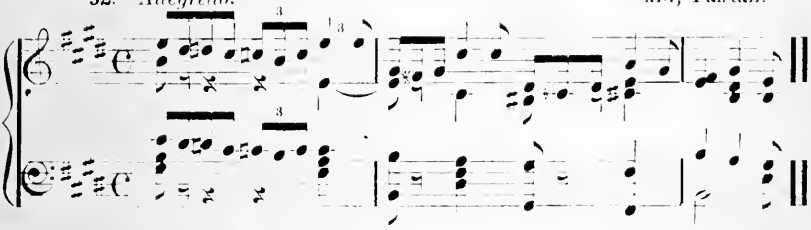
When used in succession, or in clusters, so to speak, secondary sevenths gravitate toward a dominant harmony or toward a supertonic, though the latter case is rare. This leading chord defines

the key of the preceding chords. Consequently it is necessary, as in Exercise 93, before fixing on a decision, to survey the entire passage in question and, having found the dominants, to figure from them, to possibly reason backward to the first and opening chord.

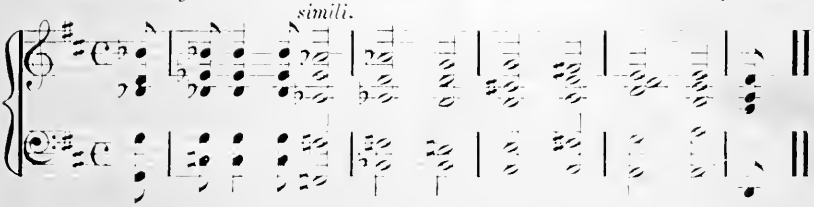
91. *Andantino.* MENDELSSOHN, Part Song.



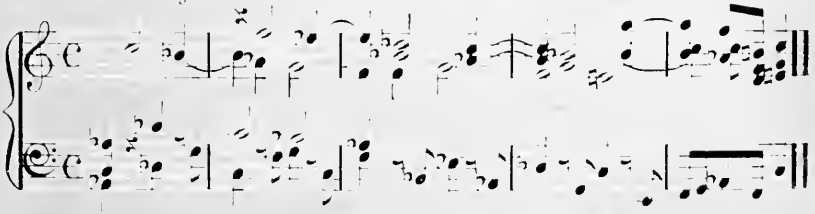
92. *Allegretto.* VERDI, Falstaff.



93. *Allegro.* BEETHOVEN, Op. 10.



94. *Allegro.* BACH, Matt. Passion.



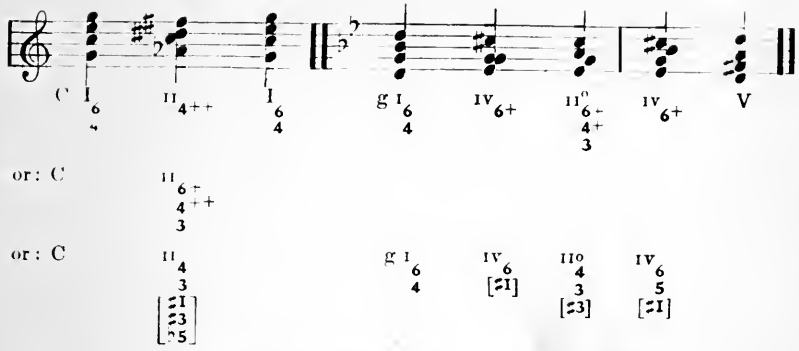
REFERENCES. Schumann, Op. 6, No. 4, m. 30; Op. 6, Nos. 8, 13, 18, 1; Cramer, Etude, No. 1, m. 16; Grieg, Op. 12, No. 5; Chopin, Prelude, No. 2.

Section 42. The Augmented Sixth Chords. The inversions of those chords which by alteration, and before inversion, contain a diminished third, and which after proper inversion are known as the Augmented Sixth ($^{6+}$), the Augmented Six-Five ($^{6+}_{5}$), the Augmented Six-Four-Three ($^{6+}_{4+}{}_{3}$), and the Doubly Augmented Fourth ($^{4++}$ or $^{6+}_{4++}{}_{3}$), are common in music of all kinds as harmonies used to strengthen the key impression, or to enrich the chord structure, or to produce modulations.

They often give especial trouble to the scholar in Analysis,—trouble due in part to a neglect to learn the chords thoroughly in the Harmony Course, and in part because the $^{6+}_{5}$ and the $^{4++}$, through enharmonics, are used interchangeably, causing confusion to the unversed. To illustrate: the interval of an augmented sixth, A♭ F♯, when the tendencies of its tones are followed, resolves to G G, the flatted tone falling, the sharped tone rising. If this principle of chromatic leads be followed out strictly with all the chromatic tones involved, the Augmented Six-Five — A♭ C E♭ F♯ — and the Doubly Augmented Fourth — A♭ C D♯ F♯ — will resolve to different harmonies, the tone E♭ falling to D, or being held over, the D♯, its enharmonic equivalent, leading up to E. But composers of all schools write the one sound in two ways — E♭ or D♯ — quite as they please, and carry the tone up or down regardless of rule or reason. As already said, this embarrasses the novice in Analysis.

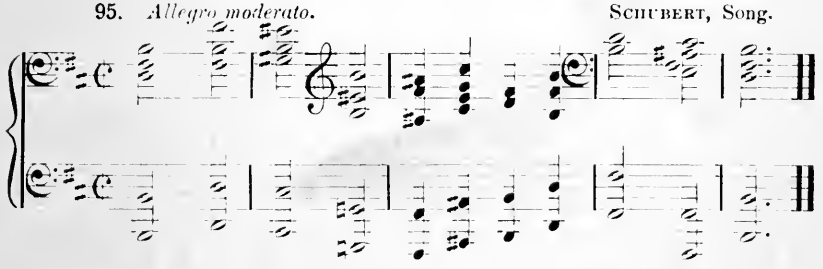
In illustration, examples of correct and incorrect notation will be given. It may be said, however, that cases occur, as in the one quoted from Mozart, where the $^{6+}_{5}$ may be quitted naturally and most sensibly as an $^{6+}_{5}$, although sounding as a $^{4++}$ — in which case we behold a simplification of notation.

Find the root and write the proper numeral, and then modify it by the proper figures and accidentals.

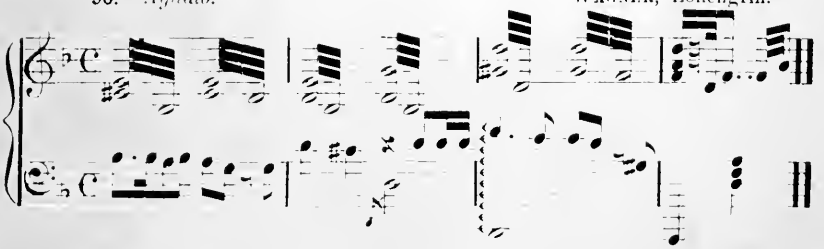


Sometimes one figuring may be used, sometimes the other.

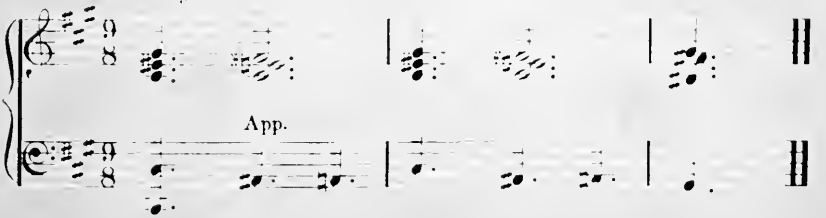
95. *Allegro moderato.* SCHUBERT, Song.



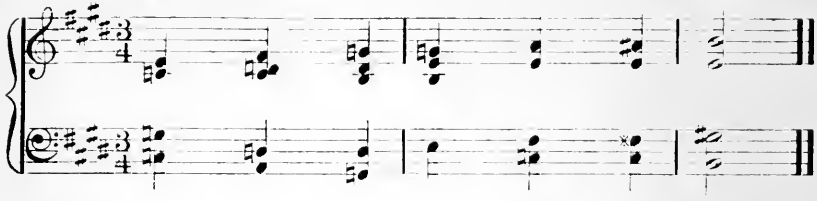
96. *Agitato.* WAGNER, Lohengrin.



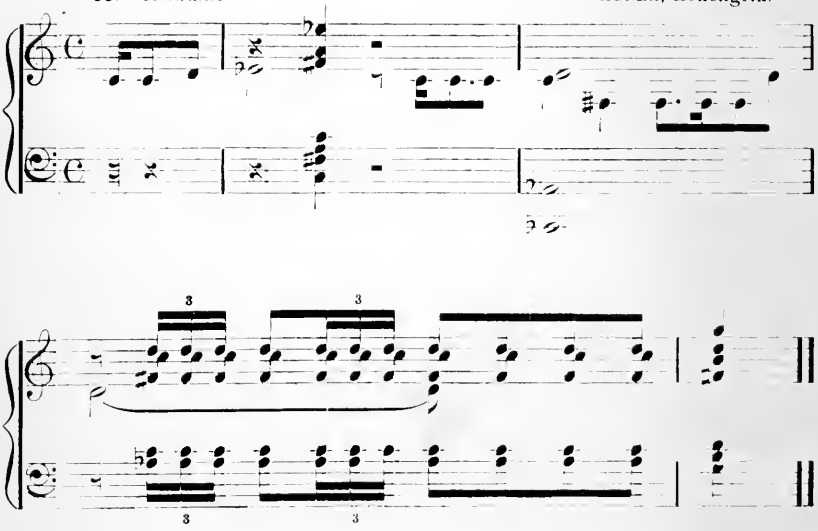
97. *Allegretto.* FRANCK, Violin Sonata.



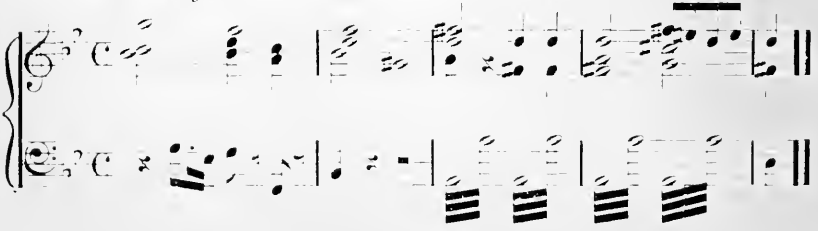
98. *Andante.* PAUKNER, Bohemian Air.



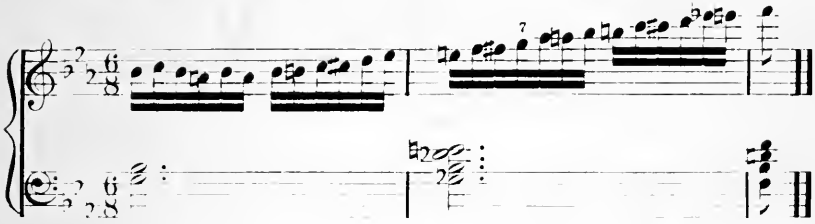
99. *Andante.* WAGNER, Lohengrin.



100. *Allegro.* MOZART, Don Giovanni.



101. *Allegro molto.* BEETHOVEN, Op. 7.



REFERENCES. 6^{+}_{5} Beethoven, Op. 2, No. 1, IV, 8; Op. 10, No. 2, II, 15; Wagner, *Lohengrin*, pp. 3, 5, 15; *Tannhäuser*, 4.

6^{+}_{5} Beethoven, Op. 7, I; Chopin, Prelude 12, m. 36; Cramer, Etude 17, m. 19; Etude 19, m. 20; Wagner, *Lohengrin*, pp. 9, 16, 50, 93, 166, 189, 190; *Tannhäuser*, 31, 224, 239.

$6^{+}_{4}_{3}$ Beethoven, Op. 13, III, 46; Chopin, Prelude 20, m. 6; Prelude 21, m. 32; Schumann, Op. 6, No. 1, m. 16; Op. 15, m. 2; Wagner, *Flying Dutchman*, 162, 175.

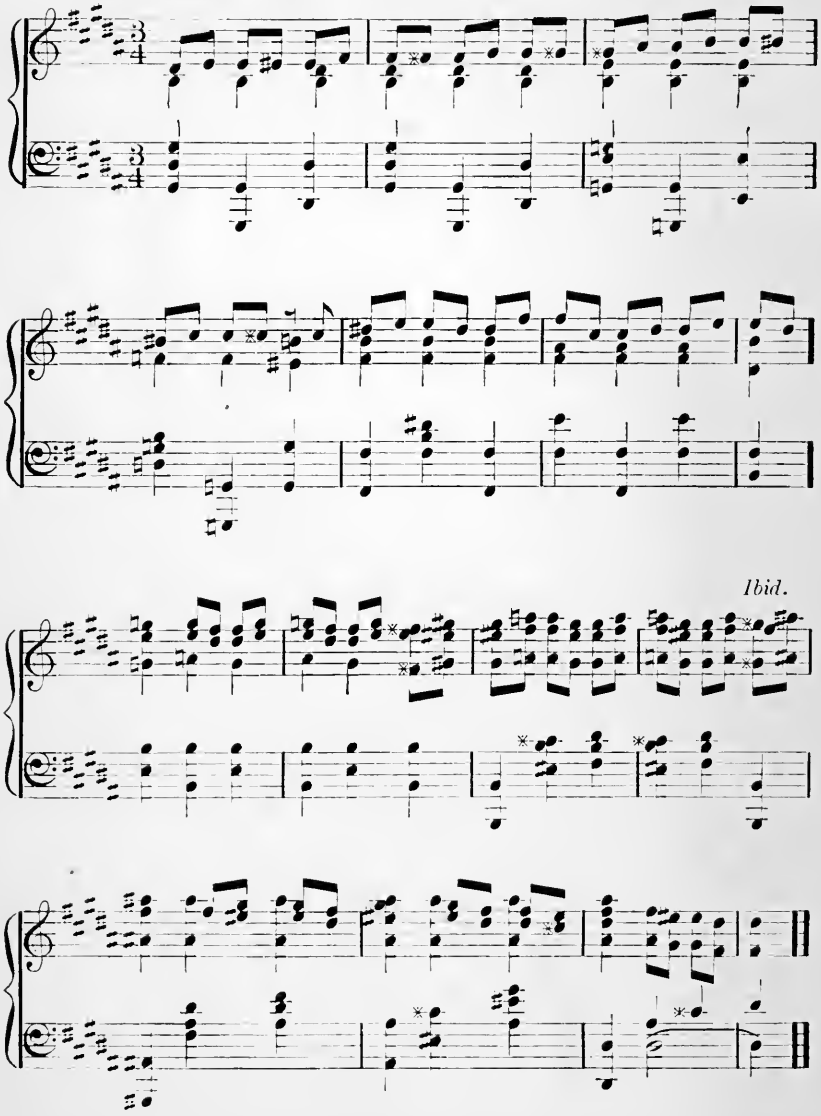
$6^{+}_{4}_{3}$ Schumann, Op. 6, No. 14, m. 28; Op. 6, No. 17, m. 34; Chopin, Polonaise, No. 1, m. 30; Wagner, *Tannhäuser*, 58.

6^{+}_{5} as 4^{++} Beethoven, Op. 7, I, m. 98; Wagner, *Lohengrin*, pp. 12, 23, 62; *Flying Dutchman*, 128, 138.

Section 43. Modulation down a Minor Second by an Augmented Chord. The V_7, and its enharmonic equivalents, the $^{5}_{6}{}^{+}$ and the 4^{++} (thus, G b d f; g b d E♯; g b C♭ e♯), were often used in modulating down a semi-tone by composers of Chopin's day. The progression appears to have become hackneyed, and for a time abandoned, to be revived with tremendous power by Wagner in his *Tristan*.

The use of enharmonics makes the analysis at times a little difficult and puzzling. Measure 4 in Exercise 102 is a good instance; in some editions the f♯ is adhered to throughout the measure — but, as the "identity of a chord depends on its resolution" and this chord goes into B major, it is a B major chord, altered, and nothing else.

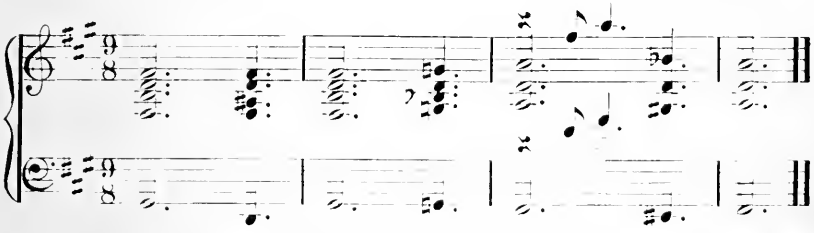
102. *Presto.* CHOPIN, Prelude.



REFERENCE. Chopin. F♯ minor Prelude.

Section 44. Chords with a Diminished Third or Hidden Augmented Sixth. These are the chords of the preceding section in some other form. The Augmented Sixth may be found in any two upper voices, or its equivalent, the Diminished Third, may be present. In figuring use numerals, and accidentals enclosed in brackets to show the alterations.

103. *Allegretto.* FRANCK, Violin Sonata.



REFERENCES. Chopin, Prelude No. 4, m. 23; Prelude 17, m. 20, 22; Prelude 22; Wagner, *Tannhäuser*, 231, 239, 240; *Flying Dutchman* 2, 22.

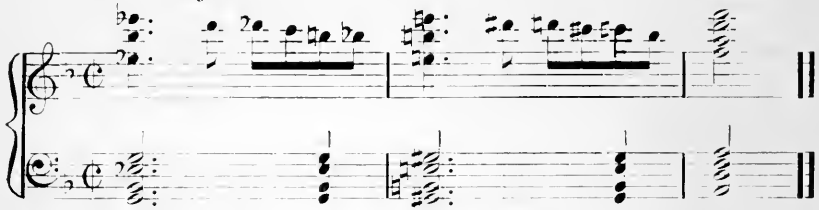
Section 45. The Flat Second and Sixth Steps. The first inversion of the supertonic triad containing this lowered — the Flat Second — step is commonly known as the Neapolitan Sixth. Although most frequent in this form, this altered supertonic may be used with any member in the bass and in either mode, in major requiring two alterations. It may be used at the beginning of a phrase, often misleading the student (Principle No. 5 must be borne in mind), or in its course; and a transient modulation is often made through the Neapolitan Sixth, or without it, to the key of its root, to the key of the Flat Second — sometimes of beautiful effect — which key is quickly abandoned for a resumption of the reigning tonic key.

SIGNS: II, II°, II_{6}, N_{6}, $II_{\frac{6}{4}}$, $II^{o}_{\frac{6}{4}}$

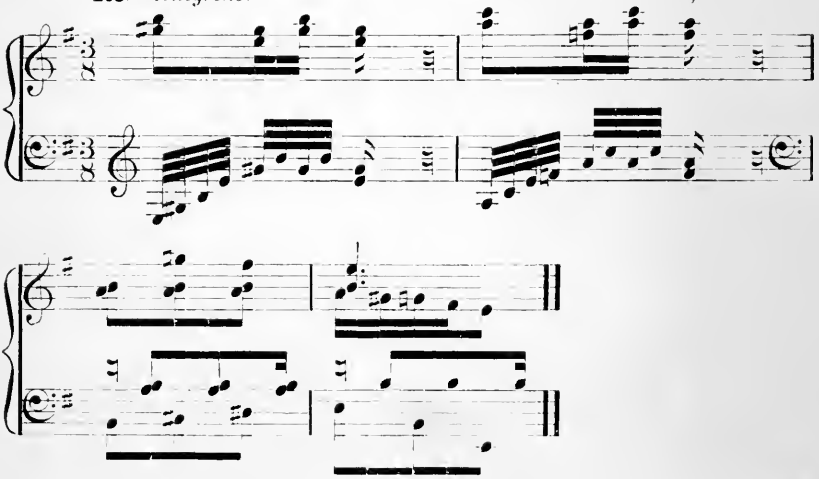
[♮ or ♭1] [♮ or ♭5] [♭1] [♮ or ♭1] [♮ or ♭5] [♮ or ♭1]

The **Flat Sixth Step** at times occurs, although less frequently than the Flat Second Step. It is easy to recognize.

104. *Allegro.* WAGNER, Flying Dutchman.



105. *Allegretto.* DVOŘÁK, Dance.

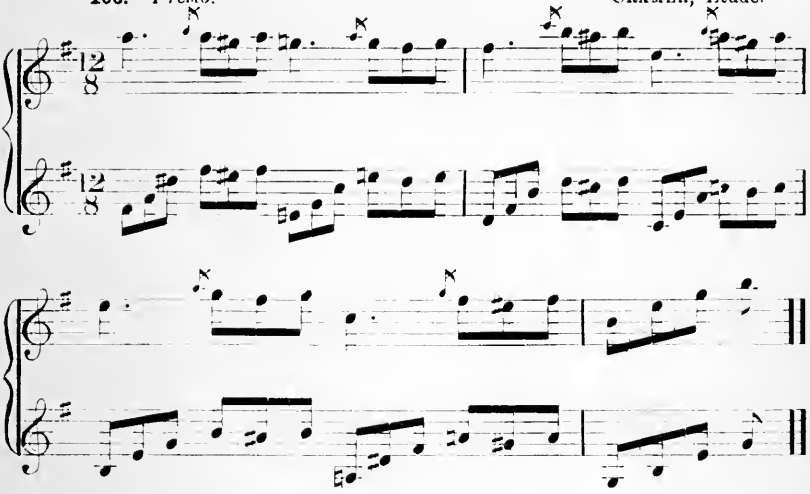


REFERENCES. Beethoven, Op. 27, No. 2, I, 21; Grieg, Op. 6, No. 4, *più Allegro*: Schumann, Op. 6, No. 5, m. 12 and 22; Op. 68, No. 29, B♭ strain and Coda; Cramer, Etude 3, m. 21; Etude 9, m. 6, 60; Etude 10, m. 22. — See also, for modulation to Key of Flat Second, Chopin, Prelude 16, m. 7 from end; Bizet, *L'Arlésienne*, Suite No. 1, II, m. 29. Flat Sixth, Wagner, *Tannhäuser*, p. 86.

Section 46. The Flat Seventh Step. Occurs most frequently in the minor mode, and often as a means of softening the harshness inseparable from the augmented second formed by the descending seventh and sixth steps of the harmonic minor scale. It is apt to mislead the student. May be found in sequential passages, and as the root of an independent chord.

SIGNS: V, or V_7, or VII°, etc.
[73] [73] [73]

106. *Presto.* CRAMER, Etude.

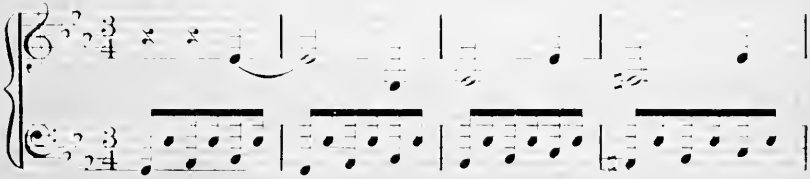


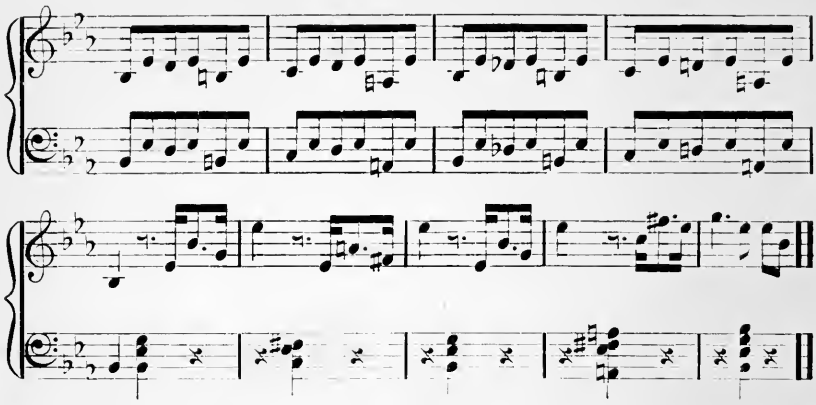
Section 47. Embellishment of the Tonic Six-Four in a Cadence. The tonic six-four moves most naturally into a dominant cadence. The suspense attendant on this six-four chord is often heightened, by composers of many schools, by embellishing, so to speak, this six-four chord before its resolution into the dominant, by harmonies diatonic or chromatic. Since they merely intensify the key effect, such chromatic harmonies may most properly be marked as altered, *i. e.*, as non-modulating.

The same procedure is at times made with the dominant chord.

Examples are especially frequent in the works of Mozart and Beethoven.

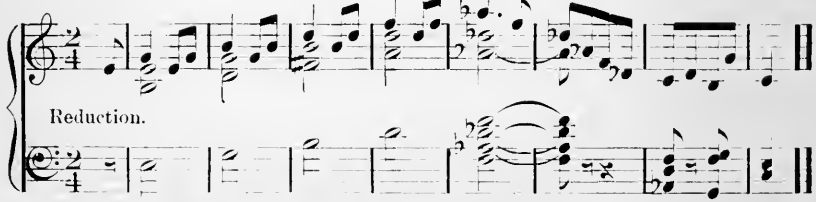
107. *Allegro con brio.* BEETHOVEN, Op. 10.



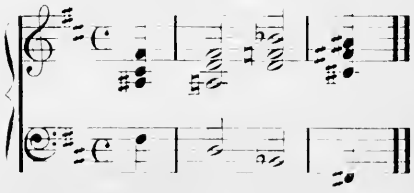


Section 48. Consecutive Tonics. Progressions are not unusual which may be explained only on the supposition that consecutive tonic impressions are possible, and are intended by the composer. Such progressions are generally made agreeable by the use of common tones, sometimes enharmonically expressed; but cases are not unknown in which the common and connecting tone is dispensed with altogether.

108. *Allegro molto vivace.* GRIEG, Violin Sonata.



109. *Allegro maestoso.* LISZT, Concerto.



REFERENCES. Grieg, Op. 6, No. 3, m. 34; Chopin, Prelude 8, m. 23; Wagner, *Tannhäuser*, 236, m. 5.

Section 49. Chromatic Passing Chords and Passing Sequential Figures. A logical outgrowth of passing tones in a single voice is the union of several voices in passing chords moving in one direction. Furthermore, as two single voices may move from one consonance through contrary motion to another consonance, and the satisfactory outcome of the passage may compensate for all the transitory harshnesses, so, proceeding logically from this premise, modern composers have made bold to employ chords in the same manner.

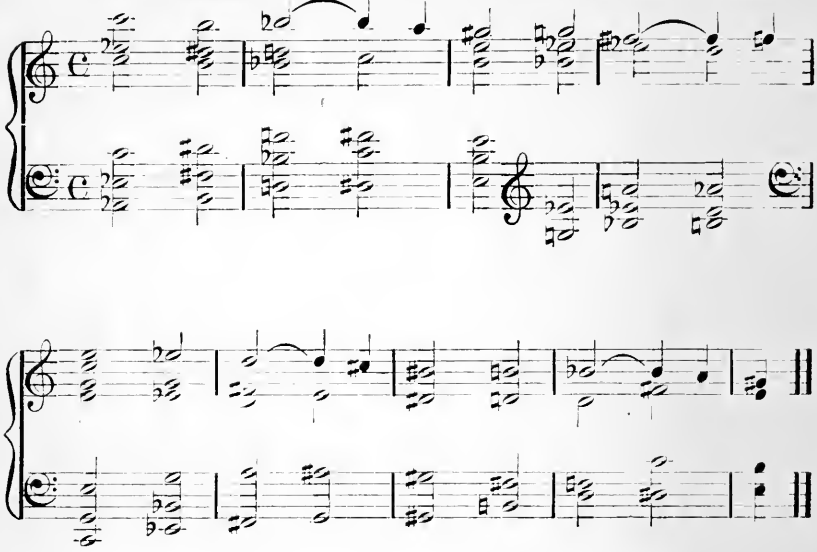
The two outside voices are written, and any combination which seems good to the composer is used in harmonizing each tone, the chord being usually fitted to the soprano. Not infrequently the most intolerable dissonances result — combinations, indeed, which may not be reduced to thirds, which are not chords.

On the other hand, such a passage may contain successions of the most ravishing beauty — due to the euphonious setting of each individual chord, and to the mental surprise and to the delight of the harmonic sense at each unexpected change.

More than this, the extension of this spirit to the sequence sometimes occurs in modern music, as in the example by Bizet, where on an organ-point a sequential figure — its motive, a chord tone with an embellishment — is carried out obstinately through the rising scale, its principal tone at times consonating, at times dissonating sharply, the whole thing ending, however, satisfactorily with a good tonic impression.

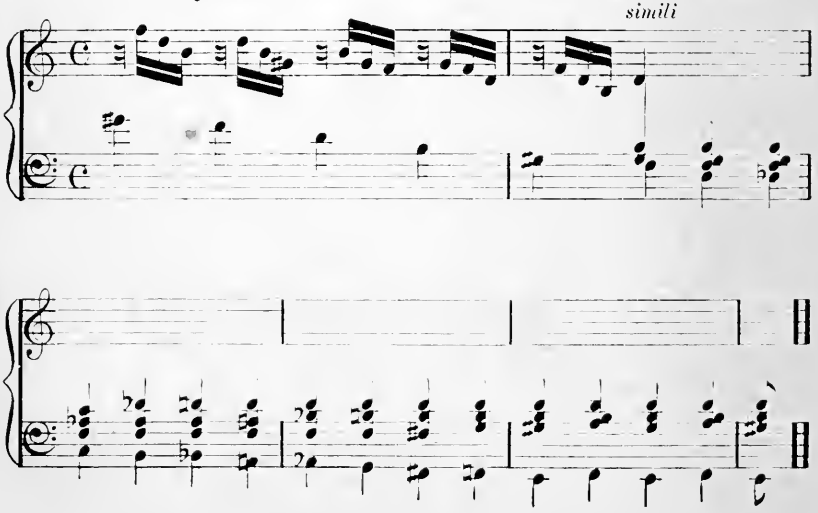
In marking, much judgment must be used. If the chords be disconnected but yet long enough to give the ear a series of strong impressions, then they will fall under the head of Consecutive Tonics, with possibly two or more occasional chords in one key. When enharmonics are used with one general chord or key impression, the task is to fix upon the places where this impression is made, to mark them, and then, as these places govern the impression of the whole, to account for the rest as best one may — passing tones, etc.

110. *Andante.* WAGNER, Walküre.

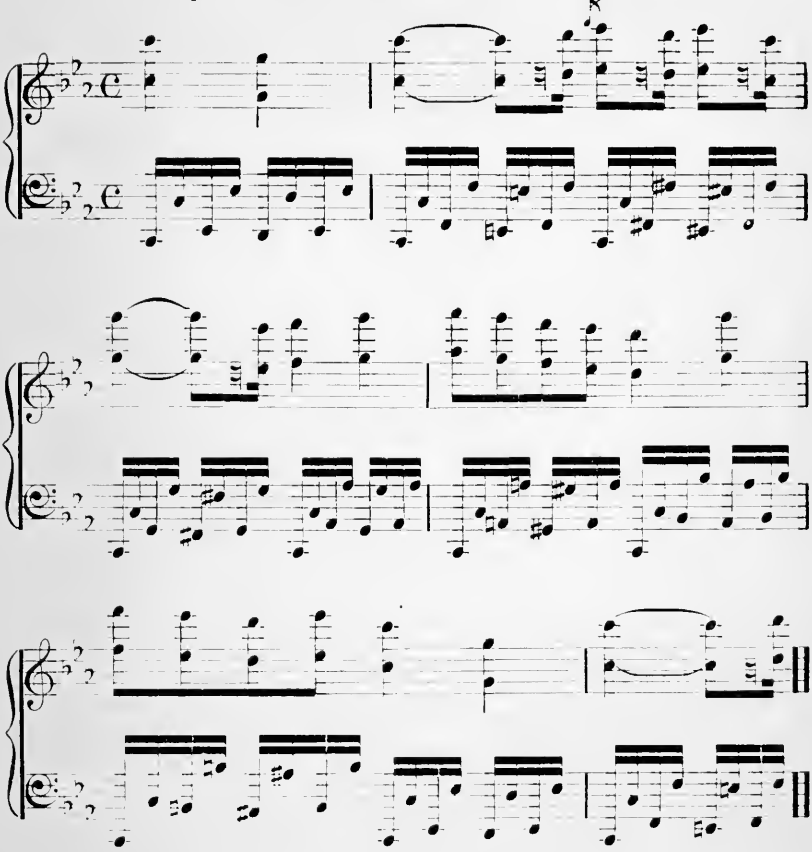


111. *Allegro vivace.* GODARD, Violin Sonata.

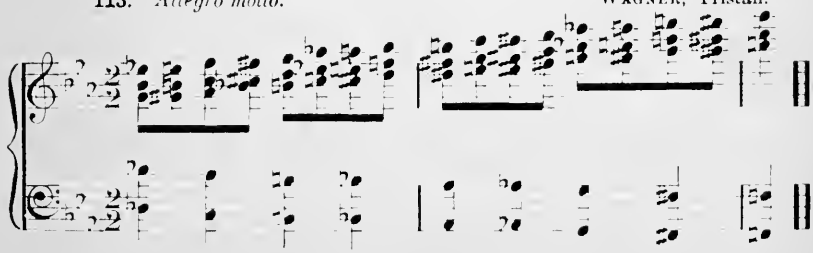
simili



112. *Tempo di marcia.* BIZET, L'Arlésienne.



113. *Allegro molto.* WAGNER, Tristan.



Section 50. The Sequence is the continuous transposition, more or less regular, of any group of notes or chords, and consists of a Motive, or Model, and Repetitions, or Transpositions, of this Model. These transpositions may be one or more in number, and the Sequence may be diatonic or chromatic throughout, or a mixture of the two, or may modulate.

When diatonic — when based on the notes of the key in which it begins — and when carried out far enough, the diminished or augmented chords of the key cause harshnesses which are more or less marked according to the position of the dissonances involved. These harshnesses add to the interest of the Sequence, and, as is usual, may be compensated for by the outcome of the whole passage in bland principal harmonies.

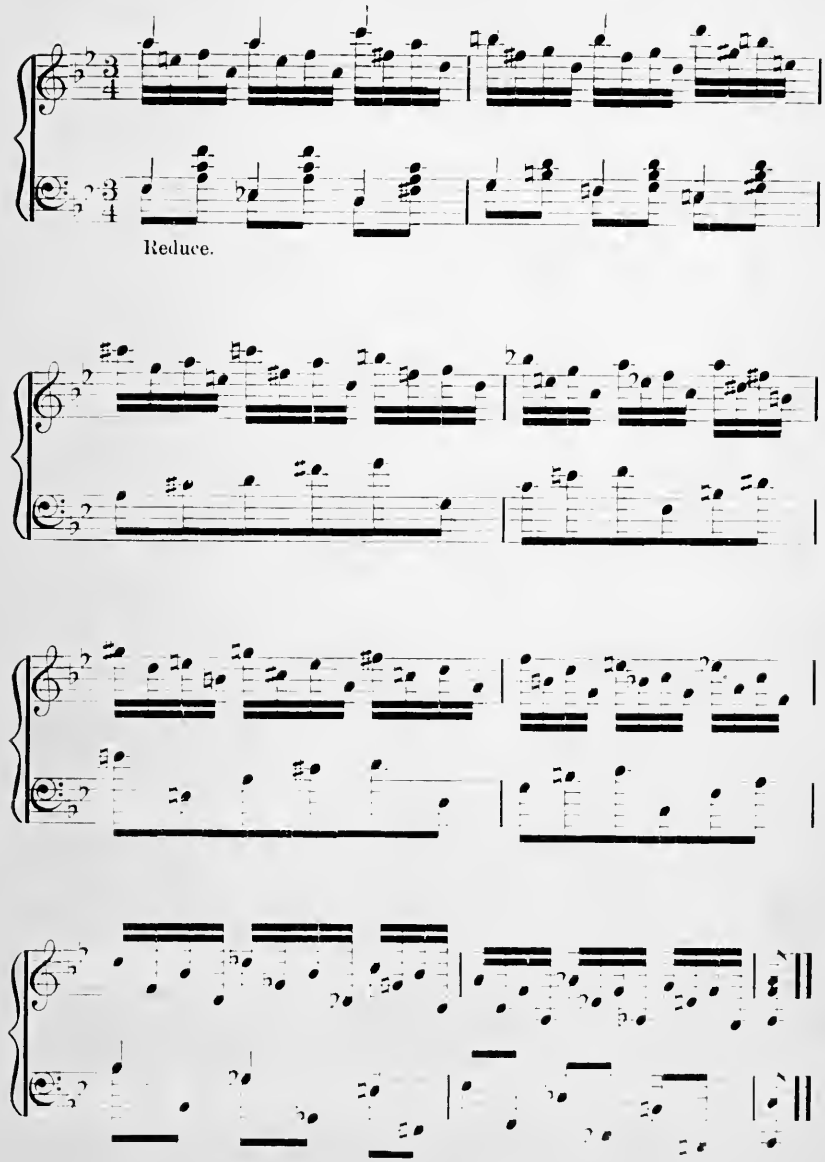
In a modulating Sequence of some length, especially in instrumental music, composers often raise or lower, arbitrarily, some tone in an occasional Repetition. This causes an irregularity which, by breaking the monotony, adds to the interest of the whole. These irregularities, interrupting the continuous rise or fall of definite keys, often produce what the author calls **sham keys**; for while the roots of an apparent dominant and tonic may be present, the tones which go with them do not form the intervals which characterize these chords, and the impression on the mind may be defined as that of a key, but marred in some way, strikingly incomplete.

Furthermore, a sequence may be based on a succession of passing thirds or sixths; or on a long sequential passage made up of several different Motives with their Repetitions.

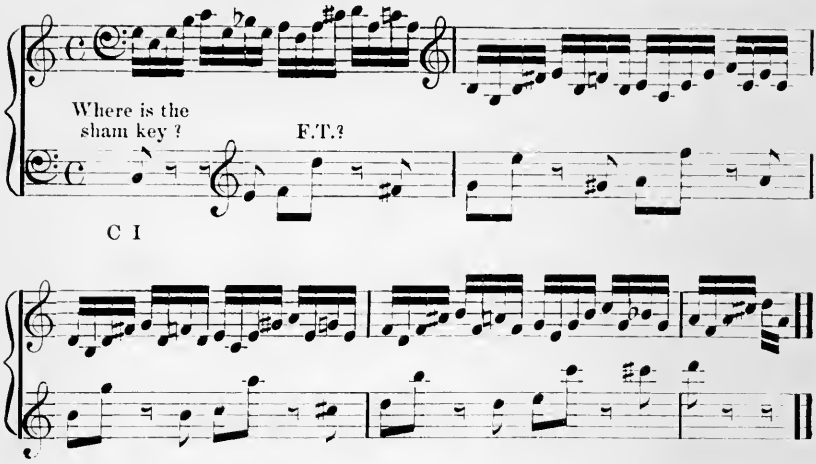
The interval of transposition depends on the will of the composer. The Sequence may rise or fall by seconds, may move by fifths, and may go up or down the chromatic scale on the basis of one sustained chord (see Cadenza), in which case some of the Repetitions will move about or on foreign tones — in other words, the essential tone of the Repetition may be a passing tone.

To mark Sequences: No fixed rule can be given; the nature of the passage must be considered. It is thought that he who reaches this point in the book will be able to use his learning and judgment rightly.

114. *Alla Polacca.* HUMMEL, Polonaise.

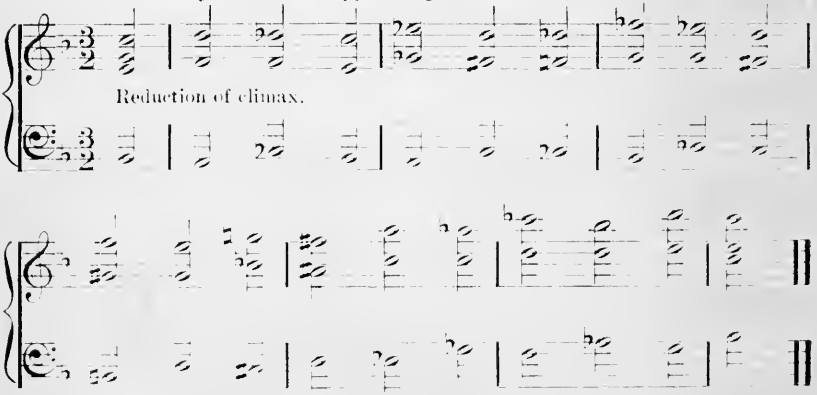


115. *Allegro brillante.* App. CRAMER, Etude.

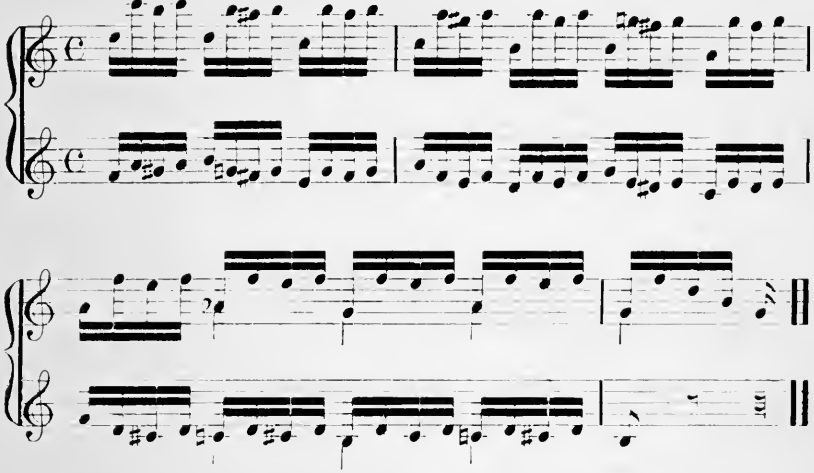


116. *Allegro.* CRAMER, Etude.

117. *Energico ma non troppo Allegro.* SINDING, Violin Suite.



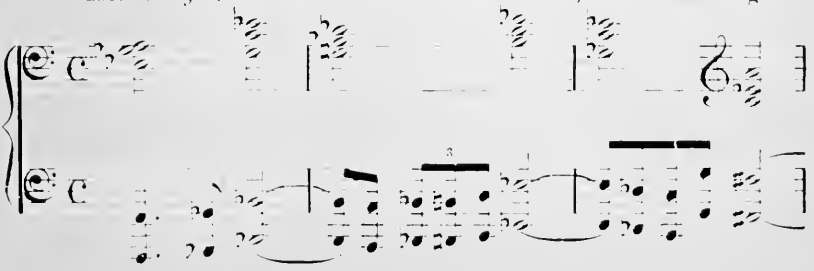
118. *Allegro.* CRAMER, Etude.

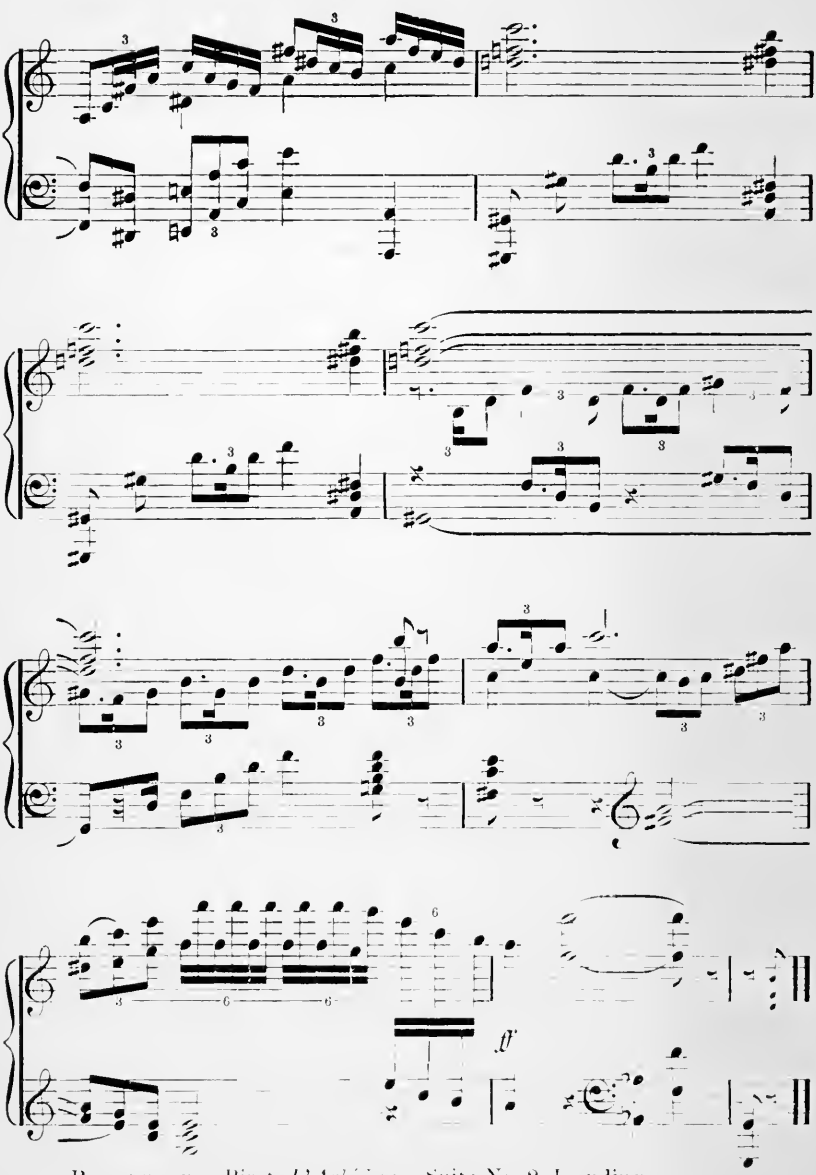


REFERENCES. Beethoven, Op. 10, No. 1, I, 32; Chopin, Prelude 9, m. 9; Prelude 20, Prelude 21, m. 32; Cramer, Etude 5, m. 23; Etude 1; Etude 8, m. 13; Etude 14, m. 26; Schumann, Op. 6, No. 2, m. 7.

Section 51. Two Simultaneous Harmonies. Cases occur occasionally in modern music in which two distinct harmonic bodies are used at one time, the one over the other. It may be possible to define the upper chord as composed of foreign tones, or it may be necessary to define it as an independent regularly resolved harmony.

119. *Allegro.* WAGNER, Götterdämmerung.



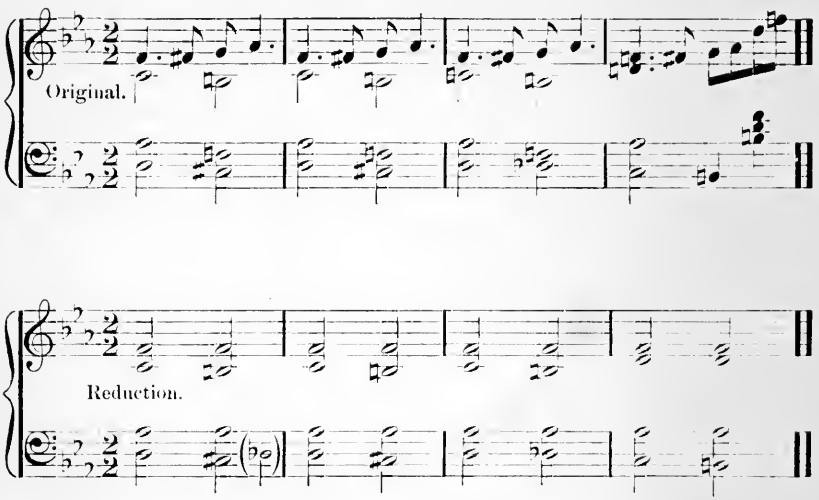


REFERENCE. Bizet, *L'Arlésienne*, Suite No. 2, I, ending.

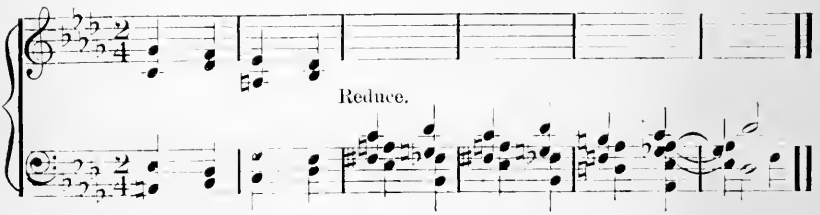
Section 52. The Skip Resolution. The normal, the strict, resolution of a chromatic tone, and of *three* members of the V_7 and of the subordinate sevenths, and of *all* of the members of the leading tone sevenths, major or minor, is by moving a second. To the violation of these strict resolutions, modern music owes some of its most startling progressions. The principle is simple; the one lined F♯, for instance, instead of going to the one lined G, is carried to some other tone, the rightful tone of resolution, G, appearing in some other voice, above or below. This procedure causes a dislocation of the resolution; and it is also often responsible for a progression which not only startles the ear, but baffles the ear in ear-analysis, and may be made out only through examination with the eye. A chromatic passage, in itself closely united, correctly written, and consequently stout in its coherence, is by this means torn asunder, and the rightful, the primary, phrase may be found only when the passage is rewritten, and the voices resolved by rule, an F♯ moving a second to G, an E♭ to D. Cases occur occasionally in which a hitch becomes necessary even in this Reduction. Moreover, enharmonics may complicate the affair, and cross relations are exceedingly common.

In marking passages of this sort, the chords should be figured as they stand in the original, and the phrase may be reduced in writing to the primary form. The legitimacy of this *primary form*, so called by the author, is well shown by Exercise No. 120, the outcome of the first four measures in the diminished seventh of C minor, toward which the whole progression tends, being most satisfactory.

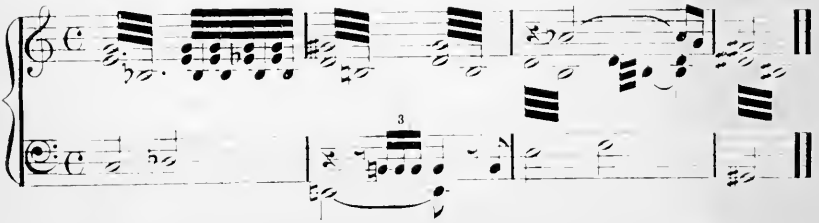
120. *Presto.* WAGNER, Tristan.



121. SCHUMANN, Op. 12.



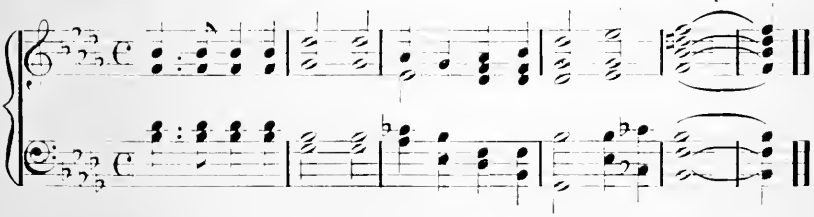
122. *Moderato e ritenuto.* WAGNER, Tristan.



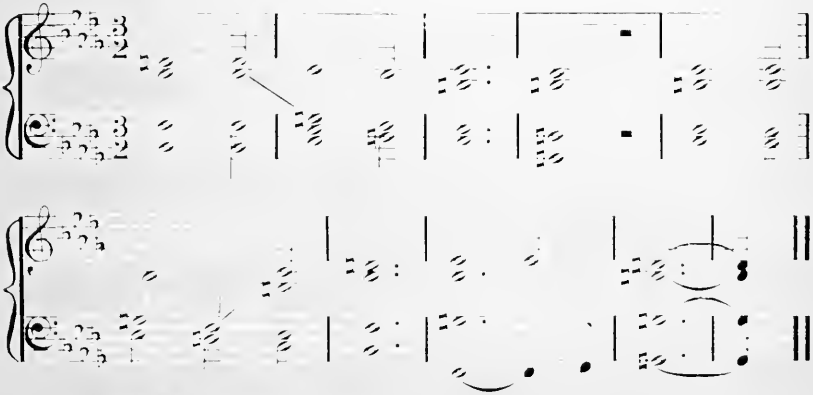
Section 53. The Church Modes, and Unusual Cadences. The Church Modes may be defined, briefly, as scales in which the customary order of semitones is changed. These alterations often make the ordinary cadences impossible, and produce, moreover, progressions which startle the harmonic sense accustomed to the modern major and minor modes or scales. To treat this matter exhaustively is needless; the bounds of this work also forbid the presentation of material sufficient to teach the many fine distinctions between the several Modes. The quickest and the best way is to regard such successions as triad progressions, pure and simple — which in reality they are — and to mark them as such.

Place as many chords as possible in one key. No better rule can be given.

123. *Poco lento.* DVOŘÁK, Requiem.



124. *Andante.* *Ibid.*



REFERENCE. Wagner, *Tannhäuser*, 259.

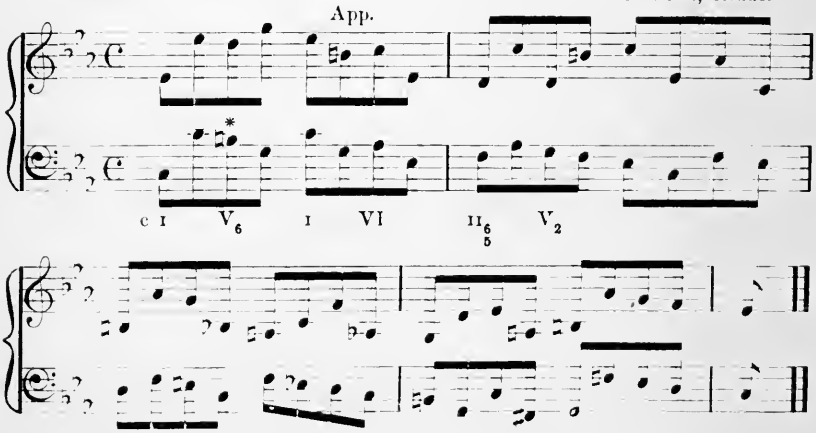
Section 54. Two-part Writing. May be divided into two classes:

1. **A melody in either voice, with a broken chord accompaniment;**

2. **Two equally important parts or voices.** In the former case the chords are dissolved in the accompaniment, and though they are at times invested with foreign tones, they are so plain before the eye that no example is needful here. In the latter and more difficult case, the most essential members of the principal chords, and those chromatic tones which define the modulations, must be sought for, must be picked out. It should not be forgotten that a chord may be dispersed over several counts in the measure, and that in many a rapid passage it is the sum total of a number of notes which gives the chord impression, if the chord be dissolved.

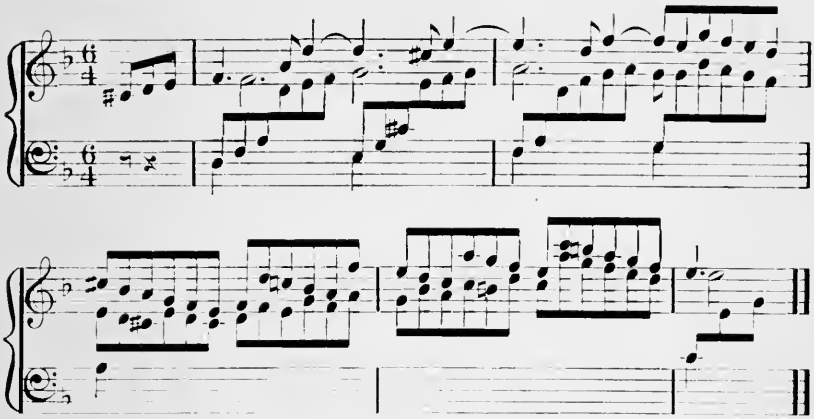
Generally by playing simultaneously those tones which define the chord structure, Two-part Writing may be resolved to fairly complete harmony, although sometimes badly disjointed in the resolutions. In deciding on modulations, the tempo must be borne in mind. It is well to remember that the principal chords predominate, in order that the key effects may be strong and unmistakable.

125. *Con moto.* CRAMER, Etude.

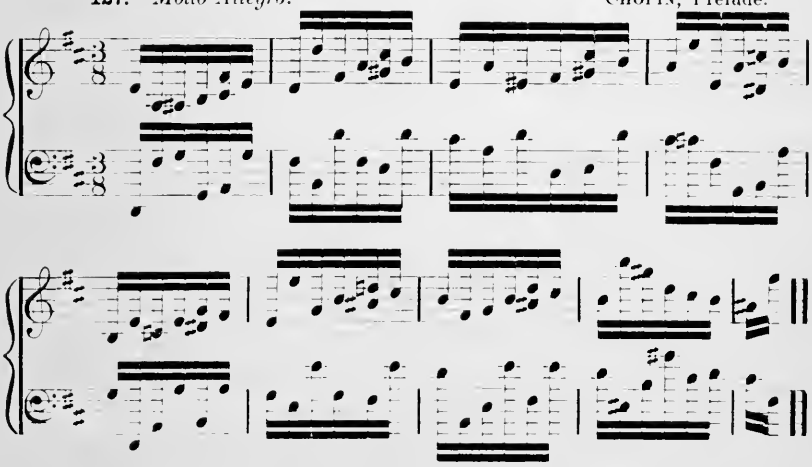


* See Principle 14.

126. *Moderato.* CRAMER, Etude.



127. *Molto Allegro.* CHOPIN, Prelude.



Section 55. One-part Writing and the Cadenza. They appear in various forms:

1. As the ornamentation of one single and prolonged chord, usually the tonic six-four or the dominant;

2. As the investment in foreign tones of a plain chord structure, easily picked out;

3. As the sequential ornamentation of a chromatic scale, moving generally above one single chord;

4. As the sequential development of some harmonic motive of several members, sometimes readily defined, again difficult of explanation, although clear in its outcome.

The marking must follow the characteristics of the passage. No definite rule may be given applicable to all cases. Following the above classification, these general ideas are suggested:

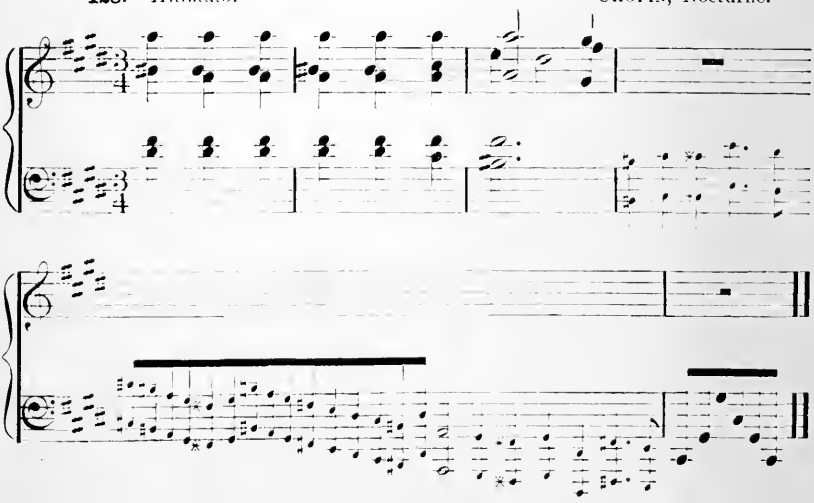
1. Fix on the chord, *mark it once* below the staff, and then give each foreign tone its sign;

2. Define the chords, and then mark as in No. 1;

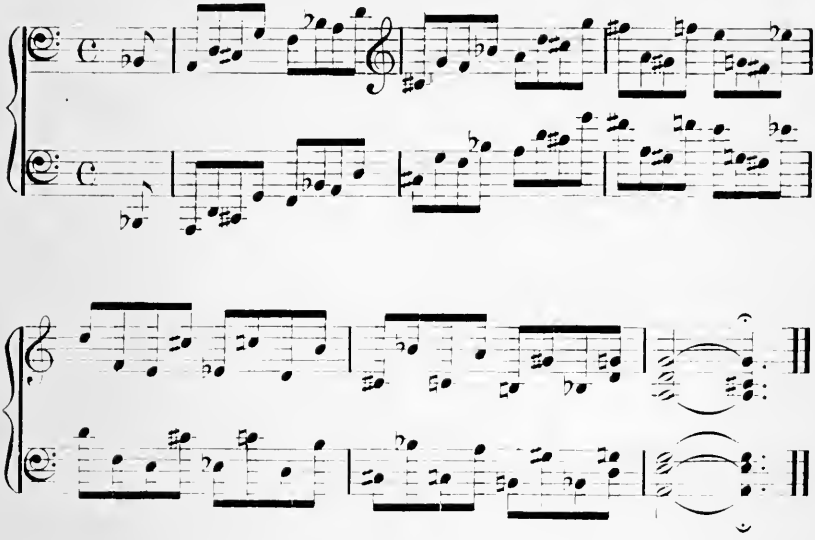
3. Fix on the motive of the sequence and mark it, and then mark those principal notes, so-called, over which the sequence moves, whether they be chord tones or foreign tones, the unessential tones in each transposition of the figure being marked only in the motive or model (see Sequence);

4. Define and mark the motive, with its possible modulations, and then follow the working out (the task will be simplified if a bracket be drawn over the motive and over each repetition).

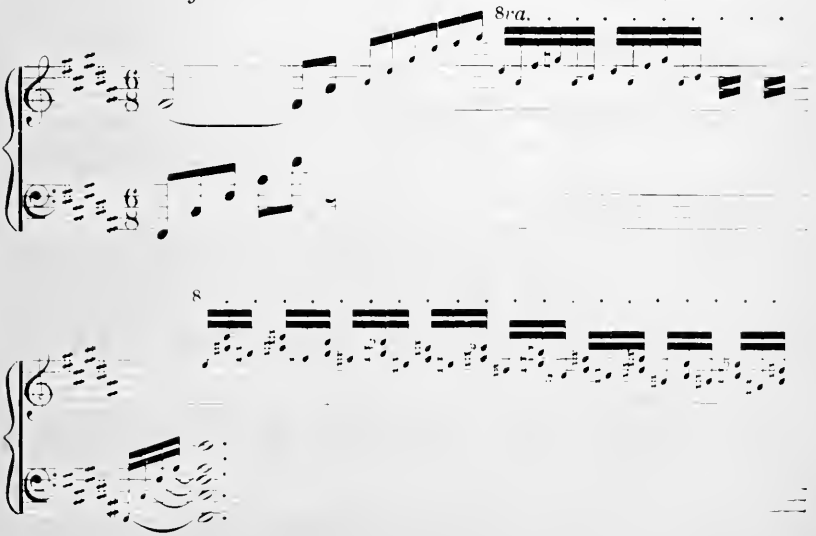
128. *Animato.* CHOPIN, Nocturne.

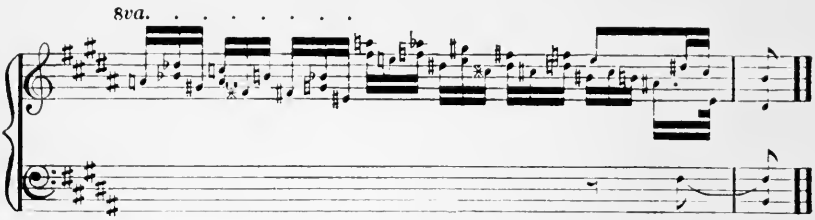


129. *Allegro.* BEETHOVEN, Op. 10.

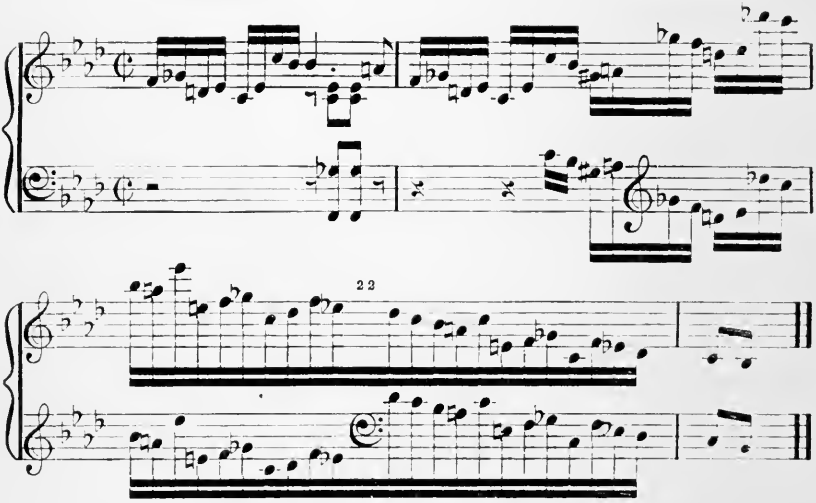


130. *Allegretto.* CHOPIN, Nocturne.





131. *Molto allegro.* CHOPIN, Prelude.



Section 56. Reduction (*continued*)**; its Application in Memorizing and in Sight Playing.** One purpose underlying the writing of this book was that of making Playing by Memory and Playing at Sight easier to learn through an application of Harmonic Analysis. Although the bounds here are too narrow to allow an exhaustive discussion, it is thought that the student may be shown how to command his material and heighten his usefulness.

In studying thus far he will have seen that all music is either plain or figurate, and that a piece of figurated music is always built on a plain harmonic structure. He must have learned that this harmonic structure is a concrete thing; that it may be taken hold

of, as it were; may be played by itself, giving a good idea of the whole. He must have begun to realize that in playing from memory there is given to the player a greater assurance, if he knows that at a certain point he is to use such and such a chord, or to go to such a key, or that a certain cadence begins with the Neapolitan Sixth — than if he does not know it. It costs him no unusual effort to remember this Neapolitan Sixth; no more than it costs him to remember that going down a certain street Mr. Y.'s house will be passed before Mr. W.'s. The effort was needed in learning to know and to recognize in the first place this especial chord; when once learned it became a part of the mental furniture, ever ready for use.

Experience shows that when a piece of music is committed to memory through a knowledge of the harmonic structure, there is a certainty of performance unknown when the piece is committed — as is usually the case — by many repetitions. In this latter instance — that of many repetitions — automatic impulses are made on the sub-consciousness; impressions on that part of the nervous system which controls habitual acts; and experience shows, also, that if in performance anything happens to disturb the performer, or if, as is often the case, the physical forces perchance take an ebb, the thread is suddenly broken, and a repetition of the piece will cause, generally, according to what seems to be a law of the mind, a second break-down at the self-same place — a thing some of our readers may possibly have observed.

If, however, to these impressions stored in the sub-consciousness through many repetitions, there be added impressions stored in another way and on the consciousness, namely, volitional impulses, subject to the call of the will in its demands on the motor nervous system — as is, for instance, the mental picture of a certain progression occurring in a certain place — then the surety of performance in playing from memory is heightened very greatly; for these two parts of the human make-up will play the one into the other; the one will help the other; and the chances are that where the one fails the other will be ready to carry on the process. Too much stress cannot be laid, then, on making an effort to memorize through a knowledge and use of Harmonic Analysis.

The piano player must know, for instance, the keys which mark the beginning of each strain he is to play. If there is a peculiar progression, this he must know thoroughly; for example, it will help him in memorizing Chopin's Eighth Prelude to know that in the eighth measure the figure moves down the chromatic scale through successive dominant sevenths, and that at the end of this group is a dominant seventh chord with a suspended root in the bass, and occupying not one count, like the other chords, but two counts. This seems much to remember. If the habit has been formed of thinking of such things, it is little. For after some practice the student will be able to keep such matters in his mind and to help himself as he plays, and the mental habit once started will grow readily. And if he says: "This savors of pedantry," let him remember that of such minutiae are pieces of music made. A good artisan cannot be unmindful of the material in which he is working; nor can the musician. He is not to remember every tone, every little tone. The sub-conscious part of his nervous system does that; and a wise provision of nature it is, too. He is to learn, first, to remember a few details and to hold himself in readiness to produce them as he plays — a series of rising diminished sevenths, or a sequence. After a time his mind, through the motor nerves, the will part, will stand ready to assist, as said before, and by looking ahead and seeing those features which it has grasped and retained, will give him a number of guiding points, beacons, by the way. We can only say, in closing this portion of our discussion, that it is wonderful how well and easily, how surely and quickly, the mind will begin to work if this sort of thing be practised regularly and persistently.

Going farther in our contention, it is a wonderful help to the sight player if in a piece of figuration he is able to see through the mass of notes and to behold the backbone, the framework of the whole affair. He will then possess a grip on the piece; he will play with an ease and a surety unknown to that sight player who regards the maze of printed notes as mere signs which his eye must see and decipher, perhaps painfully, in their succession, and which his fingers are to interpret one after the other. There is such a thing as "the Glance." It is possessed in greater or less degree by

all good sight readers. In its lowest form it is a natural gift unaccompanied by any knowledge of harmony, and those who possess it are able to read music within their technical skill without hesitation. This group is a small one. A larger group is that formed of those of more or less theoretical knowledge; it contains those, for example, who, on seeing a group of notes such as that in Exercise 16, recognize the chord and play it as a chord, as a form of arpeggio. Such a player has an enviable advantage over him of the first group. This group is a large one. We place in the third group those who with great natural gifts have by long study reached the end of sight playing, in the shape of playing from the modern orchestral score. This is a possession attained by comparatively few. It is to the middle class that we now speak.

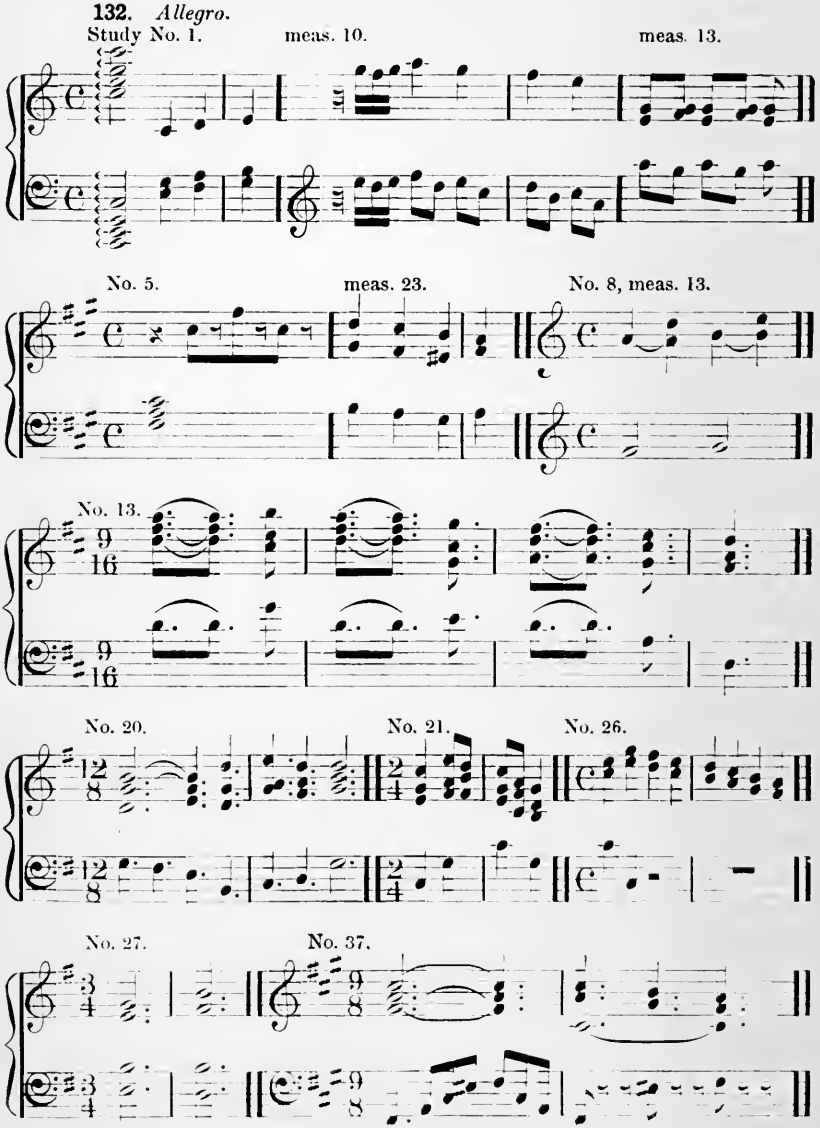
Aside from the great advantage over the natural sight player possessed by him who can look at a chord passage and read and interpret it as a whole — as in the case of Exercise 16, mentioned above — there is an element little made of in general teaching, which, if carried out far enough, will produce excellent results — that of playing a Reduction, of seeing the chord structure as one plays the actual notes before him.

And as material well fitted to give one this mental habit, we recommend the Fifty Selected Studies of Cramer. We add below Examples showing how these Reductions should be made, and a List giving the order in which they may be practised. It will be seen, on studying the Examples, that the voices must be kept in vocal compass, and should be quietly led, although occasional breaks in the leading may be unavoidable in the compression of a very florid structure. These reductions should be played over and over until they are easy and a habit has been formed which enables one to see the framework in playing at sight. In other words, one must learn to play chords, and we suggest that the practice of this thing be persevered in until one has acquired a mastery. It will be found profitable to practise in this way on pieces of all kinds.

List. Nos. 2, 3, 6, 9, 16, 17, 20, 30, 24, 27, 28, 37, 38, 41, 44, easy, the chord element being plain to the eye; 1, 5, 8, 18, 21, 26, 39, 32, 47, 19, 39, 34, 31, 40, 22, 4, more difficult: these contain sequences and figuration more or less involved.

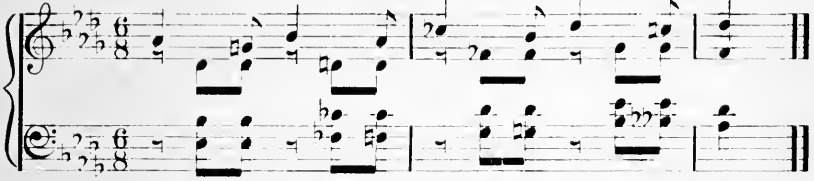
REDUCTIONS OF THE CRAMER STUDIES.

132. *Allegro.*

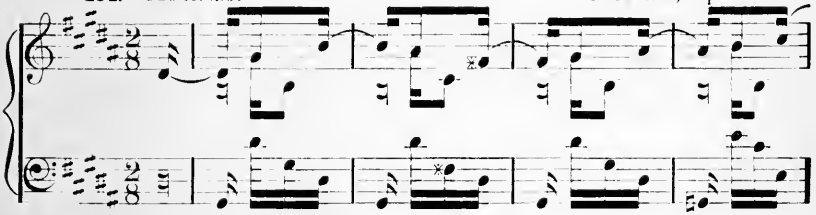


REDUCTIONS — TO BE WRITTEN.

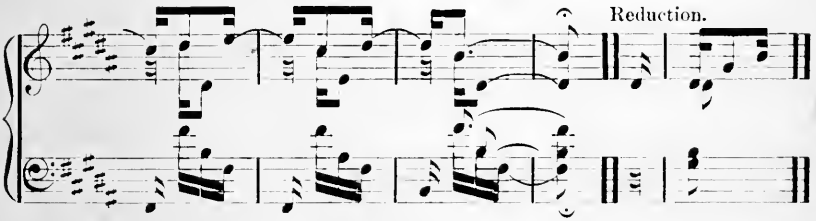
133. *Andante.* FRANCK, L'Organiste.



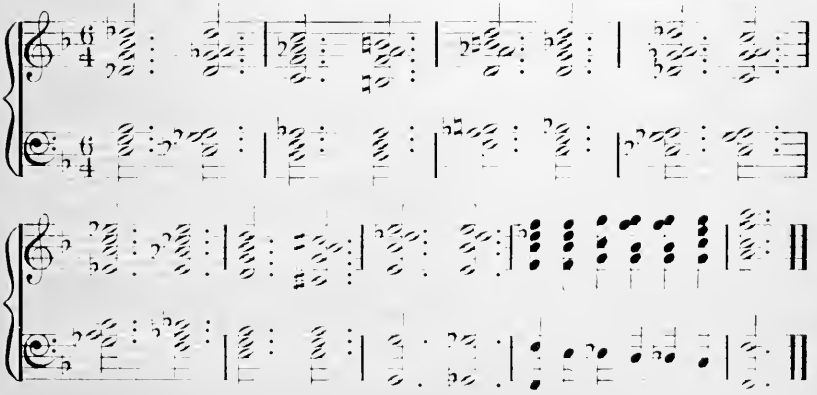
134. *Moderato.* SCHUMANN, Op. 15.



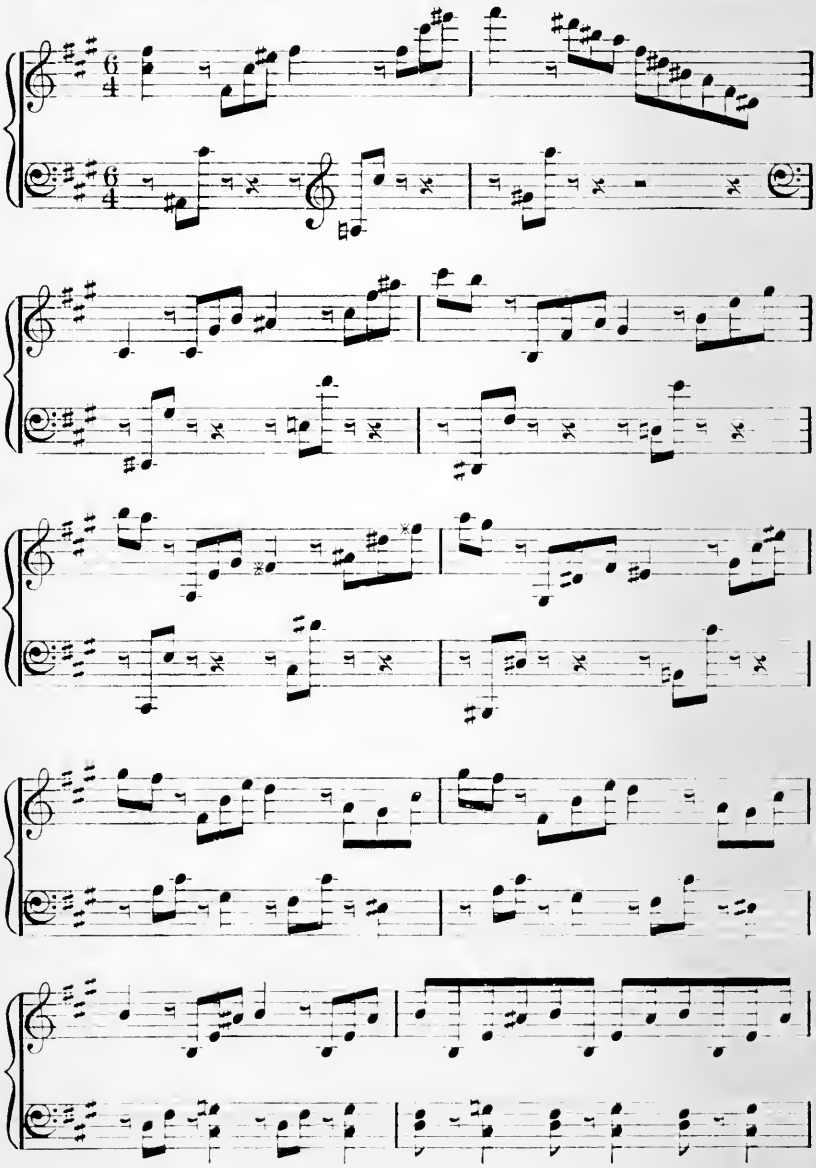
Reduction.

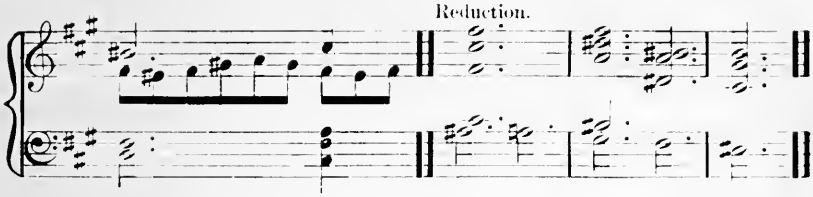


135. *Allegro.* WAGNER, Flying Dutchman.

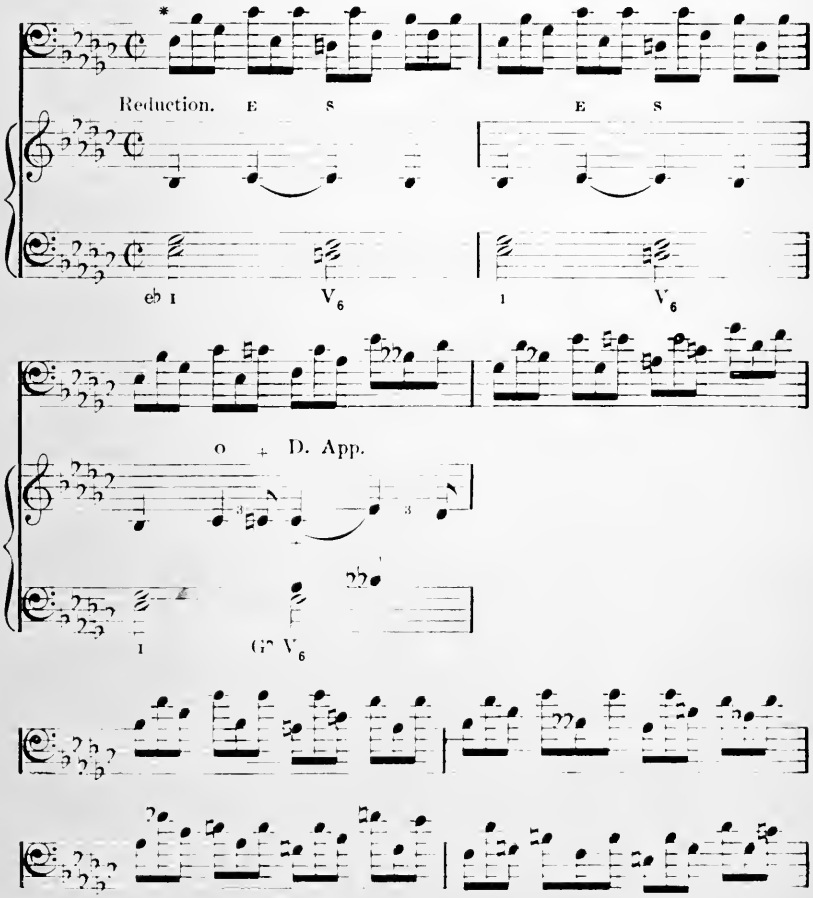


136. *Piano agitato.* MENDELSSOHN, Song without Words.

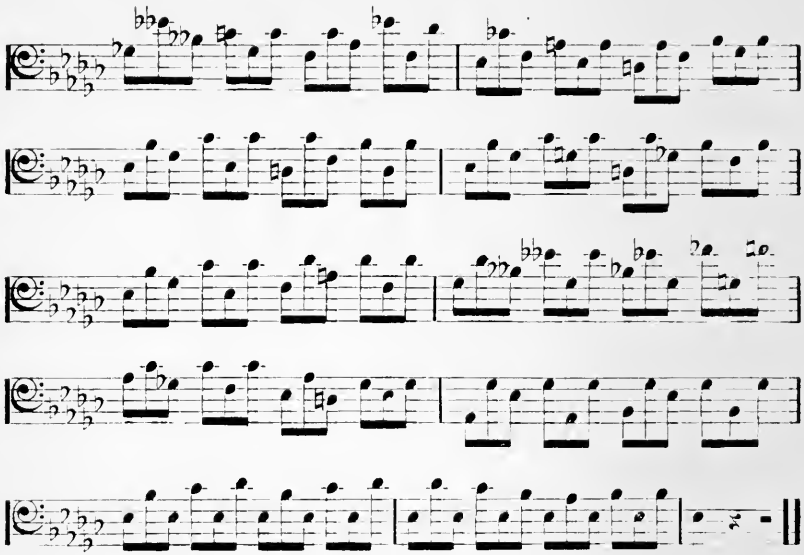




137. *Allegro.* CHOPIN, Prelude.



* In the original the left hand doubles this right-hand part in the lower octave.



Section 57. Full Table of Signs. A capital letter shows a major key; a small letter shows a minor key; a large Roman numeral shows a major triad, and a small Roman numeral a minor triad. The sign $^+$ shows the augmentation of a triad, and the sign $^\circ$ the diminution of a triad.

Triads in Major.	Triads in Minor.
I	i
II♭	II$^\circ$
III	III$^+$
IV	iv
V	v
VI	VI
VII$^\circ$	vii$^\circ$

The inversion of triads and of seventh chords, both principal and subordinate, will be indicated by the customary figurings: $\frac{6}{4}$, $\frac{6}{5}$, $\frac{6}{3}$, $\frac{4}{3}$, $\frac{4}{2}$, attached to the respective Roman numerals. Or, the letters *a*, *b*, *c*, *d*, meaning root-form, first, second, and third

inversions, may be used with these same numerals; thus: I_a, I_b, I_c, II°_{a}, II°_{b}, II°_{c}, III^{+}_{b}, III^{7}_{c}, etc. The diminished seventh chord, in its various forms, will be marked: $VII^{\circ}_{7^{\circ}}$, VII°_{6}, VII°_{4}, VII°_{4}, or: $VII^{\circ 7^{\circ}}_{a}$, $VII^{\circ 7^{\circ}}_{b}$, $VII^{\circ 7^{\circ}}_{c}$, $VII^{\circ 7^{\circ}}_{d}$.

Altered Chords. These may be indicated by writing below the proper Roman numeral, and the sign of inversion, if there be an inversion, figures accompanied by the proper accidentals, these being placed in brackets. Thus, II°_{6} [♯3], means: supertonic six-five, with diminished fifth, and sharp third.

The Appoggiatura, App.; *Double or Triple Appoggiatura*, D. or T. App.

The Appoggiatura Chord, App. Chd.

The Free Tone, F. T.

The Accented Passing Tone, 0; the Unaccented Passing Tone +.

The Embellishment, E.

The Embellishing Chord, E. Chd., or E. Chd.

VI_{6} [♯1] [♯3]

The Suspension, S.

The Anticipation, A.

The Free Anticipation, F. A.

The Retardation, R.

The Organ Point: Tonic, T. O. P.; Dominant, D. O. P.; Mediant, M. O. P.; Double, Dbl. O. P.

Section 58. Special Remarks to the Teacher. The value of this course of instruction may possibly be heightened by the following application: The text-book is used as a book of reference; the teacher selects a piece of proper difficulty, — say, for those who have worked through Part I and Part II, the Beethoven Piano Sonata, Op. 10, No. 2, movement I, and directs the class to give attention in analyzing to the following features which occur in the movement: Suspensions, Appoggiaturas, Altered Chords,

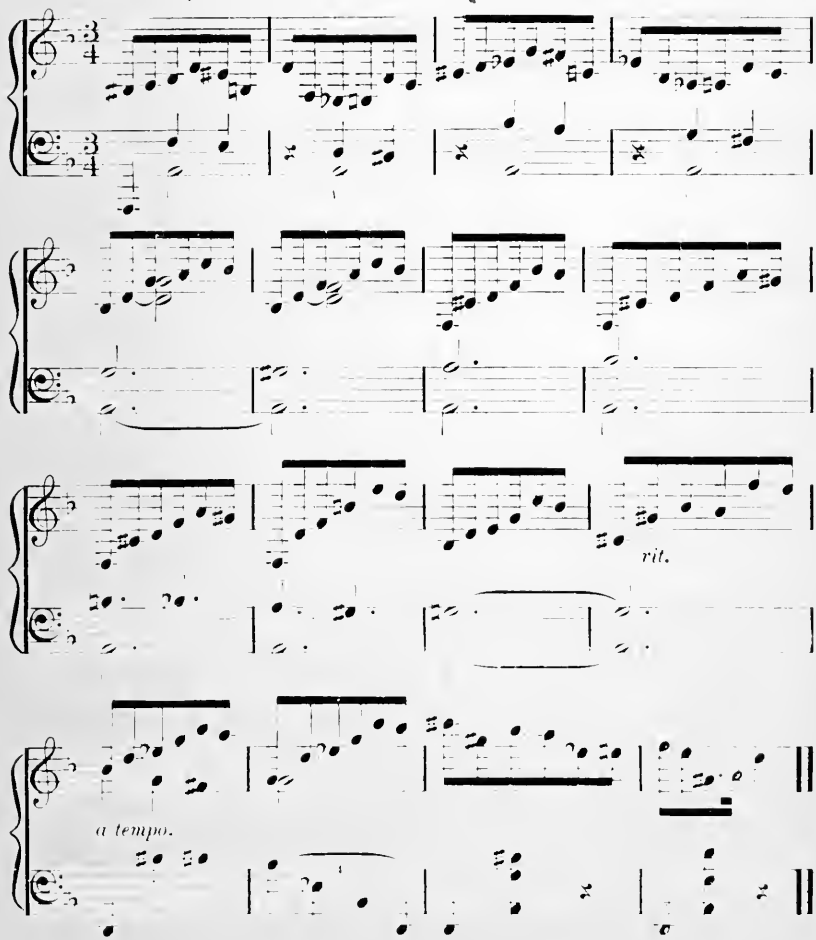
Sequences, Augmented Chords. This procedure focusses the mind on certain definite features and makes the work of learning very direct; it also gives the student, generally, several examples of the same thing, — several Suspensions, for instance.

To lay out a course in this line would be difficult. The judgment of the teacher must be called into play, and a certain amount of this work will be very beneficial. But it should not cause the student to neglect the General Exercises in Part IV, which contain characteristic and individual passages.

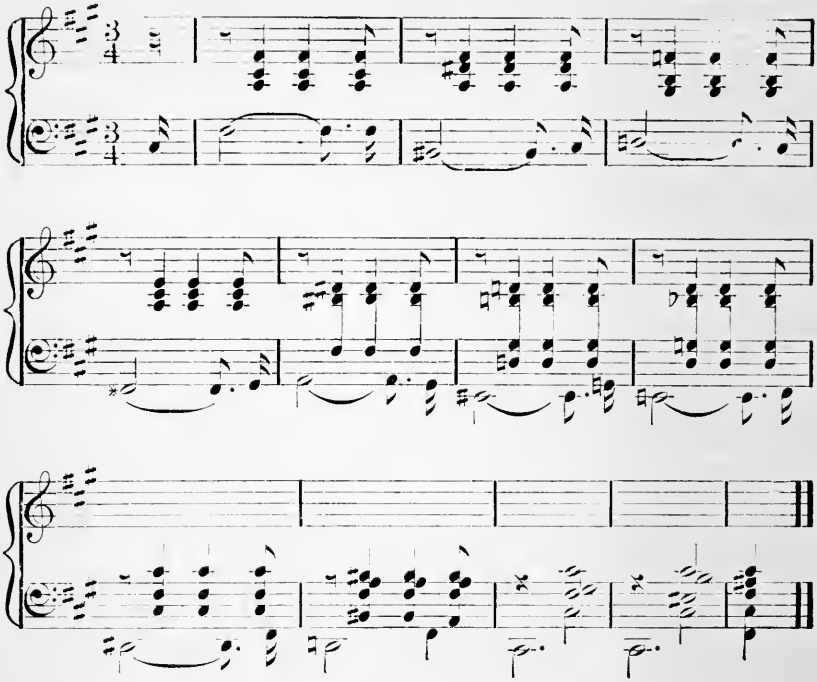
PART FOUR.

Section 59. General Exercises.

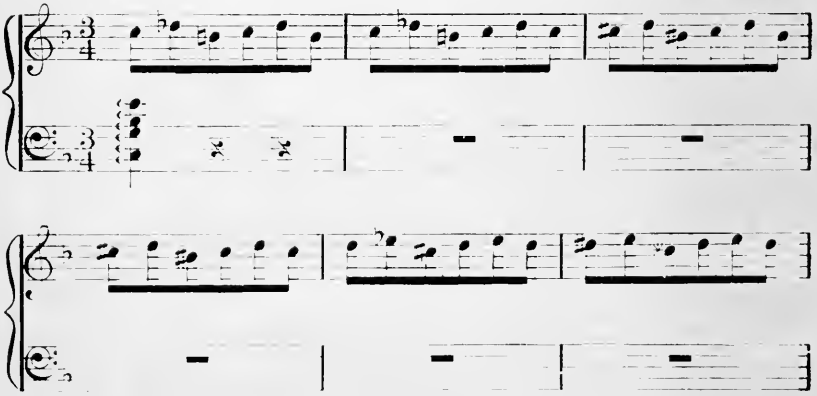
138. *Allegretto.* SCRIABINE, Prelude.

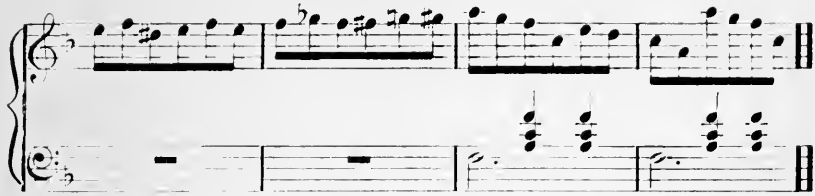


139. *Adagio con molto espressione.* GOLDMARK, Violin Suite.

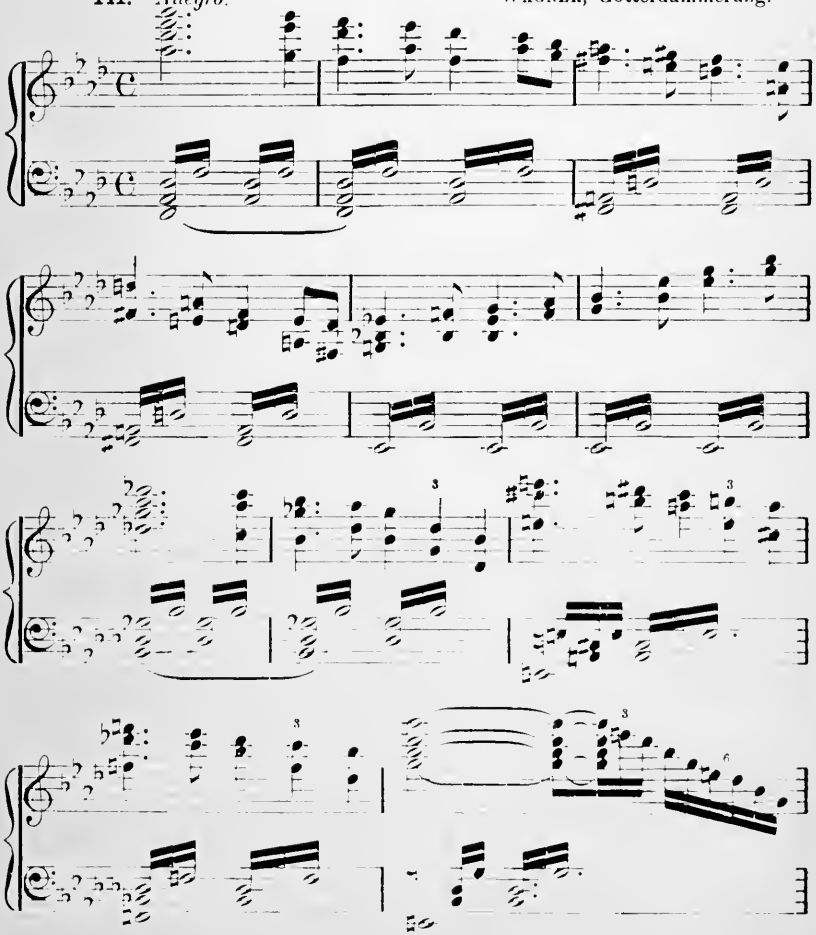


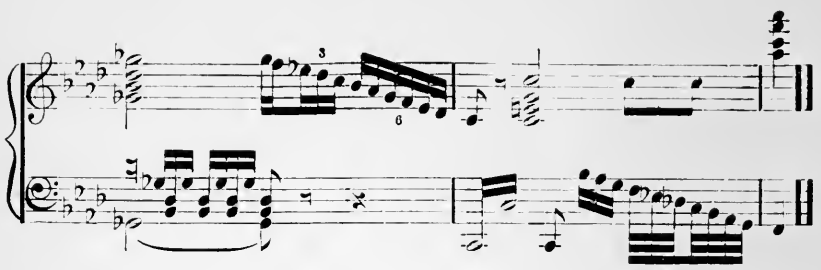
140. *Vivace.* CHOPIN, Valse.



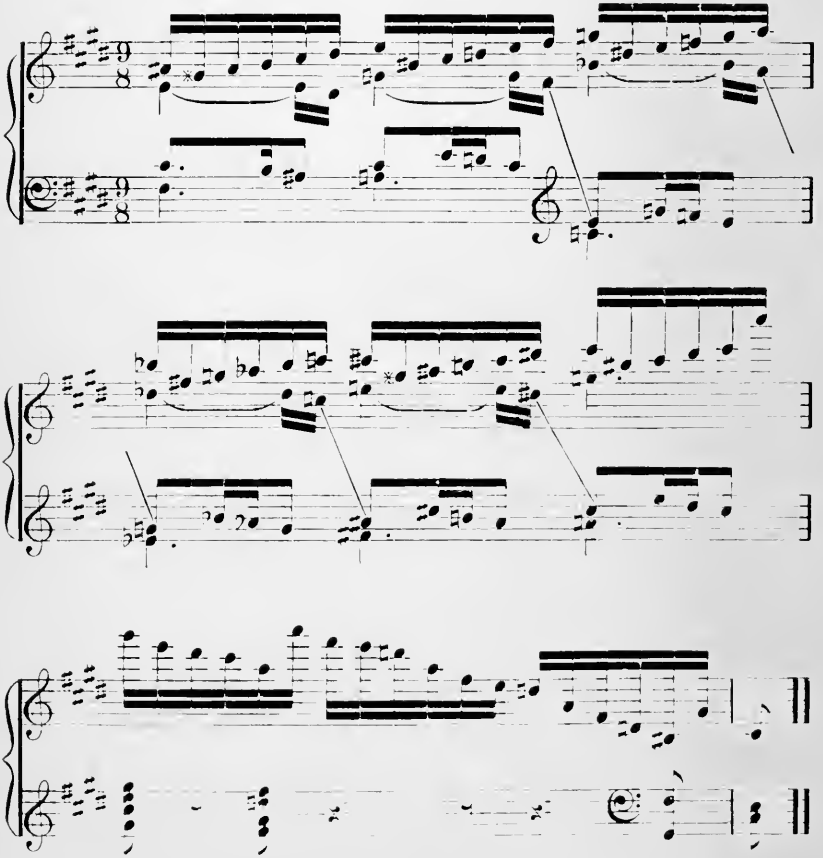


141. *Allegro.* WAGNER, Götterdämmerung.

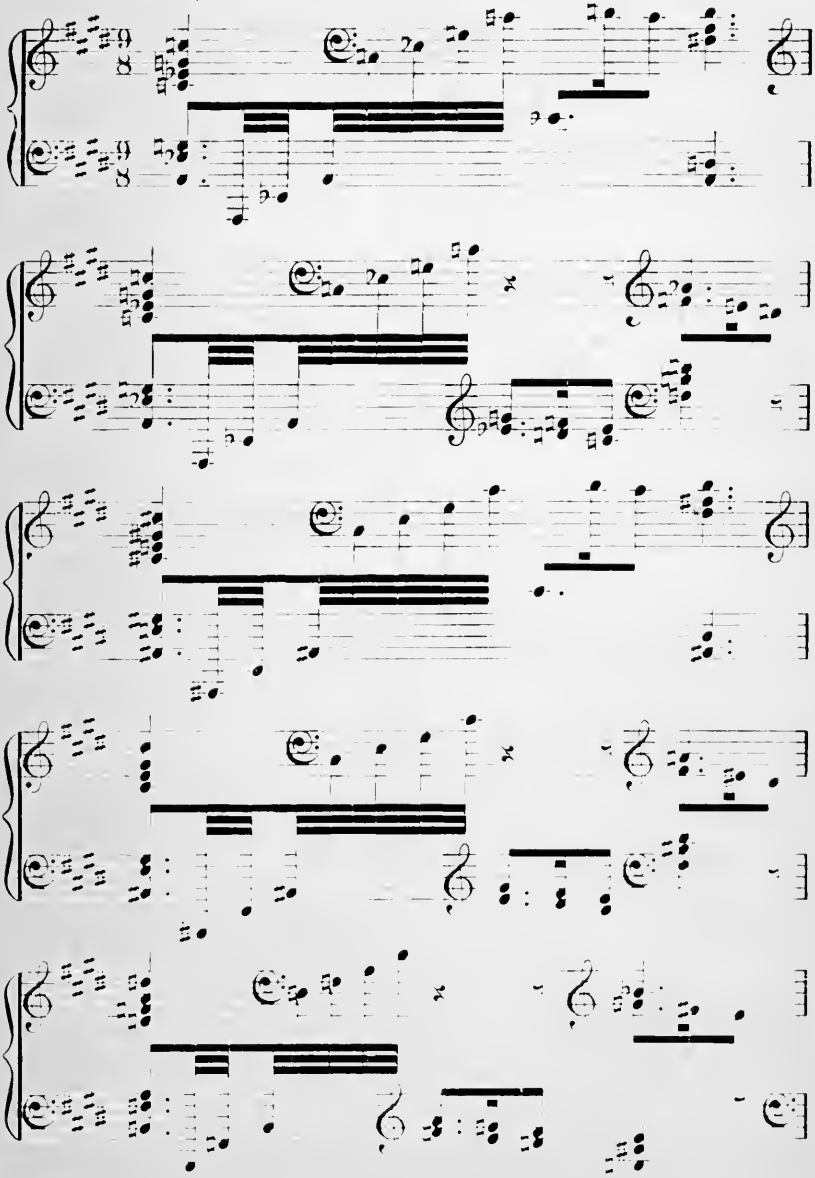


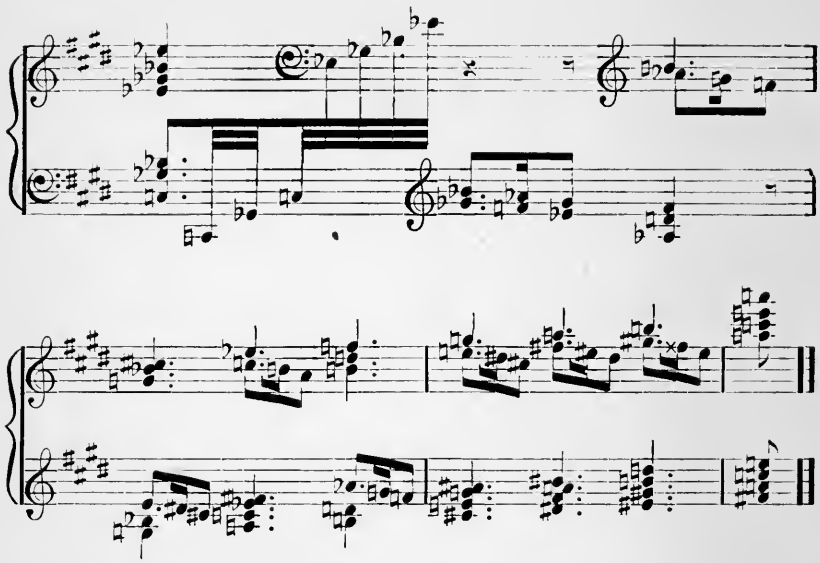


142. *Allegro.* J. Wihtol, Prelude

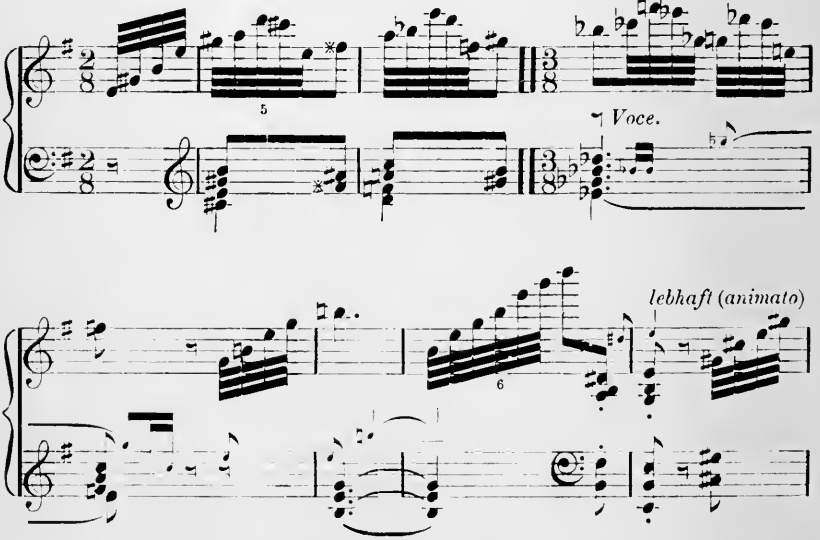


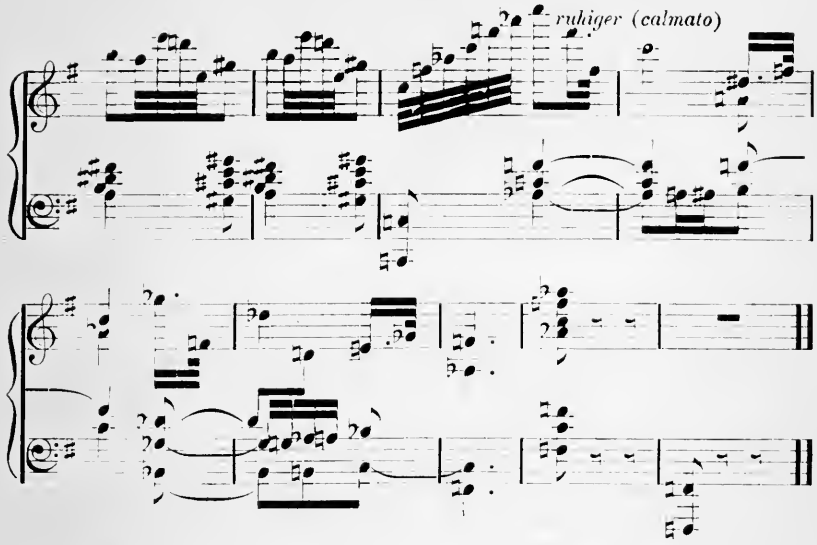
143. *Allegretto.* SINDING, Violin Suite.



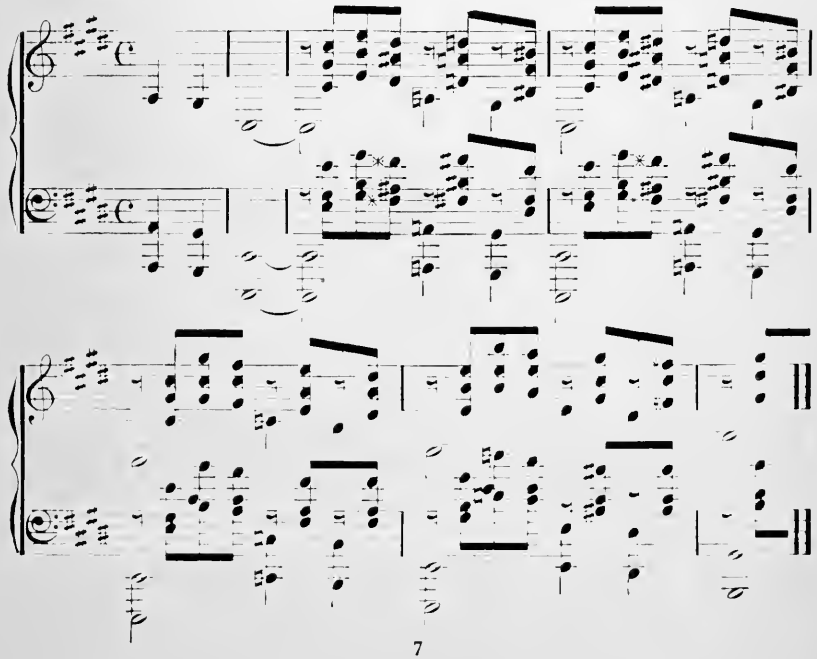


144. *Ziemlich schnell* (*poco Allegro*). R. Strauss, Song, Op. 49.

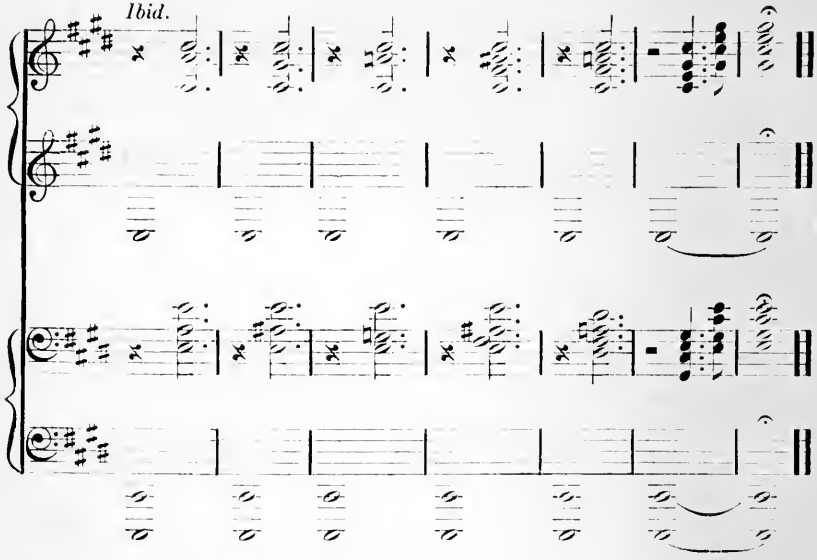




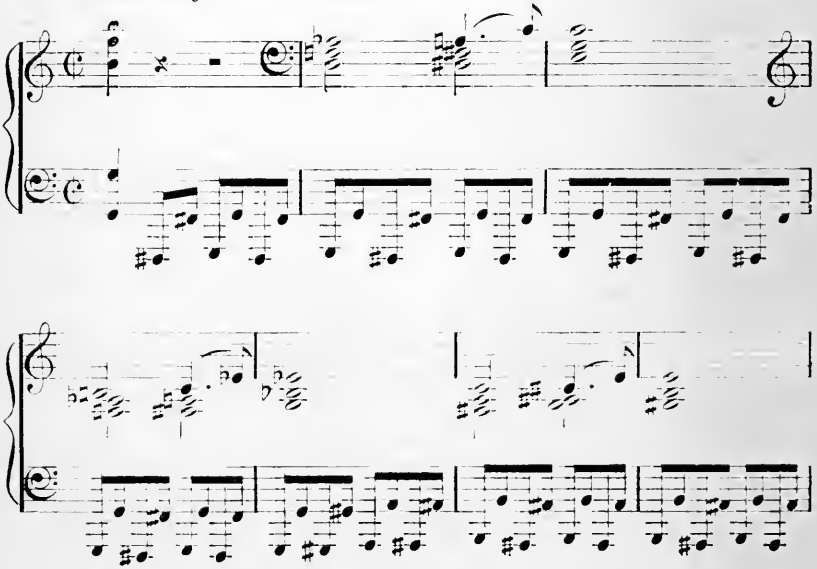
145. *Lento.* RACHMANINOFF, Prelude.

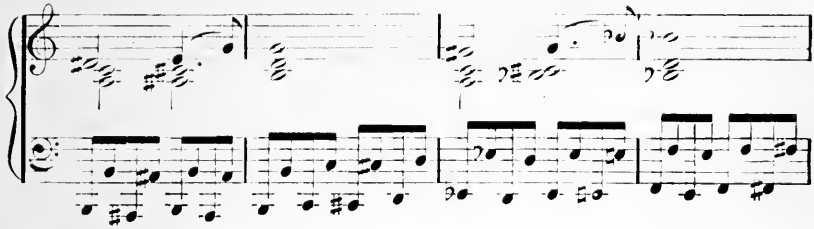


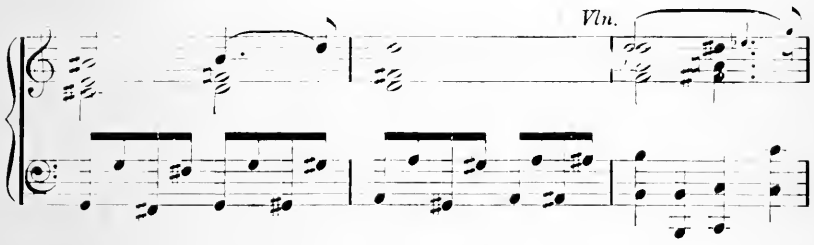
Ibid.

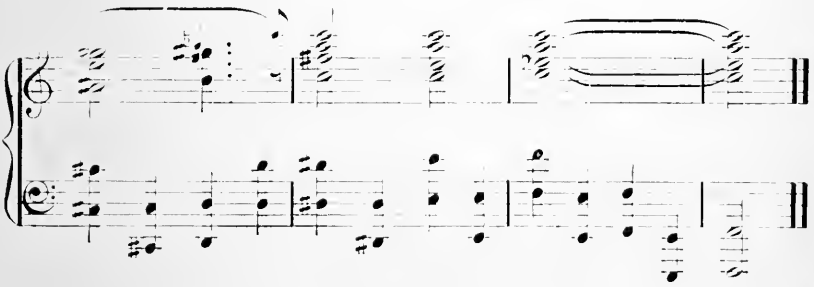


146. *Allegro.* *animato* J. RAFF, Violin Sonata.

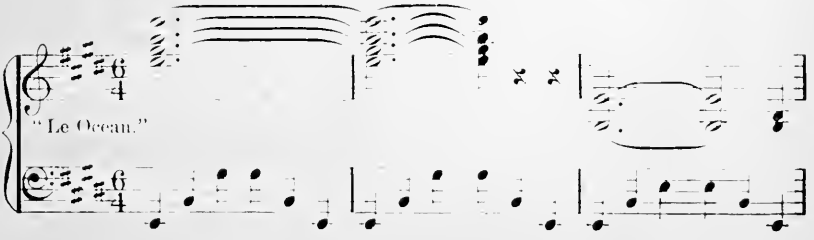


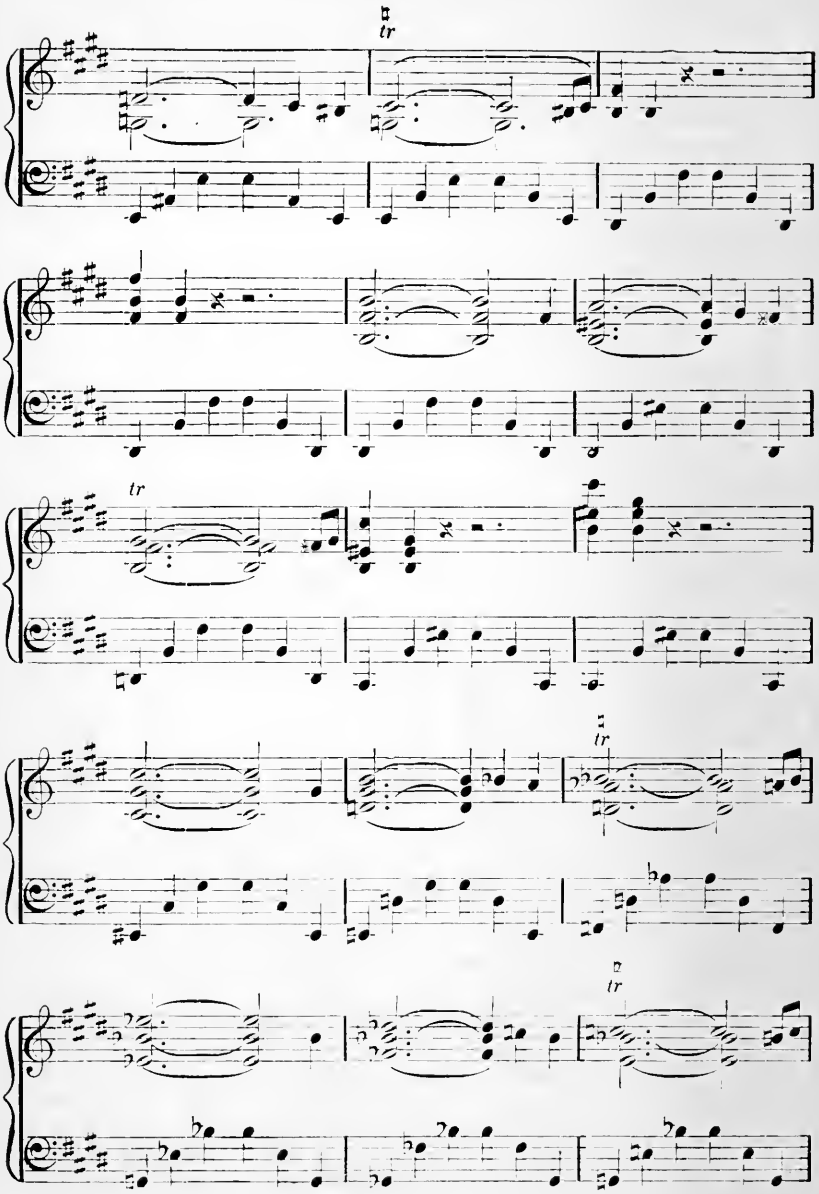






147. *Allegro non troppo.* RIMSKY-KORSAKOFF, Scheherazade.

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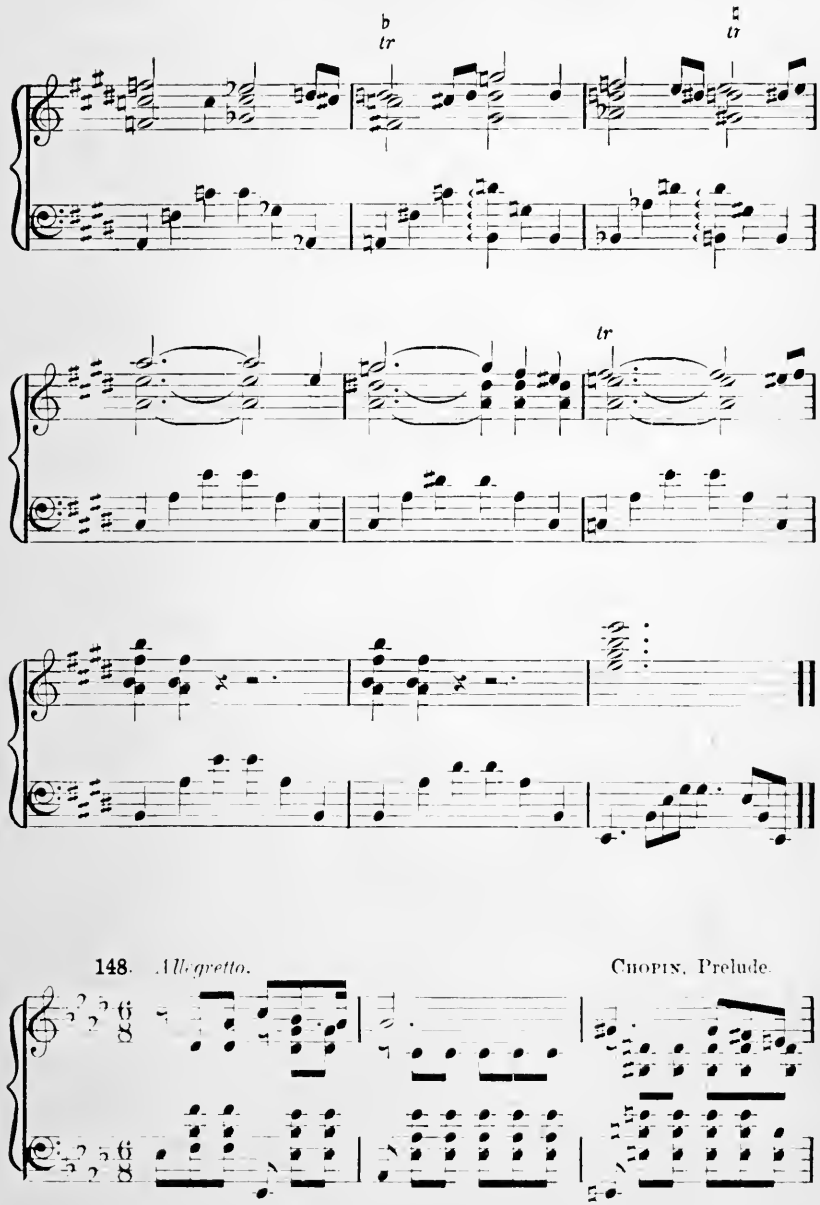
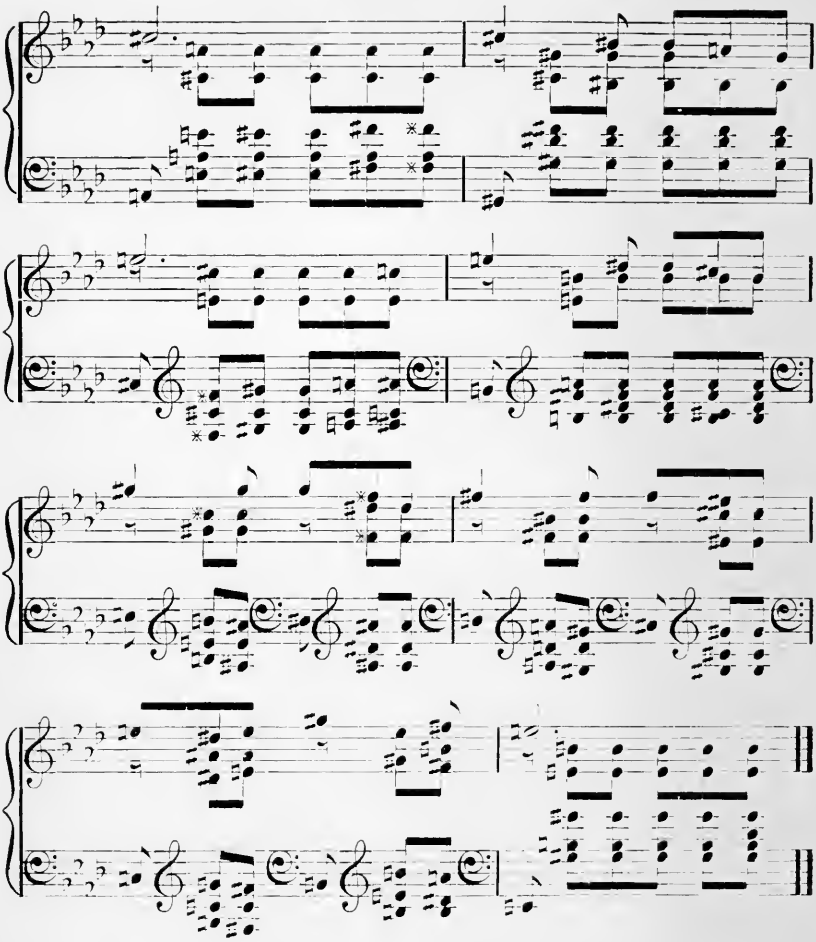
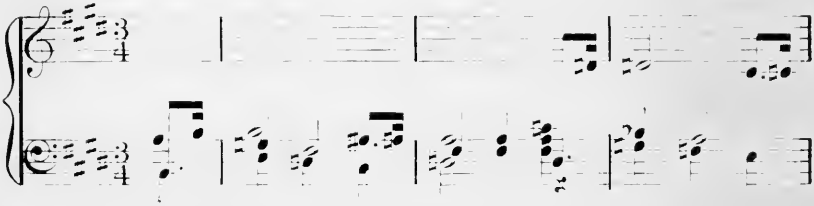
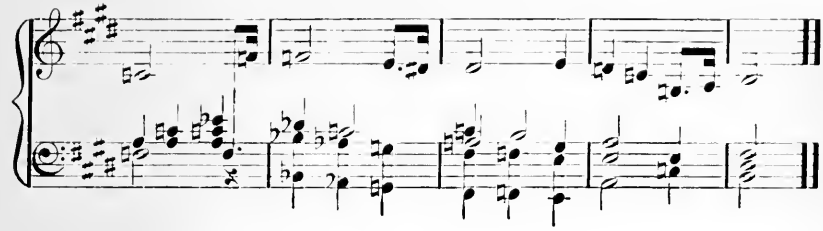


148. *Allegretto.* CHOPIN. Prelude.

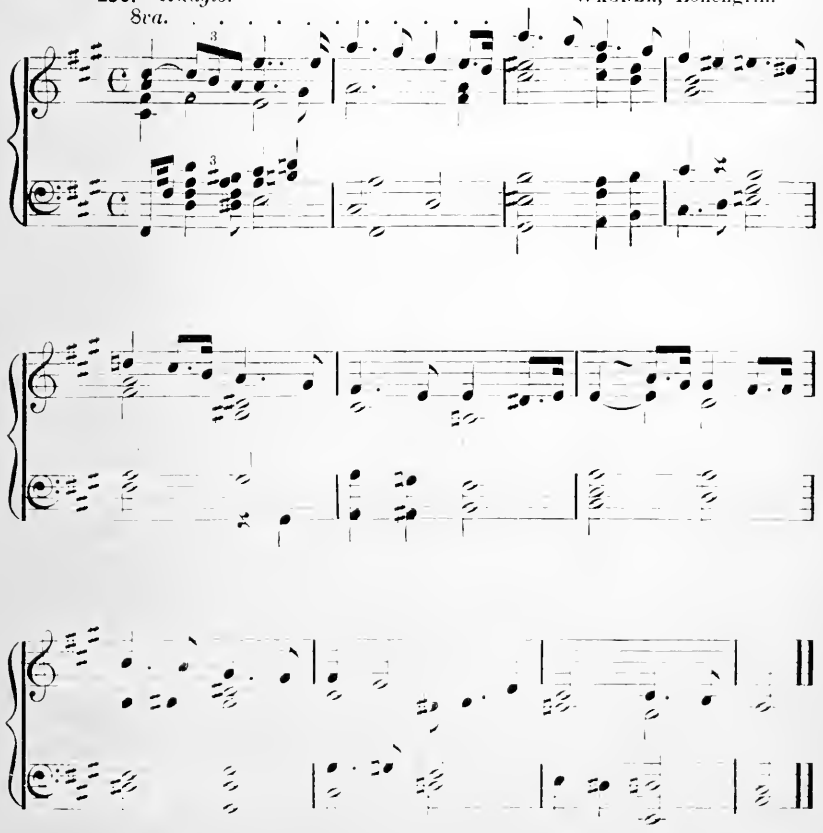


149. *Andante maestoso.* WAGNER, Tannhäuser.

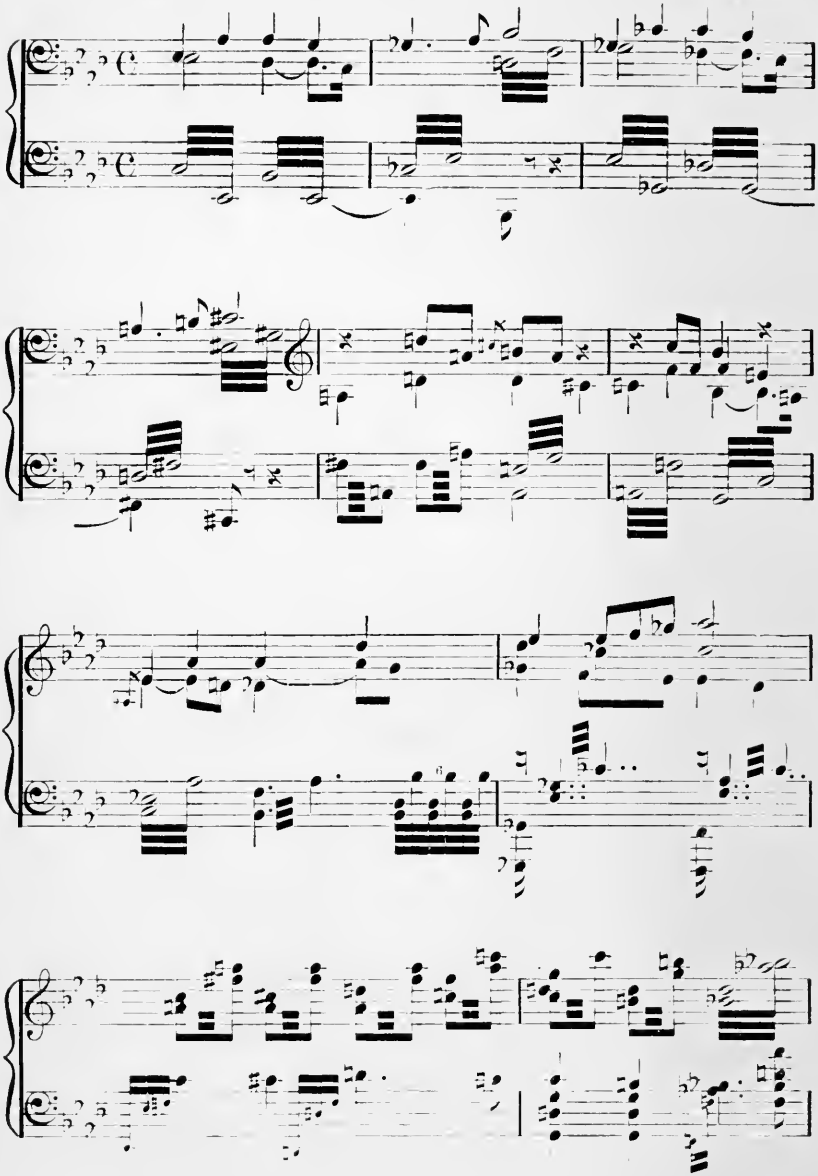


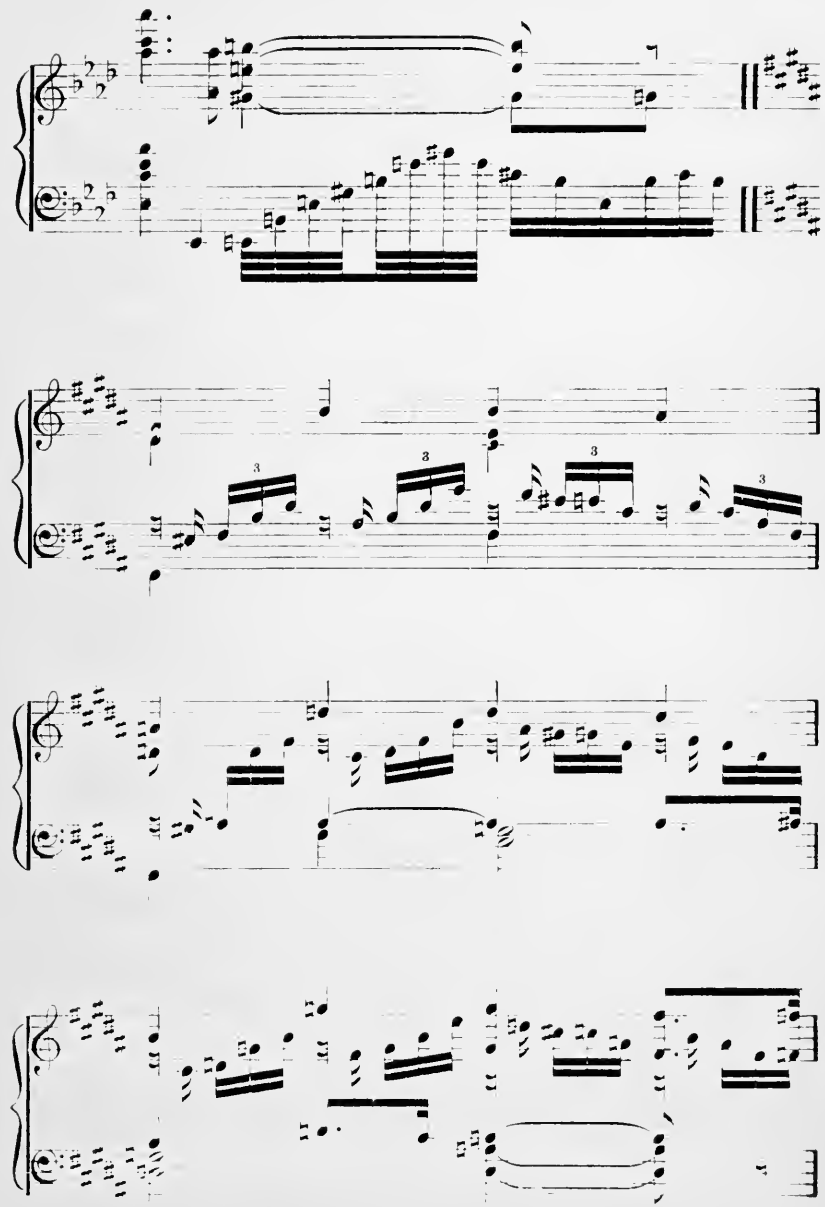


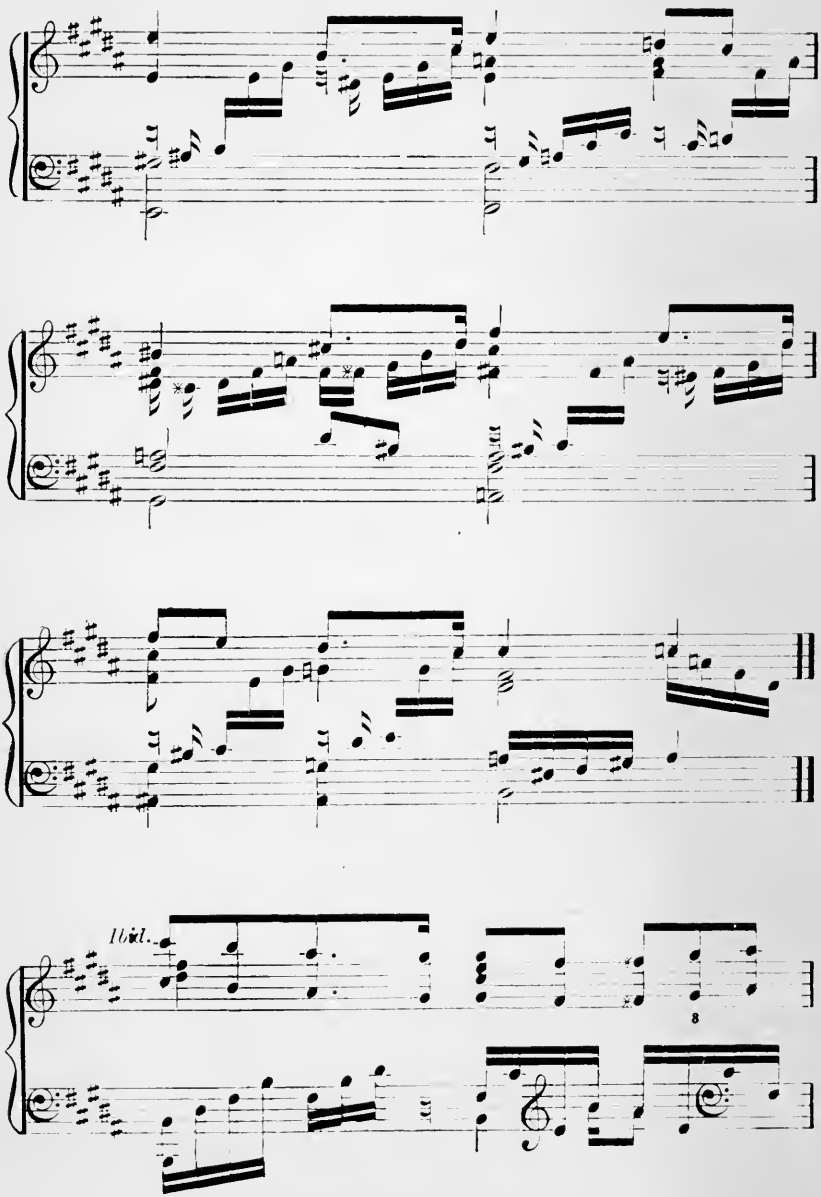
150. *Adagio.* WAGNER, Lohengrin.



151. *Molto moderato.* WAGNER, Tristan.



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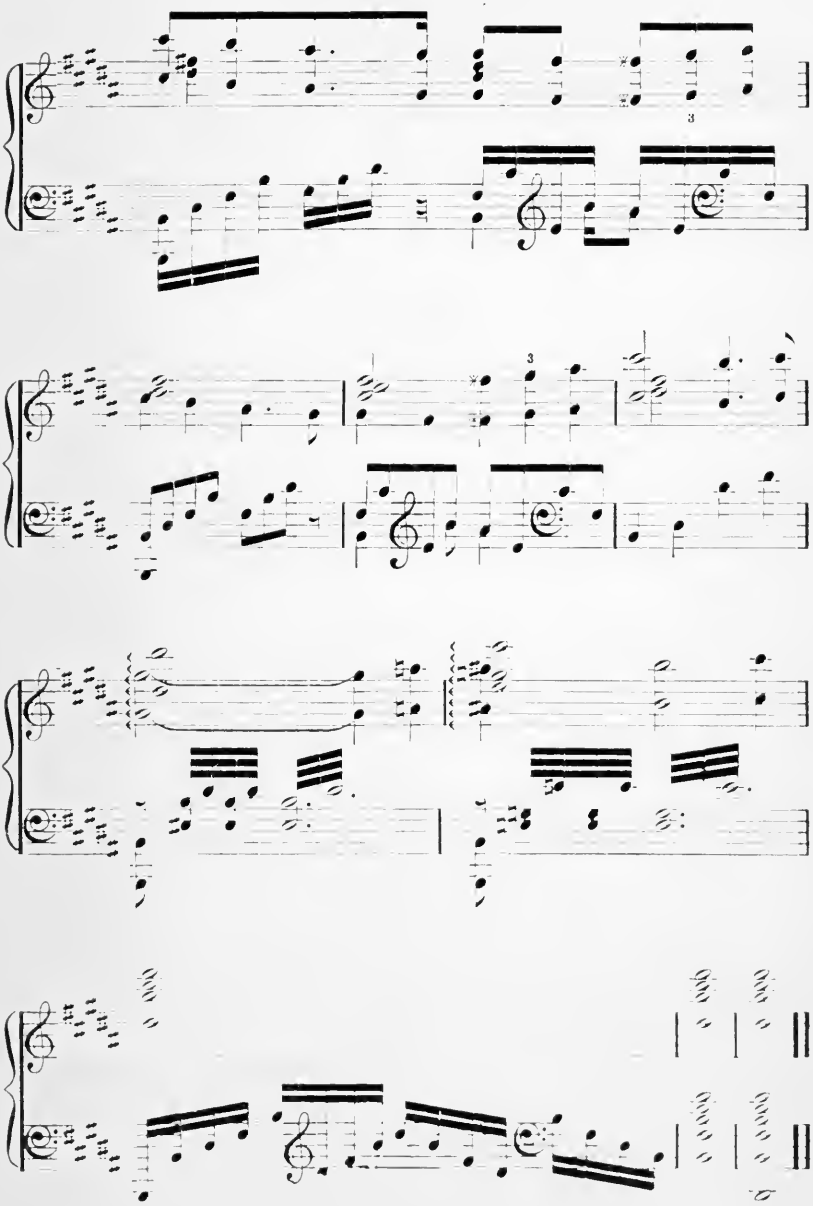
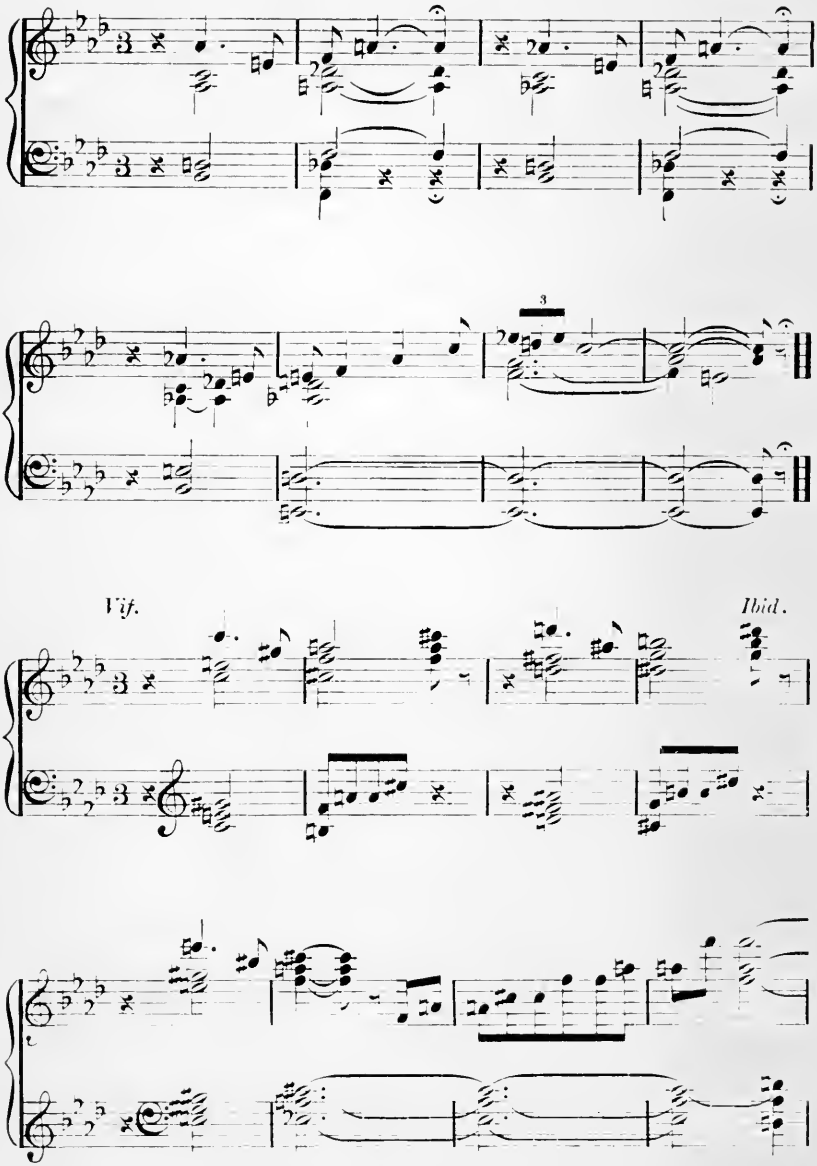
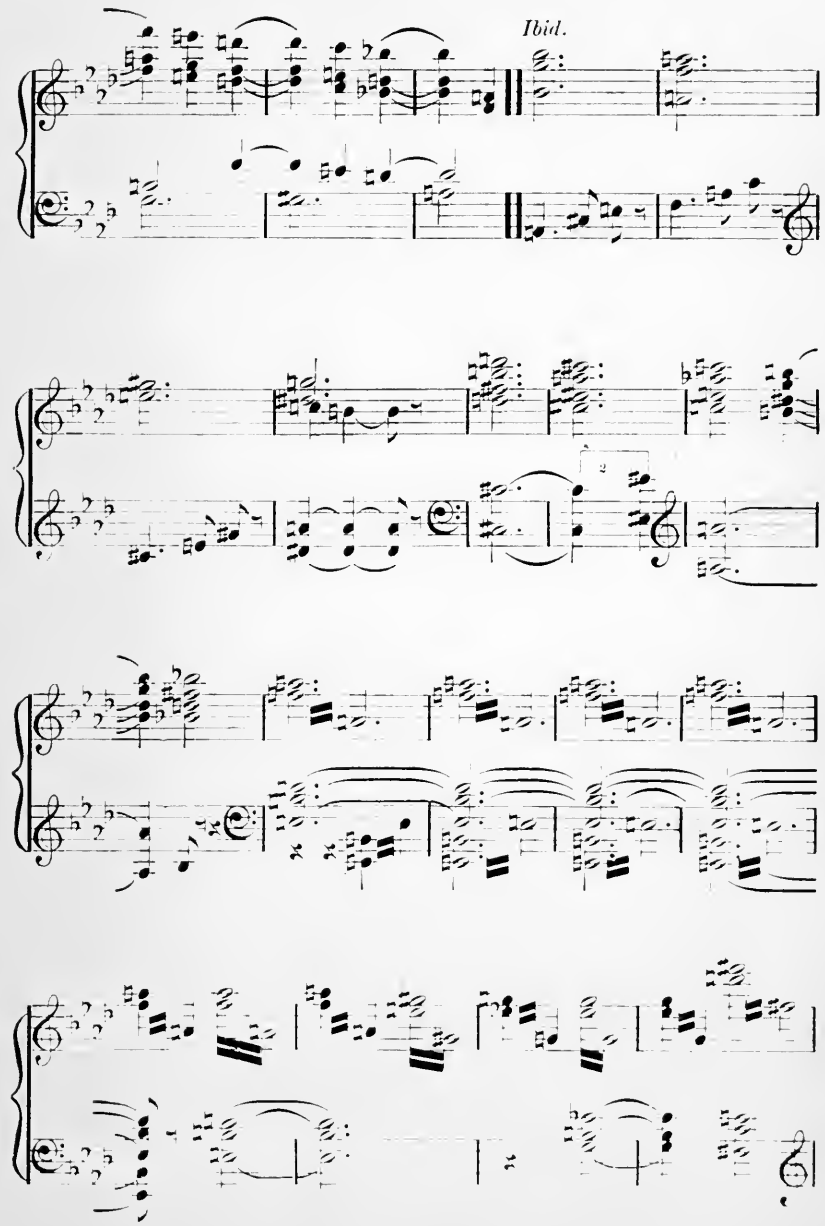
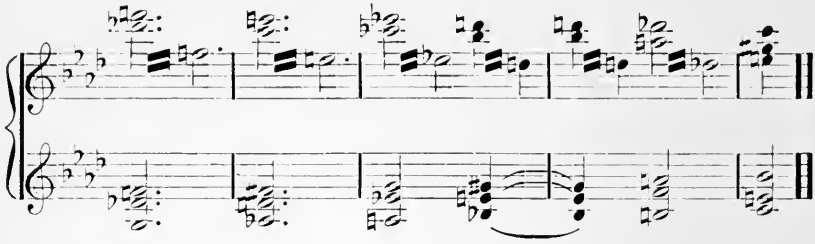


152. *Très lent.* D'INDY, Médée.

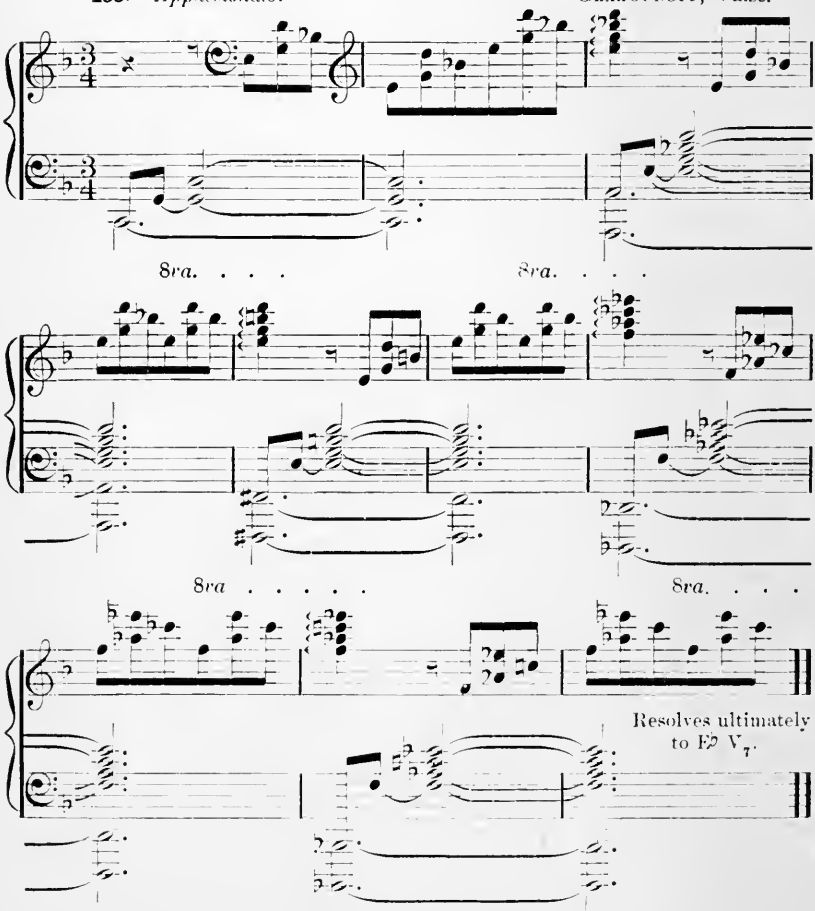


Ibid.





153. *Appassionato.* GLAZOUNOFF, Valse.



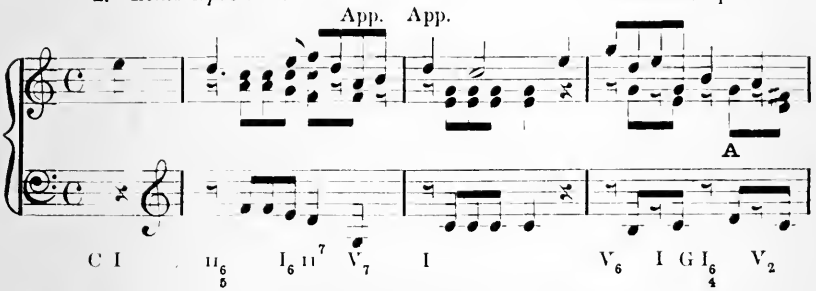
Section 60. Conclusion. The difficulty in preparing this book was not what to use, but what not to use. To those who care to go farther and to investigate in a broad and general way, the author would recommend the best of Schubert's Songs, Schumann's *Davidsbündler*, the *Kreisleriana*, and the great C major Fantaisie, Chopin's Etudes (possibly), the Brahms Variations, Wagner's *Die Walküre* (put off examination of the other things until a more general view of modern harmonies has been taken), the short Piano Pieces and the Songs of the two racially different harmonists, Grieg and Tschaikowsky, the *Beatitudes* of César Franck, and his great Piano Pieces, returning again and again to the Beethoven of the Piano Sonatas and of the greater Variations. Verdi in his latest works — *Othello, Falstaff*, the *Requiem* — and Puccini in *La Tosca*, will display the new Italian school at its best, and the Extremists of the Russian piano writers — Glazounoff, for instance — will be found well worth the while. The chamber music of such radically diverse minds as Sinding the Norseman, and that man of the South, Goldmark, will, when studied and compared, give food for thought and criticism.

The investigating student will also find both startling and exquisite things in the works of not a few Americans, and he may draw profit from the Bohemian Dvořák, especially from his fine *Requiem* and from his Piano Trios. He may also learn that the new-Germans have said little of originality in a harmonic way; that Richard Strauss, for example, although he has gone far, has in many of his works given more color and counterpoint than harmony; he may find out that to go to the apparent End of Things in Harmony — that is, what we would call the End — he must go to the out and out Cacophanists, to the Frenchmen of this day, to D'Indy, to Bruneau, for instance, and to those occasional Americans who follow the same tendency.

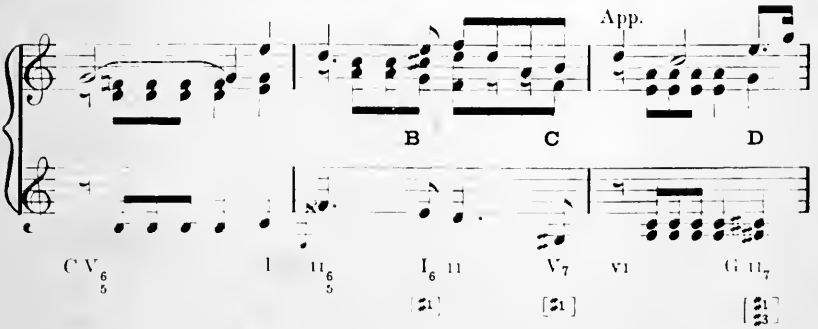
APPENDIX.

TEN FRAGMENTS OF VARIOUS NATURES, CAREFULLY ANALYZED AND DISCUSSED.

1. *Lento espressivo.* SCHUMANN, Op. 68.



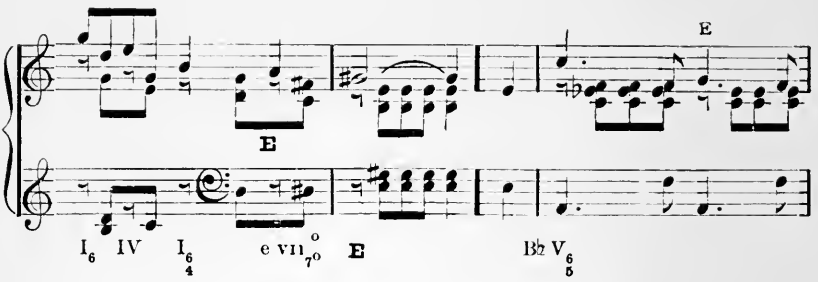
A. Principle No. 8: the impression is that of a change of key followed by a deceptive resolution.



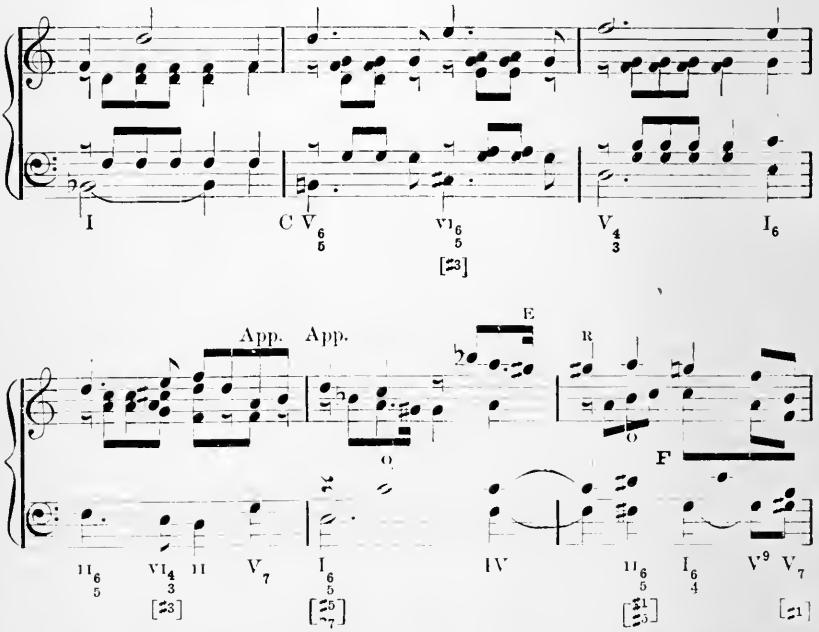
B Too short for a modulation

C. Some would call this A minor.

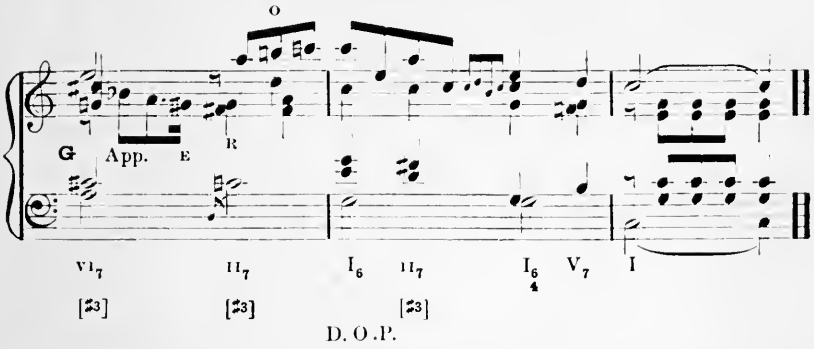
D. "The identity of a chord depends on its resolution:" Principle No. 3. Apply also Principle No. 5.



E. See Principle No. 12.

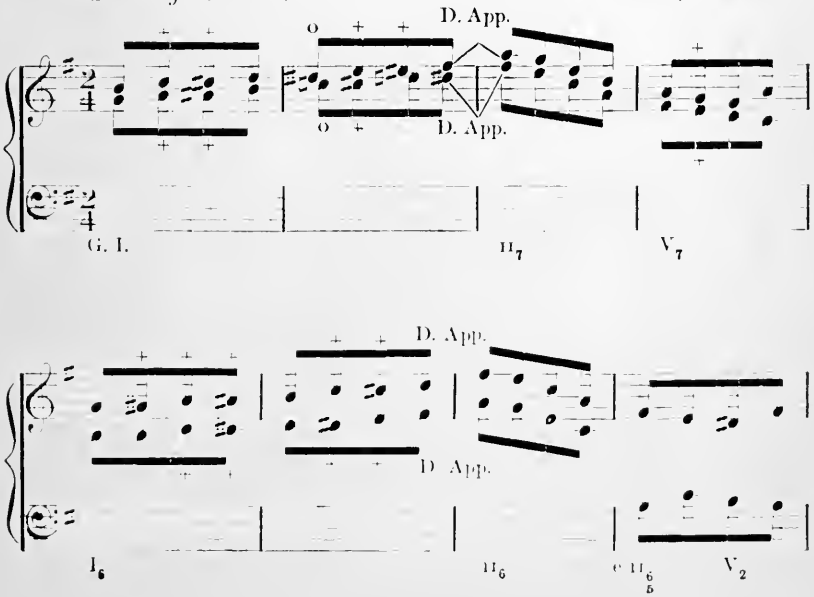


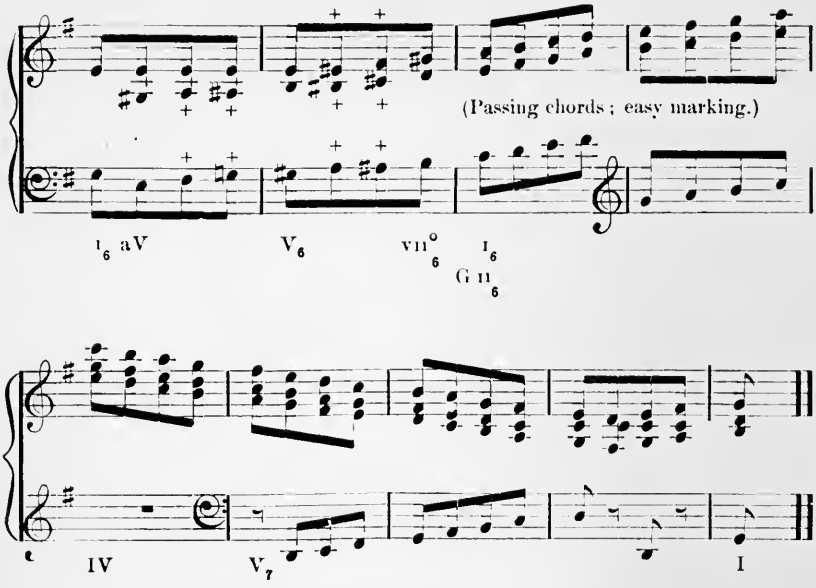
F. Unmistakably $I_{\frac{6}{4}}$ in C; especially as it is preceded by an altered $ii_{\frac{6}{5}}$. The preceding measure may be called C major, for the impression of the F chord is that of unrest, which is never the impression of a tonic. Still on account of the duration of the apparent V_7 some analyze this measure as: F, $V_{\frac{6}{5}}$, I. We regard it as but a step in the movement toward the $I_{\frac{6}{4}}$ at letter F.



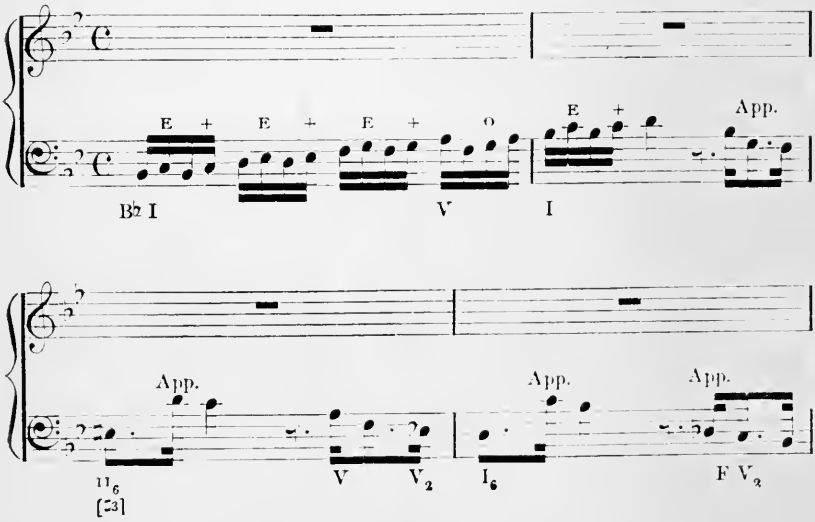
G. The old-fashioned marking would read: d V_7, G V_7; and the G♯ of the preceding measure would probably be called a passing tone. The impressions are certainly those of dominants, but whether *apparent* or *real*, the listener must decide. We call them apparent dominants, and stay in C.

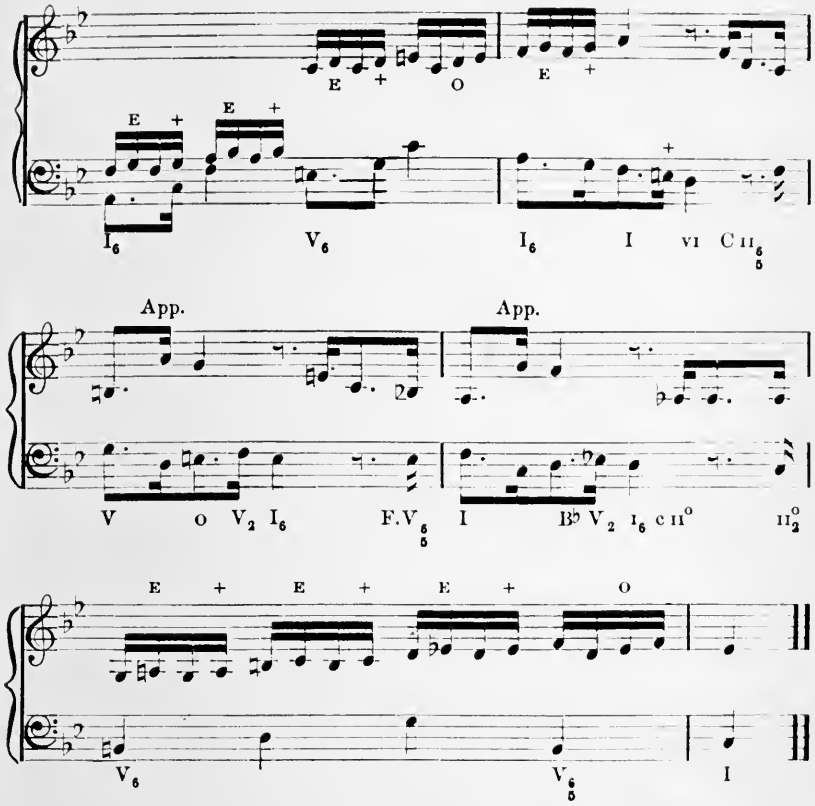
2. *Allegro brillante.* VERDI, Falstaff.



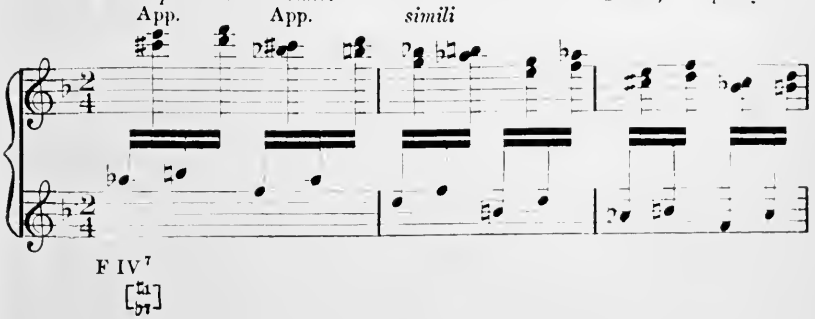


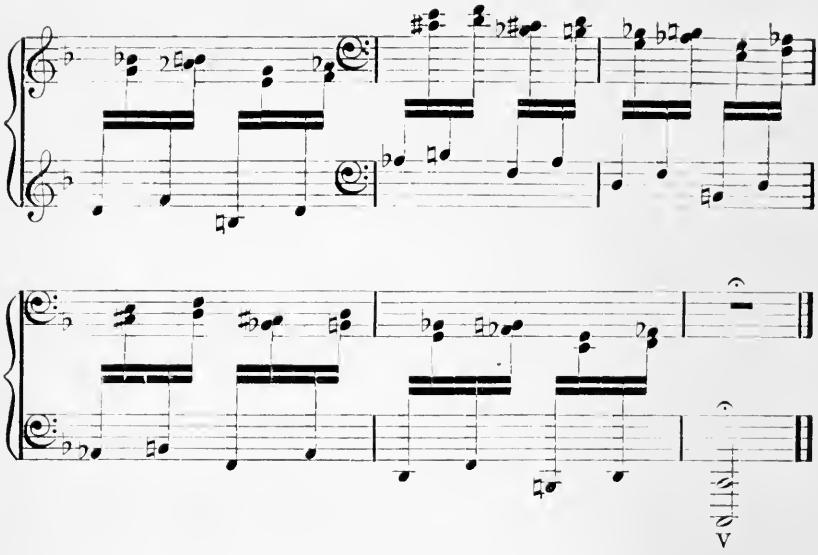
3. *Allegro con brio.* MENDELSSOHN, Fugue.





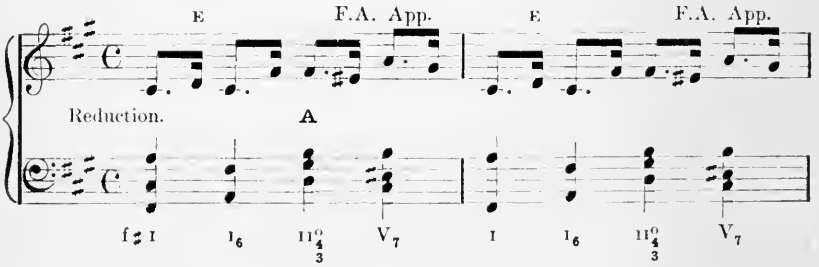
4. *Rapido. Prestissimo.* LISZT, Rhapsody.



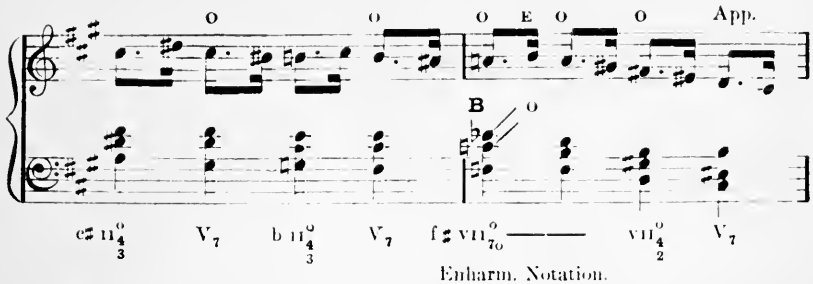


This characteristic passage is built wholly on one chord, the two upper members in each quarter count being preceded by appoggiaturas. It is hardly worth while to figure each inversion.

5. *Molto agitato.* CHOPIN, Prelude No. 8.

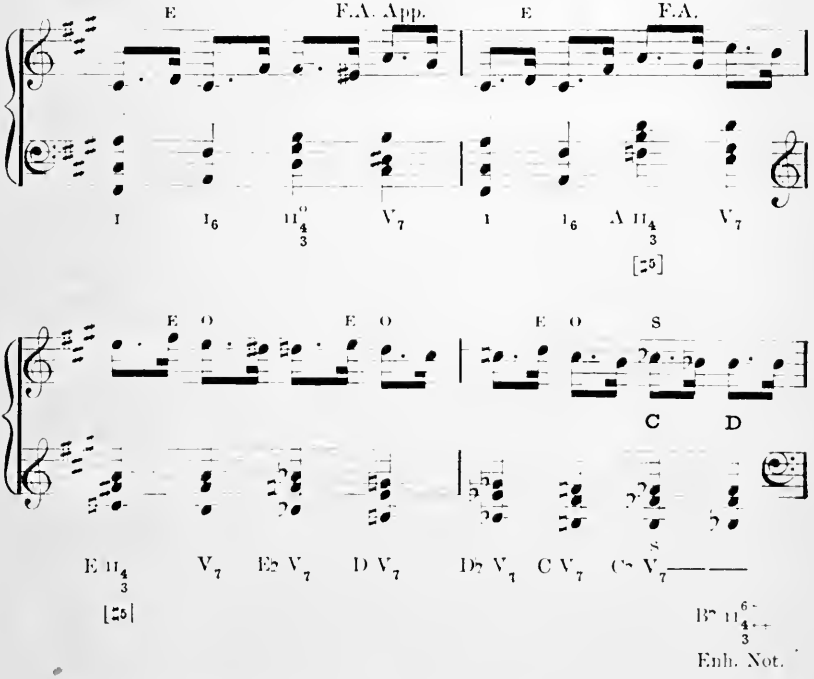


A. The root progression, II_7 V_7, is stronger, hence better, than VII°_{7o} V_7; furthermore the context — see measure 3 — shows unmistakably that the harmonic motive is $II^{\circ}_{4\ 3}$ V_7, and nothing else.



Enharm. Notation.

B. Enharmonic notation of $e\sharp\ g\times\ b\sharp\ d\sharp$, the third, fifth, and seventh of which are passing notes moving down to $g\sharp$, b, d, with $e\sharp$, forming a chord of the reigning key. The notation in flats simplifies possibly for the eye, but is illogical; for no one hearing this piece and knowing it to be in sharps would ever imagine, naturally, one single chord in flats.

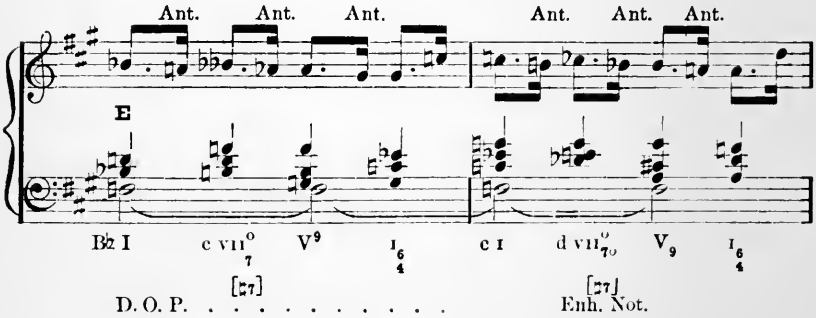


Enh. Not.

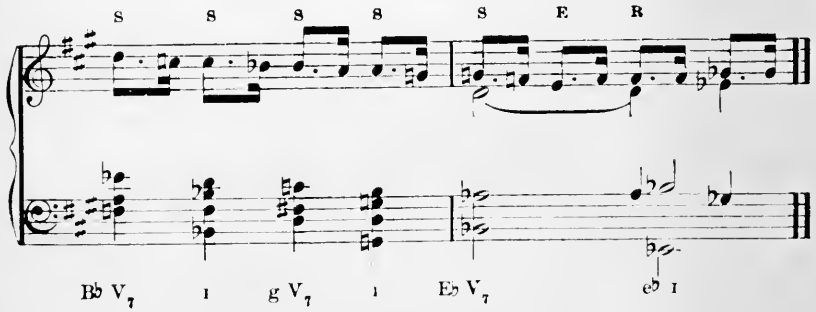
C. To call this chord, according to its appearance, the VII$^{o}_{7o}$ of A♯ major or minor, is to break the sequence, which is unwarrantable. This sequence

moves down regularly by minor seconds, and at its end is varied and made more interesting by the suspension in the bass; this prolongation of the chord also forms a *quasi* halting place and makes more impressive the change at

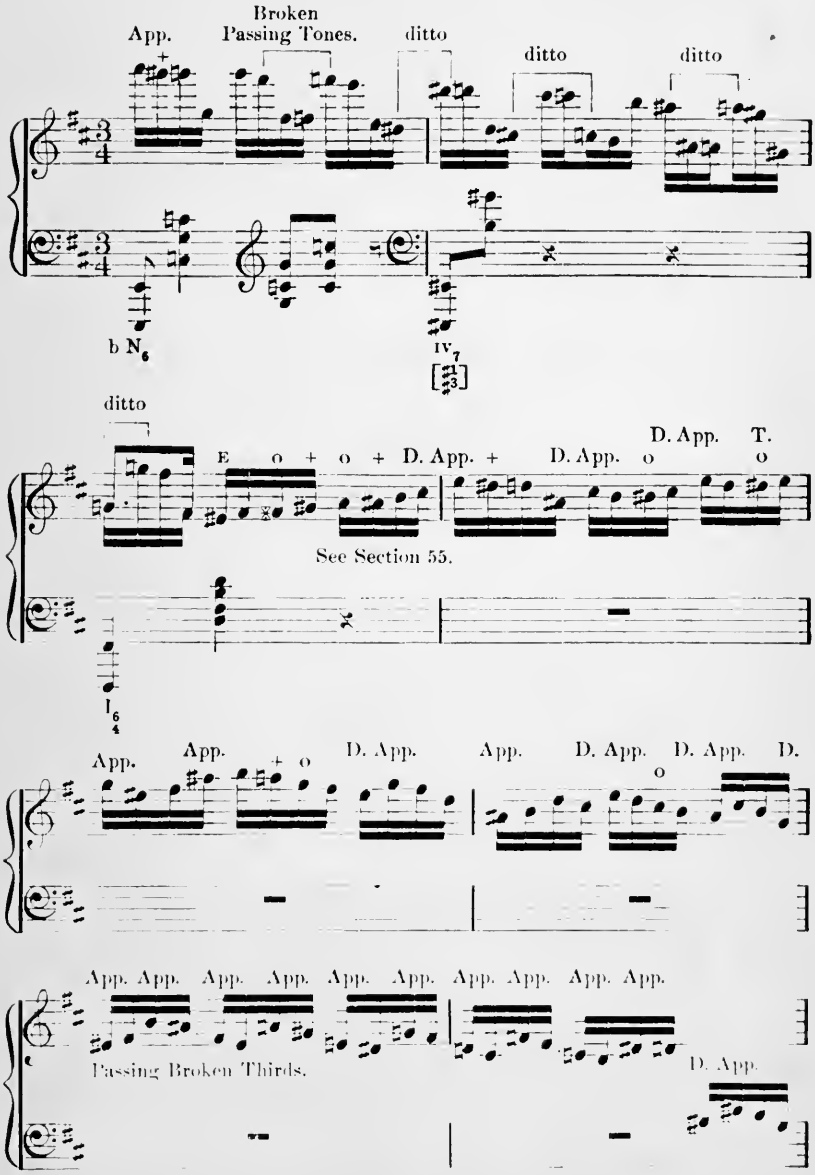
D. A dominant seventh, by enharmonic transformation of its seventh, or of its seventh and root, may become an $\frac{6+}{5}$ or a $\frac{6+}{4++}_{3}$ modulating in the first case to the *minor* tonic a minor second lower, in the second case to a *major* tonic a minor second lower; thus: from $C\flat$ to $B\natural$, minor or major. The enharmonics in this present case are $d\flat$ $f\flat$, for $c\sharp$ e. This harmonic subtlety was very dear to Chopin. See Section 43.

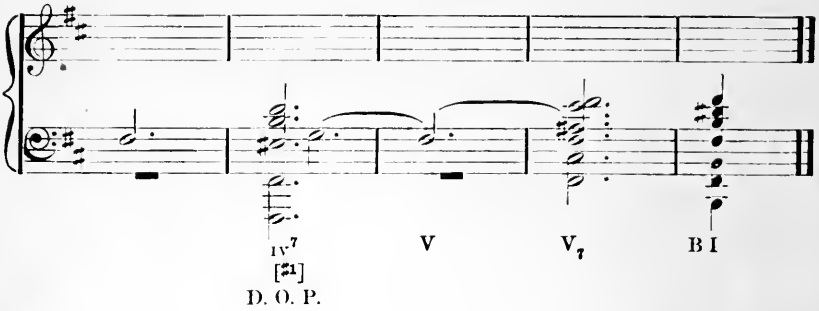


E. The soprano presents a subtlety. $B\flat\flat$ sounds A. The main notes of the soprano, then, are $B\natural$ A $A\flat$ G, and the $B\flat\flat$ is used to present to the eye a figure like that of the first count.

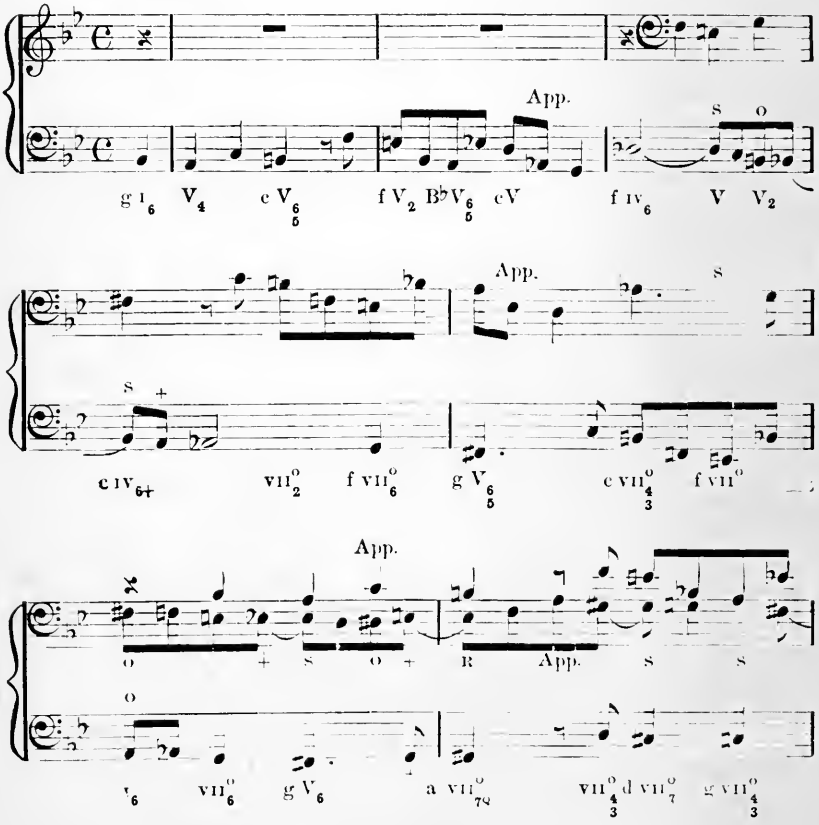


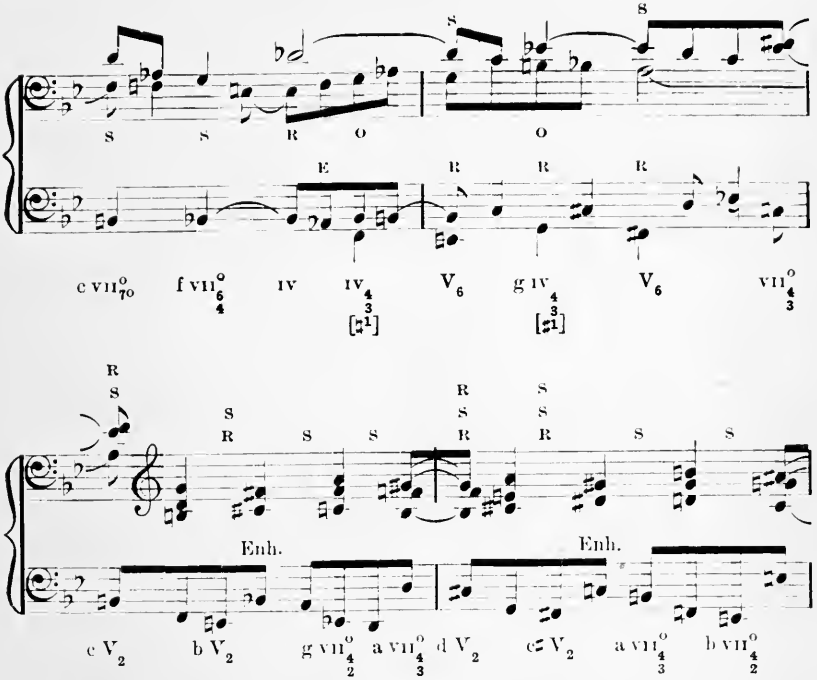
6. *Allegro maestoso.* CHOPIN, Polonaise.



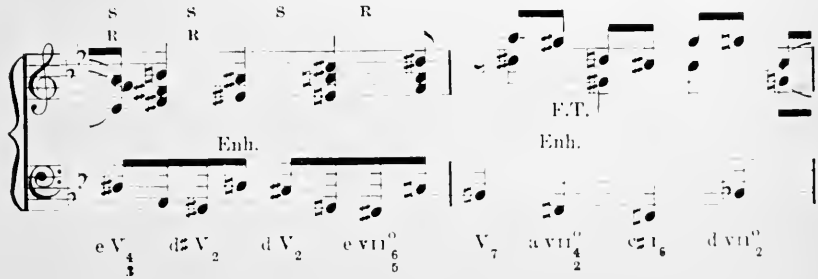


7. *Andante.* Liszt, Fugue on the name of Bach.





It is impossible to hold any key for any length of time in this example. The impressions of key change constantly, and the figuring represents what the ear hears, and any attempt to use chromatically altered chords instead of shifting tonalities leads one into illogical markings, as the writer found on experimenting. A reduction will soften certain harsh measures; Nos. 3, 4, 5, and 6, on this page, become not only clear, but fairly bland, when the syncopations are omitted.



App. App. App. O + O E +

g II$^{o}_{7}$ VII$^{o}_{2}$ VI IV$_{6+}$ V I$_{\substack{6\\4}}$ IV$_{7}$ IV$_{6}$

[♯1] [♯1 ♮3]

+ O + E S

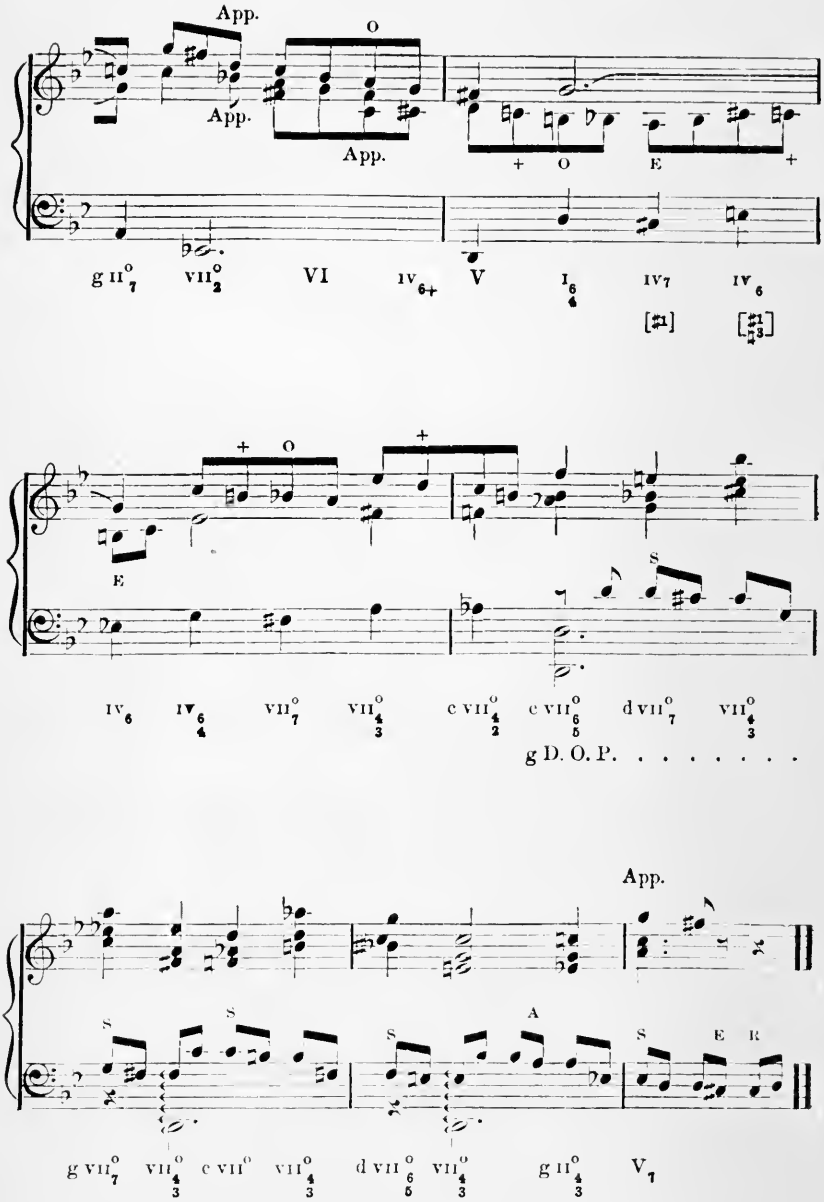
IV$_{6}$ IV$_{\substack{6\\4}}$ VII$^{o}_{7}$ VII$^{o}_{\substack{4\\3}}$ c VII$^{o}_{\substack{4\\2}}$ c VII$^{o}_{\substack{6\\5}}$ d VII$^{o}_{7}$ VII$^{o}_{\substack{4\\3}}$

g D. O. P. . . . . .

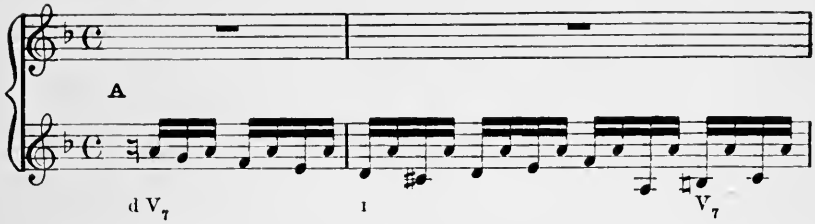
App.

S S S A S E R

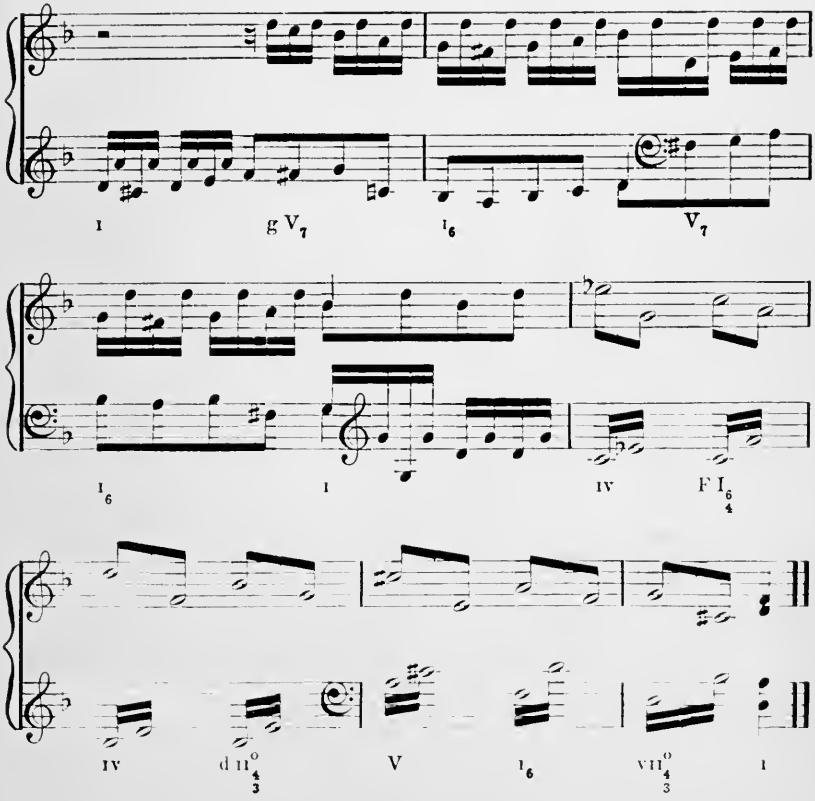
g VII$^{o}_{7}$ VII$^{o}_{\substack{4\\3}}$ c VII° VII$^{o}_{\substack{4\\3}}$ d VII$^{o}_{\substack{6\\5}}$ VII$^{o}_{\substack{4\\3}}$ g II$^{o}_{\substack{4\\3}}$ V$_{7}$

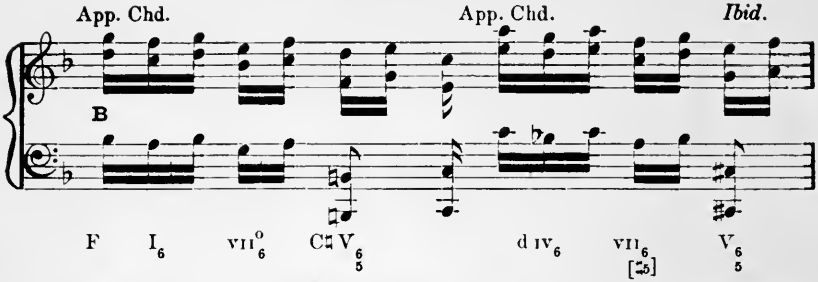


8. *Allegro.* BACH–TAUSIG.

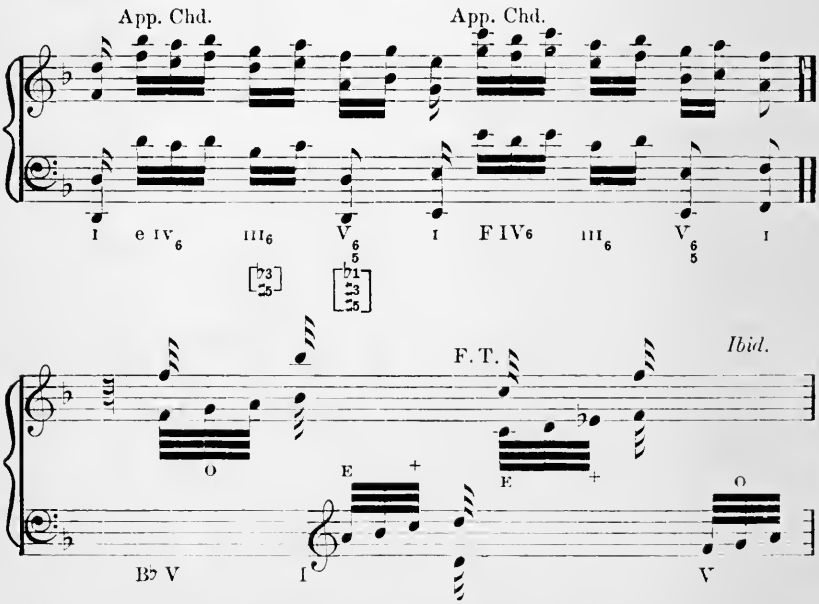


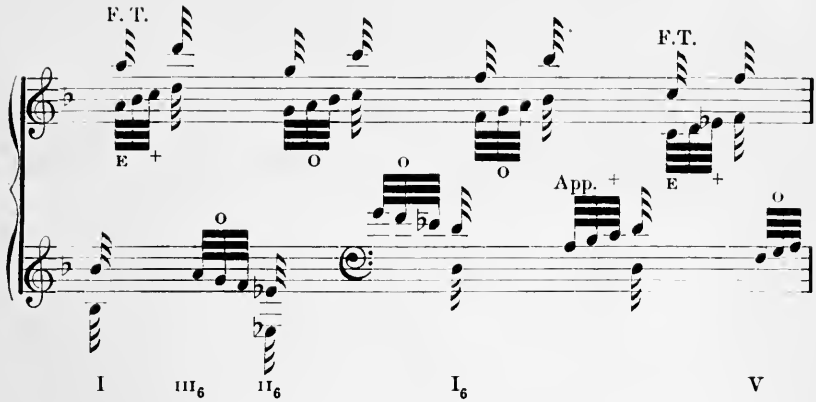
A. Passages composed of rapid and constant alternations of tonic and dominant, as is this, may best be analyzed by judging of the general impression rather than by naming each chord, a procedure which does not agree with what one hears.

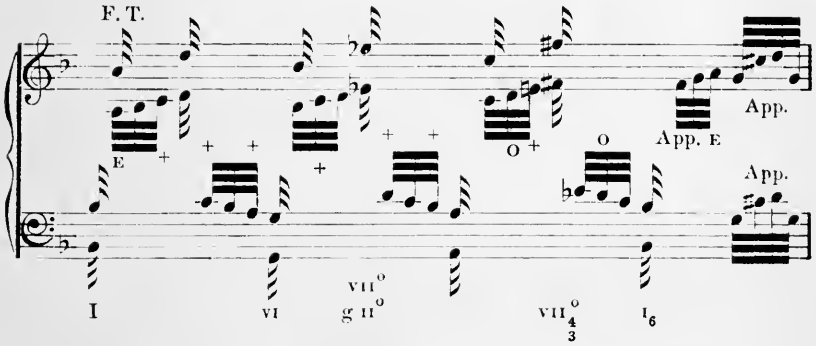


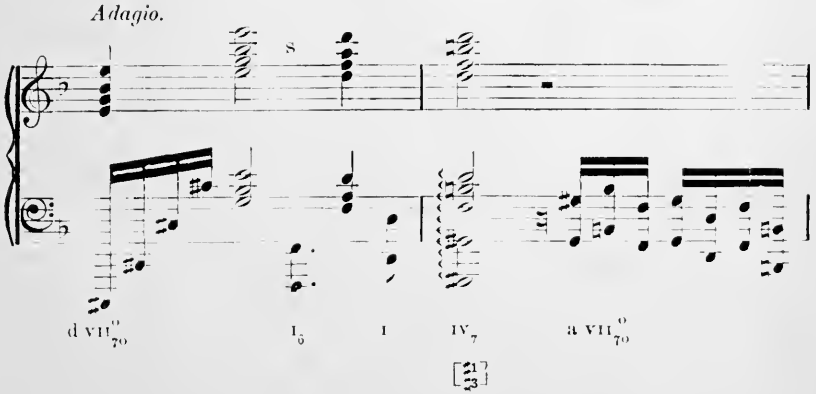


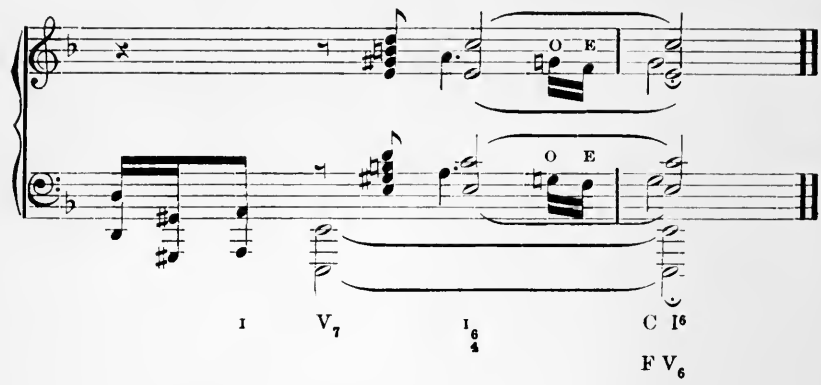
B. This whole sequential strain passes so quickly by the ear and has in it so much of the F major character — that is, so many B flats and E's — that an Extremist would call it throughout, F major. We prefer to regard it as modulatory in nature, as it seems to move up by hitches, and because of the "sham keys" which seem to accentuate the idea of key change, being used for the sake of variety (see Section 50, The Sequence). It is a place very difficult to mark, however one may regard it, and we have chosen it because typical of countless Bach passages. The first sixteenth note on each eighth is a chord; the other sixteenth notes are accidental tone formations, containing Free Tones, Free Anticipations, etc. It will be realized by any one who studies these measures attentively that here, in "old Bach," are distortions of the key nearly if not quite as great as those practised to-day by the Out-and-Outers.



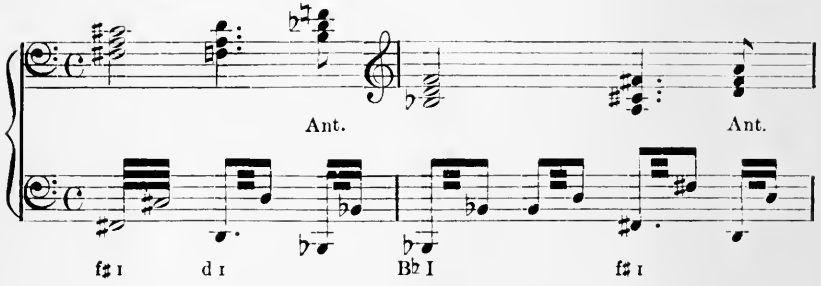

F. T.
F. T.
E
O
O
O
App.
E
O
O
I
III6
II6
I6
V

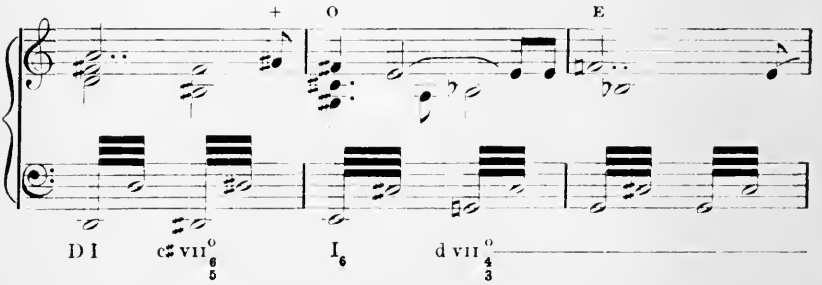

F. T.
E
O
App.
App. E
App.
I
VI
VII°
g II°
VII°4 3
I6

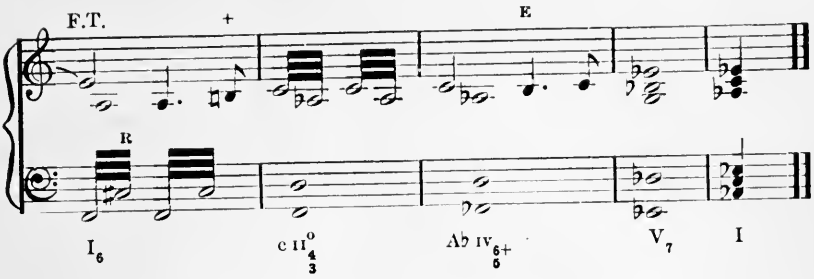

Adagio.
S
d VII°7
I6
I
IV7
a VII°7



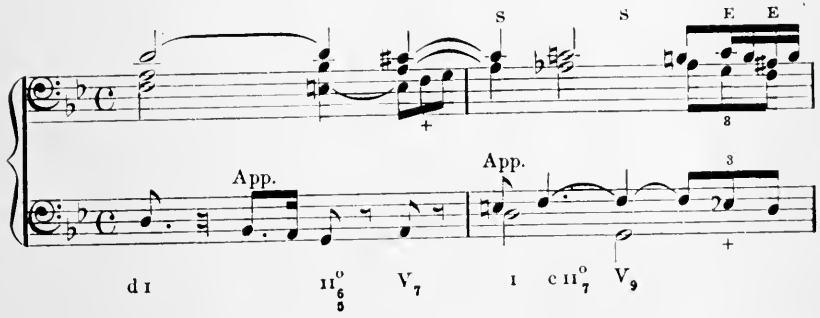
9. *Moderato.* WAGNER, Parsival.

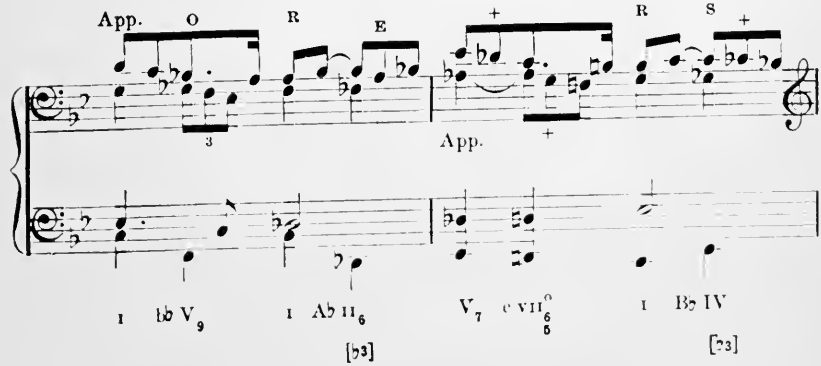


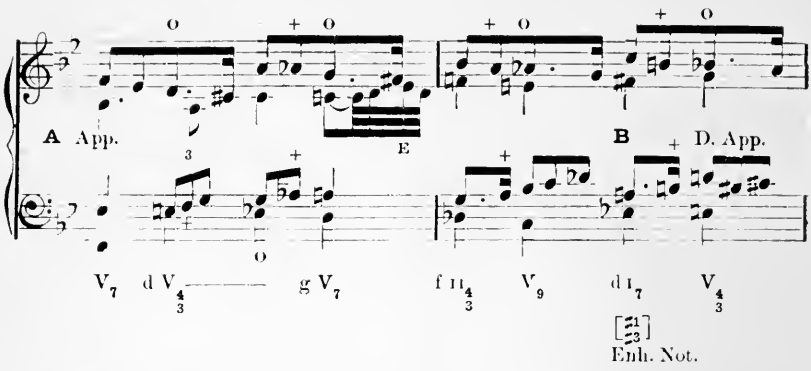




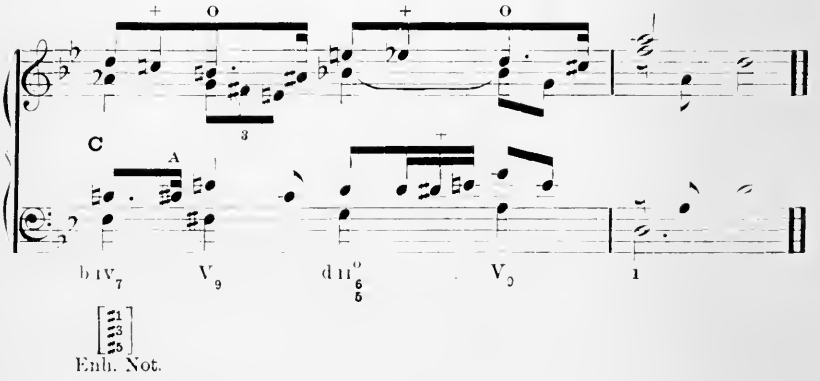
10. *Lento e maestoso.* WAGNER, Parsival.







A. A characteristic Wagnerian rising sequence, defined by the essential chords on the second and fourth beats in measures 5, 6, 7. The tone combinations on the first and third beats of these measures offer difficulty, and only recourse to enharmonics will solve the complicated problem. The chord at **B** is, in reality, *d♯ f♯ a c;* and at **C**, *e♯ g♯ b♯ d.* This interpretation gives two chords in a key — see Principle No. 5 — and explains the inconsistent and mind-disturbing notation of a passage which to the ear is very consistent, coherent, and agreeable. Numberless cases of this sort occur in modern music which may be explained only in the above way. The composer hears the chord mentally and employs any notation which seems to him good; to the analyst falls the task of finding the needful enharmonics and of making them clear to his mind.



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